

CHAPTER

24

**ELECTRICAL
POWER**



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24-EFFECTIVE PAGES			24-FAULT CODE INDEX (cont)			24-MAINT MSG INDEX (cont)		
1 thru 9	SEP 05/2017		127	May 05/2015		O 124	Sep 05/2017	
10	BLANK		128	May 05/2015		O 125	Sep 05/2017	
24-HOW TO USE THE FIM			129	May 05/2015		O 126	Sep 05/2017	
1	Jan 05/2013		130	May 05/2015		O 127	Sep 05/2017	
2	Jan 05/2013		131	May 05/2015		O 128	Sep 05/2017	
3	Jan 05/2017		132	May 05/2015		O 129	Sep 05/2017	
4	Jan 05/2013		133	May 05/2015		O 130	Sep 05/2017	
5	Jan 05/2013		R 134	Sep 05/2017		O 131	Sep 05/2017	
6	Jan 05/2013		135	Jan 05/2017		O 132	Sep 05/2017	
24-FAULT CODE INDEX			136	Jan 05/2017		O 133	Sep 05/2017	
101	Jan 05/2013		137	May 05/2015		O 134	Sep 05/2017	
102	May 05/2015		138	BLANK		O 135	Sep 05/2017	
103	May 05/2015		24-MAINT MSG INDEX			O 136	BLANK	
104	May 05/2015		R 101	Sep 05/2017		D 137	Sep 5/2017	
105	May 05/2015		R 102	Sep 05/2017		D 138	Sep 5/2017	
106	May 05/2015		R 103	Sep 05/2017		D 139	Sep 5/2017	
107	May 05/2015		R 104	Sep 05/2017		D 140	Sep 5/2017	
108	May 05/2015		R 105	Sep 05/2017		24-08 TASKS		
109	May 05/2015		O 106	Sep 05/2017		O 201	Sep 05/2017	
110	May 05/2015		O 107	Sep 05/2017		O 202	Sep 05/2017	
111	May 05/2015		R 108	Sep 05/2017		O 203	Sep 05/2017	
112	May 05/2015		R 109	Sep 05/2017		O 204	Sep 05/2017	
113	May 05/2015		R 110	Sep 05/2017		O 205	Sep 05/2017	
114	May 05/2015		O 111	Sep 05/2017		O 206	Sep 05/2017	
115	May 05/2015		O 112	Sep 05/2017		O 207	Sep 05/2017	
116	May 05/2015		R 113	Sep 05/2017		O 208	Sep 05/2017	
117	May 05/2015		O 114	Sep 05/2017		O 209	Sep 05/2017	
118	May 05/2015		O 115	Sep 05/2017		O 210	Sep 05/2017	
119	May 05/2015		R 116	Sep 05/2017		O 211	Sep 05/2017	
120	Sep 05/2015		O 117	Sep 05/2017		O 212	Sep 05/2017	
121	Sep 05/2015		O 118	Sep 05/2017		O 213	Sep 05/2017	
122	Sep 05/2015		O 119	Sep 05/2017		O 214	Sep 05/2017	
123	Sep 05/2015		O 120	Sep 05/2017		O 215	Sep 05/2017	
124	Sep 05/2015		R 121	Sep 05/2017		O 216	Sep 05/2017	
125	Sep 05/2015		O 122	Sep 05/2017		O 217	Sep 05/2017	
126	Sep 05/2015		O 123	Sep 05/2017		O 218	Sep 05/2017	

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O 219	Sep 05/2017		O 255	Sep 05/2017		O 291	Sep 05/2017	
O 220	Sep 05/2017		O 256	Sep 05/2017		O 292	Sep 05/2017	
O 221	Sep 05/2017		O 257	Sep 05/2017		O 293	Sep 05/2017	
O 222	Sep 05/2017		O 258	Sep 05/2017		O 294	Sep 05/2017	
O 223	Sep 05/2017		O 259	Sep 05/2017		O 295	Sep 05/2017	
O 224	Sep 05/2017		O 260	Sep 05/2017		O 296	Sep 05/2017	
O 225	Sep 05/2017		O 261	Sep 05/2017		O 297	Sep 05/2017	
O 226	Sep 05/2017		O 262	Sep 05/2017		O 298	Sep 05/2017	
O 227	Sep 05/2017		O 263	Sep 05/2017		O 298.1	Sep 05/2017	
O 228	Sep 05/2017		O 264	Sep 05/2017		O 298.2	Sep 05/2017	
O 229	Sep 05/2017		O 265	Sep 05/2017		O 298.3	Sep 05/2017	
O 230	Sep 05/2017		O 266	Sep 05/2017		O 298.4	Sep 05/2017	
O 231	Sep 05/2017		O 267	Sep 05/2017		O 298.5	Sep 05/2017	
O 232	Sep 05/2017		O 268	Sep 05/2017		O 298.6	Sep 05/2017	
O 233	Sep 05/2017		O 269	Sep 05/2017		O 298.7	Sep 05/2017	
O 234	Sep 05/2017		O 270	Sep 05/2017		O 298.8	Sep 05/2017	
O 235	Sep 05/2017		O 271	Sep 05/2017		O 298.9	Sep 05/2017	
O 236	Sep 05/2017		O 272	Sep 05/2017		O 298.10	Sep 05/2017	
O 237	Sep 05/2017		O 273	Sep 05/2017		O 298.11	Sep 05/2017	
O 238	Sep 05/2017		O 274	Sep 05/2017		O 298.12	Sep 05/2017	
O 239	Sep 05/2017		O 275	Sep 05/2017		O 298.13	Sep 05/2017	
O 240	Sep 05/2017		O 276	Sep 05/2017		O 298.14	Sep 05/2017	
O 241	Sep 05/2017		O 277	Sep 05/2017		O 298.15	Sep 05/2017	
O 242	Sep 05/2017		R 278	Sep 05/2017		O 298.16	Sep 05/2017	
O 243	Sep 05/2017		R 279	Sep 05/2017		O 298.17	Sep 05/2017	
O 244	Sep 05/2017		O 280	Sep 05/2017		O 298.18	Sep 05/2017	
O 245	Sep 05/2017		O 281	Sep 05/2017		A 298.19	Sep 05/2017	
O 246	Sep 05/2017		O 282	Sep 05/2017		A 298.20	Sep 05/2017	
O 247	Sep 05/2017		O 283	Sep 05/2017		A 298.21	Sep 05/2017	
O 248	Sep 05/2017		O 284	Sep 05/2017		A 298.22	BLANK	
O 249	Sep 05/2017		O 285	Sep 05/2017		24-09 TASKS		
O 250	Sep 05/2017		O 286	Sep 05/2017		O 201	Sep 05/2017	
O 251	Sep 05/2017		O 287	Sep 05/2017		O 202	Sep 05/2017	
O 252	Sep 05/2017		O 288	Sep 05/2017		O 203	Sep 05/2017	
O 253	Sep 05/2017		O 289	Sep 05/2017		O 204	Sep 05/2017	
O 254	Sep 05/2017		O 290	Sep 05/2017		O 205	Sep 05/2017	

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O 206	Sep 05/2017		226	Sep 05/2016		218	Sep 05/2016	
O 207	Sep 05/2017		227	Sep 05/2016		O 219	Sep 05/2017	
208	BLANK		228	BLANK		220	Sep 05/2015	
24-09 TASK SUPPORT			24-12 TASKS			221	Jan 05/2016	
301	Jan 05/2013		O 201	Sep 05/2017		222	Jan 05/2017	
302	Jan 05/2013		O 202	Sep 05/2017		223	Jan 05/2017	
303	Jan 05/2013		O 203	Sep 05/2017		O 224	Sep 05/2017	
304	Jan 05/2013		O 204	Sep 05/2017		O 225	Sep 05/2017	
305	Jan 05/2013		O 205	Sep 05/2017		226	Jan 05/2017	
306	BLANK		O 206	Sep 05/2017		227	Jan 05/2017	
24-11 TASKS			O 207	Sep 05/2017		228	Jan 05/2017	
201	Jan 05/2013		O 208	Sep 05/2017		229	Jan 05/2017	
202	Jan 05/2016		O 209	Sep 05/2017		230	Jan 05/2017	
203	Sep 05/2016		O 210	Sep 05/2017		231	Jan 05/2017	
204	Sep 05/2016		O 211	Sep 05/2017		232	Jan 05/2017	
205	Sep 05/2016		O 212	Sep 05/2017		233	Jan 05/2017	
206	Sep 05/2016		A 213	Sep 05/2017		234	Jan 05/2017	
207	Sep 05/2016		A 214	BLANK		235	Jan 05/2017	
208	Sep 05/2016		24-21 TASKS			236	Jan 05/2017	
209	Jan 05/2016		201	Jan 05/2013		237	Jan 05/2017	
210	Jan 05/2016		202	Jan 05/2013		238	Jan 05/2017	
211	Jan 05/2016		203	Jan 05/2013		239	Jan 05/2017	
212	Jan 05/2016		204	Jan 05/2013		240	Jan 05/2017	
213	Jan 05/2016		205	Jan 05/2013		24-22 TASKS		
214	Jan 05/2016		206	Jan 05/2013		201	Jan 05/2013	
215	Jan 05/2016		207	Jan 05/2013		202	Jan 05/2013	
216	Jan 05/2016		208	Jan 05/2013		203	Jan 05/2013	
217	Jan 05/2016		209	Jan 05/2013		204	Jan 05/2013	
218	Jan 05/2016		210	Jan 05/2013		205	Sep 05/2016	
219	Sep 05/2016		211	Sep 05/2016		206	Sep 05/2016	
220	Sep 05/2016		212	Sep 05/2016		207	Sep 05/2016	
221	Sep 05/2016		213	Sep 05/2016		208	Sep 05/2016	
222	Sep 05/2016		214	Sep 05/2016		209	Sep 05/2016	
223	Sep 05/2016		215	Sep 05/2016		210	Sep 05/2016	
224	Sep 05/2016		216	Jan 05/2016		211	Sep 05/2016	
225	Sep 05/2016		217	Jan 05/2016		212	Sep 05/2016	

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213	Sep 05/2016		249	Sep 05/2016		201	Jan 05/2013	
214	Sep 05/2016		250	Sep 05/2016		202	Jan 05/2013	
215	Sep 05/2016		251	Sep 05/2016		203	Sep 05/2016	
216	Sep 05/2016		252	Sep 05/2016		204	Sep 05/2016	
217	Sep 05/2016		253	Sep 05/2016		205	Sep 05/2016	
218	Sep 05/2016		254	Sep 05/2016		206	Jan 05/2013	
219	Sep 05/2016		255	Sep 05/2016		207	Sep 05/2016	
220	Sep 05/2016		256	Sep 05/2016		208	Sep 05/2016	
221	Sep 05/2016		257	Jan 05/2017		209	Sep 05/2016	
222	Sep 05/2016		258	Jan 05/2017		210	Sep 05/2016	
223	Sep 05/2016		259	Jan 05/2017		211	Sep 05/2016	
224	Sep 05/2016		260	Jan 05/2017		212	Sep 05/2016	
225	Sep 05/2016		261	Jan 05/2017		213	Sep 05/2016	
226	Sep 05/2016		262	Jan 05/2017		214	Sep 05/2016	
227	Sep 05/2016		263	Jan 05/2017		215	Jan 05/2013	
228	Sep 05/2016		264	Jan 05/2017		216	Jan 05/2013	
229	Sep 05/2016		265	Jan 05/2017		217	Jan 05/2013	
230	Sep 05/2016		266	Jan 05/2017		218	Jan 05/2013	
231	Sep 05/2016		267	Jan 05/2017		219	Jan 05/2013	
232	Sep 05/2016		268	Jan 05/2017		220	Sep 05/2016	
233	Sep 05/2016		269	Jan 05/2017		221	Sep 05/2016	
234	Sep 05/2016		270	Jan 05/2017		222	Jan 05/2013	
235	Sep 05/2016		271	Jan 05/2017		223	Jan 05/2013	
236	Sep 05/2016		272	Jan 05/2017		224	Jan 05/2013	
237	Sep 05/2016		273	Jan 05/2017		225	Jan 05/2013	
238	Sep 05/2016		274	Jan 05/2017		226	Jan 05/2013	
239	Sep 05/2016		275	Jan 05/2017		227	Jan 05/2013	
240	Sep 05/2016		276	Jan 05/2017		228	Jan 05/2013	
241	Sep 05/2016		277	Jan 05/2017		229	Jan 05/2013	
242	Sep 05/2016		278	Jan 05/2017		230	Jan 05/2013	
243	Sep 05/2016		279	Jan 05/2017		231	Jan 05/2013	
244	Sep 05/2016		280	Jan 05/2017		232	Jan 05/2013	
245	Sep 05/2016		281	Jan 05/2017		233	Jan 05/2013	
246	Sep 05/2016		282	Jan 05/2017		234	Jan 05/2013	
247	Sep 05/2016		283	Jan 05/2017		235	Jan 05/2013	
248	Sep 05/2016		284	BLANK		236	Sep 05/2016	

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237	Sep 05/2016		273	Jan 05/2017		298.11	Jan 05/2017	
238	Jan 05/2013		274	Jan 05/2017		298.12	Jan 05/2017	
239	Jan 05/2013		275	Jan 05/2017		24-25 TASKS		
240	Jan 05/2013		276	Jan 05/2017		201	Jan 05/2013	
241	Sep 05/2016		277	Jan 05/2017		202	Jan 05/2013	
242	Sep 05/2016		278	Jan 05/2017		203	Sep 05/2016	
243	Jan 05/2013		279	Jan 05/2017		204	Sep 05/2016	
244	Jan 05/2013		280	Jan 05/2017		205	Sep 05/2016	
245	Jan 05/2013		281	Jan 05/2017		206	Jan 05/2013	
246	Jan 05/2013		282	Jan 05/2017		207	Jan 05/2013	
247	Jan 05/2013		283	Jan 05/2017		208	Sep 05/2016	
248	Jan 05/2013		284	Jan 05/2017		209	Sep 05/2016	
249	Jan 05/2013		285	Jan 05/2017		210	Sep 05/2016	
250	Jan 05/2013		286	Jan 05/2017		211	Sep 05/2016	
251	Jan 05/2013		287	Jan 05/2017		212	Jan 05/2013	
252	Sep 05/2016		288	Jan 05/2017		213	Jan 05/2013	
253	Sep 05/2016		289	Jan 05/2017		214	Jan 05/2013	
254	Sep 05/2016		290	Jan 05/2017		215	Jan 05/2013	
255	Sep 05/2016		291	Jan 05/2017		216	Jan 05/2013	
256	Sep 05/2016		292	Jan 05/2017		217	Sep 05/2016	
257	Sep 05/2016		293	Jan 05/2017		218	Sep 05/2016	
258	Sep 05/2016		294	Jan 05/2017		219	Sep 05/2016	
259	Sep 05/2016		295	Jan 05/2017		220	Sep 05/2016	
260	Sep 05/2016		296	Jan 05/2017		221	Sep 05/2016	
261	Sep 05/2016		297	Jan 05/2017		222	Sep 05/2016	
262	Sep 05/2016		298	Jan 05/2017		223	Sep 05/2016	
263	Sep 05/2016		298.1	Jan 05/2017		224	Sep 05/2016	
264	Jan 05/2017		298.2	Jan 05/2017		225	Sep 05/2016	
265	Jan 05/2017		298.3	Jan 05/2017		226	Sep 05/2016	
266	Jan 05/2017		298.4	Jan 05/2017		227	Sep 05/2016	
267	Jan 05/2017		298.5	Jan 05/2017		228	Sep 05/2016	
268	Jan 05/2017		298.6	Jan 05/2017		229	Sep 05/2016	
269	Jan 05/2017		298.7	Jan 05/2017		230	Sep 05/2016	
270	Jan 05/2017		298.8	Jan 05/2017		231	Sep 05/2016	
271	Jan 05/2017		298.9	Jan 05/2017		232	Sep 05/2016	
272	Jan 05/2017		298.10	Jan 05/2017		233	Sep 05/2016	

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234	Sep 05/2016		270	Sep 05/2016		298.8	Jan 05/2017	
235	Sep 05/2016		271	Sep 05/2016		298.9	Jan 05/2017	
236	Sep 05/2016		272	Sep 05/2016		298.10	Jan 05/2017	
237	Sep 05/2016		273	Sep 05/2016		298.11	Jan 05/2017	
238	Sep 05/2016		274	Sep 05/2016		298.12	Jan 05/2017	
239	Sep 05/2016		275	Sep 05/2016		298.13	Jan 05/2017	
240	Sep 05/2016		276	Sep 05/2016		298.14	Jan 05/2017	
241	Sep 05/2016		277	Sep 05/2016		298.15	Jan 05/2017	
242	Sep 05/2016		278	Sep 05/2016		298.16	Jan 05/2017	
243	Sep 05/2016		R 279	Sep 05/2017		298.17	Jan 05/2017	
244	Sep 05/2016		O 280	Sep 05/2017		298.18	Jan 05/2017	
245	Sep 05/2016		O 281	Sep 05/2017		24-28 TASKS		
246	Sep 05/2016		R 282	Sep 05/2017		201	Jan 05/2013	
247	Sep 05/2016		R 283	Sep 05/2017		202	Sep 05/2016	
248	Sep 05/2016		O 284	Sep 05/2017		203	Sep 05/2016	
249	Sep 05/2016		285	Jan 05/2017		204	Jan 05/2017	
250	Sep 05/2016		286	Jan 05/2017		205	Jan 05/2017	
251	Sep 05/2016		287	Jan 05/2017		206	Jan 05/2017	
252	Sep 05/2016		288	Jan 05/2017		207	Jan 05/2017	
253	Sep 05/2016		289	Jan 05/2017		208	Jan 05/2017	
254	Sep 05/2016		290	Jan 05/2017		209	Jan 05/2017	
255	Sep 05/2016		291	Jan 05/2017		210	Jan 05/2017	
256	Sep 05/2016		292	Jan 05/2017		211	Jan 05/2017	
257	Sep 05/2016		293	Jan 05/2017		212	Jan 05/2017	
258	Sep 05/2016		294	Jan 05/2017		213	Jan 05/2017	
259	Sep 05/2016		295	Jan 05/2017		214	BLANK	
260	Sep 05/2016		296	Jan 05/2017		24-31 TASKS		
261	Sep 05/2016		297	Jan 05/2017		201	Sep 05/2016	
262	Sep 05/2016		298	Jan 05/2017		202	Sep 05/2016	
263	Sep 05/2016		298.1	Jan 05/2017		203	Sep 05/2016	
264	Sep 05/2016		298.2	Jan 05/2017		204	Sep 05/2016	
265	Sep 05/2016		298.3	Jan 05/2017		205	Sep 05/2016	
266	Sep 05/2016		298.4	Jan 05/2017		206	Sep 05/2016	
267	Sep 05/2016		298.5	Jan 05/2017		207	Sep 05/2016	
268	Sep 05/2016		298.6	Jan 05/2017		208	Sep 05/2016	
269	Sep 05/2016		298.7	Jan 05/2017		O 209	Sep 05/2017	

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O 210	Sep 05/2017		O 229	Sep 05/2017		209	May 05/2014	
O 211	Sep 05/2017		O 230	Sep 05/2017		210	May 05/2014	
O 212	Sep 05/2017		O 231	Sep 05/2017		211	Sep 05/2016	
O 213	Sep 05/2017		O 232	Sep 05/2017		212	Sep 05/2016	
O 214	Sep 05/2017		O 233	Sep 05/2017		213	Sep 05/2016	
O 215	Sep 05/2017		O 234	Sep 05/2017		214	Sep 05/2016	
R 216	Sep 05/2017		A 235	Sep 05/2017		215	Sep 05/2016	
24-32 TASKS			A 236	BLANK		216	Sep 05/2016	
R 201	Sep 05/2017		24-33 TASKS			217	Sep 05/2016	
O 202	Sep 05/2017		201	Jan 05/2013		218	Sep 05/2016	
O 203	Sep 05/2017		O 202	Sep 05/2017		219	Sep 05/2016	
R 204	Sep 05/2017		O 203	Sep 05/2017		220	Sep 05/2016	
O 205	Sep 05/2017		O 204	Sep 05/2017		24-41 TASKS		
O 206	Sep 05/2017		O 205	Sep 05/2017		201	Jan 05/2013	
O 207	Sep 05/2017		O 206	Sep 05/2017		202	Jan 05/2013	
O 208	Sep 05/2017		O 207	Sep 05/2017		203	Jan 05/2013	
O 209	Sep 05/2017		O 208	Sep 05/2017		204	Sep 05/2016	
O 210	Sep 05/2017		O 209	Sep 05/2017		205	Sep 05/2016	
O 211	Sep 05/2017		O 210	Sep 05/2017		206	Sep 05/2016	
O 212	Sep 05/2017		O 211	Sep 05/2017		207	Sep 05/2016	
O 213	Sep 05/2017		O 212	Sep 05/2017		208	Sep 05/2016	
O 214	Sep 05/2017		O 213	Sep 05/2017		209	Sep 05/2016	
O 215	Sep 05/2017		O 214	Sep 05/2017		210	Sep 05/2016	
O 216	Sep 05/2017		O 215	Sep 05/2017		211	Sep 05/2016	
O 217	Sep 05/2017		O 216	Sep 05/2017		212	Sep 05/2016	
O 218	Sep 05/2017		R 217	Sep 05/2017		R 213	Sep 05/2017	
O 219	Sep 05/2017		O 218	Sep 05/2017		R 214	Sep 05/2017	
O 220	Sep 05/2017		24-35 TASKS			O 215	Sep 05/2017	
O 221	Sep 05/2017		201	Jan 05/2013		O 216	Sep 05/2017	
O 222	Sep 05/2017		202	Sep 05/2016		O 217	Sep 05/2017	
O 223	Sep 05/2017		203	Sep 05/2016		O 218	Sep 05/2017	
O 224	Sep 05/2017		204	Sep 05/2016		O 219	Sep 05/2017	
O 225	Sep 05/2017		205	Jan 05/2013		O 220	Sep 05/2017	
O 226	Sep 05/2017		206	Jan 05/2016		O 221	Sep 05/2017	
O 227	Sep 05/2017		207	Jan 05/2016		O 222	Sep 05/2017	
O 228	Sep 05/2017		208	May 05/2014		O 223	Sep 05/2017	

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O 225	Sep 05/2017		214	May 05/2017		R 250	Sep 05/2017	
O 226	Sep 05/2017		215	May 05/2017		R 251	Sep 05/2017	
O 227	Sep 05/2017		216	May 05/2017		R 252	Sep 05/2017	
O 228	Sep 05/2017		217	May 05/2017		O 253	Sep 05/2017	
O 229	Sep 05/2017		218	May 05/2017		R 254	Sep 05/2017	
O 230	Sep 05/2017		219	May 05/2017		R 255	Sep 05/2017	
O 231	Sep 05/2017		220	May 05/2017		R 256	Sep 05/2017	
O 232	Sep 05/2017		221	May 05/2017		R 257	Sep 05/2017	
O 233	Sep 05/2017		222	May 05/2017		O 258	Sep 05/2017	
O 234	Sep 05/2017		223	May 05/2017		R 259	Sep 05/2017	
O 235	Sep 05/2017		224	May 05/2017		R 260	Sep 05/2017	
236	Jan 05/2017		225	May 05/2017		O 261	Sep 05/2017	
237	Jan 05/2017		226	May 05/2017		R 262	Sep 05/2017	
238	Jan 05/2017		227	May 05/2017		O 263	Sep 05/2017	
239	Jan 05/2017		228	May 05/2017		R 264	Sep 05/2017	
240	Jan 05/2017		229	May 05/2017		R 265	Sep 05/2017	
241	Jan 05/2017		230	May 05/2017		O 266	Sep 05/2017	
242	Jan 05/2017		231	May 05/2017		R 267	Sep 05/2017	
243	Jan 05/2017		232	May 05/2017		O 268	Sep 05/2017	
244	Jan 05/2017		233	May 05/2017		O 269	Sep 05/2017	
245	Jan 05/2017		234	May 05/2017		R 270	Sep 05/2017	
246	Jan 05/2017		235	May 05/2017		R 271	Sep 05/2017	
24-51 TASKS			236	May 05/2017		R 272	Sep 05/2017	
201	Sep 05/2016		237	May 05/2017		O 273	Sep 05/2017	
202	Sep 05/2016		238	May 05/2017		O 274	Sep 05/2017	
203	Sep 05/2016		239	May 05/2017		R 275	Sep 05/2017	
204	Jan 05/2017		240	May 05/2017		R 276	Sep 05/2017	
205	Jan 05/2017		R 241	Sep 05/2017		R 277	Sep 05/2017	
206	Jan 05/2017		R 242	Sep 05/2017		R 278	Sep 05/2017	
207	Jan 05/2017		R 243	Sep 05/2017		R 279	Sep 05/2017	
208	Jan 05/2017		R 244	Sep 05/2017		O 280	Sep 05/2017	
209	Jan 05/2017		R 245	Sep 05/2017		O 281	Sep 05/2017	
210	May 05/2017		R 246	Sep 05/2017		O 282	Sep 05/2017	
211	May 05/2017		R 247	Sep 05/2017		O 283	Sep 05/2017	
212	May 05/2017		R 248	Sep 05/2017		O 284	Sep 05/2017	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

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**CHAPTER 24
ELECTRICAL POWER**

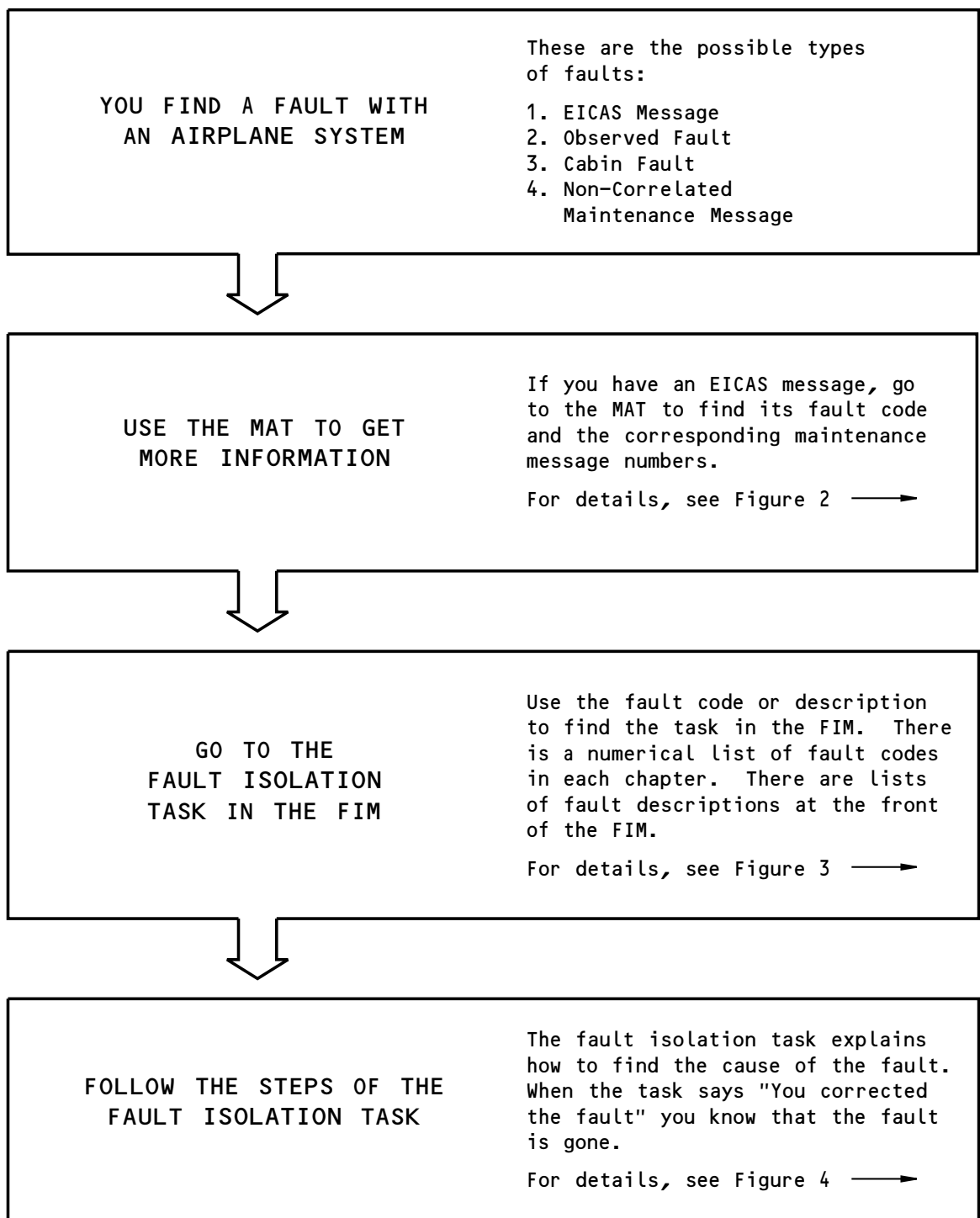
Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
24-51 TASKS (cont)								
O 285	Sep 05/2017							
O 286	Sep 05/2017							
O 287	Sep 05/2017							
O 288	Sep 05/2017							
O 289	Sep 05/2017							
O 290	Sep 05/2017							
A 291	Sep 05/2017							
A 292	BLANK							
24-53 TASKS								
R 201	Sep 05/2017							
R 202	Sep 05/2017							
R 203	Sep 05/2017							
O 204	Sep 05/2017							
24-61 TASKS								
201	May 05/2017							
202	May 05/2017							
203	Sep 05/2016							
204	Sep 05/2016							
205	Sep 05/2016							
206	BLANK							
24-98 TASKS								
201	May 05/2015							
202	BLANK							

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

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E84424 S0000132469_V1

Basic Fault Isolation Process
Figure 1

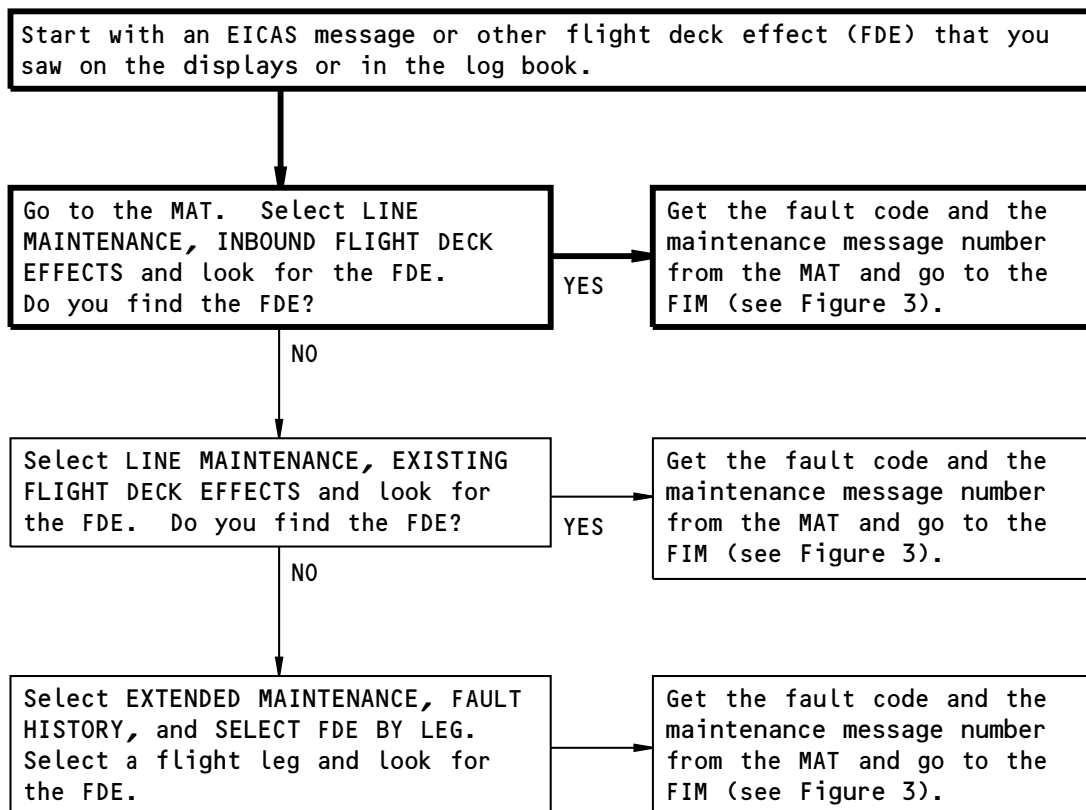
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NOTE: The bold lines show the most common path.

E84425 S0000132475_V1

Getting Fault Information from the MAT
Figure 2

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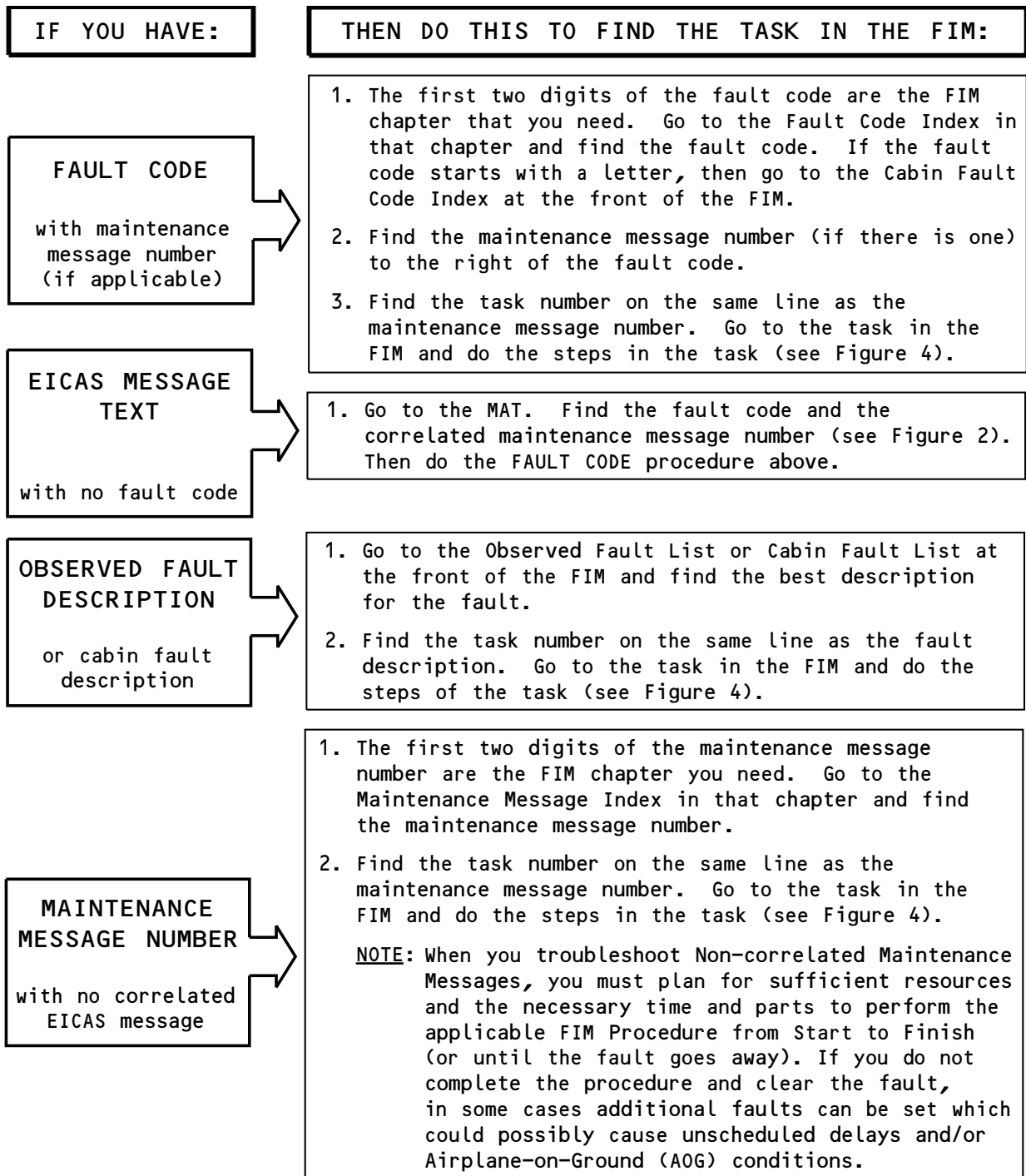
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E84427 S0000132476_V2

Finding the Fault Isolation Task in the FIM
Figure 3

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ASSUMED CONDITIONS AT START OF TASK

- External electrical power is ON
- Hydraulic power and pneumatic power are OFF
- Engines are shut down
- No equipment in the system is deactivated

INITIAL EVALUATION PARAGRAPH

- The Initial Evaluation paragraph at the start of the task helps you determine whether you can detect the fault right now.
- If you cannot detect the fault right now, then the task cannot isolate the fault and the Initial Evaluation paragraph will say that there was an intermittent fault.
- If you have an intermittent fault, you must use your judgement (and follow your airline's policy) to decide which components to replace. Then monitor the airplane to see if the fault happens again on subsequent flights.

FAULT ISOLATION STEPS

- The FIM task steps are presented in a specified order. "The If... then" statements will guide you along a logical path. But if you do not plan to follow the FIM task exactly, make sure that you read it before you start to isolate the fault. Some FIM procedures start with important steps that have an effect on the other steps in the procedure.
- When you are at the endpoint of the path, the step says "You corrected the fault." Complete the step and exit the procedure.
- The Recommended Maintenance Action that shows on the MAT for the maintenance message gives a list of possible causes in order by probability of failure. In the FIM procedure, the possible causes can be in a different order from the MAT.

WIRING CHECKS

When a step says "Do a wiring check", do these three types of electrical checks for the specified contacts (pins):

- continuity from contact to contact
- shorts between the contacts
- shorts from each contact to ground

E84428 S0000132477_V3

Doing the Fault Isolation Task
Figure 4

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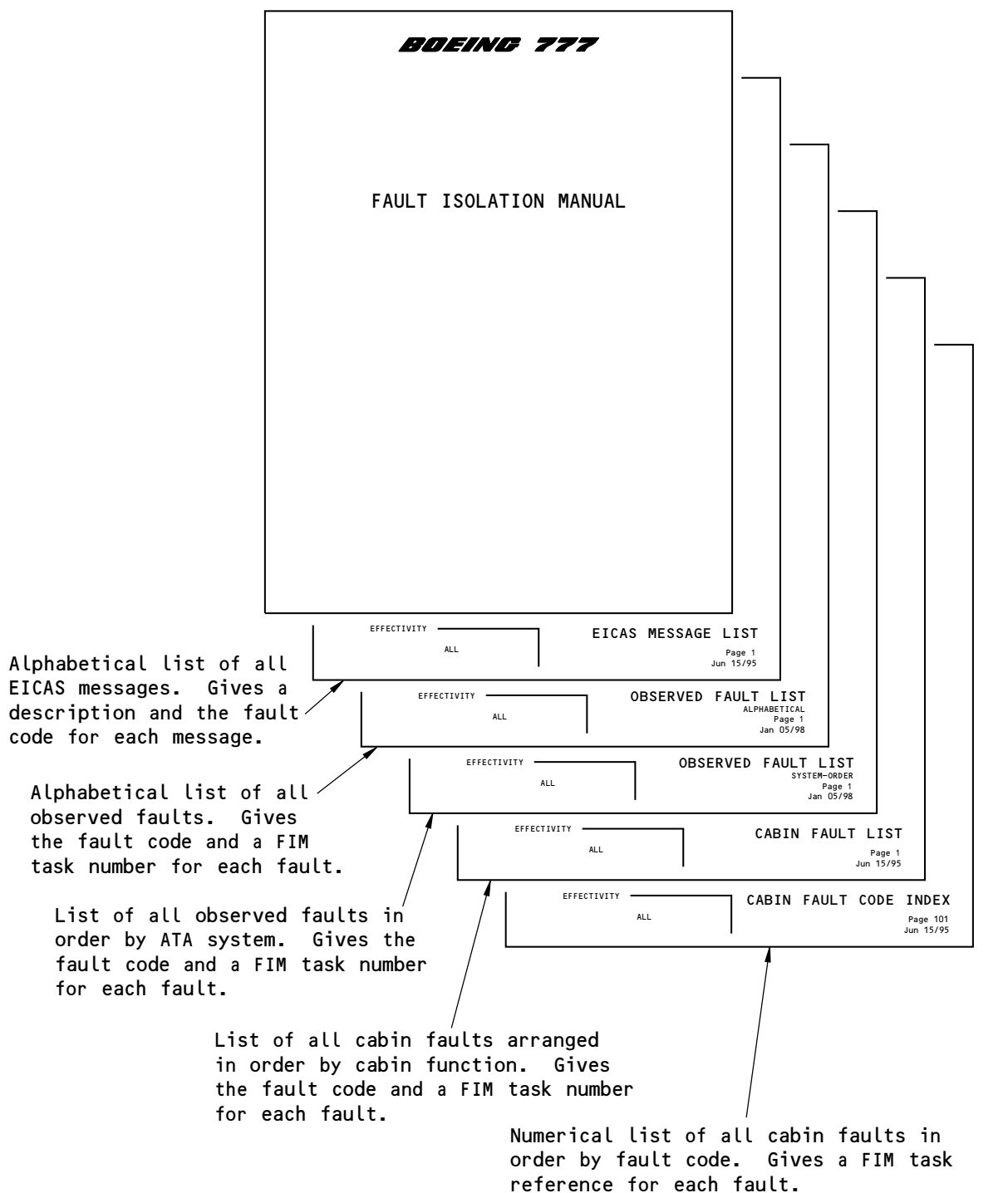
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F39750 S0000132478_V1

Subjects at Front of FIM
Figure 5

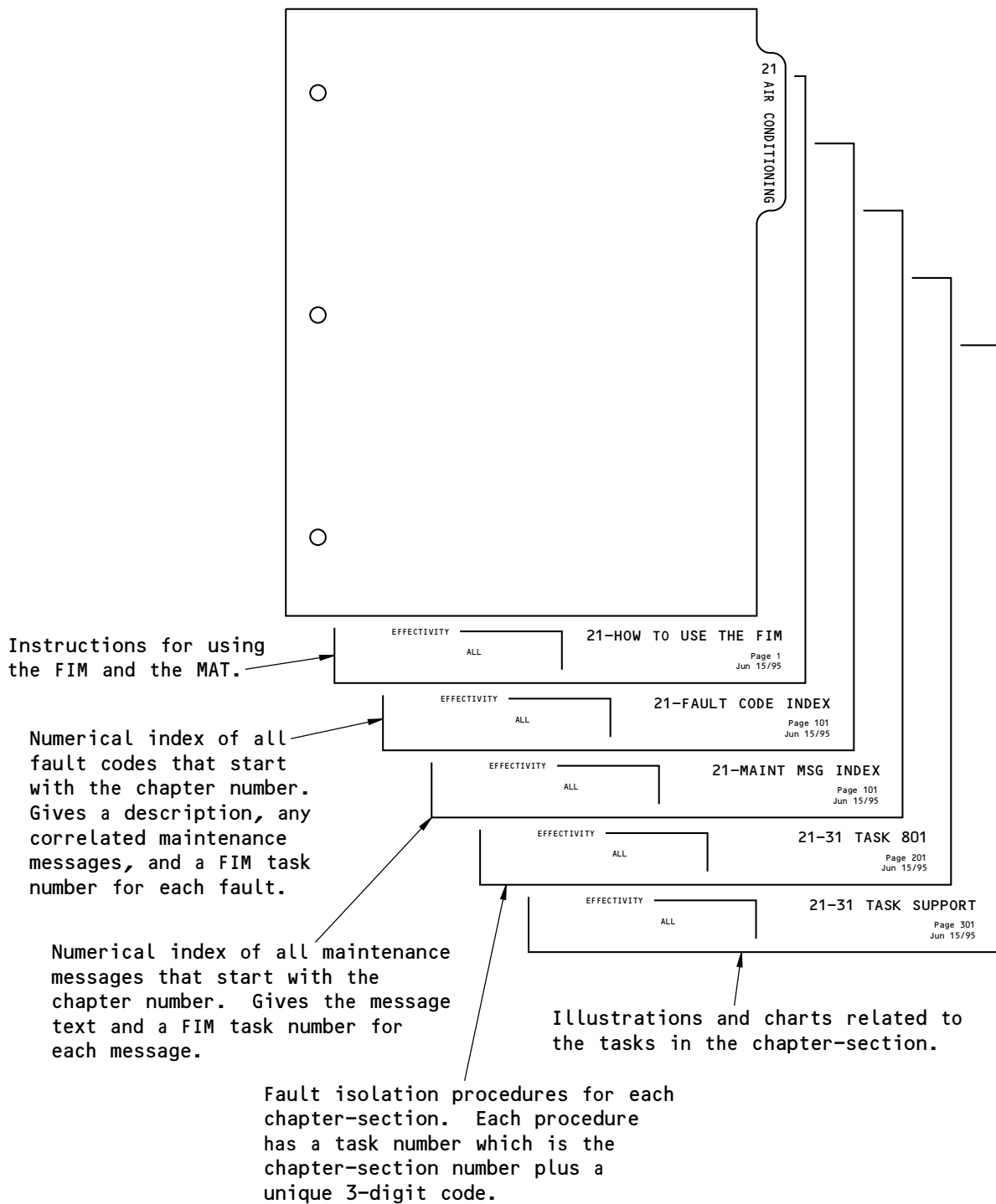
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F39837 S0000132479_V1

Subjects in Each FIM Chapter
Figure 6

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 011 01	ELMS P110 CHANNEL (EICAS STATUS)	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-11790	24-08 TASK 833
		24-11793	24-08 TASK 834
		24-11795	24-08 TASK 804
		24-11796	24-08 TASK 804
		24-11798	24-08 TASK 855
		24-11799	24-08 TASK 839
		24-11800	24-08 TASK 840
		24-11801	24-08 TASK 841
		24-11802	24-08 TASK 842
		24-11803	24-08 TASK 801
		24-11804	24-08 TASK 801
		24-11805	24-08 TASK 801
		24-11806	24-08 TASK 801
		24-11809	24-08 TASK 807
		24-11810	24-08 TASK 827
		24-11811	24-08 TASK 827
		24-11812	24-08 TASK 822
		24-11813	24-08 TASK 822
		24-11815	24-08 TASK 810
		24-11816	24-08 TASK 810
		24-11817	24-08 TASK 810
		24-11818	24-08 TASK 810
		24-11822	24-08 TASK 813
		24-11823	24-08 TASK 851
		24-11824	24-08 TASK 851
		24-11825	24-08 TASK 851
		24-11826	24-08 TASK 851
		24-11827	24-08 TASK 816
		24-11829	24-08 TASK 866
		24-11830	24-08 TASK 867
		24-11831	24-08 TASK 866
		24-11832	24-08 TASK 867
		24-11834	24-08 TASK 817

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 011 01	ELMS P110 CHANNEL (EICAS STATUS)	(continued)	
		24-11835	24-08 TASK 851
		24-11836	24-08 TASK 851
		24-11837	24-08 TASK 816
		24-11838	24-08 TASK 817
		24-12015	24-09 TASK 844
		24-12030	24-09 TASK 844
		24-12096	24-08 TASK 832
		24-12097	24-08 TASK 832
		24-12098	24-08 TASK 830
240 011 02	ELMS P210 CHANNEL (EICAS STATUS)	21-16205	21-25 TASK 823
		23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-11804	24-08 TASK 801
		24-12057	24-08 TASK 836
		24-12121	24-08 TASK 836
		24-12122	24-08 TASK 835
		24-12123	24-08 TASK 835
		24-12132	24-08 TASK 830
		24-12214	24-09 TASK 844
		24-12229	24-09 TASK 844
		24-12800	24-08 TASK 805
		24-12801	24-08 TASK 805
		24-12802	24-08 TASK 856
		24-12804	24-08 TASK 843
		24-12805	24-08 TASK 844
		24-12806	24-08 TASK 845
		24-12808	24-08 TASK 802
		24-12809	24-08 TASK 802
		24-12810	24-08 TASK 802
		24-12811	24-08 TASK 802
		24-12814	24-08 TASK 808
		24-12815	24-08 TASK 828
		24-12817	24-08 TASK 823
		24-12818	24-08 TASK 823
		24-12820	24-08 TASK 811

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 011 02	ELMS P210 CHANNEL (EICAS STATUS)	(continued)	
		24-12821	24-08 TASK 811
		24-12822	24-08 TASK 811
		24-12823	24-08 TASK 811
		24-12827	24-08 TASK 814
		24-12828	24-08 TASK 852
		24-12829	24-08 TASK 852
		24-12830	24-08 TASK 852
		24-12831	24-08 TASK 852
		24-12832	24-08 TASK 852
		24-12833	24-08 TASK 852
		24-12834	24-08 TASK 818
		24-12835	24-08 TASK 818
		24-12836	24-08 TASK 819
		24-12837	24-08 TASK 819
		24-12838	24-08 TASK 826
		24-12839	24-08 TASK 868
		24-12840	24-08 TASK 869
		24-12841	24-08 TASK 868
		24-12842	24-08 TASK 869
		24-12843	24-08 TASK 871
240 011 03	ELMS P310 CHANNEL (EICAS STATUS)	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-13123	24-09 TASK 844
		24-13138	24-09 TASK 844
		24-13802	24-08 TASK 837
		24-13819	24-08 TASK 838
		24-13821	24-08 TASK 832
		24-13840	24-08 TASK 806
		24-13841	24-08 TASK 806
		24-13844	24-08 TASK 847
		24-13845	24-08 TASK 848
		24-13846	24-08 TASK 849
		24-13847	24-08 TASK 850
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 011 03	ELMS P310 CHANNEL (EICAS STATUS)	(continued)	
		24-13850	24-08 TASK 803
		24-13851	24-08 TASK 803
		24-13854	24-08 TASK 809
		24-13855	24-08 TASK 829
		24-13857	24-08 TASK 824
		24-13858	24-08 TASK 824
		24-13860	24-08 TASK 812
		24-13861	24-08 TASK 812
		24-13862	24-08 TASK 812
		24-13863	24-08 TASK 812
		24-13867	24-08 TASK 815
		24-13870	24-08 TASK 853
		24-13871	24-08 TASK 853
		24-13872	24-08 TASK 853
		24-13873	24-08 TASK 853
		24-13874	24-08 TASK 820
		24-13875	24-08 TASK 820
		24-13876	24-08 TASK 821
		24-13877	24-08 TASK 821
240 021 01	ELMS P110 PANEL (EICAS STATUS)	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-11790	24-08 TASK 833
		24-11793	24-08 TASK 834
		24-11795	24-08 TASK 804
		24-11796	24-08 TASK 804
		24-11797	24-08 TASK 854
		24-11798	24-08 TASK 855
		24-11799	24-08 TASK 839
		24-11800	24-08 TASK 840
		24-11801	24-08 TASK 841
		24-11802	24-08 TASK 842
		24-11803	24-08 TASK 801
		24-11805	24-08 TASK 801
		24-11806	24-08 TASK 801
		24-11807	24-08 TASK 807

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 021 01	ELMS P110 PANEL (EICAS STATUS)	(continued)	
		24-11808	24-08 TASK 807
		24-11809	24-08 TASK 807
		24-11810	24-08 TASK 827
		24-11811	24-08 TASK 827
		24-11812	24-08 TASK 822
		24-11813	24-08 TASK 822
		24-11814	24-08 TASK 822
		24-11815	24-08 TASK 810
		24-11816	24-08 TASK 810
		24-11817	24-08 TASK 810
		24-11818	24-08 TASK 810
		24-11819	24-08 TASK 810
		24-11820	24-08 TASK 810
		24-11821	24-08 TASK 813
		24-11822	24-08 TASK 813
		24-11823	24-08 TASK 851
		24-11824	24-08 TASK 851
		24-11825	24-08 TASK 851
		24-11826	24-08 TASK 851
		24-11827	24-08 TASK 816
		24-11828	24-08 TASK 825
		24-11829	24-08 TASK 866
		24-11830	24-08 TASK 867
		24-11831	24-08 TASK 866
		24-11832	24-08 TASK 867
		24-11834	24-08 TASK 817
		24-11835	24-08 TASK 851
		24-11836	24-08 TASK 851
		24-11837	24-08 TASK 816
		24-11838	24-08 TASK 817
		24-12015	24-09 TASK 844
		24-12030	24-09 TASK 844
		24-12096	24-08 TASK 832
		24-12097	24-08 TASK 832
		24-12098	24-08 TASK 830

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 021 01	ELMS P110 PANEL (EICAS STATUS)	(continued)	
		24-18801	24-09 TASK 806
		24-78841	24-08 TASK 860
		24-78861	24-08 TASK 861
		31-54013	31-43 TASK 868
		31-54014	31-43 TASK 869
		31-54121	31-41 TASK 838
		31-54122	31-41 TASK 839
		31-58013	31-43 TASK 872
		31-58014	31-43 TASK 873
		31-58121	31-41 TASK 856
		31-58122	31-41 TASK 857
		31-69401	31-42 TASK 825
		31-69402	31-42 TASK 825
		31-69601	31-42 TASK 857
		31-69602	31-42 TASK 857
		31-89417	31-42 TASK 915
		31-89418	31-42 TASK 915
		31-89617	31-42 TASK 916
		31-89618	31-42 TASK 916
240 021 02	ELMS P210 PANEL (EICAS STATUS)	21-16205	21-25 TASK 823
		23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-12057	24-08 TASK 836
		24-12122	24-08 TASK 835
		24-12132	24-08 TASK 830
		24-12214	24-09 TASK 844
		24-12229	24-09 TASK 844
		24-12800	24-08 TASK 805
		24-12801	24-08 TASK 805
		24-12802	24-08 TASK 856
		24-12803	24-08 TASK 857
		24-12804	24-08 TASK 843
		24-12805	24-08 TASK 844
		24-12806	24-08 TASK 845
		24-12808	24-08 TASK 802

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 021 02	ELMS P210 PANEL (EICAS STATUS)	(continued)	
		24-12809	24-08 TASK 802
		24-12810	24-08 TASK 802
		24-12811	24-08 TASK 802
		24-12812	24-08 TASK 808
		24-12813	24-08 TASK 808
		24-12814	24-08 TASK 808
		24-12815	24-08 TASK 828
		24-12816	24-08 TASK 828
		24-12817	24-08 TASK 823
		24-12818	24-08 TASK 823
		24-12819	24-08 TASK 823
		24-12820	24-08 TASK 811
		24-12821	24-08 TASK 811
		24-12822	24-08 TASK 811
		24-12823	24-08 TASK 811
		24-12824	24-08 TASK 811
		24-12825	24-08 TASK 811
		24-12826	24-08 TASK 814
		24-12827	24-08 TASK 814
		24-12828	24-08 TASK 852
		24-12829	24-08 TASK 852
		24-12830	24-08 TASK 852
		24-12831	24-08 TASK 852
		24-12832	24-08 TASK 852
		24-12833	24-08 TASK 852
		24-12834	24-08 TASK 818
		24-12835	24-08 TASK 818
		24-12836	24-08 TASK 819
		24-12837	24-08 TASK 819
		24-12838	24-08 TASK 826
		24-12839	24-08 TASK 868
		24-12840	24-08 TASK 869
		24-12841	24-08 TASK 868
		24-12842	24-08 TASK 869
		24-12843	24-08 TASK 871

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 021 02	ELMS P210 PANEL (EICAS STATUS)	(continued)	
		24-18802	24-09 TASK 807
		24-78842	24-08 TASK 862
		24-78862	24-08 TASK 863
		31-54013	31-43 TASK 868
		31-54014	31-43 TASK 869
		31-54121	31-41 TASK 838
		31-54122	31-41 TASK 839
		31-58013	31-43 TASK 872
		31-58014	31-43 TASK 873
		31-58121	31-41 TASK 856
		31-58122	31-41 TASK 857
		31-69401	31-42 TASK 825
		31-69402	31-42 TASK 825
		31-69496	31-42 TASK 915
		31-69497	31-42 TASK 915
		31-69601	31-42 TASK 857
		31-69602	31-42 TASK 857
		31-89619	31-42 TASK 916
		31-89620	31-42 TASK 916
240 021 03	ELMS P310 PANEL (EICAS STATUS)	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-13123	24-09 TASK 844
		24-13138	24-09 TASK 844
		24-13802	24-08 TASK 837
		24-13819	24-08 TASK 838
		24-13820	24-08 TASK 838
		24-13821	24-08 TASK 832
		24-13840	24-08 TASK 806
		24-13841	24-08 TASK 806
		24-13842	24-08 TASK 858
		24-13843	24-08 TASK 859
		24-13844	24-08 TASK 847
		24-13845	24-08 TASK 848
		24-13846	24-08 TASK 849
		24-13847	24-08 TASK 850

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 021 03	ELMS P310 PANEL (EICAS STATUS)	(continued)	
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
		24-13850	24-08 TASK 803
		24-13851	24-08 TASK 803
		24-13852	24-08 TASK 809
		24-13853	24-08 TASK 809
		24-13854	24-08 TASK 809
		24-13855	24-08 TASK 829
		24-13856	24-08 TASK 829
		24-13857	24-08 TASK 824
		24-13858	24-08 TASK 824
		24-13859	24-08 TASK 824
		24-13860	24-08 TASK 812
		24-13861	24-08 TASK 812
		24-13862	24-08 TASK 812
		24-13863	24-08 TASK 812
		24-13864	24-08 TASK 812
		24-13865	24-08 TASK 812
		24-13866	24-08 TASK 815
		24-13867	24-08 TASK 815
		24-13868	24-08 TASK 853
		24-13869	24-08 TASK 853
		24-13870	24-08 TASK 853
		24-13871	24-08 TASK 853
		24-13872	24-08 TASK 853
		24-13873	24-08 TASK 853
		24-13874	24-08 TASK 820
		24-13875	24-08 TASK 820
		24-13876	24-08 TASK 821
		24-13877	24-08 TASK 821
		24-18803	24-09 TASK 808
		24-78843	24-08 TASK 864
		24-78863	24-08 TASK 865
		31-54013	31-43 TASK 868
		31-54014	31-43 TASK 869

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 021 03	ELMS P310 PANEL (EICAS STATUS)	(continued) 31-54121 31-54122 31-58013 31-58014 31-58121 31-58122 31-69401 31-69402 31-69601 31-69602 31-89421 31-89422 31-89621 31-89622	31-41 TASK 838 31-41 TASK 839 31-43 TASK 872 31-43 TASK 873 31-41 TASK 856 31-41 TASK 857 31-42 TASK 825 31-42 TASK 825 31-42 TASK 857 31-42 TASK 857 31-42 TASK 915 31-42 TASK 915 31-42 TASK 916 31-42 TASK 916
240 101 00	ELEC CABIN/UTIL OFF (EICAS ADVISORY)		24-51 TASK 831
240 111 00	ELEC IFE/SEATS OFF (EICAS ADVISORY)		24-51 TASK 832
240 480 01	Maintenance memo shows on the MAT: ELMS P110 PANEL.	23-81004 23-81006 24-11790 24-11791 24-11793 24-11794 24-11829 24-11830 24-11831 24-11832	23-91 TASK 804 23-91 TASK 806 24-08 TASK 833 24-08 TASK 833 24-08 TASK 834 24-08 TASK 834 24-08 TASK 866 24-08 TASK 867 24-08 TASK 866 24-08 TASK 867
240 480 02	Maintenance memo shows on the MAT: ELMS P210 PANEL.	23-81004 23-81006 24-12057 24-12121 24-12122 24-12123 24-12839	23-91 TASK 804 23-91 TASK 806 24-08 TASK 836 24-08 TASK 836 24-08 TASK 835 24-08 TASK 835 24-08 TASK 868

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
240 480 02	Maintenance memo shows on the MAT: ELMS P210 PANEL.	(continued) 24-12840 24-12841 24-12842	 24-08 TASK 869 24-08 TASK 868 24-08 TASK 869
240 480 03	Maintenance memo shows on the MAT: ELMS P310 PANEL.	23-81004 23-81006 24-13802 24-13803 24-13819 24-13820	23-91 TASK 804 23-91 TASK 806 24-08 TASK 837 24-08 TASK 837 24-08 TASK 838 24-08 TASK 838
241 011 41	ELEC GEN DRIVE L (EICAS ADVISORY)	24-31551	24-11 TASK 803
241 011 42	ELEC GEN DRIVE R (EICAS ADVISORY)	24-31552	24-11 TASK 803
241 671 41	DRIVE light on DRIVE DISC switch and OFF light on GEN CTRL switch: Stay on after engine is started - left engine.		24-11 TASK 824
241 671 42	DRIVE light on DRIVE DISC switch and OFF light on GEN CTRL switch: Stay on after engine is started - right engine.		24-11 TASK 824
241 672 41	DRIVE light on DRIVE DISC switch: Stays off after engine is stopped - left engine.		24-11 TASK 826
241 672 42	DRIVE light on DRIVE DISC switch: Stays off after engine is stopped - right engine.		24-11 TASK 826
241 811 41	Backup generator: OIL FILTER indication on Electrical maintenance page is blank - left.		24-25 TASK 846
241 811 42	Backup generator: OIL FILTER indication on Electrical maintenance page is blank - right.		24-25 TASK 846
241 812 41	Backup generator: OIL FILTER indication on Electrical maintenance page shows BLOCKED - left.		24-25 TASK 847
241 812 42	Backup generator: OIL FILTER indication on Electrical maintenance page shows BLOCKED - right.		24-25 TASK 847
241 816 41	Backup generator: Differential pressure indicator button is extended when OIL FILTER indication on Electrical maintenance page shows NORMAL - left.		24-25 TASK 864
241 816 42	Backup generator: Differential pressure indicator button is extended when OIL FILTER indication on Electrical maintenance page shows NORMAL - right.		24-25 TASK 864

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
241 817 41	Backup generator: OIL LEVEL indication on Electrical maintenance page is blank - left.		24-25 TASK 874
241 817 42	Backup generator: OIL LEVEL indication on Electrical maintenance page is blank - right.		24-25 TASK 874
241 821 41	IDG OIL FILTER indication on Electrical maintenance page: blank - left.		24-11 TASK 808
241 821 42	IDG OIL FILTER indication on Electrical maintenance page: blank - right.		24-11 TASK 808
241 822 41	IDG OIL FILTER indication on Electrical maintenance page: shows BLOCKED - left.		24-11 TASK 809
241 822 42	IDG OIL FILTER indication on Electrical maintenance page: shows BLOCKED - right.		24-11 TASK 809
241 823 41	IDG OIL LEVEL indication on Electrical maintenance page: blank - left.		24-11 TASK 827
241 823 42	IDG OIL LEVEL indication on Electrical maintenance page: blank - right.		24-11 TASK 827
241 826 41	IDG differential pressure indicator button: extended when OIL FILTER indication on Electrical maintenance page shows NORMAL - left.		24-11 TASK 821
241 826 42	IDG differential pressure indicator button: extended when OIL FILTER indication on Electrical maintenance page shows NORMAL - right.		24-11 TASK 821
241 841 00	Electrical systems: do not energize when airplane electrical power is supplied.		24-41 TASK 810
242 001 00	ELEC GEN OFF APU (EICAS ADVISORY)	24-22002 24-30021 24-30022 24-30033 24-30053 24-31121 24-31122 24-31233 24-31243 24-31423 24-31493 24-31503 24-31513 24-31533	24-41 TASK 821 24-22 TASK 811 24-22 TASK 811 24-22 TASK 812 24-22 TASK 812 24-22 TASK 817 24-22 TASK 844 24-22 TASK 834 24-22 TASK 821 24-21 TASK 801 24-23 TASK 830 24-23 TASK 822 24-21 TASK 802 24-23 TASK 823

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
242 001 00	ELEC GEN OFF APU (EICAS ADVISORY)	(continued)	
		24-31593	24-21 TASK 803
		24-31613	24-22 TASK 848
		24-31633	24-21 TASK 804
		24-31663	24-21 TASK 813
		24-31703	24-23 TASK 824
		24-31713	24-51 TASK 814
		24-31733	24-21 TASK 809
		24-31763	24-21 TASK 816
		24-31783	24-21 TASK 805
		24-31793	24-21 TASK 806
		24-31863	24-23 TASK 806
		24-31893	24-21 TASK 810
		24-32063	24-51 TASK 818
		24-32083	24-51 TASK 819
		24-32093	24-51 TASK 821
242 012 41	ELEC GEN OFF L (EICAS ADVISORY)	24-23710	24-22 TASK 824
		24-30021	24-22 TASK 811
		24-30031	24-22 TASK 811
		24-30051	24-22 TASK 811
		24-31121	24-22 TASK 817
		24-31201	24-22 TASK 818
		24-31231	24-22 TASK 813
		24-31241	24-22 TASK 820
		24-31421	24-11 TASK 801
		24-31491	24-23 TASK 828
		24-31501	24-23 TASK 801
		24-31511	24-11 TASK 802
		24-31531	24-23 TASK 802
		24-31561	24-11 TASK 812
		24-31591	24-11 TASK 804
		24-31611	24-11 TASK 816
		24-31631	24-11 TASK 805
		24-31661	24-21 TASK 811
		24-31701	24-23 TASK 824
		24-31711	24-51 TASK 813

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
242 012 41	ELEC GEN OFF L (EICAS ADVISORY)	(continued)	
		24-31721	24-51 TASK 815
		24-31731	24-21 TASK 808
		24-31761	24-21 TASK 817
		24-31781	24-11 TASK 806
		24-31791	24-11 TASK 806
		24-31861	24-23 TASK 805
242 012 42	ELEC GEN OFF R (EICAS ADVISORY)	24-22002	24-41 TASK 821
		24-23710	24-22 TASK 824
		24-30022	24-22 TASK 811
		24-30032	24-22 TASK 811
		24-30052	24-22 TASK 811
		24-31122	24-22 TASK 844
		24-31202	24-22 TASK 818
		24-31232	24-22 TASK 833
		24-31242	24-22 TASK 820
		24-31422	24-11 TASK 815
		24-31492	24-23 TASK 829
		24-31502	24-23 TASK 801
		24-31512	24-11 TASK 802
		24-31532	24-23 TASK 802
		24-31562	24-11 TASK 812
		24-31592	24-11 TASK 804
		24-31612	24-11 TASK 816
		24-31632	24-11 TASK 805
		24-31662	24-21 TASK 812
		24-31702	24-23 TASK 824
		24-31712	24-51 TASK 825
		24-31722	24-51 TASK 826
		24-31732	24-21 TASK 814
		24-31762	24-21 TASK 818
		24-31782	24-11 TASK 818
		24-31792	24-11 TASK 818
		24-31862	24-23 TASK 805
242 021 41	ELEC GEN SYS L (EICAS STATUS)	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806

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242 021 41	ELEC GEN SYS L (EICAS STATUS)	(continued)	
		24-13814	24-33 TASK 817
		24-23670	24-22 TASK 839
		24-23680	24-22 TASK 840
		24-23690	24-22 TASK 841
		24-23700	24-22 TASK 842
		24-30011	24-22 TASK 811
		24-30021	24-22 TASK 811
		24-30031	24-22 TASK 811
		24-30041	24-22 TASK 811
		24-30051	24-22 TASK 811
		24-31101	24-22 TASK 831
		24-31121	24-22 TASK 817
		24-31132	24-22 TASK 844
		24-31141	24-23 TASK 824
		24-31161	24-23 TASK 824
		24-31171	24-23 TASK 824
		24-31182	24-23 TASK 826
		24-31191	24-23 TASK 827
		24-31201	24-22 TASK 818
		24-31231	24-22 TASK 813
		24-31241	24-22 TASK 820
		24-31251	24-22 TASK 822
		24-31261	24-22 TASK 836
		24-31421	24-11 TASK 801
		24-31501	24-23 TASK 801
		24-31511	24-11 TASK 802
		24-31541	24-21 TASK 815
		24-31591	24-11 TASK 804
		24-31611	24-11 TASK 816
		24-31631	24-11 TASK 805
		24-31651	24-23 TASK 803
		24-31661	24-21 TASK 811
		24-31701	24-23 TASK 824
		24-31711	24-51 TASK 813
		24-31721	24-51 TASK 815

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242 021 41	ELEC GEN SYS L (EICAS STATUS)	(continued)	
		24-31731	24-21 TASK 808
		24-31761	24-21 TASK 817
		24-31811	24-23 TASK 803
		24-31841	24-51 TASK 816
		24-33391	24-23 TASK 809
		24-33401	24-23 TASK 809
		24-33451	24-23 TASK 807
		24-33861	24-23 TASK 837
		24-38801	24-23 TASK 808
		24-38841	24-23 TASK 809
		24-38861	24-23 TASK 809
		24-39401	24-23 TASK 809
		24-39601	24-23 TASK 809
		31-54013	31-43 TASK 868
		31-54014	31-43 TASK 869
		31-54121	31-41 TASK 838
		31-54122	31-41 TASK 839
		31-58013	31-43 TASK 872
		31-58014	31-43 TASK 873
		31-58121	31-41 TASK 856
		31-58122	31-41 TASK 857
		31-69401	31-42 TASK 825
		31-69402	31-42 TASK 825
		31-69423	31-42 TASK 834
		31-69424	31-42 TASK 834
		31-69601	31-42 TASK 857
		31-69602	31-42 TASK 857
		31-69623	31-42 TASK 864
		31-69624	31-42 TASK 864
		NONE	24-22 TASK 846
242 021 42	ELEC GEN SYS R (EICAS STATUS)	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-13814	24-33 TASK 817
		24-23670	24-22 TASK 839
		24-23680	24-22 TASK 840

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242 021 42	ELEC GEN SYS R (EICAS STATUS)	(continued)	
		24-23690	24-22 TASK 841
		24-23700	24-22 TASK 842
		24-30012	24-22 TASK 811
		24-30022	24-22 TASK 811
		24-30032	24-22 TASK 811
		24-30042	24-22 TASK 811
		24-30052	24-22 TASK 811
		24-31102	24-22 TASK 832
		24-31122	24-22 TASK 844
		24-31131	24-22 TASK 817
		24-31142	24-23 TASK 824
		24-31162	24-23 TASK 824
		24-31181	24-23 TASK 825
		24-31192	24-23 TASK 827
		24-31202	24-22 TASK 818
		24-31232	24-22 TASK 833
		24-31242	24-22 TASK 820
		24-31252	24-22 TASK 835
		24-31262	24-22 TASK 837
		24-31422	24-11 TASK 815
		24-31502	24-23 TASK 801
		24-31512	24-11 TASK 802
		24-31542	24-21 TASK 815
		24-31592	24-11 TASK 804
		24-31612	24-11 TASK 816
		24-31632	24-11 TASK 805
		24-31652	24-23 TASK 803
		24-31662	24-21 TASK 812
		24-31702	24-23 TASK 824
		24-31712	24-51 TASK 825
		24-31722	24-51 TASK 826
		24-31732	24-21 TASK 814
		24-31762	24-21 TASK 818
		24-31812	24-23 TASK 803
		24-31842	24-51 TASK 817

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242 021 42	ELEC GEN SYS R (EICAS STATUS)	(continued)	
		24-31962	24-51 TASK 820
		24-31972	24-51 TASK 820
		24-33392	24-23 TASK 809
		24-33402	24-23 TASK 809
		24-33452	24-23 TASK 836
		24-33862	24-23 TASK 838
		24-38802	24-23 TASK 808
		24-38842	24-23 TASK 809
		24-38862	24-23 TASK 809
		24-39402	24-23 TASK 809
		24-39602	24-23 TASK 809
		31-54013	31-43 TASK 868
		31-54014	31-43 TASK 869
		31-54121	31-41 TASK 838
		31-54122	31-41 TASK 839
		31-58013	31-43 TASK 872
		31-58014	31-43 TASK 873
		31-58121	31-41 TASK 856
		31-58122	31-41 TASK 857
		31-69401	31-42 TASK 825
		31-69402	31-42 TASK 825
		31-69425	31-42 TASK 834
		31-69426	31-42 TASK 834
		31-69601	31-42 TASK 857
		31-69602	31-42 TASK 857
		31-69625	31-42 TASK 864
		31-69626	31-42 TASK 864
		NONE	24-22 TASK 847
242 031 41	ELEC BUS ISLN L (EICAS ADVISORY)	24-22002	24-41 TASK 821
		24-23710	24-22 TASK 824
		24-30021	24-22 TASK 811
		24-30022	24-22 TASK 811
		24-30041	24-22 TASK 811
		24-31122	24-22 TASK 844
		24-31141	24-23 TASK 824

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242 031 41	ELEC BUS ISLN L (EICAS ADVISORY)	(continued)	
		24-31161	24-23 TASK 824
		24-31171	24-23 TASK 824
		24-31191	24-23 TASK 827
		24-31202	24-22 TASK 818
		24-31211	24-22 TASK 819
		24-31251	24-22 TASK 822
		24-31253	24-22 TASK 823
		24-31541	24-21 TASK 815
		24-31841	24-51 TASK 816
		24-31861	24-23 TASK 805
		24-32003	24-23 TASK 832
242 031 42	ELEC BUS ISLN R (EICAS ADVISORY)	24-22002	24-41 TASK 821
		24-23710	24-22 TASK 824
		24-30021	24-22 TASK 811
		24-30022	24-22 TASK 811
		24-30042	24-22 TASK 811
		24-31121	24-22 TASK 817
		24-31142	24-23 TASK 824
		24-31162	24-23 TASK 824
		24-31192	24-23 TASK 827
		24-31201	24-22 TASK 818
		24-31212	24-22 TASK 843
		24-31252	24-22 TASK 835
		24-31253	24-22 TASK 823
		24-31542	24-21 TASK 815
		24-31842	24-51 TASK 817
		24-31862	24-23 TASK 805
		24-33873	24-23 TASK 839
242 041 00	ELEC GND HDLG BUS (EICAS ADVISORY)	24-13843	24-08 TASK 859
		24-13850	24-08 TASK 803
		24-13851	24-08 TASK 803
		24-22000	24-41 TASK 821
		24-22460	24-22 TASK 805
		24-22470	24-22 TASK 805
		24-22480	24-22 TASK 806

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242 041 00	ELEC GND HDLG BUS (EICAS ADVISORY)	(continued) 24-22490 24-23940 24-23941	24-22 TASK 806 24-22 TASK 830 24-22 TASK 830
242 042 00	ELEC GND HDLG BUS (EICAS STATUS) Before you do any task listed here, see FIM 24-98 TASK 803. NOTE: AIMS CAN LATCH THIS MESSAGE.	24-13843 24-13850 24-13851 24-22000 24-22460 24-22470 24-22480 24-22490 24-23940 24-23941	24-08 TASK 859 24-08 TASK 803 24-08 TASK 803 24-41 TASK 821 24-22 TASK 805 24-22 TASK 805 24-22 TASK 806 24-22 TASK 806 24-22 TASK 830 24-22 TASK 830
242 051 00	ELEC BACKUP SYS (EICAS ADVISORY)	24-45000 24-45001 24-45002 24-45003 24-45480 24-45490 24-46000 24-46010 24-46020 24-46030 24-46040 24-46050 24-46060 24-46070 24-46080 24-46090 24-46100 24-46110	24-25 TASK 802 24-25 TASK 872 24-25 TASK 876 24-25 TASK 802 24-25 TASK 873 24-25 TASK 873 24-25 TASK 866 24-25 TASK 867 24-25 TASK 810 24-25 TASK 845 24-25 TASK 807 24-25 TASK 841 24-25 TASK 805 24-25 TASK 805 24-25 TASK 861 24-25 TASK 862 24-25 TASK 810 24-25 TASK 845

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242 051 00	ELEC BACKUP SYS (EICAS ADVISORY)	(continued)	
		24-46140	24-25 TASK 807
		24-46150	24-25 TASK 841
		24-46160	24-25 TASK 868
		24-46170	24-25 TASK 868
		24-47000	24-25 TASK 808
		24-47010	24-25 TASK 855
		24-47020	24-25 TASK 808
		24-47030	24-25 TASK 855
		24-47040	24-25 TASK 830
		24-47050	24-25 TASK 856
		24-47080	24-25 TASK 810
		24-47090	24-25 TASK 845
		24-48200	24-25 TASK 834
		24-48210	24-25 TASK 863
		24-48220	24-25 TASK 834
		24-48230	24-25 TASK 863
		24-48360	24-25 TASK 813
		24-48380	24-25 TASK 869
		24-48400	24-25 TASK 814
		24-48420	24-25 TASK 814
		24-48440	24-25 TASK 814
		24-48490	24-25 TASK 834
		24-48500	24-25 TASK 863
		24-48510	24-25 TASK 834
		24-48520	24-25 TASK 863
242 052 00	ELEC BACKUP SYS (EICAS STATUS)	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-13815	24-61 TASK 806
		24-44020	24-25 TASK 826
		24-44030	24-25 TASK 826
		24-44040	24-25 TASK 816
		24-44050	24-25 TASK 827
		24-45000	24-25 TASK 802
		24-45001	24-25 TASK 872
		24-45002	24-25 TASK 876

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242 052 00	ELEC BACKUP SYS (EICAS STATUS)	(continued)	
		24-45003	24-25 TASK 802
		24-45151	24-12 TASK 805
		24-45152	24-12 TASK 805
		24-45161	24-12 TASK 806
		24-45162	24-12 TASK 806
		24-45480	24-25 TASK 873
		24-45490	24-25 TASK 873
		24-46000	24-25 TASK 866
		24-46010	24-25 TASK 867
		24-46020	24-25 TASK 810
		24-46030	24-25 TASK 845
		24-46040	24-25 TASK 807
		24-46050	24-25 TASK 841
		24-46060	24-25 TASK 805
		24-46070	24-25 TASK 805
		24-46080	24-25 TASK 861
		24-46090	24-25 TASK 862
		24-46100	24-25 TASK 810
		24-46110	24-25 TASK 845
		24-46120	24-25 TASK 806
		24-46130	24-25 TASK 806
		24-46140	24-25 TASK 807
		24-46150	24-25 TASK 841
		24-46160	24-25 TASK 868
		24-46170	24-25 TASK 868
		24-47000	24-25 TASK 808
		24-47010	24-25 TASK 855
		24-47020	24-25 TASK 808
		24-47030	24-25 TASK 855
		24-47040	24-25 TASK 830
		24-47050	24-25 TASK 856
		24-47080	24-25 TASK 810
		24-47090	24-25 TASK 845
		24-48000	24-25 TASK 811
		24-48010	24-25 TASK 811

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
242 052 00	ELEC BACKUP SYS (EICAS STATUS)	(continued)	
		24-48020	24-25 TASK 822
		24-48030	24-25 TASK 857
		24-48040	24-25 TASK 822
		24-48050	24-25 TASK 857
		24-48060	24-25 TASK 831
		24-48070	24-25 TASK 831
		24-48080	24-25 TASK 831
		24-48090	24-25 TASK 831
		24-48100	24-25 TASK 812
		24-48110	24-25 TASK 858
		24-48120	24-25 TASK 832
		24-48130	24-25 TASK 859
		24-48140	24-25 TASK 832
		24-48150	24-25 TASK 859
		24-48160	24-25 TASK 833
		24-48170	24-25 TASK 860
		24-48180	24-25 TASK 833
		24-48190	24-25 TASK 860
		24-48240	24-25 TASK 842
		24-48260	24-25 TASK 813
		24-48320	24-25 TASK 835
		24-48330	24-25 TASK 835
		24-48340	24-25 TASK 835
		24-48350	24-25 TASK 835
		24-48360	24-25 TASK 813
		24-48380	24-25 TASK 869
		24-48400	24-25 TASK 814
		24-48420	24-25 TASK 814
		24-48440	24-25 TASK 814
		24-48460	24-25 TASK 815
		24-48801	24-25 TASK 823
		24-48840	24-25 TASK 816
		24-48860	24-25 TASK 827
		24-49401	24-25 TASK 816
		24-49601	24-25 TASK 827

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242 052 00	ELEC BACKUP SYS (EICAS STATUS)	(continued)	
		31-54013	31-43 TASK 868
		31-54014	31-43 TASK 869
		31-54121	31-41 TASK 838
		31-54122	31-41 TASK 839
		31-58013	31-43 TASK 872
		31-58014	31-43 TASK 873
		31-58121	31-41 TASK 856
		31-58122	31-41 TASK 857
		31-69401	31-42 TASK 825
		31-69402	31-42 TASK 825
		31-69431	31-42 TASK 837
		31-69432	31-42 TASK 837
		31-69601	31-42 TASK 857
		31-69602	31-42 TASK 857
		31-69631	31-42 TASK 867
		31-69632	31-42 TASK 867
		73-13111	73-21 TASK 842
		73-13112	73-21 TASK 842
		73-23111	73-21 TASK 842
		73-23112	73-21 TASK 842
242 061 41	ELEC BACKUP GEN L (EICAS ADVISORY)	24-45001	24-25 TASK 872
		24-45003	24-25 TASK 802
		24-45480	24-25 TASK 873
		24-46000	24-25 TASK 866
		24-46040	24-25 TASK 807
		24-46060	24-25 TASK 805
		24-46080	24-25 TASK 861
		24-46100	24-25 TASK 810
		24-46140	24-25 TASK 807
		24-46160	24-25 TASK 868
		24-47000	24-25 TASK 808
		24-47020	24-25 TASK 808
		24-47040	24-25 TASK 830
		24-47080	24-25 TASK 810
		24-48200	24-25 TASK 834

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
242 061 41	ELEC BACKUP GEN L (EICAS ADVISORY)	(continued)	
		24-48220	24-25 TASK 834
		24-48490	24-25 TASK 834
		24-48510	24-25 TASK 834
242 061 42	ELEC BACKUP GEN R (EICAS ADVISORY)	24-45002	24-25 TASK 876
		24-45003	24-25 TASK 802
		24-45490	24-25 TASK 873
		24-46010	24-25 TASK 867
		24-46050	24-25 TASK 841
		24-46070	24-25 TASK 805
		24-46090	24-25 TASK 862
		24-46110	24-25 TASK 845
		24-46150	24-25 TASK 841
		24-46170	24-25 TASK 868
		24-47010	24-25 TASK 855
		24-47030	24-25 TASK 855
		24-47050	24-25 TASK 856
		24-47090	24-25 TASK 845
		24-48210	24-25 TASK 863
		24-48230	24-25 TASK 863
		24-48500	24-25 TASK 863
		24-48520	24-25 TASK 863
242 062 41	ELEC BACKUP GEN L (EICAS STATUS)	24-45001	24-25 TASK 872
		24-45003	24-25 TASK 802
		24-45151	24-12 TASK 805
		24-45161	24-12 TASK 806
		24-45480	24-25 TASK 873
		24-46000	24-25 TASK 866
		24-46040	24-25 TASK 807
		24-46060	24-25 TASK 805
		24-46080	24-25 TASK 861
		24-46100	24-25 TASK 810
		24-46120	24-25 TASK 806
		24-46140	24-25 TASK 807
		24-46160	24-25 TASK 868
		24-47000	24-25 TASK 808

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
242 062 41	ELEC BACKUP GEN L (EICAS STATUS)	(continued)	
		24-47020	24-25 TASK 808
		24-47040	24-25 TASK 830
		24-47080	24-25 TASK 810
		73-13111	73-21 TASK 842
242 062 42	ELEC BACKUP GEN R (EICAS STATUS)	73-23111	73-21 TASK 842
		24-45002	24-25 TASK 876
		24-45003	24-25 TASK 802
		24-45152	24-12 TASK 805
		24-45162	24-12 TASK 806
		24-45490	24-25 TASK 873
		24-46010	24-25 TASK 867
		24-46050	24-25 TASK 841
		24-46070	24-25 TASK 805
		24-46090	24-25 TASK 862
		24-46110	24-25 TASK 845
		24-46130	24-25 TASK 806
		24-46150	24-25 TASK 841
		24-46170	24-25 TASK 868
		24-47010	24-25 TASK 855
		24-47030	24-25 TASK 855
		24-47050	24-25 TASK 856
		24-47090	24-25 TASK 845
		73-13112	73-21 TASK 842
		73-23112	73-21 TASK 842
242 480 00	Maintenance memo shows on the MAT: BACKUP POWER SYSTEM.	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-41000	24-25 TASK 802
		24-44020	24-25 TASK 826
		24-44030	24-25 TASK 826
		24-44040	24-25 TASK 816
		24-44050	24-25 TASK 827
		24-48460	24-25 TASK 815
		24-49401	24-25 TASK 816
		24-49601	24-25 TASK 827

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242 480 41	Maintenance memo shows on the MAT: GCU (LEFT).	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-30001	24-22 TASK 811
		24-31101	24-22 TASK 831
		24-31491	24-23 TASK 828
		24-31601	24-98 TASK 801
		24-31651	24-23 TASK 803
		24-31811	24-23 TASK 803
		24-31861	24-23 TASK 805
		24-33391	24-23 TASK 809
		24-33401	24-23 TASK 809
242 480 42	Maintenance memo shows on the MAT: GCU (RIGHT).	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-30002	24-22 TASK 811
		24-31102	24-22 TASK 832
		24-31492	24-23 TASK 829
		24-31602	24-98 TASK 801
		24-31652	24-23 TASK 803
		24-31812	24-23 TASK 803
		24-31862	24-23 TASK 805
		24-33392	24-23 TASK 809
		24-33402	24-23 TASK 809
242 481 00	Maintenance memo shows on the MAT: GCU (AUX).	23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-30003	24-22 TASK 812
		24-31103	24-23 TASK 835
		24-31493	24-23 TASK 830
		24-31653	24-23 TASK 803
		24-31813	24-23 TASK 803
		24-31863	24-23 TASK 806
		24-33393	24-23 TASK 809
		24-33403	24-23 TASK 809
243 001 00	ELEC BATTERY BUS (EICAS STATUS)	24-13816	24-32 TASK 831
243 002 00	ELEC HOT BATTERY BUS (EICAS STATUS)	24-13801	24-61 TASK 805

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243 011 00	ELEC BATTERY OFF (EICAS ADVISORY)	24-13808	24-33 TASK 822
		24-13842	24-08 TASK 858
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
243 012 00	MAIN BATTERY DISCH (EICAS ADVISORY)	24-13801	24-61 TASK 805
		NONE	24-31 TASK 807
243 021 00	BAT CHARGER MAIN (EICAS STATUS)	24-13794	24-31 TASK 811
		24-13796	24-31 TASK 813
		24-13842	24-08 TASK 858
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
243 022 00	MAIN BATTERY OVHT (EICAS STATUS)	24-13053	24-31 TASK 806
243 023 00	MAIN BATTERY (EICAS STATUS)	24-13796	24-31 TASK 813
243 031 00	BAT CHARGER APU (EICAS STATUS)	24-13804	24-31 TASK 808
		24-13806	24-31 TASK 810
		24-13842	24-08 TASK 858
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
243 032 00	APU BATTERY OVHT (EICAS STATUS)	24-13805	24-31 TASK 809
243 033 00	APU BATTERY (EICAS STATUS)	24-13806	24-31 TASK 810
		24-13842	24-08 TASK 858
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
243 041 41	ELEC TRU L (EICAS STATUS)	24-11787	24-32 TASK 817
		24-13793	24-32 TASK 827
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
243 041 42	ELEC TRU R (EICAS STATUS)	24-12056	24-32 TASK 820
		24-12126	24-51 TASK 841
		24-13797	24-32 TASK 828
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
243 042 01	ELEC TRU C1 (EICAS STATUS)	24-13799	24-32 TASK 829
		24-13815	24-61 TASK 806
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803

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243 042 02	ELEC TRU C2 (EICAS STATUS)	24-12051	24-32 TASK 819
		24-12126	24-51 TASK 841
		24-13800	24-32 TASK 830
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
243 051 00	ELEC STANDBY SYS (EICAS ADVISORY)	21-16205	21-25 TASK 823
		23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-11778	24-32 TASK 818
		24-11790	24-08 TASK 833
		24-11793	24-08 TASK 834
		24-11795	24-08 TASK 804
		24-11796	24-08 TASK 804
		24-12057	24-08 TASK 836
		24-12122	24-08 TASK 835
		24-12778	24-32 TASK 821
		24-12800	24-08 TASK 805
		24-12801	24-08 TASK 805
		24-13781	24-33 TASK 814
		24-13782	24-33 TASK 815
		24-13783	24-32 TASK 822
		24-13784	24-32 TASK 823
		24-13786	24-32 TASK 824
		24-13787	24-32 TASK 825
		24-13789	24-33 TASK 819
		24-13790	24-33 TASK 820
		24-13791	24-32 TASK 826
		24-13801	24-61 TASK 805
		24-13817	24-33 TASK 818
		24-13823	24-08 TASK 872
		24-13824	24-08 TASK 873
		24-13825	24-08 TASK 880
		24-13826	24-08 TASK 881
		24-13827	24-08 TASK 882
		24-13829	24-33 TASK 823
		24-13830	24-33 TASK 824

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243 051 00	ELEC STANDBY SYS (EICAS ADVISORY)	(continued)	
		24-13842	24-08 TASK 858
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
		24-18801	24-09 TASK 806
		24-18802	24-09 TASK 807
		24-78841	24-08 TASK 860
		24-78842	24-08 TASK 862
		24-78861	24-08 TASK 861
		24-78862	24-08 TASK 863
		31-14051	31-09 TASK 821
		31-14052	31-09 TASK 822
		31-14053	31-09 TASK 823
		31-14054	31-09 TASK 824
		31-14055	31-09 TASK 825
		31-14056	31-09 TASK 826
		31-14057	31-09 TASK 827
		31-14058	31-09 TASK 827
		31-17437	31-09 TASK 835
		31-17438	31-09 TASK 836
		31-17472	31-10 TASK 859
		31-17501	31-10 TASK 870
		31-17639	31-10 TASK 814
		31-17640	31-10 TASK 815
		31-17669	31-10 TASK 866
		31-17701	31-10 TASK 863
		31-17937	31-07 TASK 827
		31-17938	31-07 TASK 828
		31-17939	31-07 TASK 829
		31-17940	31-07 TASK 830
		31-18801	31-08 TASK 810
		31-18802	31-08 TASK 811
		31-18803	31-08 TASK 812
		31-18804	31-08 TASK 813
		31-18841	31-08 TASK 814
		31-18842	31-08 TASK 814

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243 051 00	ELEC STANDBY SYS (EICAS ADVISORY)	(continued)	
		31-18863	31-08 TASK 816
		31-18864	31-08 TASK 817
		32-22000	32-09 TASK 809
		32-22001	32-09 TASK 809
		32-22010	32-09 TASK 810
		32-22011	32-09 TASK 811
		32-22020	32-09 TASK 840
		32-22021	32-09 TASK 840
		32-22100	32-09 TASK 809
		32-22101	32-09 TASK 809
		32-22110	32-09 TASK 812
		32-22111	32-09 TASK 805
		32-22120	32-09 TASK 840
		32-22121	32-09 TASK 840
		32-23001	32-09 TASK 841
		32-23011	32-09 TASK 842
		32-23102	32-09 TASK 844
		32-23112	32-09 TASK 845
		32-23201	32-09 TASK 847
		32-23210	32-09 TASK 818
		32-23211	32-09 TASK 848
		32-28801	32-09 TASK 821
		32-28802	32-09 TASK 822
		32-28891	32-09 TASK 823
		32-28892	32-09 TASK 824
243 052 00	ELEC STANDBY SYS (EICAS STATUS)	21-16205	21-25 TASK 823
		23-81004	23-91 TASK 804
		23-81006	23-91 TASK 806
		24-11778	24-32 TASK 818
		24-11790	24-08 TASK 833
		24-11793	24-08 TASK 834
		24-11795	24-08 TASK 804
		24-11796	24-08 TASK 804
		24-12057	24-08 TASK 836
		24-12122	24-08 TASK 835

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243 052 00	ELEC STANDBY SYS (EICAS STATUS)	(continued)	
		24-12778	24-32 TASK 821
		24-12800	24-08 TASK 805
		24-12801	24-08 TASK 805
		24-13781	24-33 TASK 814
		24-13782	24-33 TASK 815
		24-13783	24-32 TASK 822
		24-13784	24-32 TASK 823
		24-13786	24-32 TASK 824
		24-13787	24-32 TASK 825
		24-13789	24-33 TASK 819
		24-13790	24-33 TASK 820
		24-13791	24-32 TASK 826
		24-13801	24-61 TASK 805
		24-13817	24-33 TASK 818
		24-13823	24-08 TASK 872
		24-13824	24-08 TASK 873
		24-13825	24-08 TASK 880
		24-13826	24-08 TASK 881
		24-13827	24-08 TASK 882
		24-13829	24-33 TASK 823
		24-13830	24-33 TASK 824
		24-13842	24-08 TASK 858
		24-13848	24-08 TASK 803
		24-13849	24-08 TASK 803
		24-18801	24-09 TASK 806
		24-18802	24-09 TASK 807
		24-78841	24-08 TASK 860
		24-78842	24-08 TASK 862
		24-78861	24-08 TASK 861
		24-78862	24-08 TASK 863
		31-14051	31-09 TASK 821
		31-14052	31-09 TASK 822
		31-14053	31-09 TASK 823
		31-14054	31-09 TASK 824
		31-14055	31-09 TASK 825

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243 052 00	ELEC STANDBY SYS (EICAS STATUS)	(continued)	
		31-14056	31-09 TASK 826
		31-14057	31-09 TASK 827
		31-14058	31-09 TASK 827
		31-17437	31-09 TASK 835
		31-17438	31-09 TASK 836
		31-17472	31-10 TASK 859
		31-17501	31-10 TASK 870
		31-17639	31-10 TASK 814
		31-17640	31-10 TASK 815
		31-17669	31-10 TASK 866
		31-17701	31-10 TASK 863
		31-17937	31-07 TASK 827
		31-17938	31-07 TASK 828
		31-17939	31-07 TASK 829
		31-17940	31-07 TASK 830
		31-18801	31-08 TASK 810
		31-18802	31-08 TASK 811
		31-18803	31-08 TASK 812
		31-18804	31-08 TASK 813
		31-18841	31-08 TASK 814
		31-18842	31-08 TASK 814
		31-18863	31-08 TASK 816
		31-18864	31-08 TASK 817
		32-22000	32-09 TASK 809
		32-22001	32-09 TASK 809
		32-22010	32-09 TASK 810
		32-22011	32-09 TASK 811
		32-22020	32-09 TASK 840
		32-22021	32-09 TASK 840
		32-22100	32-09 TASK 809
		32-22101	32-09 TASK 809
		32-22110	32-09 TASK 812
		32-22111	32-09 TASK 805
		32-22120	32-09 TASK 840
		32-22121	32-09 TASK 840

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243 052 00	ELEC STANDBY SYS (EICAS STATUS)	(continued) 32-23001 32-23011 32-23102 32-23112 32-23201 32-23210 32-23211 32-28801 32-28802 32-28891 32-28892	32-09 TASK 841 32-09 TASK 842 32-09 TASK 844 32-09 TASK 845 32-09 TASK 847 32-09 TASK 818 32-09 TASK 848 32-09 TASK 821 32-09 TASK 822 32-09 TASK 823 32-09 TASK 824
243 062 00	ELEC STANDBY BUS (EICAS STATUS)		24-51 TASK 827
243 071 00	STANDBY INVERTER (EICAS STATUS)	24-13842 24-13848 24-13849	24-08 TASK 858 24-08 TASK 803 24-08 TASK 803
243 611 00	Battery: Main Battery Current indication shows a DISCH value on ELEC Synoptic (or DIS value on ELECTRICAL Maintenance) Page greater than 5 Amps.		24-31 TASK 814
243 811 00	Electrical power DC/standby system relays in P310 panel: energize and de-energize repeatedly.		24-33 TASK 813
244 480 00	Maintenance memo shows on the MAT: BPCU.	23-81004 23-81006 24-22001 24-22540 24-22760	23-91 TASK 804 23-91 TASK 806 24-41 TASK 821 24-28 TASK 803 24-28 TASK 806
245 001 41	ELEC AC BUS L (EICAS CAUTION)	24-11786 24-22002 24-22590 24-22610 24-22630 24-22650 24-22700 24-22720	24-51 TASK 833 24-41 TASK 821 24-41 TASK 822 24-41 TASK 810 24-41 TASK 802 24-41 TASK 802 24-41 TASK 810 24-41 TASK 803

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
245 001 41	ELEC AC BUS L (EICAS CAUTION)	(continued)	
		24-22740	24-41 TASK 828
		24-22790	24-41 TASK 825
		24-22810	24-41 TASK 830
		24-22830	24-41 TASK 810
		24-22850	24-41 TASK 804
		24-22870	24-41 TASK 804
		24-22920	24-41 TASK 810
		24-22940	24-41 TASK 805
		24-22960	24-41 TASK 831
		24-23710	24-22 TASK 824
		24-30011	24-22 TASK 811
		24-30041	24-22 TASK 811
		24-30043	24-22 TASK 812
		24-30051	24-22 TASK 811
		24-31131	24-22 TASK 817
		24-31141	24-23 TASK 824
		24-31171	24-23 TASK 824
		24-31181	24-23 TASK 825
		24-31251	24-22 TASK 822
		24-31253	24-22 TASK 823
		24-31261	24-22 TASK 836
		24-31263	24-22 TASK 838
		24-31701	24-23 TASK 824
		24-31721	24-51 TASK 815
		24-31842	24-51 TASK 817
		24-32003	24-23 TASK 832
		24-32063	24-51 TASK 818
		24-32083	24-51 TASK 819
		24-33861	24-23 TASK 837
		24-33862	24-23 TASK 838
245 001 42	ELEC AC BUS R (EICAS CAUTION)	24-12127	24-51 TASK 842
		24-22002	24-41 TASK 821
		24-22570	24-41 TASK 801
		24-22590	24-41 TASK 822
		24-22610	24-41 TASK 810

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FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
245 001 42	ELEC AC BUS R (EICAS CAUTION)	(continued)	
		24-22630	24-41 TASK 802
		24-22650	24-41 TASK 802
		24-22700	24-41 TASK 810
		24-22720	24-41 TASK 803
		24-22740	24-41 TASK 828
		24-22790	24-41 TASK 825
		24-22810	24-41 TASK 830
		24-22830	24-41 TASK 810
		24-22850	24-41 TASK 804
		24-22870	24-41 TASK 804
		24-22920	24-41 TASK 810
		24-22940	24-41 TASK 805
		24-22960	24-41 TASK 831
		24-23710	24-22 TASK 824
		24-30012	24-22 TASK 811
		24-30042	24-22 TASK 811
		24-30052	24-22 TASK 811
		24-31132	24-22 TASK 844
		24-31142	24-23 TASK 824
		24-31182	24-23 TASK 826
		24-31252	24-22 TASK 835
		24-31253	24-22 TASK 823
		24-31262	24-22 TASK 837
		24-31702	24-23 TASK 824
		24-31722	24-51 TASK 826
		24-31841	24-51 TASK 816
		24-31962	24-51 TASK 820
		24-31972	24-51 TASK 820
		24-32063	24-51 TASK 818
		24-32093	24-51 TASK 821
		24-33862	24-23 TASK 838
		24-33873	24-23 TASK 839
245 012 31	FLT INST BUS CAPT (EICAS STATUS)	24-13815	24-61 TASK 806
245 012 32	FLT INST BUS F/O (EICAS STATUS)	24-12051	24-32 TASK 819
246 002 41	ELEC DC BUS L (EICAS STATUS)	24-11787	24-32 TASK 817

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246 002 42	ELEC DC BUS R (EICAS STATUS)	24-12056	24-32 TASK 820
		24-12127	24-51 TASK 842

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-11110	FMTF Zero Fuel Weight signal in P110 is out of range.	34-61 TASK 943
24-11111	Fuel Quantity Processor Unit signal is out of range.	28-41 TASK 801
24-11778	Circuit Breaker (DC TIE - L) in P110 is open.	24-32 TASK 818
24-11779	Contactor (UTIL BUS L) in P100 is not in commanded position.	24-51 TASK 834
24-11780*	Power bus (L 28 VAC BUS) in P110 is not powered.	24-53 TASK 805
24-11781*	Power bus (L AC SECT 1 BUS) in P110 is not powered.	24-51 TASK 837
24-11782*	Power bus (L AC SECT 2 BUS) in P110 is not powered.	24-51 TASK 838
24-11783	Power bus (L AC UTIL BUS) in P110 is not powered.	24-51 TASK 835
24-11784*	Power bus (L AC XFR BUS) in P100 is not powered.	24-51 TASK 836
24-11785*	Power bus (L AC XFR DIST BUS) in P110 is not powered.	24-51 TASK 836
24-11786*	Power bus (L MAIN AC BUS) in P100 is not powered.	24-51 TASK 833
24-11787*	Power bus (L MAIN DC BUS) in P110 is not powered.	24-32 TASK 817
24-11789	Fuel Quantity Processor Unit signal is out of range.	28-41 TASK 801
24-11790*	ELMS P110 Electronics Unit has an ARINC 629 fault on System ARINC 629 Bus (left).	24-08 TASK 833
24-11791	ELMS P110 Electronics Unit has a coupler channel fault on System ARINC 629 Bus (left).	24-08 TASK 833
24-11792	All P110 sheddable loads locked out due to underpowered ground cart.	24-08 TASK 831
24-11793*	ELMS P110 Electronics Unit has an ARINC 629 fault on System ARINC 629 Bus (right).	24-08 TASK 834
24-11794	ELMS P110 Electronics Unit has a coupler channel fault on System ARINC 629 Bus (right).	24-08 TASK 834
24-11795*	P110 Computing and Communication Unit channel A has an internal fault.	24-08 TASK 804
24-11796*	P110 Computing and Communication Unit channel B has an internal fault.	24-08 TASK 804
24-11797	P110 Signal Interface Unit 1 has a pull-up fault.	24-08 TASK 854
24-11798	P110 Signal Interface Unit 2 has a pull-up fault.	24-08 TASK 855
24-11799	P110 Signal Interface Unit 1 Channel A has comm Fault.	24-08 TASK 839
24-11800	P110 Signal Interface Unit 1 Channel B has comm fault.	24-08 TASK 840
24-11801	P110 Signal Interface Unit 2 Channel A has comm fault.	24-08 TASK 841
24-11802	Signal Interface Unit 2 Channel B has comm fault.	24-08 TASK 842
24-11803	P110 Signal Interface Unit 1 Channel A has an internal fault.	24-08 TASK 801
24-11804*	P110 Signal Interface Unit 1 channel B has an internal fault.	24-08 TASK 801
24-11805*	P110 Signal Interface Unit 2 Channel A has an internal fault.	24-08 TASK 801

*If the MAT shows LATCHED for the correlated EICAS message, then you must erase the EICAS message after you complete the FIM task.

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-11806*	P110 Signal Interface Unit 2 Channel B has an internal fault.	24-08 TASK 801
24-11807	P110 Computing and Comm Unit Channel A and Channel B have incompatible software.	24-08 TASK 807
24-11808	Computing and Communication Unit has an incompatible software in CH A.	24-08 TASK 807
24-11809	Computing and Communication Unit has an incompatible software in CH B.	24-08 TASK 807
24-11810	Computing and Comm Unit SW Channel A is incompatible with PVI.	24-08 TASK 827
24-11811	P210 Computing and Comm Unit SW Channel B is incompatible with PVI plug.	24-08 TASK 827
24-11812	ELMS P110 Channel A software is incompatible with CCU hardware.	24-08 TASK 822
24-11813	ELMS P110 channel B Software is incompatible with CCU hardware.	24-08 TASK 822
24-11814	AIMS-2, CMCF LDI 3114-BCG-00W-16; P110 Computing and Comm Unit Channel A and Channel B software are incompatible with CCU hardware. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; P110 Computing and Comm Unit channel A and channel B software are incompatible with CCU hardware.	24-08 TASK 822
24-11815	P110 Computing and Comm Unit channel A is incompatible with SIU1 channel A.	24-08 TASK 810
24-11816	P110 Computing and Comm Unit channel A is incompatible with SIU 2 channel A.	24-08 TASK 810
24-11817	P110 Computing and Comm Unit channel B is incompatible with SIU 1 channel B.	24-08 TASK 810
24-11818	P110 Computing and Comm Unit channel B is incompatible with SIU 2 channel B.	24-08 TASK 810
24-11819	Computing and Comm Unit channel A and channel B are incompatible with SIU 1.	24-08 TASK 810
24-11820	Computing and Comm Unit channels A and channel B are incompatible with SIU 2.	24-08 TASK 810
24-11821	P110 Computing and Comm Unit channel A panel ID does not agree with the SIU panel ID.	24-08 TASK 813
24-11822	P110 Computing and Comm Unit channel B panel ID does not agree with the SIU panel ID.	24-08 TASK 813
24-11823	P110 Signal Interface Unit 1 channel A has an ID fault.	24-08 TASK 851

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-11824	P110 Signal Interface Unit 2 channel A has an ID fault.	24-08 TASK 851
24-11825	P110 Signal Interface Unit 1 has an ID parity fault.	24-08 TASK 851
24-11826	P110 Signal Interface Unit 2 has an ID parity fault.	24-08 TASK 851
24-11827	P110 Computing and Comm Unit channel B OFP software is invalid.	24-08 TASK 816
24-11828	P110 Computing and Comm Unit and P100 Power Control Unit are incompatible.	24-08 TASK 825
24-11829	P110 Computing and Comm Unit channel A has communication fault on P100 bus 1.	24-08 TASK 866
24-11830	P110 Computing and Comm Unit channel A has communication fault on P100 bus 2.	24-08 TASK 867
24-11831	P110 Computing and Comm Unit channel B has communication fault on P100 bus 1.	24-08 TASK 866
24-11832	P110 Computing and Comm Unit channel B has communication fault on P100 bus 2.	24-08 TASK 867
24-11833	P100 Power Panel Controller power CB is open.	24-08 TASK 870
24-11834	P110 Computing and Comm Unit channel A CT software is invalid.	24-08 TASK 817
24-11835	Signal Interface Unit 1 channel B has an ID fault.	24-08 TASK 851
24-11836	ELMS Signal interface unit 2 channel B has an invalid ID fault..	24-08 TASK 851
24-11837	ELMS P110 channel A has invalid OFP SW.	24-08 TASK 816
24-11838	ELMS P110 channel B has invalid CT software.	24-08 TASK 817
24-11900	P100 Power Panel Controller UTL bus L function is disabled.	24-51 TASK 834
24-12015	Panel Variant Identifier (Programming Plug) in P110 channel A is failed.	24-09 TASK 844
24-12030	Panel Variant Identifier (Programming Plug) in P110 channel B is failed.	24-09 TASK 844
24-12046	Contactor (UTIL BUS R) in P200) is not in commanded position.	24-51 TASK 839
24-12051	Power bus (F/O FLT INST BUS) in P210 is not powered.	24-32 TASK 819
24-12056*	Power bus (R MAIN DC BUS) in P210 is not powered.	24-32 TASK 820
24-12057*	ELMS P210 Electronics Unit has an ARINC 629 fault on System ARINC 629 Bus (right).	24-08 TASK 836
24-12096	Panel Variant Identifier (Programming Plug) in P110 channel A is failed.	24-08 TASK 832
24-12097	Panel Variant Identifier (Programming Plug) in P110 channel B is failed.	24-08 TASK 832
24-12098	ELMS P110 Electronics Unit channel arbitration logic is invalid.	24-08 TASK 830

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-12099	P200 Power Panel Controller UTL bus R function is disabled.	24-51 TASK 839
24-12121	ELMS P210 Electronics Unit has a coupler channel fault on System ARINC 629 Bus (right).	24-08 TASK 836
24-12122*	ELMS P210 Electronics Unit has an ARINC 629 fault on System ARINC 629 Bus (left).	24-08 TASK 835
24-12123	ELMS P210 Electronics Unit has a coupler channel fault on System ARINC 629 Bus (left).	24-08 TASK 835
24-12124*	Power bus (R AC SECT 1 BUS) in P210 is not powered.	24-51 TASK 840
24-12125*	Power bus (R AC XFR DIST BUS) in P210 is not powered.	24-51 TASK 841
24-12126*	Power bus (R AC XFR BUS) in P200 is not powered.	24-51 TASK 841
24-12127*	Power bus (R MAIN AC BUS) in P200 is not powered.	24-51 TASK 842
24-12128*	Power bus (R AC SECT 2 BUS) in P210 is not powered.	24-51 TASK 843
24-12129	Power bus (UTIL BUS R) in P210 is not powered.	24-51 TASK 844
24-12131	All P210 sheddable loads locked out due to underpowered ground cart.	24-08 TASK 831
24-12132	ELMS P210 Electronics Unit channel arbitration logic is invalid.	24-08 TASK 830
24-12214	Panel Variant Identifier (Programming Plug) in P210 is failed.	24-09 TASK 844
24-12229	Panel Variant Identifier (Programming Plug) in P210 is failed.	24-09 TASK 844
24-12250	Fuel Quantity Processor Unit signal is out of range.	28-41 TASK 801
24-12251	FMCF Zero Fuel Weight signal in P210 is out of range.	34-61 TASK 943
24-12254	Fuel Quantity Processor Unit signal is out of range.	28-41 TASK 801
24-12778	Circuit Breaker (DC TIE - R) in P210 is open.	24-32 TASK 821
24-12800*	P210 Computing and Communication Unit channel A has an internal fault.	24-08 TASK 805
24-12801*	P210 Computing and Communication Unit channel B has an internal fault.	24-08 TASK 805
24-12802	P210 Signal Interface Unit1 has a pull-up fault.	24-08 TASK 856
24-12803	P210 Signal Interface Unit 2 has a pull-up fault.	24-08 TASK 857
24-12804	P210 Signal Interface Unit 1 channel A has a comm fault.	24-08 TASK 843
24-12805	P210 Signal Interface Unit 1 channel B has a comm fault.	24-08 TASK 844
24-12806	P210 Signal Interface Unit 2 channel A has a comm fault.	24-08 TASK 845
24-12807	P210 Signal Interface Unit 2 channel B has a comm fault.	24-08 TASK 846
24-12808*	P 210 Signal Interface Unit 1 Channel A has an internal fault.	24-08 TASK 802
24-12809*	P210 Signal Interface Unit 1 Channel B has an internal fault.	24-08 TASK 802
24-12810*	P 210 Signal Interface Unit 2 Channel A has an internal fault.	24-08 TASK 802
24-12811*	P 210 Signal Interface Unit 2 Channel B has an internal fault.	24-08 TASK 802

*If the MAT shows LATCHED for the correlated EICAS message, then you must erase the EICAS message after you complete the FIM task.

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-12812	P210 Computing and Comm Unit Channel A and Channel B have incompatible software.	24-08 TASK 808
24-12813	P210 Computing and Comm Unit Channel A has incompatible software.	24-08 TASK 808
24-12814	P210 Computing and Comm Unit Channel B has incompatible software.	24-08 TASK 808
24-12815	P210 Computing and Comm Unit SW Channel A is incompatible with PVI.	24-08 TASK 828
24-12816	P210 Computing and Comm Unit SW Channel B is incompatible with PVI.	24-08 TASK 828
24-12817	ELMS P210 Channel A software is incompatible with CCU hardware.	24-08 TASK 823
24-12818	AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; ELMS P210 Channel B Software is incompatible with CCU hardware. AIMS-2, CMCF LDI 3114-BCG-00W-16; ELMS P210 Channel B software is incompatible with CCU hardware.	24-08 TASK 823
24-12819	P210 Computing and Comm Unit channel A and channel B software are incompatible with CCU hardware.	24-08 TASK 823
24-12820	P210 Computing and Comm Unit channel A is incompatible with SIU1 channel A.	24-08 TASK 811
24-12821	P210 Computing and Comm Unit channel A is incompatible with SIU 2 channel A.	24-08 TASK 811
24-12822	P210 Computing and Comm Unit channel B is incompatible with SIU1 channel B.	24-08 TASK 811
24-12823	P210 Computing and Comm Unit channel B is incompatible with SIU 2 channel B.	24-08 TASK 811
24-12824	P210 Computing and Comm Unit channel A or channel B are incompatible with SIU 1.	24-08 TASK 811
24-12825	P210 Computing and Comm Unit channel A or channel B are incompatible with SIU 2.	24-08 TASK 811
24-12826	P210 Computing and Comm Unit channel A panel ID does not agree with the SIU panel ID.	24-08 TASK 814
24-12827	P210 Computing and Comm Unit channel B panel ID does not agree with the SIU panel ID.	24-08 TASK 814
24-12828	P210 Signal Interface Unit1 channel A has an ID fault.	24-08 TASK 852
24-12829	P210 Signal Interface Unit 2 channel A has an ID fault.	24-08 TASK 852

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24-12830	P210 Signal Interface Unit 1 CH B has an ID fault.	24-08 TASK 852
24-12831	P210 Signal Interface Unit 2 channel B has an ID fault.	24-08 TASK 852
24-12832	P210 Signal Interface Unit1 has an ID parity fault.	24-08 TASK 852
24-12833	P210 Signal Interface Unit 2 has an ID parity fault.	24-08 TASK 852
24-12834	ELMS P210 channel A OFP software is invalid.	24-08 TASK 818
24-12835	P210 Computing and Comm Unit channel B software is invalid.	24-08 TASK 818
24-12836	P210 Computing and Comm Unit channel A CT software is invalid.	24-08 TASK 819
24-12837	P210 Computing and Comm Unit channel B CT software is invalid.	24-08 TASK 819
24-12838	P210 Computing and Comm Unit and P100 PPC Unit are incompatable.	24-08 TASK 826
24-12839	P210 Computing and Comm Unit channel A has communication fault on P200 bus 1.	24-08 TASK 868
24-12840	P210 Computing and Comm Unit channel A has communication fault on P200 bus 2.	24-08 TASK 869
24-12841	Computing and Comm Unit channel B has communication fault on P200 bus1.	24-08 TASK 868
24-12842	P210 Computing and Comm Unit channel B has communication fault on P200 bus 2.	24-08 TASK 869
24-12843	P200 Power Pannel Controller power CB is open.	24-08 TASK 871
24-13011	ELMS P310 Electronics Unit channel arbitration logic is invalid.	24-08 TASK 830
24-13053	Main Battery is overheated.	24-31 TASK 806
24-13123	Panel Variant Identifier (Programming Plug) in P310 channel A is failed.	24-09 TASK 844
24-13138	Panel Variant Identifier (Programming Plug) in P310 channel B is failed.	24-09 TASK 844
24-13781*	Relay (MAIN BATT) in P310 is not in commanded position.	24-33 TASK 814
24-13782	Relay (AC STANDBY POWER) in P310 is not in commanded position.	24-33 TASK 815
24-13783*	Relay (DC TIE) in P210 is not in commanded position.	24-32 TASK 822
24-13784	Relay (CAPT-F/O TIE BUS) in P310 is not in commanded position.	24-32 TASK 823
24-13786	Relay (TRU C1) in P310 is not in commanded position.	24-32 TASK 824
24-13787	Relay (TRU C2) in P310 is not in commanded position.	24-32 TASK 825
24-13788*	Relay (GND PWR BAT) in P310 is not in commanded position.	24-33 TASK 816
24-13789*	Relay (BAT-CAPT ISO) in P310 is not in commanded position.	24-33 TASK 819
24-13790*	Relay (AC STBY CNTL) in P310 is not in commanded position.	24-33 TASK 820

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24-13791	Relay (TRU C1 XFR ENABLE) in P310 is not in commanded position.	24-32 TASK 826
24-13792	ELMS P310 Electronics Unit failed to deploy the RAT.	24-33 TASK 821
24-13793*	Transformer/Rectifier unit (TRU L) is inoperative.	24-32 TASK 827
24-13794*	Main battery charger has an internal fault.	24-31 TASK 811
24-13796*	Main Battery is weak.	24-31 TASK 813
24-13797*	Transformer/Rectifier unit (TRU R) is inoperative.	24-32 TASK 828
24-13799	Transformer/Rectifier unit (TRU C1) is inoperative.	24-32 TASK 829
24-13800	Transformer/Rectifier unit (TRU C2) is inoperative.	24-32 TASK 830
24-13801*	Power bus (HOT BAT BUS) in P310 is not powered.	24-61 TASK 805
24-13802*	ELMS P310 Electronics Unit has an ARINC 629 fault on System ARINC 629 Bus (left).	24-08 TASK 837
24-13803	ELMS P310 Electronics Unit has a coupler channel fault on System ARINC 629 Bus (left).	24-08 TASK 837
24-13804	APU battery charger has an internal fault.	24-31 TASK 808
24-13805	APU Battery is overheated.	24-31 TASK 809
24-13806	APU Battery is weak.	24-31 TASK 810
24-13807	Transformer/Rectifier unit (DC GND HDLG) in P320 is inoperative.	24-61 TASK 804
24-13808	Battery switch S3 is in off position.	24-33 TASK 822
24-13809*	Power bus (AC GND SVCE BUS) in P300 is not powered.	24-22 TASK 849
24-13810	Power bus (AC GND SVCE SECT 1 BUS) in P320 is not powered.	24-51 TASK 845
24-13811*	Power bus (AC GND SVCE SECT 2 BUS) in P320 is not powered.	24-51 TASK 850
24-13812	Power bus (AC GND HDLG BUS) in P300 is unpowered when GND HDLG RLY is closed.	24-51 TASK 849
24-13813	Power bus (28V AC GND SVCE BUS) in P320 is not powered.	24-53 TASK 806
24-13814*	Power bus (BAT BUS SECT 2) in P310 is not powered.	24-33 TASK 817
24-13815*	Power bus (CAPT FLT INST BUS) in P310 is not powered.	24-61 TASK 806
24-13816*	Power bus (BAT BUS) in P310 is not powered.	24-32 TASK 831
24-13817*	Power bus (AC STANDBY BUS) in P310 is not powered.	24-33 TASK 818
24-13818*	Power bus (28V AC STANDBY BUS) in P310 is not powered.	24-53 TASK 807
24-13819*	ELMS P310 Electronics Unit has an ARINC 629 fault on System ARINC 629 Bus (right).	24-08 TASK 838
24-13820	ELMS P310 Electronics Unit has a coupler channel fault on System ARINC 629 Bus (right).	24-08 TASK 838

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-13821	Panel Variant Identifier (Programming Plug) in P310 channel A is failed.	24-08 TASK 832
24-13823	Relay (ELMS START PWR CTRL) in P310 is not in commanded position.	24-08 TASK 872
24-13824	Relay (P310 HOT BAT LATCH) in P310 is not in commanded position.	24-08 TASK 873
24-13825	Relay (ELMS CTRL AIR MODE) in P310 is not in commanded position.	24-08 TASK 880
24-13826	Relay (ELMS CTRL GND MODE) in P310 is not in commanded position.	24-08 TASK 881
24-13827	Weight-On-Wheels Card-(right) Air ground signals is invalid.	24-08 TASK 882
24-13829	Circuit Breaker (ELMS RAT DEPLOY) in P310 is open.	24-33 TASK 823
24-13830	Standby Switch is in off position.	24-33 TASK 824
24-13840*	P310 Computing and Communication Unit channel A has an internal fault.	24-08 TASK 806
24-13841*	P310 Computing and Communication Unit channel B has an internal fault.	24-08 TASK 806
24-13842*	P310 Signal Interface Unit 1 has a pull up fault.	24-08 TASK 858
24-13843*	P310 Signal Interface Unit 1 has a pull up fault.	24-08 TASK 859
24-13844	AIMS-2, CMCF LDI 3114-BCG-00W-16; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; P310 Signal Interface Unit 1 Channel A has comm fault. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; P310 Signal Interface Unit Channel A has comm fault.	24-08 TASK 847
24-13845	P310 Signal Interface Unit 1 Channel B has comm fault.	24-08 TASK 848
24-13846	P310 Signal Interface Unit 2 Channel A has comm fault.	24-08 TASK 849
24-13847	P310 Signal Interface Unit 2 Channel B has comm fault.	24-08 TASK 850
24-13848*	P310 Signal Interface Unit 1 Channel A has an internal fault.	24-08 TASK 803
24-13849*	P310 Signal Interface Unit 1 Channel B has an internal fault.	24-08 TASK 803
24-13850*	AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; P310 Signal Interface Unit 1 Channel A has an internal fault. AIMS-2, CMCF LDI 3114-BCG-00W-16; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; P310 Signal Interface Unit 2 Channel A has an internal fault.	24-08 TASK 803
24-13851*	P310 Signal Interface Unit 2 Channel B has an internal fault.	24-08 TASK 803

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-13852	P310 Computing and Comm Unit Channel A and Channel B have incompatible software.	24-08 TASK 809
24-13853	P310 Computing and Comm Unit Channel A has incompatible software.	24-08 TASK 809
24-13854	AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; P310 Computing and Comm Unit Channel B has incompatible Software. AIMS-2, CMCF LDI 3114-BCG-00W-16; P310 Computing and Comm Unit channel B has incompatible Software.	24-08 TASK 809
24-13855	P310 Computing and Comm Unit Channel A SW is incompatible with PVI.	24-08 TASK 829
24-13856	P310 Computing and Comm Unit Channel B SW is incompatible with PVI.	24-08 TASK 829
24-13857	ELMS P310 Channel A software is incompatible with CCU.	24-08 TASK 824
24-13858	ELMS P310 Channel B software is incompatible with CCU.	24-08 TASK 824
24-13859	P310 Computing and Comm Unit channel A and Channel B software are incompatible with CCU hardware.	24-08 TASK 824
24-13860	P310 Computing and Comm Unit channel A is incompatible with SIU1 channel A.	24-08 TASK 812
24-13861	P310 Computing and Comm Unit channel A is incompatible with SIU 2 channel A.	24-08 TASK 812
24-13862	P310 Computing and Comm Unit channel A is incompatible with SIU 1 channel B.	24-08 TASK 812
24-13863	P310 Computing and Comm Unit Channel B is incompatible with SIU 2 channel B.	24-08 TASK 812
24-13864	AIMS-2, CMCF LDI 3114-BCG-00W-16; P310 Computing and Comm Unit Channel A and Channel B are incompatible with SIU 1. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; P310 Computing and Comm Unit channel A and channel B are incompatible with SIU 1.	24-08 TASK 812

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-13865	AIMS-2, CMCF LDI 3114-BCG-00W-16; P310 Computing and Comm Unit Channel A and Channel B are incompatible with SIU 2. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; P310 Computing and Comm Unit channel A and channel B are incompatible with SIU 2.	24-08 TASK 812
24-13866	P310 Computing and Comm Unit channel A panel ID does not agree with the SIU panel ID.	24-08 TASK 815
24-13867	P310 Computing and Comm Unit channel B panel ID does not agree with the SIU panel ID.	24-08 TASK 815
24-13868	P310 Signal Interface Unit 1 channel A has an ID fault.	24-08 TASK 853
24-13869	P310 Signal Interface Unit 1 channel A has an ID fault.	24-08 TASK 853
24-13870	P310 Signal Interface Unit 1 channel B has an ID fault.	24-08 TASK 853
24-13871	P310 Signal Interface Unit 2 channel B has an ID fault.	24-08 TASK 853
24-13872	P310 Signal Interface Unit 1 has an ID parity fault.	24-08 TASK 853
24-13873	P310 Signal Interface Unit 2 channel B has an ID parity fault.	24-08 TASK 853
24-13874	P310 Computing and Comm Unit channel A OFP software is invalid.	24-08 TASK 820
24-13875	P310 Computing and Comm Unit channel B OFP software is invalid.	24-08 TASK 820
24-13876	P310 Computing and Comm Unit channel A CT software is invalid.	24-08 TASK 821
24-13877	P310 Computing and Comm Unit channel B CT software is invalid.	24-08 TASK 821
24-18801*	ELMS P110 - Power Management Panel - (left) has no output on any bus.	24-09 TASK 806
24-18802*	ELMS P210 - Power Management Panel - (right) has no output on any bus.	24-09 TASK 807
24-18803*	ELMS P310 - Power Management Panel - (stdby) has no output on any bus.	24-09 TASK 808
24-19407	ELMS P110 Electronics Unit has no input from Fuel Quantity Processor Unit on System ARINC 629 Bus (left).	24-08 TASK 874
24-19408	ELMS P210 Electronics Unit has no input from Fuel Quantity Processor Unit on System ARINC 629 Bus (left).	24-08 TASK 875
24-19409	ELMS P310 Electronics Unit has no input from Fuel Quantity Processor Unit on System ARINC 629 Bus (left).	24-08 TASK 876

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-19607	ELMS P110 Electronics Unit has no input from Fuel Quantity Processor Unit on System ARINC 629 Bus (right).	24-08 TASK 879
24-19608	ELMS P310 Electronics Unit has no input from Fuel Quantity Processor Unit on System ARINC 629 Bus (right).	24-08 TASK 878
24-22000*	Bus Power Control Unit (BPCU) has an internal fault.	24-41 TASK 821
24-22001	Bus Power Control Unit (BPCU) has an internal fault.	24-41 TASK 821
24-22002	Bus Power Control Unit (BPCU) has an internal fault.	24-41 TASK 821
24-22210	Auxiliary Power Breaker (APB) sense circuit is failed.	24-22 TASK 804
24-22220	APU Gen Point of Regulation Phase C Wiring failed.	24-21 TASK 807
24-22230	Bus Power Control Unit (BPCU) 28 Volt Switch Power circuit is shorted.	24-41 TASK 808
24-22400	Right Main Bus Phase C Wiring phase C voltage sense circuit is open.	24-28 TASK 802
24-22440	Tie Bus voltage sense circuit is open.	24-28 TASK 801
24-22460*	Ground Handling Relay (GHR) is not in commanded position.	24-22 TASK 805
24-22470*	Ground Handling Relay (GHR) APU coil circuit is shorted.	24-22 TASK 805
24-22480*	Ground Handling Relay (GHR) is not in commanded position.	24-22 TASK 806
24-22490*	Ground Handling Relay (GHR) External Power Coil circuit is shorted.	24-22 TASK 806
24-22500	Ground Service Select Relay (GSSR) is not in commanded position.	24-22 TASK 807
24-22510	Ground Service Select Relay coil circuit is shorted.	24-22 TASK 807
24-22520	Ground Service Transfer Relay (GSTR) is not in commanded position.	24-22 TASK 808
24-22530	Ground Service Transfer Relay coil circuit is shorted.	24-22 TASK 808
24-22540	Bus Power Control Unit (BPCU) has an ARINC 629 fault on System ARINC 629 Bus (left).	24-28 TASK 803
24-22570	Primary External Power Contactor circuit is failed.	24-41 TASK 801
24-22580	Primary External Power Contactor circuit is shorted.	24-41 TASK 801
24-22590	Primary External Power Source single phase circuit is open or has high resistance.	24-41 TASK 822
24-22610	Primary External Power Source current is high.	24-41 TASK 810
24-22630	Primary External Power Source frequency is high.	24-41 TASK 802
24-22650	Primary External Power Source voltage is high.	24-41 TASK 802
24-22670	Primary External Power Source phase sequence is incorrect.	24-41 TASK 811
24-22680	Primary External Power Source phase sequence is incorrect.	24-41 TASK 811

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-22690	Primary External Power Interlock Wiring voltage or current is high.	24-41 TASK 812
24-22700	115 Vac Main Buses have unbalanced current.	24-41 TASK 810
24-22720	Primary External Power Source frequency is low.	24-41 TASK 803
24-22740	115 Vac Main Buses voltage is low.	24-41 TASK 828
24-22760	Bus Power Control Unit has an ARINC 629 fault on System ARINC 629 Bus (right).	24-28 TASK 806
24-22790	Secondary External Power Contactor Coil Wiring circuit is failed.	24-41 TASK 825
24-22800	Secondary External Power Contactor Coil Wiring circuit is failed.	24-41 TASK 826
24-22810	Secondary External Power single phase circuit is open or has high resistance.	24-41 TASK 830
24-22830	Secondary External Power Source current is high.	24-41 TASK 810
24-22850	Secondary External Power Source frequency is high.	24-41 TASK 804
24-22870	Secondary External Power Source voltage is high.	24-41 TASK 804
24-22890	Secondary External Power Source phase sequence is incorrect.	24-41 TASK 813
24-22900	Secondary External Power Source phase sequence is incorrect.	24-41 TASK 813
24-22910	Secondary External Power Interlock Wiring circuit failed.	24-41 TASK 814
24-22920	115 Vac Main Buses have unbalanced current.	24-41 TASK 810
24-22940	Secondary External Power Source frequency is low.	24-41 TASK 805
24-22960	115 Vac Main Buses voltage is low.	24-41 TASK 831
24-23670	Left Generator Control Breaker is not in the commanded position.	24-22 TASK 839
24-23680	Left Bus Tie Breaker is not in the commanded position.	24-22 TASK 840
24-23690	Generator Control Breaker (R) is not in commanded position.	24-22 TASK 841
24-23700	Right Bus Tie Breaker (R) is not in commanded position.	24-22 TASK 842
24-23710	Auxiliary Power Breaker (APB) sense circuit is failed.	24-22 TASK 824
24-23730	Ground Handling Bus (GHB) voltage is low.	24-22 TASK 825
24-23760	Ground Handling Bus (GHB) current is high.	24-22 TASK 826
24-23770	Ground Handling Bus (GHB) has unbalanced current.	24-22 TASK 826
24-23780	Ground Handling Bus (GHB) single phase circuit is open or has high resistance.	24-22 TASK 826
24-23800	Ground Service Bus (GSB) and Ground Handling Bus (GHB) have low voltage.	24-22 TASK 827

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-23820	Ground Service Bus (GSB) frequency is low.	24-22 TASK 828
24-23830	Ground Service Bus (GSB) or Ground Handling Bus (GHB) current is high.	24-22 TASK 829
24-23840	Ground Service Bus (GSB) or Ground Handling Bus (GHB) has unbalanced current.	24-22 TASK 829
24-23850	Ground Service Bus (GSB) or Ground Handling Bus (GHB) single phase circuit is open or has high resistance.	24-22 TASK 829
24-23940*	Ground Handling Bus (GHB) is sensed powered when commanded off.	24-22 TASK 830
24-23941*	Ground Handling Bus (GHB) is sensed powered when commanded off.	24-22 TASK 830
24-28801	Bus Power Control Unit (BPCU) has no output on any bus.	24-41 TASK 815
24-28840	Bus Power Control Unit (BPCU) has no output on System ARINC 629 Bus (left).	24-41 TASK 806
24-28860	Bus Power Control Unit (BPCU) has no output on System ARINC 629 Bus (right).	24-41 TASK 816
24-29400	Bus Power Control Unit (BPCU) has no input from any LRU on System ARINC 629 Bus (left).	24-41 TASK 806
24-29401	Bus Power Control Unit (BPCU) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (left).	24-41 TASK 833
24-29405	Bus Power Control Unit (BPCU) has no input from Left AIMS on System ARINC 629 Bus (left).	24-41 TASK 823
24-29407	Bus Power Control Unit (BPCU) has no input from Generator Control Unit (L) on System ARINC 629 Bus (left).	24-41 TASK 823
24-29408	Bus Power Control Unit (BPCU) has no input from ARINC Signal Gateway (left), LSCF on System ARINC 629 Bus (left).	24-41 TASK 827
24-29409	Bus Power Control Unit (BPCU) has no input from Right AIMS on System ARINC 629 Bus (left).	24-41 TASK 823
24-29410	Bus Power Control Unit (BPCU) has no input from Generator Control Unit (R) on System ARINC 629 Bus (left).	24-41 TASK 823
24-29411	Bus Power Control Unit (BPCU) has no input from ARINC Signal Gateway (left), RSCF on System ARINC 629 Bus (left).	24-41 TASK 827
24-29414	Bus Power Control Unit (BPCU) has no input from Auxiliary Generator Control Unit (AGCU) on System ARINC 629 Bus (left).	24-41 TASK 823
24-29415	Bus Power Control Unit (BPCU) has no input from ELMS P310 Electronics Unit on System ARINC 629 Bus (left).	24-41 TASK 823
24-29600	Bus Power Control Unit (BPCU) has no input from any LRU on System ARINC 629 Bus (right).	24-41 TASK 816

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-29605	Bus Power Control Unit (BPCU) has no input from Left AIMS on System ARINC 629 Bus (right).	24-41 TASK 823
24-29607	Bus Power Control Unit (BPCU) has no input from Generator Control Unit (L) on System ARINC 629 Bus (right).	24-41 TASK 823
24-29608	Bus Power Control Unit (BPCU) has no input from ARINC Signal Gateway (right), LSCF on System ARINC 629 Bus (right).	24-41 TASK 827
24-29609	Bus Power Control Unit (BPCU) has no input from Right AIMS on System ARINC 629 Bus (right).	24-41 TASK 823
24-29610	Bus Power Control Unit (BPCU) has no input from Generator Control Unit (R) on System ARINC 629 Bus (right).	24-41 TASK 823
24-29611	Bus Power Control Unit (BPCU) has no input from ARINC Signal Gateway (right), RSCF on System ARINC 629 Bus (right).	24-41 TASK 827
24-29614	Bus Power Control Unit (BPCU) has no input from Auxiliary Generator Control Unit (AGCU) on System ARINC 629 Bus (right).	24-41 TASK 823
24-29615	Bus Power Control Unit (BPCU) has no input from ELMS P310 Electronics Unit on System ARINC 629 Bus (right).	24-41 TASK 823
24-29616	Bus Power Control Unit (BPCU) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (right).	24-41 TASK 832
24-30001	Generator Control Unit (L) has an internal fault.	24-22 TASK 811
24-30002	Generator Control Unit (R) has an internal fault.	24-22 TASK 811
24-30003	Auxiliary Generator Control Unit (AGCU) has an internal fault.	24-22 TASK 812
24-30011	Generator Control Unit (L) has an internal fault.	24-22 TASK 811
24-30012	Generator Control Unit (R) has an internal fault.	24-22 TASK 811
24-30021	Generator Control Unit (L) has an internal fault.	24-22 TASK 811
24-30022	Generator Control Unit (R) has an internal fault.	24-22 TASK 811
24-30023	Auxiliary Generator Control Unit (AGCU) has an internal fault.	24-22 TASK 812
24-30031	Generator Control Unit (L) has an internal fault.	24-22 TASK 811
24-30032	Generator Control Unit (R) has an internal fault.	24-22 TASK 811
24-30033	Auxiliary Generator Control Unit (AGCU) has an internal fault.	24-22 TASK 812
24-30041	Generator Control Unit (L) has an internal fault.	24-22 TASK 811
24-30042	Generator Control Unit (R) has an internal fault.	24-22 TASK 811
24-30043	Auxiliary Generator Control Unit (AGCU) has an internal fault.	24-22 TASK 812
24-30051	Generator Control Unit (L) has an internal fault.	24-22 TASK 811
24-30052	Generator Control Unit (R) has an internal fault.	24-22 TASK 811
24-30053	Auxiliary Generator Control Unit (AGCU) has an internal fault.	24-22 TASK 812

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-31101	Generator Control Unit (L) 28 Volt Switch Power Wiring circuit is shorted.	24-22 TASK 831
24-31102	Generator Control Unit (R) 28 Volt Switch Power Wiring circuit is shorted.	24-22 TASK 832
24-31103	Auxiliary Generator Control Unit (AGCU) 28 Volt Switch Power Wiring circuit is shorted.	24-23 TASK 835
24-31121*	Bus Tie Breaker (L) is not in the commanded position.	24-22 TASK 817
24-31122*	Bus Tie Breaker (R) is not in the commanded position.	24-22 TASK 844
24-31131*	Bus Tie Breaker Close Coil Wiring L circuit is shorted.	24-22 TASK 817
24-31132*	Bus Tie Breaker Close Coil Wiring R circuit is shorted.	24-22 TASK 844
24-31141	Tie Bus phase current is high.	24-23 TASK 824
24-31142	Tie Bus phase current is high.	24-23 TASK 824
24-31161	Tie Bus phase current is high.	24-23 TASK 824
24-31162	Tie Bus phase current is high.	24-23 TASK 824
24-31171	Auxiliary Generator Control Unit (AGCU) detects APU Generator current is high.	24-23 TASK 824
24-31181*	Bus Tie Breaker (L) is not in commanded position.	24-23 TASK 825
24-31182*	Bus Tie Breaker (R) is not in commanded position.	24-23 TASK 826
24-31191	IDG (L) current is high.	24-23 TASK 827
24-31192	IDG (R) current is high.	24-23 TASK 827
24-31201*	Bus Tie Breaker (L) Trip Coil circuit is shorted.	24-22 TASK 818
24-31202*	Bus Tie Breaker (R) Trip Coil circuit is shorted.	24-22 TASK 818
24-31211	Bus Tie Switch (L) circuit is failed.	24-22 TASK 819
24-31212	Bus Tie Switch (R) circuit is failed.	24-22 TASK 843
24-31231*	Generator Circuit Breaker (GCB) (L) is not in commanded position.	24-22 TASK 813
24-31232*	Generator Circuit Breaker (GCB) (R) is not in commanded position.	24-22 TASK 833
24-31233	Auxiliary Power Breaker (APB) is not in commanded position.	24-22 TASK 834
24-31241*	Generator Circuit Breaker (GCB) (L) Close Coil circuit is shorted.	24-22 TASK 820
24-31242*	Generator Circuit Breaker (GCB) (R) Close Coil circuit is shorted.	24-22 TASK 820
24-31243	Auxiliary Power Breaker (APB) Close Coil circuit is shorted.	24-22 TASK 821
24-31251*	Generator Circuit Breaker (GCB) (L) is not in commanded position.	24-22 TASK 822

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24-31252*	Generator Circuit Breaker (GCB) (R) is not in commanded position.	24-22 TASK 835
24-31253	Auxiliary Power Breaker (APB) is not in commanded position.	24-22 TASK 823
24-31261*	Generator Circuit Breaker Trip Coil Wiring (L) is shorted.	24-22 TASK 836
24-31262*	Generator Circuit Breaker Trip Coil Wiring (R) is shorted.	24-22 TASK 837
24-31263	Auxiliary Power Breaker Trip Coil Wiring (APU) is shorted.	24-22 TASK 838
24-31421	IDG (L) Point of Regulation Sense Wiring is open.	24-11 TASK 801
24-31422	IDG (R) Point of Regulation Sense Wiring is open.	24-11 TASK 815
24-31423	APU Gen Point of Regulation Sense Wiring is open.	24-21 TASK 801
24-31491	Generator Control switch (L) circuit is failed.	24-23 TASK 828
24-31492	Generator Control switch (R) circuit is failed.	24-23 TASK 829
24-31493	APU Generator switch circuit is failed.	24-23 TASK 830
24-31501	Integrated Drive Generator (L) Current Transformer circuit is failed.	24-23 TASK 801
24-31502	Integrated Drive Generator (R) Current Transformer circuit is failed.	24-23 TASK 801
24-31503	APU Generator Current Transformer circuit is failed.	24-23 TASK 822
24-31511	Integrated Drive Generator (L) exciter field current is out of range.	24-11 TASK 802
24-31512	Integrated Drive Generator (R) exciter field current is out of range.	24-11 TASK 802
24-31513	APU Generator exciter field current is out of range.	24-21 TASK 802
24-31531	Engine Fire Switch (L) is pulled.	24-23 TASK 802
24-31532	Engine Fire Switch (R) is pulled.	24-23 TASK 802
24-31533	APU Fire Switch is pulled.	24-23 TASK 823
24-31541	Integrated Drive Generator (L) voltage is low.	24-21 TASK 815
24-31542	Integrated Drive Generator (R) voltage is low.	24-21 TASK 815
24-31551	Integrated Drive Generator (L) shows low oil pressure.	24-11 TASK 803
24-31552	Integrated Drive Generator (R) shows low oil pressure.	24-11 TASK 803
24-31561	Integrated Drive Generator (L) was manually disconnected.	24-11 TASK 812
24-31562	Integrated Drive Generator (R) was manually disconnected.	24-11 TASK 812
24-31591	Integrated Drive Generator (L) frequency is high.	24-11 TASK 804
24-31592	Integrated Drive Generator (R) frequency is high.	24-11 TASK 804
24-31593	APU Generator frequency is high.	24-21 TASK 803
24-31601	Integrated Drive Generator (L) frequency is modulating.	24-98 TASK 801
24-31602	Integrated Drive Generator (R) frequency is modulating.	24-98 TASK 801

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-31611	AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3114-BCG-00W-16; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Integrated Drive Generator (L) exciter field current is out of range. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; Integrated Drive Generator (L) frequency is modulating.	24-11 TASK 816
24-31612	Integrated Drive Generator (R) exciter field current is out of range.	24-11 TASK 816
24-31613	APU Generator exciter field current is out of range.	24-22 TASK 848
24-31631	Integrated Drive Generator (L) frequency is low.	24-11 TASK 805
24-31632	Integrated Drive Generator (R) frequency is low.	24-11 TASK 805
24-31633	APU Generator frequency is low.	24-21 TASK 804
24-31651*	Generator Control Unit (L) has an ARINC 629 fault on System ARINC 629 Bus (left).	24-23 TASK 803
24-31652*	Generator Control Unit (R) has an ARINC 629 fault on System ARINC 629 Bus (left).	24-23 TASK 803
24-31653	Auxiliary Generator Control Unit (AGCU) has an ARINC 629 fault on System ARINC 629 Bus (left).	24-23 TASK 803
24-31661	IDG (L) output current does not agree with P100 input current.	24-21 TASK 811
24-31662	IDG (R) output current does not agree with P200 input current.	24-21 TASK 812
24-31663	APU Generator output current does not agree with P300 input current.	24-21 TASK 813
24-31691	Generator Control Unit (L) Frequency Reference circuit is failed.	24-23 TASK 804
24-31692	Generator Control Unit (R) Frequency Reference circuit is failed.	24-23 TASK 831
24-31701	AIMS-2, CMCF LDI 3114-BCG-00W-16; Left 115 VAC Main Bus current is high and voltage is low. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Left 115 Vac Main Bus current is high and voltage is low.	24-23 TASK 824

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-31702	AIMS-2, CMCF LDI 3114-BCG-00W-16; Right 115 VAC Main Bus current is high and voltage is low. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Right 115 Vac Main Bus current is high and voltage is low.	24-23 TASK 824
24-31703	115 VAC bus current is high and voltage is low.	24-23 TASK 824
24-31711	AIMS-2, CMCF LDI 3114-BCG-00W-16; Left 115 VAC Main Bus single phase circuit is open or has high resistance. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Left 115 Vac Main Bus single phase circuit is open or has high resistance.	24-51 TASK 813
24-31712	AIMS-2, CMCF LDI 3114-BCG-00W-16; Right 115 VAC Main Bus single phase circuit is open or has high resistance. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Right 115 Vac Main Bus single phase circuit is open or has high resistance.	24-51 TASK 825
24-31713	115 Vac Main Buses single phase circuit is open or has high resistance.	24-51 TASK 814
24-31721	AIMS-2, CMCF LDI 3114-BCG-00W-16; Left 115 VAC Main Bus phase currents are not balanced. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Left 115 Vac Main Bus phase currents are not balanced.	24-51 TASK 815
24-31722	AIMS-2, CMCF LDI 3114-BCG-00W-16; Right 115 VAC Main Bus phase currents are not balanced. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Right 115 Vac Main Bus phase currents are not balanced.	24-51 TASK 826
24-31731	IDG Feeder (L) single phase circuit is open or has high resistance.	24-21 TASK 808

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-31732	IDG Feeder (R) single phase circuit is open or has high resistance.	24-21 TASK 814
24-31733	APU Generator Feeder single phase circuit is open or has high resistance.	24-21 TASK 809
24-31761	IDG Feeder (L) circuit is open.	24-21 TASK 817
24-31762	IDG Feeder (R) circuit is open.	24-21 TASK 818
24-31763	APU Generator parallel feeder circuit is open or has high resistance.	24-21 TASK 816
24-31781	IDG Feeder (L) phases are out of sequence.	24-11 TASK 806
24-31782	IDG Feeder (R) phases are out of sequence.	24-11 TASK 818
24-31783	APU Feeder (APU) phases are out of sequence.	24-21 TASK 805
24-31791	IDG Feeder (L) phases are out of sequence.	24-11 TASK 806
24-31792	IDG Feeder (R) phases are out of sequence.	24-11 TASK 818
24-31793	APU Generator Feeder phases are out of sequence.	24-21 TASK 806
24-31801	IDG (L) Oil Charge Pressure circuit is failed.	24-11 TASK 807
24-31802	IDG (R) Oil Charge Pressure circuit is failed.	24-11 TASK 807
24-31811*	Generator Control Unit (L) has an ARINC 629 fault on System ARINC 629 Bus (right).	24-23 TASK 803
24-31812*	Generator Control Unit (R) has an ARINC 629 fault on System ARINC 629 Bus (right).	24-23 TASK 803
24-31813	Auxiliary Generator Control Unit (AGCU) has an ARINC 629 fault on System ARINC 629 Bus (right).	24-23 TASK 803
24-31841	AIMS-2, CMCF LDI 3114-BCG-00W-16; Right 115 VAC Main Bus or Tie Bus phase currents are unbalanced. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Right 115 Vac Main Bus or Tie Bus phase currents are unbalanced.	24-51 TASK 816
24-31842	AIMS-2, CMCF LDI 3114-BCG-00W-16; Left 115 VAC Main Bus or Tie Bus phase currents are unbalanced. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Left 115 Vac Main Bus or Tie Bus phase currents are unbalanced.	24-51 TASK 817

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-31861	Generator Control Unit (L) Sustained Parallel Source Protection circuit is failed.	24-23 TASK 805
24-31862	Generator Control Unit (R) Sustained Parallel Source Protection circuit is failed.	24-23 TASK 805
24-31863	Auxiliary Generator Control Unit (AGCU) Sustained Parallel Source Protection circuit is failed.	24-23 TASK 806
24-31871	Tie Bus phase C sense circuit is failed.	24-28 TASK 801
24-31872	Tie Bus phase C sense circuit is failed.	24-28 TASK 805
24-31881	Tie Bus Phase C Wiring (L) is shorted.	24-28 TASK 804
24-31882	Tie Bus Phase C Wiring (R) is shorted.	24-28 TASK 805
24-31893	Tie Bus or Ground Service Bus or Ground Handling Bus phase currents are not balanced.	24-21 TASK 810
24-31962	Right Main Bus Phase C Wiring (R) circuit has low voltage.	24-51 TASK 820
24-31972	Right Main Bus Phase C Wiring (R) circuit is failed.	24-51 TASK 820
24-32003	Generator Circuit Breaker (GCB) (L) sense circuit is failed.	24-23 TASK 832
24-32063	115 Vac Main Buses have unbalanced current.	24-51 TASK 818
24-32083	AIMS-2, CMCF LDI 3114-BCG-00W-16; Left 115 VAC Main Bus or Tie Bus has unbalanced current. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Left 115 Vac Main Bus or Tie Bus has unbalanced current.	24-51 TASK 819
24-32093	AIMS-2, CMCF LDI 3114-BCG-00W-16; Right 115 VAC Main Bus or Tie Bus has unbalanced current. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Right 115 Vac Main Bus or Tie Bus has unbalanced current.	24-51 TASK 821
24-33391*	Generator Control Unit (left) has an ARINC 629 fault.	24-23 TASK 809
24-33392*	Generator Control Unit (right) has an ARINC 629 fault.	24-23 TASK 809
24-33393	Auxiliary Generator Control Unit (AGCU) has an ARINC 629 fault.	24-23 TASK 809
24-33401*	Generator Control Unit (left) has an ARINC 629 fault.	24-23 TASK 809
24-33402*	Generator Control Unit (right) has an ARINC 629 fault.	24-23 TASK 809
24-33403	Auxiliary Generator Control Unit (AGCU) has an ARINC 629 fault.	24-23 TASK 809
24-33451	Left Fuel Cutoff Switch circuit is failed.	24-23 TASK 807

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24-33452	Right Fuel Cutoff Switch circuit is failed.	24-23 TASK 836
24-33461	Right Fuel Cutoff Switch circuit is failed.	24-23 TASK 833
24-33462	Left Fuel Cutoff Switch circuit is failed.	24-23 TASK 834
24-33861	Generator Circuit Breaker (GCB) (R) sense circuit is failed.	24-23 TASK 837
24-33862	Generator Circuit Breaker (GCB) (L) sense circuit is failed.	24-23 TASK 838
24-33873	Generator Circuit Breaker (GCB) (R) sense circuit is failed.	24-23 TASK 839
24-35171	IDG Oil Inlet Temperature Sensor (L Eng) signal is out of range.	24-12 TASK 807
24-35172	IDG Oil Inlet Temperature Sensor (R Eng) signal is out of range.	24-12 TASK 807
24-35181	IDG Oil Outlet Temperature Sensor (L Eng) signal is out of range.	24-12 TASK 808
24-35182	IDG Oil Outlet Temperature Sensor (R Eng) signal is out of range.	24-12 TASK 808
24-38801*	Generator Control Unit (L) has no output on any bus.	24-23 TASK 808
24-38802*	Generator Control Unit (R) has no output on any bus.	24-23 TASK 808
24-38803	Auxiliary Generator Control Unit (AGCU) has no output on any bus.	24-23 TASK 808
24-38841*	Generator Control Unit (L) has no output on System ARINC 629 Bus (left).	24-23 TASK 809
24-38842*	Generator Control Unit (R) has no output on System ARINC 629 Bus (left).	24-23 TASK 809
24-38843	Auxiliary Generator Control Unit (AGCU) has no output on System ARINC 629 Bus (left).	24-23 TASK 809
24-38861*	Generator Control Unit (L) has no output on System ARINC 629 Bus (right).	24-23 TASK 809
24-38862*	Generator Control Unit (R) has no output on System ARINC 629 Bus (right).	24-23 TASK 809
24-38863	Auxiliary Generator Control Unit (AGCU) has no output on System ARINC 629 Bus (right).	24-23 TASK 809
24-39401*	Generator Control Unit (L) has no input from any LRU on System ARINC 629 Bus (left).	24-23 TASK 809
24-39402*	Generator Control Unit (R) has no input from any LRU on System ARINC 629 Bus (left).	24-23 TASK 809

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-39403	AIMS-2, CMCF LDI 3114-BCG-00W-16; Auxiliary Generator Control Unit (AGCU) has no input from Any LRU on System ARINC 629 Bus (left). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Auxiliary Generator Control Unit (AGCU) has no input from any LRU on System ARINC 629 Bus (left).	24-23 TASK 809
24-39404	Generator Control Unit (L) has no input from Autopilot Flight Director Computer (Left) on System ARINC 629 Bus (left).	24-23 TASK 810
24-39405	Generator Control Unit (R) has no input from Autopilot Flight Director Computer (Left) on System ARINC 629 Bus (left).	24-23 TASK 810
24-39406	Auxiliary Generator Control Unit (AGCU) has no input from Autopilot Flight Director Computer (Left) on System ARINC 629 Bus (left).	24-23 TASK 810
24-39407	Generator Control Unit (L) has no input from Auxiliary Generator Control Unit (AGCU) on System ARINC 629 Bus (left).	24-23 TASK 811
24-39408	Generator Control Unit (R) has no input from Auxiliary Generator Control Unit (AGCU) on System ARINC 629 Bus (left).	24-23 TASK 811
24-39410	Generator Control Unit (L) has no input from APU Controller (APUC) on System ARINC 629 Bus (left).	24-23 TASK 812
24-39411	Generator Control Unit (R) has no input from APU Controller (APUC) on System ARINC 629 Bus (left).	24-23 TASK 812
24-39412	Auxiliary Generator Control Unit (AGCU) has no input from APU Controller (APUC) on System ARINC 629 Bus (left).	24-23 TASK 812
24-39413	Generator Control Unit (L) has no input from Converter on System ARINC 629 Bus (left).	24-23 TASK 813
24-39414	Generator Control Unit (R) has no input from Converter on System ARINC 629 Bus (left).	24-23 TASK 813
24-39415	Auxiliary Generator Control Unit (AGCU) has no input from Backup Converter on System ARINC 629 Bus (left).	24-23 TASK 813
24-39416	Generator Control Unit (L) has no input from Bus Power Control Unit (BPCU) on System ARINC 629 Bus (left).	24-23 TASK 814
24-39417	Generator Control Unit (R) has no input from Bus Power Control Unit (BPCU) on System ARINC 629 Bus (left).	24-23 TASK 814
24-39418	Auxiliary Generator Control Unit (AGCU) has no input from Bus Power Control Unit (BPCU) on System ARINC 629 Bus (left).	24-23 TASK 814
24-39425	Generator Control Unit (L) has no input from Left AIMS on System ARINC 629 Bus (left).	24-23 TASK 816

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-39426	Generator Control Unit (R) has no input from Left AIMS on System ARINC 629 Bus (left).	24-23 TASK 816
24-39427	Auxiliary Generator Control Unit (AGCU) has no input from Left AIMS on System ARINC 629 Bus (left).	24-23 TASK 816
24-39428	Generator Control Unit (L) has no input from ARINC Signal Gateway (left), LSCF on System ARINC 629 Bus (left).	24-23 TASK 817
24-39429	Generator Control Unit (R) has no input from ARINC Signal Gateway (left), LSCF on System ARINC 629 Bus (left).	24-23 TASK 817
24-39430	Auxiliary Generator Control Unit (AGCU) has no input from ARINC Signal Gateway (left), LSCF on System ARINC 629 Bus (left).	24-23 TASK 817
24-39431	Generator Control Unit (L) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (left).	24-23 TASK 843
24-39432	Generator Control Unit (R) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (left).	24-23 TASK 844
24-39433	Auxiliary Generator Control Unit (AGCU) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (left).	24-23 TASK 845
24-39435	Generator Control Unit (R) has no input from Generator Control Unit (L) on System ARINC 629 Bus (left).	24-23 TASK 819
24-39436	Auxiliary Generator Control Unit (AGCU) has no input from Generator Control Unit (L) on System ARINC 629 Bus (left).	24-23 TASK 819
24-39437	Generator Control Unit (L) has no input from Overhead Panel Bus Controller (L) on System ARINC 629 Bus (left).	24-23 TASK 820
24-39438	Generator Control Unit (R) has no input from Overhead Panel Bus Controller (L) on System ARINC 629 Bus (left).	24-23 TASK 820
24-39439	Auxiliary Generator Control Unit (AGCU) has no input from Overhead Panel Bus Controller (L) on System ARINC 629 Bus (left).	24-23 TASK 820
24-39440	Generator Control Unit (L) has no input from Right AIMS on System ARINC 629 Bus (left).	24-23 TASK 816
24-39441	Generator Control Unit (R) has no input from Right AIMS on System ARINC 629 Bus (left).	24-23 TASK 816
24-39442	Auxiliary Generator Control Unit (AGCU) has no input from Right AIMS on System ARINC 629 Bus (left).	24-23 TASK 816
24-39443	Generator Control Unit (L) has no input from ARINC Signal Gateway (left), RSCF on System ARINC 629 Bus (left).	24-23 TASK 817
24-39444	Generator Control Unit (R) has no input from ARINC Signal Gateway (left), RSCF on System ARINC 629 Bus (left).	24-23 TASK 817
24-39445	Auxiliary Generator Control Unit (AGCU) has no input from ARINC Signal Gateway (left), RSCF on System ARINC 629 Bus (left).	24-23 TASK 817

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24-39446	Generator Control Unit (L) has no input from Generator Control Unit (R) on System ARINC 629 Bus (left).	24-23 TASK 821
24-39448	Auxiliary Generator Control Unit (AGCU) has no input from Generator Control Unit (R) on System ARINC 629 Bus (left).	24-23 TASK 821
24-39449	Generator Control Unit (L) has no input from Overhead Panel Bus Controller (R) on System ARINC 629 Bus (left).	24-23 TASK 820
24-39450	Generator Control Unit (R) has no input from Overhead Panel Bus Controller (R) on System ARINC 629 Bus (left).	24-23 TASK 820
24-39451	Auxiliary Generator Control Unit (AGCU) has no input from Overhead Panel Bus Controller (R) on System ARINC 629 Bus (left).	24-23 TASK 820
24-39452	Auxiliary Generator Control Unit (AGCU) has no input from ELMS P110 Electronics Unit on System ARINC 629 Bus (left).	24-23 TASK 840
24-39453	Generator Control Unit (L) has no input from ELMS P110 Electronics Unit on System ARINC 629 Bus (left).	24-23 TASK 840
24-39454	Generator Control Unit (R) has no input from ELMS P110 Electronics Unit on System ARINC 629 Bus (left).	24-23 TASK 840
24-39601*	AIMS-2, CMCF LDI 3114-BCG-00W-16; Generator Control Unit (L) has no input from Any LRU on System ARINC 629 Bus (right). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Generator Control Unit (L) has no input from any LRU on System ARINC 629 Bus (right).	24-23 TASK 809
24-39602*	AIMS-2, CMCF LDI 3114-BCG-00W-16; Generator Control Unit (R) has no input from Any LRU on System ARINC 629 Bus (right). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Generator Control Unit (R) has no input from any LRU on System ARINC 629 Bus (right).	24-23 TASK 809

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24-39603	AIMS-2, CMCF LDI 3114-BCG-00W-16; Auxiliary Generator Control Unit (AGCU) has no input from Any LRU on System ARINC 629 Bus (right). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Auxiliary Generator Control Unit (AGCU) has no input from any LRU on System ARINC 629 Bus (right).	24-23 TASK 809
24-39604	Generator Control Unit (L) has no input from Autopilot Flight Director Computer (Right) on System ARINC 629 Bus (right).	24-23 TASK 810
24-39605	Generator Control Unit (R) has no input from Autopilot Flight Director Computer (Right) on System ARINC 629 Bus (right).	24-23 TASK 810
24-39606	Auxiliary Generator Control Unit (AGCU) has no input from Autopilot Flight Director Computer (Right) on System ARINC 629 Bus (right).	24-23 TASK 810
24-39607	Generator Control Unit (L) has no input from Auxiliary Generator Control Unit (AGCU) on System ARINC 629 Bus (right).	24-23 TASK 811
24-39608	Generator Control Unit (R) has no input from Auxiliary Generator Control Unit (AGCU) on System ARINC 629 Bus (right).	24-23 TASK 811
24-39610	Generator Control Unit (L) has no input from APU Controller (APUC) on System ARINC 629 Bus (right).	24-23 TASK 812
24-39611	Generator Control Unit (R) has no input from APU Controller (APUC) on System ARINC 629 Bus (right).	24-23 TASK 812
24-39612	Auxiliary Generator Control Unit (AGCU) has no input from APU Controller (APUC) on System ARINC 629 Bus (right).	24-23 TASK 812
24-39613	Generator Control Unit (L) has no input from Converter on System ARINC 629 Bus (right).	24-23 TASK 813
24-39614	Generator Control Unit (R) has no input from Converter on System ARINC 629 Bus (right).	24-23 TASK 813
24-39615	Auxiliary Generator Control Unit (AGCU) has no input from Backup Converter on System ARINC 629 Bus (right).	24-23 TASK 813
24-39616	Generator Control Unit (L) has no input from Bus Power Control Unit (BPCU) on System ARINC 629 Bus (right).	24-23 TASK 814
24-39617	Generator Control Unit (R) has no input from Bus Power Control Unit (BPCU) on System ARINC 629 Bus (right).	24-23 TASK 814
24-39618	Auxiliary Generator Control Unit (AGCU) has no input from Bus Power Control Unit (BPCU) on System ARINC 629 Bus (right).	24-23 TASK 814
24-39625	Generator Control Unit (L) has no input from Left AIMS on System ARINC 629 Bus (right).	24-23 TASK 816

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24-39626	Generator Control Unit (R) has no input from Left AIMS on System ARINC 629 Bus (right).	24-23 TASK 816
24-39627	Auxiliary Generator Control Unit (AGCU) has no input from Left AIMS on System ARINC 629 Bus (right).	24-23 TASK 816
24-39628	Generator Control Unit (L) has no input from ARINC Signal Gateway (right), LSCF on System ARINC 629 Bus (right).	24-23 TASK 817
24-39629	Generator Control Unit (R) has no input from ARINC Signal Gateway (right), LSCF on System ARINC 629 Bus (right).	24-23 TASK 817
24-39630	Auxiliary Generator Control Unit (AGCU) has no input from ARINC Signal Gateway (right), LSCF on System ARINC 629 Bus (right).	24-23 TASK 817
24-39635	Generator Control Unit (R) has no input from Generator Control Unit (L) on System ARINC 629 Bus (right).	24-23 TASK 819
24-39636	Auxiliary Generator Control Unit (AGCU) has no input from Generator Control Unit (L) on System ARINC 629 Bus (right).	24-23 TASK 819
24-39637	Generator Control Unit (L) has no input from Overhead Panel Bus Controller (L) on System ARINC 629 Bus (right).	24-23 TASK 820
24-39638	Generator Control Unit (R) has no input from Overhead Panel Bus Controller (L) on System ARINC 629 Bus (right).	24-23 TASK 819
24-39639	Auxiliary Generator Control Unit (AGCU) has no input from Overhead Panel Bus Controller (L) on System ARINC 629 Bus (right).	24-23 TASK 819
24-39640	Generator Control Unit (L) has no input from Right AIMS on System ARINC 629 Bus (right).	24-23 TASK 816
24-39641	Generator Control Unit (R) has no input from Right AIMS on System ARINC 629 Bus (right).	24-23 TASK 816
24-39642	Auxiliary Generator Control Unit (AGCU) has no input from Right AIMS on System ARINC 629 Bus (right).	24-23 TASK 816
24-39643	Generator Control Unit (L) has no input from ARINC Signal Gateway (right), RSCF on System ARINC 629 Bus (right).	24-23 TASK 817
24-39644	Generator Control Unit (R) has no input from ARINC Signal Gateway (right), RSCF on System ARINC 629 Bus (right).	24-23 TASK 817
24-39645	Auxiliary Generator Control Unit (AGCU) has no input from ARINC Signal Gateway (right), RSCF on System ARINC 629 Bus (right).	24-23 TASK 817
24-39646	Generator Control Unit (L) has no input from Generator Control Unit (R) on System ARINC 629 Bus (right).	24-23 TASK 821
24-39648	Auxiliary Generator Control Unit (AGCU) has no input from Generator Control Unit (R) on System ARINC 629 Bus (right).	24-23 TASK 821
24-39649	Generator Control Unit (L) has no input from Overhead Panel Bus Controller (R) on System ARINC 629 Bus (right).	24-23 TASK 820

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-39650	Generator Control Unit (R) has no input from Overhead Panel Bus Controller (R) on System ARINC 629 Bus (right).	24-23 TASK 820
24-39651	Auxiliary Generator Control Unit (AGCU) has no input from Overhead Panel Bus Controller (R) on System ARINC 629 Bus (right).	24-23 TASK 820
24-39652	Generator Control Unit (L) has no input from ELMS P110 Electronics Unit on System ARINC 629 Bus (right).	24-23 TASK 841
24-39653	Auxiliary Generator Control Unit (AGCU) has no input from ELMS P110 Electronics Unit on System ARINC 629 Bus (right).	24-23 TASK 841
24-39654	Generator Control Unit (R) has no input from ELMS P110 Electronics Unit on System ARINC 629 Bus (right).	24-23 TASK 841
24-41000	Backup Converter has an internal fault.	24-25 TASK 802
24-43020	AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Gen Remote Oil Level Sense/Low Oil Pres Circuit (L) is failed. AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Gen Remote Oil Level Sense/Low Oil Pres Circuit is failed.	24-25 TASK 804
24-43030	AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Gen Remote Oil Level Sense/Low Oil Pres Circuit (R) is failed. AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Gen Remote Oil Level Sense/Low Oil Pres Circuit is failed.	24-25 TASK 804
24-44020*	Backup Converter has an ARINC 629 fault.	24-25 TASK 826
24-44030*	Backup Converter has an ARINC 629 fault.	24-25 TASK 826
24-44040*	Backup Converter has no output on System ARINC 629 (L).	24-25 TASK 816
24-44050*	AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Converter has no output on System ARINC 629 Bus (R). AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Converter has no output on System ARINC 629 Bus.	24-25 TASK 827

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-44060	Main Bus (L) or Transfer Bus (L) phases are out of sequence.	24-25 TASK 828
24-44070	Main Bus (R) or Transfer Bus (R) phases are out of sequence.	24-25 TASK 852
24-44080	Main Bus (L) voltage is low.	24-25 TASK 829
24-44090	Main Bus (R) voltage is low.	24-25 TASK 853
24-44120	Main Bus (L) voltage is low or phases are out of sequence.	24-25 TASK 840
24-44130	Main Bus (R) voltage is low or phases are out of sequence.	24-25 TASK 854
24-45000*	Backup Converter has an internal fault.	24-25 TASK 802
24-45001	Backup Converter has an internal fault.	24-25 TASK 872
24-45002	Backup Converter has an internal fault.	24-25 TASK 876
24-45003	Backup Converter has an internal fault.	24-25 TASK 802
24-45151	BKUP Gen Oil Inlet Temperature Sensor (L Eng) signal is out of range.	24-12 TASK 805
24-45152	BKUP Gen Oil Inlet Temperature Sensor (R Eng) signal is out of range.	24-12 TASK 805
24-45161	BKUP Gen Oil Outlet Temperature Sensor (L Eng) signal is out of range.	24-12 TASK 806
24-45162	BKUP Gen Oil Outlet Temperature Sensor (R Eng) signal is out of range.	24-12 TASK 806
24-45480	Backup Generator (L) voltage is low.	24-25 TASK 873
24-45490	Backup Generator (R) voltage is low.	24-25 TASK 873
24-46000	Backup Generator (L) has a sheared shaft.	24-25 TASK 866
24-46010	Backup Generator (R) has a sheared shaft.	24-25 TASK 867
24-46020	Backup Generator (L) has an open phase.	24-25 TASK 810
24-46030	Backup Generator (R) has an open phase.	24-25 TASK 845
24-46040	Backup Generator (L) Exciter Field current is out of range.	24-25 TASK 807
24-46050	Backup Generator (R) Exciter Field current is out of range.	24-25 TASK 841
24-46060	Backup Generator Low Oil Pressure Switch (L) circuit is shorted.	24-25 TASK 805
24-46070	Backup Generator Low Oil Pressure Switch (R) circuit is shorted.	24-25 TASK 805
24-46080	Backup Generator (L) oil pressure is low.	24-25 TASK 861
24-46090	Backup Generator (R) oil pressure is low.	24-25 TASK 862
24-46100	Backup Generator (L) feeder circuit has an open phase.	24-25 TASK 810
24-46110	Backup Generator (R) feeder circuit has an open phase.	24-25 TASK 845
24-46120	Backup Generator (L) temperature is high.	24-25 TASK 806
24-46130	Backup Generator (R) temperature is high.	24-25 TASK 806

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-46140	AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Generator (L) Exciter Field circuit is open or shorted. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Generator (L) exciter field circuit is open or shorted.	24-25 TASK 807
24-46150	AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Generator (R) Exciter Field circuit is open or shorted. AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Generator (R) exciter field circuit is open or shorted.	24-25 TASK 841
24-46160	Backup Generator (L) has an internal fault.	24-25 TASK 868
24-46170	Backup Generator (R) has an internal fault.	24-25 TASK 868
24-47000	Backup Generator (L) speed is out of range.	24-25 TASK 808
24-47010	Backup Generator (R) speed is out of range.	24-25 TASK 855
24-47020	Backup Generator (L) PMG circuit is failed.	24-25 TASK 808
24-47030	Backup Generator (R) PMG circuit is failed.	24-25 TASK 855
24-47040	Backup Converter input current does not agree with output current from Backup Generator (L).	24-25 TASK 830
24-47050	Backup Converter input current does not agree with output current from Backup Generator (R).	24-25 TASK 856
24-47080	Backup Generator Feeder (L) circuit is open.	24-25 TASK 810
24-47090	Backup Generator Feeder (R) circuit is open.	24-25 TASK 845
24-48000	Transfer Bus Breaker (TBB) (L) coil circuit is shorted.	24-25 TASK 811
24-48010	Transfer Bus Breaker (TBB) (R) coil circuit is shorted.	24-25 TASK 811
24-48020	Transfer Bus Breaker (TBB) (L) is not in commanded position.	24-25 TASK 822
24-48030	Transfer Bus Breaker (TBB) (R) is not in commanded position.	24-25 TASK 857
24-48040	Transfer Bus Breaker (TBB) (L) is not in commanded position.	24-25 TASK 822
24-48050	Transfer Bus Breaker (TBB) (R) is not in commanded position.	24-25 TASK 857
24-48060	Transfer Bus Breaker (TBB) (L) is not in commanded position.	24-25 TASK 831
24-48070	Transfer Bus Breaker (TBB) (R) is not in commanded position.	24-25 TASK 831
24-48080	Transfer Bus Breaker (TBB) (L) is not in commanded position.	24-25 TASK 831
24-48090	Transfer Bus Breaker (TBB) (R) is not in commanded position.	24-25 TASK 831
24-48100	Circuit Breaker (CCB) (L) coil circuit is shorted.	24-25 TASK 812

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-48110	Circuit Breaker (CCB) (R) coil circuit is shorted.	24-25 TASK 858
24-48120	Converter Circuit Breaker (L) is not in commanded position.	24-25 TASK 832
24-48130	Converter Circuit Breaker (R) is not in commanded position.	24-25 TASK 859
24-48140	Converter Circuit Breaker (L) is not in commanded position.	24-25 TASK 832
24-48150	Converter Circuit Breaker (R) is not in commanded position.	24-25 TASK 859
24-48160	Converter Circuit Breaker (L) is not in commanded position.	24-25 TASK 833
24-48170	Converter Circuit Breaker (R) is not in commanded position.	24-25 TASK 860
24-48180	Converter Circuit Breaker (L) is not in commanded position.	24-25 TASK 833
24-48190	Backup Converter Circuit Breaker (R) is not in commanded position.	24-25 TASK 860
24-48200	AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Generator Control Switch (GCS) (L) Position signals do not agree with Position signals from Overhead Panel Bus Controller (L). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Generator Control Switch (GCS) (L) position signals do not agree with position signals from Overhead Panel Bus Controller (L).	24-25 TASK 834
24-48210	AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Generator Control Switch (GCS) (R) Position signals do not agree with Position signals from Overhead Panel Bus Controller (R). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Generator Control Switch (GCS) (R) position signals do not agree with position signals from Overhead Panel Bus Controller (R).	24-25 TASK 863
24-48220	Backup Generator Control Switch (GCS) (L) position signal does not agree with position signal from Overhead Panel Bus Controller (L).	24-25 TASK 834
24-48230	Backup Generator Control Switch (GCS) (R) position signal does not agree with position signal from Overhead Panel Bus Controller (R).	24-25 TASK 863
24-48240	Backup Converter Supplemental Cooling Fan current is high.	24-25 TASK 842
24-48260	Backup Converter Supplemental Cooling Fan circuit is open.	24-25 TASK 813
24-48320	Transfer Bus (L) voltage is low.	24-25 TASK 835

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-48330	Transfer Bus (R) voltage is low.	24-25 TASK 835
24-48340	Transfer Bus (L) voltage is low.	24-25 TASK 835
24-48350	Transfer Bus (R) voltage is low.	24-25 TASK 835
24-48360	Backup Converter Supplemental Cooling Fan Current is high.	24-25 TASK 813
24-48380	Backup Converter output current does not agree with transfer bus currents.	24-25 TASK 869
24-48400	Backup Converter output voltage is low.	24-25 TASK 814
24-48420	Backup Converter output voltage is low.	24-25 TASK 814
24-48440	Backup Converter phase voltages are out of sequence.	24-25 TASK 814
24-48460	Backup Converter temperature is high.	24-25 TASK 815
24-48490	AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Generator Control Switch (GCS) (L) Position signals do not agree with Position signals from Overhead Panel Bus Controller (L). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Generator Control Switch (GCS) (L) position signals do not agree with position signals from Overhead Panel Bus Controller (L).	24-25 TASK 834
24-48500	AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Generator Control Switch (GCS) (R) Position signals do not agree with Position signals from Overhead Panel Bus Controller (R). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Generator Control Switch (GCS) (R) position signals do not agree with position signals from Overhead Panel Bus Controller (R).	24-25 TASK 863
24-48510	Backup Generator Control Switch (GCS) (L) position signal does not agree with position signal from Overhead Panel Bus Controller (L).	24-25 TASK 834
24-48520	Backup Generator Control Switch (GCS) (R) position signal does not agree with position signal from Overhead Panel Bus Controller (R).	24-25 TASK 863
24-48801*	Backup Converter has no output on any bus.	24-25 TASK 823
24-48840*	Backup Converter has no output on System ARINC 629 Bus (left).	24-25 TASK 816

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24-48860*	Backup Converter has no output on System ARINC 629 Bus (right).	24-25 TASK 827
24-49401*	AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Converter has no input from Any LRU on System ARINC 629 Bus (left). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Converter has no input from any LRU on System ARINC 629 Bus (left).	24-25 TASK 816
24-49402	Backup Converter has no input from Auxiliary Generator Control Unit (AGCU) on System ARINC 629 Bus (left).	24-25 TASK 817
24-49403	Backup Converter has no input from Bus Power Control Unit (BPCU) on System ARINC 629 Bus (left).	24-25 TASK 818
24-49405	Backup Converter has no input from Autopilot Flight Director Computer (Left) on System ARINC 629 Bus (left).	24-25 TASK 819
24-49406	Backup Converter has no input from Left AIMS on System ARINC 629 Bus (left).	24-25 TASK 824
24-49414	Backup Converter has no input from Generator Control Unit (L) on System ARINC 629 Bus (left).	24-25 TASK 820
24-49416	Backup Converter has no input from Overhead Panel Bus Controller (L) on System ARINC 629 Bus (left).	24-25 TASK 844
24-49418	Backup Converter has no input from ARINC Signal Gateway (left), LSCF on System ARINC 629 Bus (left).	24-25 TASK 849
24-49421	Backup Converter has no input from Right AIMS on System ARINC 629 Bus (left).	24-25 TASK 824
24-49429	Backup Converter has no input from Generator Control Unit (R) on System ARINC 629 Bus (left).	24-25 TASK 843
24-49431	Backup Converter has no input from Overhead Panel Bus Controller (R) on System ARINC 629 Bus (left).	24-25 TASK 844
24-49433	Backup Converter has no input from ARINC Signal Gateway (left), RSCF on System ARINC 629 Bus (left).	24-25 TASK 849
24-49601*	AIMS-2, CMCF LDI 3114-BCG-00W-16; Backup Converter has no input from Any LRU on System ARINC 629 Bus (right). AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11; AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15; Backup Converter has no input from any LRU on System ARINC 629 Bus (right).	24-25 TASK 827

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-49602	Backup Converter has no input from Auxiliary Generator Control Unit (AGCU) on System ARINC 629 Bus (right).	24-25 TASK 817
24-49604	Backup Converter has no input from Bus Power Control Unit (BPCU) on System ARINC 629 Bus (right).	24-25 TASK 818
24-49607	Backup Converter has no input from Left AIMS on System ARINC 629 Bus (right).	24-25 TASK 824
24-49615	Backup Converter has no input from Generator Control Unit (L) on System ARINC 629 Bus (right).	24-25 TASK 820
24-49617	Backup Converter has no input from Overhead Panel Bus Controller (L) on System ARINC 629 Bus (right).	24-25 TASK 844
24-49619	Backup Converter has no input from ARINC Signal Gateway (right), LSCF on System ARINC 629 Bus (right).	24-25 TASK 849
24-49620	Backup Converter has no input from Autopilot Flight Director Computer (Right) on System ARINC 629 Bus (right).	24-25 TASK 819
24-49622	Backup Converter has no input from Right AIMS on System ARINC 629 Bus (right).	24-25 TASK 824
24-49630	Backup Converter has no input from Generator Control Unit (R) on System ARINC 629 Bus (right).	24-25 TASK 820
24-49632	Backup Converter has no input from Overhead Panel Bus Controller (R) on System ARINC 629 Bus (right).	24-25 TASK 844
24-49634	Backup Converter has no input from ARINC Signal Gateway (right), RSCF on System ARINC 629 Bus (right).	24-25 TASK 849
24-50201	Permanent Magnet Generator (PMG) (L1) has no output with engine(s) running.	24-35 TASK 801
24-50202	Permanent Magnet Generator (PMG) (R1) has no output with engine(s) running.	24-35 TASK 801
24-50203	Permanent Magnet Generator (PMG) (L2) has no output with engine(s) running.	24-35 TASK 801
24-50211	Permanent Magnet Generator (PMG) (L1) has no output with engine(s) running.	24-35 TASK 801
24-50212	Permanent Magnet Generator (PMG) (R1) has no output with engine(s) running.	24-35 TASK 801
24-50213	Permanent Magnet Generator (PMG) (R2) has no output with engine(s) running.	24-35 TASK 801
24-50221	Power Supply Assembly (left) has an internal failure.	24-35 TASK 808
24-50222	Power Supply Assembly (right) has an internal failure.	24-35 TASK 808
24-50223	Power Supply Assembly (center) has an internal failure.	24-35 TASK 808
24-50241	FC Battery (left) voltage is low.	24-35 TASK 802
24-50242	FC Battery (right) voltage is low.	24-35 TASK 802

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24-50243	FC Battery (center) voltage is low.	24-35 TASK 802
24-50261	Power Supply Assembly (left) DC bus voltage is out of range.	24-35 TASK 804
24-50262	Power Supply Assembly (right) DC bus voltage is out of range.	24-35 TASK 804
24-50263	Power Supply Assembly (center) Capt Flt Instr bus voltage is out of range.	24-35 TASK 806
24-50271	Power Supply Assembly (left) Hot Battery bus voltage is out of range.	24-35 TASK 807
24-50273	Power Supply Assembly (center) Hot Battery bus voltage is out of range.	24-35 TASK 807
24-50371	Power Supply Assembly (left) has an ARINC 629 failure.	24-35 TASK 803
24-50372	Power Supply Assembly (right) has an ARINC 629 failure.	24-35 TASK 803
24-50373	Power Supply Assembly (center) has an ARINC 629 failure.	24-35 TASK 803
24-51001	Power Supply Assembly (left) battery interlock circuit breaker is open.	24-35 TASK 805
24-51002	Power Supply Assembly (right) battery interlock circuit breaker is open.	24-35 TASK 805
24-51003	Power Supply Assembly (center) battery interlock circuit breaker is open.	24-35 TASK 805
24-55001	Power Supply Assembly (left) has an internal failure.	24-35 TASK 810
24-55002	Power Supply Assembly (right) has an internal failure.	24-35 TASK 810
24-55003	Power Supply Assembly (center) has an internal failure.	24-35 TASK 810
24-58811	Power Supply Assembly (left) has no output on Flight Controls ARINC 629 Bus (left).	24-35 TASK 803
24-58823	Power Supply Assembly (center) has no output on Flight Controls ARINC 629 Bus (center).	24-35 TASK 803
24-58832	Power Supply Assembly (right) has no output on Flight Controls ARINC 629 Bus (right).	24-35 TASK 803
24-59107	Power Supply Assembly (left) has no input from Primary Flight Computer (left) on Flight Controls ARINC 629 Bus (left).	24-35 TASK 811
24-59209	Power Supply Assembly (center) has no input from Primary Flight Computer (center) on Flight Controls ARINC 629 Bus (center).	24-35 TASK 811
24-59308	Power Supply Assembly (right) has no input from Primary Flight Computer (right) on Flight Controls ARINC 629 Bus (right).	24-35 TASK 811
24-69622	Generator Control Unit (L) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (right).	24-23 TASK 842
24-69623	Generator Control Unit (R) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (right).	24-23 TASK 842

*If the MAT shows LATCHED for the correlated EICAS message, then you must erase the EICAS message after you complete the FIM task.

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MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
24-69624	Auxiliary Generator Control Unit (AGCU) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (right).	24-23 TASK 842
24-78841*	ELMS P110 Electronics Unit has no output on System ARINC 629 Bus (left).	24-08 TASK 860
24-78842*	ELMS P210 Electronics Unit has no output on System ARINC 629 Bus (left).	24-08 TASK 862
24-78843*	ELMS P310 Electronics Unit has no output on System ARINC 629 Bus (left).	24-08 TASK 864
24-78861*	ELMS P110 Electronics Unit has no output on System ARINC 629 Bus (right).	24-08 TASK 861
24-78862*	ELMS P210 Electronics Unit has no output on System ARINC 629 Bus (right).	24-08 TASK 863
24-78863*	ELMS P310 Electronics Unit has no output on System ARINC 629 Bus (right).	24-08 TASK 865

*If the MAT shows LATCHED for the correlated EICAS message, then you must erase the EICAS message after you complete the FIM task.

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801. P110 SIU Internal Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11803, 24-11804, 24-11805, 24-11806.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message 24-11803 or 24-11804, then do the Fault Isolation Procedure - SIU 1 below.
- (2) If the MAT shows ACTIVE for the maintenance message 24-11805 or 24-11806, then do the Fault Isolation Procedure - SIU 2 below.
- (3) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
 - (a) If the maintenance message 24-11803 or 24-11804 shows on the existing fault display, then do the Fault Isolation Procedure - SIU 1 below.
 - (b) If the maintenance message 24-11805 or 24-11806 shows on the existing fault display, then do the Fault Isolation Procedure - SIU 2 below.
 - (c) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure - SIU 1



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24504.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing fault display, then continue.

- (2) Do this check of the connectors to SIU 1, M24504:

- (a) Disconnect connectors DM24504 from the SIU-1, M24504 in the P110 panel.

- (b) Examine the connectors DM24504 for bent or damage pin.

- (c) If you find problem with the connectors, then do these steps:

- 1) Repair the connectors or wiring.

- 2) Re-connect the connectors DM24504.

- 3) If the MAT shows NOT ACTIVE for the maintenance message 24-11803 or 24-11804 (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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D. Fault Isolation Procedure - SIU 2



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24505.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing fault display, then continue.

- (2) Do this check of the connectors to SIU-2, M24505:

- (a) Disconnect connectors DM24505 from the SIU-2, M24505 in the P110 panel.

- (b) Examine the connectors DM24505 for bent or damage pin.

- (c) If you find problem with the connectors, then do these steps:

1) Repair the connectors or wiring.

2) Re-connect the connectors DM24505.

3) If the MAT shows NOT ACTIVE for the maintenance message 24-11805 or 24-11806 (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

802. P210 SIU Internal Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12808, 24-12809, 24-12810, 24-12811.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message 24-12808 or 24-12809, then do the Fault Isolation Procedure - SIU 1 below.
- (2) If the MAT shows ACTIVE for the maintenance message 24-12810 or 24-12811, then do the Fault Isolation Procedure - SIU 2 below.
- (3) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
- (a) If the maintenance message 24-12808 or 24-12809 shows on the existing faults display, then do the Fault Isolation Procedure - SIU 1 below.
- (b) If the maintenance message 24-12810 or 24-12811 shows on the existing faults display, then do the Fault Isolation Procedure - SIU 2 below.

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- (c) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure - SIU 1



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24508.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing fault display, then continue.

- (2) Do this check of the connectors to SIU 1, M24508:

- (a) Disconnect connectors DM24508 from the SIU-1, M24508 in the P210 panel.

- (b) Examine the connectors DM24508 for bent or damage pin.

- (c) If you find problem with the connectors, then do these steps:

1) Repair the connectors or wiring.

2) Re-connect the connectors DM24508.

3) If the MAT shows NOT ACTIVE for the maintenance message 24-12808 or 24-12809 (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

D. Fault Isolation Procedure - SIU 2



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24509.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing fault display, then continue.
- (2) Do this check of the connectors to SIU-2, M24509:
 - (a) Disconnect connectors DM24509 from the SIU-2, M24509 in the P210 panel.
 - (b) Examine the connectors DM24509 for bent or damage pin.
 - (c) If you find problem with the connectors, then do these steps:
 - 1) Repair the connectors or wiring.
 - 2) Re-connect the connectors DM24509.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message 24-12810 or 24-12811 (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

803. P310 SIU Internal Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13848, 24-13849, 24-13850, 24-13851.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
 - (a) If the maintenance message 24-13848 or 24-13849 shows on the existing faults display, then do the Fault Isolation Procedure - SIU 1 below.
 - (b) If the maintenance message 24-13850 or 24-13851 shows on the existing faults display, then do the Fault Isolation Procedure - SIU 2 below.
 - (c) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure - SIU 1



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24512.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing fault display, then continue.
 - (2) Do this check of the connectors to SIU 1, M24512:
 - (a) Disconnect connectors DM24512 from the SIU-1, M24512 in the P310 panel.
 - (b) Examine the connectors DM24512 for bent or damage pin.
 - (c) If you find problem with the connectors, then do these steps:
 - 1) Repair the connectors or wiring.
 - 2) Re-connect the connectors DM24512.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

D. Fault Isolation Procedure - SIU 2



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24513.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing fault display, then continue.
 - (2) Do this check of the connectors to SIU-2, M24513:
 - (a) Disconnect connectors DM24513 from the SIU-2, M24513 in the P310 panel.
 - (b) Examine the connectors DM24513 for bent or damage pin.
 - (c) If you find problem with the connectors, then do these steps:
 - 1) Repair the connectors or wiring.
 - 2) Re-connect the connectors DM24513.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

804. P110 CCU Internal Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11795, 24-11796.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Replace or do a check of the CCU, M24502.

To do a check of the CCU, do this task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

To replace the CCU, do these tasks:
Computing and Communications Unit - Removal, AMM TASK 24-09-00-000-815-002
Computing and Communications Unit - Installation, AMM TASK 24-09-00-400-811-002

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.
- (2) If the MAT shows active for maintenance message 24-11795, then replace the ARINC 629 coupler, B24107 in the P111 panel.

These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the ELMS P110 EU to the systems 629 Bus-L.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) If the MAT shows active for maintenance message 24-11796, then replace the ARINC 629 coupler, B24207 in the P211 panel.

These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the ELMS P110 EU to the systems 629 Bus-R.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

805. P210 CCU Internal Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12800, 24-12801.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Replace or do a check of the CCU, M24506.
- To do a check of the CCU, do this task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002
- To replace the CCU, do these tasks:
Computing and Communications Unit - Removal, AMM TASK 24-09-00-000-815-002
Computing and Communications Unit - Installation, AMM TASK 24-09-00-400-811-002
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) If the MAT shows active for maintenance message 24-12800, then replace the ARINC 629 coupler, B24108 in the P111 panel.
- These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- NOTE: This coupler connects the ELMS P210 EU to the systems 629 Bus-L.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (3) If the MAT shows active for maintenance message 24-12801, then replace the ARINC 629 coupler, B24208 in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the ELMS P210 EU to the systems 629 Bus-R.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

806. P310 CCU Internal Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13840, 24-13841.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Replace or do a check for the CCU, M24510.

To do a check of the CCU, do this task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

To replace the CCU, do these tasks:

Computing and Communications Unit - Removal, AMM TASK 24-09-00-000-815-002

Computing and Communications Unit - Installation, AMM TASK 24-09-00-400-811-002

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) If the MAT shows active for maintenance message 24-13840, then replace the ARINC 629 coupler, B24109 in the P111 panel.

These are the tasks:

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ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the ELMS P310 EU to the systems 629 Bus-L.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) If the MAT shows active for maintenance message 24-13841, then replace the ARINC 629 coupler, B24209 in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the ELMS P310 EU to the systems 629 Bus-R.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

807. **P110 CCU Incompatible Software Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11807, 24-11808, 24-11809.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) For the ELMS P110 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-11807	A & B
24-11808	A
24-11809	B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

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808. P210 CCU Incompatible Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12812, 24-12813, 24-12814.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) For the ELMS P210 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-12812	A & B
24-12813	A
24-12814	B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— END OF TASK —————

809. P310 CCU Incompatible Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13852, 24-13853, 24-13854.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) For the ELMS P310 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-13852	A & B
24-13853	A
24-13854	B

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

END OF TASK

810. P110 CCU Incompatible with SIU Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11815, 24-11816, 24-11817, 24-11818, 24-11819, 24-11820.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) For the ELMS P110 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-11815	A
24-11816	A
24-11817	B
24-11818	B
24-11819	A & B
24-11820	A & B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Replace the ARINC 629 coupler (L), B24107.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24207.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Use the table below and do a check of the applicable P110 Panel SIU for the message that shows.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

MAINTENANCE MESSAGE

P110 SIU

24-11815	SIU-1, (M24504)
24-11816	SIU-2, (M24505)
24-11817	SIU-1, (M24504)
24-11818	SIU-2, (M24505)
24-11819	SIU-1, (M24504)
24-11820	SIU-2, (M24505)

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (5) In the P110 panel, do a check of the CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

811. P210 CCU Incompatible with SIU Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12820, 24-12821, 24-12822, 24-12823, 24-12824, 24-12825.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) For the ELMS P210 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-12820	A
24-12821	A
24-12822	B
24-12823	B
24-12824	A & B
24-12825	A & B

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24108.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24208.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Use the table below and do a check of the applicable P210 Panel SIU for the message that shows.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

MAINTENANCE MESSAGE

24-12820

24-12821

24-12822

24-12823

24-12824

P210 SIU

SIU-1, (M24508)

SIU-2, (M24509)

SIU-1, (M24508)

SIU-2, (M24509)

SIU-1, (M24508)

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MAINTENANCE MESSAGE

24-12825

P210 SIU

SIU-2, (M24509)

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (5) Do a check of the P210 CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

812. P310 CCU Incompatible with SIU Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13860, 24-13861, 24-13862, 24-13863, 24-13864, 24-13865.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) For the ELMS P310 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

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MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-13860	A
24-13861	A
24-13862	B
24-13863	B
24-13864	A & B
24-13865	A & B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24109.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24209.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Use the table below and do a check of the applicable P310 Panel SIU for the message that shows.

This is the task:

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Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

MAINTENANCE MESSAGE

P310 SIU

24-13860	SIU-1 (M24512)
24-13861	SIU-2 (M24513)
24-13862	SIU-1 (M24512)
24-13863	SIU-2 (M24513)
24-13864	SIU-1 (M24512)
24-13865	SIU-2 (M24513)

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (5) Do a check of the P310 CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

813. P110 Panel ID Fault Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11821, 24-11822.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

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C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) In the P110 panel, do a check of the SIU-1, M24504.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) In the P110 panel, do a check of the SIU-2, M24505.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

814. P210 Panel ID Fault Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12826, 24-12827.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

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C. Fault Isolation Procedure



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) In the P210 panel, do a check of the SIU-1, M24508.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) In the P210 panel, do a check of the SIU-2, M24509.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

———— **END OF TASK** ————

815. P310 Panel ID Fault Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13866, 24-13867.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) In the P310 panel, do a check of the SIU-1, M24512.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) In the P310 panel, do a check of the SIU-2, M24513.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— END OF TASK —————

816. P110 Panel OFP Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11827, 24-11837.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.

NOTE: The Operational Flight Program (OFP) software is the Operational Program Software (OPS).

- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.

- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.

- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) For the ELMS P110 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE

SOFTWARE CHANNEL(S)

24-11837

A

24-11827

B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Replace the ARINC 629 coupler (L), B24107.
- These are the tasks:
- ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Replace the ARINC 629 coupler (R), B24207.
- These are the tasks:
- ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do a check of the P110 CCU, M24502.
- This is the task:
- Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

817. P110 Panel CT Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11834, 24-11838.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.

NOTE: The Configuration Table (CT) software is the Operational Program Configuration (OPC) software.

- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) For the ELMS P110 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-11834	A
24-11838	B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24107.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24207.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do a check of the P110 CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

818. P210 Panel OFP Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12834, 24-12835.

B. Fault Isolation Procedure

- (1) For the ELMS P210 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-12834	A
24-12835	B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24108.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24208.

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These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do a check of the P210 CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

819. **P210 Panel CT Software Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12836, 24-12837.

B. Fault Isolation Procedure

- (1) For the ELMS P210 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-12836	A
24-12837	B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24108.

These are the tasks:

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ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24208.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do a check of the P210 CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

820. P310 Panel OFP Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13874, 24-13875.

B. Fault Isolation Procedure

- (1) For the ELMS P310 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE

24-13874

SOFTWARE CHANNEL (S)

A

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MAINTENANCE MESSAGE

SOFTWARE CHANNEL (S)

24-13875

B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24109.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24209.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do a check of the P310 CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

821. P310 Panel CT Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13876, 24-13877.

B. Fault Isolation Procedure

- (1) For the ELMS P310 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-13876	A
24-13877	B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24109.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24209.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.



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- (4) Do a check of the P310 CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

END OF TASK

822. P110 CCU Hardware to Software Incompatible Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11812, 24-11813, 24-11814.

B. Fault Isolation Procedure

- (1) For the ELMS P110 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-11812	A
24-11813	B
24-11814	A & B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24107.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Replace the ARINC 629 coupler (R), B24207.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do a check of the P110 CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

823. **P210 CCU Hardware to Software Incompatible Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12817, 24-12818, 24-12819.

B. Fault Isolation Procedure

- (1) For the ELMS P210 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-12817	A
24-12818	B
24-12819	A & B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Replace the ARINC 629 coupler (L), B24108.
- These are the tasks:
- ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Replace the ARINC 629 coupler (R), B24208.
- These are the tasks:
- ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do a check of the P210 CCU, M24506.
- This is the task:
- Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

— END OF TASK —

824. P310 CCU Hardware to Software Incompatible Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13857, 24-13858, 24-13859.

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B. Fault Isolation Procedure

- (1) For the ELMS P310 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-13857	A
24-13858	B
24-13859	A & B

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24109.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24209.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do a check of the P310 CCU, M24510.

This is the task:

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

825. **P110 CCU to P100 PPC Incompatible Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11828.

B. Fault Isolation Procedure

- (1) For the ELMS P110 Power Management Panel, it is necessary to do a software installation. Install the software into Channel A. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) For the ELMS P110 Power Management Panel, it is necessary to do a software installation. Install the software into Channel B. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Replace the P100 Power Panel Controller (PPC), M24500.

These are the tasks:

Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002,

Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

826. P210 CCU to P200 PPC Incompatible Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12838.

B. Fault Isolation Procedure

- (1) For the ELMS P210 Power Management Panel, it is necessary to do a software installation. Install the software into Channel A. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) For the ELMS P210 Power Management Panel, it is necessary to do a software installation. Install the software into Channel B. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Replace the P200 Power Panel Controller (PPC), M24501.

These are the tasks:

Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002,

Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

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827. P110 CCU to Panel Variant Identifier Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11810, 24-11811.

B. Fault Isolation Procedure

- (1) For the ELMS P110 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-11810	A
24-11811	B

- (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24107.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24207.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Do a check of the P110 CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (5) Repair the panel variant identifier (programming plug) in the P110 power management panel.

- (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

END OF TASK

828. P210 CCU to Panel Variant Identifier Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12815, 24-12816.

B. Fault Isolation Procedure

- (1) For the ELMS P210 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-12815	A
24-12816	B

- (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B24108.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Replace the ARINC 629 coupler (R), B24208.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



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- (4) Do a check of the P210 CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (5) Repair the panel variant identifier (programming plug) in the P210 power management panel.

- (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

829. P310 CCU to Panel Variant Identifier Software Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13855, 24-13856.

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B. Fault Isolation Procedure

- (1) For the ELMS P310 Power Management Panel, it is necessary to do a software installation. Use the table below and install the software into the applicable channel(s) for the message that shows. do this task: Electrical Load Management System - Software Installation, AMM TASK 24-09-00-400-809-002

MAINTENANCE MESSAGE	SOFTWARE CHANNEL(S)
24-13855	A
24-13856	B

- (a) If the maintenance message does not show on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Replace the ARINC 629 coupler (L), B24109.
- These are the tasks:
- ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Replace the ARINC 629 coupler (R), B24209.
- These are the tasks:
- ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.



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- (4) Do a check of the P310 CCU, M24510.
- This is the task:
- Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

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- (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (5) Repair the panel variant identifier (programming plug) in the P310 power management panel.

- (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

830. Power Management Panel Arbitration Logic Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12098, 24-12132, 24-13011.

B. Fault Isolation Procedure

- (1) Use the table below, find the message that shows and replace the applicable ARINC 629 coupler (CMC).

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

MAINTENANCE MESSAGE	CMC
24-12098	P110 CMC (L), B24107 P110 CMC (R), B24207
24-12132	P210 CMC (L), B24108 P210 CMC (R), B24208
24-13011	P310 CMC (L), B24109 P310 CMC (R), B24209

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

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- (2) Use the table below, find the message that shows and do a check of the applicable power management panel CCU.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

MAINTENANCE MESSAGE

CCU

24-12098

P110 CCU, M24502

24-12132

P210 CCU, M24506

24-13011

P310 CCU, M24510

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110, P210 or P310 EU self test. Do the applicable EU self test for the power management panel CCU that was replaced.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

831. Underpowered Ground Cart Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11792, 24-12131.

B. Fault Isolation Procedure

- (1) Do one of the two steps below:

NOTE: You only need to do one of the steps below to clear the fault.

- (a) Supply the primary external receptacle with a capable 90 KVA ground cart, OR;
- (b) Supply the primary and secondary external receptacles with two 90 KVA ground carts.

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- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

832. Panel Variant Identifier Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12096, 24-12097, 24-13821.

B. Fault Isolation Procedure

- (1) Repair the panel variant identifier (programming plug) in the applicable power management panel.
- (a) Do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110, P210 or P310 EU self test.
- (b) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

833. P110 Panel ARINC 629 Bus (Left) Fault Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11790, 24-11791.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24107.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.



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- (2) Do a check of the P110 panel CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the ARINC 629 (L) coupler, B24107 and the P110 panel CCU, M24502. (WDM 24-09-24)

- (a) Disconnect connector DB24107 from the ARINC 629 (L) coupler, B24107 in the P111 panel.
- (b) Disconnect connector DM24502A from the P110 CCU, M24502.
- (c) Do a check for continuity between these pins of connector DB24107 in the P111 panel and these pins of connector DM24502A at the P110 panel CCU:

DB24107	DM24502A
pin 1	pin 6
pin 2	pin 5
pin 4	pin 3
pin 5	pin 2

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DB24107 to the ARINC 629 (L) coupler, B24107 in the P111 panel.
- 3) Re-connect connector DM24502A to the P110 CCU, M24502.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

834. P110 Panel ARINC 629 Bus (Right) Fault Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11793, 24-11794.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (R), B24207.

These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.



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- (2) Do a check of the P110 panel CCU, M24502.

This is the task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the ARINC 629 (R) coupler, B24207 and the P110 panel CCU, M24502. (WDM 24-09-24)
 - (a) Disconnect connector DB24207 from the ARINC 629 (R) coupler, B24207 in the P211 panel.
 - (b) Disconnect connector DM24502A from the P110 CCU, M24502.
 - (c) Do a check for continuity between these pins of connector DB24207 in the P211 panel and these pins of connector DM24502A at the P110 panel CCU:

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DB24207	DM24502A
pin 1	pin 127
pin 2	pin 126
pin 4	pin 124
pin 5	pin 123

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DB24207 to the ARINC 629 (R) coupler, B24207 in the P211 panel.
 - 3) Re-connect connector DM24502A to the P110 CCU, M24502.
- (e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

835. P210 Panel ARINC 629 Bus (Left) Fault Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12122, 24-12123.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24108.
- These are the tasks:
- ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.

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- (2) Do a check of the P210 panel CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the ARINC 629 (L) coupler, B24108 and the P210 panel CCU, M24506. (WDM 24-09-25)

- (a) Disconnect connector DB24108 from the ARINC 629 (L) coupler, B24108 in the P111 panel.

- (b) Disconnect connector DM24506A from the P210 CCU, M24506.

- (c) Do a check for continuity between these pins of connector DB24108 in the P111 panel and these pins of connector DM24506A at the P210 panel CCU:

DB24108

DM24506A

pin 1	.....	pin 6
pin 2	.....	pin 5
pin 4	.....	pin 3
pin 5	.....	pin 2

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DB24108 to the ARINC 629 (L) coupler, B24108 in the P111 panel.
- 3) Re-connect connector DM24506A to the P210 CCU, M24506.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

836. P210 Panel ARINC 629 Bus (Right) Fault Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12057, 24-12121.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (R), B24208.

These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.



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- (2) Do a check of the P210 panel CCU, M24506.

This is the task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the ARINC 629 (R) coupler, B24208 and the P210 panel CCU, M24506. (WDM 24-09-25)
 - (a) Disconnect connector DB24208 from the ARINC 629 (R) coupler, B24208 in the P211 panel.
 - (b) Disconnect connector DM24506A from the P210 CCU, M24506.
 - (c) Do a check for continuity between these pins of connector DB24208 in the P211 panel and these pins of connector DM24506A at the P210 panel CCU:



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DB24208

pin 1 pin 127
pin 2 pin 126
pin 4 pin 124
pin 5 pin 123

DM24506A

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DB24208 to the ARINC 629 (R) coupler, B24208 in the P211 panel.
 - 3) Re-connect connector DM24506A to the P210 CCU, M24506.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

837. P310 Panel ARINC 629 Bus (Left) Fault Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13802, 24-13803.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24109.

These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the P310 panel CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the ARINC 629 (L) coupler, B24109 and the P310 panel CCU, M24510. (WDM 24-09-26)

- (a) Disconnect connector DB24109 from the ARINC 629 (L) coupler, B24109 in the P111 panel.

- (b) Disconnect connector DM24510A from the P310 CCU, M24510.

- (c) Do a check for continuity between these pins of connector DB24109 in the P111 panel and these pins of connector DM24510A at the P310 panel CCU:

DB24109	DM24510A
pin 1	pin 3
pin 2	pin 2
pin 4	pin 6
pin 5	pin 5

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DB24109 to the ARINC 629 (L) coupler, B24109 in the P111 panel.
- 3) Re-connect connector DM24510A to the P310 CCU, M24510.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

838. P310 Panel ARINC 629 Bus (Right) Fault Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13819, 24-13820.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (R), B24209.

These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the P310 panel CCU, M24510.

This is the task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the ARINC 629 (R) coupler, B24209 and the P310 panel CCU, M24510. (WDM 24-09-26)
 - (a) Disconnect connector DB24209 from the ARINC 629 (R) coupler, B24209 in the P211 panel.
 - (b) Disconnect connector DM24510A from the P310 CCU, M24510.
 - (c) Do a check for continuity between these pins of connector DB24209 in the P211 panel and these pins of connector DM24510A at the P310 panel CCU:



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DB24209

pin 1 pin 127
pin 2 pin 126
pin 4 pin 124
pin 5 pin 123

DM24510A

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DB24209 to the ARINC 629 (R) coupler, B24209 in the P211 panel.
 - 3) Re-connect connector DM24510A to the P310 CCU, M24510.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

839. **P110 SIU-1 CH A Communication Loss - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11799.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24504, in the P110 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24502, in the P110 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the P110 SIU-1, M24504 and the P110 CCU, M24502 (WDM 24-09-24).

- (a) Disconnect connector DM24504B from the SIU-1, M24504 in the P110 panel.
(b) Disconnect connector DM24502A from the P110 CCU, M24502.
(c) Do a check for continuity between these pins of connector DM24504B and these pins of connector DM24502A in the P110 panel:

DM24504B

pin 71
pin 72

DM24502A

pin 8
pin 17

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24504B to the SIU-1, M24504 in the P110 panel.
- 3) Re-connect connector DM24502A to the P110 CCU, M24502.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

840. P110 SIU-1 CH B Communication Loss - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11800.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24504, in the P110 panel.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24502, in the P110 panel.

This is the task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the P110 SIU-1, M24504 and the P110 CCU, M24502 (WDM 24-09-24).
 - (a) Disconnect connector DM24504B from the SIU-1, M24504 in the P110 panel.
 - (b) Disconnect connector DM24502A from the P110 CCU, M24502.
 - (c) Do a check for continuity between these pins of connector DM24504B and these pins of connector DM24502A in the P110 panel:

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DM24504B

pin 73 pin 105
pin 74 pin 96

DM24502A

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24504B to the SIU-1, M24504 in the P110 panel.
 - 3) Re-connect connector DM24502A to the P110 CCU, M24502.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

841. P110 SIU-2 CH A Communication Loss - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11801.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24505, in the P110 panel.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24502, in the P110 panel.
This is the task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the P110 SIU-2, M24505 and the P110 CCU, M24502 (WDM 24-09-24).
- (a) Disconnect connector DM24505B from the SIU-2, M24505 in the P110 panel.
- (b) Disconnect connector DM24502A from the P110 CCU, M24502.
- (c) Do a check for continuity between these pins of connector DM24505B and these pins of connector DM24502A in the P110 panel:
- | DM24505B | DM24502A |
|-----------------|-----------------|
| pin 71 | pin 9 |
| pin 72 | pin 28 |
- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24505B to the SIU-2, M24505 in the P110 panel.
 - 3) Re-connect connector DM24502A to the P110 CCU, M24502.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

842. **P110 SIU-2 CH B Communication Loss - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11802.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.

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- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24505, in the P110 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24502, in the P110 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the P110 SIU-2, M24505 and the P110 CCU, M24502 (WDM 24-09-24).

- (a) Disconnect connector DM24505B from the SIU-2, M24505 in the P110 panel.

- (b) Disconnect connector DM24502A from the P110 CCU, M24502.

- (c) Do a check for continuity between these pins of connector DM24505B and these pins of connector DM24502A in the P110 panel:

DM24505B

pin 73
pin 74

DM24502A

pin 116
pin 97

- (d) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Re-connect connector DM24505B to the SIU-2, M24505 in the P110 panel.
- 3) Re-connect connector DM24502A to the P110 CCU, M24502.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

END OF TASK

843. P210 SIU-1 CH A Communication Loss - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12804.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24508, in the P210 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24506, in the P210 panel.

This is the task:

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the P210 SIU-1, M24508 and the P210 CCU, M24506 (WDM 24-09-25).
- (a) Disconnect connector DM24508B from the SIU-1, M24508 in the P210 panel.
- (b) Disconnect connector DM24506A from the P210 CCU, M24506.
- (c) Do a check for continuity between these pins of connector DM24508B and these pins of connector DM24506A in the P210 panel:

DM24508B	DM24506A
pin 71	pin 8
pin 72	pin 17

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24508B to the SIU-1, M24508 in the P210 panel.
 - 3) Re-connect connector DM24506A to the P210 CCU, M24506.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

844. P210 SIU-1 CH B Communication Loss - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12805.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

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C. Fault Isolation Procedure



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24508, in the P210 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24506, in the P210 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the P210 SIU-1, M24508 and the P210 CCU, M24506 (WDM 24-09-25).

- (a) Disconnect connector DM24508B from the SIU-1, M24508 in the P210 panel.

- (b) Disconnect connector DM24506A from the P210 CCU, M24506.

- (c) Do a check for continuity between these pins of connector DM24508B and these pins of connector DM24506A in the P210 panel:

DM24508B

pin 73 pin 105
pin 74 pin 96

DM24506A

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24508B to the SIU-1, M24508 in the P210 panel.
- 3) Re-connect connector DM24506A to the P210 CCU, M24506.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

845. P210 SIU-2 CH A Communication Loss - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12806.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24509, in the P210 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24506, in the P210 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the P210 SIU-2, M24509 and the P210 CCU, M24506 (WDM 24-09-25).
- (a) Disconnect connector DM24509B from the SIU-2, M24509 in the P210 panel.
- (b) Disconnect connector DM24506A from the P210 CCU, M24506.
- (c) Do a check for continuity between these pins of connector DM24509B and these pins of connector DM24506A in the P210 panel:

DM24509B	DM24506A
pin 71	pin 9
pin 72	pin 28

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24509B to the SIU-2, M24509 in the P210 panel.
 - 3) Re-connect connector DM24506A to the P210 CCU, M24506.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

846. P210 SIU-2 CH B Communication Loss - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12807.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

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C. Fault Isolation Procedure



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24509, in the P210 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24506, in the P210 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the P210 SIU-2, M24509 and the P210 CCU, M24506 (WDM 24-09-25).

- (a) Disconnect connector DM24509B from the SIU-2, M24509 in the P210 panel.

- (b) Disconnect connector DM24506A from the P210 CCU, M24506.

- (c) Do a check for continuity between these pins of connector DM24509B and these pins of connector DM24506A in the P210 panel:

DM24509B

pin 73

pin 74

DM24506A

pin 116

pin 97

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24509B to the SIU-2, M24509 in the P210 panel.
- 3) Re-connect connector DM24506A to the P210 CCU, M24506.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

847. P310 SIU-1 CH A Communication Loss - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13844.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24512, in the P310 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24510, in the P310 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the P310 SIU-1, M24512 and the P310 CCU, M24510 (WDM 24-09-26).
- (a) Disconnect connector DM24512B from the SIU-1, M24512 in the P310 panel.
- (b) Disconnect connector DM24510A from the P310 CCU, M24510.
- (c) Do a check for continuity between these pins of connector DM24512B and these pins of connector DM24510A in the P310 panel:

DM24512B	DM24510A
pin 71	pin 8
pin 72	pin 17

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24512B to the SIU-1, M24512 in the P310 panel.
 - 3) Re-connect connector DM24510A to the P310 CCU, M24510.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

848. P310 SIU-1 CH B Communication Loss - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13845.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

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C. Fault Isolation Procedure



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24512, in the P310 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24510, in the P310 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the P310 SIU-1, M24512 and the P310 CCU, M24510 (WDM 24-09-26).

- (a) Disconnect connector DM24512B from the SIU-1, M24512 in the P310 panel.

- (b) Disconnect connector DM24510A from the P310 CCU, M24510.

- (c) Do a check for continuity between these pins of connector DM24512B and these pins of connector DM24510A in the P310 panel:

DM24512B

pin 73 pin 105

pin 74 pin 96

DM24510A

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24512B to the SIU-1, M24512 in the P310 panel.
- 3) Re-connect connector DM24510A to the P310 CCU, M24510.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

849. **P310 SIU-2 CH A Communication Loss - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13846.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24513, in the P310 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24510, in the P310 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the P310 SIU-2, M24513 and the P310 CCU, M24510 (WDM 24-09-26).
- (a) Disconnect connector DM24513B from the SIU-2, M24513 in the P310 panel.
- (b) Disconnect connector DM24510A from the P310 CCU, M24510.
- (c) Do a check of continuity between these pins of connector DM24513B and these pins of connector DM24510A in the P310 panel:

DM24513B	DM24510A
pin 71	pin 9
pin 72	pin 28

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24513B to the SIU-2, M24513 in the P310 panel.
 - 3) Re-connect connector DM24510A to the P310 CCU, M24510.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

850. P310 SIU-2 CH B Communication Loss - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13847.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

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C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24513, in the P310 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the CCU, M24510, in the P310 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the P310 SIU-2, M24513 and the P310 CCU, M24510 (WDM 24-09-26).

- (a) Disconnect connector DM24513B from the SIU-2, M24513 in the P310 panel.

- (b) Disconnect connector DM24510A from the P310 CCU, M24510.

- (c) Do a check for continuity between these pins of connector DM24513B and these pins of connector DM24510A in the P310 panel:

DM24513B

pin 73

pin 74

DM24510A

pin 116

pin 97

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24513B to the SIU-2, M24513 in the P310 panel.
- 3) Re-connect connector DM24510A to the P310 CCU, M24510.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

— END OF TASK —

851. P110 SIU ID/Parity Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11823, 24-11824, 24-11825, 24-11826, 24-11835, 24-11836.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message 24-11823, 24-11825, or 24-11835, then do the Fault Isolation Procedure - SIU 1 below.
- (2) If the MAT shows ACTIVE for the maintenance message 24-11824, 24-11826, or 24-11836, then do the Fault Isolation Procedure - SIU 2 below.
- (3) If the MAT shows LATCHED for the maintenance message then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
 - (a) If the maintenance message 24-11823, 24-11825, or 24-11835 on the existing fault display, then do the Fault Isolation Procedure - SIU 1 below.
 - (b) If the maintenance message 24-11824, 24-11826, or 24-11836 on the existing fault display, then do the Fault Isolation Procedure - SIU 2 below.
 - (c) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure - SIU 1



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24504.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing fault display, then continue.
- (2) Do this check of the wiring (WDM 24-09-24):
 - (a) Disconnect connector DM24504B from the SIU-1, M24504 in the P110 panel.
 - (b) On connector DM24504B, do a check of these pins to ground.

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FROM DM24504B	TO	RESULT
PIN 56	GND	OPEN
PIN 57	GND	CONTINUITY
PIN 58	GND	OPEN
PIN 59	GND	CONTINUITY
PIN 60	GND	OPEN

(c) If you do not find the expected results above, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24504B to the SIU-1, M24504 in the P110 panel.
 - a) If the maintenance message 24-11823, 24-11825, or 24-11835 does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

D. Fault Isolation Procedure - SIU 2



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24505.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance messageshows on the existing fault display, then continue.

- (2) Do this check of the wiring (WDM 24-09-24):

- (a) Disconnect connector DM24505B from the SIU-2, M24505 in the P110 panel.
- (b) On connector DM24505B, do a check of these pins to ground.

FROM DM24505B	TO	RESULT
PIN 56	GND	OPEN
PIN 57	GND	CONTINUITY
PIN 58	GND	CONTINUITY
PIN 59	GND	OPEN
PIN 60+	GND	OPEN

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(c) If you do not find the expected results above, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24505B to the SIU-2, M24505 in the P110 panel.
 - a) If the maintenance message 24-11824, 24-11826, or 24-11836 does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

852. P210 SIU ID/Parity Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12828, 24-12829, 24-12830, 24-12831, 24-12832, 24-12833.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Use the table below and do a check of the applicable P210 Panel SIU for the message that shows.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

MAINTENANCE MESSAGE	P210 SIU
24-12828	SIU-1, (M24508)
24-12829	SIU-2, (M24509)
24-12830	SIU-1, (M24508)
24-12831	SIU-2, (M24509)
24-12832	SIU-1, (M24508)
24-12833	SIU-2, (M24509)

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Do this check of the wiring for these maintenance message(s) (WDM 24-09-25):

24-12828

24-12830

24-12832

- (a) Disconnect connector DM24508B from the SIU-1, M24508 in the P210 panel.

- (b) On connector DM24508B, do a check of these pins to ground.

FROM DM24508B	TO	RESULT
PIN 56	GND	CONTINUITY
PIN 57	GND	OPEN
PIN 58	GND	OPEN
PIN 59	GND	CONTINUITY
PIN 60	GND	OPEN

- (c) If you do not find the expected results above, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24508B to the SIU-1, M24508 in the P210 panel.
 - a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (3) Do this check of the wiring for these maintenance message(s) (WDM 24-09-25):

24-12829

24-12831

24-12833

- (a) Disconnect connector DM24509B from the SIU-2, M24509 in the P210 panel.

- (b) On connector DM24509B, do a check of these pins to ground.

FROM DM24509B	TO	RESULT
PIN 56	GND	CONTINUITY
PIN 57	GND	OPEN
PIN 58	GND	CONTINUITY
PIN 59	GND	OPEN

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FROM	TO	RESULT
DM24509B		
PIN 60	GND	OPEN

(c) If you do not find the expected results above, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24509B to the SIU-2, M24509 in the P210 panel.
 - a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

853. P310 SIU ID/Parity Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-13868, 24-13869, 24-13870, 24-13871, 24-13872, 24-13873.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Use the table below and do a check of the applicable P310 Panel SIU for the message that shows.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

MAINTENANCE MESSAGE

24-13868
24-13869
24-13870

P310 SIU

SIU-1, (M24512)
SIU-2, (M24513)
SIU-1, (M24512)

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MAINTENANCE MESSAGE

P310 SIU

24-13871

SIU-2, (M24513)

24-13872

SIU-1, (M24512)

24-13873

SIU-2, (M24513)

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Do this check of the wiring for these maintenance message(s) (WDM 24-09-26):

24-13868

24-13870

24-13872

- (a) Disconnect connector DM24512B from the SIU-1, M24512 in the P310 panel.

- (b) On connector DM24512B, do a check of these pins to ground.

FROM DM24512B

TO

RESULT

PIN 56

GND

CONTINUITY

PIN 57

GND

CONTINUITY

PIN 58

GND

OPEN

PIN 59

GND

CONTINUITY

PIN 60

GND

CONTINUITY

- (c) If you do not find the expected results above, then do these steps:

- 1) Repair the wiring.

- 2) Re-connect connector DM24512B to the SIU-1, M24512 in the P310 panel.

- a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (3) Do this check of the wiring for these maintenance message(s) (WDM 24-09-26):

24-13869

24-13871

24-13873

- (a) Disconnect connector DM24513B from the SIU-2, M24513 in the P310 panel.

- (b) On connector DM24513B, do a check of these pins to ground.

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FROM DM24513B	TO	RESULT
PIN 56	GND	CONTINUITY
PIN 57	GND	CONTINUITY
PIN 58	GND	CONTINUITY
PIN 59	GND	OPEN
PIN 60	GND	CONTINUITY

(c) If you do not find the expected results above, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24513B to the SIU-2, M24513 in the P310 panel.
 - a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

854. P110 SIU-1 Pull-Up Power Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11797.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24504, in the P110 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Do a check for 28 VDC at terminal 15F of TB414. (WDM 24-09-24)

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(a) If there is not 28 VDC at terminal 15F of TB414, then do these steps:

- 1) Replace the Current Monitor Card, M24518, in the P110 panel.

These are the tasks:

Current Monitor Card - Removal, AMM TASK 24-09-00-000-817-002,

Current Monitor Card - Installation, AMM TASK 24-09-00-400-813-002.

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

(b) If there is 28 VDC at terminal 15F of TB414, then do these steps:

- 1) Disconnect connector DM24504A from the P110 panel SIU-1, M24504.
- 2) Do a check for continuity between terminal 15F of TB414 and pin 80 of connector DM24504A. (WDM 24-09-24)
- 3) If you find a problem with the wiring, then repair the wiring.
- 4) Re-connect connector DM24504A to the SIU-1, M24504 in the P110 panel.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

END OF TASK

855. P110 SIU-2 Pull-Up Power Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11798.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24505, in the P110 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Do a check for 28 VDC at terminal 15P of TB414. (WDM 24-09-24)
 - (a) If there is not 28 VDC at terminal 15P of TB414, then do these steps:
 - 1) Replace the Current Monitor Card, M24518, in the P110 panel.
These are the tasks:
Current Monitor Card - Removal, AMM TASK 24-09-00-000-817-002,
Current Monitor Card - Installation, AMM TASK 24-09-00-400-813-002.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If there is 28 VDC at terminal 15P of TB414, then do these steps:
 - 1) Disconnect connector DM24505A from the P110 panel SIU-2, M24505.
 - 2) Do a check for continuity between terminal 15P of TB414 and pin 80 of connector DM24505A. (WDM 24-09-24)
 - 3) If you find a problem with the wiring, then repair the wiring.
 - 4) Re-connect connector DM24505A to the SIU-2, M24505 in the P110 panel.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

856. P210 SIU-1 Pull-Up Power Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12802.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24508, in the P210 panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Do a check for 28 VDC at terminal 15N of TB423. (WDM 24-09-25)
 - (a) If there is not 28 VDC at terminal 15N of TB423, then do these steps:
 - 1) Replace the Current Monitor Card, M24519, in the P210 panel.
These are the tasks:
Current Monitor Card - Removal, AMM TASK 24-09-00-000-817-002,
Current Monitor Card - Installation, AMM TASK 24-09-00-400-813-002.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If there is 28 VDC at terminal 15N of TB423, then do these steps:
 - 1) Disconnect connector DM24508A from the P210 panel SIU-1, M24508.
 - 2) Do a check for continuity between terminal 15N of TB423 and pin 80 of connector DM24508A. (WDM 24-09-24)
 - 3) If you find a problem with the wiring, then repair the wiring.
 - 4) Re-connect connector DM24508A to the SIU-1, M24508 in the P210 panel.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

857. P210 SIU-2 Pull-Up Power Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12803.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24509, in the P210 panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Do a check for 28 VDC at terminal 15P of TB423. (WDM 24-09-25)
 - (a) If there is not 28 VDC at terminal 15P of TB423, then do these steps:
 - 1) Replace the Current Monitor Card, M24519, in the P210 panel.
These are the tasks:
Current Monitor Card - Removal, AMM TASK 24-09-00-000-817-002,
Current Monitor Card - Installation, AMM TASK 24-09-00-400-813-002.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If there is 28 VDC at terminal 15P of TB423, then do these steps:
 - 1) Disconnect connector DM24509A from the P210 panel SIU-2, M24509.
 - 2) Do a check for continuity between terminal 15P of TB423 and pin 80 of connector DM24509A. (WDM 24-09-24)
 - 3) If you find a problem with the wiring, then repair the wiring.
 - 4) Re-connect connector DM24509A to the SIU-2, M24509 in the P210 panel.

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- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

END OF TASK

858. P310 SIU-1 Pull-Up Power Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13842.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-1, M24512, in the P310 panel.
- This is the task:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Do a check for 28 VDC at terminal 11N of TB422. (WDM 24-09-26)
- (a) If there is not 28 VDC at terminal 11N of TB422, then do these steps:
- 1) Replace the Monitor Card, M24520, in the P310 panel.
- These are the tasks:
- Monitor Card - Removal, AMM TASK 24-09-00-000-826,
- Monitor Card - Installation, AMM TASK 24-09-00-400-824.
- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If there is 28 VDC at terminal 11N of TB422, then do these steps:

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- 1) Disconnect connector DM24512A from the P310 panel SIU-1, M24512.
- 2) Do a check for continuity between terminal 11N of TB422 and pin 80 of connector DM24512A. (WDM 24-09-24)
- 3) If you find a problem with the wiring, then repair the wiring.
- 4) Re-connect connector DM24512A to the SIU-1, M24512 in the P310 panel.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

859. P310 SIU-2 Pull-Up Power Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13843.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the SIU-2, M24513, in the P310 panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.
NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.
- (2) Do a check for 28 VDC at terminal 12P of TB422. (WDM 24-09-24)
 - (a) If there is not 28 VDC at terminal 12P of TB422, then do these steps:
 - 1) Replace the Current Monitor Card, M24520, in the P310 panel.
These are the tasks:
Current Monitor Card - Removal, AMM TASK 24-09-00-000-817-002,
Current Monitor Card - Installation, AMM TASK 24-09-00-400-813-002.

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- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If there is 28 VDC at terminal 12P of TB422, then do these steps:

- 1) Disconnect connector DM24513A from the P310 panel SIU-2, M24513.
- 2) Do a check for continuity between terminal 12P of TB422 and pin 80 of connector DM24513A. (WDM 24-09-24)
- 3) If you find a problem with the wiring, then repair the wiring.
- 4) Re-connect connector DM24513A to the SIU-2, M24513 in the P310 panel.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

860. P110 Panel No Output on ARINC 629 Bus (Left) Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-78841.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24107.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the P110 panel CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the ARINC 629 (L) coupler, B24107 and the P110 panel CCU, M24502. (WDM 24-09-24)

- (a) Disconnect connector DB24107 from the ARINC 629 (L) coupler, B24107 in the P111 panel.
- (b) Disconnect connector DM24502A from the P110 CCU, M24502.
- (c) Do a check for continuity between these pins of connector DB24107 in the P111 panel and these pins of connector DM24502A at the P110 panel CCU:

DB24107

pin 1
pin 2
pin 4
pin 5

DM24502A

pin 6
pin 5
pin 3
pin 2

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DB24107 to the ARINC 629 (L) coupler, B24107 in the P111 panel.
- 3) Re-connect connector DM24502A to the P110 CCU, M24502.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

861. P110 Panel No Output on ARINC 629 Bus (Right) Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-78861.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (R), B24207.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the P110 panel CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the ARINC 629 (R) coupler, B24207 and the P110 panel CCU, M24502. (WDM 24-09-24)

- (a) Disconnect connector DB24207 from the ARINC 629 (R) coupler, B24207 in the P211 panel.
- (b) Disconnect connector DM24502A from the P110 CCU, M24502.
- (c) Do a check for continuity between these pins of connector DB24207 in the P211 panel and these pins of connector DM24502A at the P110 panel CCU:

DB24207

pin 1
pin 2
pin 4
pin 5

DM24502A

pin 127
pin 126
pin 124
pin 123

- (d) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
 - 2) Re-connect connector DB24207 to the ARINC 629 (R) coupler, B24207 in the P211 panel.
 - 3) Re-connect connector DM24502A to the P110 CCU, M24502.
- (e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

END OF TASK

862. P210 Panel No Output on ARINC 629 Bus (Left) Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-78842.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24108.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the P210 panel CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the ARINC 629 (L) coupler, B24108 and the P210 panel CCU, M24506. (WDM 24-09-25)
 - (a) Disconnect connector DB24108 from the ARINC 629 (L) coupler, B24108 in the P111 panel.
 - (b) Disconnect connector DM24506A from the P210 CCU, M24506.
 - (c) Do a check for continuity between these pins of connector DB24108 in the P111 panel and these pins of connector DM24506A at the P210 panel CCU:

DB24108	DM24506A
pin 1	pin 6
pin 2	pin 5
pin 4	pin 3
pin 5	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DB24108 to the ARINC 629 (L) coupler, B24108 in the P111 panel.
 - 3) Re-connect connector DM24506A to the P210 CCU, M24506.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

863. P210 Panel No Output on ARINC 629 Bus (Right) Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-78862.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (R), B24208.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the P210 panel CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the ARINC 629 (R) coupler, B24208 and the P210 panel CCU, M24506. (WDM 24-09-25)

- (a) Disconnect connector DB24208 from the ARINC 629 (R) coupler, B24208 in the P211 panel.
- (b) Disconnect connector DM24506A from the P210 CCU, M24506.
- (c) Do a check for continuity between these pins of connector DB24208 in the P211 panel and these pins of connector DM24506A at the P210 panel CCU:

DB24208	DM24506A
pin 1	pin 127
pin 2	pin 126
pin 4	pin 124
pin 5	pin 123

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DB24208 to the ARINC 629 (R) coupler, B24208 in the P211 panel.
- 3) Re-connect connector DM24506A to the P210 CCU, M24506.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— END OF TASK —————

864. P310 Panel No Output on ARINC 629 Bus (Left) Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-78843.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24109.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the P310 panel CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the ARINC 629 (L) coupler, B24109 and the P310 panel CCU, M24510. (WDM 24-09-26)

- (a) Disconnect connector DB24109 from the ARINC 629 (L) coupler, B24109 in the P111 panel.
- (b) Disconnect connector DM24510A from the P310 CCU, M24510.
- (c) Do a check for continuity between these pins of connector DB24109 in the P111 panel and these pins of connector DM24510A at the P310 panel CCU:

DB24109

DM24510A

pin 1	.....	pin 3
pin 2	.....	pin 2
pin 4		pin 6
pin 5		pin 5

- (d) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Re-connect connector DB24109 to the ARINC 629 (L) coupler, B24109 in the P111 panel.
- 3) Re-connect connector DM24510A to the P310 CCU, M24510.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

— END OF TASK —

865. P310 Panel No Output on ARINC 629 Bus (Right) Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-78863.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (R), B24209.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the P310 panel CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.
- (3) Do this check of the wiring between the ARINC 629 (R) coupler, B24209 and the P310 panel CCU, M24510. (WDM 24-09-26)
 - (a) Disconnect connector DB24209 from the ARINC 629 (R) coupler, B24209 in the P211 panel.
 - (b) Disconnect connector DM24510A from the P310 CCU, M24510.
 - (c) Do a check for continuity between these pins of connector DB24209 in the P211 panel and these pins of connector DM24510A at the P310 panel CCU:

DB24209	DM24510A
pin 1	pin 127
pin 2	pin 126
pin 4	pin 124
pin 5	pin 123

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DB24209 to the ARINC 629 (R) coupler, B24209 in the P211 panel.
 - 3) Re-connect connector DM24510A to the P310 CCU, M24510.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

866. P110 CCU to P100 Bus 1 Communication Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11829, 24-11831.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24107.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (R), B24207.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do a check of the CCU, M24502, in the P110 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Replace the Power Panel Controller (PPC), M24500 in the P100 panel.

These are the tasks:

Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002,

Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.
- (5) Do this check of the wiring between the P110 CCU, M24502 and the P100 power panel. (WDM 24-09-24) (WDM 24-09-31)
 - (a) Disconnect connector DM24502A from the CCU, M24502 in the P110 panel.
 - (b) Disconnect connector D10025P from the P100 power panel.
 - (c) Do a check for continuity between these pins of connector DM24502A at the P110 panel CCU and these pins of connector D10025P at the P100 power panel:

D10025P	DM24502A
pin 2	pin 41
pin 3	pin 42
pin 8	pin 80
pin 9	pin 39

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24502A to the CCU, M24502 in the P110 panel.
 - 3) Re-connect connector D10025P to the P100 power panel.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

END OF TASK

867. P110 CCU to P100 Bus 2 Communication Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11830, 24-11832.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24107.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (R), B24207.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do a check of the CCU, M24502, in the P110 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Replace the PPC, M24500 in the P100 panel.

These are the tasks:

Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002,

Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

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- (b) If the maintenance message shows on the existing faults display, then continue.
- (5) Do this check of the wiring between the P110 CCU, M24502 and the P100 power panel. (WDM 24-09-24) (WDM 24-09-31)
- (a) Disconnect connector DM24502A from the CCU, M24502 in the P110 panel.
- (b) Disconnect connector D10024P from the P100 power panel.
- (c) Disconnect connector D10025P from the P100 power panel.
- (d) Do a check for continuity between these pins of connector DM24502A at the P110 panel CCU and these pins of connectors D10024P and D10025P at the P100 power panel:

D10024P	DM24502A
pin 19	pin 87
pin 20	pin 88

D10025P	DM24502A
pin 8	pin 80
pin 9	pin 39

- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24502A to the CCU, M24502 in the P110 panel.
 - 3) Re-connect connector D10025P to the P100 power panel.
 - 4) Re-connect connector D10024P to the P100 power panel.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

———— **END OF TASK** ————

868. P210 CCU to P200 Bus 1 Communication Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12839, 24-12841.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

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C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Replace the PPC, M24501 in the P200 panel.

These are the tasks:

Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002,

Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (3) Do this check of the wiring between the P210 CCU, M24506 and the P200 power panel. (WDM 24-09-25) (WDM 24-09-32)

- (a) Disconnect connector DM24506A from the CCU, M24506 in the P210 panel.
(b) Disconnect connector D20025P from the P200 power panel.
(c) Do a check for continuity between these pins of connector DM24506A at the P210 panel CCU and these pins of connector D20025P at the P200 power panel:

D20025P

pin 18
pin 19
pin 12
pin 15

DM24506A

pin 41
pin 42
pin 80
pin 39

- (d) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.

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- 2) Re-connect connector DM24506A to the CCU, M24506 in the P210 panel.
- 3) Re-connect connector D20025P to the P200 power panel.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

869. P210 CCU to P200 Bus 2 Communication Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12840, 24-12842.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P210 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24108.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (R), B24208.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

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- (3) Do a check of the CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (4) Replace the PPC, M24501 in the P200 panel.

These are the tasks:

Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002,

Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (5) Do this check of the wiring between the P210 CCU, M24506 and the P200 power panel. (WDM 24-09-25) (WDM 24-09-32)

- (a) Disconnect connector DM24506A from the CCU, M24506 in the P210 panel.

- (b) Disconnect connector D20024P from the P200 power panel.

- (c) Disconnect connector D20025P from the P200 power panel.

- (d) Do a check for continuity between these pins of connector DM24506A at the P210 panel CCU and these pins of connectors D20024P and D20025P at the P200 power panel:

D20024P

pin 19 pin 87
pin 20 pin 88

DM24506A

D20025P

pin 12 pin 80
pin 15 pin 39

DM24506A

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- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24506A to the CCU, M24506 in the P210 panel.
 - 3) Re-connect connector D20025P to the P200 power panel.
 - 4) Re-connect connector D20024P to the P200 power panel.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

870. **P100 PPC Circuit Breaker Problem - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11833.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) On the P100 power panel, replace the PPC primary power circuit breaker, C24690.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) In the P110 panel, do a check of the SIU-1, M24504.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

871. P200 PPC Circuit Breaker Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12843.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) On the P200 power panel, replace the PPC primary power circuit breaker, C24691.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) In the P210 panel, do a check of the SIU-1, M24508.
- This is the task:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

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872. Relay K24025 Not in Commanded Position - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13823.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check for 28 VDC from the load terminal of circuit breaker C24640 to structure ground (WDM 24-09-26).
 - (a) If there is not 28 VDC at the load terminal of circuit breaker C24640, then do these steps:
 - 1) Replace the circuit breaker, C24640.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If there is 28 VDC at the load terminal of circuit breaker C24640, then continue.
- (2) At the P310 power management panel, replace the ELMS START PWR CNTRL relay, K24025.
 - (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) In the P310 power management panel, do a check of the SIU-1, M24512.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- (b) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do a check for 28 VDC from pin X1 of connector DK24025 to structure ground (WDM 24-09-26).

- (a) Remove the relay, K24025 from the P310 panel.
- (b) If there is not 28 VDC at pin X1 of DK24025, then do these steps:

- 1) Replace the current monitor card, M24521.

These are the tasks:

Current Monitor Card - Removal, AMM TASK 24-09-00-000-817-002,
Current Monitor Card - Installation, AMM TASK 24-09-00-400-813-002.

- 2) Re-install the relay, K24025 to the P310 panel.
- 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- 4) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- 5) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- 6) Remove the relay K24025.
- 7) Disconnect the DM24521 connector from current monitor card, M24521.
- 8) Do a check of the wiring between the K24025 relay and the current monitor card, M24521. (WDM 24-09-26)

DK24025

DM24521

pin X1 pin 15

- 9) If you find a problem with the wiring, repair the wiring.
- 10) Re-install the relay, K24025.
- 11) Re-connect the connector DM24521 to the current monitor card, M24521.

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12) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

13) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

(c) If there is 28 VDC at pin X1 of DK24025, then continue.

(5) Do this check of the wiring: (WDM 24-09-26)

(a) Disconnect connectors DM24512A and DM24512C from the P310 power management panel SIU-1, M24512.

(b) Do a check of the wiring between the K24025 relay and SIU-1, M24512. (WDM 24-09-26)

DK245025	DM24512A
pin C1	pin 9

DK24025	DM24512C
pin X2	pin 13

(c) If you find a problem with the wiring, do these steps:

- 1) Repair the wiring.
- 2) Re-connect connectors DM24512A and DM24512C to SIU-1, M24512, in the P310 power management panel.
- 3) Re-install the relay, K24025.
- 4) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- 5) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

(d) If you do not find a problem with the wiring, then continue.

(e) Re-connect connectors DM24512A and DM24512C to SIU-1, M24512, in the P310 power management panel.

(f) Disconnect connector D31013P from the P310 panel.

(g) Do a check of the wiring between the K24025 relay and the P310 power management panel. (WDM 24-09-26)

DK24025	D31013P
pin X2	pin 10

(h) If you find a problem with the wiring, do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector D31013P to the P310 power management panel.
- 3) Re-install the relay, K24025.

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- 4) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- 5) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

873. Relay K24227 Not in Commanded Position - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13824.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check for 28 VDC from the load terminal of circuit breaker C24633 to structure ground (WDM 24-09-26).
 - (a) If there is not 28 VDC at the load terminal of circuit breaker C24633, then do these steps:
 - 1) Replace the circuit breaker, C24633.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If there is 28 VDC at the load terminal of circuit breaker C24633, then continue.
- (2) At the P310 power management panel, replace the P310 HOT BAT LATCH relay, K24227.
 - (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

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- (b) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) In the P310 panel, do a check of the SIU-1, M24512.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- (b) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (4) Do this check of the wiring: (WDM 24-09-26)

- (a) Remove the relay, K24227 from the P310 power management panel.
- (b) Look for 28 VDC from pin X1 of connector DK24227 to structure ground.
- (c) If there is 28 VDC at pin X1, then do these steps:
- 1) Disconnect connectors DM24512A and DM24512B from the P310 power management panel SIU-1, M24512.
 - 2) Do a check of the wiring between the K24227 relay and SIU-1, M24512. (WDM 24-09-26)

DK24227	DM24512A
pin A1	pin 10

DK24227	DM24512B
pin X2	pin 15

- 3) If you find a problem with the wiring, repair the wiring.
- 4) Re-connect connectors DM24512A and DM24512B to SIU-1, M24512, in the P310 power management panel.
- 5) Re-install the relay, K24227.
- 6) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

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- 7) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (d) If there is not 28 VDC at pin X1, then do these steps:

- 1) Do a check of the wiring between the relay, K24227 and the circuit breaker, C24633.
- 2) If you find a problem with the wiring, repair the wiring.
- 3) Re-install the relay, K24227.
- 4) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

874. P110 EU No Input From FQPU on ARINC 629 Bus (Left) Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-19407.

B. Initial Evaluation

- (1) If the MAT also shows ACTIVE for maintenance message 24-11795 or 24-11796, then do the Fault Isolation procedure for those maintenance messages first.
- (2) If the MAT also shows ACTIVE for any ATA 28 maintenance messages, then do the Fault Isolation procedures for those maintenance messages before you do the Fault Isolation Procedure below.
- (3) If the MAT also shows ACTIVE for maintenance messages 24-19408 and 24-19409, then the problem is with the FQPU, FQPU ARINC 629-L coupler or the ARINC 629 cable. Do the ATA Chapter 28 Fault Isolation procedure for the FQPU ARINC 629 BUS-L. do this task: Fuel Quantity Processor Unit (FQPU) to Systems 629 Bus-L Communications Problems - Fault Isolation, 28-41 TASK 802
- (4) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (5) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault or the fault was corrected by the fault isolation procedure done in ATA 28.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24107 in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B28041 in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do a check of the P110 panel CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (4) Replace the Fuel Quantity Processor Unit, M28002.

These are the tasks:

Fuel Quantity Processor Unit (FQPU) - Removal, AMM TASK 28-41-01-000-801,

Fuel Quantity Processor Unit (FQPU) - Installation, AMM TASK 28-41-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

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875. P210 EU No Input From FQPU on ARINC 629 Bus (Left) Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-19408.

B. Initial Evaluation

- (1) If the MAT also shows ACTIVE for maintenance message 24-12800 or 24-12801, then do the Fault Isolation procedure for those maintenance messages first.
- (2) If the MAT also shows ACTIVE for any ATA 28 maintenance messages, then do the Fault Isolation procedures for those maintenance messages before you do the Fault Isolation Procedure below.
- (3) If the MAT also shows ACTIVE for maintenance messages 24-19407 and 24-19409, then the problem is with the FQPU, FQPU ARINC 629-L coupler or the ARINC 629 cable. Do the ATA Chapter 28 Fault Isolation procedure for the FQPU ARINC 629 BUS-L. do this task: Fuel Quantity Processor Unit (FQPU) to Systems 629 Bus-L Communications Problems - Fault Isolation, 28-41 TASK 802
- (4) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (5) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault or the fault was corrected by the fault isolation procedure done in ATA 28.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24108 in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B28041 in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

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- (3) Do a check of the P210 panel CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (4) Replace the Fuel Quantity Processor Unit, M28002.

These are the tasks:

Fuel Quantity Processor Unit (FQPU) - Removal, AMM TASK 28-41-01-000-801,

Fuel Quantity Processor Unit (FQPU) - Installation, AMM TASK 28-41-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

876. **P310 EU No Input From FQPU on ARINC 629 Bus (Left) Problem - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-19409.

B. Initial Evaluation

- (1) If the MAT also shows ACTIVE for maintenance message 24-13840 or 24-13841, then do the Fault Isolation procedure for those maintenance messages first.
- (2) If the MAT also shows ACTIVE for any ATA 28 maintenance messages, then do the Fault Isolation procedures for those maintenance messages before you do the Fault Isolation Procedure below.
- (3) If the MAT also shows ACTIVE for maintenance messages 24-19407 and 24-19408, then the problem is with the FQPU, FQPU ARINC 629-L coupler or the ARINC 629 cable. Do the ATA Chapter 28 Fault Isolation procedure for the FQPU ARINC 629 BUS-L. do this task: Fuel Quantity Processor Unit (FQPU) to Systems 629 Bus-L Communications Problems - Fault Isolation, 28-41 TASK 802
- (4) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (5) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault or the fault was corrected by the fault isolation procedure done in ATA 28.

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C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24109 in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (L), B28041 in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



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- (3) Do a check of the P310 panel CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (4) Replace the Fuel Quantity Processor Unit, M28002.

These are the tasks:

Fuel Quantity Processor Unit (FQPU) - Removal, AMM TASK 28-41-01-000-801,

Fuel Quantity Processor Unit (FQPU) - Installation, AMM TASK 28-41-01-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

877. P210 EU No Input From FQPU on ARINC 629 Bus (Right) Problem - Fault Isolation

A. Initial Evaluation

- (1) If the MAT also shows ACTIVE for maintenance message 24-12800 or 24-12801, then do the Fault Isolation procedure for those maintenance messages first.
- (2) If the MAT also shows ACTIVE for any ATA 28 maintenance messages, then do the Fault Isolation procedures for those maintenance messages before you do the Fault Isolation Procedure below.
- (3) If the MAT also shows ACTIVE for maintenance message 24-19608, then the problem is with the FQPU, FQPU ARINC 629-L coupler or the ARINC 629 cable. Do the ATA Chapter 28 Fault Isolation procedure for the FQPU ARINC 629 BUS-L. do this task: Fuel Quantity Processor to Systems 629 Bus-R Communications Problems - Fault Isolation, 28-41 TASK 803
- (4) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (5) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault or the fault was corrected by the fault isolation procedure done in ATA 28.

B. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (R), B24208 in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (R), B28042 in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

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- (3) Do a check of the P210 panel CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (4) Replace the Fuel Quantity Processor Unit, M28002.

These are the tasks:

Fuel Quantity Processor Unit (FQPU) - Removal, AMM TASK 28-41-01-000-801,

Fuel Quantity Processor Unit (FQPU) - Installation, AMM TASK 28-41-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

878. **P310 EU No Input From FQPU on ARINC 629 Bus (Right) Problem - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-19608.

B. Initial Evaluation

- (1) If the MAT also shows ACTIVE for maintenance message 24-13840 or 24-13841, then do the Fault Isolation procedure for those maintenance messages first.
- (2) If the MAT also shows ACTIVE for any ATA 28 maintenance messages, then do the Fault Isolation procedures for those maintenance messages before you do the Fault Isolation Procedure below.
- (3) If the MAT also shows ACTIVE for maintenance message 24-19609, then the problem is with the FQPU, FQPU ARINC 629-L coupler or the ARINC 629 cable. Do the ATA Chapter 28 Fault Isolation procedure for the FQPU ARINC 629 BUS-L. do this task: Fuel Quantity Processor Unit (FQPU) to Systems 629 Bus-L Communications Problems - Fault Isolation, 28-41 TASK 802
- (4) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (5) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault or the fault was corrected by the fault isolation procedure done in ATA 28.

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C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (R), B24209 in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (R), B28042 in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do a check of the P310 panel CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (4) Replace the Fuel Quantity Processor Unit, M28002.

These are the tasks:

Fuel Quantity Processor Unit (FQPU) - Removal, AMM TASK 28-41-01-000-801,

Fuel Quantity Processor Unit (FQPU) - Installation, AMM TASK 28-41-01-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— END OF TASK —————

879. P110 EU No Input From FQPU on ARINC 629 Bus (Right) Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-19607.

B. Initial Evaluation

- (1) If the MAT also shows ACTIVE for maintenance message 24-11795 or 24-11796, then do the Fault Isolation procedure for those maintenance messages first.
- (2) If the MAT also shows ACTIVE for any ATA 28 maintenance messages, then do the Fault Isolation procedures for those maintenance messages before you do the Fault Isolation Procedure below.
- (3) If the MAT also shows ACTIVE for maintenance messages 24-19608 and 24-19609, then the problem is with the FQPU, FQPU ARINC 629-R coupler or the ARINC 629 cable. Do the ATA Chapter 28 Fault Isolation procedure for the FQPU ARINC 629 BUS-R. do this task: Fuel Quantity Processor Unit (FQPU) to Systems 629 Bus-L Communications Problems - Fault Isolation, 28-41 TASK 802
- (4) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (5) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault or the fault was corrected by the fault isolation procedure done in ATA 28.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (R), B24207 in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (R), B28042 in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do a check of the P110 panel CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (4) Replace the Fuel Quantity Processor Unit, M28002.

These are the tasks:

Fuel Quantity Processor Unit (FQPU) - Removal, AMM TASK 28-41-01-000-801,

Fuel Quantity Processor Unit (FQPU) - Installation, AMM TASK 28-41-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

880. ELMS Control Air Mode Relay Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13825.

B. Initial Evaluation

- (1) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
- (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

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C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Replace the ELMS CTRL AIR MODE relay, K24036, located in the P310 panel (WDM 24-33-41).
 - (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.
- (2) In the P310 panel, do a check of the SIU-1, M24512.

This is the tasks:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring between the ELMS CTRL AIR MODE relay, K24036 and circuit breaker C24670 (WDM 24-33-41):

NOTE: To make the test easier, you can use the air ground relay test breakout box, SPL-1828.

 - (a) Remove the ELMS CTRL AIR MODE relay, K24036 from the P310 panel.
 - (b) Do a wiring check between pin X1 of connector DK24036 and the load terminal of circuit breaker C24670.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the ELMS CTRL AIR MODE relay, K24036.
 - 3) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - 4) If the maintenance message shows on the existing faults display, then continue.
 - (d) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring between the ELMS CTRL AIR MODE relay, K24036 and the ELMS SIU 1, M24512 (WDM 24-33-41):

NOTE: To make the test easier, you can use the air ground relay test breakout box, SPL-1828.

 - (a) Disconnect connector DM24512B at the ELMS SIU 1, M24512 in the P310 panel.

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- (b) Do a wiring check between pin X2 of connector DK24036 and pin 13 of connector DM24512B.
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24512B at the ELMS SIU 1, M24512 in the P310 panel.
 - 3) Re-install the ELMS CTRL AIR MODE relay, K24036.
 - 4) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - 5) If the maintenance message shows on the existing faults display, then continue.
- (d) If you do not find a problem with the wiring, then continue.
- (e) Re-connect connector DM24512B at the ELMS SIU 1, M24512 in the P310 panel.
- (5) Do this check of the wiring between the ELMS CTRL AIR MODE relay, K24036 and the ELMS SIU 1, M24512 (WDM 24-33-41):

NOTE: To make the test easier, you can use the air ground relay test breakout box, SPL-1828.

 - (a) Disconnect connector DM24512C at the ELMS SIU 1, M24512 in the P310 panel.
 - (b) Do a wiring check between pin A1 of connector DK24036 and pin 17 of connector DM24512C.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24512C at the ELMS SIU 1, M24512 in the P310 panel.
 - 3) Re-install the ELMS CTRL AIR MODE relay, K24036.
 - 4) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - 5) If the maintenance message shows on the existing faults display, then continue.
 - (d) If you do not find a problem with the wiring, then continue.
 - (e) Re-connect connector DM24512C at the ELMS SIU 1, M24512 in the P310 panel.
 - (f) Re-install the ELMS CTRL AIR MODE relay, K24036.

————— **END OF TASK** —————

881. ELMS Control Ground Mode Relay Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13826.

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B. Initial Evaluation

- (1) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
 - (a) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the existing faults, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Replace the ELMS CTRL GND MODE relay, K24037, located in the P310 panel (WDM 24-33-41).
 - (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) In the P310 panel, do a check of the SIU-1, M24512.

This is the tasks:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring between the ELMS CTRL GND MODE relay, K24037 and circuit breaker C24670 (WDM 24-33-41):

NOTE: To make the test easier, you can use the air ground relay test breakout box, SPL-1828.

 - (a) Remove the ELMS CTRL GND MODE relay, K24037 from the P310 panel.
 - (b) Do a wiring check between pin X1 of connector DK24037 and the load terminal of circuit breaker C24670.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the ELMS CTRL GND MODE relay, K24037.

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- 3) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- 4) If the maintenance message shows on the existing faults display, then continue.
 - (d) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring between the ELMS CTRL GND MODE relay, K24037 and the ELMS SIU 1, M24512 (WDM 24-33-41):

NOTE: To make the test easier, you can use the air ground relay test breakout box, SPL-1828.

 - (a) Disconnect connector DM24512B at the ELMS SIU 1, M24512 in the P310 panel.
 - (b) Do a wiring check between pin X2 of connector DK24037 and pin 14 of connector DM24512B.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24512B at the ELMS SIU 1, M24512 in the P310 panel.
 - 3) Re-install the ELMS CTRL AIR MODE relay, K24036.
 - 4) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - 5) If the maintenance message shows on the existing faults display, then continue.
 - (d) If you do not find a problem with the wiring, then continue.
 - (e) Re-connect connector DM24512B at the ELMS SIU 1, M24512 in the P310 panel.
- (5) Do this check of the wiring between the ELMS CTRL GND MODE relay, K24037 and the ELMS SIU 1, M24512 (WDM 24-33-41):

NOTE: To make the test easier, you can use the air ground relay test breakout box, SPL-1828.

 - (a) Disconnect connector DM24512C at the ELMS SIU 1, M24512 in the P310 panel.
 - (b) Do a wiring check between pin A1 of connector DK24037 and pin 18 of connector DM24512C.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24512C at the ELMS SIU 1, M24512 in the P310 panel.
 - 3) Re-install the ELMS CTRL GND MODE relay, K24037.
 - 4) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - 5) If the maintenance message shows on the existing faults display, then continue.
 - (d) If you do not find a problem with the wiring, then continue.

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- (e) Re-connect connector DM24512C at the ELMS SIU 1, M24512 in the P310 panel.
- (f) Re-install the ELMS CTRL GND MODE relay, K24037.

————— END OF TASK —————

882. Weight-On-Wheels Card (right or left) Air Ground Signal Invalid - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13827.

B. Initial Evaluation

- (1) If the MAT shows LATCHED for the maintenance message, then do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.
 - (a) If the maintenance message does not show on the existing faults, then there was an intermittent fault.
 - (b) If the maintenance message shows on the existing faults display, then do the Fault Isolation Procedure below.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler (L), B24109.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler (R), B24209.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do a check of the P310 panel CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.
- (4) Do this check of the wiring between the ARINC 629 (R) coupler, B24209 and the P310 panel CCU, M24510. (WDM 24-09-26)
- (a) Disconnect connector DB24209 from the ARINC 629 (R) coupler, B24209 in the P211 panel.
- (b) Disconnect connector DM24510A from the P310 CCU, M24510.
- (c) Do a check for continuity between these pins of connector DB24209 in the P211 panel and these pins of connector DM24510A at the P310 panel CCU:

DB24209	DM24510A
pin 1	pin 127
pin 2	pin 126
pin 4	pin 124
pin 5	pin 123

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DB24209 to the ARINC 629 (R) coupler, B24209 in the P211 panel.
 - 3) Re-connect connector DM24510A to the P310 CCU, M24510.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (e) If the maintenance message shows on the existing faults display, then continue.
- (5) Do this check of the wiring between the ARINC 629 (L) coupler, B24109 and the P310 panel CCU, M24510. (WDM 24-09-26)
- (a) Disconnect connector DB24109 from the ARINC 629 (L) coupler, B24109 in the P111 panel.
- (b) Disconnect connector DM24510A from the P310 CCU, M24510.
- (c) Do a check for continuity between these pins of connector DB24109 in the P111 panel and these pins of connector DM24510A at the P310 panel CCU:

DB24109	DM24510A
pin 1	pin 6
pin 2	pin 5
pin 4	pin 3
pin 5	pin 2

- (d) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Re-connect connector DB24109 to the ARINC 629 (L) coupler, B24109 in the P111 panel.
- 3) Re-connect connector DM24510A to the P310 CCU, M24510.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (e) If the maintenance message shows on the existing faults display, then continue.
- (6) Replace the Weight-On-Wheels (WOW) Card - Right (A16) in the P84 Right System Cardfile.
These are the tasks:
Weight-on-Wheels (WOW) Card Removal, AMM TASK 32-09-02-000-801,
Weight-on-Wheels (WOW) Card Installation, AMM TASK 32-09-02-400-801.
- (7) Do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P310 EU self test.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

———— **END OF TASK** ————

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806. ELMS P110 EU No Output - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-18801.

B. Initial Evaluation

- (1) Make sure that these circuit breakers are closed:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	24	C24617	P110 PSU A PRI
P	15	C24655	P110 PSU B PRI

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	3	C24624	P110 PSU B ALTN
J	6	C24658	P110 PSU A ALTN

- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the P110 panel CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler, B24107 in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring from the coupler to the ELMS P110 Computing and Communication Unit (CCU) (M24502) (WDM 24-09-24):

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- (a) Disconnect connector DB24107 from the coupler, B24107.
- (b) Disconnect connector D11008P from the ELMS P110.
- (c) Do a wiring check between these pins of connector DB24107 at the P111 panel and connector D11008P at the P110 panel.

DB24107		D11008P	
pin 1	.....	pin 1	
pin 2	.....	pin 2	
pin 4	.....	pin 4	
pin 5	.....	pin 5	

- (d) Disconnect connector D11008P from the ELMS P110.
- (e) Disconnect connector DM24502A from the Computing and Communication Unit (CCU), M24502.
- (f) Do a wiring check between these pins of connector D11008P at the P110 panel and connector DM24502A at the Computing and Communication Unit (CCU).

D11008P		DM24502A	
pin 1	.....	pin 6	
pin 2	.....	pin 5	
pin 4	.....	pin 3	
pin 5	.....	pin 2	

- (g) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the connectors.
 - 3) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

807. ELMS P210 EU No Output - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-18802.

B. Initial Evaluation

- (1) Make sure that these circuit breakers are closed:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	23	C24618	P210 PSU B ALTN
P	16	C24657	P210 PSU A ALTN

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	4	C24625	P210 PSU B PRI

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Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	5	C24656	P210 PSU A PRI

- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.
- (4) EICAS MESSAGES DUE TO ELMS1 PANEL ARINC 629 COMMUNICATION FAULTS

(a) CONDITION

- 1) ELMS P210 PANEL EICAS status message with correlated MM 24-18802.
- 2) Flight Deck Effects associated with ELMS P210 PANEL message:
 - a) ELMS P110 PANEL EICAS status message will be accompanied by the following EICAS messages (NOTE: Some messages may not appear depending on airplane configuration):
<1> CARGO BULK HEAT - ADVISORY
RECIRC FAN - STATUS
AIR/GROUND R STATUS
RAT GEN HEAT - STATUS
CARGO VENT FAN BULK – STATUS
 - b) Although R main AC bus and R transfer bus continue to be powered, the Electrical System synoptic display will indicate that they are not powered. The fuel system synoptic will also lose indication and flow data for the R aft main pump and R center pump. The electrical, landing gear and fuel management maintenance pages will also show some default values due to loss of input from the affected ELMS panel.
 - c) For ELMS P210 PANEL and related EICAS messages, use the following procedure to clear the fault:
<1> Open these circuit breakers and install safety tags:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	23	C24618	P210 PSU B ALTN
P	16	C24657	P210 PSU A ALTN

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	4	C24625	P210 PSU B PRI
J	5	C24656	P210 PSU A PRI

- <2> Wait 5 seconds and re-set the circuit breakers.

NOTE: Re-set P210 CH A primary circuit breaker before resetting any others.

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<a> Remove the safety tags and close these circuit breakers:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	23	C24618	P210 PSU B ALTN
P	16	C24657	P210 PSU A ALTN

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	4	C24625	P210 PSU B PRI
J	5	C24656	P210 PSU A PRI

- <3> If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below
- <4> If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the P210 panel CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler, B24108 in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (3) Do this check of the wiring from the coupler to the ELMS P210 Computing and Communication Unit (CCU) (M24506) (WDM 24-09-25):

- (a) Disconnect connector DB24108 from the coupler, B24108.

- (b) Disconnect connector D21008P from the ELMS P210.

- (c) Do a wiring check between these pins of connector DB24108 at the P111 panel and connector D21008P at the P210 panel.

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DB24108	D21008P
pin 1	pin 1
pin 2	pin 2
pin 4	pin 4
pin 5	pin 5

- (d) Disconnect connector D21008P from the ELMS P210.
- (e) Disconnect connector DM24506A from the Computing and Communication Unit (CCU), M24506.
- (f) Do a wiring check between these pins of connector D21008P at the P210 panel and connector DM24506A at the Computing and Communication Unit (CCU).

D21008P	DM24506A
pin 1	pin 6
pin 2	pin 5
pin 4	pin 3
pin 5	pin 2

- (g) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the connectors.
 - 3) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

808. ELMS P310 EU No Output - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-18803.

B. Initial Evaluation

- (1) Make sure that these circuit breakers are closed:

Standby Power Management Panel, P310

Row	Col	Number	Name
B	4	C24635	P310 PSU B PRI
C	7	C24641	P310 PSU A PRI
J	5	C24640	P310 PSU B ALTN
K	5	C24633	P310 PSU A ALTN

- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Do a check of the P310 panel CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing faults display, then continue.

- (2) Replace the ARINC 629 coupler, B24109 in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (3) Do this check of the wiring from the coupler to the ELMS P310 Computing and Communication Unit (CCU) (M24510) (WDM 24-09-26):

- (a) Disconnect connector DB24109 from the coupler, B24109.

- (b) Disconnect connector D31007P from the ELMS P310.

- (c) Do a wiring check between these pins of connector DB24109 at the P111 panel and connector D31007P at the P310 panel.

DB24109

pin 1	.....	pin 1
pin 2	.....	pin 2
pin 4	.....	pin 4
pin 5	.....	pin 5

D31007P

- (d) Disconnect connector D31007P from the ELMS P310.

- (e) Disconnect connector DM24510A from the Computing and Communication Unit (CCU), M24510.

- (f) Do a wiring check between these pins of connector D31007P at the P310 panel and connector DM24510A at the Computing and Communication Unit (CCU).

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D31007P

pin 1		pin 3
pin 2		pin 2
pin 4		pin 6
pin 5		pin 5

DM24510A

- (g) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect the connectors.
- 3) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

844. Panel Variant Identifier Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12015, 24-12030, 24-12214, 24-12229, 24-13123, 24-13138.

B. Fault Isolation Procedure

- (1) Repair the panel variant identifier in the applicable ELMS power management panel.
- (2) Do this special function on the MAT: 24 ELMS Power Management Panel, Initiated P110, P210 or P310 EU self test.
 - (a) If the maintenance message does not show on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

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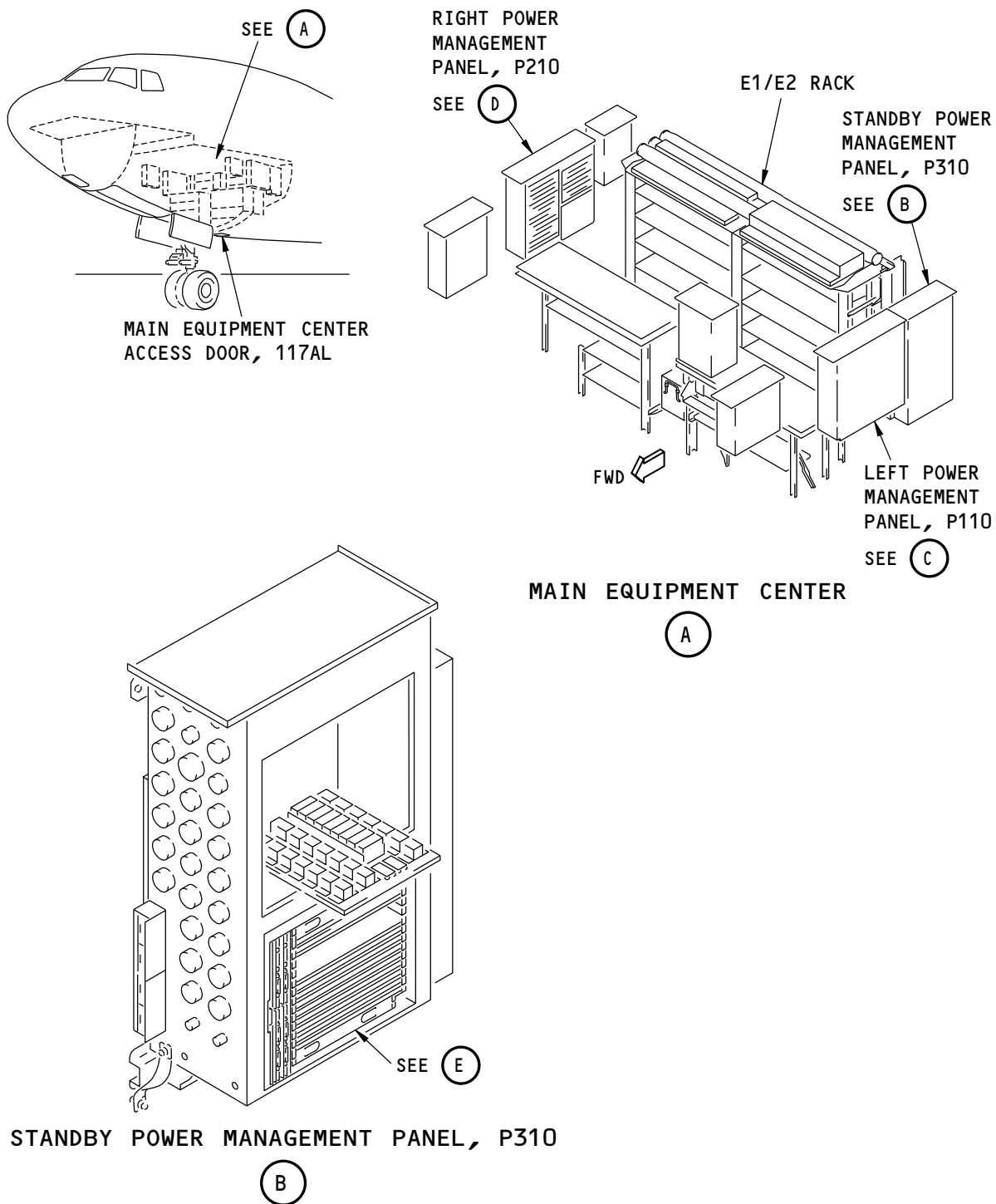
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G98322 S0006694805_V2

ELMS Electronic Unit Assembly
Figure 301/24-09-00-990-801 (Sheet 1 of 5)

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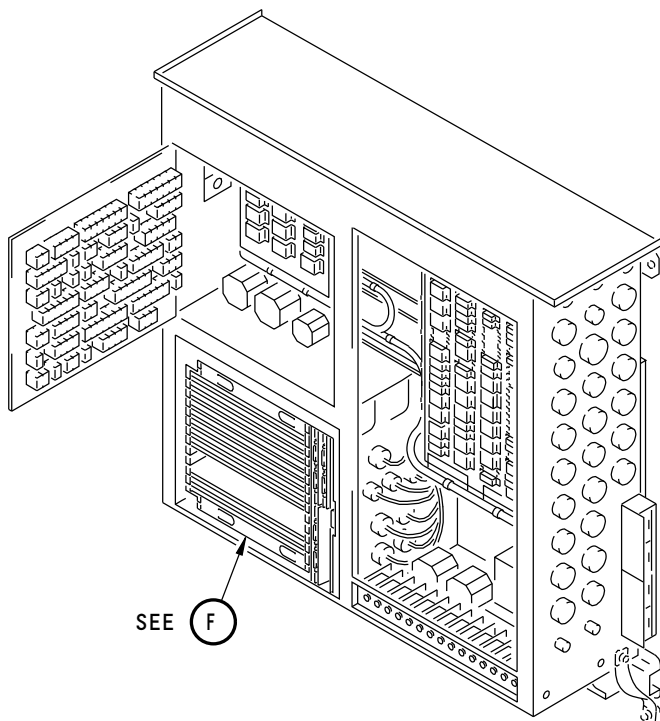
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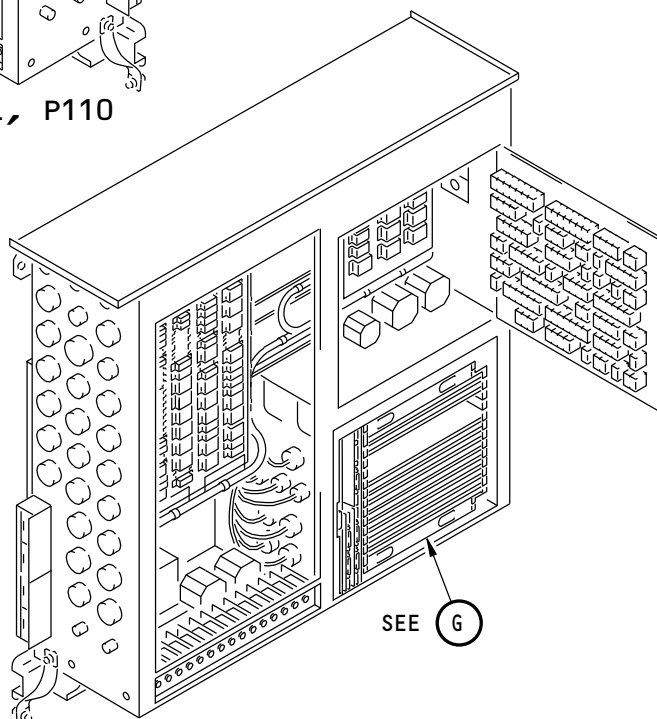


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LEFT POWER MANAGEMENT PANEL, P110

(C)



RIGHT POWER MANAGEMENT PANEL, P210

(D)

G98330 S0006694806_V2

ELMS Electronic Unit Assembly
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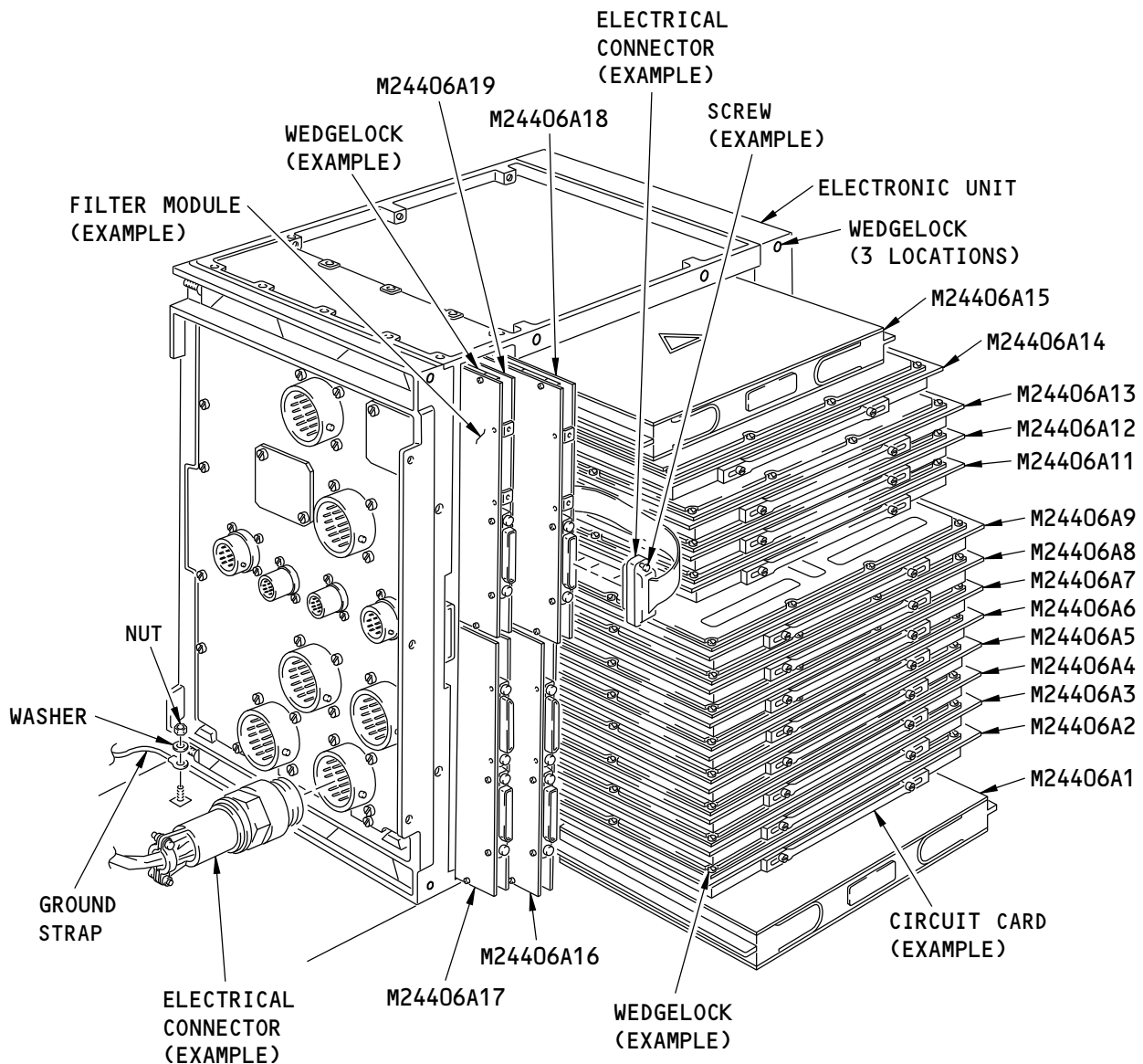
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ELECTRONIC UNIT ASSEMBLY, M24406 (P310)

E

G98340 S0006694807_V2

ELMS Electronic Unit Assembly
Figure 301/24-09-00-990-801 (Sheet 3 of 5)

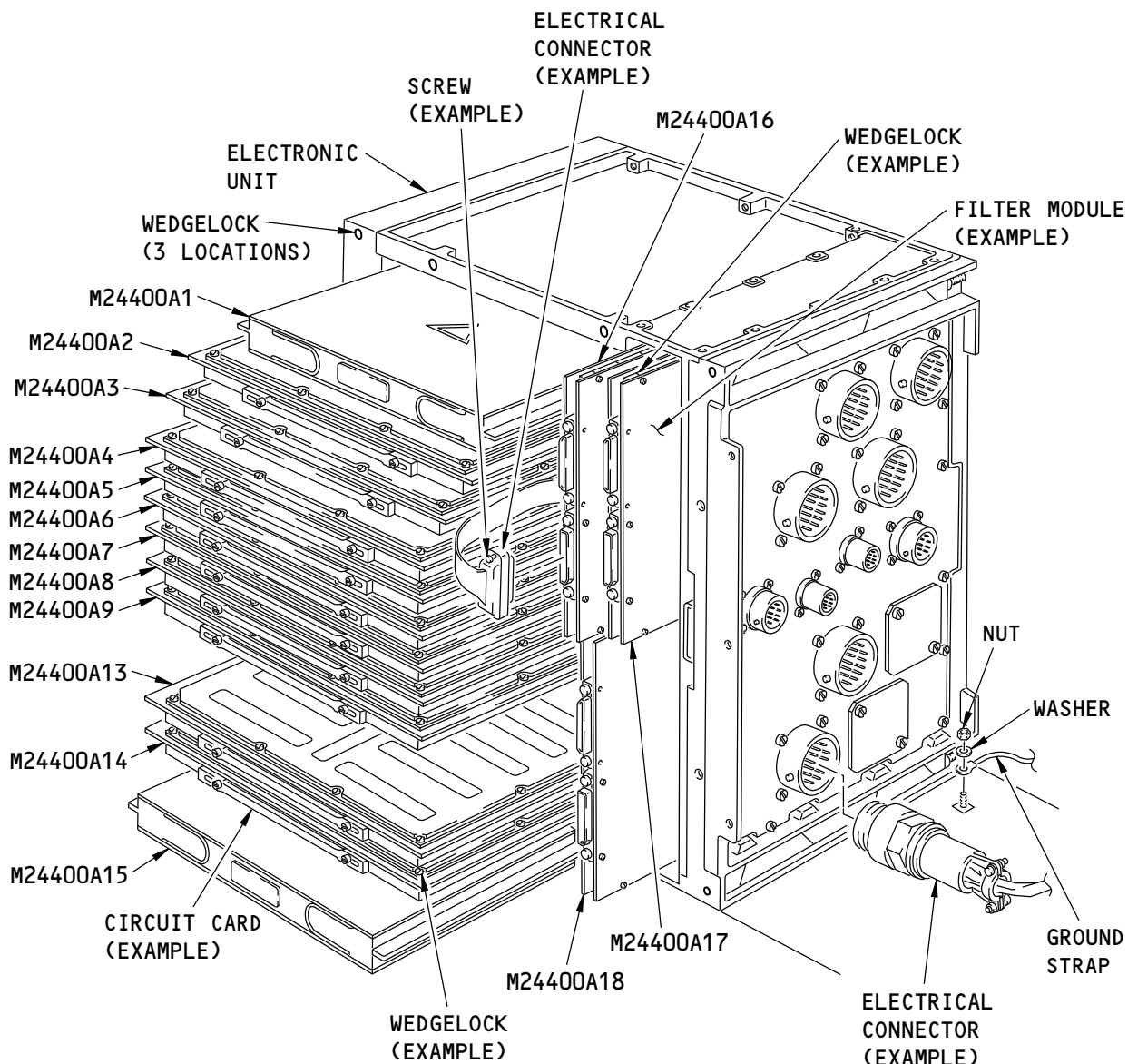
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ELECTRONIC UNIT ASSEMBLY, M24400 (P110)

(F)

G98354 S0006694808_V2

**ELMS Electronic Unit Assembly
Figure 301/24-09-00-990-801 (Sheet 4 of 5)**

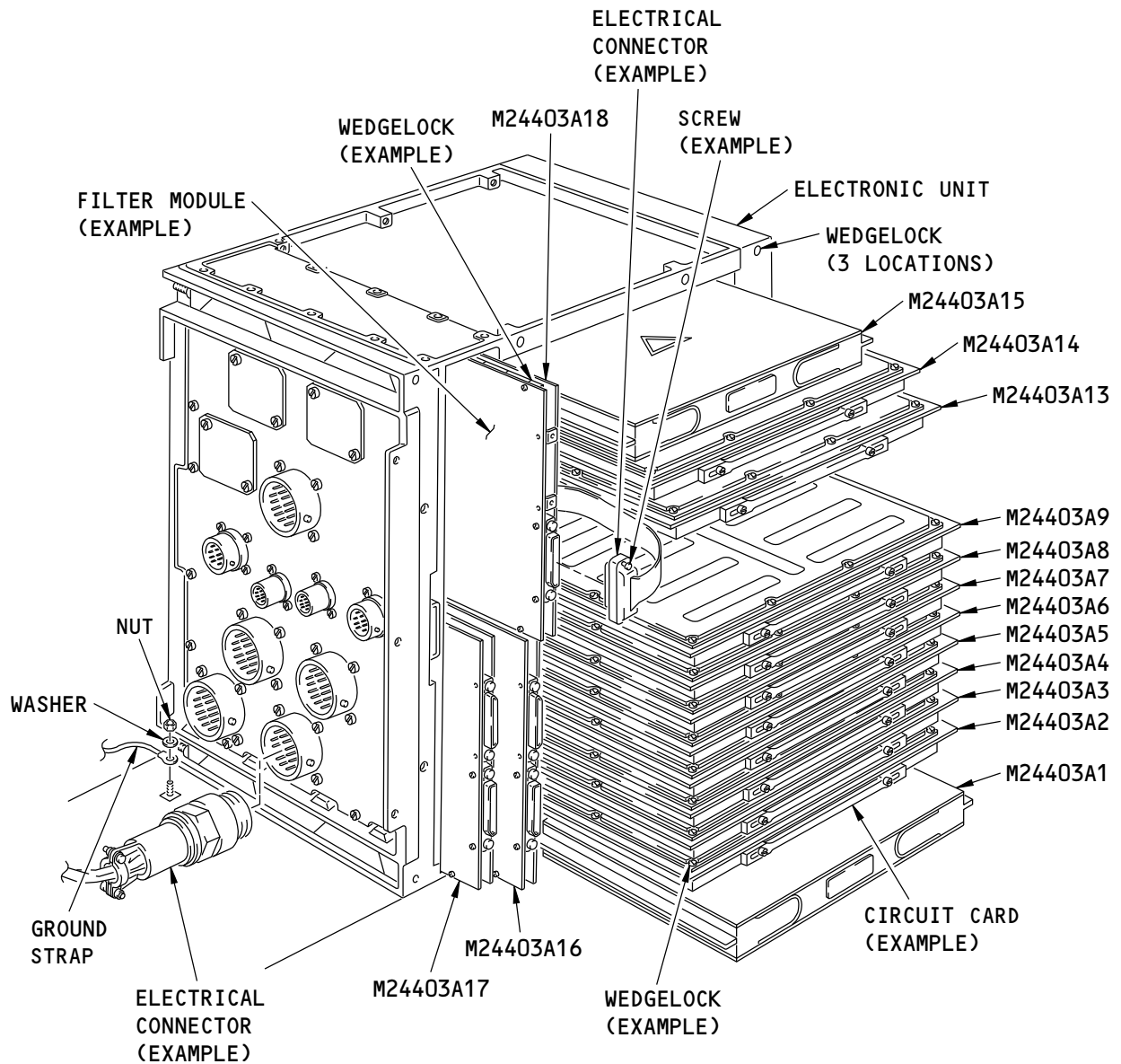
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ELECTRONIC UNIT ASSEMBLY, M24403 (P210)

G

G98352 S0006694809_V2

ELMS Electronic Unit Assembly
Figure 301/24-09-00-990-801 (Sheet 5 of 5)

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801. IDG L Point Of Regulation Open Circuit - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31421.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the L GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the generator control unit (GCU) wiring (WDM 24-21-11):
 - (a) Make sure the engine does not operate.
 - (b) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Do a wiring check between these pins of connector DM24105AA at the E1-1 shelf and terminal wires L4, L5, and L6 at the power panel (P100).

DM24105AA	P100 Panel
pin A7	L4
pin A5	L5
pin C6	L6

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left GCU, M24105, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Push the L GEN CTRL switch on the P5 panel two times.
 - 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.
- (2) Do a check for ground at pin A4 of connector DM24105AA (WDM 24-21-11).
 - (a) If there is no ground at pin A4 of connector DM24105AA, then do these steps:
 - 1) Repair the wiring between the left GCU and the P100 panel.
 - 2) Re-install the left GCU, M24105, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Push the L GEN CTRL switch on the P5 panel two times.
 - 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Replace the applicable IDG, M24001.
- These are the tasks:
- IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.
- (a) Push the applicable GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (4) Replace the applicable GCU.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) Push the applicable GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

802. IDG Exciter Field Is Out of Range - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31511, 24-31512.

B. Description

- (1) 24-31611: The Left Generator Control Unit (GCU) detected that the Left Integrated Drive Generator (IDG) Exciter Field Current is out of range.
- (2) 24-31612: The Right GCU detected that the Right IDG Exciter Field Current is out of range.

C. Possible Causes

- (1) L (R) IDG, M24001
- (2) Wiring
- (3) L (R) GCU, M24105 (M24205)

D. Circuit Breakers

- (1) These are the circuit breakers related to this fault:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	2	C24602	R IDG DISC
J	9	C24684	L GCU/BPCU

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Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	8	C24601	L GCU
B	9	C24600	R GCU

E. Related Data

- (1) WDM 24-21-11
- (2) WDM 24-21-21

F. Initial Evaluation

- (1) If the Maintenance Access Terminal (MAT) shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) On the P5 Panel, push the applicable GEN CTRL Switch two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent problem.

G. Fault Isolation Procedure

- (1) Replace the applicable IDG, M24001. These are the tasks:
 - IDG Removal, AMM TASK 24-11-01-000-801-001
 - IDG Installation, AMM TASK 24-11-01-400-801-001
 - (a) Do the Repair Confirmation at the end of this task.
- (2) Do this check of the Generator Exciter Field Wiring (WDM 24-21-11, WDM 24-21-21):
 - (a) Make sure that the engine does not operate (AMM TASK 71-00-00-800-837-H00).
 - (b) Disconnect connector DM24001B from the IDG.
 - (c) Remove the applicable GCU. This is the task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (d) Do a wiring check between the applicable GCU and IDG connectors as follows:

Left Engine

GCU, E1-1 Shelf	IDG
DM24105AA	DM24001B
pin 116	pin 10
pin 117	pin 8

Right Engine

GCU, E2-2 Shelf	IDG
DM24205AA	DM24001B
pin 116	pin 10
pin 117	pin 8

- (e) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
 - 2) Re-install the applicable GCU. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect connector DM24001B to the applicable IDG.
 - 4) Do the Repair Confirmation at the end of this task.
- (f) If you do not find a problem with the wiring, replace the applicable GCU, M24105 (M24205). These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801
 - Generator Control Unit Installation, AMM TASK 24-22-02-400-801
- 1) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) On the P5 Panel, push the applicable GEN CTRL Switch two times.
- (2) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00
 - (a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the problem.
 - (b) If the MAT shows ACTIVE or LATCHED with the maintenance message, then continue the Fault Isolation Procedure at the subsequent step.

————— END OF TASK —————

803. IDG Low Oil Pressure - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31551, 24-31552.

B. Description

- (1) These maintenance messages are related to a low oil level or low charge pressure in the IDG. These messages will only appear while the engine is running.

C. Fault Isolation Procedure

NOTE: Check IDG oil lines for evidence of an oil leak source. Repair the source of the leak. Start the engines to determine if fault is corrected. If fault is still present, replace IDG.

- (1) Replace the applicable IDG, M24001.

These are the tasks:

IDG Removal, AMM TASK 24-11-01-000-801-001,

IDG Installation, AMM TASK 24-11-01-400-801-001.

- (a) Push the applicable GEN CTRL switch on the P5 panel two times.
- (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, do this task: IDG Charge Pressure Wiring Problems - Fault Isolation, 24-11 TASK 807

————— END OF TASK —————

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804. IDG Frequency is High - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31591, 24-31592.

B. Fault Isolation Procedure

- (1) In the list below, find the applicable engine, GCU, IDG, connectors and pin numbers for the maintenance message:

- (a) GEN CTRL SWITCH LEFT

	Left Engine	
	GCU	IDG
M24105 E1-1 Shelf	DM24105AA	DM24001A
	pin J9	pin 7
	pin J11	pin 8

- (b) GEN CTRL SWITCH RIGHT

	Right Engine	
	GCU	IDG
M24205 E2-2 Shelf	DM24205AA	DM24001A
	pin J9	pin 7
	pin J11	pin 8

- (2) Replace the applicable IDG, M24001.

These are the tasks:

IDG Removal, AMM TASK 24-11-01-000-801-001,

IDG Installation, AMM TASK 24-11-01-400-801-001.

- (a) Push the applicable GEN CTRL switch on the P5 panel two times.
- (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Do this check of the trim coil wiring (WDM 24-11-11) (WDM 24-11-21):
- (a) Make sure the engine does not operate (AMM TASK 71-00-00-800-837-H00).
- (b) Disconnect connector DM24001A from the IDG.
- (c) Remove the applicable GCU. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (d) Do a wiring check between the applicable pins of connector DM24001A at the IDG and the applicable pins of the GCU connector.
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the applicable GCU. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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24-11 TASK 804

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- 3) Re-connect connector DM24001A to the IDG.
 - 4) Push the applicable GEN CTRL switch on the P5 panel two times.
 - 5) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
- 1) Re-connect connector DM24001A to the IDG.
- (4) Replace the applicable GCU.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) Push the applicable GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

805. IDG Frequency is Low - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31631, 24-31632.

B. Description

- (1) These low frequency faults can be caused by an IDG internal hardware failure.

C. Initial Evaluation

- (1) If the flight crew observed an IDG DRIVE light and the IDG was disconnected, then replace the IDG, M24001. These are the tasks:
 - IDG Removal, AMM TASK 24-11-01-000-801-001,
 - IDG Installation, AMM TASK 24-11-01-400-801-001.

NOTE: The IDG can be disconnected automatically or manually. An automatic disconnect in a thermal exceedance event requires replacement of the IDG. A manual disconnect due to illumination of the IDG DRIVE light will also require replacement of the IDG. A manual disconnect to do maintenance work does not require replacement of the IDG if it is reconnected before flight.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the applicable GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

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D. Fault Isolation Procedure

- (1) In the list below, find the applicable engine, GCU, IDG, connectors and pin numbers for the maintenance message:

- (a) GEN CTRL SWITCH LEFT

	Left Engine	
	GCU	IDG
M24105 E1-1 Shelf	DM24105AA	DM24001A
	pin J9	pin 7
	pin J11	pin 8

- (b) GEN CTRL SWITCH RIGHT

	Right Engine	
	GCU	IDG
M24205 E2-2 Shelf	DM24105AA	DM24001A
	pin J9	pin 7
	pin J11	pin 8

- (c) GEN CTRL SWITCH LEFT

	Left Engine	
	GCU	IDG
M24105 E1-1 Shelf	DM24105AB	DM24001B
	pin 115	pin 1
	pin 114	pin 2
	pin 113	pin 3

- (d) GEN CTRL SWITCH RIGHT

	Right Engine	
	GCU	IDG
M24205 E2-2 Shelf	DM24205AB	DM24001B
	pin 115	pin 1
	pin 114	pin 2
	pin 113	pin 3

- (2) Do this check of the trim coil wiring (WDM 24-11-11) (WDM 24-11-21):
- (a) Make sure the engine does not operate (AMM TASK 71-00-00-800-837-H00).
 - (b) Disconnect connector DM24001A from the applicable IDG.
 - (c) Remove the left applicable GCU. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (d) Do a wiring check between the applicable pins of connector DM24001A at the IDG and the applicable pins of the GCU connector.
 - (e) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
 - 2) Re-install the applicable GCU. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect connector DM24001A to the applicable IDG.
 - 4) Push the applicable GEN CTRL switch on the P5 panel two times.
 - 5) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
- 1) Re-connect connector DM24001A to the applicable IDG.
- (3) Do this check of the permanent magnet generator wiring (WDM 24-21-11) (WDM 24-21-21):
- (a) Disconnect connector DM24001B from the applicable IDG.
 - (b) Do a wiring check between the applicable pins of connector DM24001B at the IDG and the applicable pins of the GCU connector.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24001B to the applicable IDG.
 - 3) Push the applicable GEN CTRL switch on the P5 panel two times.
 - 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the applicable GCU. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (4) Replace the applicable IDG, M24001.
- These are the tasks:
- IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.
- (a) Push the applicable GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (5) Replace the applicable GCU.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) Push the applicable GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.



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- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

806. IDG L Feeder Phase Sequence Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31781, 24-31791.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the phase leads of the generator (WDM 24-21-11):
- (a) Make sure the engine does not operate.
 - (b) Remove the terminal block cover from the generator.
 - (c) Make sure the phase leads (T1, T2, T3, N) are connected to the correct power terminals.
 - (d) If you find a problem with the connection of the phase leads, then do these steps:
 - 1) Connect the phase leads to the correct power terminals.
 - 2) Install the terminal block cover to the generator.
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the connection of the phase leads, then continue.
- (2) Do a wiring check from the left IDG to the P100 power panel (WDM 24-21-11):
- (a) Do a continuity check from these phase leads of the left IDG to these terminals of the P100 panel.

PANEL P100	LEFT IDG
pin L1	T1
pin L2	T2
pin L3	T3
pin L4	T1
pin L5	T2
pin L6	T3

- (b) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- 3) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.
- (c) If you do not find a problem with the wiring, then continue.
- (3) Do a wiring check from the P100 power panel to the left generator control unit (GCU) (WDM 24-21-11):
 - (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Do a wiring check between these pins of connector DM24105AA at the left GCU and the terminals on the P100 panel.

PANEL P100	DM24105AA
pin L4	pin A7
pin L5	pin A5
pin L6	pin C6

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (4) Do a check for ground from pin A4 of connector DM24105AA (WDM 24-21-11):
 - (a) If there is no ground at pin A4 of connector DM24105AA, then do these steps:
 - 1) Repair the wiring between the left GCU and the P100 panel.
 - 2) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.
 - (b) If there is ground at pin A4 of connector DM24105AA, then continue.
- (5) Replace the left GCU, M24105.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

807. IDG Charge Pressure Wiring Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31801, 24-31802.

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B. Description

- (1) Nuisance occurrences of these messages can appear while the engine is running, motoring, or inflight windmilling. However, these messages are only valid when the engine is not running.

C. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message 24-31801 and/or 24-31802 and maintenance message 24-31551 and/or 24-31552 also shows, then do the Fault Isolation Procedure below. Refer to 24-11 TASK 803 for the other maintenance messages(s).
- (2) If the MAT shows ACTIVE for the maintenance message 24-31801 and/or 24-31802, but no other IDG failure shows except for a BLANK oil level indication, then refer to 24-11 TASK 827.

D. Fault Isolation Procedure

- (1) Do this check of the IDG Remote Oil Level Sensor (ROLS) (WDM 24-11-11) (WDM 24-11-21):
 - (a) Disconnect connector DM24001C from the applicable IDG.
 - (b) Do a resistance check between the following pins on the IDG connector:

IDG Connector	IDG Connector
pin 2	pin 1
pin 2	pin 3
pin 2	pin 4
 - (c) If the resistance between pin 2 and each of the other pins is not in the range of 80 to 200 ohms, then do these steps:
 - 1) Replace the Remote Oil Level Sensor (ROLS) on the applicable IDG.

These are the tasks:
IDG Remote Oil Level Sensor Removal, AMM TASK 24-11-15-000-801,
IDG Remote Oil Level Sensor Installation, AMM TASK 24-11-15-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the resistance between pin 2 and each of the other pins is in the range of 80 to 200 ohms, then continue.
- (2) Do this check of the IDG Remote Oil Level Sensor (ROLS) connector:
 - (a) Disconnect connector DM24001C from the applicable IDG.
 - (b) Visually inspect to see if the pins are bent, scratched or connector shows any other signs of damage.
 - (c) If there is damage to connector, then replace the ROLS.

These are the tasks:
IDG Remote Oil Level Sensor Removal, AMM TASK 24-11-15-000-801,
IDG Remote Oil Level Sensor Installation, AMM TASK 24-11-15-400-801.
 - (d) If the ship-side connector shows signs of damage, then replace applicable connector (WDM 24-11-11) (WDM 24-11-21).
 - (e) If the connector shows signs of dirt and contamination, but does not need to be replaced, then clean connector (SWPM 20-60-01).
 - (f) If the ROLS was replaced or the connectors were cleaned, then do these steps:
 - 1) Re-connect connector DM24001C to the applicable IDG.

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- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (g) If ROLS replacement and connector cleaning were not needed, then continue.
- (3) Do this check of the IDG charge pressure switch (WDM 24-11-11) (WDM 24-11-21):
 - (a) Disconnect connector DM24001A from the applicable IDG.
 - (b) Do a resistance check between pins 10 and 11 on the IDG connector.
 - (c) If the resistance is greater than 5 ohms, then do these steps:
 - 1) Replace the applicable IDG, M24001.
These are the tasks:
IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the resistance is less than 5 ohms, then continue.
- (4) Do this check of the IDG charge pressure circuit (WDM 24-11-11) (WDM 24-11-21):
 - (a) Remove the applicable GCU, M24105 or M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Do a resistance check between pins A10 and C10 of connector DM24105AB at the E1-1 shelf or connector DM24205AB at the E2-2 shelf as applicable.
 - (c) If the resistance is 80 to 200 ohms, then do the following steps:
 - 1) Do a resistance check between pins A10 and A8 of connector DM24105AB at the E1-1 shelf or connector DM24205AB at the E2-2 shelf as applicable.
 - 2) If the resistance is 80 to 200 ohms, then do these steps:
 - a) Replace the applicable GCU, M24105 or M24205.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the resistance between pins A10 and C10 OR pins A10 and A8 is not in the range of 80 to 200 ohms, then continue.
- (5) Do this check of the wiring between the left or right IDG and GCU, as applicable (WDM 24-11-11) (WDM 24-11-21):
 - (a) Disconnect connector DM24001C from the applicable IDG.
 - (b) Remove the applicable GCU. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Do a wiring check between these pins of connector DM24001C at the IDG and connector DM24105AB at the E1-1 shelf for the left IDG, as applicable.

DM24001C

pin 1		pin C10
pin 4		pin A8

DM24105AB

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- (d) Do a wiring check between these pins of connector DM24001C at the IDG and connector DM24205AB at the E2-2 shelf for the right IDG, as applicable.

DM24001C	DM24205AB
pin 1	pin C10
pin 3	pin A8

- (e) Disconnect connector DM24001A from the applicable IDG.
- (f) Do a wiring check between these pins of connector DM24001A at the IDG and connector DM24105AB at the E1-1 shelf or DM24205AB at the E2-2 shelf as applicable.

DM24001A	DM24105AB or DM24205AB
pin 10	pin A10

- (g) Do a wiring check between these pins of connectors DM24001A and DM24001C at the IDG.

DM24001A	DM24001C
pin 11	pin 2

- (h) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24001C to the applicable IDG.
 - 3) Re-connect connector DM24001A to the applicable IDG.
 - 4) Re-install the applicable GCU, M24105 or M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (i) If you do not find a problem with the wiring, then continue.
- (6) Replace the applicable GCU, M24105 or M24205.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (7) Replace the applicable IDG, M24001.
- These are the tasks:
- IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

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808. IDG Oil Filter Loss of Indication - Fault Isolation

A. Initial Evaluation

- (1) If the Electrical Maintenance Page does not have an indication for the IDG oil filter, then do the Fault Isolation Procedure below.
- (2) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, then there was an intermittent fault.

B. Fault Isolation Procedure

- (1) Do this task: IDG Oil Filter Blocked Condition Check, AMM TASK 12-22-07-200-802.
 - (a) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, you corrected the fault.
 - (b) If the DPI (red button) is in the retracted (normal) position, then continue.
- (2) Do this check of the electrical connector on the applicable IDG (WDM 24-11-11) or (WDM 24-11-21):
 - (a) Disconnect connector DM24001B from the IDG.
 - (b) Measure the resistance between pin 11 and pin 12 of the IDG.
 - (c) If there is resistance, then do these steps:
 - 1) Replace the IDG, M24001.
These are the tasks:
IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.
 - 2) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, you corrected the fault.
 - (d) If it is an open circuit, then continue.
 - 1) Re-connect connector DM24001B to the IDG.
- (3) Do this check of the IDG wiring (WDM 24-11-11) or (WDM 24-11-21):
 - (a) Make sure the applicable EEC MAINT ENG POWER switch (P61 panel) is set to NORM.
 - (b) Disconnect connector DM73003C from the electronic engine control (EEC).
 - (c) Measure the resistance between pin V and pin DD of connector DM73003C.
 - (d) If the resistance is less than 100 ohms, then do these steps:
 - 1) Replace the wire harness that is between connector DM24001B (IDG) and connectors DM73003C (EEC).
 - 2) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, you corrected the fault.
 - (e) If the resistance is more than 100 ohms, then continue.
- (4) Replace the electronic engine control (EEC), M73003 (WDM 73-21-11).
 - (a) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, you corrected the fault.

————— END OF TASK —————

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809. IDG Oil Filter BLOCKED Indication - Fault Isolation

A. Initial Evaluation

- (1) If the Electrical Maintenance Page shows BLOCKED for the IDG oil filter, then do the Fault Isolation Procedure below.
- (2) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, then there was an intermittent fault.

B. Fault Isolation Procedure

- (1) Do this task: IDG Oil Filter Blocked Condition Check, AMM TASK 12-22-07-200-802.
 - (a) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, you corrected the fault.
 - (b) If the DPI (red button) is in the retracted (normal) position, then continue.
- (2) Examine the applicable IDG oil filter.
 - (a) If the filter shows bright metal deposits that can be clearly specified as chunks or pieces caused by breakage, then do these steps:
 - 1) Replace the IDG, M24001.
These are the tasks:
IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.
 - 2) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, you corrected the fault.
 - (b) If the filter is clean and does not show bright metal deposits, then continue.
- (3) Do this check of the electrical connector on the applicable IDG (WDM 24-11-11) or (WDM 24-11-21):
 - (a) Disconnect connector DM24001B from the IDG.
 - (b) Measure the resistance between pin 11 and pin 12 of the IDG.
 - (c) If there is resistance, then do these steps:
 - 1) Replace the IDG, M24001.
These are the tasks:
IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.
 - 2) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, you corrected the fault.
 - (d) If it is an open circuit, then continue.
 - 1) Re-connect connector DM24001B to the IDG.
- (4) Do this check of the IDG wiring (WDM 24-11-11) or (WDM 24-11-21):
 - (a) Make sure the applicable EEC MAINT ENG POWER switch (P61 panel) is set to NORM.
 - (b) Disconnect connector DM73003C from the electronic engine control (EEC).
 - (c) Measure the resistance between pin V and pin DD of connector DM73003C.
 - (d) If the resistance is less than 100 ohms, then do these steps:
 - 1) Replace the wire harness that is between connector DM24001B (IDG) and connectors DM73003C (EEC).

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- 2) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 3) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, you corrected the fault.
- (e) If the resistance is more than 100 ohms, then continue.
- (5) Replace the electronic engine control (EEC), M73003 (WDM 73-21-11).
 - (a) If the Electrical Maintenance Page shows NORMAL for the IDG oil filter, you corrected the fault.

————— **END OF TASK** —————

810. DRIVE DISC (L) Switch Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 23-43460.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the pins on connector DM24023C (WDM 24-11-11):
 - (a) Disconnect connector DM24023C from the Electrical Module, M24023, on the Overhead Panel, P5.
 - (b) Examine the pins on connector DM24023C for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.
 - (d) Re-connect connector DM24023C to the Electrical Module, M24023.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the pins on connector DM23117G (WDM 24-11-11):
 - (a) Disconnect connector DM23117G from the Left Overhead Cardfile, M23117.
 - (b) Examine the pins on connector DM23117G for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.
 - (d) Re-connect connector DM23117G to the Left Overhead Cardfile, M23117.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the DRIVE DISC L switch, M24023S6 (WDM 24-11-11).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the Overhead Panel Card File, M23117, in the Maintenance Panel, P61.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802,

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Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the DRIVE DISC L switch to the Cardfile (WDM 24-11-11):
 - (a) Disconnect connector M24023DS6 from the DRIVE DISC L switch, M24023S6, on the Overhead Panel, P5.
 - (b) Disconnect connector DM23117G from the Left Overhead Cardfile, M23117.
 - (c) Do a wiring check between these pins of connector M24023DS6 at the P5 panel and connector DM23117G at the P61 panel.

M24023DS6	DM23117G
pin 4	pin A14
pin 5	pin A15
pin 6	pin A16
pin 16	pin A17

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector M24023DS6 to the DRIVE DISC L switch, M24023S6.
 - 3) Re-connect connector DM23117G to the Left Overhead Cardfile, M23117.
- (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.

END OF TASK

811. DRIVE DISC (R) Switch Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 23-43820.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the pins on connector DM24023B (WDM 24-11-21):
 - (a) Disconnect connector DM24023B from the Electrical Module, M24023, on the Overhead Panel, P5.
 - (b) Examine the pins on connector DM24023B for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.
 - (d) Re-connect connector DM24023B to the Electrical Module, M24023.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the pins on connector DM23217G (WDM 24-11-21):

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- (a) Disconnect connector DM23217G from the Right Overhead Cardfile, M23217.
- (b) Examine the pins on connector DM23217G for damage or contamination.
- (c) If there is damage or contamination, repair or clean the connector.
- (d) Re-connect connector DM23217G to the Right Overhead Cardfile, M23217.
- (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
- (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the DRIVE DISC R switch, M24023S10 (WDM 24-11-21).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the Overhead Panel Card File, M23217, in the Maintenance Panel, P61.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802,
Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the DRIVE DISC R switch to the Cardfile (WDM 24-11-21):
 - (a) Disconnect connector M24023DS10 from the DRIVE DISC R switch, M24023S10, on the Overhead Panel, P5.
 - (b) Disconnect connector DM23217G from the Right Overhead Cardfile, M23217.
 - (c) Do a wiring check between these pins of connector M24023DS10 at the P5 panel and connector DM23217G at the P61 panel.

M24023DS10	DM23217G
pin 4	pin A10
pin 5	pin A11
pin 6	pin A12
pin 16	pin A13

 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector M24023DS10 to the DRIVE DISC R switch, M24023S10.
 - 3) Re-connect connector DM23217G to the Right Overhead Cardfile, M23217.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.

————— **END OF TASK** —————

812. IDG Was Manually Disconnected - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31561, 24-31562.

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B. Description

- (1) A manual disconnect due to illumination of the IDG DRIVE light will require replacement of the IDG.
- (2) A manual disconnect to do maintenance work does not require replacement of the IDG if it is reconnected before flight.

C. Fault Isolation Procedure

- (1) Replace the applicable IDG, M24001.

These are the tasks:

IDG Removal, AMM TASK 24-11-01-000-801-001,

IDG Installation, AMM TASK 24-11-01-400-801-001.

- (a) Push the applicable GEN CTRL switch on the P5 panel two times.
- (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

815. IDG R Point Of Regulation Open Circuit - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31422.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the R GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the generator control unit (GCU) wiring (WDM 24-21-21):
 - (a) Make sure the engine does not operate.
 - (b) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Do a wiring check between these pins of connector DM24205AA at the E2-2 shelf and terminal wires L4, L5, and L6 at the power panel (P200).

DM24205AA

P200 Panel

pin A7	.....	L4
pin A5		L5
pin C6		L6

- (d) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Re-install the right GCU, M24205, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- 3) Push the R GEN CTRL switch on the P5 panel two times.
- 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (2) Do a check for ground at pin A4 of connector DM24205AA (WDM 24-21-21).
 - (a) If there is no ground at pin A4 of connector DM24205AA, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right GCU, M24205, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Push the R GEN CTRL switch on the P5 panel two times.
 - 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Replace the applicable IDG, M24001.

These are the tasks:

IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.

 - (a) Push the applicable GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (4) Replace the applicable GCU.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) Push the applicable GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

816. IDG Exciter Field Out of Range (Shorted Diode Problems) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31611, 24-31612.

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B. Description

- (1) 24-31611: The Left GCU detected that the IDG Exciter Field Current is out of range.
 - (a) The cause is a shorted Diode in the Left IDG Rotor.
- (2) 24-31612: The Right GCU detected that the IDG Exciter Field Current is out of range.
 - (a) The cause is a shorted Diode in the Right IDG Rotor.

C. Possible Causes

- (1) L (R) IDG, M24001
- (2) Wiring
- (3) L (R) GCU, M24105 (M24205)

D. Circuit Breakers

- (1) These are the circuit breakers related to this fault:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	2	C24602	R IDG DISC
J	9	C24684	L GCU/BPCU

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	8	C24601	L GCU
B	9	C24600	R GCU

E. Related Data

- (1) WDM 24-21-11
- (2) WDM 24-21-21

F. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) On the P5 Panel, push the applicable GEN CTRL Switch two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent problem.

G. Fault Isolation Procedure

- (1) Replace the applicable IDG, M24001. These are the tasks:
 - IDG Removal, AMM TASK 24-11-01-000-801-001
 - IDG Installation, AMM TASK 24-11-01-400-801-001
 - (a) Do the Repair Confirmation at the end of this task.
- (2) Do this check of the Generator Exciter Field Wiring (WDM 24-21-11, WDM 24-21-21):
 - (a) Make sure the engine does not operate (AMM TASK 71-00-00-800-837-H00).

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- (b) Disconnect connector DM24001B from the IDG.
- (c) Remove the applicable GCU. This is the task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (d) Do a wiring check between the applicable GCU and IDG connectors as follows:

Left Engine

GCU, E1-1 Shelf	IDG
DM24105AA	DM24001B
pin 116	pin 10
pin 117	pin 8

Right Engine

GCU, E2-2 Shelf	IDG
DM24205AA	DM24001B
pin 116	pin 10
pin 117	pin 8

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the applicable GCU. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect connector DM24001B to the applicable IDG.
 - 4) Do the Repair Confirmation at the end of this task.
- (f) If you do not find a problem with the wiring, replace the applicable GCU, M24105 (M24205). These are the tasks:
 - Generator Control Unit Removal, AMM TASK 24-22-02-000-801
 - Generator Control Unit Installation, AMM TASK 24-22-02-400-801
 - 1) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) On the P5 Panel, push the applicable GEN CTRL Switch two times.
- (2) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00
 - (a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the problem.
 - (b) If the MAT shows ACTIVE or LATCHED with the maintenance message, then continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

818. IDG R Feeder Phase Sequence Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31782, 24-31792.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:

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- (a) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the phase leads of the generator (WDM 24-21-21):
 - (a) Make sure the engine does not operate.
 - (b) Remove the terminal block cover from the generator.
 - (c) Make sure the phase leads (T1, T2, T3, N) are connected to the correct power terminals.
 - (d) If you find a problem with the connection of the phase leads, then do these steps:
 - 1) Connect the phase leads to the correct power terminals.
 - 2) Install the terminal block cover to the generator.
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the connection of the phase leads, then continue.
- (2) Do a wiring check from the right IDG to the P200 power panel (WDM 24-21-21):
 - (a) Do a continuity check from these phase leads of the right IDG to these terminals of the P200 panel.

PANEL P200	RIGHT IDG
pin L1	T1
pin L2	T2
pin L3	T3
pin L4	T1
pin L5	T2
pin L6	T3

- (b) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 3) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.
 - (c) If you do not find a problem with the wiring, then continue.
- (3) Do a wiring check from the P200 power panel to the right generator control unit (GCU) (WDM 24-21-21):
 - (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Do a wiring check between these pins of connector DM24205AA at the right GCU and the terminals on the P200 panel.

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PANEL P200

pin L1
pin L2
pin L3

DM24205AA

pin A7
pin A5
pin C6

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (4) Do a check for ground from pin A4 of connector DM24205AA (WDM 24-21-21):
 - (a) If there is no ground at pin A4 of connector DM24205AA, then do these steps:
 - 1) Repair the wiring between the right GCU and the P200 panel.
 - 2) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.
 - (b) If there is ground at pin A4 of connector DM24205AA, then continue.
- (5) Replace the right GCU, M24205.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - (a) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), you corrected the fault.

— END OF TASK —

821. IDG DPI Position and Maintenance Page Disagree - Fault Isolation

A. Fault Isolation Procedure

- (1) If the DPI is extended, then do this task: IDG Oil Filter Blocked Condition Check, AMM TASK 12-22-07-200-802.
- (2) If the DPI is not extended, then continue.
- (3) Do this check of the IDG wiring (WDM 24-11-11) or (WDM 24-11-21):
 - (a) Disconnect connector DM24001B from the IDG, M24001.
 - (b) Disconnect connector DM73003C from the electronic engine control (EEC).
 - (c) Do a wiring check between these pins of connector M24001B at the IDG, M24001, and connector DM73003C at the EEC, M73003.

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DM24001B

pin 12 pin DD

pin 11 pin V

DM73003C

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24001B to the IDG.
 - 3) Re-connect connector DM73003C to the EEC.

————— **END OF TASK** —————

824. Disconnected IDG Indication - Fault Isolation

A. Fault Isolation Procedure

- (1) Replace the applicable IDG, M24001.

These are the tasks:

IDG Removal, AMM TASK 24-11-01-000-801-001,

IDG Installation, AMM TASK 24-11-01-400-801-001.

- (a) Push the applicable GEN CTRL switch on the P5 panel two times.
- (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

826. Loss of DRIVE Light During Engine Off - Fault Isolation

A. Initial Evaluation

- (1) If the DRIVE light remain off when the engine is off, then do the Fault Isolation Procedure below.
- (2) If the DRIVE light is on when the engine is off, then there was an intermittent fault.

B. Fault Isolation Procedure

- (1) Look for the DRIVE indication on the synoptic page.
- (a) If the DRIVE indication is not on the synoptic page, then do these steps:
- 1) Wait for 7.5 minutes after engine shutdown.
NOTE: A maintenance message does not show in less than 7.5 minutes after engine shutdown. The system does a check every 2.5 minutes for the oil valid signal. It is necessary for the system to fail three checks, one after the other, before the maintenance message shows.
 - 2) Look for maintenance message 24-31801 or 24-31802 and do the procedure for that message.
- (b) If the DRIVE indication is on the synoptic page, then look for EICAS messages related to the OPAS system and do those procedures.
- (c) If the DRIVE indication is not on the synoptic page, then continue.

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C. Fault Isolation Procedure

(1) Do this check of the IDG wiring (WDM 24-11-11) or (WDM 24-11-21):

- (a) Disconnect connector DM24001A and DM24001C from the IDG, M24001.
- (b) Disconnect connectors DM24105AB and DM24205AB from the generator control unit (GCU).
- (c) Do a wiring check between these pins of connector DM24001A at the IDG, M24001, and connector DM24105AB at the left GCU, M24105.

DM24001A	DM24105AB
pin 10	pin A10

- (d) Do a wiring check between these pins of connector DM24001A at the IDG, M24001, and connector DM24001C at the IDG, M24001.

DM24001A	DM24001C
pin 11	pin 2

- (e) Do a wiring check between these pins of connector DM24001A at the IDG, M24001, and connector DM24205AB at the right GCU, M24205.

DM24001A	DM24205AB
pin 10	pin A10

- (f) Do a wiring check between these pins of connector DM24001A at the IDG, M24001, and connector DM24001C at the IDG, M24001.

DM24001A	DM24205AB
pin 10	pin 2

- (g) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24001A to the IDG.
- 3) Re-connect connector DM24001C to the IDG.
- 4) Re-connect connector DM24105AB to the GCU.
- 5) Re-connect connector DM24205AB to the GCU.

———— **END OF TASK** ————

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827. Electrical Maintenance Page Shows Blanks for Oil Level - Fault Isolation

A. Initial Evaluation

- (1) If the Electrical Maintenance Page shows blanks for the generator oil level and it has been more than 10 minutes since engine shutdown and/or power transfer, then do the Fault Isolation Procedure below.

NOTE: The Electrical Maintenance Page will show blanks for the generator oil level for 10 minutes after engine shutdown or 10 minutes after a power transfer occurs. If the engine is running, dashed lines will show for the generator oil level. This indicates that the oil level sensing system is unable to accurately measure the oil level. If the Electrical Maintenance Page shows blanks for the generator oil level while the engine is running or more than 10 minutes after engine shutdown or power transfer, then a problem exists with the remote oil level sensing system.

- (2) If the Electrical Maintenance Page shows blanks for the generator oil level and it has not been 10 minutes since engine shutdown and/or power transfer, then no maintenance action is required.

B. Fault Isolation Procedure

- (1) If the Electrical Maintenance Page shows blanks for the generator oil level and it has been more than 10 minutes since engine shutdown or power transfer or the engine is running, then do the steps that follow:

- (a) Make sure you wait for 7.5 minutes after the ROLS indication goes blank.

NOTE: A maintenance message does not show for 7.5 minutes after the ROLS indication is blank. The system does a check every 2.5 minutes for the oil valid signal. The first time there is a loss of the oil valid signal, the ROLS indication goes blank. It is necessary for the system to fail three checks, one after the other, before any maintenance message shows.

- (b) Look for these maintenance messages:

- 1) 24-31801 or 24-31802
 - 2) 24-31551 or 24-31552.

- (c) If you see maintenance message 24-31551 or 24-31552, then do the fault isolation procedure for message 24-31551 or 24-31552.

- (d) If you do not see maintenance messages 24-31551 and 24-31552 but you see the maintenance messages 24-31801 and/or 24-31802 then do the steps that follow:

- 1) Make sure the oil quantity on the IDG sight glass is above the "LOW" level.
 - 2) If the oil level is low, fill the IDG with oil. To fill the IDG, do this task: IDG Oil Fill, AMM TASK 12-13-03-600-802.

- (e) If you do not see maintenance message 24-31801 or 24-31802 and it is more than 7.5 minutes after the ROLS indication is blank, it is possible there is an intermittent failure of the oil charge pressure circuit. Do the fault isolation procedure for maintenance message 24-31801 or 24-31802.

————— **END OF TASK** —————

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801. VSCF Inlet Temperature Sensor Fault - Fault Isolation

A. Description

- (1) VSCF Inlet Oil Temperature signal exceeds valid electrical range OR the EEC input circuitry is failed. This fault can be reported on channel A whenever the EEC is powered.

B. Initial Evaluation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 30 seconds or less.
 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

C. Fault Isolation Procedure

- (1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (2) Disconnect connector DP70911 from the EEC (FADEC), M73003.
- (3) Measure the resistance between these pairs of pins in the harness connector DP70911:
 - (a) Pin G to pin B, specified resistance 100-500 ohms
 - (b) Pin G to GND, specified resistance >100k ohms
 - (c) Pin B to GND, specified resistance >100k ohms.
- (4) If the resistance is in the specified range for each pair of pins, replace the EEC (FADEC), M73003. These are the tasks:
 - EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01
 - EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01
 - (a) Do the repair confirmation procedure at the end of this task.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (5) If the resistance is not in the specified range for each pair of pins, then disconnect electrical connector DP72903 from the VSCF inlet temperature sensor, M24054 and attach a jumper wire from pin 2 to pin 3.
- (6) Do a check for continuity between pin G and pin B on connector DP70911.
- (7) If there is continuity, re-connect connector DP70911 to the EEC and replace the VSCF oil inlet temperature sensor. These are the tasks:
 - VSCF Oil Temperature Sensors Removal, AMM TASK 24-25-05-000-802-001

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- VSCF Oil Temperature Sensors Removal, AMM TASK 24-25-05-000-802-001
- (a) Do the repair confirmation procedure at the end of this task.
- (8) If there is not continuity, replace the applicable wiring harness. These are the tasks:
 - EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01
 - EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01

D. Repair Confirmation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 30 seconds or less.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

————— END OF TASK —————

802. VSCF Outlet Temperature Sensor Fault - Fault Isolation

A. Description

- (1) VSCF oil outlet temperature signal exceeds valid electrical range OR the EEC input circuitry is failed. This fault can be reported on channel B whenever the EEC is powered.

B. Initial Evaluation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 30 seconds or less.
 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

C. Fault Isolation Procedure

- (1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (2) Disconnect connector DP70912 from the EEC (FADEC), M73003.
- (3) Measure the resistance between these pairs of pins in the harness connector:
 - (a) Pin G to pin B, specified resistance 100-500 ohms
 - (b) Pin G to GND, specified resistance >100k ohms
 - (c) Pin B to GND, specified resistance >100k ohms.



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- (4) If the resistance is in the specified range for each pair of pins, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01,

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

- (a) Do the repair confirmation procedure at the end of this task.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (5) If the resistance is not in the specified range for each pair of pins, then disconnect electrical connector DP72905 from the VSCF oil outlet temperature sensor, M24055 and attach a jumper wire from pin 2 to pin 3.
- (6) Do a check for continuity between pin G and pin B on connector DP70912.
- (7) If there is continuity, re-connect connector DP70912 to the EEC and replace the VSCF oil outlet temperature sensor.

These are the tasks:

VSCF Oil Temperature Sensors Removal, AMM TASK 24-25-05-000-802-001,

VSCF Oil Temperature Sensors Installation, AMM TASK 24-25-05-400-802-001.

- (a) Do the repair confirmation procedure at the end of this task.

- (8) If there is not continuity, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01,

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

D. Repair Confirmation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 30 seconds or less.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

————— END OF TASK —————

803. IDG Inlet Temperature Sensor Fault - Fault Isolation

A. Description

- (1) IDG Inlet Oil Temperature signal exceeds valid electrical range OR the EEC input circuitry is failed. This fault can be reported on channel A whenever the EEC is powered.

B. Initial Evaluation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 30 seconds or less.

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- (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

C. Fault Isolation Procedure

- (1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (2) Disconnect electrical connector DP72904 from the IDG oil inlet temperature sensor, M24050.
- (3) Measure the resistance between these pairs of pins on the receptacle on the IDG oil inlet temperature sensor, M24050:
 - (a) Pin 2 to pin 3, specified resistance 100-500 ohms
 - (b) Pin 2 to GND, specified resistance >100K ohms
 - (c) Pin 3 to GND, specified resistance >100K ohms.
- (4) If the resistance is not in the specified range for each pair of pins, replace the IDG oil inlet temperature sensor, M24050.

These are the tasks:

IDG Oil In Temperature Sensor Removal, AMM TASK 24-11-14-000-805-001,

IDG Oil In Temperature Sensor Installation, AMM TASK 24-11-14-400-805-001.

- (a) Do the repair confirmation procedure at the end of this task.
- (5) If the resistance is in the specified range for each pair of pins, re-connect connector DP72904 to the IDG oil inlet temperature sensor, M24050.



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (6) Disconnect connector DP70911 from the EEC (FADEC), M73003.
- (7) Measure the resistance between these pairs of pins in the harness connector:
 - (a) Pin A to pin Z, specified resistance 100-500 ohms
 - (b) Pin A to GND, specified resistance >100k ohms
 - (c) Pin Z to GND, specified resistance >100k ohms.
- (8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01,

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

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- (a) Do the repair confirmation procedure at the end of this task.
- (9) If the resistance is in the specified range for each pair of pins, or if the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01,

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

D. Repair Confirmation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 30 seconds or less.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

————— **END OF TASK** —————

804. IDG Outlet Temperature Sensor Fault - Fault Isolation

A. Description

- (1) IDG oil outlet temperature signal exceeds valid electrical range OR the EEC input circuitry is failed. This fault can be reported on channel B whenever the EEC is powered.

B. Initial Evaluation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 30 seconds or less.
 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

C. Fault Isolation Procedure

- (1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (2) Disconnect electrical connector DP72906 from the IDG oil outlet temperature sensor, M24051.
- (3) Measure the resistance between these pairs of pins on the receptacle on the IDG oil outlet temperature sensor, M24051:
 - (a) Pin 2 to pin 3, specified resistance 100-500 ohms
 - (b) Pin 2 to GND, specified resistance >100k ohms
 - (c) Pin 3 to GND, specified resistance >100k ohms.

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- (4) If the resistance is not in the specified range for each pair of pins, replace the IDG oil outlet temperature sensor.

These are the tasks:

IDG Oil Out Temperature Sensor Removal, AMM TASK 24-11-14-000-806-001,

IDG Oil Out Temperature Sensor Installation, AMM TASK 24-11-14-400-806-001.

- (a) Do the repair confirmation procedure at the end of this task.
- (5) If the resistance is in the specified range for each pair of pins, re-connect connector DP72906 to the IDG oil outlet temperature sensor, M24051.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (6) Disconnect connector DP70912 from the EEC (FADEC), M73003.
- (7) Measure the resistance between these pairs of pins in the harness connector:
- (a) Pin a to pin Z, specified resistance 100-500 ohms
- (b) Pin a to GND, specified resistance >100k ohms
- (c) Pin Z to GND, specified resistance >100k ohms.
- (8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01,

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

- (a) Do the repair confirmation procedure at the end of this task.
- (9) If the resistance is in the specified range for each pair of pins, or if the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01,

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

D. Repair Confirmation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 30 seconds or less.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

————— END OF TASK —————

805. VSCF Inlet Temperature Sensor Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-45151, 24-45152.

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B. Description

- (1) VSCF Inlet Oil Temperature signal exceeds valid electrical range OR the EEC input circuitry is failed. This fault can be reported on channel A whenever the EEC is powered.

C. Initial Evaluation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 60 seconds or less.
 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

- (1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (2) Disconnect connector DP70707 from the EEC (FADEC), M73003.
- (3) Measure the resistance between these pairs of pins in the harness connector DP70911:
 - (a) Pin s to pin r, specified resistance 100-500 ohms
 - (b) Pin s to GND, specified resistance >100k ohms
 - (c) Pin r to GND, specified resistance >100k ohms.

- (4) If the resistance is in the specified range for each pair of pins, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01,

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

- (a) Do the repair confirmation procedure at the end of this task.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (5) If the resistance is not in the specified range for each pair of pins, then disconnect electrical connector DP73808 from the VSCF inlet temperature sensor, M24054 and attach a jumper wire from pin 2 to pin 3.
- (6) Do a check for continuity between pin r and pin s on connector DP70707.
- (7) If there is continuity, re-connect connector DP70707 to the EEC and replace the VSCF oil inlet temperature sensor.

These are the tasks:

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VSCF Oil Temperature Sensors Removal, AMM TASK 24-25-05-000-802-001,
VSCF Oil Temperature Sensors Removal, AMM TASK 24-25-05-000-802-001.

- (a) Do the repair confirmation procedure at the end of this task.
- (8) If there is not continuity, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01,
EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

E. Repair Confirmation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 60 seconds or less.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

— END OF TASK —

806. VSCF Outlet Temperature Sensor Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-45161, 24-45162.

B. Description

- (1) VSCF oil outlet temperature signal exceeds valid electrical range OR the EEC input circuitry is failed. This fault can be reported on channel B whenever the EEC is powered.

C. Initial Evaluation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 60 seconds or less.
 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

- (1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (2) Disconnect connector DP70808 from the EEC (FADEC), M73003.
- (3) Measure the resistance between these pairs of pins in the harness connector:

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- (a) Pin r to pin s, specified resistance 100-500 ohms
 - (b) Pin r to GND, specified resistance >100k ohms
 - (c) Pin s to GND, specified resistance >100k ohms.
- (4) If the resistance is in the specified range for each pair of pins, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01,

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

- (a) Do the repair confirmation procedure at the end of this task.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (5) If the resistance is not in the specified range for each pair of pins, then disconnect electrical connector DP73803 from the VSCF oil outlet temperature sensor, M24055 and attach a jumper wire from pin 2 to pin 3.
- (6) Do a check for continuity between pin s and pin r on connector DP73808.
- (7) If there is continuity, re-connect connector DP70808 to the EEC and replace the VSCF oil outlet temperature sensor.

These are the tasks:

VSCF Oil Temperature Sensors Removal, AMM TASK 24-25-05-000-802-001,

VSCF Oil Temperature Sensors Removal, AMM TASK 24-25-05-000-802-001.

- (a) Do the repair confirmation procedure at the end of this task.
- (8) If there is not continuity, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01,

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

E. Repair Confirmation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 60 seconds or less.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

————— END OF TASK —————

807. IDG Inlet Temperature Sensor Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-35171, 24-35172.

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B. Description

- (1) IDG Inlet Oil Temperature signal exceeds valid electrical range OR the EEC input circuitry is failed. This fault can be reported on channel A whenever the EEC is powered.

C. Initial Evaluation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 60 seconds or less.
 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

- (1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (2) Disconnect electrical connector DP73806 from the IDG oil inlet temperature sensor, M24050.
- (3) Measure the resistance between these pairs of pins on the receptacle on the IDG oil inlet temperature sensor, M24050:
 - (a) Pin 2 to pin 3, specified resistance 100-500 ohms
 - (b) Pin 2 to GND, specified resistance >100K ohms
 - (c) Pin 3 to GND, specified resistance >100K ohms.
- (4) If the resistance is not in the specified range for each pair of pins, replace the IDG oil inlet temperature sensor, M24050.

These are the tasks:

IDG Oil In Temperature Sensor Removal, AMM TASK 24-11-14-000-805-001,

IDG Oil In Temperature Sensor Installation, AMM TASK 24-11-14-400-805-001.

- (a) Do the repair confirmation procedure at the end of this task.
- (5) If the resistance is in the specified range for each pair of pins, re-connect connector DP73806 to the IDG oil inlet temperature sensor, M24050.



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (6) Disconnect connector DP70707 from the EEC (FADEC), M73003.
- (7) Measure the resistance between these pairs of pins in the harness connector:
 - (a) Pin d to pin c, specified resistance 100-500 ohms
 - (b) Pin d to GND, specified resistance >100k ohms

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- (c) Pin c to GND, specified resistance >100k ohms.
- (8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.
These are the tasks:
EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01,
EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.
 - (a) Do the repair confirmation procedure at the end of this task.
- (9) If the resistance is in the specified range for each pair of pins, or if the fault continues, replace the EEC (FADEC), M73003.
These are the tasks:
EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01,
EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

E. Repair Confirmation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 60 seconds or less.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

— END OF TASK —

808. IDG Outlet Temperature Sensor Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-35181, 24-35182.

B. Description

- (1) IDG oil outlet temperature signal exceeds valid electrical range OR the EEC input circuitry is failed. This fault can be reported on channel B whenever the EEC is powered.

C. Initial Evaluation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 60 seconds or less.
 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

- (1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (2) Disconnect electrical connector DP73805 from the IDG oil outlet temperature sensor, M24051.
- (3) Measure the resistance between these pairs of pins on the receptacle on the IDG oil outlet temperature sensor, M24051:
 - (a) Pin 2 to pin 3, specified resistance 100-500 ohms
 - (b) Pin 2 to GND, specified resistance >100k ohms
 - (c) Pin 3 to GND, specified resistance >100k ohms.
- (4) If the resistance is not in the specified range for each pair of pins, replace the IDG oil outlet temperature sensor.

These are the tasks:

IDG Oil Out Temperature Sensor Removal, AMM TASK 24-11-14-000-806-001,
IDG Oil Out Temperature Sensor Installation, AMM TASK 24-11-14-400-806-001.

 - (a) Do the repair confirmation procedure at the end of this task.
- (5) If the resistance is in the specified range for each pair of pins, re-connect connector DP73805 to the IDG oil outlet temperature sensor, M24051.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC (FADEC) BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

- (6) Disconnect connector DP70808 from the EEC (FADEC), M73003.
- (7) Measure the resistance between these pairs of pins in the harness connector:
 - (a) Pin d to pin c, specified resistance 100-500 ohms
 - (b) Pin d to GND, specified resistance >100k ohms
 - (c) Pin c to GND, specified resistance >100k ohms.
- (8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01,
EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

 - (a) Do the repair confirmation procedure at the end of this task.
- (9) If the resistance is in the specified range for each pair of pins, or if the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01,
EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

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E. Repair Confirmation

- (1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 60 seconds or less.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

———— **END OF TASK** ————

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801. APU Generator Point Of Regulation Open Circuit - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31423.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the APU generator control unit (AGCU) wiring:
 - (a) Make sure the APU is stopped. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (b) Disconnect connector DM24305AA from the AGCU.
 - (c) Do a wiring check between these pins of connector DM24305AA at the E2-3 shelf and terminal wires L1, L2, and L3 at the auxiliary power panel (P300) (WDM 24-21-31).

DM24305AA	P300 Panel
pin A7	L1
pin A5	L2
pin C6	L3

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24305AA to the AGCU.
 - 3) Push the APU GEN switch on the P5 panel two times.
 - 4) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.
- (2) Replace the AGCU, M24305.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.

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- (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

802. APU Generator Exciter Field Open Circuit - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31513.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the APU generator, M24003.

These are the tasks:

APU Generator Removal, AMM TASK 24-21-01-000-801,

APU Generator Installation, AMM TASK 24-21-01-400-801.

- (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (2) Do this check of the generator exciter field wiring:
- (a) Make sure the APU is stopped. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (b) Disconnect connector DM24003A from the APU generator.
 - (c) Disconnect connector DM24305AA from the AGCU.
 - (d) Do a wiring check between these pins of connector DM24003A at the APU generator and connector DM24305AA at the E2-3 shelf (WDM 24-21-31).

DM24003A

pin 5
pin 7

DM24305AA

pin 117
pin 116

- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.

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- 2) Re-connect connector DM24305AA to the AGCU.
- 3) Re-connect connector DM24003A to the APU generator.
- 4) Push the APU GEN switch on the P5 panel two times.
- 5) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- 6) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

END OF TASK

803. APU Generator High Frequency Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31593.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the APU controller.

These are the tasks:

APU Controller (APUC) Removal, AMM TASK 49-61-05-000-801,
APU Controller (APUC) Installation Test, AMM TASK 49-61-05-700-801.

- (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (2) Replace the AGCU, M24305.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.

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- (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (3) Replace the APU generator, M24003.
- These are the tasks:
- APU Generator Removal, AMM TASK 24-21-01-000-801,
APU Generator Installation, AMM TASK 24-21-01-400-801.
- (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

804. APU Generator Low Frequency Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31633.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the APU controller.

These are the tasks:

APU Controller (APUC) Removal, AMM TASK 49-61-05-000-801,
APU Controller (APUC) Installation Test, AMM TASK 49-61-05-700-801.

- (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (2) Replace the AGCU, M24305.

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These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (3) Replace the APU generator, M24003.

These are the tasks:

APU Generator Removal, AMM TASK 24-21-01-000-801,
APU Generator Installation, AMM TASK 24-21-01-400-801.

- (a) Push the APU GEN switch on the P5 panel two times.
- (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

805. APU Generator Feeder Phase Sequence Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31783.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check on the phase leads of the APU generator:
 - (a) Remove the terminal block cover from the APU generator.
 - (b) Make sure the phase leads are connected to the correct power terminals (WDM 24-21-31).
 - (c) If you find a problem with the connection of the phase leads, then do these steps:
 - 1) Connect the phase leads to the correct power terminals (WDM 24-21-31).
 - 2) Install the terminal block cover to the APU generator.

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- 3) Do this ground test on the MAT: 24-Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
- 4) If the maintenance message does not show on the ground test display, you corrected the fault.
- (d) If you do not find a problem with the connection of the phase leads, then continue.
- (2) Replace the auxiliary generator control unit, M24305.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - (a) Install the terminal block cover to the APU generator.
 - (b) Do this ground test on the MAT: 24-Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - (c) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (d) If the maintenance message shows on the ground test display, then continue.
- (3) Do a check at the L1, L2, L3, L4, L5 and L6 terminal at the P300 panel for the correct installation (WDM 24-21-31).
 - (a) Make sure the wires are connected to its correct terminal.
- (4) If you find a problem with the connections, then do these steps:
 - (a) Connect the wires to the correct terminal (WDM 24-21-31).
 - (b) Do this ground test on the MAT: 24-Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - (c) If the maintenance message does not show on the ground test display, you corrected the fault.

————— **END OF TASK** —————

806. APU Generator Wiring Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31793.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check on the phase leads of the generator:
 - (a) Remove the terminal block cover from the APU generator.

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- (b) Make sure the phase leads are connected to the correct power terminals (WDM 24-21-31).
- (c) If you find a problem with the connection of the phase leads, then do these steps:
 - 1) Connect the phase leads to the correct power terminals (WDM 24-21-31).
 - 2) Install the terminal block cover to the APU generator.
 - 3) Do this ground test on the MAT: 24-Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - 4) If the maintenance message does not show on the ground test display, you corrected the fault.
- (d) If you do not find a problem with the phase leads installation, then continue.
- (2) Do a check at the L1, L2, L3, L4, L5 and L6 terminal at the P300 panel for the correct installation (WDM 24-21-31).
 - (a) Make sure the wires are connected to its correct terminal.
 - (b) If you find a problem with the connections, do these steps:
 - 1) Connect the wires to the correct terminals (WDM 24-21-31).
 - 2) Do this ground test on the MAT: 24-Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - 3) If the maintenance message does not show on the ground test display, you corrected the fault.

— END OF TASK —

807. APU Generator Point Of Regulation Wiring Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22220.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the APU GEN phase C wiring:
 - (a) Make sure that the APU is stopped. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (b) Disconnect connector DM24002AA from the BPCU, M24002 (WDM 24-28-41).
 - 1) Do a visual inspection of pin A7.
 - 2) Make sure that the pin is not loose, damaged, or pushed back.

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- (c) Disconnect connector D30021 from the P300 AUX Panel (WDM 24-28-41).
 - 1) Do a visual inspection of pin 32.
 - 2) Make sure that the pin is not loose, damaged, or pushed back.
- (d) If you find a problem with the pins, then do these steps:
 - 1) Repair the pins.
 - 2) Re-connect connector DM24002AA to the BPCU.
 - 3) Re-connect connector D30021 to the P300 AUX panel.
 - 4) Push the APU GEN switch on the P5 panel two times.
 - 5) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - 7) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue with the Fault Isolation Procedure.
- (2) Do this check of the point of regulation (POR) wiring:
 - (a) Make sure the APU is stopped. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (b) Disconnect connector DM24305AA from the AGCU, M24305 (WDM 24-21-31).
 - (c) Remove the auxiliary power breaker, C24335. To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
 - (d) Do a wiring check between this pin of connector DM24305AA at the E2-3 shelf and this terminal at the auxiliary power circuit breaker, C24335 in the auxiliary power panel (P300) (WDM 24-21-31).

DM24305AA	C24335
pin C6	C1

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24305AA to the AGCU.
 - 3) Push the APU GEN switch on the P5 panel two times.
 - 4) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - 6) Shut down the APU. To shut it down, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.

————— **END OF TASK** —————

808. IDG L Feeder Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31731.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the L GEN CTRL switch on the P5 overhead panel two times.
 - (b) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Make sure the engine is stopped. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (2) Do this check of the IDG feeder (WDM 24-21-11):
 - (a) Disconnect terminal L1, L2, L3, L4, L5, and L6 from the left power panel P100.
 - (b) Disconnect terminal T1, T2, and T3 from the left IDG.
 - (c) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal T1 of the IDG, M24001 and terminal L1 of the P100 left power panel
 - 2) Terminal T1 of the IDG, M24001 and terminal L4 of the P100 left power panel
 - 3) Terminal T2 of the IDG, M24001 and terminal L2 of the P100 left power panel
 - 4) Terminal T2 of the IDG, M24001 and terminal L5 of the P100 left power panel
 - 5) Terminal T3 of the IDG, M24001 and terminal L3 of the P100 left power panel
 - 6) Terminal T3 of the IDG, M24001 and terminal L6 of the P100 left power panel
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P100 panel.
 - 3) Re-connect terminal T1, T2, and T3 to the left IDG.
 - 4) Push the L GEN CTRL switch on the P5 overhead panel two times.
 - 5) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the IDG feeder inside the P100 left power panel (WDM 24-21-11):
 - (a) Remove the generator circuit breaker (GCB), C24331. To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
 - (b) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal L1 of the P100 left power panel and terminal A1 of the left GCB, C24331
 - 2) Terminal L4 of the P100 left power panel and terminal A1 of the left GCB, C24331



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- 3) Terminal L2 of the P100 left power panel and terminal B1 of the left GCB, C24331
 - 4) Terminal L5 of the P100 left power panel and terminal B1 of the left GCB, C24331
 - 5) Terminal L3 of the P100 left power panel and terminal C1 of the left GCB, C24331
 - 6) Terminal L6 of the P100 left power panel and terminal C1 of the left GCB, C24331
- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the GCB, C24331. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
 - 3) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P100 panel.
 - 4) Re-connect terminal T1, T2, and T3 to the left IDG.
 - 5) Push the L GEN CTRL switch on the P5 overhead panel two times.
 - 6) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 7) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the GCB, C24331. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
 - 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P100 panel.
- (4) Replace the integrated drive generator (IDG), M24001.
- These are the tasks:
- IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.
- (a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

END OF TASK

809. APU Feeder Short-Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31733.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch on the P5 overhead panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do this check of the APU feeder (WDM 24-21-31):
 - (a) Make sure the APU is stopped. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (b) Disconnect terminal L1, L2, L3, L4, L5, and L6 from the auxiliary power panel P300.
 - (c) Disconnect terminal T1, T2, T3 from the APU generator.
 - (d) Do a wiring check between these pairs of terminals:
 - 1) Terminal T1 of the APU generator, M24003 and terminal L1 of the P300 auxiliary power panel
 - 2) Terminal T1 of the APU generator, M24003 and terminal L4 of the P300 auxiliary power panel
 - 3) Terminal T2 of the APU generator, M24003 and terminal L2 of the P300 auxiliary power panel
 - 4) Terminal T2 of the APU generator, M24003 and terminal L5 of the P300 auxiliary power panel
 - 5) Terminal T3 of the APU generator, M24003 and terminal L3 of the P300 auxiliary power panel
 - 6) Terminal T3 of the APU generator, M24003 and terminal L6 of the P300 auxiliary power panel
 - (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P300 panel.
 - 3) Re-connect terminal T1, T2, and T3 to the APU generator.
 - 4) Push the APU GEN switch on the P5 overhead panel two times.
 - 5) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (f) If you do not find a problem with the wiring, then continue.
- (2) Do this check of the APU feeder inside the P300 auxiliary power panel (WDM 24-21-31):
 - (a) Remove the auxiliary power (APB) circuit breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

- (b) To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
- (c) Do a wiring check between these pairs of terminals:
 - 1) Terminal L1 of the P300 auxiliary power panel and terminal A1 of the APB, C24335
 - 2) Terminal L4 of the P300 auxiliary power panel and terminal A1 of the APB, C24335
 - 3) Terminal L2 of the P300 auxiliary power panel and terminal B1 of the APB, C24335
 - 4) Terminal L5 of the P300 auxiliary power panel and terminal B1 of the APB, C24335

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- 5) Terminal L3 of the P300 auxiliary power panel and terminal C1 of the APB, C24335
- 6) Terminal L6 of the P300 auxiliary power panel and terminal C1 of the APB, C24335
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the APB circuit breaker

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

- 3) To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- 4) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P300 panel.
- 5) Re-connect terminal T1, T2, and T3 to the APU generator.
- 6) Push the APU GEN switch on the P5 overhead panel two times.
- 7) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- 8) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the APB circuit breaker

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

- 2) To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- 3) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P300 panel.
- (3) Replace the APU generator, M24003.

These are the tasks:

APU Generator Removal, AMM TASK 24-21-01-000-801,

APU Generator Installation, AMM TASK 24-21-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

810. Ground Handling Or Service Bus Unbalanced Phase Currents - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31893.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.

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- (b) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
- (c) Make sure secondary external power is off.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
- (e) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
- (2) Do this check of the APU feeder between the APU generator and the auxiliary power panel (P100) (WDM 24-21-31):
 - (a) Do a wiring check between these pairs of terminals:
 - 1) Terminal T1 of the APU generator, M24003 and terminal L1 of the P300 auxiliary power panel
 - 2) Terminal T1 of the APU generator, M24003 and terminal L4 of the P300 auxiliary power panel
 - 3) Terminal T2 of the APU generator, M24003 and terminal L2 of the P300 auxiliary power panel
 - 4) Terminal T2 of the APU generator, M24003 and terminal L5 of the P300 auxiliary power panel
 - 5) Terminal T3 of the APU generator, M24003 and terminal L3 of the P300 auxiliary power panel
 - 6) Terminal T3 of the APU generator, M24003 and terminal L6 of the P300 auxiliary power panel
 - (b) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 3) Make sure the primary and secondary external power is off.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (c) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the APU feeder inside the P300 auxiliary power panel (WDM 24-21-31):
 - (a) Remove the auxiliary power breaker (APB), C24335. To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
 - (b) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal L1 of the P300 auxiliary power panel and pin A1 of the APB, C24335
 - 2) Terminal L4 of the P300 auxiliary power panel and pin A1 of the APB, C24335
 - 3) Terminal L2 of the P300 auxiliary power panel and pin B1 of the APB, C24335
 - 4) Terminal L5 of the P300 auxiliary power panel and pin B1 of the APB, C24335
 - 5) Terminal L3 of the P300 auxiliary power panel and pin C1 of the APB, C24335
 - 6) Terminal L6 of the P300 auxiliary power panel and pin C1 of the APB, C24335
 - (c) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Re-install the APB, C24335. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- 3) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- 4) Make sure the primary and secondary external power is off.
- 5) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring between the APB and the GHR (WDM 24-21-31):
 - (a) Remove the ground handling relay (GHR), K24004. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - (b) Do a wiring check between these pairs of pins:
 - 1) Pin A1 of the GHR, K24004 and pin A1 of the APB, C24335
 - 2) Pin B1 of the GHR, K24004 and pin B1 of the APB, C24335
 - 3) Pin C1 of the GHR, K24004 and pin C1 of the APB, C24335
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the APB, C24335. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
 - 3) Re-install the GHR, K24004. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 5) Make sure the primary and secondary external power is off.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the APB, C24335. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- (5) Do this check of the wiring between the GHR and the GSSR (WDM 24-21-31):
 - (a) Remove the ground service select relay (GSSR), K24002. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - (b) Do a wiring check between these pairs of pins:
 - 1) Pin A1 of the GHR, K24004 and pin A1 of the GSSR, K24002
 - 2) Pin B1 of the GHR, K24004 and pin B1 of the GSSR, K24002
 - 3) Pin C1 of the GHR, K24004 and pin C1 of the GSSR, K24002
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the GSSR, K24002. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - 3) Re-install the GHR, K24004. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.

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- 5) Make sure the primary and secondary external power is off.
- 6) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the GSSR, K24002. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
- (6) Replace the GHR, K24004.

These are the tasks:

Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.

 - (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Make sure the primary and secondary external power is off.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (7) Replace the GSSR, K24002.

These are the tasks:

Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.

 - (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Make sure the primary and secondary external power is off.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (8) Do this check of the ground handling bus (WDM 24-51-42):
 - (a) Remove the ground handling relay (GHR), K24004. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - (b) Remove the circuit breaker in the list below. To remove it, do this task: Circuit Breaker - Removal, AMM TASK 24-09-00-000-818-002.

NOTE: Remove and do a check of the wiring for the circuit breaker one at a time.
 - (c) Do a wiring check between pins A2, B2 and C2 of the ground handling relay receptacle and pins A1, B1 and C1 of the circuit breaker in the list that follows:
 - 1) L CARGO HDLG FWD COMPT, C25307
 - 2) R CARGO HDLG FWD COMPT, C25308
 - 3) L CARGO HDLG AFT COMPT, C25309
 - 4) R CARGO HDLG AFT COMPT, C25310
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the GHR, K24004. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.

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- 3) Re-install the circuit breaker that was removed. To install it, do this task: Circuit Breaker - Installation, AMM TASK 24-09-00-400-814-002.
 - 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 5) Make sure the primary and secondary external power is off.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- 1) Re-install the GHR, K24004. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - 2) Re-install the circuit breaker that was removed To install it, do this task: Circuit Breaker - Installation, AMM TASK 24-09-00-400-814-002.
- (9) Do this check of the ground service bus (WDM 24-51-41):
- (a) Remove the ground service select relay (GSSR), K24002. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - (b) Remove the circuit breaker in the list below. To remove it, do this task: Circuit Breaker - Removal, AMM TASK 24-09-00-000-818-002.
- NOTE: Remove and do a check of the wiring for the circuit breaker one at a time.
- (c) Do a wiring check between pins A2, B2 and C2 of the ground service select relay receptacle and pins A1, B1 and C1 of the circuit breaker in the list that follows:
 - 1) GND SVCE AC SECT 2 BUS, C24323
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the GSSR, K24002. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - 3) Re-install the circuit breaker that was removed. To install it, do this task: Circuit Breaker - Installation, AMM TASK 24-09-00-400-814-002.
 - 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 5) Make sure the primary and secondary external power is off.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

END OF TASK

811. IDG L Feeder Differential Protection Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31661.

B. Description

- (1) This maintenance message can be caused by an Integrated Drive Generator (IDG) internal hardware failure.

C. Initial Evaluation

- (1) If the flight crew observed an IDG DRIVE light and the IDG was disconnected, then replace the IDG, M24001. These are the tasks:
 - IDG Removal, AMM TASK 24-11-01-000-801-001,

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- IDG Installation, AMM TASK 24-11-01-400-801-001.

NOTE: The IDG can be disconnected automatically or manually. An automatic disconnect in a thermal exceedance event requires replacement of the IDG. A manual disconnect due to illumination of the IDG DRIVE light will also require replacement of the IDG. A manual disconnect to do maintenance work does not require replacement of the IDG if it is reconnected before flight.

- (2) Look for message 24-30031 in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, and FAULT HISTORY.
 - (a) If message 24-31661 is latched, and message 24-30031 is INACTIVE in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, or FAULT HISTORY, then do the Generator Control Unit Internal Fault - Fault Isolation, 24-22 TASK 811 for message 24-30031, and ignore this maintenance message.
- (3) If the Maintenance Access Terminal (MAT) shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the L GEN CTRL Switch on the P5 Overhead Panel two times.
 - (b) Start the Left Engine. This is the task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 1) If the MAT shows LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT does not show LATCHED for the maintenance message while the engine operates, then there was an intermittent problem.

D. Fault Isolation Procedure

- (1) Make sure that the engine is stopped. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (2) Do a visual inspection of the IDG Feeder Cables as follows:
 - (a) Examine the IDG Feeder Cables and Terminal Blocks and Disconnects for signs of damage, overheating, loose terminal nuts/studs etc. These are the tasks:
 - IDG Disconnect Function Check, AMM TASK 24-11-01-700-801
 - IDG Terminal Block Check, AMM TASK 24-11-01-200-803
 - 1) If you find problems, make the necessary repairs.
 - a) Do the Repair Confirmation at the end of this task.
 - 2) If you find no problems, continue.
- (3) Do this check of the IDG and Generator Control Unit (GCU):
 - (a) Remove the Left GCU, M24105. This is the task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove connector DM24001A from the Left IDG.
 - (c) On connector DM24105AB, do a continuity check between pin C6 and each of these pins: J6, G6, E6 (WDM 24-21-11).
 - (d) If you do not find continuity, then do these steps:
 - 1) Remove connector DM24001A from the Left IDG.
 - 2) On the Left IDG, do a continuity check between pin 3 and each of these pins: 14, 13, 12 (WDM 24-21-11).
 - a) If you do not find continuity, do these steps:

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- <1> Replace the Left IDG, M24001. These are the tasks:
 - IDG Removal, AMM TASK 24-11-01-000-801-001
 - IDG Installation, AMM TASK 24-11-01-400-801-001
- <2> Re-install the Left GCU, M24105. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- <3> Do the Repair Confirmation at the end of this task.
- b) If you find continuity at the IDG, then do these steps:
 - <1> Repair the wiring between IDG connector DM24001A and GCU connector DM24105AB.
 - <2> Reconnect IDG connector DM24001A.
 - <3> Re-install the Left GCU, M24105. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - <4> Do the Repair Confirmation at the end of this task.
- (e) If you find continuity, then continue.
- (4) Do this check of the IDG Feeder Cable (WDM 24-21-11):
 - (a) Remove this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

- 1) This is the task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
 - (b) Disconnect terminals T1, T2, and T3 from the Left IDG.
 - (c) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal T1 of the IDG, M24001 and terminal A1 of the Left GCB, C24331
 - 2) Terminal T2 of the IDG, M24001 and terminal B1 of the Left GCB, C24331
 - 3) Terminal T3 of the IDG, M24001 and terminal C1 of the Left GCB, C24331
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminals T1, T2, and T3 to the Left IDG.
 - 3) Re-install the Left GCU, M24105. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Re-install this circuit breaker:
- ### Left Power Panel, P100
<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB
- a) This is the task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
 - 5) Do the Repair Confirmation at the end of this task.
 - (e) If you do not find a problem with the wiring, then continue.
 - (5) Do this check of the wiring (WDM 24-21-11):

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- (a) Do a wiring check between these pairs of pins and terminals:
- 1) Terminal A7 of the GCU, M24105 and terminal A1 of the Left GCB, C24331
 - 2) Terminal A5 of the GCU, M24105 and terminal B1 of the Left GCB, C24331
 - 3) Terminal C6 of the GCU, M24105 and terminal C1 of the Left GCB, C24331

- (b) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reconnect terminals T1, T2, and T3 to the Left IDG.
 - 3) Re-install the Left GCU, M24105. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Re-install this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

- a) This is the task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 5) Do the Repair Confirmation at the end of this task.

- (c) If you do not find a problem with the wiring, reconnect terminals T1, T2, and T3 to the Left IDG, then continue.

- (6) On connector DM24105AB, do a wiring check between pin C8 and each of these pins: E8, G8, J8, E10, G10, J10 (WDM 24-21-11).

- (a) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the Left GCU, M24105. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-install this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

- a) To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) Do the Repair Confirmation at the end of this task.

- (b) If you do not find a problem with the wiring, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (7) Do this continuity check of the P100 Power Panel Current Transformers:
- (a) Disconnect the D10021 connector from the P100 Power Panel.
 - (b) Do a resistance check between the following pins of the D10021J connector (WDM 24-21-11):

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D10021J		D10021J	
Pin 37		Pin 38	35 - 41 Ohms
Pin 37		Pin 39	35 - 41 Ohms
Pin 37		Pin 40	35 - 41 Ohms
Pin 37	.....	Pin 41	35 - 41 Ohms
Pin 37	.....	Pin 42	35 - 41 Ohms
Pin 37	.....	Pin 43	35 - 41 Ohms

- 1) If the resistance is not in the specified range, then replace the applicable current transformer (WDM 24-21-11).
 - a) Re-connect the connector D10021 to the P100 Power Panel.
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the resistance is in the specified range.
 - a) Re-connect the connector D10021 to the P100 Power Panel then continue.
- (8) Replace the Left GCU, M24105. These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801
 - Generator Control Unit Installation, AMM TASK 24-22-02-400-801
- (a) Re-install this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

- 1) This is the task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- (b) Do the Repair Confirmation at the end of this task.
- (9) Replace the Left IDG, M24001. These are the tasks:
- IDG Removal, AMM TASK 24-11-01-000-801-001
 - IDG Installation, AMM TASK 24-11-01-400-801-001
- (a) Do the Repair Confirmation at the end of this task.

E. Repair Confirmation

- (1) Push the L GEN CTRL Switch on the P5 Overhead Panel two times.
- (2) Start the Left Engine. This is the task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (a) If the MAT does not show ACTIVE or LATCHED for the maintenance message while the engine operates (or if the message does not show), you corrected the problem.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, continue the Fault Isolation at the subsequent step.

————— END OF TASK —————

812. IDG R Feeder Differential Protection Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31662.

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B. Description

- (1) This maintenance message can be caused by an IDG internal hardware failure.

C. Initial Evaluation

- (1) If the flight crew observed an IDG DRIVE light and the IDG was disconnected, then replace the IDG, M24001. These are the tasks:
 - IDG Removal, AMM TASK 24-11-01-000-801-001,
 - IDG Installation, AMM TASK 24-11-01-400-801-001.

NOTE: The IDG can be disconnected automatically or manually. An automatic disconnect in a thermal exceedance event requires replacement of the IDG. A manual disconnect due to illumination of the IDG DRIVE light will also require replacement of the IDG. A manual disconnect to do maintenance work does not require replacement of the IDG if it is reconnected before flight.
- (2) Look for message 24-30032 in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, and FAULT HISTORY.
 - (a) If message 24-31662 is latched, and message 24-30032 is INACTIVE in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, or FAULT HISTORY, then do the Generator Control Unit Internal Fault - Fault Isolation, 24-22 TASK 811 for message 24-30032, and ignore this maintenance message.
- (3) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the R GEN CTRL switch on the P5 Overhead Panel two times.
 - (b) Start the Right Engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 1) If the MAT shows LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT does not show LATCHED for the maintenance message while the engine operates, then there was an intermittent fault.

D. Fault Isolation Procedure

- (1) Make sure the engine is stopped. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (2) Do a visual inspection of the IDG Feeder Cables as follows:
 - (a) Examine the IDG Feeder Cables and Terminal Blocks and Disconnects for signs of damage, overheating, loose terminal nuts/studs etc. These are the tasks:
 - IDG Disconnect Function Check, AMM TASK 24-11-01-700-801
 - IDG Terminal Block Check, AMM TASK 24-11-01-200-803
 - 1) If you find problems, make the necessary repairs.
 - a) Do the Repair Confirmation at the end of this task.
 - 2) If you find no problems, continue.
- (3) Do this check of the IDG and GCU:
 - (a) Remove the Right GCU, M24205. This is the task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove connector DM24205AB from the Right IDG.
 - (c) On connector DM24205AB, do a continuity check between pin C6 and each of these pins: J6, G6, E6 (WDM 24-21-21).

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- (d) If you do not have continuity, then do these steps:
- 1) Remove connector DM24001A from the Right IDG.
 - 2) On the Right IDG, do a continuity check between pin 3 and each of these pins: 14, 13, 12 (WDM 24-21-21).
 - a) If you do not have continuity, then do the following:
 - <1> Replace the Right IDG, M24001. These are the tasks:
 - IDG Removal, AMM TASK 24-11-01-000-801-001
 - IDG Installation, AMM TASK 24-11-01-400-801-001
 - <2> Re-install the Right GCU, M24205. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - <3> Do the Repair Confirmation at the end of this task.
 - b) If you find continuity at the IDG, then do the following:
 - <1> Repair the wiring between IDG connector DM24001A and GCU connector DM24205AB.
 - <2> Reconnect IDG connector DM24001A.
 - <3> Re-install the Right GCU, M24205. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - <4> Do the Repair Confirmation at the end of this task.
- (e) If you do have continuity, then continue.
- (4) Do this check of the IDG feeder (WDM 24-21-21):
- (a) Remove these circuit breaker:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- 1) This is the task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
- (b) Disconnect terminals T1, T2, and T3 from the Right IDG.
- (c) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal T1 of the IDG, M24001 and terminal A1 of the Right GCB, C24332
 - 2) Terminal T2 of the IDG, M24001 and terminal B1 of the Right GCB, C24332
 - 3) Terminal T3 of the IDG, M24001 and terminal C1 of the Right GCB, C24332
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminals T1, T2, and T3 to the Right IDG.
 - 3) Re-install the Right GCU, M24205. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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- 4) Re-install these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- a) This is the task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- 5) Do the Repair Confirmation at the end of this task.
- (e) If you do not find a problem with the wiring, then continue.
- (5) Do this check of the wiring (WDM 24-21-21):
- (a) Do a wiring check between these pairs of pins and terminals:
- 1) Terminal A7 of the GCU, M24205 and terminal A1 of the Right GCB, C24332
 - 2) Terminal A5 of the GCU, M24205 and terminal B1 of the Right GCB, C24332
 - 3) Terminal C6 of the GCU, M24205 and terminal C1 of the Right GCB, C24332
- (b) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reconnect terminals T1, T2, and T3 to the Right IDG.
 - 3) Re-install the Right GCU, M24205. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Re-install these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- a) This is the task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- 5) Do the Repair Confirmation at the end of this task.
- (c) If you do not find a problem with the wiring, reconnect terminals T1, T2, and T3 to the Right IDG, then continue.
- (6) On connector DM24205AB, do a wiring check between pin C8 and each of these pins: E8, G8, J8, E10, G10, J10 (WDM 24-21-21).
- (a) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the Right GCU, M24205. This is the task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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- 3) Re-install these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

- a) To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- 4) Do the Repair Confirmation at the end of this task.
- (b) If you do not find a problem with the wiring, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (7) Do this continuity check of the P200 Power Panel Current Transformers:
- (a) Disconnect the D20021 connector from the P200 Power Panel.
- (b) Do a resistance check between the following pins of the D20021J connector (WDM 24-21-21):

D20021J		D20021J	
Pin 37	.....	Pin 38	35 - 41 Ohms
Pin 37	.....	Pin 39	35 - 41 Ohms
Pin 37	.....	Pin 40	35 - 41 Ohms
Pin 37	.....	Pin 41	35 - 41 Ohms
Pin 37	.....	Pin 42	35 - 41 Ohms
Pin 37	.....	Pin 43	35 - 41 Ohms

- 1) If the resistance is not in the specified range, then replace the applicable current transformer (WDM 24-21-21).
- a) Re-connect the connector D20021 to the P200 Power Panel.
- b) Do the Repair Confirmation at the end of this task.
- 2) If the resistance is in the specified range.
- a) Re-connect the connector D20021 to the P200 Power Panel then continue.
- (8) Replace the Right GCU, M24205. These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801
 - Generator Control Unit Installation, AMM TASK 24-22-02-400-801
- (a) Re-install the right GCB circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

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ARO 011-999 (Continued)

(Continued)

Right Power Panel, P200

Row	Col	Number	Name
D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

- 1) This is the task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- 2) Do the Repair Confirmation at the end of this task.
- (9) Replace the Right IDG, M24001. These are the tasks:
 - IDG Removal, AMM TASK 24-11-01-000-801-001
 - IDG Installation, AMM TASK 24-11-01-400-801-001
- (10) Do the Repair Confirmation at the end of this task.

E. Repair Confirmation

- (1) Push the R GEN CTRL Switch on the P5 Overhead Panel two times.
- (2) Start Right Engine. This is the task: Start the Left Engine. This is the task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (a) If the MAT does not show ACTIVE or LATCHED for the maintenance message while the engine operates (or if the message does not show), you corrected the problem.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, continue the Fault Isolation at the subsequent step.

————— END OF TASK —————

813. APU Generator Differential Protection Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31663.

B. Initial Evaluation

NOTE: Look for message 24-30033 in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, and FAULT HISTORY. If message 24-31663 is latched, and message 24-30033 is INACTIVE in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, OR FAULT HISTORY, then do the FIM procedure for message 24-30033, and ignore this maintenance message.

- (1) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch on the P5 overhead panel two times.
 - (b) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT does not show LATCHED for the maintenance message while the APU operates, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Make sure the APU is stopped. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
- (2) Do this check of the APU Generator and GCU:
 - (a) Remove the APU GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) On connector DM24305AB, do a continuity check between pin C6 and each of these pins: J6, G6, E6 (WDM 24-21-31).
 - (c) If you do not have continuity, then do these steps:
 - 1) Remove connector DM24003B from the APU generator.
 - 2) On the APU generator, do a continuity check between pin 2 and each of these pins: 3, 4, 5 (WDM 24-21-31).
 - 3) If you do not have continuity at the APU generator, then do these steps:
 - a) Replace the APU generator, M24003.
These are the tasks:
APU Generator Removal, AMM TASK 24-21-01-000-801,
APU Generator Installation, AMM TASK 24-21-01-400-801.
 - b) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - c) Push the APU GEN switch on the P5 overhead panel two times.
 - d) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - e) If the MAT does not show LATCHED for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - 4) If you do have continuity at the APU generator, then do the following:
 - a) Repair the wiring between APU generator connector DM24003B and APU GCU connector DM24305AB.
 - b) Reconnect the APU generator connector DM24003B.
 - c) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - d) Push the APU GEN switch on the P5 overhead panel two times.
 - e) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - f) If the MAT does not show LATCHED for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If you do have continuity at connector DM24305AB, then continue.
- (3) Do this check of the APU feeder (WDM 24-21-31):
 - (a) Remove the Auxiliary Power Breaker (APB), C24335. To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
 - (b) Disconnect terminals T1, T2, and T3 from the APU Generator.
 - (c) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal T1 of the APU Generator, M24003 and terminal A1 of the APB, C24335
 - 2) Terminal T2 of the APU Generator, M24003 and terminal B1 of the APB, C24335

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- 3) Terminal T3 of the APU Generator, M24003 and terminal C1 of the APB, C24335
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminals T1, T2, and T3 to the APU Generator.
 - 3) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Re-install the APB, C24335. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
 - 5) Push the APU GEN switch on the P5 overhead panel two times.
 - 6) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 7) If the MAT does not show LATCHED for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring (WDM 24-21-31):
 - (a) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal A7 of the APU GCU, M24305 and terminal A1 of the APB, C24335
 - 2) Terminal A5 of the APU GCU, M24305 and terminal B1 of the APB, C24335
 - 3) Terminal C6 of the GCU, M24305 and terminal C1 of the APB, C24335.
 - (b) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect terminals T1, T2, and T3 to the APU generator.
 - 3) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Re-install the APB, C24335. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
 - 5) Push the APU GEN switch on the P5 overhead panel two times.
 - 6) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 7) If the MAT does not show LATCHED for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (c) If you do not find a problem with the wiring, reconnect terminals T1, T2, and T3 to the APU generator, then continue.
- (5) On connector DM24305AB, do a wiring check between pin C8 and each of these pins: E8, G8, J8, E10, G10, J10 (WDM 24-21-31).
 - (a) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-install the APB, C24335. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
 - 4) Push the APU GEN switch on the P5 overhead panel two times.
 - 5) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.

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- 6) If the MAT does not show LATCHED for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (b) If you do not find a problem with the wiring, then continue.
- (6) Replace the APU GCU, M24305.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) Push the APU GEN switch on the P5 overhead panel two times.
 - (b) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT does not show LATCHED for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (7) Replace the APU generator, M24003.

These are the tasks:

APU Generator Removal, AMM TASK 24-21-01-000-801,
APU Generator Installation, AMM TASK 24-21-01-400-801.

 - (a) Push the APU GEN switch on the P5 overhead panel two times.
 - (b) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT does not show LATCHED for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

— END OF TASK —

814. IDG R Feeder Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31732.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the R GEN CTRL switch on the P5 overhead panel two times.
 - (b) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Make sure the engine is stopped. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (2) Do this check of the IDG feeder (WDM 24-21-21):
 - (a) Disconnect terminal L1, L2, L3, L4, L5, and L6 from the right power panel P200.

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- (b) Disconnect terminal T1, T2, and T3 from the right IDG.
 - (c) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal T1 of the IDG, M24001 and terminal L1 of the P200 right power panel
 - 2) Terminal T1 of the IDG, M24001 and terminal L4 of the P200 right power panel
 - 3) Terminal T2 of the IDG, M24001 and terminal L2 of the P200 right power panel
 - 4) Terminal T2 of the IDG, M24001 and terminal L5 of the P200 right power panel
 - 5) Terminal T3 of the IDG, M24001 and terminal L3 of the P200 right power panel
 - 6) Terminal T3 of the IDG, M24001 and terminal L6 of the P200 right power panel
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P200 panel.
 - 3) Re-connect terminal T1, T2, and T3 to the right IDG.
 - 4) Push the R GEN CTRL switch on the P5 overhead panel two times.
 - 5) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the IDG feeder inside the P200 right power panel (WDM 24-21-21):
- (a) Remove the generator circuit breaker (GCB) circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal L1 of the P200 right power panel and terminal A1 of the right GCB, C24332
 - 2) Terminal L4 of the P200 right power panel and terminal A1 of the right GCB, C24332
 - 3) Terminal L2 of the P200 right power panel and terminal B1 of the right GCB, C24332
 - 4) Terminal L5 of the P200 right power panel and terminal B1 of the right GCB, C24332
 - 5) Terminal L3 of the P200 right power panel and terminal C1 of the right GCB, C24332
 - 6) Terminal L6 of the P200 right power panel and terminal C1 of the right GCB, C24332

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- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the generator circuit breaker (GCB) circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P200 panel.
 - 4) Re-connect terminal T1, T2, and T3 to the right IDG.
 - 5) Push the R GEN CTRL switch on the P5 overhead panel two times.
 - 6) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 7) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the generator circuit breaker (GCB) circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P200 panel.
- (4) Replace the integrated drive generator (IDG), M24001.

These are the tasks:

IDG Removal, AMM TASK 24-11-01-000-801-001,

IDG Installation, AMM TASK 24-11-01-400-801-001.

- (a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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815. IDG Low Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31541, 24-31542.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the applicable GEN CTRL switch on the P5 overhead panel two times.
 - (b) Start the applicable engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Find the applicable Integrated Drive Generator (IDG) and Generator Control Unit (GCU) in this table:

IDG	GCU	ENGINE
LEFT M24001	LEFT M24105	LEFT
RIGHT M24001	RIGHT M24205	RIGHT

- (2) Make sure the engine is stopped. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (3) Replace the applicable IDG.

These are the tasks:

IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.

 - (a) Push the L GEN CTRL switch on the P5 overhead panel two times.
 - (b) Start the applicable engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE for the maintenance message while the engine operates, then continue.
- (4) Replace the applicable GCU.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) Push the applicable GEN CTRL switch on the P5 overhead panel two times.
 - (b) Start the applicable engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

816. APU Feeder Circuit Open or Resistance Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31763.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Push the APU GEN switch on the P5 overhead panel two times.
 - (b) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the APU feeder (WDM 24-21-31):
- (a) Make sure the APU is stopped. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (b) Disconnect terminal L1, L2, L3, L4, L5, and L6 from the auxiliary power panel P300.
 - (c) Disconnect terminal T1, T2, T3 from the APU generator.
 - (d) Do a wiring check between these pairs of terminals:
 - 1) Terminal T1 of the APU generator, M24003 and terminal L1 of the P300 auxiliary power panel
 - 2) Terminal T1 of the APU generator, M24003 and terminal L4 of the P300 auxiliary power panel
 - 3) Terminal T2 of the APU generator, M24003 and terminal L2 of the P300 auxiliary power panel
 - 4) Terminal T2 of the APU generator, M24003 and terminal L5 of the P300 auxiliary power panel
 - 5) Terminal T3 of the APU generator, M24003 and terminal L3 of the P300 auxiliary power panel
 - 6) Terminal T3 of the APU generator, M24003 and terminal L6 of the P300 auxiliary power panel
 - (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P300 panel.
 - 3) Re-connect terminal T1, T2, and T3 to the APU generator.
 - 4) Push the APU GEN switch on the P5 overhead panel two times.

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- 5) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- 6) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
- (2) Do this check of the APU feeder inside the P300 auxiliary power panel (WDM 24-21-31):
 - (a) Remove the auxiliary power breaker (APB), C24335.
Remove the auxiliary power (APB) circuit breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between these pairs of terminals:
 - 1) Terminal L1 of the P300 auxiliary power panel and terminal A1 of the APB, C24335
 - 2) Terminal L4 of the P300 auxiliary power panel and terminal A1 of the APB, C24335
 - 3) Terminal L2 of the P300 auxiliary power panel and terminal B1 of the APB, C24335
 - 4) Terminal L5 of the P300 auxiliary power panel and terminal B1 of the APB, C24335
 - 5) Terminal L3 of the P300 auxiliary power panel and terminal C1 of the APB, C24335
 - 6) Terminal L6 of the P300 auxiliary power panel and terminal C1 of the APB, C24335
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the APB circuit breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P300 panel.
- 4) Re-connect terminal T1, T2, and T3 to the APU generator.
- 5) Push the APU GEN switch on the P5 overhead panel two times.
- 6) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- 7) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the APB circuit breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P300 panel.
- (3) Do this check of the APU current transformer wiring between the APU GCU and the P300 auxiliary power panel (WDM 24-21-31):
 - (a) Remove the APU GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Disconnect connector D30021 from the Auxiliary Power Panel, P300.
 - (c) Do a wiring check between these pins of connector DM24305AB at the E2-3 shelf and these pins of connector D30021 at the auxiliary power panel (P300) (WDM 24-21-31):

DM24305AB	D30021
pin J10	pin 22
pin G10	pin 23
pin E10	pin 24
pin C8	pin 21
pin J8	pin 25
pin G8	pin 26
pin E8	pin 27

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect connector D30021 to the Auxiliary Power Panel, P300.
 - 4) Push the APU GEN switch on the P5 overhead panel two times.
 - 5) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 2) Re-connect connector D30021 to the Auxiliary Power Panel, P300.
- (4) Replace the APU generator, M24003.

These are the tasks:

APU Generator Removal, AMM TASK 24-21-01-000-801,

APU Generator Installation, AMM TASK 24-21-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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817. IDG L Feeder Open Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31761.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the L GEN CTRL switch on the P5 overhead panel two times.
 - (b) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Make sure the engine is stopped. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (2) Do this check of the IDG feeder (WDM 24-21-11):
 - (a) Disconnect terminal L1, L2, L3, L4, L5, and L6 from the left power panel P100.
 - (b) Disconnect terminal T1, T2, and T3 from the left IDG.
 - (c) Do a wiring check between these pairs of pins and terminals:
 - 1) Terminal T1 of the IDG, M24001 and terminal L1 of the P100 left power panel
 - 2) Terminal T1 of the IDG, M24001 and terminal L4 of the P100 left power panel
 - 3) Terminal T2 of the IDG, M24001 and terminal L2 of the P100 left power panel
 - 4) Terminal T2 of the IDG, M24001 and terminal L5 of the P100 left power panel
 - 5) Terminal T3 of the IDG, M24001 and terminal L3 of the P100 left power panel
 - 6) Terminal T3 of the IDG, M24001 and terminal L6 of the P100 left power panel
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P100 panel.
 - 3) Re-connect terminal T1, T2, and T3 to the left IDG.
 - 4) Push the L GEN CTRL switch on the P5 overhead panel two times.
 - 5) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect terminal T1, T2, and T3 to the left IDG.
- (3) Do this check of the IDG feeder inside the P100 left power panel (WDM 24-21-11):

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- (a) Remove the generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between these pairs of pins and terminals:

- 1) Terminal L1 of the P100 left power panel and terminal A1 of the left GCB, C24331
- 2) Terminal L4 of the P100 left power panel and terminal A1 of the left GCB, C24331
- 3) Terminal L2 of the P100 left power panel and terminal B1 of the left GCB, C24331
- 4) Terminal L5 of the P100 left power panel and terminal B1 of the left GCB, C24331
- 5) Terminal L3 of the P100 left power panel and terminal C1 of the left GCB, C24331
- 6) Terminal L6 of the P100 left power panel and terminal C1 of the left GCB, C24331

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P100 panel.
- 4) Push the L GEN CTRL switch on the P5 overhead panel two times.
- 5) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

- (d) If you do not find a problem with the wiring, then continue.

- 1) Re-install the GCB, C24331. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P100 panel.

- (4) Do this check of the current transformer wiring between the left GCU and the P100 left power panel (WDM 24-21-11):

- (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (b) Disconnect connector D10021 from the left Power Panel, P100.
- (c) Do a wiring check between these pins of connector DM24105AB at the E1-1 shelf and these pins of connector D10021 at the left power panel (P100) (WDM 24-21-11):

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DM24105AB	D10021
pin J10	pin 38
pin G10	pin 39
pin E10	pin 40
pin C8	pin 37
pin J8	pin 41
pin G8	pin 42
pin E8	pin 43

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect connector D10021 to the left Power Panel, P100.
 - 4) Push the L GEN CTRL switch on the P5 overhead panel two times.
 - 5) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 7) Make sure the engine is stopped. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

————— END OF TASK —————

818. IDG R Feeder Open Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31762.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Push the R GEN CTRL switch on the P5 overhead panel two times.
 - (b) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Make sure the engine is stopped. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (2) Do this check of the IDG feeder (WDM 24-21-21):
- (a) Disconnect terminal L1, L2, L3, L4, L5, and L6 from the right power panel P200.
 - (b) Disconnect terminal T1, T2, and T3 from the right IDG.

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- (c) Do a wiring check between these pairs of pins and terminals:
- 1) Terminal T1 of the IDG, M24001 and terminal L1 of the P200 right power panel
 - 2) Terminal T1 of the IDG, M24001 and terminal L4 of the P200 right power panel
 - 3) Terminal T2 of the IDG, M24001 and terminal L2 of the P200 right power panel
 - 4) Terminal T2 of the IDG, M24001 and terminal L5 of the P200 right power panel
 - 5) Terminal T3 of the IDG, M24001 and terminal L3 of the P200 right power panel
 - 6) Terminal T3 of the IDG, M24001 and terminal L6 of the P200 right power panel
- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P200 panel.
 - 3) Re-connect terminal T1, T2, and T3 to the right IDG.
 - 4) Push the R GEN CTRL switch on the P5 overhead panel two times.
 - 5) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- 1) Re-connect terminal T1, T2, and T3 to the right IDG.
- (3) Do this check of the IDG feeder inside the P200 right power panel (WDM 24-21-21):
- (a) Remove the generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between these pairs of pins and terminals:
- 1) Terminal L1 of the P200 right power panel and terminal A1 of the right GCB, C24332
 - 2) Terminal L4 of the P200 right power panel and terminal A1 of the right GCB, C24332
 - 3) Terminal L2 of the P200 right power panel and terminal B1 of the right GCB, C24332
 - 4) Terminal L5 of the P200 right power panel and terminal B1 of the right GCB, C24332
 - 5) Terminal L3 of the P200 right power panel and terminal C1 of the right GCB, C24332
 - 6) Terminal L6 of the P200 right power panel and terminal C1 of the right GCB, C24332

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(c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P200 panel.
 - 4) Push the R GEN CTRL switch on the P5 overhead panel two times.
 - 5) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 2) Re-connect terminal L1, L2, L3, L4, L5, and L6 to the P200 panel.
- (4) Do this check of the current transformer wiring between the right GCU and the P200 right power panel (WDM 24-21-21):
- (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Disconnect connector D20021 from the right Power Panel, P200.
 - (c) Do a wiring check between these pins of connector DM24205AB at the E2-2 shelf and these pins of connector D20021 at the right power panel (P200) (WDM 24-21-21):

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DM24205AB	D20021
pin J10	pin 38
pin G10	pin 39
pin E10	pin 40
pin C8	pin 37
pin J8	pin 41
pin G8	pin 42
pin E8	pin 43

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect connector D20021 to the right Power Panel, P200.
 - 4) Push the R GEN CTRL switch on the P5 overhead panel two times.
 - 5) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 7) Make sure the engine is stopped. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

———— **END OF TASK** ————

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801. APU GEN Switch Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 23-43070.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the pins on connector DM24023C (WDM 24-22-31):
 - (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DM24023C from the electrical module, M24023.
 - (c) Examine the pins on connector DM24023C for damage or contamination.
 - (d) If there is damage or contamination, repair or clean the connector.
 - (e) Re-connect connector DM24023C to the electrical module, M24023.
 - (f) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (h) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the pins on connector DM23117G (WDM 24-22-31):
 - (a) Disconnect connector DM23117G from the left overhead cardfile, M23117.
 - (b) Examine the pins on connector DM23117G for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.
 - (d) Re-connect connector DM23117G to the left overhead cardfile, M23117.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the APU GEN switch, S2 (WDM 24-22-31).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the overhead panel cardfile, M23117.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802,
Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (5) Do this check of the wiring from the APU GEN switch, S2 to the cardfile, M23117 (WDM 24-22-31):
- (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DS2 from the APU GEN switch, S2.
 - (c) Disconnect connector DM23117G from the left overhead cardfile, M23117.
 - (d) Do a wiring check between these pins of connector DS2 and connector DM23117G.
- | M24023DS2 | DM23117G |
|------------------|-----------------|
| pin 4 | pin A4 |
| pin 5 | pin A5 |
| pin 6 | pin A6 |
- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DS2 to the APU GEN switch, S2.
 - 3) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 4) Re-connect connector DM23117G to the left overhead cardfile, M23117.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.

————— **END OF TASK** —————

802. L BUS TIE Switch Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 23-43400.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the pins on connector DM24023C (WDM 24-22-11):
 - (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DM24023C from the electrical module, M24023.
 - (c) Examine the pins on connector DM24023C for damage or contamination.
 - (d) If there is damage or contamination, repair or clean the connector.
 - (e) Re-connect connector DM24023C to the electrical module, M24023.
 - (f) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (h) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (2) Do this check of the pins on connector DM23117G (WDM 24-22-11):
 - (a) Disconnect connector DM23117G from the left overhead cardfile, M23117.
 - (b) Examine the pins on connector DM23117G for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.
 - (d) Re-connect connector DM23117G to the left overhead cardfile, M23117.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the L BUS TIE switch, S4 (WDM 24-22-11).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the overhead panel card file, M23117.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802,

Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the L BUS TIE switch, S4 to the cardfile, M23117 (WDM 24-22-11):
 - (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DS4 from the L BUS TIE switch, S4.
 - (c) Disconnect connector DM23117G from the left overhead cardfile, M23117.
 - (d) Do a wiring check between these pins of connector DS4 and connector DM23117G.

M24023DS4	DM23117G
pin 4	pin A7
pin 5	pin A8
pin 6	pin A9

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DS4 to the L BUS TIE switch, S4.
 - 3) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 4) Re-connect connector DM23117G to the left overhead cardfile, M23117.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.

————— **END OF TASK** —————

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803. L GEN CTRL Switch Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 23-43450.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the pins on connector DM24023C (WDM 24-22-11):
 - (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DM24023C from the electrical module, M24023.
 - (c) Examine the pins on connector DM24023C for damage or contamination.
 - (d) If there is damage or contamination, repair or clean the connector.
 - (e) Re-connect connector DM24023C to the electrical module, M24023.
 - (f) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (h) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the pins on connector DM23117G (WDM 24-22-11):
 - (a) Disconnect connector DM23117G from the left overhead cardfile, M23117.
 - (b) Examine the pins on connector DM23117G for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.
 - (d) Re-connect connector DM23117G to the left overhead cardfile, M23117.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the L GEN CTRL switch, S5 (WDM 24-22-11).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the overhead panel card file, M23117.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802,
Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (5) Do this check of the wiring from the L GEN CTRL switch, S5 to the cardfile, M23117 (WDM 24-22-11):
- (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DS5 from the L GEN CTRL switch, S5.
 - (c) Disconnect connector DM23117G from the left overhead cardfile, M23117.
 - (d) Do a wiring check between these pins of connector DS5 and connector DM23117G.
- | M24023DS5 | DM23117G |
|------------------|-----------------|
| pin 4 | pin A10 |
| pin 5 | pin A11 |
| pin 6 | pin A12 |
- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DS5 to the L GEN CTRL switch, S5.
 - 3) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 4) Re-connect connector DM23117G to the left overhead cardfile, M23117.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.

END OF TASK

804. Auxiliary Power Breaker (APB) Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22210.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Supply APU power to the airplane. To supply it, do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the APB circuit breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,

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Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Supply APU power to the airplane. To supply it, do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (2) Replace the BPCU, M24002.
- These are the tasks:
- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) Supply APU power to the airplane . To supply it, do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (3) Do this check of the APB status wiring (WDM 24-28-41):
- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Disconnect connector D30021P from the left power panel (P300).
 - (c) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector D30021P at the auxiliary power panel (P300):
- | | |
|------------------|----------------|
| DM24002AA | D30021P |
| pin A4 | pin 11 |
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector D30021P to the auxiliary power panel (P300).
 - 4) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

805. APU-Source Ground Handling Relay (GHR) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22460, 24-22470.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:

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- (a) Remove external power from the airplane (AMM TASK 24-22-00-860-807) (AMM TASK 24-22-00-860-808).
- (b) Supply APU power to the airplane (AMM TASK 24-22-00-860-803).
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

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- (1) Do this check of the GHR coil wiring (WDM 24-22-41):

- (a) Disconnect connector D30021 from the P300 panel.
- (b) Do a wiring check between these pins of connector D30021 at the P300 panel.

D30021	D30021
pin 33	pin 34

- (c) If you find a problem with the wiring, then do these steps:

- 1) Replace the GHR, K24004.

These are the tasks:

Ground Handling and Ground Service Relay Removal, AMM
TASK 24-22-05-000-801,

Ground Handling and Ground Service Relay Installation, AMM
TASK 24-22-05-400-801.

- 2) Re-connect connector D30021 to the P300 panel.
- 3) Remove external electrical power from the airplane (AMM TASK 24-22-00-860-807) (AMM TASK 24-22-00-860-808).
- 4) Supply APU power to the airplane (AMM TASK 24-22-00-860-803).
- 5) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- 6) If the MAT shows ACTIVE for the maintenance message, then do these steps:
 - a) Repair the wiring inside the P300 panel.
 - b) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

- (d) If you do not find a problem with the wiring, then continue.

- (2) Do this check of the wiring between the P300 panel and the bus power control unit (BPCU), M24002 (WDM 24-22-41):

- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
- (b) Do a wiring check between these pins of connector D30021 at the P300 panel and connector DM24002AA at the E1-1 shelf.

DM24002AA	D30021
pin J1	pin 33
pin K1	pin 34

- (c) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector D30021 to the P300 panel.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the wiring between the P300 and the P310 panel (WDM 24-09-33):
- (a) Disconnect connector D30023P from the P300 panel.
 - (b) Disconnect connector D31010P from the P310 panel.
 - (c) Do a wiring check between these pins of connector D30023P at the P300 panel and connector D31010P at the P310 panel.

D31010P	D30023P
pin 11	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector D31010P to the P310 panel.
 - 3) Re-connect connector D30023P to the P300 panel.
 - 4) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 5) Re-connect connector D30021 to the P300 panel.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring between the P310 ELMS 2 SIU 2, M24513 and the pins on the P310 panel (WDM 24-09-33):
- (a) Disconnect connector DM24513C from the P310 ELMS 2 SIU 2, M24513.
 - (b) Do a wiring check between the pin of connector DM24513C at the SIU 2, M24513 and the pin on the P310 panel.

D31010P	DM24513C
pin 11	pin 10

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24513C to the P310 SIU 2, M24513.
 - 3) Re-connect connector D31010P to the P310 panel.
 - 4) Supply APU power to the airplane (AMM TASK 24-22-00-860-803).
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.

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- (5) Do this check of the wiring between the GHR, K24004 and the pins on the P300 panel (WDM 24-09-33):

- (a) Disconnect connector D30023P from the P300 panel.
- (b) Do a wiring check between pin 9 on relay K24004 and pin 4 on panel P300.

K24004	D30023P
pin 9	pin 4

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D30023P to the P300 panel.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
- (6) Replace the GHR, K24004.
- These are the tasks:
- Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
- (a) Re-connect connector D30023P to the P300 panel.
 - (b) Supply APU power to the airplane, do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

806. Ground Handling Relay (GHR) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22480, 24-22490.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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- (1) Do this check of the GHR coil wiring (WDM 24-22-41):
 - (a) Disconnect connector DM30022 from the P300 panel.
 - (b) Do a wiring check between these pins of connector DM30022 at the P300 panel.

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DM30022

pin 17 pin 18

DM30022

- (c) If you find a problem with the wiring, then do these steps:
- 1) Replace the GHR, K24004.
These are the tasks:
Ground Handling and Ground Service Relay Removal, AMM
TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM
TASK 24-22-05-400-801.
 - 2) Re-connect connector DM30022 to the P300 panel.
 - 3) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE for the maintenance message, then do these steps:
 - a) Repair the wiring inside the P300 panel.
 - b) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (2) Do this check of the wiring between the P300 panel and the bus power control unit (BPCU), M24002 (WDM 24-22-41):
- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Do a wiring check between these pins of connector DM30022 at the P300 panel and connector DM24002AA at the E1-1 shelf.

DM24002AA

pin J3 pin 17
pin K3 pin 18

DM30022

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector DM30022 to the P300 panel.
 - 4) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the wiring between the P300 and the P310 panel (WDM 24-09-33):
- (a) Disconnect connector D30023P from the P300 panel.
 - (b) Disconnect connector D31010P from the P310 panel.

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- (c) Do a wiring check between these pins of connector D30023P at the P300 panel and connector D31010P at the P310 panel.

D31010P	D30023P
pin 12	pin 3

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector D31010P to the P310 panel.
 - 3) Re-connect connector D30023P to the P300 panel.
 - 4) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 5) Re-connect connector DM30022 to the P300 panel.
 - 6) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - 7) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring between the SIU 2, M24513 and the pins on the P310 panel (WDM 24-09-33):
- (a) Disconnect connector DM24513C from the SIU 2, M24513.
- (b) Do a wiring check between the pin of connector DM24513C and the pin on the P310 panel.

D31010P	DM24513C
pin 12	pin 9

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24513C to the SIU 2, M24513.
 - 3) Re-connect connector D31010P to the P310 panel.
 - 4) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (5) Do a check of the signal interface unit, SIU 2, M24513.

This is the tasks:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) Re-connect connector DM24513C to the SIU 2, M24513.
- (b) Re-connect connector D31010P to the P310 panel.
- (c) Push the PRIMARY EXT PWR switch on the P5 panel two times.
- (d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

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- (6) Do this check of the wiring between the GHR, K24004 and the pins on the P300 panel (WDM 24-09-33):
- (a) Disconnect connector D30023P from the P300 panel.
 - (b) Do a wiring check between pin 10 on relay K24004 and pin 3 on panel P300.

K24004	D30023P
pin 10	pin 3

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D30023P to the P300 panel.
 - 3) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (7) Replace the GHR, K24004.

These are the tasks:

Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.

- (a) Re-connect connector D30023P to the P300 panel.
- (b) Push the PRIMARY EXT PWR switch on the P5 panel two times.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

807. Ground Service Select Relay (GSSR) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22500, 24-22510.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - (b) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.

NOTE: To unlatch this maintenance message, the source of power to the ground service bus must be transferred from primary external power to APU power. To transfer the ground service bus from primary external power to APU power, the APU must be started, and the primary external power source must be turned off.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Manual

- (1) Do this check of the GSSR coil wiring (SSM 24-22-41):
 - (a) Disconnect connector D30021 from the P300 panel.
 - (b) Do a wiring check between these pins, 37 and 38 of connector D30021 at the P300 panel.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Replace the GSSR, K24002.
These are the tasks:
Ground Handling and Ground Service Relay Removal, AMM
TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM
TASK 24-22-05-400-801.
 - 2) Re-connect connector D30021 to the P300 panel.
 - 3) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 4) Do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - 5) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 7) If the MAT shows ACTIVE for the maintenance message, then do these steps:
 - a) Repair the wiring inside the P300 panel.
 - b) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - c) Do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - d) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
- (2) Do this check of the wiring between the P300 panel and the bus power control unit (BPCU), M24002 (SSM 24-22-41):
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Do a wiring check between these pins of connector D30021 at the P300 panel and connector DM24002AA at the E1-1 shelf.

DM24002AA	D30021
pin J5	pin 37
pin K5	pin 38
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector D30021 to the P300 panel.
 - 4) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

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- 5) Do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
- 6) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
- 7) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the wiring between the P300 and the P310 panel (WDM 24-09-33):
 - (a) Disconnect connector D30023P from the P300 panel.
 - (b) Disconnect connector D31010P from the P310 panel.
 - (c) Do a wiring check between these pins of connector D30023P at the P300 panel and connector D31010P at the P310 panel.

D31010P	D30023P
pin 13	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D31010P to the P310 panel.
 - 3) Re-connect connector D30023P to the P300 panel.
 - 4) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 5) Re-connect connector D30021 to the P300 panel.
 - 6) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 7) Do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - 8) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - 9) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring between the SIU 2, M24513 and the pins on the P310 panel (WDM 24-09-33):
 - (a) Disconnect connector DM24513C from the SIU 2, M24513.
 - (b) Do a wiring check between the pin of connector DM24513C and the pin on the P310 panel.

D31010P	DM24513C
pin 13	pin 8

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24513C to SIU 2, M24513.
 - 3) Re-connect connector D31010P to the P310 panel.
 - 4) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 5) Do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - 6) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.

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- 7) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (5) Do a check of the signal interface unit, SIU 2, M24513.
- This is the tasks:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) Re-connect connector DM24513C to the SIU 2, M24513.
 - (b) Re-connect connector D31010P to the P310 panel.
 - (c) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (d) Do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - (e) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (g) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (6) Do this check of the wiring between the GSSR, K24002 and the pins on the P300 panel (WDM 24-09-33):
- (a) Disconnect connector D30023P from the P300 panel.
 - (b) Do a wiring check between pin 7 on relay K24002 and pin 2 on panel P300.

K24002	D30023P
pin 7	pin 2

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D30023P to the P300 panel.
 - 3) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 4) Do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - 5) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
- (7) Replace the GSSR, K24002.

These are the tasks:

Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.

- (a) Re-connect connector D30023P to the P300 panel.
- (b) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
- (c) Do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
- (d) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
- (e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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808. Ground Service Transfer Relay (GSTR) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22520, 24-22530.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:

NOTE: To unlatch this maintenance message, you must isolate the right tie bus, supply primary external power, then cycle the ground service switch to ON, then OFF.

- (a) Put the R BUS TIE switch in the ISLN position.
- (b) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
- (c) At the attendant's switch panel, cycle the GND SVC switch from OFF to ON, then back to OFF.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- (e) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation

- (1) Replace the GSTR, K24003.

These are the tasks:

Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.

- (a) Put the R BUS TIE switch in the ISLN position.
 - (b) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (c) At the attendant's switch panel, cycle the GND SVC switch from OFF to ON, then back to OFF.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the GSTR coil wiring (SSM 24-22-41):
 - (a) Disconnect connector D20020 from the P200 panel.
 - (b) Do a wiring check between these pins of connector D20020 at the P200 panel.

D20020	D20020
pin 11	pin 12

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring inside the P200 panel.
 - 2) Re-connect connector D20020 to the P200 panel.
 - 3) Put the R BUS TIE switch in the ISLN position.
 - 4) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

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- 5) At the attendant's switch panel, cycle the GND SVC switch from OFF to ON, then back to OFF.
- 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the wiring between the P200 panel and the bus power control unit (BPCU), M24002 (SSM 24-22-41):
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Do a wiring check between these pins of connector D20020 at the P200 panel and connector DM24002AA at the E1-1 shelf.

DM24002AA	D20020
pin J7	pin 12
pin K7	pin 11

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector D20020 to the P200 panel.
 - 4) Put the R BUS TIE switch in the ISLN position.
 - 5) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 6) At the attendant's switch panel, cycle the GND SVC switch from OFF to ON, then back to OFF.
 - 7) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring between the P200 and the P210 panel (WDM 24-09-32):
 - (a) Disconnect connector D20024P from the P200 panel.
 - (b) Disconnect connector D21004P from the P210 panel.
 - (c) Do a wiring check between these pins of connector D20024P at the P200 panel and connector D21004P at the P210 panel.

D20024P	D21004P
pin 43	pin 23

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D21004P to the P210 panel.
 - 3) Re-connect connector D20024P to the P200 panel.
 - 4) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 5) Re-connect connector D20020 to the P200 panel.
 - 6) Put the R BUS TIE switch in the ISLN position.

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- 7) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
- 8) At the attendant's switch panel, cycle the GND SVC switch from OFF to ON, then back to OFF.
- 9) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (5) Do this check of the wiring between the signal interface unit, M24508 and the pins on the P210 panel (WDM 24-09-32):
 - (a) Disconnect connector DM24508C from the signal interface unit, M24508.
 - (b) Do a wiring check between the pin of connector DM24508C and the pin on the P210 panel.

D21004P	DM24508C
pin 23	pin 15
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24508C to the signal interface unit, M24508.
 - 3) Re-connect connector D21004P to the P210 panel.
 - 4) Put the R BUS TIE switch in the ISLN position.
 - 5) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 6) At the attendant's switch panel, cycle the GND SVC switch from OFF to ON, then back to OFF.
 - 7) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
- (6) Do a check of the signal interface unit SIU 1, M24508.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) Re-connect connector DM24508 to the signal interface unit, M24508.
 - (b) Re-connect connector D21004P to the P210 panel.
 - (c) Put the R BUS TIE switch in the ISLN position.
 - (d) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (e) At the attendant's switch panel, cycle the GND SVC switch from OFF to ON, then back to OFF.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (g) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (7) Do this check of the wiring between the GSTR, K24003 and the pins on the P200 panel (WDM 24-09-32):
 - (a) Disconnect connector D20024P from the P200 panel.
 - (b) Do a wiring check between pin 9 on relay K24003 and pin 43 on panel P200.

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K24003

pin 9

D21004P

pin 43

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector D20024P to the P200 panel.
 - 3) Put the R BUS TIE switch in the ISLN position.
 - 4) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 5) At the attendant's switch panel, cycle the GND SVC switch from OFF to ON, then back to OFF.
 - 6) Push the PRIMARY EXT PWR switch to the AVAIL position.
 - 7) Push the PRIMARY EXT PWR switch to the ON position.
 - 8) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

809. **Bus Tie Breaker (BTB) Position Problems - Fault Isolation**

A. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Supply left IDG power to the airplane. To supply it, do this task: Supply IDG Power, AMM TASK 24-22-00-860-804.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

B. Fault Isolation Procedure

- (1) Replace the BTB, C24333.
These are the tasks:
Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
 - (a) Supply left IDG power to the airplane. To supply it, do this task: Supply IDG Power, AMM TASK 24-22-00-860-804.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the BTB status wiring (WDM 24-28-41):
 - (a) Push the L GEN CTRL switch on the P5 panel.
 - 1) Make sure the ON light in the switch goes off.

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- (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
- (c) Disconnect connector D10021P from the left power panel (P100).
- (d) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector D10021P at the left power panel (P100):

DM24002AA	D10021P
pin C4	pin 27

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector D10021P to the left power panel (P100).
 - 4) Push the L GEN CTRL switch on the P5 panel.
 - a) Make sure the OFF light in the switch goes off and the ON light comes on.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
- (3) Replace the BPCU, M24002.

These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

 - (a) Re-connect connector D10021P to the left power panel (P100).
 - (b) Push the L GEN CTRL switch on the P5 panel.
 - 1) Make sure the OFF light in the switch goes off and the ON light comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

810. GCB Position Problems - Fault Isolation

A. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Supply left IDG power to the airplane. To supply it, do this task: Supply IDG Power, AMM TASK 24-22-00-860-804.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

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B. Fault Isolation Procedure

- (1) Replace the left GCB circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Supply left IDG power to the airplane. To supply it, do this task: Supply IDG Power, AMM TASK 24-22-00-860-804.
- (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the GCB status wiring (WDM 24-28-41):
- (a) Push the L GEN CTRL switch on the P5 panel.
- 1) Make sure the ON light in the switch goes off.
- (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
- (c) Disconnect connector D10021P from the left power panel (P100).
- (d) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector D10021P at the left power panel (P100):

DM24002AA	D10021P
pin E1	pin 11

- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 3) Re-connect connector D10021P to the left power panel (P100).
- 4) Push the L GEN CTRL switch on the P5 panel.
- a) Make sure the OFF light in the switch goes off and the ON light comes on.
- 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
- (3) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) Re-connect connector D10021P to the left power panel (P100).
- (b) Push the L GEN CTRL switch on the P5 panel.

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- 1) Make sure the OFF light in the switch goes off and the ON light comes on.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

811. Generator Control Unit Internal Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-30001, 24-30002, 24-30011, 24-30012, 24-30021, 24-30022, 24-30031, 24-30032, 24-30041, 24-30042, 24-30051, 24-30052.

B. Initial Evaluation

- (1) Do this task: Generator Control Unit Installation Test, AMM TASK 24-22-02-710-802.
 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

NOTE: If message 24-30031 occurs, look for message 24-31511 in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, and FAULT HISTORY. If message 24-30031 is latched, and message 24-31511 is INACTIVE in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, OR FAULT HISTORY, then do the FIM procedure for message 24-31511, and ignore maintenance message 24-30031.

NOTE: If message 24-30031 is INACTIVE in FAULT HISTORY and message 24-31561 is also present (there was a manual IDG disconnect), ignore message 24-30031.

NOTE: If message 24-30032 occurs, look for message 24-31512 in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, and FAULT HISTORY. If message 24-30032 is latched, and message 24-31512 is INACTIVE in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, OR FAULT HISTORY, then do the FIM procedure for message 24-31512, and ignore maintenance message 24-30032.

NOTE: If message 24-30032 is INACTIVE in FAULT HISTORY and message 24-31562 is also present (there was a manual IDG disconnect), ignore message 24-30032.

- (1) Replace the applicable generator control unit.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable integrated drive generator (IDG) if the fault continues.

These are the tasks:

IDG Removal, AMM TASK 24-11-01-000-801-001,

IDG Installation, AMM TASK 24-11-01-400-801-001.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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812. APU Generator Control Unit Internal Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-30003, 24-30023, 24-30033, 24-30043, 24-30053.

B. Initial Evaluation

- (1) Do this task: Generator Control Unit Installation Test, AMM TASK 24-22-02-710-802.
 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

NOTE: If message 24-30033 occurs, look for message 24-31513 in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, and FAULT HISTORY. If message 24-30033 is latched, and message 24-31513 is INACTIVE in INBOUND FLIGHT DECK EFFECTS, EXISTING FLIGHT DECK EFFECTS, OR FAULT HISTORY, then do the FIM procedure for message 24-31513, and ignore maintenance message 24-30033.

- (1) Replace the APU generator control unit, M24305.

These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

813. Generator Circuit Breaker (GCB) (L) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31231.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, or the message does not show, then do these steps:
 - (a) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) Push the L GEN CTRL switch two times.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Replace the left GCB circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the L GEN CTRL switch two times.
- 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the wiring (WDM 24-22-11):
- (a) Stop the engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (b) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (c) Disconnect connector D10021 from the left power panel, P100.
- (d) Do a wiring check between these pins of connector DM24105AA at the E1-1 shelf and connector D10021P at the left power panel, P100:

DM24105AA	D10021P
pin J1	pin 2

- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect connector D10021 to the left power panel, P100.
- (f) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (g) Push the L GEN CTRL switch two times.
- 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

814. R BUS TIE Switch Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 23-43760.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the pins on connector DM24023B (WDM 24-22-21):
 - (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DM24023B from the electrical module, M24023.
 - (c) Examine the pins on connector DM24023B for damage or contamination.
 - (d) If there is damage or contamination, repair or clean the connector.
 - (e) Re-connect connector DM24023B to the electrical module, M24023.
 - (f) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (h) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the pins on connector DM23217G (WDM 24-22-21):
 - (a) Disconnect connector DM23217G from the right overhead cardfile, M23117.
 - (b) Examine the pins on connector DM23217G for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.
 - (d) Re-connect connector DM23217G to the right overhead cardfile, M23217.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the R BUS TIE switch, S8 (WDM 24-22-21).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the overhead panel card file, M23217.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802,
Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the R BUS TIE switch, S8 to the overhead panel card file, M23217 (WDM 24-22-21):
 - (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DS8 from the R BUS TIE switch, S8.

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- (c) Disconnect connector DM23217G from the right overhead card file, M23217.
- (d) Do a wiring check between these pins of connector DS8 and connector DM23217G.

M24023DS8	DM23217G
pin 4	pin A4
pin 5	pin A6
pin 6	pin A5

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DS8 to the R GEN CTRL switch, S8.
 - 3) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 4) Re-connect connector DM23217G to the right overhead cardfile, M23217.
- (f) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.

————— **END OF TASK** —————

815. R GEN CTRL Switch Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 23-43810.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the pins on connector DM24023B (WDM 24-22-21):
 - (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DM24023B from the electrical module, M24023.
 - (c) Examine the pins on connector DM24023B for damage or contamination.
 - (d) If there is damage or contamination, repair or clean the connector.
 - (e) Re-connect connector DM24023B to the electrical module, M24023.
 - (f) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (h) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the pins on connector DM23217G (WDM 24-22-21):
 - (a) Disconnect connector DM23217G from the right overhead cardfile, M23217.
 - (b) Examine the pins on connector DM23217G for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.

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- (d) Re-connect connector DM23217G to the right overhead cardfile, M23217.
- (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
- (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the R GEN CTRL switch, S9 (WDM 24-22-21).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the overhead panel card file, M23217.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802,

Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the R GEN CTRL switch, S9 to the cardfile, M23217 (WDM 24-22-21):
 - (a) Remove the electrical system control module, M24023. To remove it, do this task:
Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DS9 from the R GEN CTRL switch, S9.
 - (c) Disconnect connector DM23217G from the right overhead cardfile, M23217.
 - (d) Do a wiring check between these pins of connector DS9 and connector DM23217G.

M24023DS9

pin 4	.....	pin A7
pin 5	.....	pin A8
pin 6	.....	pin A9

DM23217G

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DS9 to the R GEN CTRL switch, S9.
 - 3) Re-install the electrical system control module, M24023. To install it, do this task:
Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 4) Re-connect connector DM23217G to the right overhead cardfile, M23217.
- (f) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.

————— **END OF TASK** —————

817. Left Bus Tie Breaker Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31121, 24-31131.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the L BUS TIE switch is in the AUTO (latched) position, then push the L BUS TIE switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below:
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the left BTB, C24333.

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Push the L BUS TIE switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the left GCU, M24105.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Push the L BUS TIE switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-22-11):
 - (a) Remove the left GCU, M24105. To remove the left GCU, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Disconnect connector D10021 from the left power panel, P100.
 - (c) Do a wiring check between these pins of connector DM24105AA at the E1-1 shelf and connector D10021 at the left power panel, P100:

DM24105AA	D10021
pin J5	pin 19
pin K5	pin 17
pin J7	pin 18

- (d) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
- (e) Disconnect connector DM24023C from the electrical system control panel, M24023.

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- (f) Do a wiring check between these pins of connector DM24023C at the electrical system control panel, M24023, and connector D10021 at the left power panel, P100:

DM24023C	D10021
pin 7	pin 20

- (g) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (h) Re-install the left generator control unit, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (i) Re-connect connector D10021 to the left power panel, P100.
- (j) Re-connect connector DM24023C to the electrical system control panel, M24023.
- (k) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
- 1) Push the L BUS TIE switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

818. Bus Tie Breaker (BTB) Trip Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31201, 24-31202.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Make sure the applicable BUS TIE switch (L or R) is in the ISOL (unlatched) position, then push the applicable BUS TIE switch twice.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below:
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable BTB.

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

BTB	EQUIP NO.
LEFT	C24333
RIGHT	C24334

- (a) Push the applicable BUS TIE switch twice.
- 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring (WDM 24-22-11), (WDM 24-22-21):
- (a) Remove the applicable GCU. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.

GCU	EQUIP NO.
LEFT	M24105
RIGHT	M24205

- (b) Disconnect connector D10021 from the left power panel, P100.
- (c) Do a wiring check between these pins of connector at the GCU and connector at the power pane (WDM 24-22-11):

LEFT GCU AT E1-1 SHELF

GCU	LEFT POWER PANEL, P100
DM24105AA	D10021
pin J5	pin 19
pin K5	pin 17
pin J7	pin 18

RIGHT GCU AT E2-2 SHELF

GCU	RIGHT POWER PANEL, P200
DM24205AA	D20021
pin J5	pin 19
pin K5	pin 17
pin J7	pin 18

- (d) Remove the electrical system control panel (ESCP), M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
- (e) Disconnect the connector from the electrical system control panel.
- (f) Do a wiring check between these pins of the connector at the electrical system control panel, M24023 and the applicable connector at the power panel (WDM 24-22-11):

LEFT POWER PANEL, P100

ECSP	LEFT POWER PANEL, P100
DM24023C	D10021
pin 7	pin 20

RIGHT POWER PANEL, P200

ECSP	RIGHT POWER PANEL, P200
DM24023B	D20021
pin 7	pin 20

- (g) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- (h) Re-install the applicable GCU. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (i) Re-connect the applicable connector to the power panel (WDM 24-22-11).
- (j) Re-connect connector DM24023C to the electrical system control panel, M24023 (WDM 24-22-11).
- (k) Re-install the electrical system control panel, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 1) Push the applicable BUS TIE switch twice.
 - a) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

819. Left Bus Tie Switch (BTS) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31211.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the L BUS TIE switch twice.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below:
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the L BUS TIE switch, S4 (WDM 24-22-11).
 - (a) Push the L BUS TIE switch twice.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (2) Replace the left bus tie breaker, C24333.

Replace the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Push the L BUS TIE switch twice.

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- 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-22-11):

- (a) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
- (b) Disconnect connector DM24023C from the electrical system control panel, M24023.
- (c) Remove the left generator control unit, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (d) Do a wiring check between these pins of connector DM24023C at the electrical power control panel, M24023 and connector DM24105AA at the E1-1 rack.

DM24023C

pin 9

DM24105AA

pin G3

- (e) Disconnect connector D10021 from the left power panel, P100.
- (f) Do a wiring check between these pins of connector DM24023C at the electrical power control panel, M24023 and connector D10021 at the left power panel, P100:

DM24023C

pin 7

D10021

pin 20

- (g) Do a wiring check between these pins of connector D10021 at the left power panel, P100 and connector DM24105AA at the E1-1 shelf:

D10021

pin 19

DM24105AA

pin J5

- (h) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (i) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (j) Reconnect connector DM24023C to the electrical power control panel, M24023.
- (k) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
- (l) Reconnect connector D10021 to the left power panel, P100.
- (m) Push the L BUS TIE switch twice.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (4) Replace the left GCU, M24105.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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- (a) Push the L BUS TIE switch twice.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

820. Generator Circuit Breaker (GCB) Close Circuit Shorted - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31241, 24-31242.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Operate the applicable engine. To operate the applicable engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) Push the applicable GEN CTRL switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) In the list below, find the applicable GCB, GCU, connectors and pin numbers for the maintenance message:

GCB C24331

GCU M24105	P100 Left, E1-1
DM24105AA	Shelf
pin J1	D10021P
	pin 2

GCB 24332

GCU M24205	P100 Right,
DM24205AA	E2-2 Shelf
pin J1	D10021P
	pin 2

- (2) Replace the applicable GCB.

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- (a) Operate the applicable engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the applicable GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

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- 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Do this check of the wiring (WDM 24-22-11), (WDM 24-22-21):
 - (a) Stop the engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (b) Remove the applicable GCU. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Disconnect the applicable connector from the power panel.
 - (d) Do a wiring check between the applicable pin of the GCU connector and the applicable pin of the power panel connector.
 - (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the applicable GCU. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect the applicable connector to the power panel.
 - 4) Operate the applicable engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) Push the applicable GEN CTRL switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

821. Auxiliary Power Breaker (APB) Close Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31243.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the APU GEN switch is in the unlatched (out) position.
 - (b) Operate the APU. To operate it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) Push the APU GEN switch twice.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the auxiliary power breaker (APB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

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These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Operate the APU. To operate it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (b) Push the APU GEN switch twice.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Replace the AGCU, M24305.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Operate the APU. To operate it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (b) Push the APU GEN switch twice.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (3) Do this check of the wiring (WDM 24-22-31):
 - (a) Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (b) Remove the AGCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Disconnect connector D30021 from the auxiliary power panel, P300.
 - (d) Remove the auxiliary power breakers (APB) C24355: To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
 - (e) Do a wiring check between these pins of connector DM24305AA at the E2-3 shelf and connector D30021 at the auxiliary power panel, P300:

DM24305AA	D30021
pin J1	pin 2
pin K1	pin 1
pin C1	pin 9

- (f) Do a wiring check between these pins of connector D30021 at the P300 auxiliary power panel, and these pins of connector DC24335 at the P300 auxiliary power panel:

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D30021	DC24335
pin 2	pin 1
pin 1	pin 2
pin 9	pin 9
pin 10	pin 10

- (g) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (h) Re-install the AGCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (i) Re-install the APB, M24335. To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- (j) Re-connect connector D30021 to the auxiliary power panel, P300.
- (k) Operate the APU. To operate it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (l) Push the APU GEN switch twice.
- 1) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

— END OF TASK —

822. Generator Circuit Breaker (GCB) (L) Trip Coil Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31251.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, or the message does not show, then do these steps:
- (a) Make sure the L GEN CTRL switch is in the unlatched (out) position.
 - (b) Operate the left engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the left GCB, C24331.

Remove the left generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

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These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,

- (a) Operate the left engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Replace the left GCU, M24105.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Operate the left engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Do this check of the wiring (WDM 24-22-11), (WDM 24-28-11):
 - (a) Stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (b) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Disconnect connector D10021 from the left power panel, P100.
 - (d) Remove the left GCB, C24331. To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
 - (e) Remove the electrical system control panel, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (f) Disconnect connector DM24023C from the electrical system control panel, M24023.
 - (g) Do a wiring check between these pins of connector DM24105AA at the E1-1 shelf and connector D10021P at the left power panel, P100:

DM24105AA	D10021P
pin J3	pin 3
pin K1	pin 1

- (h) Do a wiring check between these pins of connector D10021J at the P100 left power panel, and these pins of connector DC24331 at the P100 left power panel:

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D10021J	DC24331
pin 3	pin 3
pin 4	pin 4
pin 5	pin 5
pin 6	pin 6

- (i) Do a wiring check between this pin of connector D10021P at the P100 left power panel, and this pin of connector DM24023C at the P5 overhead panel:

D10021P	DM24023C
pin 4	pin 26

- (j) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (k) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (l) Re-install the left generator circuit breaker (GCB):

Left Power Panel, P100

Row	Col	Number	Name
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 1) Re-connect connector D10021 to the left power panel, P100.
- 2) Re-connect connector DM24023C to the electrical system control panel, M24023.
- 3) Re-install the electrical system control panel, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
- 4) Operate the left engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 5) Push the L GEN CTRL switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

823. Auxiliary Power Breaker (APB) Trip Coil Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31253.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Make sure the APU GEN switch is in the unlatched (out) position.
 - (b) Operate the APU. To operate it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.

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- (c) Push the APU GEN switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the auxiliary power breaker (APB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Operate the APU. To operate it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (b) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Replace the AGCU, M24305.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) Operate the APU. To operate it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Do this check of the wiring (WDM 24-22-31), (WDM 24-28-31):
 - (a) Shut down the APU. To shut it down, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (b) Remove the AGCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Disconnect connector D30021 from the auxiliary power panel, P300.
 - (d) Remove the auxiliary power breaker (APB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

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To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (e) Remove the electrical system control panel, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
- (f) Disconnect connector DM24023C from the electrical system control panel, M24023.
- (g) Do a wiring check between these pins of connector DM24305AA at the E2-3 shelf and connector D30021P at the auxiliary power panel, P300:

DM24305AA	D30021P
pin J3	pin 3
pin C1	pin 9

- (h) Do a wiring check between these pins of connector D30021J at the P300 auxiliary power panel, and these pins of connector DC24335 at the P300 auxiliary power panel:

D30021J	DC24335
pin 3	pin 3
pin 4	pin 4
pin 9	pin 9
pin 10	pin 10

- (i) Do a wiring check between this pin of connector D30021P at the P300 auxiliary power panel, and this pin of connector DM24023C at the P5 overhead panel:

D10021P	DM24023C
pin 4	pin 37

- (j) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (k) Re-install the AGCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (l) Re-install the auxiliary power breaker (APB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 1) Re-connect connector D30021 to the auxiliary power panel, P300.
- 2) Re-connect connector DM24023C to the electrical system control panel, M24023.
- 3) Re-install the electrical system control panel, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
- 4) Operate the APU. To operate it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- 5) Push the APU GEN switch two times.

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- a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

824. APB Sense Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-23710.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Push the APU GEN switch twice to unlatch the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.
 - (e) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.

C. Fault Isolation Procedure

- (1) Replace the auxiliary power breaker (APB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Push the APU GEN switch twice to unlatch the fault.
 - (c) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the APB sense wiring (WDM 24-28-31), (WDM 24-28-41):
- (a) Remove the AGCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (c) Disconnect connector D30021 from the auxiliary power panel, P300.
 - (d) Do a wiring check between these pins of connector DM24305AA at the E2-3 shelf and connector D30021 at the auxiliary power panel, P300.

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DM24305AA **D30021**
pin C1 pin 9

- (e) Do a wiring check between pin 10 of connector D30021 at the auxiliary power panel, P300 and airplane ground.
- (f) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector D30021 at the auxiliary power panel, P300.

DM24002AA **D30021**
pin A4 pin 11

- (g) Do a wiring check between pin 12 of connector D30021 at the auxiliary power panel, P300 and airplane ground.
- (h) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D30021 to the auxiliary power panel, P300.
 - 3) Re-install the AGCU, M24305. To re-install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Re-install the BPCU, M24002. To re-install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 5) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 6) Push the APU GEN switch on the P5 panel twice.
 - 7) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 8) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (i) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector D30021 to the auxiliary power panel, P300.
 - 2) Re-install the AGCU, M24305. To re-install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (3) Replace the BPCU, M24002.
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Push the APU GEN switch on the P5 panel twice.
 - (c) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

825. **GHB Low Current Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-23730.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do these steps to check for a faulty BPCU.
 - (a) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
NOTE: You must unplug the de-energized PEP source from the PEP receptacle.
 - (b) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
NOTE: Use SEP to supply both 115 VAC main buses
 - (c) Re-connect the PEP plug to the PEP receptacle, and energize the PEP source.
 - (d) If the AVAIL light for PEP comes on, then do these steps:
 - 1) Replace the BPCU, M24002.
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - 2) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If the MAT shows ACTIVE or LATCHED for the maintenance message, or if the AVAIL light for PEP does not come on, then continue.
- (2) Replace the PEP supply source.
 - (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, or if the AVAIL light for PEP does not come on, then continue.
- (3) Do this check of the wiring (WDM 24-41-11):
 - (a) Remove the PEP contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (c) Do a wiring check between these pins of connector DM24002AB at the E1-1 shelf and the PEP contactor receptacle, DK24022 on the right power panel, P200.

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DK24022

pin A1 pin 115
pin B1 pin 114
pin C1 pin 113

DM24002AB

- (d) Do a wiring check between pin 112 of connector DM24002AB at the E1-1 shelf, and airplane ground.
- (e) Do a wiring check between terminals L11, L12 and L13 of the right power panel, P200 and terminals L21, L22 and L23 of the auxiliary power panel, P300.
- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the PEP contactor, K24022. To re-install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 3) Re-install the BPCU, M24002. To re-install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 4) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

826. GHB Circuit or Current Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-23760, 24-23770, 24-23780.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do these steps to check for a faulty BPCU.
 - (a) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
NOTE: You must unplug the de-energized PEP source from the PEP receptacle.
 - (b) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
NOTE: Use SEP to supply both 115 VAC main buses
 - (c) Re-connect the PEP plug to the PEP receptacle, and energize the PEP source.
 - (d) If the AVAIL light for PEP comes on, then do these steps:
 - 1) Replace the BPCU, M24002.

These are the tasks:

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- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- 2) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If the MAT shows ACTIVE or LATCHED for the maintenance message, or if the AVAIL light for PEP does not come on, then continue.
- (2) Replace the PEP supply source.
- (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

827. GHB/GSB Low Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-23800.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
NOTE: You must supply primary external power to the right main bus to unlatch this fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do these steps to try to supply power to the ground service bus:
 - (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (b) On the attendant's panel, push the GROUND SERVICE switch.
 - (c) If the light in the GROUND SERVICE switch does not come on, replace the primary external power source, and do these steps:
 - 1) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
NOTE: You must supply primary external power to the right main bus to unlatch this fault.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - (d) If the light in the GROUND SERVICE switch comes on, then continue.
- (2) Replace the BPCU, M24002.

These are the tasks:

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BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

NOTE: You must supply primary external power to the right main bus to unlatch this fault.

- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
(c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (3) Do a check of the ELMS signal interface unit, SIU 2, M24513 in the P310 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

NOTE: You must supply primary external power to the right main bus to unlatch this fault.

- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
(c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (4) Do this check of the wiring (WDM 24-09-33):

- (a) Disconnect connector D30023P from the P300 panel.
(b) Remove the ground service select relay, K24002. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
(c) Do a wiring check between this pin of connector D30023 at the auxiliary power panel, P300 and the receptacle for the ground service select relay, K24002 at the auxiliary power panel, P300.

D30023P

K24002

pin 13 pin 12

- 1) If you find a problem with the wiring, then do these steps:.

- a) Repair the wiring.
b) Re-connect connector D30023P to the P300 panel.
c) Re-install the ground service select relay, K24002. To re-install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
d) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
NOTE: You must supply primary external power to the right main bus to unlatch this fault.
e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
f) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- 2) If you do not find a problem with the wiring, then continue.

- (5) Do this check of the wiring (WDM 24-09-33):

- (a) Disconnect connector D31010P from the P310 panel.

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- (b) Do a wiring check between these pins of connector D31010P at the P310 panel and connector D30023P at the P300 panel.

D31010P	D30023P
pin 20	pin 13

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector D31010P to the P310 panel.
- 3) Re-connect connector D30023P to the P300 panel.
- 4) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

NOTE: You must supply primary external power to the right main bus to unlatch this fault.

- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (d) If you do not find a problem with the wiring, then continue.

- 1) Re-connect connector D30023P to the P300 panel.

- (6) Do this check of the wiring (WDM 24-09-33):

- (a) Disconnect connector DM24411A from the signal conditioning card, M24411.

- (b) Do a wiring check between these pins of connector DM24411A at the P310 panel and connector D31010P at the P300 panel.

D31010P	DM24411A
pin 20	pin 4

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24411A to the signal conditioning card, M24411.
- 3) Re-connect connector D31010P to the standby power management panel, P310.
- 4) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

NOTE: You must supply primary external power to the right main bus to unlatch this fault.

- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (d) If you do not find a problem with the wiring, then continue.

- 1) Re-connect connector DM24411A to the signal conditioning card, M24411.
- 2) Re-connect connector D31010P to the standby power management panel, P310.

- (7) Do this check of the wiring (WDM 24-09-33) (WDM 24-51-41).

- (a) Disconnect connector D31010 from the standby power management panel, P310.

- (b) Disconnect connector D30023 from the auxiliary power panel, P310.

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- (c) Do a wiring check between these pins of connector D31010 at the standby power management panel, P310 and connector D30023 from the auxiliary power panel, P300:

D31010P

D30023P

pin 13 pin 2

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector D30023P to the auxiliary power panel, P300.
- 3) Re-connect connector D31010P to the standby power management panel, P310.
- 4) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

NOTE: You must supply primary external power to the right main bus to unlatch this fault.

- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

828. GSB Frequency Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-23820.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:

NOTE: This maintenance message may latch if the ground service bus is powered from primary external power and the primary external power source is de-energized, but not disconnected.

- (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

NOTE: You must supply primary external power to the right main bus or the ground service bus to unlatch this fault.

- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the primary external power source.
- (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
- NOTE: You must supply primary external power to the right main bus or the ground service bus to unlatch this fault.
- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the BPCU, M24002.

These are the tasks:

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BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

END OF TASK

829. GSB/GHB Current or Resistance Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-23830, 24-23840, 24-23850.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.
- (3) Do this check of the wiring (WDM 24-09-33):
 - (a) Remove the ground service select relay, K24002. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - (b) Disconnect connector D32001 from the ground service/ground handling power panel, P320.
 - (c) Do a wiring check between these pins of connector D32001 and the ground service select relay receptacle.

DK24002	D32001
pin A2	pin A
pin B2	pin B
pin C2	pin C
pin A2	pin I
pin B2	pin H
pin C2	pin G

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D32001 to the ground service/ground handling power panel, P320.
 - 3) Re-install the ground service select relay, K24002. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector D32001 to the ground service/ground handling power panel, P320.

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- 2) Re-install the ground service select relay, K24002. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
- (4) Replace the BPCU, M24002.
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

830. GHB Sensed Powered When Commanded Off Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-23940, 24-23941.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - (c) Turn the battery switch to the ON position.
 - (d) Turn the APU GEN switch to the UNLATCHED position for 6 seconds, or turn the APU off: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (e) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), then there was an intermittent fault.
- (3) Replace the ground handling relay, K24004.
These are the tasks:
Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - (c) Turn the battery switch to the ON position.
 - (d) Turn the APU GEN switch to the UNLATCHED position for 6 seconds, or turn the APU off: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (e) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (f) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (4) Replace the signal interface unit 2, M24513.
These are the tasks:
Signal Interface Unit - Removal, AMM TASK 24-09-00-000-814-002,

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Signal Interface Unit - Installation, AMM TASK 24-09-00-400-810-002.

- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - (c) Turn the battery switch to the ON position.
 - (d) Turn the APU GEN switch to the UNLATCHED position for 6 seconds, or turn the APU off: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (e) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (f) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (5) Do a check of the P310 signal interface unit, SIU 2, M24513.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - (c) Turn the battery switch to the ON position.
 - (d) Turn the APU GEN switch to the UNLATCHED position for 6 seconds, or turn the APU off: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (e) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (g) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (6) Do a check of the P310 CCU, M24510.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002

- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807
 - (c) Turn the battery switch to the ON position.
 - (d) Turn the APU GEN switch to the UNLATCHED position for 6 seconds, or turn the APU off: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (e) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (g) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (7) Do this check of the wiring (WDM 24-09-33):
- (a) Remove the ground handling relay, K24004. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - (b) Remove the signal interface unit, M24513. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - (c) Do a wiring check between these pins of connector DM24513C and the ground handling relay receptacle, DK24004.

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DK24004

pin 11 pin 64
pin 12 pin 71
pin 13 pin 72

DM24513C

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the signal interface unit, M24513. To install it, do this task: Signal Interface Unit - Installation, AMM TASK 24-09-00-400-810-002.
 - 3) Re-install the ground handling relay, K24004. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 5) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - 6) Turn the battery switch to the ON position.
 - 7) Turn the APU GEN switch to the UNLATCHED position for 6 seconds, or turn the APU off: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 8) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 9) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - 10) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- 1) Re-install the signal interface unit, M24513. To install it, do this task: Signal Interface Unit - Installation, AMM TASK 24-09-00-400-810-002
 - 2) Re-install the ground handling relay, K24004. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
- (8) Replace the BPCU, M24002.
- These are the tasks:
- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - (c) Turn the battery switch to the ON position.
 - (d) Turn the APU GEN switch to the UNLATCHED position for 6 seconds, or turn the APU off: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (e) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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831. L GCU 28 VDC Switch Short Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31101.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Put the L GEN CTRL switch to OFF and the L BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below:
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the L BUS TIE switch (WDM 24-22-11).
 - (a) Put the L GEN CTRL switch to OFF and the L BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.
- (2) Replace the L GEN CTRL switch (WDM 24-22-11).
 - (a) Put the L GEN CTRL switch to OFF and the L BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.
- (3) Replace the Left Engine Fire Switch, S26101.

These are the tasks:

Engine Fire Switch Removal, AMM TASK 26-21-03-000-801,
Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.

 - (a) Put the L GEN CTRL switch to OFF and the L BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.
- (4) Do this check of the wiring (WDM 24-22-11).
 - (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Make sure the L GEN CTRL switch is in the OFF position.

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- (c) Make sure the L BUS TIE switch is in the ISLN position.
- (d) Do a check for electrical ground at pin 119 of connector DM24105AA at the E1-1 shelf.
NOTE: Pin 119 of connector DM24105AA should be isolated from electrical ground when the L GEN CTRL switch is in the OFF position and the L BUS TIE switch is in the ISLN position.
- (e) If there is electrical ground at pin 119 of connector DM24105AA, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Put the L GEN CTRL switch to OFF and the L BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - a) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - b) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.
- (f) If there is not electrical ground at pin 119 of connector DM24105AA, then continue:
- (5) Do this check of the wiring (WDM 24-22-11):
 - (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Do a check for electrical ground at pins G3, E4, J3, and J5 of connector DM24105AA at the E1-1 shelf.
NOTE: Pins G3, E4, J3, and J5 of connector DM24105AA should be isolated from electrical ground when the L GEN CTRL switch is in the OFF position and the L BUS TIE switch is in the ISLN position.
 - (c) Do a check for electrical ground at pin C4 of connector DM24105AB at the E1-1 shelf.
NOTE: Pin C4 of connector DM24105AB should be isolated from electrical ground when the L GEN CTRL switch is in the OFF position and the L BUS TIE switch is in the ISLN position.
 - (d) If there is electrical ground at pins G3, E4, J3, and J5 of connector DM24105AA or pin C4 of connector DM24105AB, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Put the L GEN CTRL switch to OFF and the L BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - a) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.

————— **END OF TASK** —————

832. **R GCU 28 VDC Switch Short Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31102.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Put the R GEN CTRL switch to OFF and the R BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below:
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the R BUS TIE switch (WDM 24-22-11).
 - (a) Put the R GEN CTRL switch to OFF and the R BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.
- (2) Replace the R GEN CTRL switch (WDM 24-22-11).
 - (a) Put the R GEN CTRL switch to OFF and the R BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.
- (3) Replace the Right Engine Fire Switch, S26201.

These are the tasks:

Engine Fire Switch Removal, AMM TASK 26-21-03-000-801,
Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.

 - (a) Put the R GEN CTRL switch to OFF and the R BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.
- (4) Do this check of the wiring (WDM 24-22-21):
 - (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Make sure the R GEN CTRL switch is in the OFF position.
 - (c) Make sure the R BUS TIE switch is in the ISLN position.

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- (d) Do a check for electrical ground at pin 119 of connector DM24205AA at the E2-2 shelf.
NOTE: Pin 119 of connector DM24205AA should be isolated from electrical ground when the R GEN CTRL switch is in the OFF position and the R BUS TIE switch is in the ISLN position.
- (e) If there is electrical ground at pin 119 of connector DM24205AA, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Put the R GEN CTRL switch to OFF and the R BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - a) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - b) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.
- (f) If there is not electrical ground at pin 119 of connector DM24205AA, then continue:
- (5) Do this check of the wiring (WDM 24-22-21):
- (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Do a check for electrical ground at pins G3, E4, J3, and J5 of connector DM24205AA at the E2-2 shelf.
NOTE: Pins G3, E4, J3, and J5 of connector DM24205AA should be isolated from electrical ground when the R GEN CTRL switch is in the OFF position and the R BUS TIE switch is in the ISLN position.
 - (c) Do a check for electrical ground at pin C4 of connector DM24205AB at the E2-2 shelf.
NOTE: Pin C4 of connector DM24205AB should be isolated from electrical ground when the R GEN CTRL switch is in the OFF position and the R BUS TIE switch is in the ISLN position.
 - (d) If there is electrical ground at pins G3, E4, J3, and J5 of connector DM24205AA or pin C4 of connector DM24205AB, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Put the R GEN CTRL switch to OFF and the R BUS TIE switch to ISLN at the same time. It will take at least 2 seconds for the message to unlatch.
 - a) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then you corrected the fault.

END OF TASK

833. Generator Circuit Breaker (GCB) (R) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31232.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, or the message does not show, then do these steps:
 - (a) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) Push the R GEN CTRL switch two times.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the wiring (WDM 24-22-21):
 - (a) Stop the engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (b) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Disconnect connector D20021 from the right power panel, P200.
 - (d) Do a wiring check between these pins of connector DM24205AA at the E2-2 shelf and connector D20021P at the right power panel, P200:

DM24205AA	D20021P
pin J1	pin 2

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- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect connector D20021 to the right power panel, P200.
- (f) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (g) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

834. Auxiliary Power Breaker (APB) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31233.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Push the APU GEN switch two times.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the auxiliary power breaker (APB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (b) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the wiring (WDM 24-22-31):
 - (a) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.

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- (b) Remove the APU GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (c) Disconnect connector D30021 from the auxiliary power panel, P300.
- (d) Do a wiring check between these pins of connector DM24305AA at the E2-3 shelf and connector D30021P at the auxiliary power panel, P300:

DM24305AA	D30021P
pin J1	pin 2

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-connect connector D30021 to the auxiliary power panel, P300.
- (f) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (g) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

835. Generator Circuit Breaker (GCB) (R) Trip Coil Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31252.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, or the message does not show, then do these steps:
 - (a) Make sure the R GEN CTRL switch is in the unlatched (out) position.
 - (b) Operate the right engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB

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Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Operate the right engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Replace the right GCU, M24205.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Operate the right engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Do this check of the wiring (WDM 24-22-21), (WDM 24-28-21):
 - (a) Stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (b) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Disconnect connector D20021 from the right power panel, P200.
 - (d) Remove the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

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To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (e) Remove the electrical system control panel, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
- (f) Disconnect connector DM24023B from the electrical system control panel, M24023.
- (g) Do a wiring check between these pins of connector DM24205AA at the E2-2 shelf and connector D20021P at the right power panel, P200:

DM24205AA	D20021P
pin J3	pin 3
pin K1	pin 1

- (h) Do a wiring check between these pins of connector D20021J at the P200 right power panel, and these pins of connector DC24332 at the P200 right power panel:

D20021J	DC24332
pin 3	pin 3
pin 4	pin 4
pin 5	pin 5
pin 6	pin 6

- (i) Do a wiring check between this pin of connector D20021P at the P200 right power panel, and this pin of connector DM24023B at the P5 overhead panel:

D20021P	DM24023B
pin 4	pin 20

- (j) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (k) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (l) Re-install the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 1) Re-connect connector D20021 to the right power panel, P200 (WDM 24-22-21).
- 2) Re-connect connector DM24023B to the electrical system control panel, M24023 (WDM 24-22-21).
- 3) Re-install the electrical system control panel, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.

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- 4) Operate the right engine. To operate it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 5) Push the R GEN CTRL switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

836. Generator Circuit Breaker (GCB) (L) Trip Coil Wiring Shorted - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31261.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Open these circuit breakers:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	8	C24601	L GCU

- (b) Close these circuit breakers:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	8	C24601	L GCU

- (c) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (d) Push the L GEN CTRL switch two times.
 - (e) Stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring (WDM 24-22-11):
 - (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.

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- (b) Remove the left generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Make sure pin J3 of connector DM24105AA at the E1-1 shelf is not shorted to ground.
- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (e) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (f) Re-install the left generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Replace the left generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the L GEN CTRL switch two times.
- 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

837. Generator Circuit Breaker (GCB) (R) Trip Coil Wiring Shorted - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31262.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Open these circuit breakers:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	2	C24602	R IDG DISC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	9	C24600	R GCU

- (b) Close these circuit breakers:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	2	C24602	R IDG DISC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	9	C24600	R GCU

- (c) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (d) Push the R GEN CTRL switch two times.
 - (e) Stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring (WDM 24-22-21):
 - (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the right generator circuit breaker (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

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To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Make sure pin J3 of connector DM24205AA at the E2-2 shelf is not shorted to ground.
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (e) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (f) Re-install the right GCB, M24332.

Re-install the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Replace the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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838. Auxiliary Power Breaker is Shorted - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31263.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Open this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
H	7	C24606	APU GCU

- (b) Close this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
H	7	C24606	APU GCU

- (c) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (d) Push the APU GEN switch two times.
- 1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
- 2) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring (WDM 24-22-31):
- (a) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
- (b) Remove the APU GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (c) Remove the APU GCB, C24335.

Remove the APU generator circuit breaker (GCB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (d) Make sure pin J3 of connector DM24305AA at the E2-3 shelf is not shorted to ground.
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (f) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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- (g) Re-install the APU generator circuit breaker (GCB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 1) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then continue.
- (2) Replace the APU generator circuit breaker (GCB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the APU. To start it, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804
- (b) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

839. Left GCB Trip Position Sense Disagree at BPCU - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-23670.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
NOTE: To unlatch this fault, you must start, then shut down the left engine. This will cycle the left GCB.
 - (b) Shutdown the left engine. To shutdown the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Replace the left GCB, C24331.

Replace the left generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

NOTE: To unlatch this fault, you must start, then shut down the left engine. This will cycle the left GCB.

- (b) Shutdown the left engine. To shutdown the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (2) Do this check of the wiring (WDM 24-28-41):

- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.

- (b) Remove the left generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector DC24331 at the left power panel, P100.

DM24002AA	DC24331
pin E1	pin 11

- (d) Do a wiring check between pin 12 of connector DC24331 at the left power panel, P100 and airplane ground.
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 4) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

NOTE: To unlatch this fault, you must start, then shut down the left engine. This will cycle the left GCB.

- 5) Shutdown the left engine. To shutdown the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 7) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (f) If you do not find a problem with the wiring, then continue.
- 1) Re-install the left generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (3) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,

BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

NOTE: To unlatch this fault, you must start, then shut down the left engine. This will cycle the left GCB.

- (b) Shutdown the left engine. To shutdown the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

840. Left BTB Trip Position Sense Disagree at BPCU - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-23680.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:

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- (a) Use primary external power to supply power to the left main AC bus.
NOTE: To unlatch this fault, you must supply primary external power to the left main AC bus. To supply primary external power to the left main AC bus, make sure the L BUS TIE switch is in the AUTO position with primary external power on.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Use primary external power to supply power to the left main AC bus.
NOTE: To unlatch this fault, you must supply primary external power to the left main AC bus. To supply primary external power to the left main AC bus, make sure the L BUS TIE switch is in the AUTO position with primary external power on.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring (WDM 24-28-41):
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector DC24333 at the left power panel, P100.

DM24002AA	DC24333
pin C4	pin 11

- (d) Do a wiring check between pin 12 of connector DC24333 at the left power panel, P100 and airplane ground.
- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- 2) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 4) Use primary external power to supply power to the left main AC bus.
NOTE: To unlatch this fault, you must supply primary external power to the left main AC bus. To supply primary external power to the left main AC bus, make sure the L BUS TIE switch is in the AUTO position with primary external power on.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (f) If you do not find a problem with the wiring, then continue.
- 1) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (3) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,

BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) Use primary external power to supply power to the left main AC bus.

NOTE: To unlatch this fault, you must supply primary external power to the left main AC bus. To supply primary external power to the left main AC bus, make sure the L BUS TIE switch is in the AUTO position with primary external power on.

- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

841. Right GCB Trip Position Sense Disagree at BPCU - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-23690.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Start the right engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
NOTE: To unlatch this fault, you must start, then shut down the right engine. This will cycle the right GCB.
 - (b) Shutdown the right engine. To shutdown the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the right engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
NOTE: To unlatch this fault, you must start, then shut down the right engine. This will cycle the right GCB.
 - (b) Shutdown the right engine. To shutdown the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring (WDM 24-28-41):
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Remove the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			

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ARO 011-999 (Continued)

(Continued)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector DC24332 at the right power panel, P200.

DM24002AA	DC24332
pin C1	pin 11

- (d) Do a wiring check between pin 12 of connector DC24332 at the right power panel, P200 and airplane ground.
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 4) Start the right engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

NOTE: To unlatch this fault, you must start, then shut down the right engine. This will cycle the right GCB.

- 5) Shutdown the right engine. To shutdown the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 7) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (f) If you do not find a problem with the wiring, then continue.

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- 1) Re-install the right generator circuit breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (3) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,

BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) Start the right engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

NOTE: To unlatch this fault, you must start, then shut down the right engine. This will cycle the right GCB.

- (b) Shutdown the right engine. To shutdown the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

842. Right BTB Trip Position Sense Disagree at BPCU - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-23700.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Use primary external power to supply power to the left main AC bus.

NOTE: To unlatch this fault, you must supply primary external power to the left main AC bus. To supply primary external power to the left main AC bus, make sure the L BUS TIE and R BUS TIE switches are in the AUTO position with primary external power on.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right BTB, C24334.

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Replace the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Use primary external power to supply power to the left main AC bus.

NOTE: To unlatch this fault, you must supply primary external power to the left main AC bus. To supply primary external power to the left main AC bus, make sure the L BUS TIE and R BUS TIE switches are in the AUTO position with primary external power on.

- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (2) Do this check of the wiring (WDM 24-28-41):

- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.

- (b) Remove the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector DC24334 at the right power panel, P200.

DM24002AA	DC24334
pin E4	pin 11

- (d) Do a wiring check between pin 12 of connector DC24334 at the right power panel, P200 and airplane ground.

- (e) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.

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- 2) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 4) Use primary external power to supply power to the left main AC bus.
- NOTE:** To unlatch this fault, you must supply primary external power to the left main AC bus. To supply primary external power to the left main AC bus, make sure the L BUS TIE switch is in the AUTO position with primary external power on.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (f) If you do not find a problem with the wiring, then continue.
- 1) Re-install the right BTB, C24334.

Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (3) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,

BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) Use primary external power to supply power to the left main AC bus.

NOTE: To unlatch this fault, you must supply primary external power to the left main AC bus. To supply primary external power to the left main AC bus, make sure the L BUS TIE switch is in the AUTO position with primary external power on.

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- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

843. Right Bus Tie Switch (BTS) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31212.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Push the R BUS TIE switch twice.
- 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below:
- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the R BUS TIE switch, S8 (WDM 24-22-21).
- (a) Push the R BUS TIE switch twice.
- 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
- 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Push the R BUS TIE switch twice.
- 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
- 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-22-21):
- (a) Remove the electrical system control module, M24023. To remove it, do this task:
Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.

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- (b) Disconnect connector DM24023B from the electrical system control panel, M24023.
- (c) Remove the right generator control unit, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (d) Do a wiring check between these pins of connector DM24023B at the electrical power control panel, M24023 and connector DM24205AA at the E2-2 rack.

DM24023B	DM24205AA
pin 9	pin G3

- (e) Disconnect connector D20021 from the right power panel, P200.
- (f) Do a wiring check between these pins of connector DM24023B at the electrical power control panel, M24023 and connector D20021 at the left power panel, P200:

DM24023B	D20021
pin 7	pin 20

- (g) Do a wiring check between these pins of connector D20021 at the left power panel, P200 and connector DM24205AA at the E2-2 shelf:

D20021	DM24205AA
pin 19	pin J5

- (h) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (i) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (j) Reconnect connector DM24023B to the electrical power control panel, M24023.
- (k) Re-install the electrical system control module, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
- (l) Reconnect connector D20021 to the left power panel, P200.
- (m) Push the R BUS TIE switch twice.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (4) Replace the right GCU, M24205.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Push the R BUS TIE switch twice.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

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844. Right Bus Tie Breaker Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31122, 24-31132.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the R BUS TIE switch is in the AUTO (latched) position, then push the R BUS TIE switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below:
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Push the R BUS TIE switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the right GCU, M24205.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) Push the R BUS TIE switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-22-21):

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- (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801
- (b) Disconnect connector D20021 from the right power panel, P200.
- (c) Do a wiring check between these pins of connector DM24205AA at the E2-2 shelf and connector D20021 at the right power panel, P200:

DM24205AA	D20021
pin J5	pin 19
pin K5	pin 17
pin J7	pin 18

- (d) Remove the electrical system control module, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
- (e) Disconnect connector DM24023B from the electrical system control panel, M24023.
- (f) Do a wiring check between these pins of connector DM24023B at the electrical system control panel, M24023, and connector D20021 at the right power panel, P200:

DM24023B	D20021
pin 7	pin 20

- (g) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (h) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (i) Re-connect connector D20021 to the right power panel, P200.
- (j) Re-connect connector DM24023B to the electrical system control panel, M24023.
- (k) Re-install the electrical system control panel, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 1) Push the R BUS TIE switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

845. Right BTB Position Problems - Fault Isolation

A. Fault Isolation Procedure

- (1) Push the R BUS TIE switch on the P5 panel two times.

NOTE: This task will reset the right bus tie breaker to the closed position. The removal of the primary and secondary external power simultaneously will generate this fault.

————— **END OF TASK** —————

846. EICAS message ELEC GEN SYS L with no maintenance message - Fault Isolation

A. Fault Isolation Procedure

- (1) If EICAS message ELEC GEN SYS L occurs with no maintenance message correlated, do these steps to determine the correct fault isolation task to perform.
 - (a) Make sure the primary external and secondary external power supplies are plugged in and energized.

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- (b) Apply secondary external power (AMM TASK 24-22-00-860-802).
NOTE: Do not apply primary external power.
- (c) Push the L BUS TIE switch twice.
- (d) Check the MAT for maintenance messages.
 - 1) If maintenance message 24-31121 shows, do the task Left Bus Tie Breaker Circuit Problems - Fault Isolation, 24-22 TASK 817 for that message.
 - 2) If maintenance message 24-31181 shows, do the task GHB Low Current Problems - Fault Isolation, 24-22 TASK 825 for that message.
- (e) If no maintenance messages show, check for EICAS message ELEC AC BUS L.
 - 1) If EICAS message ELEC AC BUS L shows, do the task Generator Circuit Breaker (GCB) (L) Trip Coil Problems - Fault Isolation, 24-22 TASK 822 for maintenance message 24-31251.
 - 2) If EICAS message ELEC AC BUS L does not show, do the task Generator Circuit Breaker (GCB) (L) Problems - Fault Isolation, 24-22 TASK 813 for maintenance message 24-31231.

————— **END OF TASK** —————

847. EICAS message ELEC GEN SYS R with no maintenance message - Fault Isolation

A. Fault Isolation Procedure

- (1) If EICAS message ELEC GEN SYS R occurs with no maintenance message correlated, do these steps to determine the correct fault isolation task to perform.
 - (a) Make sure the primary external and secondary external power supplies are plugged in and energized.
 - (b) Apply secondary external power (AMM TASK 24-22-00-860-802).
NOTE: Do not apply primary external power.
 - (c) Push the R BUS TIE switch twice.
 - (d) Check for EICAS message ELEC AC BUS R.
 - 1) If EICAS message ELEC AC BUS R shows, do the fault isolation Generator Circuit Breaker (GCB) (R) Trip Coil Problems - Fault Isolation, 24-22 TASK 835 for maintenance message 24-31252.
 - (e) If EICAS message ELEC AC BUS R does not show, check the MAT for maintenance messages.
 - 1) If maintenance message 24-31122 shows, do the task Right Bus Tie Breaker Circuit Problems - Fault Isolation, 24-22 TASK 844 for that maintenance message.
 - 2) If maintenance message 24-31182 shows, do the task GHB Circuit or Current Problems - Fault Isolation, 24-22 TASK 826 for that message.
 - 3) If no maintenance message shows, do the task Generator Circuit Breaker (GCB) (R) Problems - Fault Isolation, 24-22 TASK 833 for maintenance message 24-31232.

————— **END OF TASK** —————

848. APU Generator Exciter Field Out of Range (Shorted Diode Problem) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31613.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the APU operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the APU Generator, M24003.
These are the tasks:
APU Generator Removal, AMM TASK 24-21-01-000-801,
APU Generator Installation, AMM TASK 24-21-01-400-801.
 - (a) Push the applicable GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the APU operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

849. Power Bus AC GND SVCE BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13809.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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- (1) Replace the GSSR, M24002. These are the tasks:
These are the tasks:
Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801,
Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do a check of the Signal Interface Unit 2, M24513.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring between the GSSR, K24002 and the SIU 2, M24513 (WDM 24-09-33):

- (a) Disconnect connector DM24513C from the SIU 2, M24513.
- (b) Remove GSSR, K24002, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
- (c) Do a wiring check between GSSR, K24002 and SIU 2, M24513.

DK24002

DM24513C

pin 12 pin 73

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24513C to the SIU, M24513.
 - 3) Re-install GSSR, K24002, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

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801. IDG Current Transformer (CT) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31501, 24-31502.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the applicable L GEN CTRL or R GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) If the problem is with the left IDG, do this check of the wiring:
 - (a) Remove the left GCU, M24105, located at the E1-1 shelf. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Disconnect connector DM24001A from the left IDG.
 - (c) Do a wiring check between these pins of connector DM24105AB at the E1-1 shelf, and connector DM24001A, at the left IDG, M24001, (WDM 24-21-11):

DM24105AB	DM24001A
pin J6	pin 14
pin G6	pin 13
pin E6	pin 12
pin C6	pin 3

- (d) If you find a problem with the wiring, then repair the wiring.
 - (e) Re-connect connector DM24001A to the left IDG.
 - (f) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 1) Push the L GEN CTRL switch on the P5 panel two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue with the IDG replacement subtask.
- (2) If the problem is with the right IDG, do this check of the wiring:
 - (a) Remove the right GCU, M24205, located at the E2-2 shelf. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Disconnect connector DM24001A from the right IDG.
 - (c) Do a wiring check between these pins of connector DM24205AB at the E2-2 shelf, and connector DM24001A, at the right IDG, M24001, (WDM 24-21-21):

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DM24205AB

pin J6 pin 14
pin G6 pin 13
pin E6 pin 12
pin C6 pin 3

DM24001A

- (d) If you find a problem with the wiring, then repair the wiring.
- (e) Re-connect connector DM24001A to the right IDG.
- (f) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 1) Push the R GEN CTRL switch on the P5 panel two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue with the IDG replacement subtask.
- (3) Replace the applicable IDG.

These are the tasks:
IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.

 - (a) Push the applicable L GEN CTRL or R GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

802. IDG Fire Switch Has Been Pulled - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31531, 24-31532.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the applicable L GEN CTRL or R GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the left engine fire switch, S26101. To replace the switch,

These are the tasks:
Engine Fire Switch Removal, AMM TASK 26-21-03-000-801,

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Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.

- (a) Push the L GEN CTRL switch on the P5 panel two times.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the wiring between the left engine fire switch and the left GCU.
- (a) Remove the left GCU, M24105, at the E1-1 shelf. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the left engine fire switch, S26101. To remove it, do this task: Engine Fire Switch Removal, AMM TASK 26-21-03-000-801.
 - (c) Do a wiring check between the following pins of connector DS26101 at the IDG fire switch and connector DM24105AB at the GCU.

DS26101

DM24105AB

pin 40 pin C4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left GCU. To install the GCU, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-install the left engine fire switch. To install the switch, do this task: Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, re-install the left engine fire switch. To install the switch, do this task: Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.
 - (f) Continue with the GCU replacement subtask.
- (3) Do this check of the wiring between the right engine fire switch and the right GCU.
- (a) Remove the right GCU, M24205, at the E2-2 shelf. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the right engine fire switch, S26201. To remove it, do this task: Engine Fire Switch Removal, AMM TASK 26-21-03-000-801.
 - (c) Do a wiring check between the following pins of connector DS26201 at the IDG fire switch and connector DM24205AB at the GCU.

DS26201

DM24205AB

pin 40 pin C4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right GCU. To install the GCU, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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- 3) Re-install the right engine fire switch. To install the switch, do this task: Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.
- 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, re-install the right engine fire switch. To install the switch, do this task: Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.
- (f) Continue with the GCU replacement subtask.
- (4) Replace the applicable GCU. To replace the GCU,
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

803. GCU ARINC 629 Data Coupler Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31651, 24-31652, 24-31653, 24-31811, 24-31812, 24-31813.

B. Fault Isolation Procedure

- (1) Replace the applicable ARINC 629 coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the systems 629 Bus.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the applicable GCU.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) If the problem is with the left GCU/ARINC 629 Left System Bus, then do this check of the wiring between the left GCU, M24105, and ARINC 629 coupler B24103:
 - (a) Remove the left GCU, M24105, from the E1-1 shelf. To remove the GCU, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Disconnect the connector from ARINC 629 coupler B24103 in the P111 panel (WDM 24-28-11).

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- (c) Do a wiring check between the following pins of the GCU connector at the E1-1 shelf and the ARINC 629 connector at the P111 panel:

DM24105AC	DB24103
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (e) Re-install the left GCU, M24105, in the E1-1 shelf. To install the GCU, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (f) Re-connect the connector to the ARINC 629 coupler, B24103, in the P111 panel.
- 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.
- (4) If the problem is with the right GCU/ARINC 629 Left System Bus, then do this check of the wiring between the right GCU, M24205, and ARINC 629 coupler B24104:
- (a) Remove the right GCU, M24205, from the E2-2 shelf. To remove the GCU, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (b) Disconnect the connector from ARINC 629 coupler B24104 in the P111 panel (WDM 24-28-21).
- (c) Do a wiring check between the following pins of the GCU connector at the E2-2 shelf and the ARINC 629 connector at the P111 panel:

DM24205AC	DB24104
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (e) Re-install the right GCU, M24205, in the E2-2 shelf. To install the GCU, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (f) Re-connect the connector to the ARINC 629 coupler, B24104, in the P111 panel.
- 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.
- (5) If the problem is with the auxiliary GCU/ARINC 629 Left System Bus, then do this check of the wiring between the auxiliary GCU, M24305, and ARINC 629 coupler B24105:
- (a) Remove the auxiliary GCU, M24305, from the E2-3 shelf. To remove the GCU, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (b) Disconnect the connector from ARINC 629 coupler B24105 in the P111 panel (WDM 24-28-31).
- (c) Do a wiring check between the following pins of the GCU connector at the E2-3 shelf and the ARINC 629 connector at the P111 panel:

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DM24305AC

pin 3T		pin 2
pin 3TR		pin 1
pin 6T		pin 5
pin 6TR		pin 4

DB24105

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (e) Re-install the right GCU, M24305, in the E2-3 shelf. To install the GCU, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (f) Re-connect the connector to the ARINC 629 coupler, B24105, in the P111 panel.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.
- (6) If the problem is with the left GCU/ARINC 629 Right System Bus, then do this check of the wiring between the left GCU, M24105, and ARINC 629 coupler B24203:
 - (a) Remove the left GCU, M24105, from the E1-1 shelf. To remove the GCU, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Disconnect the connector from ARINC 629 coupler B24203 in the P211 panel (WDM 24-28-11).
 - (c) Do a wiring check between the following pins of the GCU connector at the E1-1 shelf and the ARINC 629 connector at the P211 panel:

DM24105AC

pin 2T	.....	pin 2
pin 2TR	.....	pin 1
pin 5T	.....	pin 5
pin 5TR	.....	pin 4

DB24103

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (e) Re-install the left GCU, M24105, in the E1-1 shelf. To install the GCU, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (f) Re-connect the connector to the ARINC 629 coupler, B24203, in the P211 panel.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.
- (7) If the problem is with the right GCU/ARINC 629 Right System Bus, then do this check of the wiring between the right GCU, M24205, and ARINC 629 coupler B24204:
 - (a) Remove the right GCU, M24205, from the E2-2 shelf. To remove the GCU, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Disconnect the connector from ARINC 629 coupler B24204 in the P211 panel (WDM 24-28-21).
 - (c) Do a wiring check between the following pins of the GCU connector at the E2-2 shelf and the ARINC 629 connector at the P211 panel:

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DM24205AC DB24204

pin 2T		pin 2
pin 2TR		pin 1
pin 5T		pin 5
pin 5TR		pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (e) Re-install the right GCU, M24205, in the E2-2 shelf. To install the GCU, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (f) Re-connect the connector to the ARINC 629 coupler, B24204, in the P111 panel.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.
- (8) If the problem is with the auxiliary GCU/ARINC 629 Right System Bus, then do this check of the wiring between the auxiliary GCU, M24305, and ARINC 629 coupler B24205:
 - (a) Remove the auxiliary GCU, M24305, from the E2-3 shelf. To remove the GCU, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Disconnect the connector from ARINC 629 coupler B24205 in the P211 panel (WDM 24-28-31).
 - (c) Do a wiring check between the following pins of the GCU connector at the E2-3 shelf and the ARINC 629 connector at the P211 panel:

DM24305AC DB24205

pin 2T	.....	pin 2
pin 2TR	.....	pin 1
pin 5T	.....	pin 5
pin 5TR	.....	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (e) Re-install the right GCU, M24305, in the E2-3 shelf. To install the GCU, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (f) Re-connect the connector to the ARINC 629 coupler, B24205, in the P111 panel.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.

————— END OF TASK —————

804. Left GCU Frequency Reference Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31691.

B. Fault Isolation Procedure

- (1) Replace the left GCU, M24105.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

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Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (c) Do a wiring check between these pins of connector DM24105AA at the E1-1 shelf, and connector DM24002 at the E1-1 shelf (WDM 24-28-41):

DM24105AA

pin A1
pin A2

DM24002AA

pin A1
pin A2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (3) Replace the BPCU, M24002.
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

805. GCU Sustained Parallel Source Wiring Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31861, 24-31862.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24 Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.

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- (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the ground display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a wiring check between the applicable pins of the connector at the Generator Control Unit (GCU) and the connector at the Bus Power Control Unit (BPCU) (WDM 24-22-11) and (WDM 24-22-21):

	GCU	BPCU
L, M24105	DM24105AB	DM24002AB
	pin E4	pin A4

	GCU	BPCU
R, M24205	DM24205AB	DM24002AB
	pin E4	pin A6

- (a) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Do this ground test on the MAT: 24 Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - 3) If the maintenance message does not show on the ground test display, you corrected the fault.
- (b) If you do not find a problem with the wiring, then continue.
- (2) Do this check of the applicable GCU:
 - (a) Make sure the BATTERY switch (P5 panel) is in the ON position.
 - (b) Make sure the STANDBY POWER (P61 panel) switch is in the AUTO position.
 - (c) Push the applicable BUS TIE (P5 panel) switch to the ISLN position.
 - 1) Make sure the applicable ISLN light on the switch comes on.
 - (d) Push the applicable BUS TIE switch.
 - 1) Make sure the applicable ISLN light on the switch goes off.
 - (e) Push the applicable GEN CTRL switch to the OFF position.
 - 1) Make sure the applicable OFF light on the switch comes on.
 - (f) Push the applicable GEN CTRL switch to the ON position.
 - 1) Make sure the applicable OFF light on the switch goes off.
 - (g) If all the lights in the check of the GCU did not operate as specified above, then do these steps:
 - 1) Replace the applicable GCU.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 2) Do this ground test on the MAT: 24 Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.

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- 3) If the maintenance message does not show on the ground test display, you corrected the fault.
- (h) If all the lights in the check of the GCU operate as specified above, then continue.
- (3) Replace the BPCU.
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) Do this ground test on the MAT: 24 Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— END OF TASK —————

806. AGCU Sustained Parallel Source Wiring Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31863.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24 Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a wiring check between these pins of connector DM24305AB at the E2-3 shelf and connector DM24002AB at the E1-1 shelf (WDM 24-22-31 and WDM 24-22-31):

DM24105AB	DM24002AB
pin E4	pin A8

- (a) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Do this ground test on the MAT: 24 Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - 3) If the maintenance message does not show on the ground test display, you corrected the fault.
- (b) If you do not find a problem with the wiring, then continue.
- (2) Do this test for the auxiliary generator control unit (AGCU):
 - (a) Make sure the APU GEN switch on the P5 panel is in the OFF (released) position.
 - (b) Make sure the STANDBY POWER switch is in the AUTO position.

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- (c) Start the APU. To start the APU, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (d) Push the applicable APU GEN switch to the ON (latched) position.
 - 1) Make sure the applicable ON light in the switch come on.
 - 2) Make sure no no maintenance messages related to AGCU show in Existing Faults on the MAT.
- (e) If you find a problem with the AGCU, then do these steps:
 - 1) Replace the auxiliary generator control unit (AGCU), M24305.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 2) Do this ground test on the MAT: 24 Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - 3) If the maintenance message does not show on the ground test display, you corrected the fault.
- (f) If you do not find a problem with the AGCU, then continue.
- (3) Replace the bus power control unit (BPCU), M24002.
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) Do this ground test on the MAT: 24 Main AC Electrical Power Generation System, Operational Test, Main-Manually Initiated Ground Self Test.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— **END OF TASK** —————

807. Left Fuel Cutoff At Left GCU Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-33451.

B. Fault Isolation Procedure

- (1) Replace the relay, K76104 (SSM 24-22-11).
 - (a) If the MAT shows NOT ACTIVE for the maintenance (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows LATCHED for the maintenance message, then continue.
- (2) Do this check of the left fuel cutoff wiring between the power management panel (P110) and the left generator control unit (GCU) (SSM 24-22-11).
 - (a) Disconnect connector D11032 from the P110 panel.
 - (b) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Do a wiring check between pin 25 of connector D11032 and pin G9 of connector DM24105AA.
 - (d) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Re-connect connector D11032 to the P110 panel.
- 3) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (3) Do this check of the left fuel cutoff wiring between the power management panel (P110) receptacle and relay K76104 receptacle (SSM 24-22-11).
 - (a) Remove the relay, K76104 (SSM 24-22-11).
 - (b) Do a wiring check between pin B3 of relay K76104 and pin 25 of connector D11032.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D11032 to the P110 panel.
 - 3) Re-install the relay, K76104 (SSM 24-22-11).
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector D11032 to the P110 panel.
 - 2) Re-install the relay, K76104 (SSM 24-22-11).
- (4) Replace the left GCU, M24105.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

808. GCU Communication Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-38801, 24-38802, 24-38803.

B. Fault Isolation Procedure

- (1) Replace the applicable generator control unit, M24105, M24205, or M24305.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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809. GCU Has Arinc 629 Bus Communication Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-33391, 24-33392, 24-33393, 24-33401, 24-33402, 24-33403, 24-38841, 24-38842, 24-38843, 24-38861, 24-38862, 24-38863, 24-39401, 24-39402, 24-39403, 24-39601, 24-39602, 24-39603.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (3) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
(b) Disconnect the applicable connector from the coupler.
(c) Do a wiring check between the pins of these connectors (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, or WDM 24-28-31 for the AGCU):

LEFT GCU, E1-1 SHELF

	M24105	COUPLER B24103, P111 PANEL
ARINC 629 BUS-L	DM24105AC	DB24103
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

RIGHT GCU, E2-2 SHELF

	M24205	COUPLER B24104, P111 PANEL
ARINC 629 BUS-L	DM24205AC	DB24104
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

AGCU, E2-3 SHELF

	M24305	COUPLER B24105, P111 PANEL
ARINC 629 BUS-L	DM24105AC	DB24105
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

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LEFT GCU, E1-1 SHELF

ARINC 629 BUS-R-	COUPLER B24203, P211 PANEL	
	M24105	
	DM24105AC	DB24203
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

RIGHT GCU, E2-2 SHELF

ARINC 629 BUS-R	COUPLER B24204, P211 PANEL	
	M24205	
	DM24205AC	DB24204
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

AGCU, E2-3 SHELF

ARINC 629 BUS-R	COUPLER B24205, P211 PANEL	
	M24305	
	DM24305AC	DB24205
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.
 - 3) Re-connect the connector to the applicable coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

810. GCU No Input From AFDC On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39404, 24-39405, 24-39406, 24-39604, 24-39605, 24-39606.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the autopilot flight director computer (AFDC), M22101.

These are the tasks:

Autopilot Flight Director Computer Removal, AMM TASK 22-11-01-000-801,

Autopilot Flight Director Computer Installation, AMM TASK 22-11-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the AFDC to the Systems 629 Bus.

COUPLER	PANEL	629 BUS
B22104	P111	LEFT
B22205	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, or WDM 24-28-31 for the AGCU):

LEFT GCU, E1-1 SHELF

ARINC 629 BUS-L	M24105	COUPLER B24103, P111 PANEL
	DM24105AC	DB24103
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

RIGHT GCU, E2-2 SHELF

ARINC 629 BUS-L	M24205	COUPLER B24104, P111 PANEL
	DM24205AC	DB24104
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

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AGCU, E2-3 SHELF

ARINC 629 BUS-L	M24305	COUPLER B24105, P111 PANEL
	DM24305AC	DB24105
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

LEFT GCU, E1-1 SHELF

ARINC 629 BUS-R	M24105	COUPLER B24203, P211 PANEL
	DM24105AC	DB24203
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

RIGHT GCU, E1-1 SHELF

ARINC 629 BUS-R	M24205	COUPLER B24204, P211 PANEL
	DM24205AC	DB24204
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

AGCU, E2-3 SHELF

ARINC 629 BUS-R	M24305	COUPLER B24205, P211 PANEL
	DM24305AC	DB24205
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.

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- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the AFDC to the coupler:
 - (a) Disconnect the applicable connector from the AFDC.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 22-11-18):

ADFC, E1-3 SHELF		
		COUPLER B22104 P111 PANEL
ARINC 629 BUS-L	CONNECTOR DM22101AD	
	pin 2T	pin 5
	pin 2TR	pin 4
	pin 5T	pin 2
	pin 5TR	pin 1

ADFC, E2-5 SHELF		
		COUPLER B22204 P211 PANEL
ARINC 629 BUS-R	CONNECTOR DM22201AD	
	pin 2T	pin 5
	pin 2TR	pin 4
	pin 5T	pin 2
	pin 5TR	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the AFDC.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

811. GCU No Input From AGCU On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39407, 24-39408, 24-39607, 24-39608.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the auxiliary generator control unit (AGCU), M24305, if you did not replace the AGCU in the above task.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the AGCU to the Systems 629 Bus and should be replaced if you did not replace the coupler in the above task.

COUPLER	PANEL	629 BUS
B24105	P111	LEFT
B24205	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11 for Left GCU, WDM 24-28-21 for Right GCU, or WDM 24-28-31 for AGCU):

Left GCU, E1-1 Shelf

	Coupler
M24105	B24103, P111
DM24105AC	panel ARINC
	629 BUS-L
	DB24103
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

Right GCU, E2-2 Shelf

	Coupler
M24205	B24104, P111
DM24205AC	panel ARINC
	629 BUS-L
	DB24104
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

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AGCU, E2-3 Shelf

	Coupler
	B24105, P111
	panel ARINC
M24305	629 BUS-L
DM24305AC	DB24105
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

Left GCU, E1-1 Shelf

	Coupler
	B24203, P211
	panel ARINC
M24105	629 BUS-R
DM24105AC	DB24203
pin 2T	pin 2
pin 2TR	pin 1
pin 5T	pin 5
pin 5TR	pin 4

Right GCU, E2-2 Shelf

	Coupler
	B24204, P211
	panel ARINC
M24205	629 BUS-R
DM24205AC	DB24204
pin 2T	pin 2
pin 2TR	pin 1
pin 5T	pin 5
pin 5TR	pin 4

AGCU, E2-3 Shelf

	Coupler
	B24205, P211
	panel ARINC
M24305	629 BUS-R
DM24305AC	DB24205
pin 2T	pin 2
pin 2TR	pin 1
pin 5T	pin 5
pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.

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- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the AGCU to the coupler if you did not check the wiring in the above task:
 - (a) Disconnect the applicable connector from the AGCU.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 24-28-31):

AGCU, E2-3 SHELF

		COUPLER B24105 P111 PANEL
ARINC 629 BUS-L	M24305 DM24305AC	
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

AGCU, E2-3 SHELF

		COUPLER B24205 P211 PANEL
ARINC 629 BUS-R	M24305 DM24305AC	
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the AGCU.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

812. GCU No Input From APUC On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39410, 24-39411, 24-39412, 24-39610, 24-39611, 24-39612.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the APU controller (APUC), M49002.

These are the tasks:

APU Controller (APUC) Removal, AMM TASK 49-61-05-000-801,

APU Controller (APUC) Installation, AMM TASK 49-61-05-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the APUC to the Systems 629 Bus.

COUPLER	PANEL	629 BUS
B49101	P115	LEFT
B49201	P215	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the GCU to the coupler:
- NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.
- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, or WDM 24-28-31 for the AGCU):

Left GCU, E1-1 Shelf

	Coupler B24103, P111 panel, ARINC 629 BUS-L DB24103
M24105	
DM24105AC	
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

Right GCU, E2-2 Shelf

	Coupler B24104, P111 panel, ARINC 629 BUS-L DB24104
M24205	
DM24205AC	
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

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AGCU, E2-3 Shelf

	Coupler B24105, P111 panel, ARINC 629 BUS-L DB24105
M24305	
DM24305AC	
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

Left GCU, E1-1 Shelf

	Coupler B24203, P211 panel, ARINC 629 BUS-R DB24203
M24105	
DM24105AC	
pin 2T	pin 2
pin 2TR	pin 1
pin 5T	pin 5
pin 5TR	pin 4

Right GCU, E2-2 Shelf

	Coupler B24204, P211 panel, ARINC 629 BUS-R DB24204
M24205	
DM24205AC	
pin 2T	pin 2
pin 2TR	pin 1
pin 5T	pin 5
pin 5TR	pin 4

AGCU, E2-3 Shelf

	Coupler B24205, P211 panel, ARINC 629 BUS-R DB24205
M24305	
DM24305AC	
pin 2T	pin 2
pin 2TR	pin 1
pin 5T	pin 5
pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.

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- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the APUC to the coupler:
 - (a) Disconnect the applicable connector from the APUC.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 49-61-11):

APUC, E7 SHELF

ARINC 629 BUS-L	CONNECTOR	COUPLER
		B49101 P115 PANEL
	DM49002AC	DB49101
	pin 2T	pin 5
	pin 2TR	pin 4
	pin 5T	pin 2
	pin 5TR	pin 1

APUC, E7 SHELF

ARINC 629 BUS-R	CONNECTOR	COUPLER
		B49201 P215 PANEL
	DM49002AC	DB49201
	pin 1T	pin 5
	pin 1TR	pin 4
	pin 4T	pin 2
	pin 4TR	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the AFDC.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

813. GCU No Input From The Converter On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39413, 24-39414, 24-39415, 24-39613, 24-39614, 24-39615.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup converter to the Systems 629 Bus.

COUPLER	PANEL	629 BUS
B24102	P111	LEFT
B24202	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, or WDM 24-28-31 for the AGCU):

LEFT GCU, E1-1 SHELF

ARINC 629 BUS-L	M24105	COUPLER B24103 P111 PANEL
	DM24105AC	DB24103
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

RIGHT GCU, E2-2 SHELF

ARINC 629 BUS-L	M24205	COUPLER B24104 P111 PANEL
	DM24205AC	DB24104
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

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AGCU, E2-3 SHELF

ARINC 629 BUS-L	COUPLER B24105 P111 PANEL	
	M24305	
	DM24305AC	DB24105
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

LEFT GCU, E1-1 SHELF

ARINC 629 BUS-R	COUPLER B24203 P211 PANEL	
	M24105	
	DM24105AC	DB24203
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

RIGHT GCU, E2-2 SHELF

ARINC 629 BUS-R	COUPLER B24204 P211 PANEL	
	M24205	
	DM24205AC	DB24204
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

AGCU, E2-3 SHELF

ARINC 629 BUS-R	COUPLER B24205 P211 PANEL	
	M24305	
	DM24305AC	DB24205
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.

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- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the backup converter to the coupler:
 - (a) Disconnect the applicable connector from the AFDC.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 24-25-33):

BACKUP CONVERTER, E4-4 SHELF		
		COUPLER
		B24102 P111
		PANEL
ARINC 629	CONNECTOR	
BUS-L	DM24008A	DB24102
	pin 5	pin 5
	pin 4	pin 4
	pin 2	pin 2
	pin 1	pin 1

BACKUP CONVERTER, E4-4 SHELF		
		COUPLER
		B24202 P211
		PANEL
ARINC 629	CONNECTOR	
BUS-R	DM24008B	DB24202
	pin 5	pin 5
	pin 4	pin 4
	pin 2	pin 2
	pin 1	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the AFDC.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

814. GCU No Input From The BPCU On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39416, 24-39417, 24-39418, 24-39616, 24-39617, 24-39618.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the bus power control unit (BPCU), M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,

BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the BPCU to the Systems 629 Bus.

COUPLER	PANEL	629 BUS
B24106	P111	LEFT
B24206	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, or WDM 24-28-31 for the AGCU):

LEFT GCU, E1-1 SHELF

	M24105	COUPLER B24103 P111 PANEL
ARINC 629 BUS-L	DM24105AC	DB24103
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

RIGHT GCU, E2-2 SHELF

	M24205	COUPLER B24104 P111 PANEL
ARINC 629 BUS-L	DM24205AC	DB24104
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

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AGCU, E2-3 SHELF

ARINC 629 BUS-L	M24305	COUPLER B24105 P111 PANEL
	DM24305AC	DB24105
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

LEFT GCU, E1-1 SHELF

ARINC 629 BUS-R	M24105	COUPLER B24203 P211 PANEL
	DM24105AC	DB24203
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

RIGHT GCU, E2-2 SHELF

ARINC 629 BUS-R	M24205	COUPLER B24204 P211 PANEL
	DM24205AC	DB24204
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

AGCU, E2-3 SHELF

ARINC 629 BUS-R	M24305	COUPLER B24205, P211 PANEL
	DM24305AC	DB24205
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.

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- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the BPCU to the coupler:
 - (a) Disconnect the applicable connector from the BPCU.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 24-28-41):

BPCU, E1-1 SHELF		
		COUPLER
		B24106 P111
		PANEL
ARINC 629	CONNECTOR	
BUS-L	DM24002AC	DB24106
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

BPCU, E1-1 SHELF		
		COUPLER
		B24206 P211
		PANEL
ARINC 629	CONNECTOR	
BUS-R	DM24002AC	DB24206
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the BPCU.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

816. GCU No Input From AIMS On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39425, 24-39426, 24-39427, 24-39440, 24-39441, 24-39442, 24-39625, 24-39626, 24-39627, 24-39640, 24-39641, 24-39642.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable I/O module in the AIMS cabinet.

These are the tasks:

Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801,

Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.

AIMS CABINET	ARINC 629 BUS	I/O MODULE
LEFT	LEFT	M009
LEFT	RIGHT	M004
RIGHT	LEFT	M009
RIGHT	RIGHT	M004

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT

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COUPLER	GCU	PANEL	629 BUS
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the AIMS cabinet to the Systems 629 Bus.

AIMS	COUPLER	PANEL	629 BUS
LEFT	B31112	P111	LEFT
LEFT	B31211	P211	RIGHT
RIGHT	B31116	P111	LEFT
RIGHT	B31214	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, or WDM 24-28-31 for the AGCU):

Left GCU, E1-1 Shelf

ARINC 629 BUS-L	M24105	Coupler B24103, P111 panel
	DM24105AC	DB24103
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

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Right GCU, E2-2 Shelf

ARINC 629 BUS-L	M24205	Coupler B24104, P111 panel	
		DB24104	
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6T	pin 5
		pin 6TR	pin 4

AGCU, E2-3 Shelf

ARINC 629 BUS-L	M24305	Coupler B24105, P111 panel	
		DB24105	
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6T	pin 5
		pin 6TR	pin 4

Left GCU, E1-1 Shelf

ARINC 629 BUS-R	M24105	Coupler B24203, P211 panel	
		DB24203	
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4

Right GCU, E2-2 Shelf

ARINC 629 BUS-R	M24205	Coupler B24204, P211 panel	
		DB24204	
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4

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AGCU, E2-3 Shelf

ARINC 629 BUS-R	M24305	Coupler B24205, P211 panel
	DM24305AC	DB24205
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.
 - 3) Re-connect the connector to the applicable coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the AIMS cabinets to the coupler:
- (a) Remove the IOM 3(M004) and IOM 1(M009) modules from the left and right AIMS cabinets. To remove them, do this task: Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 31-41-25 for the Left AIMS Cabinet or WDM 31-41-26 for the Right AIMS Cabinet:

Left AIMS Cabinet, E3-1 Shelf

ARINC 629 BUS-L	M31101	Coupler B31112, P111 panel
	J420B	DB31112
	pin G3	pin 5
	pin G4	pin 4
	pin G1	pin 2
	pin G2	pin 1

Left AIMS Cabinet, E3-1 Shelf

ARINC 629 BUS-R	M31101	Coupler B31211, P211 panel
	J250B	DB31211
	pin G3	pin 5
	pin G4	pin 4
	pin G1	pin 2
	pin G2	pin 1

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Right AIMS Cabinet, E2-1 Shelf		
	M31201	Coupler B31116, P111 panel
ARINC 629 BUS-L	J420B	DB31116
	pin G3	pin 5
	pin G4	pin 4
	pin G1	pin 2
	pin G2	pin 1

Right AIMS Cabinet, E2-1 Shelf		
	M31201	Coupler B31214, P211 panel
ARINC 629 BUS-R	J250B	DB31214
	pin G3	pin 5
	pin G4	pin 4
	pin G1	pin 2
	pin G2	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-install the IOM 3(M004) and IOM 1(M009) modules in the left and right AIMS cabinets. To install them, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

817. GCU Has No Input From The ARINC Signal Gateway On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39428, 24-39429, 24-39430, 24-39443, 24-39444, 24-39445, 24-39628, 24-39629, 24-39630, 24-39643, 24-39644, 24-39645.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
- Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable ARINC signal gateway (ASG) card, in the systems card file (SCF) shown below.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

SYSTEM CARDFILE	629 BUS	GATEWAY CARD
LEFT	LEFT	P85A12
LEFT	RIGHT	P85A15
RIGHT	LEFT	P84A12
RIGHT	RIGHT	P84A12

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

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ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the ACG card to the Systems 629 Bus.

ASG CARD	COUPLER	PANEL	629 BUS
P85A12	B31101	P111	LEFT
P85A15	B31102	P211	RIGHT
P84A12	B31201	P111	LEFT
P84A15	B31202	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, or WDM 24-28-31 for the AGCU):

Left GCU, E1-1 Shelf

ARINC 629 BUS-L	M24105	Coupler B24103, P111 panel
	DM24105AC	DB24103
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

Right GCU, E2-2 Shelf

ARINC 629 BUS-L	M24205	Coupler B24104, P111 panel
	DM24205AC	DB24104
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

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AGCU, E2-3 Shelf

ARINC 629 BUS-L	M24305	Coupler B24105, P111 panel	
		DB24105	
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6T	pin 5
		pin 6TR	pin 4

Left GCU, E1-1 Shelf

ARINC 629 BUS-R	M24105	Coupler B24203, P211 panel	
		DB24203	
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4

Right GCU, E2-2 Shelf

ARINC 629 BUS-R	M24205	Coupler B24204, P211 panel	
		DB24204	
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4

AGCU, E2-3 Shelf

ARINC 629 BUS-R	M24305	Coupler B24205, P111 panel	
		DB24205	
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.

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- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the ASG card to the coupler:
 - (a) Remove the applicable ASG card. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 31-09-12 for the SCF, P85 and WDM 31-09-22 for the SCF, P84):

Left ASG Card, A12 in SCF, P85

	ARINC BUS-L	Coupler B31101, P111 panel
ARINC 629 BUS-L	XA12	DB31101
	pin TA9	pin 2
	pin TB6	pin 1
	pin RA10	pin 5
	pin RB7	pin 4

Right ASG Card, A15 in SCF, P85

	ARINC BUS-R	Coupler B31102, P211 panel
ARINC 629 BUS-R	XA15	DB31102
	pin TA9	pin 2
	pin TB6	pin 1
	pin RA10	pin 5
	pin RB7	pin 4

Left ASG Card, A12 in SCF, P84

	ARINC BUS-L	Coupler B31201, P111 panel
ARINC 629 BUS-L	XA12	DB31201
	pin TA9	pin 2
	pin TB6	pin 1
	pin RA10	pin 5
	pin RB7	pin 4

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Right ASG Card, A15 in SCF, P84

Coupler
B31202, P211
panel

ARINC 629 BUS-R	ARINC BUS-R	
	XA15	DB31202
	pin TA9	pin 2
	pin TB6	pin 1
	pin RA10	pin 5
	pin RB7	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-install the ASG card. To install it, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

843. Generator Control Unit (L) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (left).

A. Maintenance Messages

- (1) This task is for maintenance message: 24-39431.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the left generator control unit, M24105 (P210, P310).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do a check of the Computing and Comm Unit, M24506 (P210).

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (3) Replace the left ARINC 629 coupler, B24108 in P111 (ELMS P210).
These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the left ARINC 629 coupler, B24103 in P111 ((GCU-L)).
These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- NOTE: This coupler connects the GCU to the Systems 629 Bus.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

844. Generator Control Unit (R) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (left).

A. Maintenance Messages

- (1) This task is for maintenance message: 24-39432.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right generator control unit, M24205 (P210, P310).
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do a check of the Computing and Comm Unit, M24506 (P210).
This is the task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the left ARINC 629 coupler, B24104 in P111 ((GCU-R)).
These are the tasks:

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ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the left ARINC 629 coupler, B24108 in P111 (ELMS P210).

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

845. Auxiliary Generator Control Unit (AGCU) has no input from ELMS P210 Electronics Unit on System ARINC 629 Bus (left).

A. Maintenance Messages

- (1) This task is for maintenance message: 24-39433.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the auxiliary generator control unit (AGCU), M24305 (P310).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do a check of the Computing and Comm Unit, M24506 (P210).

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the left ARINC 629 coupler, B24105 in P111 (AGCU).

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

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ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the left ARINC 629 coupler, B24108 in P111 (ELMS P210).

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

819. GCU-R Or AGCU No Input From GCU-L On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39435, 24-39436, 24-39635, 24-39636, 24-39638, 24-39639.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU) or AGCU.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the left generator control unit (GCU-L), M24105, if you did not replace the GCU-L in the above task.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU-L to the Systems 629 Bus and should be replaced if you did not replace the coupler in the above task.

COUPLER	PANEL	629 BUS
B24103	P111	LEFT
B24203	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, and WDM 24-28-31 for the AGCU):

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Left GCU, E1-1 Shelf

ARINC 629 BUS-L	M24105	Coupler B24103, P111 panel	
		DB24103	
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6T	pin 5
		pin 6TR	pin 4
	DM24105AC		
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6T	pin 5
		pin 6TR	pin 4

Right GCU, E2-2 Shelf

ARINC 629 BUS-L	M24205	Coupler B24104, P111 panel	
		DB24104	
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6T	pin 5
		pin 6TR	pin 4
	DM24205AC		
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6T	pin 5
		pin 6TR	pin 4

AGCU, E2-3 Shelf

ARINC 629 BUS-L	M24305	Coupler B24105, P111 panel	
		DB24105	
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6T	pin 5
		pin 6TR	pin 4
	DM24305AC		
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6T	pin 5
		pin 6TR	pin 4

Left GCU, E1-1 Shelf

ARINC 629 BUS-R	M24105	Coupler B24203, P211 panel	
		DB24203	
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4
	DM24105AC		
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4

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Right GCU, E2-2 Shelf

ARINC 629 BUS-R	Coupler B24204, P211 panel	
	M24205	DB24204
	DM24205AC	
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

AGCU, E2-3 Shelf

ARINC 629 BUS-R	Coupler B24205, P111 panel	
	M24305	DB24205
	DM24305AC	
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.
 - 3) Re-connect the connector to the applicable coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the AGCU to the coupler if you did not check the wiring in the above task:
- (a) Disconnect the applicable connector from the GCU-L.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 24-28-11):

GCU-L, E1-1 shelf

ARINC 629 BUS-L	Coupler B24103, P111 panel	
	Connector	DB24103
	DM24105AC	
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

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GCU-L, E1-1 shelf

ARINC 629 BUS-R	Connector	Coupler B24203, P211 panel
	DM24105AC	DB24203
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU-L.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

820. GCU Has No Input From OPBC On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39437, 24-39438, 24-39439, 24-39449, 24-39450, 24-39451, 24-39637, 24-39649, 24-39650, 24-39651.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable overhead panel bus controller (OPBC), M23112 (left) or M23212 (right).
- These are the tasks:

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Left Overhead Panel Bus Controller (OPBC) Removal, AMM TASK 23-93-01-000-801,
Left Overhead Panel Bus Controller (OPBC) Installation, AMM TASK 23-93-01-400-801.

These are the tasks:

Right Overhead Panel Bus Controller (OPBC) Removal, AMM TASK 23-93-01-000-802,
Right Overhead Panel Bus Controller (OPBC) Installation, AMM TASK 23-93-01-400-802.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the APBC to the Systems 629 Bus.

OPBC	COUPLER	PANEL	629 BUS
LEFT	B23126	P111	LEFT
LEFT	B23226	P211	RIGHT
RIGHT	B23127	P111	LEFT
RIGHT	B23227	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11):

Left GCU, E1-1 Shelf

		Coupler B24103, P111 panel
	M24105	
ARINC 629	DM24105AC	DB24103
BUS-L	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

Right GCU, E2-2 Shelf

		Coupler B24104, P111 panel
	M24205	
ARINC 629	DM24205AC	DB24104
BUS-L	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

AGCU, E2-3 Shelf

		Coupler B24105, P111 panel
	M24305	
ARINC 629	DM24305AC	DB24105
BUS-L	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

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Left GCU, E1-1 Shelf

ARINC 629 BUS-R	M24105	Coupler B24203, P211 panel
	DM24105AC	DB24203
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

Right GCU, E2-2 Shelf

ARINC 629 BUS-R	M24205	Coupler B24204, P211 panel
	DM24205AC	DB24204
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

AGCU, E2-3 Shelf

ARINC 629 BUS-R	M24305	Coupler B24205, P111 panel
	DM24305AC	DB24205
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.
 - 3) Re-connect the connector to the applicable coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the OPBC to the coupler:
- (a) Disconnect the applicable connector from the OPBC.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 23-93-11 for the Left OPBC and WDM 23-93-21 for the Right OPBC):

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Left OPBC		
ARINC 629 BUS-L	M23112	Coupler B23126, P111 panel
	DM23112B	DB23126
	pin 5	pin 5
	pin 4	pin 4
	pin 2	pin 2
	pin 1	pin 1

Right OPBC		
ARINC 629 BUS-L	M23212	Coupler B23127, P111 panel
	DM23212B	DB23127
	pin 5	pin 5
	pin 4	pin 4
	pin 2	pin 2
	pin 1	pin 1

Right OPBC		
ARINC 629 BUS-R	M23212	Coupler B23227, P211 panel
	DM23212C	DB23227
	pin 5	pin 5
	pin 4	pin 4
	pin 2	pin 2
	pin 1	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the OPBC.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

821. GCU-L Or AGCU No Input From GCU-R On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39446, 24-39448, 24-39646, 24-39648.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU).

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

GCU	EQUIPMENT
LEFT	M24105
RIGHT	M24205
AUXILIARY (AGCU)	M24305

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the right generator control unit (GCU-R), M24205, if you did not replace the GCU-R in the above task.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU to the Systems 629 Bus.

COUPLER	GCU	PANEL	629 BUS
B24103	LEFT	P111	LEFT
B24104	RIGHT	P111	LEFT
B24105	AGCU	P111	LEFT
B24203	LEFT	P211	RIGHT
B24204	RIGHT	P211	RIGHT
B24205	AGCU	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler in the panel shown below.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the GCU-R to the Systems 629 Bus and should be replaced if you did not replace the coupler in the above task.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the GCU.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU and WDM 24-28-31 for the AGCU):

Left GCU, E1-1 Shelf

ARINC 629 BUS-L	M24105	Coupler B24103, P111 panel
	DM24105AC	DB24103
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6	pin 5
	pin 6TR	pin 4

Right GCU, E2-2 Shelf

ARINC 629 BUS-L	M24105	Coupler B24104, P111 panel
	DM24205AC	DB24104
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6	pin 5
	pin 6TR	pin 4

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AGCU, E2-3 Shelf

ARINC 629 BUS-L	M24305	Coupler B24105, P111 panel	
		DB24105	
		pin 3T	pin 2
		pin 3TR	pin 1
		pin 6	pin 5
		pin 6TR	pin 4

Left GCU, E1-1 Shelf

ARINC 629 BUS-R	M24105	Coupler B24203, P211 panel	
		DB24203	
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5	pin 5
		pin 5TR	pin 4

Right GCU, E2-2 Shelf

ARINC 629 BUS-R	M24205	Coupler B24204, P211 panel	
		DB24204	
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5	pin 5
		pin 5TR	pin 4

AGCU, E2-3 Shelf

ARINC 629 BUS-L	M24305	Coupler B24105, P111 panel	
		DB24105	
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5	pin 5
		pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU.

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- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the GCU-R to the coupler if you did not check the wiring in the above task:
 - (a) Disconnect the applicable connector from the GCU-R.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors (WDM 24-28-21):

GCU-R		
	E2-2 SHELF	Coupler B24104, P111 panel
ARINC 629 BUS-L	DM24205AC	DB24104
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

GCU-R		
	E2-2 SHELF	Coupler B24204, P211 panel
ARINC 629 BUS-R	DM24205AC	DB24204
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the GCU-R.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

822. APU Generator Current Transformer (CT) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31503.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the APU generator.

These are the tasks:

APU Generator Removal, AMM TASK 24-21-01-000-801,

APU Generator Installation, AMM TASK 24-21-01-400-801.

- (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the wiring:
 - (a) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - (b) Disconnect connector DM24003B from the APU generator, M24003 (WDM 24-21-31).
 - (c) Remove the APU GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (d) Do a wiring check between these pins of connector DM24003B at the APU generator, and connector DM24305AB at the E2-3 shelf (WDM 24-21-31):

DM24003B

pin 3	.....	pin J6
pin 4	.....	pin G6
pin 5	.....	pin E6
pin 2	.....	pin C6

DM24305AB

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - (f) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - (g) Re-connect connector DM24003B to the APU generator (WDM 24-21-31).
 - (h) Push the APU GEN switch on the P5 panel two times.
 - (i) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.

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- (j) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.
- (k) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Replace the APU GCU, M24305.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Push the APU GEN switch on the P5 panel two times.
- (b) Do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

823. APU Fire Switch Has Been Pulled - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31533.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the applicable APU GEN switch on the P5 panel two times.
 - (b) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the APU fire switch, S26401. To replace the switch,
These are the tasks:
Engine Fire Switch Removal, AMM TASK 26-21-03-000-801,
Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.
 - (a) Push the APU GEN switch on the P5 panel two times.
 - (b) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the wiring between the APU fire switch and the APU GCU (WDM 24-22-11).
 - (a) Remove the APU GCU, M24305. To remove the GCU, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.

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- (b) Remove the APU fire switch, S26401. To remove the switch, do this task: Engine Fire Switch Removal, AMM TASK 26-21-03-000-801.
- (c) Do a wiring check between these pins of connector DS26401 at the P8 panel and connector DM24305AB at the E2-3 shelf:

DM24305AB	DS26401
pin C4	pin 40

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the APU GCU, M24305. To install the GCU, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-install the APU fire switch, S26401. To install the switch, do this task: Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the APU fire switch, S26401. To install the switch, do this task: Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.
- (3) Replace the APU GCU, M24305. To replace the GCU,
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

824. Tie Bus or Main Bus Current is High - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31141, 24-31142, 24-31161, 24-31162, 24-31171, 24-31701, 24-31702, 24-31703.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Use secondary external power to supply power to the left and right main AC buses.
NOTE: To unlatch this maintenance message, you must power both main AC buses with secondary external power only. To power both main AC buses, supply secondary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do these steps to find a short to ground on the tie bus.
 - (a) Put the L BUS TIE and R BUS TIE switches in the ISLN position.
 - (b) Supply secondary external power.
 - 1) If secondary external power trips off line, do this check of the wiring (SSM 24-21-32).
 - a) Remove the auxiliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- b) Remove the secondary external power contactor, K24023. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
- c) Remove the left and right bus tie breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- d) Do a wiring check between these receptacles for the left bus tie breaker, C24333 and the right bus tie breaker, C24334:

C24333	C24334
A1	A1
B1	B1
C1	C1

- e) Do a wiring check between these receptacles for the left bus tie breaker, C24333 and the auxiliary power breaker, C24335:

C24333	C24335
A1	A2
B1	B2
C1	C2

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- f) Do a wiring check between these receptacles for the left bus tie breaker, C24333 and the secondary external power contactor, K24023:

C24333	K24023
A1	A2
B1	B2
C1	C2

- 2) If you find a problem with the wiring, then do these steps:
- Repair the wiring.
 - Re-install the auxiliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- Re-install the secondary external power contactor, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- Re-install the left and right bus tie breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- Use secondary external power to supply power to the left and right main AC buses.

NOTE: To unlatch this maintenance message, you must power both main AC buses with secondary external power only. To power both main AC buses, supply secondary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.

- If the MAT shows NOT ACTIVE for the maintenance message, then you corrected the fault.
- 3) If you do not find a problem with the wiring, then do these steps:

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- a) Re-install the auxiliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- b) Re-install the secondary external power contactor, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- c) Re-install the left and right bus tie breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	3	C24334	R BTB

ARO 001-010

E	3	C24334	R BTB

ARO ALL

To install them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (c) Do the steps that follow to check for a short to ground on the left main AC bus.
- (2) Do these steps to find a short to ground on the left main AC bus.
- (a) Put the L BUS TIE switch in the AUTO position and the R BUS TIE switch in the ISLN position.
- (b) Supply secondary external power.
- (c) If secondary external power trips off line, do this check of the wiring (SSM 24-51-11).
- 1) Remove the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 2) Make sure there are no shorts to ground on the left BTB receptacle, pins A2, B2 and C2.
- 3) If you find a problem with the wiring, then do these steps:
- a) Repair the wiring.

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- b) Re-install the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- c) Use secondary external power to supply power to the left and right main AC buses.

NOTE: To unlatch this maintenance message, you must power both main AC buses with secondary external power only. To power both main AC buses, supply secondary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.

- d) If the MAT shows NOT ACTIVE for the maintenance message, then you corrected the fault.

- 4) If you do not find a problem with the wiring, then do these steps:

- a) Re-install the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- b) Do the steps that follow to check for a short to ground on the right main AC bus.

- (3) Do these steps to find a short to ground on the right main AC bus.

- (a) Put the L BUS TIE switch in the ISLN position and the R BUS TIE switch in the AUTO position.

- (b) Supply secondary external power.

- (c) If secondary external power trips off line, do this check of the wiring (SSM 24-51-11).

- 1) Remove the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	3	C24334	R BTB

ARO 001-010

E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 2) Make sure there are no shorts to ground on the right BTB receptacle, pins A2, B2 and C2.

- 3) If you find a problem with the wiring, then do these steps:

- a) Repair the wiring.

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- b) Re-install the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- c) Use secondary external power to supply power to the left and right main AC buses.

NOTE: To unlatch this maintenance message, you must power both main AC buses with secondary external power only. To power both main AC buses, supply secondary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.

- d) If the MAT shows NOT ACTIVE for the maintenance message, then you corrected the fault.

END OF TASK

825. Left BTB Position Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31181.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Use primary external power to supply power to the left and right main AC buses.
- NOTE: To unlatch this maintenance message, you must power both main AC buses with primary external power only. To power both main AC buses, supply primary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.
- 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- 2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,

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- (a) Use primary external power to supply power to the left and right main AC buses.

NOTE: To unlatch this maintenance message, you must power both main AC buses with primary external power only. To power both main AC buses, supply primary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.

- 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (2) Do this check of the wiring (WDM 24-22-11):

- (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.

- (b) Remove the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of connector DM24105AA at the E1-1 shelf, and connector DC24333, at the left power panel, P100:

DM24105AA	DC24333
pin K5	pin 2
pin J7	pin 1
pin C4	pin 5

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- 3) Re-install the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) Use primary external power to supply power to the left and right main AC buses.

NOTE: To unlatch this maintenance message, you must power both main AC buses with primary external power only. To power both main AC buses, supply primary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.

- a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Replace the left GCU, M24105.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Use primary external power to supply power to the left and right main AC buses.

NOTE: To unlatch this maintenance message, you must power both main AC buses with primary external power only. To power both main AC buses, supply primary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.

- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

826. Right BTB Position Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31182.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Use primary external power to supply power to the left and right main AC buses.
- NOTE: To unlatch this maintenance message, you must power both main AC buses with primary external power only. To power both main AC buses, supply primary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.
- 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- 2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

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- (a) Use primary external power to supply power to the left and right main AC buses.

NOTE: To unlatch this maintenance message, you must power both main AC buses with primary external power only. To power both main AC buses, supply primary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.

- 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (2) Do this check of the wiring:

- (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (b) Remove the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of connector DM24205AA at the E2-2 shelf, and connector DC24334, at the right power panel, P200 (WDM 24-22-21):

DM24205AA	DC24334
pin K5	pin 2
pin J7	pin 1
pin C4	pin 5

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- 3) Re-install the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

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- 4) Use primary external power to supply power to the left and right main AC buses.

NOTE: To unlatch this maintenance message, you must power both main AC buses with primary external power only. To power both main AC buses, supply primary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.

- a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (3) Replace the right GCU, M24205.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Use primary external power to supply power to the left and right main AC buses.

NOTE: To unlatch this maintenance message, you must power both main AC buses with primary external power only. To power both main AC buses, supply primary external power and put the L BUS TIE and R BUS TIE switches in the AUTO position.

- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

827. Main Bus Overload Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31191, 24-31192.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Put the L BUS TIE and R BUS TIE switches in the ISLN position.
 - (a) Put the PRIMARY EXT PWR switch in the AVAIL position.
 - (b) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.

NOTE: Keep the L and R BUS TIE switches in the ISLN position when you supply secondary power.
 - (c) If the secondary external power trips off line, then do this check of the wiring (WDM 24-21-32):

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- 1) Remove the auxilliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 2) Remove the secondary external power contactor, K24023. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
- 3) Remove the left and right bus tie breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	3	C24334	R BTB

ARO 001-010

E	3	C24334	R BTB

ARO ALL

To remove them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 4) Do a wiring check between A2, B2 and C2 of the auxiliary power breaker receptacle and A2, B2 and C2 of the secondary external power contactor receptacle.
- 5) Do a wiring check between A2, B2 and C2 of the auxiliary power breaker receptacle and A1, B1 and C1 of the right bus tie breaker receptacle.
- 6) Do a wiring check between A1, B1 and C1 of the right bus tie breaker receptacle and A1, B1 and C1 of the left bus tie breaker receptacle.
- 7) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the auxilliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- c) Re-install the secondary external power contactor, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.

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- d) Re-install the left and right bus tie breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	3	C24334	R BTB

ARO 001-010

E	3	C24334	R BTB

ARO ALL

To install them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- e) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
- f) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
- g) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- 8) If you do not find a problem with the wiring, then continue.
- (d) If secondary external power does not trip off line, then continue.
- (2) Put the L BUS TIE switch in the AUTO position and the R BUS TIE switch in the ISLN position.
- (a) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
- NOTE:** Keep the L BUS TIE switch in the AUTO position and the R BUS TIE switch in the ISLN position when you supply secondary power.
- (b) If secondary external power trips off line, then do this check of the wiring (WDM 24-21-32):

- 1) Remove the left generator control breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 2) Remove the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

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- 3) Do a wiring check between A2, B2 and C2 of the left generator control breaker receptacle and A2, B2 and C2 of the left bus tie breaker receptacle.
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left generator control breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
- 5) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
- 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (d) If you do not find a problem with the wiring, then continue.
- (e) If secondary external power does not trip off line, then continue.
- (3) Put the R BUS TIE switch in the AUTO position and the L BUS TIE switch in the ISLN position.
 - (a) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.

NOTE: Keep the R BUS TIE switch in the AUTO position and the L BUS TIE switch in the ISLN position when you supply secondary power.
 - (b) If secondary external power trips off line, then do this check of the wiring (WDM 24-21-32):
 - 1) Remove the right generator control breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

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- 2) Remove the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	3	C24334	R BTB

ARO 001-010

E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 3) Do a wiring check between A2, B2 and C2 of the right generator control breaker receptacle and A2, B2 and C2 of the right bus tie breaker receptacle.
- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right generator control breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	3	C24334	R BTB

ARO 001-010

E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (d) If you do not find a problem with the wiring, then continue.

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- (e) If secondary external power does not trip off line, then continue.
- (4) Do this check of the wiring (SSM 24-09-61, 24-09-62).
 - (a) Remove the left and right generator control breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To remove them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Remove the left and right bus tie breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Remove the primary and secondary external power contactor, K24022 and K24023. To remove them, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
- (d) Remove the auxiliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (e) Do a wiring check between pin 15 of the left generator control breaker receptacle, pin 28 of the right bus tie breaker receptacle, and pins 26 and 16 of the left bus tie breaker.

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- (f) Do a wiring check between pin 25 of the left bus tie breaker receptacle, and pin 27 of the right bus tie breaker receptacle.
- (g) Do a wiring check between pin 15 of the left bus tie breaker receptacle, pin 7 of the secondary external power contactor, and pin 7 of the auxiliary power breaker receptacle.
- (h) Do a wiring check between pin 15 of the right generator control breaker receptacle, pin 7 of the primary external power contactor, pin 28 of the left bus tie breaker receptacle, and pins 26 and 16 of the right bus tie breaker receptacle.
- (i) Do a wiring check between pin 25 of the right bus tie breaker receptacle, and pin 27 of the left bus tie breaker receptacle.
- (j) Do a wiring check between pin 15 of the right bus tie breaker receptacle, pin 5 of the secondary external power contactor, and pin 15 of the auxiliary power breaker receptacle.
- (k) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left and right generator control breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the left and right bus tie breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

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- 4) Re-install the primary and secondary external power contactors, K24022 and K24023. To install them, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801

- 5) Re-install the auxiliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 6) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
 - 7) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 8) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (I) If you do not find a problem with the wiring, then continue.
- 1) Re-install the left and right generator control breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

To install them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 2) Re-install the left and right bus tie breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	3	C24334	R BTB

ARO 001-010

E	3	C24334	R BTB

ARO ALL

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To install them, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- a) Re-install the primary and secondary external power contactors, K24022 and K24023. To install them, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801
- 3) Re-install the auxiliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (5) Do a check of the signal interface unit 1, M24508.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- a) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (6) Replace the left generator control breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- a) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (7) Replace the right generator control breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

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These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
- 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (8) Replace the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
- 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (9) Replace the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
- 1) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, (or if the message does not show), you corrected the fault.

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- 2) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (10) Replace the primary external power contactor, K24022.
- These are the tasks:
- External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- (a) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (11) Replace the secondary external power contactor, K24023.
- These are the tasks:
- External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- (a) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (12) Replace the auxiliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) To unlatch this message, you must power both main AC buses with primary or secondary external power. Make sure the L BUS TIE and R BUS TIE switches are in the AUTO position to supply power to both main AC buses.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

828. Generator Control Switch (L) Circuit is Failed - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31491.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the L GEN CTRL switch, M24023-S5 (WDM 24-22-11).
 - (a) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (2) Replace the left generator circuit breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring:
 - (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Set the L GEN CTRL switch to ON.
 - (c) Do a wiring check between pin 119 and pin E4 of connector DM24105AA at the E1-1 shelf (WDM 24-22-11).
 - (d) If you find a problem with the wiring, then repair the wiring.
 - (e) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 1) Push the L GEN CTRL switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

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- (4) Do this check of the wiring:
 - (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Set the L GEN CTRL switch to OFF.
 - (c) Do a wiring check between pin 119 and pin J3 of connector DM24105AA at the E1-1 shelf (WDM 24-22-11).
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - (e) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 1) Push the L GEN CTRL switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (5) Replace the left GCU, M24105.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

829. Generator Control Switch (R) Circuit is Failed - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31492.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the R GEN CTRL switch, M24023-S9 (WDM 24-22-21).
 - (a) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.

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- 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring:
 - (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Set the R GEN CTRL switch to ON.
 - (c) Do a wiring check between pin 119 and pin E4 of connector DM24205AA at the E2-2 shelf (WDM 24-22-21).
 - (d) If you find a problem with the wiring, then repair the wiring.
 - (e) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 1) Push the R GEN CTRL switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do this check of the wiring:
 - (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Set the R GEN CTRL switch to OFF.
 - (c) Do a wiring check between pin 119 and pin J3 of connector DM24205AA at the E2-2 shelf (WDM 24-22-21).
 - (d) If you find a problem with the wiring, then repair the wiring.
 - (e) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 1) Push the R GEN CTRL switch two times.

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- a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (5) Replace the right GCU, M24205.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

830. APU Generator Switch Circuit is Failed - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31493.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the APU GEN switch, M24023-S2 (WDM 24-22-31).
 - (a) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the APU GCB, C24335.

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

 - (a) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring:

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- (a) Remove the APU GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Set the APU GEN switch to ON.
 - (c) Do a wiring check between pin 119 and pin E4 of connector DM24205AA at the E2-3 shelf (WDM 24-22-31).
 - (d) If you find a problem with the wiring, then repair the wiring.
 - (e) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 1) Push the APU GEN switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do this check of the wiring:
- (a) Remove the APU GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Set the APU GEN switch to OFF.
 - (c) Do a wiring check between pin 119 and pin J3 of connector DM24305AA at the E2-3 shelf (WDM 24-22-31).
 - (d) If you find a problem with the wiring, then repair the wiring.
 - (e) Re-install the APU GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 1) Push the APU GEN switch two times.
 - a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (5) Replace the APU GCU, M24305.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

END OF TASK

831. Right GCU Frequency Reference Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31692.

B. Fault Isolation Procedure

- (1) Replace the right GCU, M24205.

These are the tasks:

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Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (c) Do a wiring check between these pins of connector DM24205AA at the E2-2 shelf, and connector DM24002AA at the E1-1 shelf (WDM 24-28-41):

DM24205AA

pin A1
pin A2

DM24002AA

pin A1
pin A2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (3) Replace the BPCU, M24002.

These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

832. Left GCB Sense Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-32003.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:

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- (a) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the wiring (WDM 24-22-11).
 - (a) Remove the auxiliary GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of the left GCB receptacle connector DC24331 and connector DM24305AA on the E2-3 shelf.

DC24331	DM24305AA
pin 9	pin E1

- (d) Do a wiring check between pin 10 of the left GCB receptacle connector DC24331 and airplane ground.
 - 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the auxiliary GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Replace the auxiliary GCU, M24305.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.

END OF TASK

833. Right Fuel Cutoff At Left GCU Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-33461.

B. Fault Isolation Procedure

- (1) Replace the relay, K76204 (SSM 24-22-11).
 - (a) If the MAT shows NOT ACTIVE for the maintenance (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows LATCHED for the maintenance message, then continue.
- (2) Do this check of the right fuel cutoff wiring between the power management panel (P210) and the left generator control unit (GCU) (SSM 24-22-11).
 - (a) Disconnect connector D21032 from the P210 panel.
 - (b) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Do a wiring check between pin 4 of connector D21032 and pin G11 of connector DM24105AA.
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D21032 to the P210 panel.
 - 3) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.

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- 1) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (3) Do this check of the right fuel cutoff wiring between the power management panel (P210) receptacle and relay K76204 receptacle (SSM 24-22-11).
 - (a) Remove the relay, K76204 (SSM 24-22-11).
 - (b) Do a wiring check between pin B3 of relay K76204 and pin 4 of connector D21032.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D21032 to the P210 panel.
 - 3) Re-install the relay, K76204 (SSM 24-22-11).
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector D21032 to the P210 panel.
 - 2) Re-install the relay, K76204 (SSM 24-22-11).
- (4) Replace the left GCU, M24105.

These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance (or if the message does not show), you corrected the fault.

— END OF TASK —

834. Left Fuel Cutoff At Right GCU Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-33462.

B. Fault Isolation Procedure

- (1) Replace the relay, K76104 (SSM 24-22-11).
 - (a) If the MAT shows NOT ACTIVE for the maintenance (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows LATCHED for the maintenance message, then continue.
- (2) Do this check of the left fuel cutoff wiring between the power management panel (P110) and the right generator control unit (GCU) (SSM 24-22-11).
 - (a) Disconnect connector D11032 from the P110 panel.
 - (b) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Do a wiring check between pin 25 of connector D11032 and pin G11 of connector DM24205AA.
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D11032 to the P110 panel.

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- 3) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (3) Do this check of the left fuel cutoff wiring between the power management panel (P110) receptacle and relay K76104 receptacle (SSM 24-22-11).
 - (a) Remove the relay, K76104 (SSM 24-22-11).
 - (b) Do a wiring check between pin B3 of relay K76104 and pin 25 of connector D11032.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D11032 to the P110 panel.
 - 3) Re-install the relay, K76104 (SSM 24-22-11).
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector D11032 to the P110 panel.
 - 2) Re-install the relay, K76104 (SSM 24-22-11).
- (4) Replace the right GCU, M24105.

These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance (or if the message does not show), you corrected the fault.

END OF TASK

835. Auxiliary GCU 28 Volt Switch Power Wiring Short - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31103.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the APU GEN switch two times.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Replace the electrical module assembly, M24023.

These are the tasks:

Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801,

Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.

- (a) Push the APU GEN switch two times.
- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring (WDM 24-22-31):
- (a) Remove the auxiliary GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
- (b) Remove the electrical module assembly, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
- (c) Do a wiring check between these pins on connector DM24305A at the E2-3 shelf and connector DM24023C:

DM24305A	DM24023C
119	57

- (d) Do a wiring check between these pins on connector DM24023C at the electrical module assembly:

DM24023C	DM24023C
57	38

- (e) If you find a problem with the wiring, then repair the wiring, and do these steps:
- 1) Re-install the auxiliary GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 2) Re-install the electrical module assembly, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 3) Push the APU GEN switch two times.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (f) If you do not find a problem with the wiring, then continue.
- 1) Re-install the auxiliary GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (3) Do this check of the wiring (WDM 24-22-31):
- (a) Remove the APU fire switch, S26401. To remove it, do this task: APU Fire Switch Removal, AMM TASK 26-22-03-000-801.
- (b) Do a wiring check between these pins on connector DS26401 and connector DM24023C at the electrical module assembly:

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DS26401

21

DM24023C

38

- (c) If you find a problem with the wiring, then repair the wiring, and do these steps:
 - 1) Re-install the APU fire switch, S26401. To install it, do this task: APU Fire Switch Installation, AMM TASK 26-22-03-400-801.
 - 2) Re-install the electrical module assembly, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 3) Push the APU GEN switch two times.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— END OF TASK ————

836. Right Fuel Cutoff At Right GCU Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-33452.

B. Fault Isolation Procedure

- (1) Replace the relay, K76204 (SSM 24-22-11).
 - (a) If the MAT shows NOT ACTIVE for the maintenance (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows LATCHED for the maintenance message, then continue.
- (2) Do this check of the right fuel cutoff wiring between the power management panel (P210) and the right generator control unit (GCU) (SSM 24-22-11).
 - (a) Disconnect connector D21032 from the P210 panel.
 - (b) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (c) Do a wiring check between pin 4 of connector D21032 and pin G9 of connector DM24205AA.
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D21032 to the P210 panel.
 - 3) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (3) Do this check of the right fuel cutoff wiring between the power management panel (P210) receptacle and relay K76204 receptacle (SSM 24-22-11).
 - (a) Remove the relay, K76204 (SSM 24-22-11).
 - (b) Do a wiring check between pin B3 of relay K76204 and pin 4 of connector D21032.
 - (c) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
 - 2) Re-connect connector D21032 to the P210 panel.
 - 3) Re-install the relay, K76204 (SSM 24-22-11).
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-connect connector D21032 to the P210 panel.
 - 2) Re-install the relay, K76204 (SSM 24-22-11).
- (4) Replace the right GCU, M24205.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

837. Right GCB to Left GCU Sense Circuit Fail Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-33861.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the R GEN CTRL switch twice.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Push the R GEN CTRL switch twice.

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- (b) If the MAT shows NOT ACTIVE for the maintenance message, then you corrected the fault.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring (WDM 24-28-11).
 - (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of the right GCB receptacle connector DC24332 and connector DM24105AA on the E1-1 shelf.

DC24332	DM24105AA
pin 7	pin E1

- (d) Do a wiring check between pin 8 of the right GCB receptacle connector DC24332 and airplane ground.
 - 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Push the R GEN CTRL switch twice.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message, then you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance, then continue.
- (3) Replace the left GCU, M24105.

These are the tasks:

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Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) Push the R GEN CTRL switch twice.
- (b) If the MAT shows NOT ACTIVE for the maintenance message, then you corrected the fault.

————— **END OF TASK** —————

838. Left GCB to Right GCU Sense Circuit Fail Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-33862.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the wiring (WDM 24-28-21).
 - (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

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To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of the left GCB receptacle connector DC24331 and connector DM24205AA on the E2-2 shelf.

DC24331	DM24205AA
pin 7	pin E1

- (d) Do a wiring check between pin 8 of the left GCB receptacle connector DC24331 and airplane ground.
- 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

Row	Col	Number	Name
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Replace the right GCU, M24205.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) Start the left engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.

————— END OF TASK —————

839. Right GCB to Auxiliary GCU Sense Circuit Fail Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-33873.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Start the right engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the right engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (2) Do this check of the wiring (WDM 24-28-31).
 - (a) Remove the auxiliary GCU, M24305. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Remove the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

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To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between these pins of the right GCB receptacle connector DC24332 and connector DM24305AA on the E2-3 shelf.

DC24332

pin 9

DM24305AA

pin C4

- (d) Do a wiring check between pin 10 of the right GCB receptacle connector DC24332 and airplane ground.

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- 1) Repair the wiring.
- 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the auxiliary GCU, M24305. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Start the right engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
- (3) Replace the auxiliary GCU, M24305.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) Start the right engine. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.

————— **END OF TASK** —————

840. GCU No Input From P110 EU on System Arinc 629 Bus (Left) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39452, 24-39453, 24-39454.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU) for the maintenance message that shows.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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MAINTENANCE MESSAGE

24-39452

24-39453

24-39454

REPLACE THIS GCU

AUX GCU, M24305

LEFT GCU, M24105

RIGHT GCU, M24205

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (2) Do a check of the P110 power management panel CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (3) Replace the applicable ARINC 629 (L) coupler in the P111 panel for the maintenance message that shows.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

MAINTENANCE MESSAGE

24-39452

24-39453

24-39454

P111 PANEL ARINC COUPLER

CPLR (AGCU), B24105

CPLR (LGCU), B24103

CPLR (RGCU), B24104

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (4) Replace the P111 panel ARINC 629 (L) coupler, B24107.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Remove the applicable GCU. do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801
- (b) Disconnect the applicable connector from the coupler.
- (c) Do the check of the wiring for the maintenance message that shows (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, and WDM 24-28-31 for the AGCU).

AGCU, E2-3 shelf

ARINC 629 BUS-L (MM 24-39452)	M24305	Coupler B24105, P111 panel	
		DB24105	
	pin 3T	pin 2	
	pin 3TR	pin 1	
	pin 6T	pin 5	
	pin 6TR	pin 4	

Left GCU, E1-1 shelf

ARINC 629 BUS-L (MM 24-39453)	M24105	Coupler B24103, P111 panel	
		DB24103	
	pin 3T	pin 2	
	pin 3TR	pin 1	
	pin 6T	pin 5	
	pin 6TR	pin 4	

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Right GCU, E2-2 shelf

ARINC 629 BUS-L (MM 24-39454)	M24205	Coupler B24104, P111 panel
	DM24205AC	DB24105
	pin 3T	pin 2
	pin 3TR	pin 1
	pin 6T	pin 5
	pin 6TR	pin 4

(d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the GCU. do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801
- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

(e) If you do not find a problem with the wiring, then continue.

(6) Do this check of the wiring between the ARINC 629 (L) coupler, B24107 and the P110 panel CCU, M24502. (WDM 24-09-24)

- (a) Disconnect connector DB24107 from the ARINC 629 (L) coupler, B24107 in the P111 panel.
- (b) Disconnect connector DM24502A from the P110 CCU, M24502.
- (c) Do this check of the wiring between connector DB24107 in the P111 panel and connector DM24502A at the P110 panel CCU:

DB24107	DM24502A
pin 1	pin 6
pin 2	pin 5
pin 4	pin 3
pin 5	pin 2

(d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DB24107 to the ARINC 629 (L) coupler, B24107 in the P111 panel.
- 3) Re-connect connector DM24502A to the P110 CCU, M24502.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— END OF TASK —————

841. GCU No Input From P110 EU on System Arinc 629 Bus (Right) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-39652, 24-39653, 24-39654.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU) for the maintenance message that shows.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

Table 201/24-23-00-993-863

MAINTENANCE MESSAGE	REPLACE THIS GCU
24-39652	LEFT GCU, M24105
24-39653	AUX GCU, M24305
24-39654	RIGHT GCU, M24205

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (2) Do a check of the P110 power management panel CCU, M24502.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (3) Replace the applicable ARINC 629 (R) coupler in the P211 panel for the maintenance message that shows.

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These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

Table 202/24-23-00-993-864

MAINTENANCE MESSAGE

24-39652

24-39653

24-39654

P211 PANEL ARINC COUPLER

CPLR (LGCU), B24203

CPLR (AGCU), B24205

CPLR (RGCU), B24204

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (4) Replace the P211 panel ARINC 629 (R) coupler, B24207.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Remove the applicable GCU. do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801

- (b) Disconnect the applicable connector from the coupler.

- (c) Do the check of the wiring for the maintenance message that shows (WDM 24-28-11 for the Left GCU, WDM 24-28-21 for the Right GCU, and WDM 24-28-31 for the AGCU).

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Left GCU, E1-1 shelf

ARINC 629 BUS-R (MM 24-39652)	M24105	Coupler B24203, P211 panel	
		DM24105AC	DB24203
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4

AGCU, E2-3 shelf

ARINC 629 BUS-R (MM 24-39653)	M24305	Coupler B24205, P211 panel	
		DM24305AC	DB24205
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4

Right GCU, E2-2 shelf

ARINC 629 BUS-R (MM 24-39654)	M24205	Coupler B24204, P211 panel	
		DM24205AC	DB24204
		pin 2T	pin 2
		pin 2TR	pin 1
		pin 5T	pin 5
		pin 5TR	pin 4

(d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the GCU. do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801
- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

(e) If you do not find a problem with the wiring, then continue.

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- (6) Do this check of the wiring between the ARINC 629 (R) coupler, B24207 and the P110 panel CCU, M24502 (WDM 24-09-24).
- (a) Disconnect connector DB24207 from the ARINC 629 (R) coupler, B24207 in the P211 panel.
 - (b) Disconnect connector DM24502A from the P110 CCU, M24502.
 - (c) Do a check for continuity between these pins of connector DB24207 in the P211 panel and these pins of connector DM24502A at the P110 panel CCU:

DB24207	DM24502A
pin 1	pin 127
pin 2	pin 126
pin 4	pin 124
pin 5	pin 123

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DB24207 to the ARINC 629 (R) coupler, B24207 in the P211 panel.
 - 3) Re-connect connector DM24502A to the P110 CCU, M24502.
- (e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

842. GCU No Input From P210 EU on System Arinc 629 Bus (Right) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-69622, 24-69623, 24-69624.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable generator control unit (GCU) for the maintenance message that shows.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

MAINTENANCE MESSAGE

24-69622
24-69623
24-69624

REPLACE THIS GCU

LEFT GCU, M24105
RIGHT GCU, M24205
AUX GCU, M24305

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (2) Do a check of the P210 power management panel CCU, M24506.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (3) Replace the applicable ARINC 629 (R) coupler in the P211 panel for the maintenance message that shows.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

MAINTENANCE MESSAGE

P211 PANEL ARINC COUPLER

24-69622

CPLR (LGCU), B24203

24-69623

CPLR (RGCU), B24204

24-69624

CPLR (AGCU), B24205

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (4) Replace the P211 panel ARINC 629 (R) coupler, B24208.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (5) Do this check of the wiring from the GCU to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Remove the applicable GCU. do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801
- (b) Disconnect the applicable connector from the coupler.
- (c) Do the check of the wiring for the maintenance message that shows.

Left GCU, E1-1 shelf

ARINC 629 BUS-R (MM 24-69622)	M24105	Coupler B24203, P211 panel
	DM24105AC	DB24203
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

Right GCU, E2-2 shelf

ARINC 629 BUS-R (MM 24-69623)	M24305	Coupler B24204, P211 panel
	DM24205AC	DB24204
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

AGCU, E2-3 shelf

ARINC 629 BUS-R (MM 24-69624)	M24305	Coupler B24205, P211 panel
	DM24305AC	DB24205
	pin 2T	pin 2
	pin 2TR	pin 1
	pin 5T	pin 5
	pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the GCU. do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801

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- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring between the ARINC 629 (R) coupler, B24208 and the P210 panel CCU, M24506. (WDM 24-09-25)
 - (a) Disconnect connector DB24208 from the ARINC 629 (R) coupler, B24208 in the P211 panel.
 - (b) Disconnect connector DM24506A from the P210 CCU, M24506.
 - (c) Do a check of the wiring between connector DB24208 in the P211 panel and connector DM24506A at the P210 panel CCU:

DB24208	DM24506A
pin 1	pin 127
pin 2	pin 126
pin 4	pin 124
pin 5	pin 123

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DB24208 to the ARINC 629 (R) coupler, B24208 in the P211 panel.
 - 3) Re-connect connector DM24506A to the P210 CCU, M24506.
- (e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

————— **END OF TASK** —————

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802. Backup Converter Has Internal Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-41000, 24-45000, 24-45003.

B. Initial Evaluation

- (1) Do this ground test on the MAT: Backup Electrical Power - Operational Test, AMM TASK 24-25-00-700-801.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the right engine backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Replace the left engine backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Replace the left converter circuit breaker, K24102.

These are the tasks:

Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (5) Replace the right converter circuit breaker, K24202.

These are the tasks:

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Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (6) Do this check of the backup converter-to-backup generator electrical wiring (WDM 24-25-02):
 - (a) Disconnect connectors DM24008C and DM24008D from the backup converter, M24008.
 - (b) Measure the resistance between DM24008C, pin 13 and aircraft ground.
 - (c) Measure the resistance between DM24008D, pin 13 and aircraft ground.
 - (d) If the resistance is less than 250 ohms on either connector, then do these steps:
 - 1) Repair the wire harness that is between connector DM24008C, pin 13 or DM24008D, pin 13, of the backup converter and connector DM24004A at either the left or right Backup Generators.
 - 2) Re-connect connectors DM24008C and DM24008D to the backup converter.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (7) Do this check of the backup converter electrical wiring (WDM 24-25-11, WDM 24-25-12WDM 24-25-12WDM 24-25-21, WDM 24-25-22, and WDM 24-25-33):

NOTE: Check for shorts to ground for the wiring listed below.

- (a) Disconnect connectors DM24008C and DM24008D from the backup converter, M24008.
- (b) Check for a short to ground on these connectors removed from the backup converter, M24008:
 - 1) Pin 2 of connector DM24008C.
 - 2) Pin 30 of connector DM24008C.
 - 3) Pin 31 of connector DM24008C.
 - 4) Pin 2 of connector DM24008D.
 - 5) Pin 30 of connector DM24008D.
 - 6) Pin 31 of connector DM24008D.
- (c) If the wiring has a short to ground, then do these steps:
 - 1) Repair the wiring, (WDM 24-25-11, WDM 24-25-12, and WDM 24-25-22).
 - 2) Re-connect connectors DM24008C and DM24008D to the backup converter.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the wiring is OK, then continue.
- (e) Disconnect connector DM24004A from the left and right backup generators, M24004.
- (f) Do a wiring check between these pins of connector DM24004A removed from the left backup generator, M24004 and connector DM24008C removed from the backup converter, M24008:

NOTE: Check for shorts to ground for the wiring listed below.

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DM24004A

pin 7		pin 60
pin 8		pin 38
pin 9		pin 20

DM24008C

- (g) Do a wiring check between these pins of connector DM24004A removed from the right backup generator, M24004 and connector DM24008D removed from the backup converter, M24008:

NOTE: Check for shorts to ground for the wiring listed below.

DM24004A

pin 7	.....	pin 60
pin 8	.....	pin 38
pin 9	.....	pin 20

DM24008D

- (h) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring (WDM 24-25-11 and WDM 24-25-21).
 - 2) Re-connect connectors DM24008C and DM24008D to the backup converter.
 - 3) Re-connect connector DM24004A to the left and right backup generators.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (i) If the wiring is OK, then continue.
- (j) Disconnect connectors DM24008A and DM24008B from the backup converter, M24008.
- (k) Disconnect connectors DB24102 and DB24202 from the ARINC 629 left and right system bus couplers, B24102 and B24202.
- (l) Do a wiring check between these pins of connector DB24102 removed from the ARINC 629 left system bus couplers, B24102 and connector DM24008A removed from the backup converter, M24008:

NOTE: Check for shorts to ground for the wiring listed below.

DB24102

pin 1	.....	pin 1
pin 2	.....	pin 2
pin 4	.....	pin 4
pin 5	.....	pin 5

DM24008A

- (m) Do a wiring check between these pins of connector DB24202 removed from the ARINC 629 right system bus couplers, B24202 and connector DM24008B removed from the backup converter, M24008:

NOTE: Check for shorts to ground for the wiring listed below.

DB24202

pin 1		pin 1
pin 2		pin 2
pin 4		pin 4
pin 5		pin 5

DM24008B

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- (n) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring (WDM 24-25-33).
 - 2) Re-connect connectors DM24008A and DM24008B to the backup converter.
 - 3) Re-connect connectors DB24102 and DB24202 to the ARINC 629 left and right system bus couplers.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— END OF TASK ————

804. Remote Oil Level Sensor Feedback Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-43020, 24-43030.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the FUEL CONT switches on the pilots' control stand are in the CUTOFF position and wait for at least 8 minutes.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the backup generator:
 - (a) Disconnect the connector, DM24004A, from the applicable backup generator.
 - (b) Measure the resistance between these pairs of pins of the connector on the backup generator:
 - 1) Pin 1 and pin 4, specified resistance 75-125 ohms.
 - 2) Pin 2 and pin 4, specified resistance 75-125 ohms.
 - (c) If the resistance is not in the range specified for each pair of pins, replace the applicable backup generator, M24004.
These are the tasks:
Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - (d) If the resistance is in the range specified for each pair of pins, then continue.
 - (e) Re-connect connector DM24004A to the applicable backup generator.
- (2) Do this check of the backup generator wiring (WDM 24-25-02):
 - (a) Disconnect the connector, DM24008C or DM24008D from the backup converter, M24008 as applicable.
 - (b) Measure the resistance between these pairs of pins of the connector DM24008C or DM24008D:
 - 1) Pin 4 and pin 13, specified resistance 75-125 ohms.

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- 2) Pin 14 and pin 13, specified resistance 75-125 ohms.
 - (c) If the resistance is not in the range specified for each pair of pins, repair the wiring.
 - (d) If the resistance is in the range specified for each pair of pins, then continue.
- (3) Replace the backup converter, M24008.
- These are the tasks:
- Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- (a) Make sure the FUEL CONT switches on the pilots' control stand are in the CUTOFF position and wait for at least 8 minutes.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

805. Backup Generator Low Oil Pressure Switch Wiring Is Shorted - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-46060, 24-46070.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Start the applicable engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Find the applicable backup generator, connectors and pin numbers in this table:

Left Engine			
Backup Gen		Backup Conv	
Conn		Conn	
DM 24004A		DM24008C	
pin 1		pin 4	
pin 4		pin 13	
pin 2		pin 14	

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Right Engine

Backup Gen Conn	Backup Conv Conn
DM 24004A	DM24008D
pin 1	pin 4
pin 4	pin 13
pin 2	pin 14

- (2) Do this check of the backup generator wiring (WDM 24-25-02):
 - (a) Disconnect connector DM24004A from the backup generator.
 - (b) Disconnect the applicable connector from the backup converter, M24008.
 - (c) Do a wiring check between the applicable pins of the backup generator connector and the connector at the E4-4 shelf.
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24004A to the backup generator, M24004.
 - 3) Re-connect the applicable connector to the backup converter, M24008.
 - 4) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) Start the applicable engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect the applicable connector to the backup converter, M24008.
- (3) Replace the applicable backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) Start the applicable engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

806. Backup Generator Temperature Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-46120, 24-46130.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup generator, M24004.
These are the tasks:
Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
- (2) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
 - (a) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (b) If the maintenance message shows on the ground test display, then continue.
- (3) If equipped with a air/oil heat exchanger valve, then replace the air/oil heat exchanger valve, M24056 (WDM 24-25-02).
- (4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
 - (a) If the maintenance message does not show on the ground test display, you corrected the fault.

————— END OF TASK —————

807. Backup Generator (L) Excitor Field Wiring (Shorted) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-46040, 24-46140.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance while the engine operates, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do this check of the backup generator wiring (WDM 24-25-11):
- (a) Make sure the engine is off.
 - (b) Disconnect connector DM24004A from the left backup generator, M24004.
 - (c) Do a check of the connector backshell for chafing.
 - (d) Disconnect connector DM24008C from the backup converter, M24008.
 - (e) Do a wiring check between these pins of connector DM24004A removed from the left backup generator, M24004 and connector DM24008C removed from the backup converter, M24008:

DM24004A	DM24008C
pin 5	pin 40
pin 6	pin 42

- (f) Do a wiring check between these pins of connector DM24004A removed from the left backup generator, M24004 and connector DM24008C removed from the backup converter, M24008:

NOTE: Check for shorts to ground for the wiring listed below.

DM24004A	DM24008C
pin 7	pin 60
pin 8	pin 38
pin 9	pin 20

- (g) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24004A to the left backup generator, M24004.
 - 3) Re-connect connector DM24008C to the backup converter, M24008.
 - 4) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - 5) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (h) If you do not find a problem with the wiring, then continue.
- (2) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- (a) Re-connect connector DM24008C to the backup converter, M24008.
- (b) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
- (c) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the backup generator converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - (a) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

808. Backup Generator L Speed and Wiring Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-47000, 24-47020.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - (b) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the resistance (WDM 24-25-11):
 - (a) Make sure the engine does not operate.
 - (b) Disconnect connector DM24008C from the backup converter, M24008.
 - (c) Measure the resistance between these pairs of pins of connector DM24008C.
 - 1) Pin 60 and pin 38, specified resistance 1.0-2.0 ohms
 - 2) Pin 20 and pin 38, specified resistance 1.0-2.0 ohms
 - (d) If the resistance is in the range specified for each pair of pins, then do these steps:
 - 1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

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Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- 2) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
- 3) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If the resistance is not in the range specified for each pair of pins, then continue.
- (2) Do this check of the backup generator wiring (WDM 24-25-11):
 - (a) Disconnect connector DM24004A from the backup generator, M24004.
 - (b) Do a check of the connector backshell for chafing.
 - (c) Do a wiring check between these pins of connector DM24004A at the backup generator, M24004 and connector DM24008C at the E4-4 shelf :

DM24004A	DM24008C
pin 7	pin 60
pin 8	pin 38
pin 9	pin 20

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24004A to the backup generator, M24004.
 - 3) Re-connect connector DM24008C to the backup converter, M24008.
 - 4) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - 5) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24008C to the backup converter, M24008.
- (3) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- (a) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
- (b) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

810. Backup Generator (L) Feeder Open Circuit - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-46020, 24-46100, 24-47080.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) For the left engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this resistance check of the backup generator (WDM 24-25-11):
- (a) Disconnect terminal wires T1, T2 and T3 from the backup converter, M24008.
 - (b) Measure the resistance between the terminal wires T1 and T2, T2 and T3, T1 and T3.
 - (c) If the resistance between the terminal wires is less than 10K ohms and are balance and have equal values, then do these steps:
 - 1) Replace the backup converter, M24008.These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 3) For the left engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If the resistance between the terminal wires is greater than 10K ohms and are not balance and do not have equal values, then continue.
- (2) Do this check of the backup generator feeder (WDM 24-25-11):
- (a) Do a wiring check between these terminal wires at the backup generator, M24004 and terminal wires at the E4-4 shelf:

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Backup Generator M24004	Backup Converter M24008
T1	T1
T2	T2
T3	T3

- (b) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminal wires T1, T2, and T3 to the backup generator, M24004.
 - 3) Re-connect terminal wires T1, T2, and T3 to the backup converter, M24008.
 - 4) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) For the left engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (c) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect terminal wires T1, T2, and T3 to the backup converter, M24008.
- (3) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

 - (a) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) For the left engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

811. Transfer Bus Breaker Coil Short Circuit - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48000, 24-48010.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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- (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Find the applicable transfer bus breaker (TBB), connectors and pin numbers in this table:

Backup Converter Connector		TBB
DM24008C		Left, K24101
pin 31	.....	pin 1
pin 32	.....	pin 2
DM24008D		Right, K24201
pin 31	.....	pin 1
pin 32	.....	pin 2

- (2) Do this resistance check of the applicable TBB (WDM 24-25-12) (WDM 24-25-22):
- Disconnect the applicable connector from the backup converter, M24008.
 - Measure the resistance between pin 31 and ground and pin 31 and pin 32.
 - If the resistance is greater than 7 ohms, then do these steps:
 - Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - If the maintenance message does not show on the ground test display, you corrected the fault.
 - If the resistance is less than 7 ohms, then continue.
- (3) Do this check of the TBB coil wiring (WDM 24-25-12) (WDM 24-25-22):
- Remove the applicable TBB. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - Do a wiring check between the applicable pins of the connector at the E4-4 shelf and the receptacle of the applicable TBB at the power panel.
 - If you find a problem with the wiring, then do these steps:
 - Repair the wiring.
 - Re-connect the applicable connector to the backup converter, M24008.
 - Re-install the applicable TBB. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - If the maintenance message does not show on the ground test display, you corrected the fault.
 - If you do not find a problem with the wiring, then continue.

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- 1) Re-connect the connector to the backup converter, M24008.
- (4) Replace the applicable TBB.
These are the tasks:
Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— **END OF TASK** —————

812. Converter Circuit Breaker Coil Short Circuit - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-48100.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this resistance check of the left CCB (WDM 24-25-12):
 - (a) Disconnect connector D24008C from the backup converter, M24008.
 - (b) Measure the resistance between pin 30 and ground, pin 30 and pin 15.
 - (c) If the resistance is greater than 7 ohms, then do these steps:
 - 1) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 3) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (d) If the resistance is less than 7 ohms, then continue.
- (2) Do this check of the converter circuit breaker (CCB) coil wiring (WDM 24-25-12):
 - (a) Remove the left CCB, K24102. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.

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- (b) Do a wiring check between these pins of connector DM24008C at the E4-4 shelf and receptacle of the CCB at the left power panel:

DM24008C	K24102
pin 30	pin 1
pin 15	pin 2

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24008C to the backup converter.
 - 3) Re-install the left CCB, K24101. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-connect connector DM24008C to the backup converter.
- (3) Replace the converter circuit breaker (CCB), K24102.
- These are the tasks:
- Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— **END OF TASK** —————

813. Converter Supplemental Cooling Fan Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48260, 24-48360.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
- (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the resistance (WDM 24-25-32):
- (a) Disconnect connector DM24008C from the backup converter.

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- (b) Do a resistance check between pin 28 and pin 48, pin 48 and pin 49, pin 28 and pin 49.
- (c) If the resistance are balance and have equal values for each wire, then do these steps:
 - 1) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
 - 3) If the maintenance message does not show on the ground test display, you corrected the fault.
- (d) If the resistance are not balance and have different values for each wire, then continue.
- (2) Do this check of the wiring between the backup converter and the converter supplemental cooling fan (WDM 24-25-32):
 - (a) Disconnect connector DB24003 from the converter supplemental cooling fan.
 - (b) Do a wiring check between these pins of connector DM24008C at the E4-4 shelf and connector DB24003 at the converter supplemental cooling fan:

DM24008C	DB24003
pin 49	pin 1
pin 48	pin 2
pin 28	pin 3
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24008C to the backup converter.
 - 3) Re-connect connector DB24003 to the converter supplemental cooling fan.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24008C to the backup converter.
- (3) Replace the converter supplemental cooling fan, B24003.
These are the tasks:
Converter Supplemental Cooling Fan - Removal, AMM TASK 24-25-13-000-801,
Converter Supplemental Cooling Fan - Installation, AMM TASK 24-25-13-400-801.
 - (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.

———— **END OF TASK** ————

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814. Low Converter Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48400, 24-48420, 24-48440.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Operate one of the two engines. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the POR sense wiring (WDM 24-25-12):
- (a) Disconnect connector terminal wires L1, L2, and L3 from the backup converter, M24008.
 - (b) Disconnect connector DM24008D from the backup converter.
 - (c) Do a check for airplane ground at pin 50 of connector DM24008D.
 - (d) Do a wiring check between these terminals at the backup converter, M24008 and connector DM24008D at the backup converter:

M24008	DM24008D
pin L1	pin 49
pin L2	pin 48
pin L3	pin 28

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminal wires L1, L2, and L3 to the backup converter.
 - 3) Re-connect connector DM24008D to the backup converter.
 - 4) Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) Operate one of the two engines. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
- (2) Replace the backup converter, M24008.

These are the tasks:

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Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) Operate one of the two engines. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

815. Converter Temperature Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-48460.

B. Initial Evaluation

- (1) If the MAT does not show maintenance message 24-48240, 24-48260, 24-48280 or 24-48300, then do the Fault Isolation Procedure below.
- (2) If the MAT show maintenance message 24-48240, 24-48260, 24-48280 or 24-48300, then do the Fault Isolation Procedure for the applicable maintenance message Converter Supplemental Cooling Fan Current Problems - Fault Isolation, 24-25 TASK 842 for message 24-48240, Converter Supplemental Cooling Fan Problems - Fault Isolation, 24-25 TASK 813 for message 24-48260, TBD for message 234-48280 and TBD for message 24-48300..

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— END OF TASK —————

816. Backup Converter No Output On 629 System Bus (L) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-44040, 24-48840, 24-49401.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (2) Replace the ARINC 629 coupler, B24102, in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup converter to the Systems 629 Bus-L.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring from the backup converter to the coupler:
- (a) Disconnect connector DM24008A from the backup converter.
- (b) Disconnect connector DB24102 from the coupler, B24102.
- (c) Do a wiring check between these pins of connector DM24008A at the E4-4 shelf and connector DB24102 at the P111 panel (WDM 24-25-33).

DM24008A

DB24102

pin 1	.....	pin 1
pin 2	.....	pin 2
pin 4	.....	pin 4
pin 5	.....	pin 5

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
- 2) Re-connect connector DM24008A to the backup converter.
- 3) Re-connect connector DB24102 to the coupler, B24102.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

817. Converter No Input From AGCU On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-49402, 24-49602.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the auxiliary generator control unit (AGCU), M24305.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the applicable ARINC 629 coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup converter to the Systems 629 Bus.

MESSAGE	COUPLER	PANEL	629 BUS
24-49402	B24102	P111	LEFT
24-49602	B24202	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the applicable ARINC 629 coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the AGCU to the Systems 629 Bus.

MESSAGE	COUPLER	PANEL	629 BUS
24-49402	B24105	P111	LEFT
24-49602	B24205	P211	RIGHT

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the backup converter to the coupler:
 - (a) Disconnect the applicable connector from the backup converter.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors WDM 24-25-33). The first set applies to message 24-49402. The second set applies to message 24-49602.

DM24008A

pin 5	.....	pin 5
pin 4	.....	pin 4
pin 2	.....	pin 2
pin 1	.....	pin 1

DB24102

DM24008B

pin 5	.....	pin 5
pin 4	.....	pin 4
pin 2	.....	pin 2
pin 1	.....	pin 1

DB24202

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the backup converter.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect the applicable connector to the backup converter.
 - 2) Re-connect the applicable connector to the coupler.
- (6) Do this check of the wiring from the AGCU to the coupler:
 - (a) Disconnect the applicable connector from the AGCU.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors WDM 24-28-31 in the first set for message 24-49402 and WDM 24-25-33 in the second set for message 24-49602).

DM24305AC

pin 3T		pin 2
pin 3TR		pin 1
pin 6T		pin 5
pin 6TR		pin 4

DB24105

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DM24305AC

pin 2T pin 2
pin 2TR pin 1
pin 5T pin 5
pin 5TR pin 4

DB24205

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the AGCU.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

818. Converter No Input From BPCU On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-49403, 24-49604.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the bus power control unit (BPCU), M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,

BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (3) Replace the applicable ARINC 629 coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup converter to the Systems 629 Bus.

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MESSAGE	COUPLER	PANEL	629 BUS
24-49403	B24102	P111	LEFT
24-49604	B24202	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the applicable ARINC 629 coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the BPCU to the Systems 629 Bus.

MESSAGE	COUPLER	PANEL	629 BUS
24-49403	B24106	P111	LEFT
24-49604	B24206	P211	RIGHT

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the backup converter to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable connector from the backup converter.
- (b) Disconnect the applicable connector from the coupler.
- (c) Do a wiring check between the pins of these connectors (WDM 24-25-33). The first set applies to message 24-49403. The second set applies to message 24-49604.

DM24008A

pin 1	.....	pin 1
pin 2	.....	pin 2
pin 4	.....	pin 4
pin 5	.....	pin 5

DB24102

DM24008B

pin 1	.....	pin 1
pin 2	.....	pin 2
pin 4	.....	pin 4
pin 5	.....	pin 5

DB24202

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the backup converter.
 - 3) Re-connect the applicable connector to the coupler.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect the applicable connector to the backup converter.
 - 2) Re-connect the applicable connector to the coupler.
- (6) Do this check of the wiring from the BPCU to the coupler:
 - (a) Disconnect the applicable connector from the BPCU.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the pins of these connectors WDM 24-28-41). The first set applies to message 24-49403. The second set applies to message 24-49604.

DM24002AC

pin 3T	.....	pin 2
pin 3TR	.....	pin 1
pin 6T	.....	pin 5
pin 6TR	.....	pin 4

DB24106

DM24002AC

pin 2T	.....	pin 2
pin 2TR	.....	pin 1
pin 5T	.....	pin 5
pin 5TR	.....	pin 4

DB24206

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the BPCU.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

819. Converter No Input From AFDC On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-49405, 24-49620.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the autopilot flight director computer (AFDC). To replace it, These are the tasks:
Autopilot Flight Director Computer Removal, AMM TASK 22-11-01-000-801,
Autopilot Flight Director Computer Installation, AMM TASK 22-11-01-400-801.

MESSAGE	AFDC	EQUIPMENT NUMBER
24-29405	Left	B22101
24-29620	Right	M22201

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the applicable ARINC 629 coupler. To replace it, These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
NOTE: This coupler connects the backup converter to the Systems 629 Bus.

MESSAGE	PANEL	COUPLER
24-29405	P111	B24102
24-29620	P211	B24202

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the applicable ARINC 629 coupler. To replace it, These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
NOTE: This coupler connects the AFDC to the Systems 629 Bus.

MESSAGE	PANEL	COUPLER
24-29405	P111	B22104
24-29620	P211	B22204

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the backup converter to the applicable coupler:
 - (a) Disconnect the applicable from the backup converter.

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MESSAGE	ARINC 629	CONNECTOR
24-49405	Left	DM24008A
24-49620	Right	DM24008B

- (b) Disconnect the applicable connector from the coupler.

MESSAGE	COUPLER	CONNECTOR
24-49405	B24102	DB24102
24-49620	B24202	DB24202

- (c) Do a wiring check between these pins of the applicable connectors (WDM 24-25-33). The first set applies to message 24-49405. The second set applies to message 49620.

DB24102	DM24008A
pin 5	pin 5
pin 4	pin 4
pin 2	pin 2
pin 1	pin 1

DB24103	DM24008B
pin 5	pin 5
pin 4	pin 4
pin 2	pin 2
pin 1	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect applicable connectors.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the applicable AFDC to the coupler:
- (a) Disconnect applicable connector from the AFDC.

MESSAGE	AFDC	CONNECTOR
24-49405	M22101	DM22101AD
24-49620	M22201	DM22201AD

- (b) Disconnect connector DB22104 from the coupler, B22104.

MESSAGE	COUPLER	CONNECTOR
24-49405	B22104	DB22104
24-49620	B22204	DB22204

- (c) Do a wiring check between these pins of connector DM22101AD at the E1-3 shelf and connector DB22104 at the P111 panel (WDM 22-11-18). The first set applies to message 24-49405. The second set applies to message 24-49620.

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DM22101AD	DB22104
pin 2T	pin 5
pin 2TR	pin 4
pin 5T	pin 2
pin 5TR	pin 1

DM22201AD	DB22204
pin 2T	pin 5
pin 2TR	pin 4
pin 5T	pin 2
pin 5TR	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect applicable connectors.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

820. Backup Converter No Input From GCU On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-49414, 24-49615, 24-49630.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable generator control unit (GCU). To replace it,
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
- Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

MESSAGE	GCU	EQUIPMENT NUMBER
24-49414	Left	M24105
24-49615	Left	M24105

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MESSAGE	GCU	EQUIPMENT NUMBER
24-49630	Right	M24205

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the applicable ARINC 629 coupler. To replace it,
These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
NOTE: This coupler connects the backup converter to the Systems 629 Bus.

MESSAGE	PANEL	COUPLER
24-49414	P111	B24102
24-49615	P211	B24202
24-49630	P211	B24202

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the applicable ARINC 629 coupler. To replace it,
These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
NOTE: This coupler connects the GCU to the Systems 629 Bus.

MESSAGE	PANEL	COUPLER
24-49414	P111	B24103
24-49615	P211	B24203
24-49630	P211	B24204

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the backup converter to the coupler:
 - (a) Disconnect the applicable from the backup converter.

MESSAGE	ARINC 629	CONNECTOR
24-49414	Left	DM24008A
24-49615	Right	DM24008B
24-49630	Right	DM24008B

- (b) Disconnect the applicable connector from the coupler.

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MESSAGE	COUPLER	CONNECTOR
24-49414	B24102	DB24102
24-49615	B24202	DB24202
24-49630	B24202	DB24202

- (c) Do a wiring check between these pins of the applicable connectors (WDM 24-25-33). The first set applies to message 24-49414. The second set applies to messages 24-49615 and 24-49630.

**Message
24-49414**

DB24102

DM24008A

pin 5	.....	pin 5
pin 4	.....	pin 4
pin 2	.....	pin 2
pin 1	.....	pin 1

**Message
24-49615 and
24-49630**

DB24103

DM24008B

pin 5	.....	pin 5
pin 4	.....	pin 4
pin 2	.....	pin 2
pin 1	.....	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect applicable connectors.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the GCU to the coupler:
- (a) Disconnect connector DM24105AC from the GCU.
 - (b) Disconnect the applicable connector from the coupler.

MESSAGE	COUPLER	CONNECTOR
24-49414	B24103	DB24103
24-49615	B24203	DB24203
24-49630	B24204	DB24204

- (c) Do a wiring check between these pins of the applicable connector (WDM 24-28-11), (WDM 24-28-12). The first set applies to message 24-49414. The second set applies to message 24-49615. The third set applies to message 24-49630

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DB24103

pin 2		pin 3T
pin 1		pin 3TR
pin 5		pin 6T
pin 4		pin 6TR

DM24105AC

DB24203

pin 2	.....	pin 2T
pin 1	.....	pin 2TR
pin 5	.....	pin 5T
pin 4	.....	pin 5TR

DM24105AC

DB24204

pin 2	.....	pin 2T
pin 1	.....	pin 2TR
pin 5	.....	pin 5T
pin 4	.....	pin 5TR

DM24205AC

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect applicable connectors.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

822. TBB L Commanded Position (Open) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48020, 24-48040.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the TBB and its wiring (WDM 24-25-12) (WDM 24-25-31):
- (a) Disconnect connector DM24008C from the backup converter, M24008.
 - (b) Disconnect connector DM24008D from the backup converter, M24008.
 - (c) Apply 28 VDC from pin 1 of connector DM24008D to pin 31 of connector DM24008C.
 - (d) Connect the pin 32 of connector DM24008C to structure ground.

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- (e) Do a continuity check from pin 17 to pin 18 of connector DM24008C.
- (f) If there is continuity between pin 17 and pin 18, then do these steps:
 - 1) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) Re-connect connector DM24008C to the backup converter, M24008.
 - 3) Re-connect connector DM24008D to the backup converter, M24008.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.
- (g) If there is no continuity between pin 17 and pin 18, then continue.
 - 1) Re-connect connector DM24008D to the backup converter, M24008.
- (2) Do this check of the wiring between the TBB and the backup converter, M24008 (WDM 24-25-12):
 - (a) Remove the left TBB, K24101. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between these pins of connector DM24008C at the E4-4 shelf and receptacles of TBB, K24101 at the left power panel (P100):

DM24008C	K24101
pin 18	pin 3
pin 17	pin 4
pin 31	pin 1
pin 32	pin 2

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24008C to the backup converter, M24008.
 - 3) Re-install the left TBB, K24101. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24008C to the backup converter, M24008.
- (3) Replace the transfer bus breaker (TBB), K24101.

These are the tasks:

Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.

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- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— END OF TASK —————

823. Backup Converter No Output on Any Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-48801.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

NOTE: It may take up to 15 seconds for the message to clear.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Make sure that this circuit breaker is closed:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
H	6	C24671	BACKUP CONVERTER CONTROL

- (c) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a check for 28 VDC from pin 5 to pin 1 of connector DM24008D (SSM 24-25-31).
- (4) If there is not 28 VDC from pin 5 to pin 1 of connector DM24008D, then do these steps:
 - (a) Repair the wiring.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) If there is 28 VDC from pin 5 to pin 1 of connector DM24008D, then replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

————— END OF TASK —————

824. Converter No Input from AIMS on Systems 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-49406, 24-49421, 24-49607, 24-49622.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable input/output module in the AIMS (P11). To replace it,
These are the tasks:
AIMS LRM Removal, AMM TASK 31-41-00-000-801,
AIMS LRM Installation, AMM TASK 31-41-00-400-801.

MAINT MESSAGE	AIMS	MODULE
24-49406	LEFT	M009
24-49421	RIGHT	M009
24-49607	LEFT	M004
24-49622	RIGHT	M004

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the applicable ARINC 629 coupler. To replace it,
These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup generator converter to the systems 629 Bus.

MAINT MESSAGE	PANEL	COUPLER
24-49406	P111	B24102
24-49421	P111	B24102
24-49607	P211	B24202
24-49622	P211	B24202

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler in the panel shown below. To replace it,

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These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the AIMS to the systems 629 Bus.

MAINT MESSAGE	PANEL	COUPLER
24-49406	P111	B31112
24-49421	P111	B31116
24-49607	P211	B31211
24-49622	P211	B31214

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the backup generator converter to the coupler (WDM 24-25-33):

NOTE: See the tables that follows for the connectors and pins that apply to the applicable maintenance message.

- (a) Disconnect the applicable coupler.

MAINT MESSAGE	PANEL	COUPLER
24-49418	P111	B24102
24-49433	P111	B24102
24-49619	P211	B24202
24-49634	P211	B24202

- (b) Disconnect the applicable connector from the backup generator converter.

MAINT MESSAGE	CONNECTOR
24-49418	DM24008A
24-49433	DM24008A
24-49619	DM24008B
24-49634	DM24008B

- (c) Do a wiring check between the pins of these connectors (WDM 24-25-33). The first set applies to messages 24-49418 and 24-49433. The second set applies to messages 24-49618 and 24-49634:

DB24102	DM24008A
pin 5	pin 5
pin 4	pin 4
pin 2	pin 2
pin 1	pin 1

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DB24202

pin 5		pin 5
pin 4		pin 4
pin 2		pin 2
pin 1		pin 1

DM24008B

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the backup generator converter.
 - 3) Re-connect the connector to the applicable coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- 1) Re-connect the applicable connector to the backup generator converter.
 - 2) Re-connect the connector to the applicable coupler.
- (6) Do this check of the wiring from the AIMS to the coupler:
- NOTE:** See the table that follows for the connectors and pins that apply to the applicable maintenance message.
- (a) Disconnect the applicable connector from the coupler.
- (b) Remove the applicable input/output module from the AIMS. To remove it, These are the tasks:
Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801,
Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.
- (c) Do a wiring check between the pins of these connectors (SSM 31-41-25). The first set applies to message 24-49406. The second set applies to message 24-49421. The third set applies to message 24-49607. The fourth set applies to message 24-49621.

D6607 (M009)

pin 1	.....	pin 5
pin 2	.....	pin 4
pin 3	.....	pin 2
pin 4	.....	pin 1

DB31112

D6707 (M009)

pin 1	.....	pin 5
pin 2	.....	pin 4
pin 3	.....	pin 2
pin 4		pin 1

DB31116

D6619 (M004)

pin 1		pin 5
pin 2		pin 4
pin 3		pin 2
pin 4		pin 1

DB31211

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D6719 (M004)	DB31214
pin 1	pin 5
pin 2	pin 4
pin 3	pin 2
pin 3	pin 2
pin 4	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-install the applicable input/output module to the AIMS. To remove it, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

826. No Input Data to Backup Converter on Systems 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-44020, 24-44030.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), LRU REPLACEMENT TEST, Backup Converter.
- (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Find the applicable coupler, connectors and pin numbers in these tables:

BACKUP CONVERTER M24008 DM24008A	P111 PANEL COUPLER B24102 DB24102
pin 2	pin 2
pin 1	pin 1
pin 5	pin 5
pin 4	pin 4

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BACKUP CONVERTER M24008 DM24008B	P211 PANEL COUPLER B24202 DB24202
pin 2	pin 2
pin 1	pin 1
pin 5	pin 5
pin 4	pin 4

- (2) Replace the applicable ARINC 629 coupler in the panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the Backup Generator Converter to the Systems 629 Bus.

- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), LRU REPLACEMENT TEST, Backup Converter.
- 1) If the maintenance message does not show on the ground test display, you corrected the fault.
 - 2) If the maintenance message shows on the ground test display, then continue.
- (3) Replace the backup converter, M24008.
- These are the tasks:
- Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), LRU REPLACEMENT TEST, Backup Converter.
- 1) If the maintenance message does not show on the ground test display, you corrected the fault.
 - 2) If the maintenance message shows on the ground test display, then continue.
- (4) Do this check of the wiring (WDM 24-25-33):
- (a) Disconnect the applicable connector from the backup converter, M24008.
 - (b) Disconnect the applicable connector from the coupler.
 - (c) Do a wiring check between the applicable pins of the connector at the E4-4 shelf and the connector at the panel.
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the applicable connector to the backup converter, M24008.
 - 3) Re-connect the applicable connector to the coupler.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), LRU REPLACEMENT TEST, Backup Converter.
 - a) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (e) If you do not find a problem with the wiring, then do these steps:

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- 1) Re-connect the applicable connector to the backup converter, M24008.
- 2) Re-connect the applicable connector to the coupler.

————— END OF TASK —————

827. Backup Converter No Output On Systems 629 Bus-R - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-44050, 24-48860, 24-49601.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the ARINC 629 coupler, B24202 in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup converter to the Systems 629 Bus-R.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring between the backup converter, M24008 and the backup converter coupler, B24202 (WDM 24-25-33):
 - (a) Disconnect connector DM24008B from the backup converter.
 - (b) Disconnect connector DB24202 from the backup converter coupler.
 - (c) Do a wiring check between these pins of connector DM24008B at the E4-4 shelf and connector DB24202 at the P211 panel:

DM24008B

DB24202

pin 2	.....	pin 2
pin 1	.....	pin 1
pin 5	.....	pin 5
pin 4	.....	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- 2) Re-connect connector DM24008B to the backup converter.
- 3) Re-connect connector DM24202 to the backup converter Coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

828. Transfer Bus L Phase Sequence Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-44060.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation

- (1) Replace the left transfer bus breaker, K24101.

These are the tasks:

Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,

Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this phase sequence check of the voltage sense wiring (WDM 24-25-12):
 - (a) Disconnect connector DM24008C from the backup converter, M24008.
 - (b) Do a phase sequence check of pins 44, 45, and 25 at connector DM24008C.
 - (c) If you do not find a problem with the phase sequence, then do these steps:
 - 1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE for the maintenance message, then repair the wiring from pin 24 of connector DM24008C to airplane ground.
 - (d) If you do not find a problem with the phase sequence, then continue.
- (3) Do this check of the voltage sense wiring between the backup converter and the P100 left power panel (WDM 24-25-12):
 - (a) Disconnect connector D10023P from the P100 left power panel.
 - (b) Do a wiring check between these pins of connector D10023P at the P100 panel and connector DM24008C at the E4-4 shelf:

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D10023P

pin 26 pin 45
pin 27 pin 25
pin 44 pin 44

DM24008C

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D10023P to the P100 panel.
 - 3) Re-connect connector DM24008C to the backup converter.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24008C to the backup converter.
- (4) Do this check of the voltage sense wiring inside the P100 left power panel (SSM 24-25-12):
 - (a) Remove the left transfer bus breaker, K24101. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between these pairs of pins:
 - 1) Pin 27 of connector D10023P and pin 17 of the left transfer bus breaker.
 - 2) Pin 26 of connector D10023P and pin 16 of the left transfer bus breaker.
 - 3) Pin 44 of connector D10023P and pin 15 of the left transfer bus breaker.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D10023P to the P100 panel.
 - 3) Re-install the left transfer bus breaker, K24101. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector D10023P to the P100 panel.
- (5) Do this check of the wiring between the left transfer bus breaker, K24101 and the left converter circuit breaker, K24102 (WDM 24-25-12):
 - (a) Remove the left converter circuit breaker, K24102. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between these pairs of pins:
 - 1) Pin A2 of the left converter circuit breaker, K24102 and pin A2 of the left transfer bus breaker, K24101.
 - 2) Pin B2 of the left converter circuit breaker, K24102 and pin B2 of the left transfer bus breaker, K24101.
 - 3) Pin C2 of the left converter circuit breaker, K24102 and pin C2 of the left transfer bus breaker, K24101.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- 2) Re-install the left converter circuit breaker, K24102. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 3) Re-install the left transfer bus breaker, K24101. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the left converter circuit breaker, K24102. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
- (6) Do this check of the transfer bus (WDM 24-51-12):
- (a) Remove the circuit breaker in the list below, do this task: Circuit Breaker - Removal, AMM TASK 24-09-00-000-818-002.
NOTE: Remove and do a check of the wiring for the circuit breaker one at a time.
 - (b) Do a wiring check between pins A2, B2 and C2 of the receptacle for the transfer bus breaker, K24101, and pins A1, B1 and C1 of the circuit breaker in the list that follows:
 - 1) TRU C1, C24341
 - 2) L TRU, C24303
 - 3) L XFR AC BUS, C24339
 - 4) WDO HTR IL, C30301
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left transfer bus breaker, K24101. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 3) Re-install the circuit breaker that was removed, do this task: Circuit Breaker - Installation, AMM TASK 24-09-00-400-814-002.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

829. Left 115 VAC Main Bus Voltage Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-44080.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 110-120 VAC from pins 26, 46, and 47 of connector DM24008C to structure ground (WDM 24-25-12).
 - (a) Disconnect connector DM24008C from the backup converter, M24008.

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- (b) If there is 110-120 VAC at pins 26, 46, and 47 of DM24008C, then replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (c) If there is not 110-120 VAC at pins 26, 46, and 47 of DM24008C, then continue.

- (2) Do this check of the wiring (WDM 24-25-12):

- (a) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between these pins of connector DM24008C at the E4-4 shelf and the receptacle for the left generator circuit breaker, C24331:

DM24008C	C24331
pin 26	pin 21
pin 46	pin 20
pin 47	pin 19

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24008C to the backup converter.
- 3) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (3) Replace the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do a visual check of the connections between pins 19,20, and 21 of the left generator circuit breaker, C24331, and the backplane of the P100 panel (WDM 24-25-12).
 - (a) If you find a problem with the connections, then repair the connections.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

830. Backup Generator L Feeder Circuit Shorted - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-47040.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check of the terminal wires T1, T2, and T3.
 - (a) Do a check of the terminal wires T1, T2, and T3 for chafing at the engine-strut area (WDM 24-25-11).
 - 1) If you find a problem with the terminal wires, then do these steps:
 - a) Repair the wiring.
 - b) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - c) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If you do not find a problem with the terminal wires, then continue.
 - (2) Do a wiring check of the phase leads at terminals T1, T2, and T3 of the backup converter, M24008 and make sure they are not shorted to ground (WDM 24-25-11).

NOTE: This Maintenance Message can be generated if a phase lead is connected to the wrong terminal at the backup generator or the backup converter during re-installation of these LRUs.

- (a) If one of the terminals T1, T2, or T3 is shorted to ground, then do these steps:
 - 1) Replace the backup generator, M24004.

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These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- 2) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then repair the wiring between terminals T1, T2, T3 of the backup converter, M24008 and T1, T2, T3 of the backup generator, M24004.
- (b) If terminals T1, T2, and T3 of the backup converter, M24008 are not shorted to ground, then continue.
- (3) Do this resistance check of the backup generator and its wiring (WDM 24-25-11).
- (a) Disconnect connector DM24008C from the backup converter, M24008.
 - (b) Do a resistance check between pin 51 and pin 54, pin 52 and pin 54, pin 53 and pin 54.
 - (c) Make sure the resistances measure between 5 and 25 ohms and are approximately equal to each other.
 - (d) If the resistance reading is less than 5 ohms on any of the pins, then do these steps:
 - 1) Reconnect connector DM24008C to the backup converter, M24008.
 - 2) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- 3) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If the resistance reading is greater than 25 ohms on any of the pins or if the resistance readings are not approximately equal to each other, then do these steps:
- 1) Disconnect connector DM24004A from the backup generator, M24004.
 - 2) Do a wiring check between these pins of connector DM24004A and connector DM24008C at the backup converter, M24008 on the E4-4 shelf:

DM24004A	DM24008C
pin 10	pin 51
pin 11	pin 52
pin 12	pin 53
pin 3	pin 54

- 3) If you find a problem with the wiring, then do these steps:

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- a) Repair the wiring.
 - b) Re-connect connector DM24004A to the backup generator, M24004.
 - c) Re-connect connector DM24008C to the backup converter, M24008.
 - d) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - e) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - f) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- 4) If you do not find a problem with the wiring, then continue.
- a) Re-connect connector DM24008C to the backup converter, M24008.
 - b) Replace the backup generator, M24004.
- These are the tasks:
- Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
- c) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - d) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - e) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (f) If there is no problem with the resistance values, then continue.
- (4) Replace the backup converter, M24008.
- These are the tasks:
- Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

END OF TASK

831. TBB Commanded Position (Close) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48060, 24-48070, 24-48080, 24-48090.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:

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- (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) For the applicable engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Find the applicable transfer bus breaker (TBB), connectors and pin numbers in this table:

Backup Converter Connector		TBB
DM24008C		Left, K24101
pin 18	.....	pin 3
pin 17	.....	pin 4
DM24008D		Right, K24201
pin 18	.....	pin 3
pin 17	.....	pin 4

- (2) Do this check of the TBB and its wiring (WDM 24-25-12) (WDM 24-25-22):
 - (a) Disconnect the applicable connector from the backup converter, M24008.
 - (b) Do a continuity check from pin 17 to pin 18 of the connector.
 - (c) If there is continuity between pin 17 and pin 18, then do these steps:
 - 1) Replace the applicable transfer bus breaker.
These are the tasks:
Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 2) Re-connect the connector to the backup converter, M24008 (WDM 24-25-12).
 - 3) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 4) For the applicable engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If there is no continuity between pin 17 and pin 18, then continue.
- (3) Do this check of the wiring between the TBB and the backup converter (WDM 24-25-12) (WDM 24-25-22):

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- (a) Remove the applicable TBB. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between the applicable pins of the backup converter connector and the receptacles of the TBB at the power panel.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the connector to the backup converter, M24008.
 - 3) Re-install the applicable TBB. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) For the applicable engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the applicable TBB. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 2) Re-connect the connector to the backup converter, M24008.
- (4) Replace the backup converter, M24008.
- These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) For the applicable engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

832. CCB L Commanded Position (Close) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48120, 24-48140.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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- (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the CCB and its wiring:
 - (a) Disconnect connector DM24008C from the backup converter, M24008 (WDM 24-25-12).
 - (b) Disconnect connector DM24008D from the backup converter, M24008 (WDM 24-25-31).
 - (c) Apply 28 VDC from pin 1 of connector DM24008D to pin 30 of connector DM24008C.
 - (d) Connect the pin 15 of connector DM24008C to structure ground.
 - (e) Do a continuity check from pin 34 to pin 35 of connector DM24008C.
 - (f) If there is continuity between pin 34 and pin 35, then do these steps:
 - 1) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) Re-connect connector DM24008C to the backup converter.
 - 3) Re-connect connector DM24008D to the backup converter.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (g) If there is no continuity between pin 34 and pin 35, then continue.
 - 1) Re-connect connector DM24008D to the backup converter.
- (2) Do this check of the wiring between the CCB and the backup converter:
 - (a) Remove the left CCB, K24102. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between these pins of connector DM24008C at the E4-4 shelf and receptacles of CCB, K24102 at the left power panel (P100) (WDM 24-25-12):

DM24008C	K24102
pin 34	pin 3
pin 35	pin 4
pin 30	pin 1
pin 15	pin 2

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24008C to the backup converter.
 - 3) Re-install the left CCB, K24102. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.

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- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24008C to the backup converter.
- (3) Replace the converter circuit breaker (CCB), K24102. These are the tasks:
Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS),
Operational Test, Backup Manually Init. Engine Start.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— END OF TASK —————

833. CCB L Commanded Position (Open) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48160, 24-48180.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the CCB and its wiring:
 - (a) Disconnect connector DM24008C from the backup converter (WDM 24-25-12).
 - (b) Do a continuity check from pin 34 to pin 35 of connector DM24008C.
 - (c) If there is continuity between pin 34 and pin 35, then do these steps:
 - 1) Replace the left converter circuit breaker, K24102.
These are the tasks:
Transfer Bus and Converter Circuit Breaker Removal, AMM
TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM
TASK 24-25-10-400-801.
 - 2) Re-connect connector DM24008C to the backup converter.
 - 3) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If there is no continuity between pin 34 and pin 35, then continue.
- (2) Do this check of the wiring between the CCB and the backup converter:
 - (a) Remove the left CCB, K24102. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between these pins of connector DM24008C and receptacles of CCB, K24102 at the left power panel (P100) (WDM 24-25-12):

DM24008C	K24102
pin 34	pin 3
pin 35	pin 4

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24008C to the backup converter.
 - 3) Re-install the left CCB, K24102. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the left CCB, K24102. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 2) Re-connect connector DM24008C to the backup converter.
- (3) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

 - (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

834. Converter and Generator Control Switch L Disagree - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48200, 24-48220, 24-48490, 24-48510.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Make sure the engine fire switch on the P8 panel is in the normal position.
NOTE: The engine fire switch in the pulled position may cause this fault message.
- (2) Replace the L BACKUP GEN switch on the Electrical Systems Control Panel, M24023 (WDM 24-25-11).
 - (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (c) If the maintenance message shows on the ground test display, then continue.
- (3) Do this check of the L BACKUP GEN switch wiring (WDM 24-25-11).
 - (a) Disconnect connector DM24023A from the Electrical System Control Panel, M24023.
 - (b) Disconnect connector DM24023C from the Electrical System Control Panel, M24023.
 - (c) Disconnect connector DM23117G from the Maintenance Panel, P61.
 - (d) Disconnect connector DS26101 from the Left Engine Fire Switch, S26101 on the Aft Aisle Stand Panel, P8.
 - (e) Remove the Backup Generator Converter, M24008. To remove it, do this task: Backup Generator Converter Removal, AMM TASK 24-25-09-000-801.
 - (f) Do a wiring check between these pins of connector DM24023C at the Electrical System Control Panel, M24023, and connector DM23117G at the Maintenance Panel, P61 (WDM 24-25-11):

DM24023C

pin 41	.....	pin A18
pin 42	.....	pin A20
pin 43	.....	pin A19

DM23117G

- (g) Do a wiring check between these pins of connector DM24023A at the Electrical System Control Panel, M24023, and connector DM24008C at the E4-4 shelf (WDM 24-25-11):

DM24023A

pin 13		pin 3
pin 14		pin 2

DM24008C

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- (h) Do a wiring check between these pins of connector DM24023A at the Electrical System Control Panel, M24023, and connector DS26101 at the Aft Aisle Stand Panel, P8 (WDM 24-25-11):

DM24023A	DS26101
pin 13	pin 30
pin 14	pin 14

- (i) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (j) Re-connect connector DM24023A to the Electrical System Control Panel, M24023.
- (k) Re-connect connector DM24023C to the Electrical System Control Panel, M24023.
- (l) Re-connect connector DM23117G to the Maintenance Panel, P61.
- (m) Re-connect connector DS26101 to the Left Engine Fire Switch, S26101 on the Aft Aisle Stand Panel, P8.
- (n) Re-install the Backup Generator Converter, M24008. To install it, do this task: Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- 1) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 2) If the maintenance message does not show on the ground test display, you corrected the fault.
- (o) If you do not find a problem with the wiring, then continue.
- (4) Replace the Left Engine Fire Switch, S26101.
- These are the tasks:
- Engine Fire Switch Removal, AMM TASK 26-21-03-000-801,
Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.
- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.
- (c) If the maintenance message shows on the ground test display, then continue.
- (5) Replace the Backup Generator Converter, M24008.
- These are the tasks:
- Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— END OF TASK —————

835. Transfer Bus Frequency Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48320, 24-48330, 24-48340, 24-48350.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Find the applicable Transfer Bus Breaker (TBB), connectors and pin numbers in this table:

Backup Converter Connector	TBB
DM24008C	Left, K24101
pin 44	pin 15
pin 45	pin 16
pin 25	pin 17
DM24008D	Right, K24201
pin 44	pin 15
pin 45	pin 16
pin 25	pin 17

- (2) Replace the applicable TBB.

These are the tasks:

Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the voltage sense wiring between the backup converter and the TBB (WDM 24-25-12) (WDM 24-25-22):
 - (a) Remove the applicable TBB. To remove the TBB, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Disconnect the applicable connector from the backup converter, K24008.
 - (c) Do a wiring check from pin 24 of the connector to airplane ground.
 - (d) Do a wiring check between the applicable pins of the backup converter connector at the E4-4 shelf and the receptacle of the TBB inside the power panel.
 - (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the connector to the backup converter.
 - 3) Re-install the applicable TBB. To install the TBB, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (f) If you do not find a problem with the wiring, then continue.

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- 1) Re-install the applicable TBB. To install the TBB, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
- (4) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

836. **BACKUP GEN L Switch Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 23-43390.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the pins on connector DM24023C (WDM 24-25-11):
 - (a) Remove the electrical module assembly, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DM24023C from the electrical module assembly, M24023.
 - (c) Examine the pins on connector DM24023C for damage or contamination.
 - (d) If there is damage or contamination, repair or clean the connector.
 - (e) Re-connect connector DM24023C to the electrical module assembly, M24023.
 - (f) Re-install the electrical module assembly, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (h) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the pins on connector DM23117G (WDM 24-25-11):
 - (a) Disconnect connector DM23117G from the Left Overhead Cardfile, M23117.
 - (b) Examine the pins on connector DM23117G for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.
 - (d) Re-connect connector DM23117G to the Left Overhead Cardfile, M23117.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the BACKUP GEN L switch, M24023S11 (WDM 24-25-11).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), then you corrected the fault.

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- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the Overhead Panel Card File, M23117, in the Maintenance Panel, P61.
- These are the tasks:
- Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802,
Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the BACKUP GEN L switch to the Cardfile (WDM 24-25-11):
- (a) Remove the electrical module assembly, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
- (b) Disconnect connector M24023DS11 from the BACKUP GEN L switch, M24023S11, on the electrical module assembly, M24023.
- (c) Disconnect connector DM23117G from the Left Overhead Cardfile, M23117.
- (d) Do a wiring check between these pins of connector M24023DS11 and connector DM23117G.
- | M24023DS11 | DM23117G |
|------------|----------|
| pin 4 | pin A20 |
| pin 5 | pin A19 |
| pin 6 | pin A18 |
| pin 16 | pin A13 |
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector M24023DS11 to the BACKUP GEN L switch, M24023S11.
 - 3) Re-install the electrical module assembly, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - 4) Re-connect connector DM23117G to the Left Overhead Cardfile, M23117.
- (f) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.

————— **END OF TASK** —————

837. BACKUP GEN R Switch Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 23-43750.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do this check of the pins on connector DM24023B (WDM 24-25-21):
 - (a) Remove the electrical module assembly, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector DM24023B from the electrical module assembly, M24023.
 - (c) Examine the pins on connector DM24023B for damage or contamination.
 - (d) If there is damage or contamination, repair or clean the connector.
 - (e) Re-connect connector DM24023B to the electrical module assembly, M24023.
 - (f) Re-install the electrical module assembly, M24023. To install it, do this task: Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (h) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the pins on connector DM23217G (WDM 24-25-21):
 - (a) Disconnect connector DM23217G from the right overhead cardfile, M23217.
 - (b) Examine the pins on connector DM23217G for damage or contamination.
 - (c) If there is damage or contamination, repair or clean the connector.
 - (d) Re-connect connector DM23217G to the right overhead cardfile, M23217.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the BACKUP GEN R switch, M24023S12, (WDM 24-25-21).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), then you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the Overhead Panel Card File, M23217, in the Maintenance Panel, P61.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802,
Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the BACKUP GEN R switch to the cardfile (WDM 24-25-21):
 - (a) Remove the electrical module assembly, M24023. To remove it, do this task: Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801.
 - (b) Disconnect connector M24023DS12 from the BACKUP GEN R switch, M24023S12.
 - (c) Disconnect connector DM23217G from the right overhead cardfile, M23217.
 - (d) Do a wiring check between these pins of connector M24023DS12 and connector DM23217G:



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M24023DS12

pin 4 pin A14
pin 5 pin A15
pin 6 pin A16
pin 16 pin A17

DM23217G

- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM23217G to the Right Overhead Cardfile, M23217.
 - 3) Re-connect connector M24023DS11 to the BACKUP GEN R switch, M24023S12.
 - 4) Re-install the electrical module assembly, M24023. To install it, do this task:
Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.
- (f) If the MAT shows NOT ACTIVE for the maintenance message (or the message does not show), you corrected the fault.

————— **END OF TASK** —————

840. Main Bus L Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-44120.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring:
- (a) Remove the left generator circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between these pins of connector DM24008C at the E4-4 shelf and the receptacle for the left generator circuit breaker, C24331:

DM24008C

pin 26 pin 21
pin 46 pin 20
pin 47 pin 19

C24331

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24008C to the backup converter, M24008.

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- 3) Re-install the left generator circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the left generator circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a visual check of the connections between pins 19, 20, and 21 of the left generator circuit breaker, C24331 and the backplane of the P100 panel (WDM 24-25-12).
- (a) If you find a problem with the connections, then repair the connections.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

841. Backup Generator (R) Excitor Field Wiring (Shorted) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-46050, 24-46150.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance while the engine operates, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do this check of the backup generator wiring (WDM 24-25-21):
 - (a) Make sure the engine is off.
 - (b) Disconnect connector DM24004A from the right backup generator, M24004.
 - (c) Do a check of the connector backshell for chafing.
 - (d) Disconnect connector DM24008D from the backup converter, M24008.
 - (e) Do a wiring check between these pins of connector DM24004A removed from the right backup generator, M24004 and connector DM24008D removed from the backup converter, M24008:

DM24004A	DM24008D
pin 5	pin 40
pin 6	pin 42

- (f) Do a wiring check between these pins of connector DM24004A removed from the right backup generator, M24004 and connector DM24008D removed from the backup converter, M24008:

NOTE: Check for shorts to ground for the wiring listed below.

DM24004A	DM24008D
pin 7	pin 60
pin 8	pin 38
pin 9	pin 20

- (g) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24004A to the right backup generator, M24004.
 - 3) Re-connect connector DM24008D to the backup converter, M24008.
 - 4) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - 5) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (h) If you do not find a problem with the wiring, then continue.
- (2) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- (a) Re-connect connector DM24008D to the backup converter, M24008.
 - (b) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - (c) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the backup generator converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- (a) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
- (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

842. Converter Supplemental Cooling Fan Current Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-48240.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the converter supplemental cooling fan, B24003.
These are the tasks:
Converter Supplemental Cooling Fan - Removal, AMM TASK 24-25-13-000-801,
Converter Supplemental Cooling Fan - Installation, AMM TASK 24-25-13-400-801.
 - (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (c) If the maintenance message shows on the ground test display, then continue.
- (2) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

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- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.
- (c) If the maintenance message shows on the ground test display, then continue.
- (3) Do this check of the wiring between the backup converter and the converter supplemental cooling fan (WDM 24-25-32):
 - (a) Disconnect connector DB24003 from the converter supplemental cooling fan.
 - (b) Disconnect connector DM24008C from the backup converter.
 - (c) Do a wiring check between these pins of connector DM24008C at the E4-4 shelf and connector DB24003 at the converter supplemental cooling fan:

DM24008C	DB24003
pin 49	pin 1
pin 48	pin 2
pin 28	pin 3

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24008C to the backup converter.
 - 3) Re-connect connector DB24003 to the converter supplemental cooling fan.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start Test.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.

————— END OF TASK —————

843. Backup Converter No Input From GCU (R) On System ARINC 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-49429.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the right generator control unit (GCU), M24205.

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These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler, B24102, in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup converter to the Systems 629 Bus-L.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler, B24104, in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the right GCU to the Systems 629 Bus-L.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the backup converter to the coupler:
 - (a) Disconnect connector DM24008A from the backup converter.
 - (b) Disconnect connector DB24102 from the coupler, B24202.
 - (c) Do a wiring check between these pins of connector DM24008A at the E4-4 shelf and connector DB24102 at the P111 panel (WDM 24-25-33).

DM24008A

DB24102

pin 1	.....	pin 1
pin 2	.....	pin 2
pin 4	.....	pin 4
pin 5	.....	pin 5

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect connector DM24008A to the backup converter.
 - 3) Re-connect connector DB24102 to the coupler, B24202.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the GCU to the coupler:

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- (a) Disconnect connector DM24205AC from the right GCU.
- (b) Disconnect connector DB24104 from the coupler, B24104.
- (c) Do a wiring check between these pins of connector DM24205AC at the E1-1 shelf and connector DB24104 at the P111 panel (WDM 24-28-21).

DM24205AC	DB24104
pin 3TP	pin 2
pin 3TN	pin 1
pin 6TP	pin 5
pin 6TN	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect connector DM24105AC to the GCU.
 - 3) Re-connect connector DB24103 to the coupler, B24103.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

844. Backup Converter No Input from OPBC on Systems 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-49416, 24-49431, 24-49617, 24-49632.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup generator converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable overhead panel bus controller (OPBC):

MESSAGE	OPBC	EQUIPMENT NUMBER
24-49416, 24-49617	Left	M23112
24-49431, 24-49632	Right	B23212

- (a) To replace the left OPBC, M23112.

These are the tasks:

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Left Overhead Panel Bus Controller (OPBC) Removal, AMM TASK 23-93-01-000-801,
Left Overhead Panel Bus Controller (OPBC) Installation, AMM TASK 23-93-01-400-801.

- (b) To replace the right OPBC, B23212.

These are the tasks:

Right Overhead Panel Bus Controller (OPBC) Removal, AMM TASK 23-93-01-000-802,
Right Overhead Panel Bus Controller (OPBC) Installation, AMM TASK 23-93-01-400-802.

- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the applicable ARINC 629 coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup converter to the Systems 629 Bus.

MESSAGE	PANEL	COUPLER
24-49416, 24-49431	P111	B24102
24-49617, 24-49632	P211	B24202

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the applicable ARINC 629 coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the OPBC to the systems 629 Bus.

MESSAGE	PANEL	COUPLER
24-49416	P111	B23126
24-49431	P111	B23127
24-49617	P211	B23226
24-49632	P211	B23227

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the backup converter to the coupler:
- (a) Disconnect the applicable from the backup converter.

MESSAGE	ARINC 629	CONNECTOR
24-49416, 24-49431	Left	DM24008A
24-49617, 24-49632	Right	DM24008B

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- (b) Disconnect the applicable connector from the coupler.

MESSAGE	COUPLER	CONNECTOR
24-49416 24-49431	B24102	DB24102
24-49617 24-49632	B24202	DB24202

- (c) Do a wiring check between these pins of the applicable connectors (WDM 24-25-33). The first set applies to messages 24-49416 and 24-49431. The second set applies to messages 24-49617 and 24-49632.

DB24102	DM24008A
pin 5	pin 5
pin 4	pin 4
pin 2	pin 2
pin 1	pin 1

DB24202	DM24008B
pin 5	pin 5
pin 4	pin 4
pin 2	pin 2
pin 1	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect applicable connectors.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the applicable OPBC to the applicable coupler:
- (a) Disconnect the connector from the applicable coupler.

MESSAGE	COUPLER	CONNECTOR
24-49416	B23126	DB23126
24-49431	B23127	DB23127
24-49617	B23226	DB23226
24-49632	B23227	DB23227

- (b) Disconnect connector from the applicable OPBC.

MESSAGE	OPBC	CONNECTOR
24-49416	Left	DB23112B
24-49431	Right	DB23212B
24-49617	Left	DB23112C
24-49632	Right	DB23212C

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- (c) Do a wiring check between these pins of the applicable connector (WDM 23-93-11 and 23-93-21). The first set applies to message 24-49416. The second set applies to message 24-49431. The third set applies to message 24-49617. The fourth set applies to message 24-49632.

DB23112B

pin 5	.....	pin 5
pin 4	.....	pin 4
pin 2	.....	pin 2
pin 1	.....	pin 1

DB23126

DB23212B

pin 5	.....	pin 5
pin 4	.....	pin 4
pin 2	.....	pin 2
pin 1	.....	pin 1

DB23127

DB23112C

pin 5	.....	pin 5
pin 4	.....	pin 4
pin 2	.....	pin 2
pin 1	.....	pin 1

DB23226

DB23212C

pin 5	.....	pin 5
pin 4	.....	pin 4
pin 2	.....	pin 2
pin 1	.....	pin 1

DB23227

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect applicable connectors.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

END OF TASK

845. Backup Generator (R) Feeder Open Circuit - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-46030, 24-46110, 24-47090.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.

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- (b) For the right engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this resistance check of the backup generator (WDM 24-25-21):
 - (a) Disconnect terminal wires T4, T5 and T6 from the backup converter, M24008.
 - (b) Measure the resistance between the terminal wires T4 and T5, T5 and T6, T4 and T6.
 - (c) If the resistance between the terminal wires is less than 10K ohms and have approximately equal values, then do these steps:
 - 1) Replace the backup converter, M24008.These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 3) For the right engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If the resistance between the terminal wires is greater than 10K ohms and/or do not have approximately equal values, then continue.
- (2) Do this check of the backup generator feeder (WDM 24-25-21):
 - (a) Do a wiring check between these terminal wires at the backup generator, M24004 and terminal wires at the E4-4 shelf:

Backup Generator M24004	Backup Converter M24008
T1	T4
T2	T5
T3	T6

- (b) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminal wires T1, T2, and T3 to the backup generator, M24004.
 - 3) Re-connect terminal wires T4, T5, and T6 to the backup converter, M24008.
 - 4) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) For the right engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (c) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect terminal wires T4, T5, and T6 to the backup converter, M24008.
- (3) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

 - (a) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) For the right engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

846. Backup Generator Oil Filter Loss of Indication - Fault Isolation

A. Initial Evaluation

- (1) If the Electrical Maintenance Page does not have an indication for the BACKUP GEN oil filter, then do the Fault Isolation Procedure below.
- (2) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, then there was an intermittent fault.

B. Fault Isolation Procedure

- (1) Examine the differential pressure indicator (DPI) on the applicable backup generator.
 - (a) If the DPI (red button) is in the extended position, then do these steps:
 - 1) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - 2) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, you corrected the fault.
 - (b) If the DPI (red button) is in the retracted (normal) position, then continue.
- (2) Do this check of the electrical connector on the applicable backup generator (WDM 24-25-02):
 - (a) Disconnect connector DM24004A from the backup generator.
 - (b) Measure the resistance between pin 13 and pin 14 of the backup generator.
 - (c) If there is resistance, then do these steps:
 - 1) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

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- 2) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, you corrected the fault.
- (d) If it is an open circuit, then continue.
 - 1) Re-connect connector DM24004A to the backup generator.
- (3) Do this check of the backup generator wiring (WDM 24-25-02):
 - (a) Make sure the applicable EEC MAINT ENG POWER switch (P61 panel) is set to NORM.
 - (b) Disconnect connector DM73003B from the electronic engine control (EEC).
 - (c) Measure the resistance between pin N and pin P of connector DM73003B.
 - (d) If the resistance is less than 100 ohms, then do these steps:
 - 1) Replace the wire harness that is between connector DM24004A of the backup generator and connector DM73003B at the EEC.
 - 2) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, you corrected the fault.
 - (e) If the resistance is more than 100 ohms, then continue.
- (4) Replace the electronic engine control (EEC), M73003 (WDM 73-21-11).
 - (a) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, you corrected the fault.

————— END OF TASK —————

847. Backup Generator Oil Filter - Fault Isolation

A. Initial Evaluation

- (1) If the Electrical Maintenance Page shows BLOCKED for the BACKUP GEN oil filter, then do the Fault Isolation Procedure below.
- (2) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, then there was an intermittent fault.

B. Fault Isolation Procedure

- (1) Examine the differential pressure indicator (DPI) on the applicable backup generator.
 - (a) If the DPI (red button) is in the extended position, then do these steps:
 - 1) Replace the backup generator, M24004.
These are the tasks:
Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - 2) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, you corrected the fault.
 - (b) If the DPI (red button) is in the retracted (normal) position, then continue.
- (2) Do this task: Backup Generator Oil Filter Inspection Check, AMM TASK 24-25-02-200-801.
 - (a) If the filter shows bright metal deposits that can be clearly specified as chunks or pieces caused by breakage, then do these steps:
 - 1) Replace the backup generator, M24004.
These are the tasks:
Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

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Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- 2) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, you corrected the fault.
- (b) If the filter is clean and does not show bright metal deposits, then continue.
- (3) Do this check of the electrical connector on the applicable backup generator (WDM 24-25-02):
 - (a) Disconnect connector DM24004A from the backup generator.
 - (b) Measure the resistance between pin 13 and pin 14 of the backup generator.
 - (c) If there is resistance, then do these steps:
 - 1) Replace the backup generator, M24004.
These are the tasks:
Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - 2) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, you corrected the fault.
 - (d) If it is an open circuit, then continue.
 - 1) Re-connect connector DM24004A to the backup generator.
- (4) Do this check of the backup generator wiring (WDM 24-25-02):
 - (a) Make sure the applicable EEC MAINT ENG POWER switch (P61 panel) is set to NORM.
 - (b) Disconnect connector DM73003B from the electronic engine control (EEC).
 - (c) Measure the resistance between pin N and pin P of connector DM73003B.
 - (d) If the resistance is less than 100 ohms, then do these steps:
 - 1) Replace the wire harness that is between connector DM24004A of the backup generator and connector DM73003B at the EEC.
 - 2) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, you corrected the fault.
 - (e) If the resistance is more than 100 ohms, then continue.
- (5) Do an engine ground idle run.

NOTE: This will prevent the backup generator oil filter(s) incorrectly showing as BLOCKED on EICAS maintenance page.
- (6) Replace the electronic engine control (EEC), M73003 (WDM 73-21-11).
 - (a) If the Electrical Maintenance Page shows NORMAL for the BACKUP GEN oil filter, you corrected the fault.

————— **END OF TASK** —————

848. Backup Converter No Input From EDIU (Ch A) On System Arinc 629 Bus - Fault Isolation

A. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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B. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) For the left engine, replace the engine data interface unit (EDIU), M73103.

These are the tasks:

Engine Data Interface Unit (EDIU) Removal, AMM TASK 73-21-22-000-804-H00,

Engine Data Interface Unit (EDIU) Installation, AMM TASK 73-21-22-400-808-H00.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) For the right engine, replace the engine data interface unit (EDIU), M73203.

These are the tasks:

Engine Data Interface Unit (EDIU) Removal, AMM TASK 73-21-22-000-804-H00,

Engine Data Interface Unit (EDIU) Installation, AMM TASK 73-21-22-400-808-H00.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) For the left engine, replace the ARINC 629 coupler, B24102, in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup converter to the Systems 629 Bus.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) For the right engine, replace the ARINC 629 coupler, B24202, in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the backup converter to the Systems 629 Bus.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (6) Do this check of the wiring from the backup converter to the coupler:
 - (a) For the left engine, do these steps:

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- 1) Disconnect connector, DM24008A, from the backup converter.
- 2) Disconnect connector, DB24102, from the coupler, B24102.
- 3) Do a wiring check between these pins of connector, DM24008A, at the E4-4 shelf and connector, DB24102, at the P111 panel (WDM 24-25-33).

DM24008A		DB24102	
pin 1	.....	pin 1	
pin 2	.....	pin 2	
pin 4	.....	pin 4	
pin 5	.....	pin 5	

- (b) For the right engine, do these steps:

- 1) Disconnect connector, DM24008B, from the backup converter.
- 2) Disconnect connector, DB24202, from the coupler, B24202.
- 3) Do a wiring check between these pins of connector, DM24008B, at the E4-4 shelf and connector, DB24202, at the P111 panel (WDM 24-25-33).

DM24008B		DB24202	
pin 1	.....	pin 1	
pin 2	.....	pin 2	
pin 4	.....	pin 4	
pin 5	.....	pin 5	

- (c) If you find a problem with the wiring, then do these steps:

- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
- 2) For the left engine, do these steps:
 - a) Re-connect connector, DM24008A, to the backup converter.
 - b) Re-connect connector, DB24102, to the coupler, B24102.
- 3) For the right engine, do these steps:
 - a) Re-connect connector, DM24008B, to the backup converter.
 - b) Re-connect connector, DB24202, to the coupler, B24202.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (d) If you do not find a problem with the wiring, then continue.

- (7) Do this check of the wiring from the EDIU to the coupler:

- (a) For the left engine, do these steps:

- 1) Disconnect connector, DM73103AF, from the EDIU.
- 2) Disconnect connector, DB73101, from the coupler, B73101.
- 3) Do a wiring check between these pins of connector, DM73103AF, at the E1-5 shelf and connector DB73101 at the P111 panel (WDM 73-21-13).

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DM73103AF	DB73101
pin 4T	pin 5
pin 4TR	pin 4
pin 6T	pin 2
pin 6TR	pin 1

- (b) For the right engine, do these steps:
- 1) Disconnect connector, DM73203AF, from the EDIU.
 - 2) Disconnect connector, DB73201, from the coupler, B73201.
 - 3) Do a wiring check between these pins of connector, DM73103AF, at the E4-1 shelf and connector DB73101 at the P211 panel (WDM 73-21-13).

DM73203AF	DB73201
pin 4T	pin 5
pin 4TR	pin 4
pin 6T	pin 2
pin 6TR	pin 1

- (c) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) For the left engine, do these steps:
 - a) Re-connect connector, DM73103AF, to the EDIU.
 - b) Re-connect connector, DB24103, to coupler, B24103.
 - 3) For the right engine, do these steps:
 - a) Re-connect connector, DM73203AF, to the EDIU.
 - b) Re-connect connector, DB24203, to coupler, B24203.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

849. Converter No Input from ARINC Signal Gateway - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-49418, 24-49433, 24-49619, 24-49634.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable ARINC signal gateway card.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

MAINT MESSAGE

24-49418

24-49433

24-49619

24-49634

ASG CARD

P085A12

P084A12

P085A15

P084A15

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the applicable ARINC 629 coupler. To replace it,

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the applicable backup generator converter to the applicable systems 629 Bus.

MAINT MESSAGE

24-49418

24-49433

24-49619

24-49634

PANEL

P111

P111

P211

P211

COUPLER

B24102

B24102

B24202

B24202

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the applicable ARINC 629 coupler. To replace it,

These are the tasks:

Left Overhead Panel Bus Controller (OPBC) Removal, AMM TASK 23-93-01-000-801,

Left Overhead Panel Bus Controller (OPBC) Installation, AMM TASK 23-93-01-400-801.

NOTE: This coupler connects the AIMS to the applicable systems 629 Bus.

MAINT MESSAGE

24-49418

24-49433

24-49619

SYSTEM CARD FILE

LEFT

RIGHT

LEFT

ARINC COUPLER

B31101

B31201

B31102

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MAINT MESSAGE	SYSTEM CARD FILE	ARINC COUPLER
24-49634	RIGHT	B31202
(a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.		
(b) If the MAT shows ACTIVE for the maintenance message, then continue.		
(5) Do this check of the wiring from the backup generator converter to the coupler (WDM 24-25-33):		
<u>NOTE:</u> See the tables that follows for the connectors and pins that apply to the applicable maintenance message.		
(a) Disconnect the applicable coupler.		

MAINT MESSAGE	PANEL	COUPLER
24-49418	P111	B24102
24-49433	P111	B24102
24-49619	P211	B24202
24-49634	P211	B24202

- (b) Disconnect the applicable connector from the backup generator converter.

MAINT MESSAGE	CONNECTOR
24-49418	DM24008A
24-49433	DM24008A
24-49619	DM24008B
24-49634	DM24008B

- (c) Do a wiring check between the pins of these connectors (WDM 24-25-33). The first set applies to messages 24-49418 and 24-49433. The second set applies to messages 24-49618 and 49634.

DB24102	DM24008A
pin 5	pin 5
pin 4	pin 4
pin 2	pin 2
pin 1	pin 1

DB24202	DM24008B
pin 5	pin 5
pin 4	pin 4
pin 2	pin 2
pin 1	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the applicable connector to the backup generator converter.

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- 3) Re-connect the connector to the applicable coupler.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect the applicable connector to the backup generator converter.
 - 2) Re-connect the connector to the applicable coupler.
- (6) Do this check of the wiring from the ARINC signal gateway card to the coupler:

NOTE: See the table that follows for the connectors and pins that apply to the applicable maintenance message.

 - (a) Disconnect the applicable connector from the coupler.
 - (b) Remove the applicable ARINC signal gateway card. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.
 - (c) Do a wiring check between the pins of these connectors (WDM 31-09-12), (WDM 31-09-22). The first set applies to message 24-49418. The second set applies to message 24-49433. The third set applies to message 24-49619. The fourth set applies to message 24-49634.

DB31101	XA12
pin 2	pin 9
pin 1	pin 6
pin 5	pin 10
pin 4	pin 7

DB31201	XA12
pin 2	pin 9
pin 1	pin 6
pin 5	pin 10
pin 4	pin 7

DB31102	XA15
pin 2	pin 9
pin 1	pin 6
pin 5	pin 10
pin 4	pin 7

DB31202	XA15
pin 2	pin 9
pin 1	pin 5
pin 5	pin 10
pin 4	pin 7

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-install the applicable ARINC signal gateway card. To install it, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.
 - 3) Re-connect the applicable connector to the coupler.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

852. Transfer Bus R Phase Sequence Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-44070.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation

- (1) Replace the transfer bus breaker, K24201.

These are the tasks:

Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this phase sequence check of the voltage sense wiring (WDM 24-25-22):
 - (a) Disconnect connector DM24008D from the backup converter, M24008.
 - (b) Do a phase sequence check of pins 44, 45, and 25 at connector DM24008D.
 - (c) If you do not find a problem with the phase sequence, then do these steps:
 - 1) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE for the maintenance message, then repair the wiring from pin 24 of connector DM24008D to airplane ground.
- (d) If you do not find a problem with the phase sequence, then continue.
- (3) Do this check of the voltage sense wiring between the backup converter and the P200 right power panel (WDM 24-25-22):
 - (a) Disconnect connector D20023P from the P200 right power panel.
 - (b) Do a wiring check between these pins of connector D20023P at the P200 panel and connector DM24008D at the E4-4 shelf:

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D20023P

pin 26 pin 45
pin 27 pin 25
pin 44 pin 44

DM24008D

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D20023P to the P200 panel.
 - 3) Re-connect connector DM24008D to the backup converter, M24008.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24008D to the backup converter, M24008.
- (4) Do this check of the voltage sense wiring inside the P200 right power panel (SSM 24-25-22):
 - (a) Remove the right transfer bus breaker, K24201. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801
 - (b) Do a wiring check between these pairs of pins:
 - 1) Pin 27 of connector D20023P and pin 17 of the right transfer bus breaker, K24201.
 - 2) Pin 26 of connector D20023P and pin 16 of the right transfer bus breaker, K24201.
 - 3) Pin 44 of connector D20023P and pin 15 of the right transfer bus breaker, K24201.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D20023P to the P200 panel.
 - 3) Re-install the right transfer bus breaker, K24201. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector D20023P to the P200 panel.
- (5) Do this check of the wiring between the right transfer bus breaker, K24201 and the right converter circuit breaker, K24202 (WDM 24-25-22):
 - (a) Remove the right converter circuit breaker, K24202. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801
 - (b) Do a wiring check between these pairs of pins:
 - 1) Pin A2 of the right converter circuit breaker, K24202 and pin A2 of the right transfer bus breaker, K24201.
 - 2) Pin B2 of the right converter circuit breaker, K24202, and pin B2 of the right transfer bus breaker, K24201.
 - 3) Pin C2 of the right converter circuit breaker, K24202, and pin C2 of the right transfer bus breaker, K24201.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- 2) Re-install the right converter circuit breaker, K24202. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 3) Re-install the right transfer bus breaker, K24201. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the right converter circuit breaker, K24202. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
- (6) Do this check of the transfer bus (WDM 24-51-22):
- (a) Remove each of the circuit breakers:
(Circuit Breaker - Removal, AMM TASK 24-09-00-000-818-002)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-010			
A	1	C24302	TRU R
A	3	C24340	TRU C2
ARO 011-999			
A	5	C24340	TRU C2
ARO 001-004			
A	6	C24324	R XFR AC BUS DISTR P210
ARO 011-999			
A	6	C24302	TRU R
ARO 001-004			
A	7	C24344	R XFR AC BUS DISTR P11
ARO 006-999			
A	8	C24344	R XFR AC BUS DISTR P11
B	7	C24324	R XFR AC BUS DISTR P210

ARO ALL

NOTE: Remove and do a check of the wiring for the circuit breaker one at a time.

- (b) Do a wiring check between pins A2, B2 and C2 of the receptacle for the right transfer bus breaker, K24201 and pins A1, B1, and C1 of the circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-010			
A	1	C24302	TRU R
A	3	C24340	TRU C2
ARO 011-999			
A	5	C24340	TRU C2
ARO 001-004			
A	6	C24324	R XFR AC BUS DISTR P210

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Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
A	6	C24302	TRU R
ARO 006-999			
B	7	C24324	R XFR AC BUS DISTR P210

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- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right transfer bus breaker, K24201. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 3) Re-install the circuit breaker that was removed, do this task: Circuit Breaker - Installation, AMM TASK 24-09-00-400-814-002.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

853. Right 115 VAC Main Bus Voltage Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-44090.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 110-120 VAC from pins 26, 46, and 47 of connector DM24008D to structure ground (WDM 24-25-22).
- (a) Disconnect connector DM24008D from the backup converter, M24008.
- (b) If there is 110-120 VAC at pins 26, 46, and 47 of DM24008D, then replace the backup converter, M24008.
- These are the tasks:
- Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- (c) If there is not 110-120 VAC at pins 26, 46, and 47 of DM24008D, then continue.
- (2) Do this check of the wiring:

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- (a) Remove the right generator circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between these pins of connector DM24008D at the E4-4 shelf and the receptacle for the right generator circuit breaker, C24332:

DM24008D	C24332
pin 26	pin 21
pin 46	pin 20
pin 47	pin 19

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24008D to the backup converter, M24008.
- 3) Re-install the right generator circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the right generator circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

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These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do a visual check of the connections between pins 19, 20 and 21 of the right generator circuit breakers, and the backplane of the P200 panel:
(WDM 24-25-22)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- (a) If you find a problem with the connections, then repair the connections.
- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

854. Main Bus R Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-44130.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring:
 - (a) Remove the right generator circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

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- (b) Do a wiring check between these pins of connector DM24008D at the E4-4 shelf and the receptacle for the right generator circuit breaker, C24332:

DM24008D	C24332
pin 26	pin 21
pin 46	pin 20
pin 47	pin 19

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24008D to the backup converter, M24008.
- 3) Re-install the right generator circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the right generator circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a visual check of the connections between pins 19, 20 and 21 of the right generator circuit breakers and the backplane of the P200 panel:
- (WDM 24-25-22)

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Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- (a) If you find a problem with the connections, then repair the connections.
- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

855. Backup Generator R Speed and Wiring Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-47010, 24-47030.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - (b) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE while the engine operates (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring (WDM 24-25-21):
 - (a) Make sure the engine does not operate.
 - (b) Disconnect connector DM24008D from the backup converter, M24008.
 - (c) Measure the resistance between these pairs of pins of connector DM24008D.
 - 1) Pins 60 and pin 38
 - 2) Pins 20 and pin 38
 - (d) If the resistance is in the range 1.0-2.0 ohms for each pair of pins, then do these steps:
 - 1) Replace the backup converter, M24008.These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

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- 2) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
- 3) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If the resistance is not in the range 1.0-2.0 ohms for each pair of pins, then continue.
- (2) Do this check of the backup generator wiring (WDM 24-25-21):
 - (a) Disconnect connector DM24004A from the backup generator, M24004.
 - (b) Do a check of the connector backshell for chafing.
 - (c) Do a wiring check between these pins of connector DM24004A at the backup generator, M24004 and connector DM24008D at the E4-4 shelf :

DM24004A

pin 7 pin 60
pin 8 pin 38
pin 9 pin 20

DM24008D

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24004A to the backup generator, M24004.
 - 3) Re-connect connector DM24008D to the backup converter, M24008.
 - 4) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
 - 5) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24008D to the backup converter, M24008.
- (3) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- (a) Place the L and R BACKUP GEN switches on the P5 panel to the OFF position if not already OFF, then set the L and R BACKUP GEN switches to the ON position to reset the L and R generator control electronics.
- (b) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

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856. Backup Generator R Feeder Circuit Shorted - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-47050.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check of the terminal wires T1, T2, and T3.
 - (a) Do a check of the terminal wires T1, T2, and T3 for chafing at the engine-strut area (WDM 24-25-21).
 - 1) If you find a problem with the terminal wires, then do these steps:
 - a) Repair the wiring.
 - b) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - c) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 2) If you do not find a problem with the terminal wires, then continue.
 - (2) Do a wiring check of the phase leads at terminals T4, T5, and T6 of the backup converter, M24008 and make sure they are not shorted to ground (WDM 24-25-21).

NOTE: This Maintenance Message can be generated if a phase lead is connected to the wrong terminal at the backup generator or the backup converter during re-installation of these LRUs.

- (a) If one of the terminals T4, T5, or T6 is shorted to ground, then do these steps:
 - 1) Replace the backup generator, M24004.
These are the tasks:
Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - 2) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- 5) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then repair the wiring between terminals T4, T5, T6 of the backup converter, M24008 and T1, T2, T3 of the backup generator, M24004.
- (b) If terminals T4, T5, and T6 of the backup converter, M24008 are not shorted to ground, then continue.
- (3) Do this resistance check of the backup generator and its wiring (WDM 24-25-21).
 - (a) Disconnect connector DM24008D from the backup converter, M24008.
 - (b) Do a resistance check between pin 51 and pin 54, pin 52 and pin 54, pin 53 and pin 54.
 - (c) Make sure the resistances measure between 5 and 25 ohms and are approximately equal to each other.
 - (d) If the resistance reading is less than 5 ohms on any of the pins, then do these steps:
 - 1) Reconnect connector DM24008D to the backup converter, M24008.
 - 2) Replace the backup generator, M24004.

These are the tasks:
Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - 3) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (e) If the resistance reading is greater than 25 ohms on any of the pins or if the resistance readings are not approximately equal to each other, then do these steps:
 - 1) Disconnect connector DM24004A from the backup generator, M24004.
 - 2) Do a wiring check between these pins of connector DM24004A and connector DM24008D at the backup converter, M24008 on the E4-4 shelf:

DM24004A	DM24008D
pin 10	pin 51
pin 11	pin 52
pin 12	pin 53
pin 3	pin 54
- 3) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-connect connector DM24004A to the backup generator, M24004.
 - c) Re-connect connector DM24008D to the backup converter, M24008.
 - d) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - e) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- f) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- 4) If you do not find a problem with the wiring, then continue.
 - a) Re-connect connector DM24008D to the backup converter, M24008.
 - b) Replace the backup generator, M24004.

These are the tasks:
Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - c) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - d) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - e) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (f) If there is no problem with the resistance values, then continue.
- (4) Replace the backup converter, M24008.

These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

 - (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

857. TBB R Commanded Position (Open) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48030, 24-48050.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the TBB and its wiring (WDM 24-25-31):
 - (a) Disconnect connector DM24008D from the backup converter, M24008.

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- (b) Apply 28 VDC from pin 1 to pin 31 of connector DM24008D.
- (c) Connect the pin 32 of connector DM24008D to structure ground.
- (d) Do a continuity check from pin 17 to pin 18 of connector DM24008D.
- (e) If there is continuity between pin 17 and pin 18, then do these steps:
 - 1) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) Re-connect connector DM24008D to the backup converter, M24008.
 - 3) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 4) If the maintenance message does not show on the ground test display, you corrected the fault.
- (f) If there is no continuity between pin 17 and pin 18, then continue.
 - 1) Re-connect connector DM24008D to the backup converter, M24008.
- (2) Do this check of the wiring between the TBB and the backup converter (WDM 24-25-22):
 - (a) Remove the right TBB, K24201. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between these pins of connector DM24008D at the E4-4 shelf and receptacles of TBB, K24201 at the right power panel, P200:

DM24008D	K24201
pin 18	pin 3
pin 17	pin 4
pin 31	pin 1
pin 32	pin 2

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24008D to the backup converter, M24008.
 - 3) Re-install the right TBB, K24201. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24008D to the backup converter, M24008.
- (3) Replace the right TBB, K24201.

These are the tasks:

Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.

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- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— **END OF TASK** —————

858. Converter Circuit Breaker R Coil Short Circuit - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-48110.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this resistance check of the right CCB (WDM 24-25-22):
 - (a) Disconnect connector D24008D from the backup converter.
 - (b) Measure the resistance between pin 30 and ground, and pin 30 and pin 15.
 - (c) If the resistance is greater than 7 ohms, then do these steps:
 - 1) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 2) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 3) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (d) If the resistance is less than 7 ohms, then continue.
- (2) Do this check of the converter circuit breaker (CCB) coil wiring:
 - (a) Remove the right CCB, K24202. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between these pins of connector DM24008D at the E4-4 shelf and receptacle of the CCB at the right power panel (WDM 24-25-22):

DM24008D	K24202
pin 30	pin 1
pin 15	pin 2

- (c) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
 - 2) Re-connect connector DM24008D to the backup converter.
 - 3) Re-install the right CCB, K24201. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-connect connector DM24008D to the backup converter.
- (3) Replace the converter circuit breaker (CCB), K24202.
- These are the tasks:
- Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.

— END OF TASK —

859. CCB R Commanded Position (Close) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48130, 24-48150.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the CCB and its wiring:
 - (a) Disconnect connector DM24008D from the backup converter, M24008 (WDM 24-25-31).
 - (b) Apply 28 VDC from pin 1 to pin 30 of connector DM24008D.
 - (c) Connect the pin 15 of connector DM24008D to structure ground.
 - (d) Do a continuity check from pin 34 to pin 35 of connector DM24008D.
 - (e) If there is continuity between pin 34 and pin 35, then do these steps:
 - 1) Replace the backup converter, M24008.

These are the tasks:

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Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- 2) Re-connect connector DM24008D to the backup converter.
- 3) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- 4) If the maintenance message does not show on the ground test display, you corrected the fault.
- (f) If there is no continuity between pin 34 and pin 35, then continue.
 - 1) Re-connect connector DM24008D to the backup converter.
- (2) Do this check of the wiring between the CCB and the backup converter:
 - (a) Remove the right CCB, K24202. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between these pins of connector DM24008D at the E4-4 shelf and receptacles of CCB, K24202 at the right power panel (P200) (WDM 24-25-22):

DM24008D	K24202
pin 34	pin 3
pin 35	pin 4
pin 30	pin 1
pin 15	pin 2

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24008D to the backup converter.
 - 3) Re-install the right CCB, K24202. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24008D to the backup converter.
- (3) Replace the converter circuit breaker (CCB), K24202.

These are the tasks:

Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.

- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.

———— **END OF TASK** ————

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860. CCB R Commanded Position (Open) Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48170, 24-48190.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the CCB and its wiring:
 - (a) Disconnect connector DM24008D from the backup converter (WDM 24-25-22).
 - (b) Do a continuity check from pin 34 to pin 35 of connector DM24008D.
 - (c) If there is continuity between pin 34 and pin 35, then do these steps:
 - 1) Replace the right converter circuit breaker (CCB), K24202.
These are the tasks:
Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801,
Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 2) Re-connect connector DM24008D to the backup converter.
 - 3) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (d) If there is no continuity between pin 34 and pin 35, then continue.
- (2) Do this check of the wiring between the CCB and the backup converter:
 - (a) Remove the right CCB, K24202. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (b) Do a wiring check between these pins of connector DM24008D and receptacles of CCB, K24202 at the right power panel (P200) (WDM 24-25-22):

DM24008D	K24202
pin 34	pin 3
pin 35	pin 4

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- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24008D to the backup converter.
 - 3) Re-install the right CCB, K24202. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the right CCB, K24202. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 2) Re-connect connector DM24008D to the backup converter.
- (3) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

 - (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

———— END OF TASK ————

861. Left Backup Generator Low Oil Pressure Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-46080.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Operate the left engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

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- (e) Stop the left engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

C. Fault Isolation Procedure

- (1) Do these steps to check for and correct a low oil level in the left backup generator, M24004.
 - (a) Do a check of the backup generator oil level. To do the check, do this task: Backup Generator Oil Level Check, AMM TASK 12-13-07-200-801.
 - 1) If you find a low oil level, examine the items in the list that follows for leaks.
 - a) Backup generator heat exchanger
 - b) Backup generator oil-out line
 - c) Backup generator oil-in line
 - d) Backup generator oil servicing lines
 - 2) If you find a leak, repair it, and continue.
 - (b) If the oil level is low, fill the left backup generator with oil. To fill the generator, do this task: Backup Generator Oil Fill, AMM TASK 12-13-07-600-801
 - (c) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (d) Operate the left engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (e) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the engine operates, you corrected the fault.
 - (g) Stop the left engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (2) Replace the left backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

 - (a) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Operate the left engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the engine operates, you corrected the fault.
 - (e) Stop the left engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (3) Do this check of the backup generator wiring (WDM 24-25-02):
 - (a) Disconnect connector DM24004A from the backup generator, M24004.
 - (b) Disconnect connector DM24008C from the backup converter, M24008.

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- (c) Do a wiring check between these pins of connector DM24004A at the backup generator, M24004 and connector DM24008C at the E4-4 shelf:

DM24004A	DM24008C
pin 1	pin 4
pin 4	pin 13
pin 2	pin 14

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24004A to the backup generator, M24004.
 - 3) Re-connect connector DM24008C to the backup converter, M24008.
 - 4) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) Operate the left engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
 - 7) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the engine operates, you corrected the fault.
 - 8) Stop the left engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (e) If you do not find a problem with the wiring, then continue.
- 1) Re-connect connector DM24004A to the backup generator, M24004.
 - 2) Stop the left engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

- (4) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) Operate the left engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the engine operates, you corrected the fault.
- (d) Stop the left engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

————— END OF TASK —————

862. Right Backup Generator Low Oil Pressure Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-46090.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Operate the right engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.
 - (e) Stop the right engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

C. Fault Isolation Procedure

- (1) Do these steps to check for and correct a low oil level in the right backup generator, M24004.
 - (a) Do a check of the backup generator oil level. To do the check, do this task: Backup Generator Oil Level Check, AMM TASK 12-13-07-200-801.
 - 1) If you find a low oil level, examine the items in the list that follows for leaks.
 - a) Backup generator heat exchanger
 - b) Backup generator oil-out line
 - c) Backup generator oil-in line
 - d) Backup generator oil servicing lines
 - 2) If you find a leak, repair it, and continue.
 - (b) If the oil level is low, fill the right backup generator with oil. To fill the generator, do this task: Backup Generator Oil Fill, AMM TASK 12-13-07-600-801
 - (c) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (d) Operate the right engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (e) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the engine operates, you corrected the fault.
 - (g) Stop the right engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (2) Replace the right backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

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- (a) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Operate the right engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the engine operates, you corrected the fault.
 - (e) Stop the right engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (3) Do this check of the backup generator wiring (WDM 24-25-02):
- (a) Disconnect connector DM24004A from the backup generator, M24004.
 - (b) Disconnect connector DM24008D from the backup converter, M24008.
 - (c) Do a wiring check between these pins of connector DM24004A at the backup generator, M24004 and connector DM24008D at the E4-4 shelf:

DM24004A	DM24008D
pin 1	pin 4
pin 4	pin 13
pin 2	pin 14

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24004A to the backup generator, M24004.
 - 3) Re-connect connector DM24008D to the backup converter, M24008.
 - 4) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) Operate the right engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then continue.
 - 7) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the engine operates, you corrected the fault.
 - 8) Stop the right engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24004A to the backup generator, M24004.
 - 2) Stop the right engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (4) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

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Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) Operate the right engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the engine operates, you corrected the fault.
- (d) Stop the right engine. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

————— END OF TASK —————

863. Converter and Generator Control Switch R Disagree - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-48210, 24-48230, 24-48500, 24-48520.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Make sure the engine fire switch on the P8 panel is in the normal position.
NOTE: The engine fire switch in the pulled position may cause this fault message.
- (2) Replace the R BACKUP GEN switch on the Electrical Systems Control Panel, M24023 (WDM 24-25-21).
 - (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (c) If the maintenance message shows on the ground test display, then continue.
- (3) Do this check of the R BACKUP GEN switch wiring (WDM 24-25-21).
 - (a) Disconnect connector DM24023A from the Electrical System Control Panel, M24023.
 - (b) Disconnect connector DM24023B from the Electrical System Control Panel, M24023.
 - (c) Disconnect connector DM23217G from the Maintenance Panel, P61.
 - (d) Disconnect connector DS26201 from the Right Engine Fire Switch, S26201 on the Aft Aisle Stand Panel, P8.
 - (e) Remove the Backup Generator Converter, M24008. To remove it, do this task: Backup Generator Converter Removal, AMM TASK 24-25-09-000-801.

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- (f) Do a wiring check between these pins of connector DM24023B at the Electrical System Control Panel, M24023, and connector DM23217G at the Maintenance Panel, P61 (WDM 24-25-21):

DM24023B	DM23217G
pin 34	pin A14
pin 35	pin A16
pin 36	pin A15

- (g) Do a wiring check between these pins of connector DM24023A at the Electrical System Control Panel, M24023, and connector DM24008D at the E4-4 shelf (WDM 24-25-21):

DM24023A	DM24008D
pin 11	pin 3
pin 12	pin 2

- (h) Do a wiring check between these pins of connector DM24023A at the Electrical System Control Panel, M24023, and connector DS26201 at the Aft Aisle Stand Panel, P8 (WDM 24-25-21):

DM24023A	DS26201
pin 11	pin 30
pin 12	pin 14

- (i) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (j) Re-connect connector DM24023A to the Electrical System Control Panel, M24023.
- (k) Re-connect connector DM24023B to the Electrical System Control Panel, M24023.
- (l) Re-connect connector DM23217G to the Maintenance Panel, P61.
- (m) Re-connect connector DS26201 to the Right Engine Fire Switch, S26201 on the Aft Aisle Stand Panel, P8.
- (n) Re-install the Backup Generator Converter, M24008. To install it, do this task: Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
- 1) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
 - 2) If the maintenance message does not show on the ground test display, you corrected the fault.
- (o) If you do not find a problem with the wiring, then continue.
- (4) Replace the Right Engine Fire Switch, S26201.

These are the tasks:

Engine Fire Switch Removal, AMM TASK 26-21-03-000-801,

Engine Fire Switch Installation, AMM TASK 26-21-03-400-801.

- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.
- (c) If the maintenance message shows on the ground test display, then continue.

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- (5) Replace the Backup Generator Converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) Do this ground test on the MAT: 24-Backup (VSCF) Electrical Power System (BEPS), Operational Test, Backup Manually Init. Engine Start.
- (b) If the maintenance message does not show on the ground test display, you corrected the fault.

————— **END OF TASK** —————

864. Backup Generator DPI Position and Maintenance Page Disagree - Fault Isolation

A. Fault Isolation Procedure

- (1) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- (2) Do this check of the wiring (WDM 24-25-02):

- (a) Disconnect connector DM24004A from the backup generator, M24004.
- (b) Disconnect connector DM73003B from the electronic engine control (EEC), M73003.
- (c) Do a wiring check between these pins of connector M24004A at the backup generator, M24004, and connector DM73003B at the EEC, M73003.

DM24004A

DM73003B

pin 13 pin N

pin 14 pin P

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- 2) Re-connect connector DM24004A to the backup generator.
- 3) Re-connect connector DM73003B to the EEC.

————— **END OF TASK** —————

865. Backup Converter Supplemental Cooling Fan Fault - Fault Isolation

A. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 24 Backup (VSCF) Electric Power System (BEPS), Operational Test, Engine Start Test.
- (a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

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B. Fault Isolation Procedure

- (1) Replace the backup converter supplemental cooling fan, B24003.

These are the tasks:

Converter Supplemental Cooling Fan - Removal, AMM TASK 24-25-13-000-801,

Converter Supplemental Cooling Fan - Installation, AMM TASK 24-25-13-400-801.

- (a) Do this ground test on the MAT: 24 Backup (VSCF) Electric Power System (BEPS), Operational Test, Engine Start Test.
 - (b) If the maintenance message does not show on the ground test display, you corrected the fault.
 - (c) If the maintenance message shows on the ground test display, then continue.
- (2) Do this check of the backup converter supplemental cooling fan wiring (WDM 24-25-32):
 - (a) Remove the backup converter, M24008. To remove it, do this task: Backup Generator Converter Removal, AMM TASK 24-25-09-000-801.
 - (b) Remove connector DB24003 from the backup converter supplemental cooling fan, B24003.
 - (c) Do a wiring check between these pins at connector DM24008C at the E4-4 shelf and connector DB24003:

DM24008C	DB24003C
49	1
48	2
28	3

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the backup converter, M24008. To install it, do this task: Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - 3) Re-connect connector DB24003 to the backup converter supplemental cooling fan, B24003.
 - 4) Do this ground test on the MAT: 24 Backup (VSCF) Electric Power System (BEPS), Operational Test, Engine Start Test.
 - 5) If the maintenance message does not show on the ground test display, you corrected the fault.

————— END OF TASK —————

866. Left Backup Generator Sheared Shaft - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-46000.

B. Possible Causes

- (1) Backup Generator (BUG)

NOTE: A single input shaft shear where the BUG has not experienced an internal failure can also be caused by age or fatigue effects on the BUG input shaft.

- (2) For repeated occurrence of sheared shaft, these are the possible causes:

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- (a) Integrated Drive Generator (IDG)

NOTE: Shaft shears due to IDG modulation are more likely to occur during the specific engine RPM's that equate the IDG's straight through speed which is during flight idle/decent or during taxi.

- (b) Starter Air Valve (SAV)

NOTE: A degraded or damaged SAV can open too fast during the engines start sequence. This can cause excessive torque to the BUG's input shaft.

C. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (a) If this is a repeated occurrence of sheared shaft, then do these steps:
- 1) If the IDG modulation is suspected, then do Fault Isolation Procedure below for the IDG modulation.
 - 2) If the SAV damage or degradation is suspected, then do Fault Isolation Procedure below for the SAV damage or degradation.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

D. Fault Isolation Procedure

- (1) Replace the left backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

NOTE: A single input shaft shear where the BUG has not experienced an internal failure can also be caused by age or fatigue effects on the BUG input shaft. If the input shaft can rotate freely, do this task to replace it Backup Generator Input Shaft Replacement (Shaft Shear), AMM TASK 24-25-01-960-801. If the input shaft cannot rotate freely, install a new BUG.

- (a) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
- (2) If the IDG modulation is suspected, do the following steps.
- (a) Do a check of BUG input shaft rotation.

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- 1) Remove the BUG, M24004. To remove it, do this task: Backup Generator Removal, AMM TASK 24-25-01-000-804-001.
 - 2) Rotate the BUG input shaft.
 - 3) If the BUG input shaft can rotate freely, do one of these steps:
 - a) Replace the BUG input shaft per reference AMM PAGEBLOCK 24-25-01/801.
 - b) Install a new BUG. To install the new BUG, do this task: Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - 4) If the BUG input shaft cannot rotate freely, install a new BUG. To install the new BUG, do this task: Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
- (b) Replace the left IDG, M24001.
- These are the task:
- IDG Removal, AMM TASK 24-11-01-000-801-001,
IDG Installation, AMM TASK 24-11-01-400-801-001.
- (c) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
- (d) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (e) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
- (3) If the SAV damage or degradation is suspected, do the following steps.
- (a) Do a check of BUG input shaft rotation.
- 1) Remove the BUG, M24004. To remove it, do this task: Backup Generator Removal, AMM TASK 24-25-01-000-804-001.
 - 2) Rotate the BUG input shaft.
 - 3) If the BUG input shaft can rotate freely, do one of these steps:
 - a) Replace the BUG input shaft per reference AMM PAGEBLOCK 24-25-01/801.
 - b) Install a new BUG. To install the new BUG, do this task: Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - 4) If the BUG input shaft cannot rotate freely, install a new BUG. To install the new BUG, do this task: Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
- (b) Replace the left SAV, V80001.
- These are the task:
- Starter Air Valve Removal, AMM TASK 80-11-02-000-801-H01,
Starter Air Valve Installation, AMM TASK 80-11-02-400-801-H01.
- (c) Place the L BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the L BACKUP GEN switch to the ON position to reset the generator control electronics.
- (d) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- (e) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.

————— END OF TASK —————

867. Right Backup Generator Sheared Shaft - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-46010.

B. Possible Causes

- (1) Backup Generator (BUG)

NOTE: A single input shaft shear where the BUG has not experienced an internal failure can also be caused by age or fatigue effects on the BUG input shaft.

- (2) For repeated occurrence of sheared shaft, these are the possible causes:

- (a) Integrated Drive Generator (IDG)

NOTE: Shaft shears due to IDG modulation are more likely to occur during the specific engine RPM's that equate the IDG's straight through speed which is during flight idle/decent or during taxi.

- (b) Starter Air Valve (SAV)

NOTE: A degraded or damaged SAV can open too fast during the engines start sequence. This can cause excessive torque to the BUG's input shaft.

C. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (a) If this is a repeated occurrence of sheared shaft, then do these steps:
- 1) If the IDG modulation is suspected, then do Fault Isolation Procedure below for the IDG modulation.
 - 2) If the SAV damage or degradation is suspected, then do Fault Isolation Procedure below for the SAV damage or degradation.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

D. Fault Isolation Procedure

- (1) Replace the right backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

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Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

NOTE: A single input shaft shear where the BUG has not experienced an internal failure can also be caused by age or fatigue effects on the BUG input shaft. If the input shaft can rotate freely, do this task to replace it Backup Generator Input Shaft Replacement (Shaft Shear), AMM TASK 24-25-01-960-801. If the input shaft cannot rotate freely, install a new BUG.

- (a) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
- (2) If the IDG modulation is suspected, do the following steps.
- (a) Do a check of BUG input shaft rotation.
 - 1) Remove the BUG, M24004. To remove it, do this task: Backup Generator Removal, AMM TASK 24-25-01-000-804-001.
 - 2) Rotate the BUG input shaft.
 - 3) If the BUG input shaft can rotate freely, do one of these steps:
 - a) Replace the BUG input shaft per reference AMM PAGEBLOCK 24-25-01/801.
 - b) Install a new BUG. To install the new BUG, do this task: Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - 4) If the BUG input shaft cannot rotate freely, install a new BUG. To install the new BUG, do this task: Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - (b) Replace the right IDG, M24001.

These are the task:

IDG Removal, AMM TASK 24-11-01-000-801-001,

IDG Installation, AMM TASK 24-11-01-400-801-001.
 - (c) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (d) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.
- (3) If the SAV damage or degradation is suspected, do the following steps.
- (a) Do a check of BUG input shaft rotation.
 - 1) Remove the BUG, M24004. To remove it, do this task: Backup Generator Removal, AMM TASK 24-25-01-000-804-001.
 - 2) Rotate the BUG input shaft.
 - 3) If the BUG input shaft can rotate freely, do one of these steps:
 - a) Replace the BUG input shaft per reference AMM PAGEBLOCK 24-25-01/801.

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- b) Install a new BUG. To install the new BUG, do this task: Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
- 4) If the BUG input shaft cannot rotate freely, install a new BUG. To install the new BUG, do this task: Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
- (b) Replace the right SAV, V80001.
These are the task:
Starter Air Valve Removal, AMM TASK 80-11-02-000-801-H01,
Starter Air Valve Installation, AMM TASK 80-11-02-400-801-H01.
- (c) Place the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the R BACKUP GEN switch to the ON position to reset the generator control electronics.
- (d) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (e) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then you corrected the fault.

————— **END OF TASK** —————

868. Backup Generator Internal Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-46160, 24-46170.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Start the applicable engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- (a) Place the applicable BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) Start the applicable engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

869. Converter Output Current Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-48380.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
 - Operate one of the two engines. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring (WDM 24-25-22):
- Disconnect connector DM24008D from the backup converter.
 - Remove the left converter circuit breaker, K24102. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - Do a wiring check between these pins at the backup converter connector, DM24008D and circuit breaker receptacle DK24102 at the left power panel, P100:

DM24008D	DK24102
pin 49	pin A1
pin 48	pin B1
pin 28	pin C1
pin 50	ground

- (d) If you find a problem with the wiring, then do these steps:
- Repair the wiring.
 - Re-connect connector DM24008D to the backup converter.
 - Re-install the left converter circuit breaker, K24102. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
 - Operate one of the two engines. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

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- 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (2) Do this check of the wiring (WDM 24-25-22):
 - (a) Disconnect terminal lugs L1, L2, L3 and N from the backup converter, M24008.
 - (b) Remove the left converter circuit breaker, K24102. To remove it, do this task: Transfer Bus and Converter Circuit Breaker Removal, AMM TASK 24-25-10-000-801.
 - (c) Do a wiring check between these terminals at the backup converter, and circuit breaker receptacle DK24102 at the left power panel, P100:

M24008	DK24102
L1	pin A1
L2	pin B1
L3	pin C1
N	ground

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect terminal lugs L1, L2, L3 and N to the backup converter, M24008.
 - 3) Re-install the left converter circuit breaker, K24102. To install it, do this task: Transfer Bus and Converter Circuit Breaker Installation, AMM TASK 24-25-10-400-801.
 - 4) Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
 - 5) Operate one of the two engines. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the backup current transformers, T24204, T24207, and T24208 (WDM 24-25-22).
 - (a) Disconnect connector DM24008D from the backup converter.
 - (b) Measure the resistance between pins 58 and 55; pins 57 and 55; and pins 56 and 55 on connector DM24008D.
 - (c) If the resistances are not within 100 ohms of each other, then do this check of the wiring:
 - 1) Disconnect connector D20023 from the right main power panel, P200.
 - 2) Do a wiring check between these pins at the backup converter connector DM24008D and connector D20023 at the right main power panel, P200:

DM24008D	D20023
pin 58	pin 1
pin 57	pin 2
pin 56	pin 3
pin 55	pin 4

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- 3) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-connect connector DM24008D to the backup converter, M24008.
 - c) Re-connect connector D20023 to the right main power panel, P200.
 - d) Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
 - e) Operate one of the two engines. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the resistances are within 100 ohms of each other, then continue.
- (4) Do this check of the backup current transformers, T24104, T24107, and T24108 (WDM 24-25-12).
 - (a) Disconnect connector DM24008C from the backup converter.
 - (b) Measure the resistance between pins 58 and 55; pins 57 and 55; and pins 56 and 55 on connector DM24008C.
 - (c) If the resistances are not within 100 ohms of each other, then do this check of the wiring:
 - 1) Disconnect connector D10023 from the left main power panel, P100.
 - 2) Do a wiring check between these pins at the backup converter connector DM24008C and connector D10023 at the left main power panel, P100:

DM24008C	D10023
pin 58	pin 1
pin 57	pin 2
pin 56	pin 3
pin 55	pin 4

- 3) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-connect connector DM24008C to the backup converter, M24008.
 - c) Re-connect connector D10023 to the left main power panel, P100.
 - d) Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
 - e) Operate one of the two engines. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the resistances are within 100 ohms of each other, then continue.
- (5) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

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- (a) Place the either the L or the R BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the same BACKUP GEN switch to the ON position to reset the generator control electronics.
- (b) Operate one of the two engines. To start the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

872. Backup Converter Has Internal Fault (Left) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-45001.

B. Initial Evaluation

- (1) Use the MAT to check for any other ACTIVE or LATCHED ATA Chapter 24 Maintenance Messages and perform the tasks for those Maintenance Messages first.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the left BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Start the left engine (AMM TASK 71-00-00-800-835-H00).
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the left engine backup generator, M24004.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

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- (3) Do this check of the backup converter electrical wiring (WDM 24-25-02, WDM 24-25-11, WDM 24-25-12, WDM 24-25-22):

NOTE: Check for shorts to ground for the wiring listed below.

- (a) Disconnect connector DM24008C from the backup converter, M24008.
(b) Check for a short to ground on this connector removed from the backup converter, M24008:

DM24008C	Connection
pin 2	GND
pin 13	GND
pin 30	GND
pin 31	GND

- (c) If the wiring has a short to ground, then do these steps:
- 1) Repair the wiring, (WDM 24-25-02, WDM 24-25-11, WDM 24-25-12, WDM 24-25-22).
 - 2) Re-connect connector DM24008C to the backup converter.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the wiring is OK, then continue.
- (e) Disconnect connector DM24004A from the left backup generator, M24004.
- (f) Do a wiring check between these pins of connector DM24004A removed from the left backup generator, M24004 and connector DM24008C removed from the backup converter, M24008:

NOTE: Check for shorts to ground for the wiring listed below.

DM24004A	DM24008C
pin 7	pin 60
pin 8	pin 38
pin 9	pin 20
pin 5	pin 40
pin 6	pin 42

- (g) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring (WDM 24-25-11, WDM 24-25-21).
 - 2) Re-connect connector DM24008C to the backup converter.
 - 3) Re-connect connector DM24004A to the left backup generator.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

876. Backup Converter Has Internal Fault (Right) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-45002.

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B. Initial Evaluation

- (1) Use the MAT to check for any other ACTIVE or LATCHED ATA Chapter 24 Maintenance Messages and perform the tasks for those Maintenance Messages first.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Place the right BACKUP GEN switch on the P5 panel to the OFF position if not already OFF, then set the BACKUP GEN switch to the ON position to reset the generator control electronics.
 - (b) Start the right engine (AMM TASK 71-00-00-800-835-H00).
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.
These are the tasks:
Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,
Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the right engine backup generator, M24004.
These are the tasks:
Backup Generator Removal, AMM TASK 24-25-01-000-804-001,
Backup Generator Installation, AMM TASK 24-25-01-400-804-001.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the backup converter electrical wiring (WDM 24-25-02, WDM 24-25-11, WDM 24-25-12, WDM 24-25-22):
NOTE: Check for shorts to ground for the wiring listed below.
 - (a) Disconnect connector DM24008D from the backup converter, M24008.
 - (b) Check for a short to ground on this connector removed from the backup converter, M24008:

DM24008D	Connection
pin 2	GND
pin 13	GND
pin 30	GND
pin 31	GND

- (c) If the wiring has a short to ground, then do these steps:

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- 1) Repair the wiring, (WDM 24-25-02, WDM 24-25-11, WDM 24-25-12, WDM 24-25-22).
 - 2) Re-connect connector DM24008D to the backup converter.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the wiring is OK, then continue.
- (e) Disconnect connector DM24004A from the right backup generator, M24004.
- (f) Do a wiring check between these pins of connector DM24004A removed from the right backup generator, M24004 and connector DM24008D removed from the backup converter, M24008:

NOTE: Check for shorts to ground for the wiring listed below.

DM24004A	DM24008D
pin 7	pin 60
pin 8	pin 38
pin 9	pin 20
pin 5	pin 40
pin 6	pin 42

- (g) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring (WDM 24-25-11, WDM 24-25-21).
 - 2) Re-connect connector DM24008D to the backup converter.
 - 3) Re-connect connector DM24004A to the right backup generator.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

873. BKUP Gen Undervoltage 1 Trip/Converter Fail - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-45480, 24-45490.

B. Fault Isolation Procedure

- (1) Replace the backup converter, M24008.

These are the tasks:

Backup Generator Converter Removal, AMM TASK 24-25-09-000-801,

Backup Generator Converter Installation, AMM TASK 24-25-09-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace either the right or the left engine backup generator, M24004, as appropriate.

These are the tasks:

Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

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- (3) Do this check of the backup converter electrical wiring (WDM 24-25-02, WDM 24-25-11, WDM 24-25-12, WDM 24-25-22):

NOTE: Check for shorts to ground for the wiring listed below.

- (a) Disconnect connectors DM24008C and DM24008D from the backup converter, M24008.
- (b) Check for a short to ground on these connectors removed from the backup converter, M24008:
 - 1) Pin 2 of connector DM24008C.
 - 2) Pin 13 of connector DM24008C.
 - 3) Pin 30 of connector DM24008C.
 - 4) Pin 31 of connector DM24008C.
 - 5) Pin 2 of connector DM24008D.
 - 6) Pin 13 of connector DM24008D.
 - 7) Pin 30 of connector DM24008D.
 - 8) Pin 31 of connector DM24008D.
- (c) If the wiring has a short to ground, then do these steps:
 - 1) Repair the wiring, (WDM 24-25-02, WDM 24-25-11, WDM 24-25-12, WDM 24-25-22).
 - 2) Re-connect connectors DM24008C and DM24008D to the backup converter.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

874. Electrical Maintenance Page Shows Blanks for Oil Level - Fault Isolation

A. Initial Evaluation

- (1) If the Electrical Maintenance Page shows blanks for the generator oil level and it has been more than 10 minutes since engine shutdown and/or power transfer, then do the Fault Isolation Procedure below.

NOTE: The Electrical Maintenance Page will show blanks for the generator oil level for 10 minutes after engine shutdown or 10 minutes after a power transfer occurs. If the engine is running, dashed lines will show for the generator oil level. This indicates that the oil level sensing system is unable to accurately measure the oil level. If the Electrical Maintenance Page shows blanks for the generator oil level while the engine is running or more than 10 minutes after engine shutdown or power transfer, then a problem exists with the remote oil level sensing system.

- (2) If the Electrical Maintenance Page shows blanks for the generator oil level and it has not been 10 minutes since engine shutdown and/or power transfer, then no maintenance action is required.

B. Fault Isolation Procedure

- (1) If the Electrical Maintenance Page shows blanks for the generator oil level and it has been more than 10 minutes since engine shutdown or power transfer or the engine is running, then do the following:
- (a) Use the MAT to check for ACTIVE ATA Chapter 24 Maintenance Messages.

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- (b) Perform the fault isolation task for each ACTIVE ATA Chapter 24 maintenance message.

———— **END OF TASK** ————

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801. Tie Bus L Phase C Sense Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22440, 24-31871.

B. Fault Isolation Procedure

- (1) Replace the Secondary External Power Contactor relay, K24023 (WDM 24-21-32).
- (a) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - (c) If you do not find the problem with the relay, then continue.
- (2) Do this check for 115 VAC at pin A11 of connector DM24105AA (WDM 24-28-11).
- (a) Remove the left GCU, M24105. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Do a check for 115 VAC at pin A11 of connector DM24105AA.
 - (c) If there is 115 VAC at pin A11 of connector DM24105AA, then do these steps:
 - 1) Do a check for ground at pin 121 of connector DM24105AA.
 - 2) If there is no ground at pin 121, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - c) Push the left GEN CTRL switch two times.
 - d) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - e) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
 - 3) If there is ground at pin 121, then do these steps:
 - a) Replace the left GCU, M24105.
- These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If there is not 115 VAC at pin A11 of connector DM24105AA, then continue.
- (3) Do this check of the tie bus phase C wiring between the left BTB and the left GCU (SSM 24-28-11):
- (a) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

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- (b) Do a wiring check between these pins at the P100 panel and connector DM24105AA at the E1-1 shelf:

DM24105AA	C24333
pin A11	pin 24

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the left GCU, M24105. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Push the left GEN CTRL switch two times.
 - 5) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the left GCU, M24105.

To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (4) Replace the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

802. Right Main Bus Phase C Wiring Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22400.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while there is primary external power to the airplane, then do the fault isolation procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while there is primary external power to the airplane, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the PEPC, K24022.

These are the tasks:

External Power Contactor Removal, AMM TASK 24-41-01-000-801,

External Power Contactor Installation, AMM TASK 24-41-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the voltage sense wiring of the right main bus phase C wiring (WDM 24-28-41):
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Open the P200 right power panel.
 - (c) Remove the PEPC, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (d) Do a wiring check between these pins of the primary external power contactor, K24022 in the P200 right power panel and connector DM24002AA at the E1-1 shelf:

DM24002AA

K24022

pin A9 pin 17

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the PEPC, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 3) Close the P200 right power panel.
 - 4) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 5) Make sure the PRIMARY EXT PWR switch on the P5 panel is in the ON position.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (f) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the PEPC, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.

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- 2) Close the P200 right power panel.
- (3) Do a wiring check for ground at pin A5 of connector DM24002AA (WDM 24-28-41).
 - (a) If there is no ground at pin A5 of connector DM24002AA, then do these steps.
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is ground at pin A5 of connector DM24002A, then continue.
- (4) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,

BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message while the right main bus is powered then you corrected the fault.

————— END OF TASK —————

803. BPCU to Systems 629 Bus (left) Communication Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22540.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:

NOTE: To unlatch this fault, you must reset the BPCU.

- (a) Open these circuit breakers and install safety tags:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	6	C24305	BPCU-AC
ARO 001-010			
E	7	C24305	BPCU-AC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
B	10	C24649	BPCU DC

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- (b) Remove the safety tags and close these circuit breakers:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	6	C24305	BPCU-AC
ARO 001-010			
E	7	C24305	BPCU-AC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
B	10	C24649	BPCU DC

- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler, B24106, in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the BPCU to the Systems 629 Bus-L.

- (a) Open these circuit breakers and install safety tags:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	6	C24305	BPCU-AC
ARO 001-010			
E	7	C24305	BPCU-AC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
B	10	C24649	BPCU DC

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- (b) Remove the safety tags and close these circuit breakers:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	6	C24305	BPCU-AC
ARO 001-010			
E	7	C24305	BPCU-AC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
B	10	C24649	BPCU DC

- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the bus power control unit (BPCU), M24002.
- These are the tasks:
- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message, you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring from the BPCU to the coupler, B24106 (WDM 24-28-41):
- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
- (b) Disconnect connector DB24106 from the coupler, B24106.
- (c) Do a wiring check between these pins of connector DB24106 at the P111 panel and connector DM24002AC at the BPCU, M24002:

DB24106	DM24002AC
pin 2	pin 3T
pin 1	pin 3TR
pin 5	pin 6T
pin 4	pin 6TR

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect connector DB24106.
 - 3) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

804. Tie Bus Voltage Sense Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31881.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while there is secondary external power to the airplane, then do the fault isolation procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while there is secondary external power to the airplane, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the SEPC, K24023.

These are the tasks:

External Power Contactor Removal, AMM TASK 24-41-01-000-801,

External Power Contactor Installation, AMM TASK 24-41-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the tie bus phase C wiring (WDM 24-28-41):
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Open the P300 auxiliary power panel.
 - (c) Remove the SEPC, K24023. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (d) Do a wiring check between these pins of the secondary external power contactor, K24023 in the P300 auxiliary power panel and connector DM24002AA at the E1-1 shelf:

DM24002AA	K24023
pin A11	pin 17

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the SEPC, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 3) Close the P300 auxiliary power panel.
 - 4) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.

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- 5) Make sure the SECONDARY EXT PWR switch on the P5 panel is in the ON position.
- 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the SEPC, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 2) Close the P300 auxiliary power panel.
- (3) Do a wiring check for ground at pin A5 of connector DM24002AA (WDM 24-28-41).
 - (a) If there is no ground at pin 121 of connector DM24002AA, then do these steps.
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Make sure the SECONDARY EXT PWR switch on the P5 panel is in the ON position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is ground at pin 121 of connector DM24002AA, then continue.
- (4) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

 - (a) Make sure the SECONDARY EXT PWR switch on the P5 panel is in the ON position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message while the right main bus is powered then you corrected the fault.

————— **END OF TASK** —————

805. Tie Bus R Phase C Sense Circuit Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31872, 24-31882.

B. Fault Isolation Procedure

- (1) Do this check for 115 VAC at pin A11 of connector DM24205AA (WDM 24-28-21).
 - (a) Remove the right GCU, M24205. To remove it, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Do a check for 115 VAC at pin A11 of connector DM24205AA.
 - (c) If there is 115 VAC at pin A11 of connector DM24205AA, then do these steps:
 - 1) Do a check for ground at pin 121 of connector DM24205AA.
 - 2) If there is no ground at pin 121, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - c) Push the right GEN CTRL switch two times.

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- d) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - e) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- 3) If there is ground at pin 121, then do these steps:
- a) Replace the right GCU, M24205.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - b) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If there is not 115 VAC at pin A11 of connector DM24205AA, then continue.
- (2) Do this check of the tie bus phase C wiring between the right BTB and the right GCU (SSM 24-28-21):
- (a) Remove the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

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To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between these pins at the P200 panel and connector DM24205AA at the E2-2 shelf:

DM24205AA	C24334
pin A11	pin 24

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

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- 3) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 4) Push the right GEN CTRL switch two times.
 - 5) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (3) Replace the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	3	C24334	R BTB

ARO 001-010

E	3	C24334	R BTB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— END OF TASK —————

806. BPCU To Systems 629 Bus (right) Communication Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22760.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:

NOTE: To unlatch this fault, you must reset the BPCU.

- (a) Open these circuit breakers and install safety tags:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	6	C24305	BPCU-AC

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Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-010			
E	7	C24305	BPCU-AC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
B	10	C24649	BPCU DC

- (b) Remove the safety tags and close these circuit breakers:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	6	C24305	BPCU-AC

ARO 001-010			
E	7	C24305	BPCU-AC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
B	10	C24649	BPCU DC

- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the ARINC 629 coupler, B24206, in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the BPCU to the Systems 629 Bus-R.

- (a) Open these circuit breakers and install safety tags:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

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Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	6	C24305	BPCU-AC
ARO 001-010			
E	7	C24305	BPCU-AC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
B	10	C24649	BPCU DC

- (b) Remove the safety tags and close these circuit breakers:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	9	C24684	L GCU/BPCU

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	6	C24305	BPCU-AC
ARO 001-010			
E	7	C24305	BPCU-AC

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO ALL			
B	10	C24649	BPCU DC

- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the bus power control unit (BPCU), M24002.
- These are the tasks:
- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring from the BPCU to the coupler:
- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
- (b) Disconnect connector DB24206 from the coupler, B24206.
- (c) Do a wiring check between these pins of connector DM24002AC at the E1-1 shelf and connector DB24206 at the P211 panel (WDM 24-28-41).

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DM24002AC	DB24206
pin 2T	pin 2
pin 2TR	pin 1
pin 5T	pin 5
pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect connector DB24206 to the coupler, B24206.
 - 3) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

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806. Main Battery Overheat Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13053.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below:
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.
- (3) If electrical power is supplied to the airplane while it is on jacks, prevent the activation of standby power:

NOTE: Make sure you open this circuit breaker if electrical power is supplied to the airplane while it is on jacks. If this circuit breaker is not open, the battery can overheat.

- (a) Open this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
K	13	C24643	MN BAT RLY CTRL

C. Fault Isolation Procedure

- (1) Do this check of the main battery (WDM 24-31-11).
 - (a) Disconnect connector DM24013B from the main battery.
 - (b) Do a continuity check between pin 8 and pin 9 in the battery.
 - (c) If there is continuity between pin 8 and 9 of the battery, then do these steps:
 - 1) Disconnect connector DM24013A from the main battery.
 - 2) Measure the dc voltage between pin 3 of the main battery and the negative (-) terminal of the main battery.

NOTE: This voltage should be 1/2 of the dc voltage between the (-) and (+) terminals of the main battery.
 - 3) If the voltage between the (+) and (-) terminals is not two times the value as the voltage between pin 3 and the (-) terminal, then do these steps:
 - a) Replace the main battery, M24013.

These are the tasks:
Main Battery Removal, AMM TASK 24-31-01-000-801,
Main Battery Installation, AMM TASK 24-31-01-400-801.
 - b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 4) If the voltage between the (+) and (-) is two times the value as the voltage between pin 3 and the (-) terminal, then continue.
 - 5) Let the battery cool until battery case temperature reaches ambient temperature.
 - 6) Do a check of the voltage across the positive (+) and negative (-) terminals of the battery.
 - 7) If the voltage is less than 26 Vdc, then do these steps:
 - a) Replace the main battery, M24013.

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These are the tasks:

Main Battery Removal, AMM TASK 24-31-01-000-801,

Main Battery Installation, AMM TASK 24-31-01-400-801.

- b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 8) If the voltage is equal or greater than 26 Vdc, then continue.
- 9) Re-connect connector DM24013B to the main battery.
- 10) Re-connect connector DM24013A to the main battery.
- 11) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If there is no continuity between pin 8 and pin 9, then continue.
- (2) Do this check of the wiring from the main battery to the P310 panel (WDM 24-31-11):
 - (a) Disconnect connector D31016P from the P310 panel.
 - (b) Do a wiring check between these pins of connector DM24013B at the E3-E4 shelf and connector D31016P at the P310 panel.

DM24013B	D31016P
pin 8	pin 7

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24013B to the main battery.
 - 3) Re-connect connector D31016P to the P310 panel.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector D31016P to the P310 panel.
- (3) Do this check of the wiring from the main battery to the main battery charger (WDM 24-31-11):
 - (a) Disconnect connector DM24015 from the main battery charger.
 - (b) Do a wiring check between these pins of connector DM24013B at the E3-E4 shelf and connector DM24015 at the E3-2 shelf.

DM24013B	DM24015
pin 1	pin 1

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24013B to the main battery.
 - 3) Re-connect connector DM24014 to the main battery charger.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24015 to the main battery charger.

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- (4) Do a check for ground at pin 9 of the Main battery connector DM24013B (WDM 24-31-11).
 - (a) If there is a ground at pin 9 of Main battery connector DM24013B, then do these steps:
 - 1) Let the Main battery cool off.
 - 2) Re-connect connector DM24013B to the Main battery.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is no ground at pin 9 of Main battery connector DM24013B, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24013B to the Main battery.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the signal interface unit, M24513 to connector D31012P (WDM 24-31-11):
 - (a) Disconnect connector DM24513A from the signal interface unit, M24513.
 - (b) Disconnect connector D31012P from the P310 panel.
 - (c) Do a wiring check between these pins of connector DM24513A inside the P310 panel and the pins on the P310 panel.

DM24413A	D31012J
pin 122	pin 14

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24513A to the signal interface unit, M24513.
 - 3) Re-connect connector D31012P to the P310 panel.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector D31012P to the P310 panel.
- (6) Do a check of the signal interface unit, M24513, in the P310 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

807. MAIN BATTERY DISCH EICAS Message - Fault Isolation

A. Initial Evaluation

- (1) Do a check of the MAT for maintenance messages.
 - (a) If the MAT shows ACTIVE for maintenance message 24-13071, do the task for that message.

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- (b) If the MAT shows NOT ACTIVE for maintenance message 24-13071 or if the maintenance message does not show, do the fault isolation procedure below.

B. Fault Isolation Procedure

- (1) Replace the Main Battery Current sensor

These are the tasks:

Main Battery Current Sensor Removal, AMM TASK 24-31-03-000-801,

Main Battery Current Sensor Installation, AMM TASK 24-31-03-400-801.

- (a) If the EICAS message does not show, then you corrected the fault.

————— END OF TASK —————

808. APU Battery Charger Internal Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13804.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message 24-13806, then do the Fault Isolation Procedure for the maintenance message 24-13806.
- (2) If the MAT shows ACTIVE for the maintenance message 24-13805, then do the Fault Isolation Procedure for the maintenance message 24-13805.
- (3) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (4) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) If maintenance message 24-13806 is also present, then do the following voltage checks:
- (a) Disconnect connector DM24014 from the APU Battery Charger.
- (b) Do a check for 3-phase 115 VAC at pins 4, 7, and 10 of DM24014 to structure ground.
- (c) If there is not 3-phase 115 VAC at pins 4, 7, and 10 of DM24014:
- 1) Make repairs as required to restore power to the APU Battery Charger (WDM 24-31-21).
 - 2) Re-connect connector DM24014 to the APU Battery Charger.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If there is 3-phase 115 VAC at pins 4, 7 and 10 of DM24014, then continue.
- (2) Replace the APU battery charger, M24014.
- These are the tasks:
- APU Battery Charger Removal, AMM TASK 24-31-06-000-801,
- APU Battery Charger Installation, AMM TASK 24-31-06-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a check of the Signal Interface Unit-1 (SIU-1), M24512 in the P310 panel.
- This is the task:

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Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the fault indicating circuit of the APU battery charger (WDM 24-31-21):
 - (a) Disconnect connector DM24014 from the APU battery charger.
 - (b) Disconnect connector DM24512C from SIU-1, M24512, in the P310 panel.
 - (c) Do a wiring check between these pins of connector DM24014 at the E10 shelf and connector DM24512C at SIU-1, M24512, in the P310 panel.

DM24014

DM24512C

pin 9 pin 9

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24014 to the APU battery charger.
 - 3) Re-connect connector DM24512C to SIU-1, M24512, in the P310 panel.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

809. APU Battery Overheat Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13805.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below:
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the APU battery (WDM 24-31-21).
 - (a) Disconnect connector DM24012B from the APU battery.
 - (b) Do a continuity check between pin 8 and pin 9 in the battery.
 - (c) If there is continuity between pin 8 and pin 9 of the battery, then do these steps:
 - 1) Disconnect connector DM24012A from the APU battery.
 - 2) Measure the dc voltage between pin 3 of the APU battery and the negative (-) terminal of the APU battery.
NOTE: This voltage should be 1/2 of the dc voltage between the (-) and (+) terminals of the APU battery.
 - 3) If the voltage between the (+) and (-) terminals is not two times the value as the voltage between pin 3 and the (-) terminal, then do these steps:
 - a) Replace the APU battery, M24012.

These are the tasks:

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APU Battery Removal, AMM TASK 24-31-05-000-801,
APU Battery Installation, AMM TASK 24-31-05-400-801.

- b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 4) If the voltage between the (+) and (-) is two times the value as the voltage between pin 3 and the (-) terminal, then continue.
- 5) Let the battery cool until battery case temperature reaches ambient temperature.
- 6) Do a check of the voltage across the positive (+) and negative (-) terminals of the battery.
- 7) If the voltage is less than 26 VDC, then do these steps:
 - a) Replace the APU battery, M24012.
These are the tasks:
APU Battery Removal, AMM TASK 24-31-05-000-801,
APU Battery Installation, AMM TASK 24-31-05-400-801.
 - b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 8) If the voltage is equal to or more than 26 VDC, then continue.
- 9) Re-connect connector DM24012B to the APU battery.
- 10) Re-connect connector DM24012A to the APU battery.
- 11) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If there is not continuity between pin 8 and pin 9, then continue.
- (2) Do this check of the wiring from the APU battery to the Current Monitor, (WDM 24-31-21):
 - (a) Disconnect connector DM24520 from the Monitor Card, M24520 in the P310 panel.
 - (b) Disconnect connector DM24012B from the APU battery.
 - (c) Do a wiring check between these pins of connector DM24012B at the E10 shelf and connector DM24520 removed from the Monitor Card.

DM24012B	DM24520
pin 8	pin 29
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24520 to the Monitor Card.
 - 3) Re-connect connector DM24012B to the APU battery.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the wiring from the Monitor Card, M24520 to the SIU-1, M24512, (WDM 24-31-21):
 - (a) Disconnect connector DM24512C from the SIU-1, M24512, in the P310 panel.
 - (b) Do a wiring check between these pins of connector DM24512C at the SIU-1, M24512, and connector DM24520 removed from the Monitor Card, M24520.

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DM24512C

pin 10

DM24520

pin 43

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24520 to the Monitor Card.
 - 3) Re-connect connector DM24512C to the SIU-1, M24512.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then do these steps:
 - 1) Replace the M24520 Monitor Card.
These are the tasks:
Current Monitor Card - Removal, AMM TASK 24-09-00-000-817-002,
Current Monitor Card - Installation, AMM TASK 24-09-00-400-813-002.
 - 2) Re-connect connector DM24512C to the SIU-1, M24512.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 4) If the MAT shows ACTIVE, then continue.
- (4) Do a check of the SIU-1, M24512 in the P310 panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE, then continue.
- (5) Do this check of the wiring from the APU battery to the APU battery charger (WDM 24-31-21):
 - (a) Disconnect connector DM24014 from the APU battery charger.
 - (b) Disconnect connector DM24012B from the APU battery.
 - (c) Do a wiring check between these pins of connector DM24012B at the E10 shelf and connector DM24014 at the E10 shelf.

DM24012B

pin 1

DM24014

pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24012B to the APU battery.
 - 3) Re-connect connector DM24014 to the APU battery charger.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24014 to the APU battery charger.

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- (6) Do a check for ground at pin 9 on connector DM24012B that connects to the APU battery (WDM 24-31-21).
 - (a) If there is a ground at pin 9 of connector DM24012B, then do these steps:
 - 1) Let the APU battery cool.
 - 2) Re-connect connector DM24012B to the APU battery.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is no ground at pin 9 of connector DM24012B, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24012B to the APU battery.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

810. Weak APU Battery Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13806.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the APU battery (WDM 24-31-21).
 - (a) Disconnect connector DM24012A from the APU battery.
 - (b) Disconnect connector DM24012B from the APU battery.
 - (c) Measure the dc voltage between pin 3 of the APU battery and the negative (-) terminal of the APU battery.

NOTE: This voltage should be 1/2 of the dc voltage between the (-) and (+) terminals of the APU battery.
 - (d) Measure the voltage across the (+) and (-) terminals of the APU battery.
 - (e) If the voltage between the (+) and (-) terminals is less than 26 VDC or is not two times the value as the voltage between pin 3 and the (-) terminal, then do these steps:
 - 1) Replace the APU battery, M24012.

These are the tasks:
APU Battery Removal, AMM TASK 24-31-05-000-801,
APU Battery Installation, AMM TASK 24-31-05-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (f) If the voltage between the (+) and (-) terminals is equal or greater than 26 VDC and is two times the value as the voltage between pin 3 and the (-) terminal, then continue.
 - 1) Re-connect connector DM24012A to the APU battery.

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the SIU-1, M24512.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing fault display, then continue.

- (3) Do this check of the cell balance monitor circuit wiring, (WDM 24-31-21):

- (a) Disconnect connector DM24014 from the APU battery charger.

- (b) Do a wiring check between these pins of connector DM24104 at the E10 shelf and connector DM24012B at the E10 shelf.

DM24014

DM24012B

pin 3 pin 3

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24014 to the APU battery charger.
- 3) Re-connect connector DM24012B to the APU battery.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (d) If you do not find a problem with the wiring, then continue.

- 1) Re-connect connector DM24012B to the APU battery.

- (4) Do this check of the wiring between the APU battery charger and SIU 1, (WDM 24-31-21):

- (a) Disconnect connector DM24512C from SIU 1, M24512.

- (b) Do a wiring check between these pins of connector DM24104 at the E10 shelf and connector DM24512C in the P310 panel.

DM24014

DM24512C

pin 5 pin 11

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-connect connector DM24014 to the APU battery charger, M24014.
- 3) Re-connect connector DM24512C to the SIU 1, M24512.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

811. Main Battery Charger Internal Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13794.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message 24-13796, then do the Fault Isolation Procedure for the maintenance message 24-13796.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) If maintenance message 24-13796 is also present, then do the following voltage checks:
 - (a) Do a check for 3-phase 115 VAC at pins A2, B2, and C2 of C24300 to structure ground (WDM 24-31-11).
 - 1) If there is not 115 VAC to structure at one or more of the pins, then do the following:
 - a) Replace this circuit breaker:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
K	9	C24300	MN BAT CHARGER PWR

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 3) If there is 115 VAC to structure at all of the output pins of C24300, then continue.
 - (b) Disconnect connector DM24015 from the Main Battery Charger.
 - (c) Do a check for 3-phase 115 VAC at pins 4, 7, and 10 of DM24015 to structure ground.
 - (d) If there is not 3-phase 115 VAC at pins 4, 7, and 10 of DM24014, then make repairs to connectors or wire bundles, as required, to restore power to the Main Battery Charger (WDM 24-31-11).
 - (e) Re-connect connector DM24015 to the Main Battery Charger.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (g) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the main battery charger, M24015.

These are the tasks:

Main Battery Charger Removal, AMM TASK 24-31-02-000-801,

Main Battery Charger Installation, AMM TASK 24-31-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (3) Do a check of the Signal Interface Unit-1 (SIU-1), M24512 in the P310 panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the fault indicating circuit wiring (WDM 24-31-11):
- (a) Disconnect connector DM24015 from the main battery charger.
- (b) Disconnect connector DM24512C from the SIU-1, M24512, in the P310 panel.
- (c) Do a wiring check between these pins of connector DM24015 at the E3-2 shelf and connector DM24512C in the P310 panel.
- | DM24015 | DM24512C |
|-----------------|----------|
| pin 9 | pin 20 |
- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24015 to the main battery charger.
 - 3) Re-connect connector DM24512C to the SIU-1, M24512.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

812. Main Battery Overheat Problems - Fault Isolation

A. Initial Evaluation

- (1) If the MAT also shows ACTIVE for maintenance message 24-13794, then do the Fault Isolation Procedure for maintenance message 24-13794.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below:
- (3) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.
- (4) If electrical power is supplied to the airplane while it is on jacks, prevent the activation of standby power:

NOTE: Make sure you open this circuit breaker if electrical power is supplied to the airplane while it is on jacks. If this circuit breaker is not open, the battery can overheat.

- (a) Open this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
K	13	C24643	MN BAT RLY CTRL

B. Fault Isolation Procedure

- (1) Do this check of the main battery (WDM 24-31-11).
- (a) Disconnect connector DM24013B from the main battery.
- (b) Do a continuity check between pin 8 and pin 9 in the battery.

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- (c) If there is continuity between pin 8 and 9 of the battery, then do these steps:
- 1) Disconnect connector DM24013A from the main battery.
 - 2) Measure the dc voltage between pin 3 of the main battery and the negative (-) terminal of the main battery.
NOTE: This voltage should be 1/2 of the dc voltage between the (-) and (+) terminals of the main battery.
 - 3) If the voltage between the (+) and (-) terminals is not two times the value as the voltage between pin 3 and the (-) terminal, then do these steps:
 - a) Replace the main battery, M24013.
These are the tasks:
Main Battery Removal, AMM TASK 24-31-01-000-801,
Main Battery Installation, AMM TASK 24-31-01-400-801.
 - b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 4) If the voltage between the (+) and (-) is two times the value as the voltage between pin 3 and the (-) terminal, then continue.
 - 5) Let the battery cool until battery case temperature reaches ambient temperature.
 - 6) Do a check of the voltage across the positive (+) and negative (-) terminals of the battery.
 - 7) If the voltage is less than 26 VDC, then do these steps:
 - a) Replace the main battery, M24013.
These are the tasks:
Main Battery Removal, AMM TASK 24-31-01-000-801,
Main Battery Installation, AMM TASK 24-31-01-400-801.
 - b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 8) If the voltage is equal to or more than 26 VDC, then continue.
 - 9) Re-connect connector DM24013B to the main battery.
 - 10) Re-connect connector DM24013A to the main battery.
 - 11) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If there is no continuity between pin 8 and pin 9, then continue.
- (2) Do a check for ground at main battery connector DM24013B, pin 9 (WDM 24-31-11).
- (a) If there is a ground at pin 9 of connector DM24013B, then do these steps:
 - 1) Let the main battery cool off.
 - 2) Re-connect connector DM24013B to the main battery.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is no ground at pin 9 of the main battery, then continue.
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24013B to the main battery.

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- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (c) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring from the main battery to the main battery charger (WDM 24-31-11):
 - (a) Disconnect connector DM24015 from the main battery charger.
 - (b) Disconnect connector DM24013B from the main battery.
 - (c) Do a wiring check between these pins of connector DM24013B at the main battery and these pins of connector DM24015 at the main battery charger.

DM24013B	DM24015
pin 1	pin 1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24013B to the main battery.
 - 3) Re-connect connector DM24015 to the main battery charger.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24015 to the main battery charger.
- (4) Do this check of the wiring from the main battery to the Monitor Card (WDM 24-31-11):
 - (a) Disconnect connector DM24520 from Monitor Card, M24520.
 - (b) Do a wiring check between these pins of connector DM24013B at the E3-E4 shelf and connector DM24520 in the P310 panel.

DM24013B	DM24520
pin 8	pin 94

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24013B to the main battery.
 - 3) Re-connect connector DM24520 to the Monitor Card, M24520.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24013B to the main battery.
- (5) Do this check of the wiring from the Monitor Card, M24520 to the SIU-1, M24512 (WDM 24-31-11):
 - (a) Disconnect connector DM24512C from the SIU-1, M24512, in the P310 panel.
 - (b) Do a wiring check between these pins of connector DM24512C removed from SIU 1, M24512 and connector DM24520 removed from the Monitor card, M24520.

DM24512C	DM24520
pin 19	pin 90

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- (c) If you find a problem with continuity of the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24520 to the Monitor Card.
 - 3) Re-connect connector DM24512C to the SIU-1, M24512.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then do these steps:
 - 1) Replace the M24520 Monitor Card.
These are the tasks:
Current Monitor Card - Removal, AMM TASK 24-09-00-000-817-002,
Current Monitor Card - Installation, AMM TASK 24-09-00-400-813-002.
 - 2) Re-connect connector DM24512C to the SIU-1, M24512.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 4) If the MAT shows ACTIVE for the maintenance message, then continue.
- (6) Do a check of the Signal Interface Unit-1 (SIU-1), M24512 in the P310 panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

END OF TASK

813. Weak Main Battery - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13796.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message , then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the main battery (WDM 24-31-11).
 - (a) Disconnect connector DM24013A from the main battery.
 - (b) Disconnect connector DM24013B from the main battery.
 - (c) Measure the dc voltage between pin 3 of the main battery and the negative (-) terminal of the main battery.
NOTE: This voltage should be 1/2 of the dc voltage between the (-) and (+) terminals of the main battery.
 - (d) Measure the voltage across the (+) and (-) terminals of the main battery.
 - (e) If the voltage between the (+) and (-) terminals is less than 26 VDC or is not two times the value as the voltage between pin 3 and the (-) terminal, then do these steps:
 - 1) Replace the main battery, M24013.

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These are the tasks:

Main Battery Removal, AMM TASK 24-31-01-000-801,

Main Battery Installation, AMM TASK 24-31-01-400-801.

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (f) If the voltage between the (+) and (-) terminals is equal to or more than 26 VDC and is two times the value as the voltage between pin 3 and the (-) terminal, then continue.
 - 1) Re-connect connector DM24013A to the main battery.



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- (2) Do a check of the SIU-1, M24512.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing fault display, then continue.
- (3) Do this check of the wiring between the main battery and the main battery charger (WDM 24-31-11):
 - (a) Disconnect connector DM24015 from the main battery charger.
 - (b) Do a wiring check between these pins of connector DM24015 at the E3-2 shelf and connector DM24013B at the E3-E4 area.

DM24015

DM24013B

pin 3 pin 3

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24015 to the main battery charger.
 - 3) Re-connect connector DM24013B to the main battery.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect connector DM24013B to the main battery.
- (4) Do this check of the wiring between the main battery charger and SIU 1, M24512 (WDM 24-31-11):
 - (a) Disconnect connector DM24512C from the SIU-1, M24512 in the P310 panel.
 - (b) Do a wiring check between these pins of connector DM24015 at the E3-2 shelf and connector DM24512C at the SIU-1, M24512.

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DM24015

pin 5

DM24512C

pin 21

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24015 to the main battery charger.
 - 3) Re-connect connector DM24512C to the SIU-1, M24512.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

814. Main Battery Current Discharge Above 5 Amps - Fault Isolation

A. Description

- (1) This task is for these Observed Faults:
 - (a) MAIN BAT AMPS Indication on the ELEC Synoptic Page, shows a DISCH value greater than 5 Amps.
 - (b) MAIN BAT DC-A Indication on the ELECTRICAL Maintenance Page, shows a DIS value greater than 5 Amps.
- (2) The Battery Current value is a function of several factors:
 - (a) The loads on the Hot Battery Bus.
 - (b) In the TR Mode, the Battery Charger and Battery Output Voltage is approximately 27.5 VDC.
 - 1) The source with the higher voltage will be supplying more current to support the loads on the bus.
 - 2) When the charger puts out a higher voltage than the voltage of the battery, the battery will accept this as Charge Current.
 - (c) The EICAS Display Resolution is low.
 - 1) The display can not show the Battery Current and Voltage in the tenths and hundredths of a unit.
 - 2) For small fluctuations, the rounding is to the nearest unit.

B. Initial Evaluation

- (1) If the Battery Charger is in the Transformer-Rectifier (TR) Mode and the Battery Current value is 0 to 5 Amps CHG/DISCH (ELEC SYNOPTIC Page) and 0 to 5 Amps CHG/DIS (ELECTRICAL Maintenance Page) for a fully charged battery, you can ignore this fault.
- (2) If the Battery Current value is above 5 Amps, do the Fault Isolation Procedure below.

C. Fault Isolation Procedure

- (1) Look for active DC Power related EICAS Messages.
 - (a) If you see active EICAS Messages, refer to the 24-FAULT CODE INDEX to find the applicable Fault Isolation Manual (FIM) Tasks for the messages that show.

————— **END OF TASK** —————

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817. Power Bus L MAIN DC BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11787.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 28 VDC from terminal L2 of the P110 power management panel to structure ground (WDM 24-32-11).
 - (a) If there is not 28 VDC at terminal L2 of the P110 power management panel, then do these steps:
 - 1) Replace the left transformer rectifier unit, M24103.
These are the tasks:
Transformer Rectifier Unit Removal, AMM TASK 24-32-01-000-801,
Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at terminal L2 of the P110 power management panel, then continue.
- (2) Do a check for 28 VDC from pin 1 of the circuit breaker to structure ground:
(WDM 24-32-11)

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	28	C24629	DC BUS TIE L

- (a) If there is not 28 VDC at pin 1 of circuit breaker C24629, then do these steps:
 - 1) Repair the wiring from terminal 1 of circuit breaker C24629 to the L2 terminal of the P110 power management panel.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 1 of circuit breaker C24629, then continue.
- (3) Do a resistance check for 1K ohms between pin 61 of the connector DM24504A at SIU-1 and terminal 1 of the circuit breaker C24629. (WDM 24-32-11)
 - (a) Disconnect connector DM24504A from SIU-1, M24504 in the P110 panel.
 - (b) If there is not resistance value of 1k ohms between pin 61 of the connector DM24504A and terminal 1 of the circuit breaker C24629, then do these steps:
 - 1) Repair the wiring between terminal 1 of circuit breaker C24629 and pin 61 of connector DM24504A.
 - 2) Reconnect connector DM24504A to SIU-1, M24504 in the P110 panel.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- 4) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do a check of the SIU-1, M24504, in the P110 power management panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

818. Circuit Breaker DC BUS TIE L Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11778.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 28 VDC at the load terminal of the circuit breaker C24629 to structure ground.

- (a) If there is not 28 VDC at the circuit breaker, then do these steps:

- 1) Replace this circuit breaker:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	28	C24629	DC BUS TIE L

(WDM 24-32-11).

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If there is 28 VDC at the circuit breaker, then continue.
- (2) Do this check of the wiring (WDM 24-32-11):
 - (a) Disconnect connector DM24504A from the SIU-1, M24504, in the P110 power management panel.
 - (b) Do a resistance check for 1K ohms between pin 2 of connector DM24504A of the SIU-1, M24504 and terminal 2 of the circuit breaker C24629.
 - (c) If there is not a value of 1K ohms, then do these steps:
 - 1) Repair the wiring between terminal 2 of circuit breaker C24629 and pin 2 of connector DM24504A.
 - 2) Reconnect connector DM24504A to the SIU-1, M24504, in the P110 power management panel.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 4) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

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- (d) If there is a value of 1K ohms, then continue.
- (3) Do a check of the SIU-1, M24504, in the P110 power management panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

819. F/O FLT INST BUS Power Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12051.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check of the SIU-1, M24512, in the P310 panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do the following wiring check (WDM 24-32-21):
 - (a) Disconnect connector DM24512A from the SIU-1, M24512, in the P310 power management panel.
 - (b) Do a resistance check for 1K ohms between pin 72 of connector DM24512A and terminal 2 of the circuit breaker C24654
Do a resistance check for 1K ohms between pin 72 of connector DM24512A and terminal 2 of the circuit breaker in P210 power management panel:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	5	C24654	F/O INST ALTN

- (c) If you do not find a value of 1K ohms, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24512A to the SIU-1, M24512, in the P210 power management panel.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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820. R MAIN DC BUS Power Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12056.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 28 VDC from terminal L2 of the P210 power management panel to structure ground (WDM 24-32-11).
 - (a) If there is not 28 VDC at terminal L2 of the P210 power management panel, then do these steps:
 - 1) Replace the right transformer rectifier unit, M24203.
These are the tasks:
Transformer Rectifier Unit Removal, AMM TASK 24-32-01-000-801,
Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at terminal L2 of the P210 power management panel, then continue.
- (2) Do a check for 28 VDC from pin 1 of circuit breaker to structure ground:
(WDM 24-32-11)

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	1	C24666	DC BUS TIE R

- (a) If there is not 28 VDC at pin 1 of circuit breaker C24666, then do these steps:
 - 1) Repair the wiring from terminal 1 of circuit breaker C24666 to the L2 terminal of the P210 power management panel.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 1 of circuit breaker C24666, then continue.
- (3) Do this resistance check between SIU-2, M24509 and circuit breaker C24666 on the P210 panel.
 - (a) Disconnect connector DM24509A from SIU-2, M24509 in the P210 panel.
 - (b) If there is not resistance value of 1K ohms between pin 62 of the connector DM24509A and terminal 1 of the circuit breaker C24666, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24509A to SIU-2, M24509 in the P210 panel.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If there is resistance value of 1K ohms, then continue.

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- (4) Do a check of the SIU-2, M24509, in the P210 power panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

END OF TASK

821. Circuit Breaker DC BUS TIE R Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12778.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 28 VDC at the load terminal of the circuit breaker C24666 to structure ground.

- (a) If there is not 28 VDC at the circuit breaker, then do these steps:

- 1) Replace this circuit breaker:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	1	C24666	DC BUS TIE R

(WDM 24-32-11).

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (b) If there is 28 VDC at the circuit breaker, then continue.

- (2) Do this check of the wiring (WDM 24-32-11):

- (a) Disconnect connector DM24509A from the SIU-2, M24509, in the P210 power management panel.

- (b) Do a resistance check for 1K ohms between pin 5 of connector DM24509A of the SIU-2, M24509 and terminal 2 of the circuit breaker C24666.

- (c) If there is not a value of 1K ohms, then do these steps:

- 1) Repair the wiring.
- 2) Reconnect connector DM24509A to the SIU-2, M24509, in the P210 power management panel.
- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (d) If there is a value of 1K ohms, then continue.

- (3) Do a check of the SIU-2, M24509, in the P210 power management panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

822. DC TIE RELAY Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13783.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the DC TIE relay, K24013 (WDM 24-32-11).
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do a check of the SIU-1, M24512, in the P310 power management panel.
- This is the task:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do a check for 28 VDC from pin 2 of circuit breaker C24642 to structure ground (WDM 24-32-11).
- (a) If there is not 28 VDC at pin 2 of circuit breaker C24642, then do these steps (WDM 24-32-11):

- 1) Replace this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
K	9	C24642	DC TIE CTRL

- 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- (b) If there is 28 VDC at pin 2 of circuit breaker C24642, then continue.
- (4) Do a check for 28 VDC from pin 1 of connector DK24013 to structure ground (WDM 24-32-11).
 - (a) If there is not 28 VDC at pin 1 of connector DK24013, then do these steps:
 - 1) Repair the wiring.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 1 of connector DK24013, then continue.
- (5) Do a check of the wiring between connector DK24013 in the P210 power management panel and the SIU-1, M24512, in the P310 power management panel (WDM 24-32-11):
 - (a) Disconnect connector DM24512B from the SIU-1, M24512, in the P310 power management panel.
 - (b) Do a check of the wiring between these pins of connector DK24013 in the P210 power panel and these pins of connector DM24512B in the P310 power panel.

DK24013	DM24512B
pin 3	pin 5

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512B to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (e) Reconnect connector DM24512B to the SIU-1, M24512, in the P310 power management panel.
- (f) Disconnect connector DM24512C from the SIU-1, M24512, in the P310 power management panel.
- (g) Do a check of the wiring between these pins of connector DK24013 in the P210 power panel and these pins of connector DM24512C in the P310 power panel.

DK24013	DM24512C
pin 6	pin 16

- (h) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512C to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (i) If you do not find a problem with the wiring, then continue.
 - 1) Reconnect connector DM24512C to the SIU-1, M24512, in the P310 power management panel.
- (6) Do this check of the wiring (WDM 24-32-11):
 - (a) Disconnect connector DM24512A from the SIU-1, M24512, in the P310 power management panel.
 - (b) Do a check of the wiring between the pin of connector DM24512A from the SIU-1, M24512 and terminal 1 of the circuit breaker C24629 in P110 power panel.

DM24512A	C24629
pin 73	term 1

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring between terminal 1 of circuit breaker C24629 and pin 73 of connector DM24512A.
 - 2) Reconnect connector DM24512A to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (e) Do a check of the wiring between the pin of connector DM24512A from the SIU-1, M24512 and terminal 1 of the circuit breaker C24666 in P210 power panel.

DM24512A	C24666
pin 78	term 1

- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring between terminal 1 of circuit breaker C24666 and pin 78 of connector DM24512A.
 - 2) Reconnect connector DM24512A to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

823. CAPT - F/O BUS TIE Relay Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13784.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Replace the CAPT-F/O bus-tie relay, K24016 (WDM 24-32-21).
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do a check of the SIU-1, M24512, in the P310 power management panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (c) If the maintenance message shows on the existing fault display, then continue.
- (3) Do a check for 28 VDC from pin 2 of circuit breaker C24637 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at pin 2 of circuit breaker C24637, then do these steps (WDM 24-32-21):

- 1) Replace this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
K	10	C24637	CAPTAIN-F/O TIE CTRL

- 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

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- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If there is 28 VDC at pin 2 of circuit breaker C24637, then continue.
- (4) Do a check for 28 VDC from pin 1 of connector DK24016 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at pin 1 of connector DK24016, then do these steps:
 - 1) Repair the wiring.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 1 of connector DK24016, then continue.
- (5) Do this check of the wiring between connector DK24016 in the P310 panel and the SIU-1, M24512, in the P310 panel (WDM 24-32-21):
 - (a) Disconnect connector DM24512B from the SIU-1, M24512, in the P310 power management panel.
 - (b) Do a check of the wiring between these pins of connector DK24016 in the P310 panel and these pins of connector DM24512B. (WDM 24-32-21):

DK24016	DM24512B
pin 3	pin 6

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512B to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (e) Disconnect connector DM24512A from the SIU-1, M24512, in the P310 power management panel.
- (f) Do a check of the wiring between these pins of connector DK24016 in the P310 panel and these pins of connector DM24512A. (WDM 24-32-21):

DK24016	DM24512A
pin 6	pin 4

- (g) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512A to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (6) Replace the Ground Power Battery Relay, K24019.
- These are the tasks:
- Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,
Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (7) Do this check for 28 VDC to the relay coil (WDM 24-33-21):
- (a) Remove relay K24019.
 - (b) Do a check for 28 VDC from pin 1 and 5 of connector DK24019 to ground.
 - 1) If 28 VDC is not present, then do the steps that follow.
 - a) Repair the wiring or replace the circuit breaker as required and re-install relay K24019.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 28 VDC is present, then continue.
- (8) Replace Bat-Capt Isolation relay, K24020.
- These are the tasks:
- Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,
Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (9) Do this check for 28 VDC to the relay, (WDM 24-33-21):
- (a) Remove relay K24020.
 - (b) Do a check for 28 VDC from pin 1 and 5 of connector DK24020 to structure ground.
 - 1) If 28 VDC is not present, then do these steps.
 - a) Repair the wiring or replace the circuit breaker as required and re-install relay K24020.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.



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- c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

824. TRU C1 RELAY Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13786.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message 24-13784, then do this task: CAPT - F/O BUS TIE Relay Position Problems - Fault Isolation, 24-32 TASK 823.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Replace the TRU C1 relay, K24017 (WDM 24-32-21).
- (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do a check of the SIU-1, M24512, in the P310 power management panel.
- This is the task:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.
- NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
- (c) If the maintenance message shows on the existing fault display, then continue.
- (3) Do this check of the wiring between connector DK24017 and SIU-1, M24512, in the P310 power management panel (WDM 24-32-21).

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- (a) Disconnect connector DM24512A from the SIU-1, M24512, in the P310 power management panel.
- (b) Do a wiring check between these pins of connector DK24017 in the P310 panel and connector DM24512A in the P310 panel (WDM 24-32-21):

DK24017	DM24512A
pin 12	pin 5

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512A to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (4) Replace the current monitor card, M24521, in the P310 power management panel.

These are the tasks:

Current Monitor Card - Removal, AMM TASK 24-09-00-000-817-002,

Current Monitor Card - Installation, AMM TASK 24-09-00-400-813-002.

 - (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (5) Do a check for 28 VDC from pin 11 of relay connector DK24017 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at pin 11 of relay connector DK24017, then do these steps:
 - 1) Repair the wiring.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 11 of relay connector DK24017, then continue.
- (6) Do a check for 28 VDC from pin X1 of relay connector DK24017 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at pin X1 of relay connector DK24017, then do these steps:
 - 1) Repair the wiring.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin X1 of relay connector DK24017, then continue.

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- (7) Do a wiring check between relay K24300 in the P310 panel and SIU-1 connector DM24512B in the P310 panel (WDM 24-32-21):
- (a) Disconnect connector DM24512B from the SIU-1, M24512, in the P310 panel.
 - (b) Do a check of the wiring between these pins of connector DK24300 and connector DM24512B.
- | | |
|------------------|-----------------|
| DK24300 | DM24512B |
| pin X2 | pin 16 |
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512B to the SIU-1, M24512, in the P310 panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then do these steps:
 - 1) Replace the relay, K24300 (WDM 24-32-21).
 - 2) Reconnect connector DM24512B to the SIU-1, M24512, in the P310 panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (8) Replace the CAPT-F/O bus-tie relay, K24016 (WDM 24-32-21).
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (9) Do a check for 28 VDC from pin 1 of connector DK24016 to structure ground (WDM 24-32-21).
- (a) If there is not 28 VDC at pin 1 of connector DK24016, then do these steps:
 - 1) Repair the wiring.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 1 of connector DK24016, then continue.
- (10) Do this check of the wiring between connector DK24016 in the P310 panel and the SIU-1, M24512, in the P310 panel (WDM 24-32-21):
- (a) Disconnect connector DM24512B from the SIU-1, M24512, in the P310 power management panel.

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- (b) Do a check of the wiring between these pins of connector DK24016 in the P310 panel and these pins of connector DM24512B. (WDM 24-32-21):

DK24016	DM24512B
pin 3	pin 6

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reconnect connector DM24512B to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (e) Disconnect connector DM24512A from the SIU-1, M24512, in the P310 power management panel.
- (f) Do a check of the wiring between these pins of connector DK24016 in the P310 panel and these pins of connector DM24512A. (WDM 24-32-21):

DK24016	DM24512A
pin 6	pin 4

- (g) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reconnect connector DM24512A to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (11) Replace the Ground Power Battery Relay, K24019.
- These are the tasks:
- Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,
Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (12) Do this check for 28 VDC to the relay coil (WDM 24-33-21):
- (a) Remove relay K24019.
 - (b) Do a check for 28 VDC from pin 1 and 5 of connector DK24019 to ground.

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- 1) If 28 VDC is not present, then do the steps that follow.
 - a) Repair the wiring or replace the circuit breaker as required and re-install relay K24019.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 28 VDC is present, then continue.
- (13) Replace Bat-Capt Isolation relay, K24020.
- These are the tasks:
- Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,
Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (14) Do this check for 28 VDC to the relay, (WDM 24-33-21):
- (a) Remove relay K24020.
 - (b) Do a check for 28 VDC from pin 1 and 5 of connector DK24020 to structure ground.
 - 1) If 28 VDC is not present, then do these steps.
 - a) Repair the wiring or replace the circuit breaker as required and re-install relay K24020.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

825. TRU C2 RELAY Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13787.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Replace the relay, K24018 (WDM 24-32-21).
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do a check of the SIU-1, M24512, in the P310 power management panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring between connector DK24018 and connector DM24512A of the SIU-1, M24512, in the P310 power management panel (WDM 24-32-21).
 - (a) Disconnect connector DM24512A from the SIU-1, M24512, in the P310 power management panel.
 - (b) Do a wiring check between these pins of connector DK24017 in the P310 panel and connector DM24512A in the P310 panel (WDM 24-32-21):

DK24018	DM24512A
pin 12	pin 6

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512A to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then reconnect connector DM24512A to the SIU-1, M24512, and continue.
- (4) Do this check of the wiring between connector DK24018 and connector DM24512B of the SIU-1, M24512, in the P310 power management panel (WDM 24-32-21).
 - (a) Disconnect connector DM24512B from the SIU-1, M24512, in the P310 power management panel.
 - (b) Do a wiring check between these pins of connector DK24017 in the P310 panel and connector DM24512B in the P310 panel (WDM 24-32-21):

DK24018	DM24512B
pin X2	pin 7

- (c) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
 - 2) Reconnect connector DM24512B to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then reconnect connector DM24512B to the SIU-1, M24512, and continue.
 - (5) Do a check for 28 VDC from pin 2 of circuit breaker C24628 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at pin 2 of circuit breaker C24628, then do these steps (WDM 24-32-21):
 - 1) Replace this circuit breaker:
- | Standby Power Management Panel, P310 | | | |
|---|------------|---------------|-------------|
| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
| D | 7 | C24628 | TRU C2 CTRL |
- 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 2 of circuit breaker C24628, then continue.
 - (6) Do a check for 28 VDC from pin 11 of relay connector DK24018 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at pin 11 of relay connector DK24018, then do these steps:
 - 1) Repair the wiring.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 11 of relay connector DK24018, then continue.
 - (7) Do a check for 28 VDC from pin X1 of relay connector DK24018 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at pin X1 of relay connector DK24018, then do these steps:
 - 1) Repair the wiring.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

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826. TRU C1 XFR ENABLE Relay Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13791.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message 24-13784, then do this task: CAPT - F/O BUS TIE Relay Position Problems - Fault Isolation, 24-32 TASK 823.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Replace the relay, K24300 (WDM 24-32-21).
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the SIU-1, M24512.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.
 - (c) If the maintenance message shows on the existing fault display, then continue.

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- (3) Do a wiring check in the P310 panel between relay K24300 and connector DM24512B of the SIU-1, M24512 (WDM 24-32-21):

- (a) Disconnect connector DM24512B from the SIU-1, M24512, in the P310 panel.
- (b) Do a check of the wiring between these pins of connector DK24300 and connector DM24512B.

DK24300	DM24512B
pin X2	pin 16

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512B to the SIU-1, M24512, in the P310 panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (d) If you do not find a problem with the wiring, then reconnect connector DM24512B to the SIU-1, M24512, in the P310 panel and continue.

- (4) Do this check of the wiring in the P310 panel between relay K24300 and connector DM24512A of the SIU-1, M24512 (WDM 24-32-21):

- (a) Disconnect connector DM24512A from the SIU-1, M24512, in the P310 panel.
- (b) Do a check of the wiring between these pins of connector DK24300 and connector DM24512A.

DK24300	DM24512A
pin B2	pin 11

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512A to the SIU-1, M24512, in the P310 panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (d) If you do not find a problem with the wiring, then reconnect connector DM24512A to the SIU-1, M24512, in the P310 panel and continue.

- (5) Do a check for 28 VDC from pin 2 of circuit breaker C24627 to structure ground (WDM 24-32-21).

- (a) If there is not 28 VDC at pin 2 of circuit breaker C24627, then do these steps (WDM 24-32-21):

- 1) Replace this circuit breaker;

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	6	C24627	TRU C1 CTRL

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- 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If there is 28 VDC at pin 2 of circuit breaker C24627, then continue.
- (6) Do a check for 28 VDC from pins B1, A2 and X1 of connector DK24300 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at pin B1, A2 or X1 of connector DK24300, then do these steps:
 - 1) Repair the wiring.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there are 28 VDC at pin B1, A2 and X1 of connector DK24300, then continue.
- (7) Replace the CAPT-F/O bus-tie relay, K24016 (WDM 24-32-21).
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (8) Do a check for 28 VDC from pin 1 of connector DK24016 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at pin 1 of connector DK24016, then do these steps:
 - 1) Repair the wiring.
 - 2) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 1 of connector DK24016, then continue.
- (9) Do this check of the wiring between connector DK24016 in the P310 panel and the SIU-1, M24512, in the P310 panel (WDM 24-32-21):
 - (a) Disconnect connector DM24512B from the SIU-1, M24512, in the P310 power management panel.
 - (b) Do a check of the wiring between these pins of connector DK24016 in the P310 panel and these pins of connector DM24512B. (WDM 24-32-21):

DK24016	DM24512B
pin 3	pin 6
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512B to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (e) Disconnect connector DM24512A from the SIU-1, M24512, in the P310 power management panel.
- (f) Do a check of the wiring between these pins of connector DK24016 in the P310 panel and these pins of connector DM24512A. (WDM 24-32-21):

DK24016	DM24512A
pin 6	pin 4

- (g) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reconnect connector DM24512A to the SIU-1, M24512, in the P310 power management panel.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (10) Replace the Ground Power Battery Relay, K24019.
These are the tasks:
Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,
Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (11) Do this check for 28 VDC to the relay coil (WDM 24-33-21):
 - (a) Remove relay K24019.
 - (b) Do a check for 28 VDC from pin 1 and 5 of connector DK24019 to ground.
 - 1) If 28 VDC is not present, then do the steps that follow.
 - a) Repair the wiring or replace the circuit breaker as required and re-install relay K24019.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 28 VDC is present, then continue.
- (12) Replace Bat-Capt Isolation relay, K24020.
These are the tasks:

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Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,
Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.

- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (13) Do this check for 28 VDC to the relay, (WDM 24-33-21):
- (a) Remove relay K24020.
 - (b) Do a check for 28 VDC from pin 1 and 5 of connector DK24020 to structure ground.
 - 1) If 28 VDC is not present, then do these steps.
 - a) Repair the wiring or replace the circuit breaker as required and re-install relay K24020.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

827. Transformer/Rectifier Unit TRU L Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13793.

B. Initial Evaluation

- (1) If the ELEC TRU L and ELEC TRU C1 EICAS messages show at the same time, then replace the Right GCU, M24205.

NOTE: The ELEC STANDBY SYS EICAS message and correlation maintenance message 24-13781 may show and there may be a high voltage of 117-125V at the Right IDG.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message, then you have corrected the problem.
- (b) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.

C. Fault Isolation Procedure

- (1) Do these steps to do a check for 115 VAC power input to the left TRU, M24103.
 - (a) Disconnect connector DM24013 from the left TRU, M24103.
 - (b) Do a check for 115 VAC from pins 6, 7 and 8 to pin 5 at connector DM24103.
 - (c) If you do not find 115 VAC from pins 6, 7 and 8, then do these steps:
 - 1) Trace and repair the wiring back to the left power panel P100 (WDM 24-32-11).
 - 2) Reconnect connector DM24103 to the Left TRU, M24103.

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- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you find 115 VAC from pins 6, 7 and 8, then do these steps:
 - 1) Replace the Left TRU, M24103.
These are the tasks:
Transformer Rectifier Unit Removal, AMM TASK 24-32-01-000-801,
Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do a check of the SIU-1, M24512, in the P310 panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the TRU wiring:
 - (a) Remove the Left TRU, M24103. To remove the TRU, do this task: Transformer Rectifier Unit Removal, AMM TASK 24-32-01-000-801.
 - (b) Measure the resistance at terminal lug removed from the negative terminal of the TRU, to structural ground.
NOTE: Make the resistance measurement at a different ground stud (or structural ground point) than the one the negative wire is attached to.
 - (c) Make sure the resistance is less than 5 milliohms.
 - (d) If the resistance is 5 milliohms or greater, then do these steps:
 - 1) Repair the ground stud (SWPM 20-20-00), and the wiring if necessary.
 - 2) Re-install the Left TRU, M24103. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If the resistance is less than 5 milliohms, then continue.
 - (f) Do a wiring check between the terminal lug removed from the positive terminal of the TRU and terminal L2 at the P110 panel (WDM 24-32-11).
 - (g) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the Left TRU, M24103. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (h) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring from the left TRU to the SIU-1, M24512 (WDM 24-32-11):

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MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE AIRPLANE BEFORE DISCONNECTING A CONNECTOR AT THE P310 PANEL. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO EQUIPMENT CAN OCCUR.

- (a) Disconnect connector DP24512A from the SIU-1, M24512.
- (b) Disconnect connector DM24103 from the left TRU, M24103.
- (c) Do a wiring check between these pins of connector DM24103 removed from the left TRU and connector DP24512A removed from the SIU-1.

DP24512A

DM24103

pin 57	pin 3
pin 64	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DP24512A to the SIU-1, M24512.
 - 3) Re-connect connector DM24103 to the left TRU, M24103.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

828. Transformer/Rectifier Unit TRU R Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13797.

B. Initial Evaluation

- (1) If the ELEC TRU R and ELEC TRU C2 EICAS messages show at the same time, then replace the Left GCU, M24105.

NOTE: The ELEC STANDBY SYS EICAS message and correlation maintenance message 24-13781 may show and there may be a high voltage of 117-125V at the Left IDG.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message, then you have corrected the problem.
- (b) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC at pins 27, 28 and 29 of the L (R) Integrated Drive Generator (IDG) Connector, D71100J (WDM 24-21-11) (WDM 24-21-21).
 - (a) If 115 VAC is not present and the L (R) Generator Control Unit (GCU), M24105 (M24205) was not already replaced, then replace it. These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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- (b) If 115 VAC is present, replace the L (R) IDG (IDG Removal, AMM TASK 24-11-01-000-801-001) (IDG Installation, AMM TASK 24-11-01-400-801-001).
- (2) If the problem continues, do a check for 115 VAC power input to the right TRU, M24203 (WDM 24-32-11).
 - (a) Disconnect connector DM24203 from the right TRU, M24203.
 - (b) Do a check for 115 VAC from pins 6, 7 and 8 to pin 5 at connector DM24203.
 - 1) If you do not find 115 VAC at pins 6, 7 and 8, then do these steps:
 - a) Trace and repair the wiring back to the right power panel P200 (WDM 24-32-11).
 - b) Reconnect connector DM24203 to the right TRU, M24203.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If you find 115 VAC at pins 6, 7 and 8, then do these steps:
 - a) Replace the right TRU, M24203.

These are the tasks:
Transformer Rectifier Unit Removal, AMM TASK 24-32-01-000-801,
Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 4) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a check of the SIU-1, M24512, in the P310 panel.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the TRU wiring:
 - (a) Remove the right TRU, M24103. To remove the TRU, do this task: Transformer Rectifier Unit Removal, AMM TASK 24-32-01-000-801.
 - (b) Measure the resistance at the terminal lug removed from the negative terminal of the TRU, to structural ground.

NOTE: Make the resistance measurement at a different ground stud (or structural ground point) than the one the negative wire is attached to.
 - (c) Make sure the resistance is less than 5 milliohms.
 - 1) If the resistance is 5 milliohms or greater, then do these steps:
 - a) Repair the ground stud (SWPM 20-20-00), and the wiring if necessary.
 - b) Re-install the right TRU, M24203. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If the resistance is less than 5 milliohms, then continue.

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- (d) Do a wiring check between the terminal lug removed from the positive terminal of the TRU and terminal L2 at the P210 panel (WDM 24-32-11).
 - 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the right TRU, M24203. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If you do not find a problem with the wiring, then continue.
- (5) Do this check of the wiring from the right TRU to the SIU-1, M24512 (WDM 24-32-11):



CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE AIRPLANE BEFORE DISCONNECTING A CONNECTOR AT THE P310 PANEL. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO EQUIPMENT CAN OCCUR.

- (a) Disconnect connector DP24512A from the SIU-1, M24512.
- (b) Disconnect connector DM24203 from the right TRU, M24203.
- (c) Do a wiring check between these pins of connector DM24203 removed from the right TRU and connector DP24512A removed from the SIU-1.

DP24512A

pin 58
pin 65

DM24203

pin 3
pin 4

- 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-connect connector DP24512A to the SIU-1, M24512.
 - c) Re-connect connector DM24203 to the right TRU, M24203.
 - d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

END OF TASK

829. Inoperative Transformer/Rectifier Unit (TRU C1) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13799.

B. Initial Evaluation

- (1) If the ELEC TRU L and ELEC TRU C1 EICAS messages show at the same time, then replace the Right GCU, M24205.

NOTE: The ELEC STANDBY SYS EICAS message and correlation maintenance message 24-13781 may show and there may be a high voltage of 117-125V at the Right IDG.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message, then you have corrected the problem.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (c) On the display system, look at the Electrical System, Maintenance Page, page 1 for the values that show for the C1 TRU.
- (d) If the DC-A value that shows for C1 TRU is less than 10 amps, then start with the check for 3-Phase Input Power to the TRU.
- (e) If the DC-A value that shows for C1 TRU is more than 10 amps, then start with the check of the TRU and associated wiring.

C. Fault Isolation Procedure

- (1) Do this check of the TRU and associated wiring:
 - (a) Remove the TRU C1, M24300. To remove the TRU, do this task: Transformer Rectifier Unit Removal, AMM TASK 24-32-01-000-801.
 - (b) Measure the resistance at terminal lug removed from the negative terminal of the TRU, to structural ground.
NOTE: Make the resistance measurement at a different ground stud (or structural ground point) than the one the negative wire is attached to.
 - (c) Make sure the resistance is less than 5 milliohms.
 - (d) If the resistance is 5 milliohms or greater, then do these steps:
 - 1) Repair the ground stud (SWPM 20-20-00), and the wiring if necessary.
 - 2) Re-install TRU C1, M24300. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If the resistance is less than 5 milliohms, then continue.
 - (f) Do a wiring check between the terminal lug removed from the positive terminal of the TRU and terminal L4 at the P310 panel (WDM 24-32-21).
 - (g) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install TRU C1, M24300. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - (h) Remove the safety tag and close this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	4	C24341	TRU C1

NOTE: This circuit breaker was opened during the TRU removal task.

- 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (i) If you do not find a problem with the wiring, then continue.
- (2) Do this check for 3-phase Input Power to the TRU:
 - (a) Look for 115 VAC from pins 6, 7 and 8 to pin 5 at connector DM24300 removed from TRU C1 (WDM 24-32-21).

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- (b) If 3-phase 115 VAC input power to the TRU is present, then install a new TRU C1, M24300. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
- 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (c) If 3-phase 115 VAC input power to the TRU is not present, then look for 115 VAC from pins 1, 2 and 3 at connector D31002P on the P310 Power Management Panel (WDM 24-32-21).
- (d) If 115 VAC is present, then replace the relay, K24017.
- 1) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 2) If the fault continues:
- a) Open this circuit breaker and install safety tag:
- Left Power Panel, P100**
- | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
|------------|------------|---------------|-------------|
| E | 4 | C24341 | TRU C1 |
- b) Examine and repair the wiring between the P310 Power Management Panel and TRU C1 (WDM 24-32-21).
- c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If 115 VAC is not present, then:
- 1) Open this circuit breaker and install safety tag:
- Left Power Panel, P100**
- | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
|------------|------------|---------------|-------------|
| E | 4 | C24341 | TRU C1 |
- 2) Examine and repair the wiring between the P100 power panel and the P310 Power Management Panel (WDM 24-32-21).
- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the 3-phase input power to the TRU, then continue.
- (3) Do a check of the SIU-1, M24512, in the P310 panel.
- This is the task:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring from the TRU C1 to the SIU-1, M24512 (WDM 24-32-21):

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- (a) Disconnect connector DP24512A from the SIU-1, M24512.
- (b) Disconnect connector DM24300 from the TRU C1, M24300.
- (c) Do a wiring check between these pins of connector DM24300 removed from the TRU C1 and connector DP24512A removed from the SIU-1.

DP24512A

DM24300

pin 59	pin 3
pin 66	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DP24512A to the SIU-1, M24512.
 - 3) Re-connect connector DM24300 to the TRU C1, M24300.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

830. Inoperative Transformer/Rectifier Unit (TRU C2) - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13800.

B. Initial Evaluation

- (1) If the ELEC TRU R and ELEC TRU C2 EICAS messages show at the same time, then replace the Left GCU, M24105.

NOTE: The ELEC STANDBY SYS EICAS message and correlation maintenance message 24-13781 may show and there may be a high voltage of 117-125V at the Left IDG.

These are the tasks:

Generator Control Unit Removal, AMM TASK 24-22-02-000-801,

Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message, then you have corrected the problem.
 - (b) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC at pins 27, 28 and 29 of the L (R) IDG Connector, D71100J (WDM 24-21-11) (WDM 24-21-21).
 - (a) If 115 VAC is not present and the L (R) GCU, M24105 (M24205) was not already replaced, then replace it. These are the tasks:

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Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

- (b) If 115 VAC is present, replace the L (R)IDG (IDG Removal, AMM TASK 24-11-01-000-801-001) (IDG Installation, AMM TASK 24-11-01-400-801-001).
- (2) If the problem continues, do a check of the TRU and associated wiring (WDM 24-32-21).
 - (a) Remove the TRU C2, M24303. To remove the TRU, do this task: Transformer Rectifier Unit Removal, AMM TASK 24-32-01-000-801.
 - (b) Measure the resistance at terminal lug removed from the negative terminal of the TRU, to structural ground.

NOTE: Make the resistance measurement at a different ground stud (or structural ground point) than the one the negative wire is attached to.
- (c) Make sure the resistance is less than 5 milliohms.
 - 1) If the resistance is 5 milliohms or greater, then do these steps:
 - a) Repair the ground stud (SWPM 20-20-00), and the wiring if necessary.
 - b) Re-install TRU C2, M24303. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If the resistance is less than 5 milliohms, then continue.
- (d) Do a wiring check between the terminal lug removed from the positive terminal of the TRU and terminal L3 at the P210 panel (WDM 24-32-21).
 - 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-install TRU C2, M24303. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If you do not find a problem with the wiring, then continue.
- (e) Remove the safety tags and close these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-010			
A	3	C24340	TRU C2
ARO 011-999			
A	5	C24340	TRU C2

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NOTE: This circuit breaker was opened during the TRU removal task.

- (f) Do a check for 115 VAC from pins 6, 7 and 8 to pin 5 at connector DM24303 removed from TRU C2.

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- 1) Open these circuit breakers and install safety tags:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-010			
A	3	C24340	TRU C2
ARO 011-999			
A	5	C24340	TRU C2

ARO ALL

- 2) If 115 VAC was not present, then do these steps:
 - a) Trace and repair the wiring back to the TRU C2 RELAY, K24018 located in the P310 panel (WDM 24-32-21).
 - b) Re-install TRU C2, M24303. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 3) If 115 VAC was present, then do these steps:
 - a) Install a new TRU C2, M24303. To install the TRU, do this task: Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - c) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a check of the SIU-1, M24512, in the P310 panel.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring from the TRU C2 to the SIU-1, M24512 (WDM 24-32-21):



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- (a) Disconnect connector DP24512A from the SIU-1, M24512.
- (b) Disconnect connector DM24303 from the TRU C2, M24303.
- (c) Do a wiring check between these pins of connector DM24303 removed from the TRU C2 and connector DP24512A removed from the SIU-1.

DP24512A

pin 60
pin 67

DM24303

pin 3
pin 4

- 1) If you find a problem with the wiring, then do these steps:

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- a) Repair the wiring.
- b) Re-connect connector DP24512A to the SIU-1, M24512.
- c) Re-connect connector DM24303 to the TRU C2, M24303.
- d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

831. **Power Bus BAT BUS in P310 Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13816.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check of the SIU-1, M24512, in the P310 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the wiring (WDM 24-33-21):
 - (a) Disconnect connectors DM24512A and DM24512B from the SIU-1, M24512.
 - (b) Remove the relay K24006 from the P310 standby power management panel.
 - (c) Do a wiring check between these pins of connector DM24512A at the SIU-1, M24512 and connector DK24006 at the MAIN BAT RELAY, K24006:

DM24512A

DK24006

pin 3 pin 6

- (d) Do a wiring check between these pins of connector DM24512B at the SIU-1, M24512 and connector DK24006 at the MAIN BAT RELAY, K24006:

DM24512B

DK24006

pin 4 pin 3

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connectors DM24512A and DM24512B to the SIU-1, M24512.
 - 3) Connect the relay K24006 to the P310 standby power management panel.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.

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- (3) Replace the relay, K24006 (WDM 24-33-21).
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring (WDM 24-33-21):
- (a) Disconnect connectors DM24512A and DM24512B from the SIU-1, M24512.
 - (b) Remove the relay K24020 from the P310 standby power management panel.
 - (c) Do a wiring check between these pins of connector DM24512A at the SIU-1, M24512 and connector DK24020 at the BAT-CAPT ISO RELAY, K24020:
- | DM24512A | DK24020 |
|-----------------|----------------|
| pin 8 | pin 6 |
- (d) Do a wiring check between these pins of connector DM24512B at the SIU-1, M24512 and connector DK24020 at the BAT-CAPT ISO RELAY, K24020:
- | DM24512B | DK24020 |
|-----------------|----------------|
| pin 9 | pin 3 |
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connectors DM24512A and DM24512B to the SIU-1, M24512.
 - 3) Connect the relay K24020 to the P310 standby power management panel.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
- (5) Replace the relay, K24020 (WDM 24-32-21).
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (6) Do this check of the wiring from relay K24016 to signal interface unit M24512 (WDM 24-32-21):
- (a) Disconnect connector DM24512A from the signal interface unit.
 - (b) Remove the relay K24016 from the P310 standby power management panel.
 - (c) Do a wiring check between these pins of connector DK24016 at the CAPT-F/O BUS TIE, K24016 and connector DM24512A at the signal interface unit, M24512:
- | DM24512A | DK24016 |
|------------------|----------------|
| pin 4 | pin 6 |
| pin 72 | pin A2 |
- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Connect the relay K24016 to the P310 standby power management panel.
 - 3) Re-connect connector DM24512A to the signal interface unit.



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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

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813. Continuous DC/Standby Self Test - Fault Isolation

A. Initial Evaluation

- (1) If the DC/Standby system relays in the P310 panel continuously to energize and then de-energize for every 20-30 seconds, then do the Fault Isolation Procedure below.
- (2) If the DC/Standby system relays in the P310 panel does not continuously energize and then de-energize for every 20-30 seconds, then there was an intermittent fault.

B. Fault Isolation Procedure

- (1) Do a resistance check of the standby power switch:
 - (a) Make sure the STANDBY POWER switch, on the P61 panel, is in the AUTO position.
 - (b) Disconnect connector DM30431A from the P61 panel.
 - (c) Measure the resistance between pin 10 and pin 11 of connector DM30431A on the standby power switch.
 - (d) If there is resistance then do these steps:
 - 1) Replace the STANDBY POWER switch, M30431S3.
 - 2) Measure the resistance between pin 10 and pin 11 of connector DM30431A on the standby power switch.
 - 3) If there is resistance then do these steps:
 - a) Replace the P61 panel, M30431.
 - b) If the DC/Standby system relays in the P310 panel does not continuously energize and then de-energize for every 20-30 seconds, then you corrected the fault.
 - 4) If it is an open circuit, then make sure the DC/Standby system relays in the P310 panel does not energize and then de-energize for every 20-30 seconds.
 - (e) If it is an open circuit, then continue.
 - (f) Reconnect connector DM30431A to the P61 panel.
- (2) Do a wiring check from the P61 panel to the P310 panel (SSM 24-33-21):
 - (a) Make sure the STANDBY POWER switch, on the P61 panel, is in the AUTO position.
 - (b) Disconnect connector D31016 from the P310 panel.
 - (c) Measure the resistance from pin 12 of connector D31016 to aircraft ground.
 - (d) If there is resistance, then do these steps:
 - 1) Repair the wiring from the P61 panel to the P310 panel.
 - 2) Reconnect connector D31016 to the P310 panel.
 - 3) If the DC/Standby system relays in the P310 panel does not continuously energize and then de-energize for every 20-30 seconds, then you corrected the fault.
 - (e) If it is an open circuit, then continue.
 - (f) Reconnect connector D31016 to the P310 panel.
- (3) Do a check of the signal interface unit, M24512, in the P310 electronics unit.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) Make sure the STANDBY POWER switch, on the P61 panel, is in the AUTO position.

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- (b) If the DC/Standby system relays in the P310 panel does not continuously energize and then de-energize for every 20-30 seconds, then you corrected the fault.

— END OF TASK —

814. Relay (MAIN BATT) in P310 position problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13781.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace Main Battery relay, K24006.

These are the tasks:

Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,
Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.

- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
- (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check for 28 VDC to the relay coil (WDM 24-33-21):
 - (a) Remove relay K24006, or connector DK24006.
 - (b) Do a check for 28 VDC from pin 1 and 5 of connector DK24006 to structure ground.
 - 1) If 28 VDC is not present, then do these steps.
 - a) Repair wiring or replace the circuit breaker as required and re-install relay K24006.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 28 VDC is present then continue.



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- (3) Do a check of the SIU-1, M24512.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
- (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (d) If the maintenance message shows on the existing fault display, then continue.

- (4) Do a check of the wiring between the relay (K24006) and the SIU 1 (M24512) (WDM 24-33-21):

- (a) Remove relay K24006, or connector DK24006.
- (b) Remove connector DM24512A and DM24512B from SIU 1.
- (c) Do a wiring check between these pins of connector DK24006 and DM24512B on the P310 panel:

DK24006	DM24512B
pin 3	pin 4

- (d) Do a wiring check between these pins of connector DK24006 and DM24512A on the P310 panel:

DK24006	DM24512A
pin 6	pin 3

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the relay K24006, or re-connect DK24006.
 - 3) Re-connect DM24512A and DM24512B to SIU 1.
 - 4) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

815. Relay (AC STBY PWR) in P210 position problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13782.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace AC STBY PWR relay, K24009 (WDM 24-33-11).
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check for 115 VAC to the relay coil (WDM 24-33-11):
 - (a) Remove relay K24009.
 - (b) Do a check for 115 VAC from pin X1 of connector DK24009 to structure ground.
 - 1) If 115 VAC is not present, check the wiring between pin X1 and the 115 VAC circuit breaker on the P100 panel.
 - a) If a fault was found, repair wiring or replace the circuit breaker as required and re-install relay K24009.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 115 VAC is present then continue.
- (3) Do this check for the 115 VAC relay status signal for the SIU (WDM 24-33-11):
 - (a) Do a check for 115 VAC from pin A1 of connector DK24009 to structure ground.
 - 1) If 115 VAC is not present, check the wiring between pin A1 and the circuit breaker on the P100 panel.
 - a) If a fault was found, repair wiring or replace the circuit breaker as required and re-install relay K24009.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 115 VAC is present, then re-install relay K24009 and continue.
- (4) Do a check of the Signal Interface Unit 1 (M24512) Module.

This is the task:

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Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
- (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (5) Do a check of the wiring between Relays K24009 and K24031 (WDM 24-33-11):
 - (a) Remove relays K24009 and K24031.
 - (b) Do a wiring check between these pins of connector DK24009 and DK24031:

DK24009	DK24031
pin X1	pin B1
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the relays K24009 and K24031.
 - 3) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
- (6) Do a check of the wiring between the relay K24009 and the SIU 1, M24512 (WDM 24-33-11):
 - (a) Remove connect DM24512C from SIU 1.
 - (b) Do a resistance check, for 18 K OHMS, between these pins of connector DK24009 and DM24512C on the P310 panel:

DK24009	DM24512C
pin A2	pin 74
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring or replace the M24520 Monitor Card.
 - 2) Re-install the relays K24009 and K24031.
 - 3) Re-connect DM24512C to SIU 1.
 - 4) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

816. Relay (GND PWR BAT) in P310 position problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13788.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the Ground Power Battery Relay, K24019.
These are the tasks:
Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,
Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check for 28 VDC to the relay coil (WDM 24-33-21):
 - (a) Remove relay K24019.
 - (b) Do a check for 28 VDC from pin 1 and 5 of connector DK24019 to ground.
 - 1) If 28 VDC is not present, then do the steps that follow.
 - a) Repair the wiring or replace the circuit breaker as required and re-install relay K24019.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 28 VDC is present, then continue.
- (3) Do a check of the Signal Interface Unit 1 (M24512) Module.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do a check of the wiring between the relay K24019 and the SIU 1, M24512 (WDM 24-33-21):
 - (a) Remove relay K24019.

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- (b) Remove connectors DM24512A and DM24512B from SIU 1.
- (c) Do a wiring check between these pins of connector DK24019 and DM24512B on the P310 panel:

DK24019	DM24512B
pin 3	pin 8

- (d) Do a wiring check between these pins of connector DK24019 and DM24512A on the P310 panel:

DK24019	DM24512A
pin 6	pin 7

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install relay K24019.
 - 3) Re-connect connectors DM24512A and DM24512B to SIU 1.
 - 4) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

817. **Power bus (BAT BUS SECT 2) in P310 problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13814.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (1) Replace Ground Power Battery Relay, K24019.

These are the tasks:

Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,

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Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.

- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
- (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the SIU-2, M24513.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do a check of the wiring in the P310 panel, (WDM 24-33-21):
 - (a) Remove relay K24019.
 - (b) Remove connector DM24513A from SIU 2, M24513.
 - (c) Do a resistance check (for 1 K OHM) between these pins of connector DK24019 and DM24513A on the P310 panel:

DK24019

DM24513A

pin A2 pin 77

- (d) Do a check for 28 VDC between pins A3 and A1 of connector DK24019 and ground.
- (e) If 28 VDC is not present, or if you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install relay K24019.
 - 3) Re-connect connector DM24513A to SIU 2, M24513.
 - 4) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

818. Power Bus (AC STANDBY BUS) in P310 Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13817.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for this maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the BATTERY Switch on the P5 Panel is in the ON position.
 - (b) Push and release the STANDBY POWER Switch on the P61 Panel to the BAT position.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check of the Signal Interface Unit 1 Module, M24512 (Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002).
 - (a) Do the Repair Confirmation at the end of this task.
- (2) Remove the Relay K24009 (WDM 24-33-11).
- (3) Do a check for 115V AC, at pin C3 of the Relay connector DK24009.
 - (a) If you do not find 115V AC, at pin C3, do a check for 28V DC at the 28V DC (+) terminal of the Static Inverter, M24016.
 - 1) If you find 28V DC, then replace the Static Inverter M24016.

These are the tasks:

Static Inverter Removal, AMM TASK 24-33-05-000-801,
Static Inverter Installation, AMM TASK 24-33-05-400-801.

 - a) Re-install the Relay K24009.
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If you do not find 28V DC, then examine the wiring between the STATIC INV PWR (M9) Circuit Breaker, C24632 and the Static Inverter.
 - a) Repair the problems that you find.
 - b) Re-install the Relay K24009.
 - c) Do the Repair Confirmation at the end of this task.
 - (b) If you find 115V AC at pin C3 of the Relay K24009 connector DK24009, do a check of the wiring between the Relay K24009 and the SIU 1 Module, M24512 as follows (WDM 24-33-11, WDM 24-51-31):
 - 1) Disconnect connector DM24512C from SIU 1, M24512.
 - 2) Do a Resistance check between these pins of connector DK24009 and DM24512C on the P310 panel:

AC STBY Relay	SIU 1	
DK24009	DM24512C	Resistance
pin C2	pin 71	18 K Ω

- a) If the Resistance value is not correct, do these steps:
 - <1> Repair the wiring problems that you find.
 - <2> Re-install the Relay K24009.

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- <3> Do the Repair Confirmation at the end of this task.
- b) If the Resistance value is correct, then continue.
- (4) Do a check for 115V AC, at pin C1 of the AC STBY PWR Relay K24009 connector DK24009 (WDM 24-33-11).
- (a) If you find 115V AC, replace the Relay K24009.
- 1) Do the Repair Confirmation at the end of this task.
- (b) If you do not find 115V AC, repair the wiring between pin C1 of Relay K24009 and the AC STBY BUS PWR Circuit Breaker, C24415.
- 1) Re-install the Relay K24009.
- 2) Do the Repair Confirmation at the end of this task.
- (5) Replace the AC STBY CNTL Relay, K24031 (WDM 24-33-11).
- (a) Do the Repair Confirmation at the end of this task.

D. Repair Confirmation

- (1) Make sure that the BATTERY Switch on the P5 Panel is in the ON position.
- (2) Push and release the STANDBY POWER Switch on the P61 Panel to the BAT position.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue the Fault Isolation Procedure above at the subsequent step.

————— END OF TASK —————

819. Relay (BAT-CAPT ISO) in P310 position problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13789.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
- (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
- (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace Bat-Capt Isolation relay, K24020.

These are the tasks:

Standby Power-DC Control Relay Removal, AMM TASK 24-33-07-000-801,
Standby Power-DC Control Relay Installation, AMM TASK 24-33-07-400-801.

- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
- (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

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- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check for 28 VDC to the relay, (WDM 24-33-21):
 - (a) Remove relay K24020.
 - (b) Do a check for 28 VDC from pin 1 and 5 of connector DK24020 to structure ground.
 - 1) If 28 VDC is not present, then do these steps.
 - a) Repair the wiring or replace the circuit breaker as required and re-install relay K24020.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 28 VDC is present then continue.



CAUTION MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (3) Do a check of the SIU-1, M24512.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

 - (d) If the maintenance message shows on the existing fault display, then continue.
- (4) Do a check of the wiring between the relay (K24020) and the SIU module (M24512) (WDM 24-33-21):
 - (a) Remove relay K24020.
 - (b) Disconnect DM24512A and DM24512B from SIU 1, M24512.
 - (c) Do a wiring check between these pins of connector DK24020 and DM24512B on the P310 panel:

DK24020	DM24512B
pin 3	pin 9
 - (d) Do a wiring check between these pins of connector DK24020 and DM24512A on the P310 panel:

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DK24020

pin 6 pin 8

DM24512A

- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the relay K24020.
 - 3) Re-connect DM24512A and DM24512B to SIU 1, M24512.
 - 4) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

820. Relay (AC STBY CNTL) in P310 position problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13790.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace AC STBY CNTL relay, K24031 (WDM 24-33-11).
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check for 28 VDC to the relay coil (WDM 24-33-11):
- (a) Remove relay K24031.
 - (b) Do a check for 28 VDC from pin X1 of connector DK24031 to structure ground.
 - 1) If 28 VDC VAC is not present, then do these steps.
 - a) Repair wiring or replace the circuit breaker as required and re-install relay K24031.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

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- c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 2) If 28 VDC is present then continue.
- (3) Do this check for the 115 VAC relay status voltage (WDM 24-33-11):
 - (a) Do a check for 115 VAC from pin B2 of connector DK24031 to structure ground.
 - 1) If 115 VAC is not present, then do these steps.
 - a) Repair wiring or replace the circuit breaker as required and re-install relay K24031.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 115 VAC is present, then re-install relay K24031 and continue.
- (4) Do a check of the Signal Interface Unit 1 (M24512) Module.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (5) Do a check of the wiring between the relay K24031 and SIU 1, M24512 (WDM 24-33-11):
 - (a) Remove relay K24031.
 - (b) Disconnect DM24512B and DM24512C from SIU 1, M24512.
 - (c) Do a wiring check between these pins of connector DK24031 and DM24512B on the P310 panel:

DK24031	DM24512B
pin X2	pin 12

- (d) Do a resistance check, for 18K OHMS, between these pins of connector DK24031 and DM24512C on the P310 panel:

DK24031	DM24512C
pin B1	pin 75

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the relay K24031.
 - 3) Re-connect DM24512B and DM24512C to SIU 1, M24512.
 - 4) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.

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- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

821. ELMS P310 Failed to Deploy the RAT problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13792.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the relay, K24026 (WDM 24-33-41).
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check for 28 VDC to the relay coil (WDM 24-33-41):
- (a) Remove relay K24026.
 - (b) Do a check for 28 VDC from pins X1 and A1 of connector DK24026 to structure ground.
 - 1) If 28 VDC VAC is not present, then do these steps.
 - a) Repair wiring or replace the circuit breakers as required and re-install relay K24026.
 - b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 2) If 28 VDC is present then continue.
- (3) Do a check of the Signal Interface Unit 1 (M24512) Module.
- This is the task:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - (b) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do a check of the wiring between the relay K24026 and SIU 1, M24512 (WDM 24-33-41):
- (a) Remove relay K24026.
 - (b) Disconnect connector DM24512B from SIU 1, M24512.
 - (c) Do a wiring check between these pins of connector DK24026 in the P310 panel and connector DM24512B in the P310 panel (WDM 24-33-41):

DK24026	DM24512B
pin X2	pin 10

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install relay K24026.
 - 3) Re-connect connector DM24512B to SIU 1, M24512.
 - 4) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - 5) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (5) Do a check of the wiring between the relay K24026 and RAT Acuator Solenoid, M29002 (WDM 24-33-41):
 - (a) Remove relay K24026.
 - (b) Disconnect connector DM29002 from RAT Acuator Solenoid, M29002.
 - (c) Do a wiring check between these pins of connector DK24026 in the P310 panel and connector DM29002 removed from M29002 (WDM 24-33-41):

DK24026	DM29002
pin A2	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install relay K24026.
 - 3) Re-connect connector DM29002 to RAT Acuator Solenoid, M29002.
 - 4) Make sure the BATTERY switch on the P5 panel is in the ON position.
 - 5) Push and release the STANDBY POWER switch on the P61 panel to the BAT position.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

822. Battery switch 3 is in Off position - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13808.

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B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, monitor the maintenance message on the MAT while you do these steps:
 - (a) Set the BATTERY switch on the P5 panel first to the on mode, and then to the off mode.
 - (b) If the MAT shows ACTIVE for the maintenance message while the switch is in the on or off mode, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the switch is in the on and off modes, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the Electrical Module Assembly, M24023 on the P5.

These are the tasks:

Electrical Module Assembly Removal, AMM TASK 24-22-01-000-801,

Electrical Module Assembly Installation, AMM TASK 24-22-01-400-801.

- (a) Monitor the maintenance message on the MAT while you do these steps:
 - 1) Set the BATTERY switch first to the on mode, and then to the off mode.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the switch is in the on or off modes, you corrected the fault.
 - (c) If the MAT shows ACTIVE for the maintenance message while the switch is in the on or off mode, then continue.
- (2) Do a check of the Signal Interface Unit 1 (M24512) Module.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) Monitor the maintenance message on the MAT while you do these steps:
 - 1) Set the BATTERY switch first to the on mode, and then to the off mode.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the switch is in the on and off modes, you corrected the fault.
 - (c) If the MAT shows ACTIVE for the maintenance message while the switch is in the on or off mode, then continue.
 - (3) Do this check of the wiring between the Electrical Module Assy, M24023 and SIU 1, M24512 (WDM 24-33-21):
 - (a) Disconnect connector DM24023B from the Electrical Module Assy, M24023.
 - (b) Disconnect connector DM24512C from SIU 1, M24512.
 - (c) Do a wiring check between these pins of connector DM24512C removed from SIU 1 and connector DM24023B removed from the Electrical Module Assy, M24023:

DM24512C

DM24023B

pin 13 pin 43

- (d) Do a check for continuity between pin 42 of connector DM24023B to ground.
- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- 2) Re-connect connector DM24023B to the Electrical Module Assy, M24023.
- 3) Re-connect connector DM24512C to SIU 1, M24512.
- 4) Monitor the maintenance message on the MAT while you do these steps:
 - a) Set the BATTERY switch to the on mode, and then to the off mode.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) while the switch is in the on and off modes, you corrected the fault.

————— END OF TASK —————

823. Circuit Breaker C24619 open - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13829.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do the check for 28 VDC from pin 2 of circuit breaker to structure ground:
(WDM 24-33-41)

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
K	6	C24619	ELMS RAT DEPLOY

- (a) If there is not 28 VDC at pin 2 of circuit breaker C24619, then do these steps:
 - 1) Replace the circuit breaker, C24619 (WDM 24-33-41) and activate it.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, you corrected the fault.
- (b) If there is 28 VDC at pin 2 of circuit breaker C24619, then continue.
- (2) Open circuit breaker C24619 (WDM 24-33-41).
 - (a) Remove connector DM24512A from SIU 2, M24512.
 - (b) Do a wiring check between pin 2 of circuit breaker C24619 and connector DM24512A.

DK24512A	C24619
pin 1	pin 2

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24512A and close the circuit breaker C24619.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message, you corrected the fault.

————— END OF TASK —————

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824. Standby Switch Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13830.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check of the Signal Interface Unit 1 (M24512) Module.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message, you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the wiring from the Window Heat Backup Module, M30431 to SIU 1, M24512. (WDM 24-33-21):
- (a) Disconnect connector DM30431A from Window Heat Backup Module, M30431.
- (b) Disconnect connector DM24512C from SIU 1, M24512.
- (c) Do a wiring check between these pins of connector DM30431A at the P61 and connector DM24512C in the P310:

DM30431A

pin 9

pin 10

DM24512C

pin 22

pin 41

- (d) Do a check for continuity between pin 11 of connector DM30431A to ground.
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- 2) Re-connect connector DM30431A to Window Heat Backup Module, M30431.
- 3) Re-connect connector DM24512C to SIU 1, M24512.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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801. PMG No Output Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-50201, 24-50202, 24-50203, 24-50211, 24-50212, 24-50213.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) For the left permanent magnet generator (PMG), operate the left engine; for the right PMG, operate the right engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring between the backup generator and the PSA (WDM 24-35-11 for the 24-50201 or 24-50211 message, WDM 24-35-21 for the 24-50202 or 24-50212 message, WDM 24-35-31 for the 24-50203 or 24-50213 message):

Table 201/24-35-00-993-804

MAINTENANCE MESSAGE	PSA	BACKUP GEN CONNECTOR	PSA CONNECTOR
24-50201	LEFT	DM24004B (left eng)	DM24101AB
		pin 2	pin 1
		pin 3	pin 2
		pin 4	pin 3
24-50202	RIGHT	DM24004B (right eng)	DM24201AB
		pin 2	pin 1
		pin 3	pin 2
		pin 4	pin 3
24-50203	CENTER	DM24004C (left eng)	DM24301AB
		pin 1	pin 1
		pin 2	pin 2
		pin 3	pin 3
24-50211	LEFT	DM24004B (left eng)	DM24101AE
		pin 2	pin 1
		pin 3	pin 2

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Table 201/24-35-00-993-804 (Continued)

MAINTENANCE MESSAGE	PSA	BACKUP GEN CONNECTOR	PSA CONNECTOR
24-50212	RIGHT	pin 4	pin 3
		DM24004B (right eng)	DM24201AE
		pin 2	pin 1
		pin 3	pin 2
24-50213	CENTER	pin 4	pin 3
		DM24004C (right eng)	DM24301AE
		pin 1	pin 1
		pin 2	pin 2
		pin 3	pin 3

- (a) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring from the backup generator to the PSA.
 - 2) Re-connect the applicable connectors.
 - 3) For the left PMG, operate the left engine; for the right PMG, operate the right engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (b) If you do not find a problem with the wiring, then continue.
- 1) Re-connect the applicable connectors to the backup generator.
- (2) Do a check for 110VAC or greater between pins 1 and 2, pins 1 and 3, pins 2 and 3 of the power supply assembly (PSA) connector while the engine operates. See the table below:

NOTE: The voltage measurements should agree within 10 percent.

MAINTENANCE MESSAGE	PSA	PSA CONNECTOR	WIRING DIAGRAM
24-50201	LEFT	DM24101AB	WDM 24-35-11
24-50202	RIGHT	DM24201AB	WDM 24-35-21
24-50203	CENTER	DM24301AB	WDM 24-35-31
24-50211	LEFT	DM24101AE	WDM 24-35-11
24-50212	RIGHT	DM24201AE	WDM 24-35-21
24-50213	CENTER	DM24301AE	WDM 24-35-31

- (a) If there is not 110VAC between pins 1 and 2, pins 1 and 3, pins 2 and 3 of the PSA connector, then do these steps:
- 1) Replace the applicable backup generator, M24004.
- These are the tasks:
- Backup Generator Removal, AMM TASK 24-25-01-000-804-001,

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Backup Generator Installation, AMM TASK 24-25-01-400-804-001.

- 2) For the left PMG, operate the left engine; for the right PMG, operate the right engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.
- (b) If there is 110VAC between pins 1 and 2, pins 1 and 3, pins 2 and 3 of the PSA connector, then continue.
- (3) Replace the applicable power supply assembly.

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,

Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

MAINTENANCE MESSAGE	PSA	EQUIPMENT NUMBER
24-50201	LEFT	M24101
24-50202	RIGHT	M24201
24-50203	CENTER	M24301
24-50211	LEFT	M24101
24-50212	RIGHT	M24201
24-50213	CENTER	M24301

- (a) For the left PMG, operate the left engine; for the right PMG, operate the right engine. To operate the engine, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

802. FC Battery Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-50241, 24-50242, 24-50243.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable FC battery.

These are the tasks:

FCDC Batteries Removal, AMM TASK 24-35-02-000-801,

FCDC Batteries Installation, AMM TASK 24-35-02-400-801.

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FC BATTERY

EQUIPMENT NUMBER

LEFT	M24102
RIGHT	M24202
CENTER	M24302

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable power supply assembly.

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,

Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

PSA

EQUIPMENT NUMBER

LEFT	M24101
RIGHT	M24201
CENTER	M24301

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring from the applicable FC battery to the applicable power supply assembly (WDM 24-35-11):
 - (a) Disconnect connector from the applicable FC battery.
 - (b) Disconnect applicable connector from the power supply assembly (PSA).
 - (c) Do a wiring check between these pins of connectors that follow (WDM 24-35-11 for the Left FC Battery, WDM 24-35-21 for the Right FC Battery, and WDM 24-35-31 for the Center FC Battery):

LEFT FC BATTERY, M24102, E1-6 SHELF

**FC BATTERY
CONNECTOR
DM24102**

**LEFT PSA,
M24101
DM24101AC**

pin 1	.....	pin 4
pin 2	.....	pin 5

RIGHT FC BATTERY, M24202, E5-2 SHELF

**FC BATTERY
CONNECTOR
DM24202**

**RIGHT PSA,
M24201
DM24201AC**

pin 1		pin 4
pin 2		pin 5

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ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

PSA	COUPLER
LEFT	B24101
RIGHT	B24201
CENTER	B24301

v

- (a) Do this ground test on the MAT: 27-Primary Flight Control System System Test, Transmitter Reset Test.
 - (b) If the maintenance message does not show on the ground test display, then you corrected the fault.
 - (c) If the maintenance message shows on the ground test display, then continue.
- (3) Do this check of the wiring from the applicable PSA to the coupler:
- (a) Disconnect the applicable connector from the PSA.
 - (b) Do a wiring check between these pins of the PSA connector and the coupler connector (WDM 24-35-11 for the PSA-L, WDM 24-35-21 for the PSA-R, WDM 24-35-31 for the PSA-C):

PSA-L, M24101, E1-6 SHELF		
	COUPLER CONNECTOR	PSA CONNECTOR
ARINC 629 COUPLER, P112 PANEL B24101	DB24101	DM24101AA
	pin 5	pin 1T
	pin 4	pin 1TR
	pin 2	pin 4T
	pin 1	pin 4TR

PSA-R, M24201, E5-1 SHELF		
	COUPLER CONNECTOR	PSA CONNECTOR
ARINC 629 COUPLER, P212 PANEL B24201	DB24201	DM24201AA
	pin 5	pin 1T
	pin 4	pin 1TR
	pin 2	pin 4T
	pin 1	pin 4TR

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PSA-C, M24301, E2-6 SHELF		
	COUPLER CONNECTOR	PSA CONNECTOR
ARINC 629 COUPLER, P312 PANEL B24301	DB24301	DM24301AA
	pin 5	pin 1T
	pin 4	pin 1TR
	pin 2	pin 4T
	pin 1	pin 4TR

- (c) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the coupler connector.
 - 3) Re-connect the PSA connector.
- (d) Do this ground test on the MAT: 27-Primary Flight Control System System Test, Transmitter Reset Test.
- (e) If the maintenance message does not show on the ground test display, then you corrected the fault.

————— **END OF TASK** —————

804. PSA DC Bus Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-50261, 24-50262.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring from the applicable power management panel (PMP) to the applicable power supply assembly (PSA):
- (a) Disconnect the applicable connector from the power management panel.
 - (b) Disconnect the applicable connector from the power supply assembly.
 - (c) Do a wiring check between these pins of the connectors that follow: Refer to WDM 24-35-11 for the left PSA and WDM 24-35-21 for the right PSA.

Table 202/24-35-00-993-808

LEFT PSA, M24101 IN THE E1-6 SHELF

LEFT PMP, P110
D11012
pin D

LEFT PSA
DM24101AC
pin 1

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Table 203/24-35-00-993-809

RIGHT PSA, M24201 IN THE E5-1 SHELF

RIGHT PMP, P210
D21012

pin E

RIGHT PSA
DM24201AC

pin 1

- (d) For the left PSA, do a wiring check between pin 3 of connector DM24101AC and structure ground (WDM 24-35-11).
- (e) For the right PSA, do a wiring check between pin 3 of connector DM24201AC and structure ground (WDM 24-35-21).
- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the connector to the applicable power management panel.
 - 3) Re-connect the connector to the applicable power supply assembly.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the wiring from the standby power management panel, P310 to the center power supply assembly (PSA), M24301:
 - (a) Disconnect connector D31034 from the standby power management panel.
 - (b) Disconnect connector DM24301AC from the center power supply assembly.
 - (c) Do a wiring check between these pins of connector D31034 on the standby power management panel, P310 and connector DM24301AC on the center power supply assembly, M24301 (WDM 24-35-31):

D31034

pin G	.....	pin 1
pin C	.....	pin 2
GND	.....	pin 3
GND	.....	pin 6

DM24301AC

- (d) Disconnect connector DM24302 from the center flight control battery M24302.
- (e) Do this check of the wiring from the center flight control battery, M24302 to the center power supply assembly (PSA), M24301:

DM24302

pin 1	.....	pin 4
pin 2	.....	GND
GND	.....	pin 5

DM24301AC

- (f) Disconnect connector DM24004C from the left backup generator M24004.
- (g) Disconnect connector DM24301AB from the center power supply assembly (PSA), M24301.
- (h) Do this check of the wiring from the from the backup generator M24004 and the center power supply assembly (PSA), M24301:

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DM24004C

pin 1		pin 1
pin 2		pin 2
pin 3		pin 3

DM24301AB

- (i) Disconnect connector DM24004C from the right backup generator M24004.
- (j) Disconnect connector DM24301AE from the center power supply assembly (PSA), M24301.
- (k) Do this check of the wiring from the from the backup generator M24004 and the center power supply assembly (PSA), M24301:

DM24004C

pin 1	.....	pin 1
pin 2	.....	pin 2
pin 3	.....	pin 3

DM24301AE

- (l) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D31034 to the standby power management panel, P310.
 - 3) Re-connect connector DM24301AC to the center power supply assembly, M24301.
 - 4) Re-connect connector DM24302 to the center flight control battery M24302.
 - 5) Re-connect connector DM24004C to the backup generator M24004.
 - 6) Re-connect connector DM24301AB to the center power supply assembly (PSA), M24301.
 - 7) Re-connect connector DM24301AE to the center power supply assembly (PSA), M24301.
 - 8) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 9) If the MAT shows ACTIVE for the maintenance message, then continue.
 - (m) Disconnect connector DM24301AC from the center power supply assembly.
 - (n) Do check for the proper operation of C27674 PSA TRU-C position M15 and C24676 PSA BAT-PWR-C position M5 on the P310 Power Management panel.
 - (o) If you find a problem with a circuit breaker, then do these steps:
 - 1) Replace the circuit breaker.
 - 2) Re-connect connector DM24301AC to the center power supply assembly, M24301.
- (3) Replace the applicable power supply assembly.

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,

Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

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805. PSA Battery Interlock Circuit Breaker Is Open - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-51001, 24-51002, 24-51003.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable power supply assembly.

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,

Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

PSA	EQUIPMENT NUMBER
LEFT	M24101
RIGHT	M24201
CENTER	M24301

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

806. PSA Captains Flight Instrument Bus Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-50263.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring from the standby power management panel, P310 to the center power supply assembly (PSA), M24301:
 - (a) Disconnect connector D31034 from the standby power management panel.
 - (b) Disconnect connector DM24301AC from the center power supply assembly.
 - (c) Do a wiring check between these pins of connector D31034 on the standby power management panel, P310 and connector DM24301AC on the center power supply assembly, M24301 (WDM 24-35-31):

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D31034

pin G		pin 1
pin C		pin 2
GND		pin 3
GND		pin 6

DM24301AC

- (d) Disconnect connector DM24302 from the center flight control battery M24302.
- (e) Do this check of the wiring from the center flight control battery, M24302 to the center power supply assembly (PSA), M24301:

DM24302

pin 1	.....	pin 4
pin 2	.....	GND
GND	.....	pin 5

DM24301AC

- (f) Disconnect connector DM24004C from the left backup generator M24004.
- (g) Disconnect connector DM24301AB from the center power supply assembly (PSA), M24301.
- (h) Do this check of the wiring from the from the backup generator M24004 and the center power supply assembly (PSA), M24301:

DM24004C

pin 1	.....	pin 1
pin 2	.....	pin 2
pin 3	.....	pin 3

DM24301AB

- (i) Disconnect connector DM24004C from the right backup generator M24004.
- (j) Disconnect connector DM24301AE from the center power supply assembly (PSA), M24301.
- (k) Do this check of the wiring from the from the backup generator M24004 and the center power supply assembly (PSA), M24301:

DM24004C

pin 1	.....	pin 1
pin 2	.....	pin 2
pin 3	.....	pin 3

DM24301AE

- (l) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D31034 to the standby power management panel, P310.
 - 3) Re-connect connector DM24301AC to the center power supply assembly, M24301.
 - 4) Re-connect connector DM24302 to the center flight control battery M24302.
 - 5) Re-connect connector DM24004C to the backup generator M24004.
 - 6) Re-connect connector DM24301AB to the center power supply assembly (PSA), M24301.
 - 7) Re-connect connector DM24301AE to the center power supply assembly (PSA), M24301.

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- 8) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 9) If the MAT shows ACTIVE for the maintenance message, then continue.
- (m) Disconnect connector DM24301AC from the center power supply assembly.
- (n) Do check for the proper operation of C27674 PSA TRU-C position M15 and C24676 PSA BAT-PWR-C position M5 on the P310 Power Management panel.
- (o) If you find a problem with a circuit breaker, then do these steps:
 - 1) Replace the circuit breaker.
 - 2) Re-connect connector DM24301AC to the center power supply assembly, M24301.
- (2) Replace the center power supply assembly, M24301.

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,

Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

807. PSA Hot Battery Bus Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-50271, 24-50273.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring from the applicable power management panel (PMP) to the applicable power supply assembly (PSA):
 - (a) Disconnect the applicable connector from the power management panel.
 - (b) Disconnect the applicable connector from the power supply assembly.
 - (c) Do a wiring check between these pins of the connectors that follow WDM 24-35-11 for the Left PSA and WDM 24-35-31 for the Center PSA:

Table 204/24-35-00-993-810

LEFT PSA, M24101 IN THE E1-6 SHELF

LEFT PMP, P310
D11012
pin E

--

LEFT PSA
DM24101AC
pin 2

Table 205/24-35-00-993-811

CENTER PSA, M24301 IN THE E2-6 SHELF

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CENTER PMP, P310
D31034

CENTER PSA
DM24301AC

pin C

--

pin 2

- (d) For the left PSA, do a wiring check between pin 5 of connector DM24101AC and structure ground (WDM 24-35-11).
- (e) For the center PSA, do a wiring check between pin 5 of connector DM24301AC and structure ground (WDM 24-35-31).
- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the connector to the applicable power management panel.
 - 3) Re-connect the connector to the applicable power supply assembly.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable power supply assembly.

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,
Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

808. Power Supply Assembly Internal Fault - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-50221, 24-50222, 24-50223.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable power supply assembly (PSA).

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,

Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

MAINTENANCE MESSAGE	PSA	EQUIPMENT NUMBER
24-50221	LEFT	M24101
24-50222	RIGHT	M24201
24-50223	CENTER	M24301
24-50231	LEFT	M24101

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MAINTENANCE MESSAGE	PSA	EQUIPMENT NUMBER
24-50232	RIGHT	M24201
24-50233	CENTER	M24301

- (2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

809. PSA to ARINC 629 Bus Failure Problems - Fault Isolation

A. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

B. Fault Isolation Procedure

- (1) Replace the applicable power supply assembly (PSA).

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,

Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

PSA	EQUIPMENT NUMBER
LEFT	M24101
RIGHT	M24201
CENTER	M24301

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable ARINC 629 coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

PSA	COUPLER
LEFT	B24101
RIGHT	B24201
CENTER	B24301

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring from the applicable PSA to the coupler:
- (a) Disconnect the applicable connector from the PSA.

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- (b) Do a wiring check between these pins of the PSA connector and the coupler connector WDM 24-35-11 for the PSA-L, WDM 24-35-21 for the PSA-R, and WDM 24-35-31 for the PSA-C).

PSA-L, M24101, E1-6 SHELF		
ARINC 629 COUPLER, P112 PANEL B24101	COUPLER CONNECTOR	PSA CONNECTOR
	DB24101	DM24101AA
	pin 5	pin 1T
	pin 4	pin 1TR
	pin 2	pin 4T
	pin 1	pin 4TR

PSA-R, M24201, E5-1 SHELF		
ARINC 629 COUPLER, P212 PANEL B24201	COUPLER CONNECTOR	PSA CONNECTOR
	DB22101	DM24201AA
	pin 5	pin 1T
	pin 4	pin 1TR
	pin 2	pin 4T
	pin 1	pin 4TR

PSA-C, M24301, E2-6 SHELF		
ARINC 629 COUPLER, P312 PANEL B24301	COUPLER CONNECTOR	PSA CONNECTOR
	DB23101	DM24301AA
	pin 5	pin 1T
	pin 4	pin 1TR
	pin 2	pin 4T
	pin 1	pin 4TR

- (c) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect the coupler connector.
 - 3) Re-connect the PSA connector.
- (d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

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810. PSA-Battery Internal Failure - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-55001, 24-55002, 24-55003.

B. Initial Evaluation

- (1) Open and close these applicable circuit breakers:

- (a) For maintenance message 24-55001:

Open this circuit breaker:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	26	C24673	L PSA TRU PWR

- (b) For maintenance message 24-55002:

Open this circuit breaker:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	3	C24672	R PSA TRU PWR

- (c) For maintenance message 24-55003:

Open this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
M	15	C24674	C PSA TRU PWR

- (d) Look at the maintenance page and make sure the applicable voltage and current indication for the applicable PSA is blank.

- (e) For maintenance message 24-55001:

Close this circuit breaker:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	26	C24673	L PSA TRU PWR

- (f) For maintenance message 24-55002:

Close this circuit breaker:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	3	C24672	R PSA TRU PWR

- (g) For maintenance message 24-55003:

Close this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
M	15	C24674	C PSA TRU PWR

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- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.
- (3) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (4) If the MAT shows LATCHED for the maintenance message, then do these steps:

- (a) For maintenance message 24-55001:

Open this circuit breaker:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	26	C24673	L PSA TRU PWR

- (b) For maintenance message 24-55002:

Open this circuit breaker:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	3	C24672	R PSA TRU PWR

- (c) For maintenance message 24-55003:

Open this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
M	15	C24674	C PSA TRU PWR

- (d) Look at the maintenance page and make sure the applicable voltage and current indication for the applicable PSA is blank.

- (e) For maintenance message 24-55001:

Close this circuit breaker:

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	26	C24673	L PSA TRU PWR

- (f) For maintenance message 24-55002:

Close this circuit breaker:

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
P	3	C24672	R PSA TRU PWR

- (g) For maintenance message 24-55003:

Close this circuit breaker:

Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
M	15	C24674	C PSA TRU PWR

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- (h) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- (i) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable power supply assembly.

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,

Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

MESSAGE	PSA	EQUIPMENT
24-55001	Left	M24101
24-55002	Right	M24201
24-55003	Center	M24301

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable flight control direct current (FCDC) battery.

These are the tasks:

FCDC Batteries Removal, AMM TASK 24-35-02-000-801,

FCDC Batteries Installation, AMM TASK 24-35-02-400-801.

MESSAGE	FCDC	EQUIPMENT
24-55001	Left	M24102
24-55002	Right	M24202
24-55003	Center	M24302

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

811. PSA No Input From Primary Flight Computer - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-59107, 24-59209, 24-59308.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the applicable power supply assembly. To replace it,

These are the tasks:

Power Supply Assembly Removal, AMM TASK 24-35-01-000-801,

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Power Supply Assembly Installation, AMM TASK 24-35-01-400-801.

MESSAGE	PSA	EQUIPMENT
24-55001	left	M24101
24-55002	right	M24201
24-55003	center	M24301

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the applicable primary flight computer (PFC).

These are the tasks:

Primary Flight Computer (PFC) Removal, AMM TASK 27-02-01-000-801,

Primary Flight Computer (PFC) Installation, AMM TASK 27-02-01-400-802.

MESSAGE	PFC	EQUIPMENT
24-59107	left	M27106
24-59209	center	M27306
24-59308	right	M27206

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the applicable flight controls coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

MESSAGE	PANEL	EQUIPMENT
24-59107	P112	B24101
24-59209	P312	B24301
24-59308	P212	B24201

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the applicable flight controls coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

MESSAGE	PANEL	EQUIPMENT
24-59107	P112	B27011
24-59209	P312	B27073

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MESSAGE	PANEL	EQUIPMENT
24-59308	P212	B27042

- (5) Replace the applicable flight controls coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

MESSAGE	PANEL	EQUIPMENT
24-59107	P112	B27021
24-59209	P312	B27083
24-59308	P212	B27052

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (6) Replace the applicable flight controls coupler.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

MESSAGE	PANEL	EQUIPMENT
24-59107	P112	B27031
24-59209	P312	B27093
24-59308	P212	B27062

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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801. Primary External Power Contactor Coil Short Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22570, 24-22580.

B. Fault Isolation Procedure

- (1) Replace the primary external power contactor, K24022.

These are the tasks:

External Power Contactor Removal, AMM TASK 24-41-01-000-801,

External Power Contactor Installation, AMM TASK 24-41-01-400-801.

- (a) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
- 1) Make sure the AVAIL light in the switch comes on.
- (b) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
- 1) Make sure the ON light in the switch comes on.
- (2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (3) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do this check of the wiring:
- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
- (b) Remove the primary external power contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
- (c) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector DK24022 at the right power panel, P200 (WDM 24-41-11).

DM24002AA

pin J9 pin 1

pin K9 pin 2

DK24022

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 3) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- 4) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
- a) Make sure the AVAIL light in the switch comes on.
- 5) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
- a) Make sure the ON light in the switch comes on.
- 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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802. Primary External Power Source Overfrequency/Overvoltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22630, 24-22650.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the PRIMARY EXT PWR switch on the P5 panel to the AVAIL position.
 - 1) Make sure the the ON light in the switch goes off and the AVAIL light comes on.
 - (b) Push the PRIMARY EXT PWR switch on the P5 panel to the ON position.
 - 1) Make sure the AVAIL light in the switch goes off and the ON light comes on.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the primary external power source.
 - (a) Push the PRIMARY EXT PWR switch on the P5 panel to the AVAIL position.
 - 1) Make sure the the ON light in the switch goes off and the AVAIL light comes on.
 - (b) Push the PRIMARY EXT PWR switch on the P5 panel to the ON position.
 - 1) Make sure the AVAIL light in the switch goes off and the ON light comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the BPCU. To replace the BPCU,
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) Push the PRIMARY EXT PWR switch on the P5 panel to the AVAIL position.
 - 1) Make sure the the ON light in the switch goes off and the AVAIL light comes on.
 - (b) Push the PRIMARY EXT PWR switch on the P5 panel to the ON position.
 - 1) Make sure the AVAIL light in the switch goes off and the ON light comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

803. Primary External Power Source Low Frequency - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22720.

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B. Fault Isolation Procedure

- (1) Replace the primary external power source.
 - (a) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring.
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Disconnect connector D20020 from the right power panel, P200.
 - (c) Do a wiring check between these pins of connector D20020 at the right power panel, P200 and conector DM24002AB at the E1-1 shelf (WDM 24-41-11).

DM24002AB	D20020
pin 112	pin 22
pin 113	pin 21
pin 114	pin 20
pin 115	pin 19

- (3) If you find a problem with the wiring, then do these steps:
 - (a) Repair the wiring.
 - (b) Re-connect connector D20020 to the right power panel, P200.
 - (c) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - (d) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (e) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (g) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do this check of the wiring.
 - (a) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - (b) Do a wiring check between these pins of the primary external power receptacle DP30A and these terminal lugs at the right power panel, P200 (WDM 24-41-11).

DP30A	P200
pin A	L11
pin B	L12
pin C	L13
pin N	ground

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- (5) If you find a problem with the wiring, then do these steps:
 - (a) Repair the wiring.
 - (b) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - (c) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (d) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (6) Replace the bus power control unit (BPCU), M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

 - (a) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

804. Secondary External Power Source Overfrequency/Overvoltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22850, 24-22870.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the secondary external power source.
 - (a) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.

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- 1) Make sure the AVAIL light in the switch comes on.
- (b) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the BPCU. To replace the BPCU,
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

805. Secondary External Power Source Low Frequency - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22940.

B. Fault Isolation Procedure

- (1) Replace the secondary external power source.
 - (a) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring.
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Disconnect connector D30022 from the auxiliary power panel, P300.
 - (c) Do a wiring check between these pins of connector D30022 at the auxiliary power panel, P300 and conector DM24002AB at the E1-1 shelf (WDM 24-41-31).

DM24002AB	D30022
pin J10	pin 9
pin G10	pin 10
pin E10	pin 11
pin C10	pin 12

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- (3) If you find a problem with the wiring, then do these steps:
- (a) Repair the wiring.
 - (b) Re-connect connector D30022 to the auxiliary power panel, P300.
 - (c) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - (d) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (e) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (g) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do this check of the wiring.
- (a) Do this task: Remove Secondary External Power, AMM TASK 24-22-00-860-808.
 - (b) Do a wiring check between these pins of the secondary external power receptacle DP30B and these terminal lugs at the auxiliary power panel, P300 (WDM 24-41-31).

DP30B	P300
pin A	L11
pin B	L12
pin C	L13
pin N	ground

- (5) If you find a problem with the wiring, then do these steps:
- (a) Repair the wiring.
 - (b) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
 - (c) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (d) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (f) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (6) Replace the bus power control unit (BPCU), M24002.
- These are the tasks:
- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.

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- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

806. BPCU No Input Or Output On 629 System Bus-L - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-28840, 24-29400.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the bus power control unit (BPCU), M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,

BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the ARINC 629 coupler, B24106, in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the BPCU to the Systems 629 Bus-L.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring from the BPCU to the coupler:
- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
- (b) Disconnect connector DB24106 from the coupler, B24106.
- (c) Do a wiring check between these pins of connector DM24002AC at the E1-1 shelf and connector DB24106 at the P111 panel (WDM 24-28-41).

DM24002AC

pin 3T	.....	pin 2
pin 3TR	.....	pin 1
pin 6T	.....	pin 5
pin 6TR	.....	pin 4

DB24106

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).

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- 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 3) Re-connect connector DB24106 to the coupler, B24106.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

807. BPCU No Input From AGCU On System Arinc 629 Bus - Fault Isolation

A. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

B. Fault Isolation Procedure

- (1) Replace the bus power control unit (BPCU), M24002.
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the auxiliary generator control unit (AGCU), M24305.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler, B24106, in the P111 panel.
NOTE: This coupler connects the BPCU to the Systems 629 Bus-L.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler, B24105, in the P111 panel.
NOTE: This coupler connects the AGCU to the Systems 629 Bus-L.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the BPCU to the coupler:
 - (a) Disconnect connector DM24002AC from the BPCU.
 - (b) Disconnect connector DB24106 from the coupler, B24106.

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- (c) Do a wiring check between these pins of connector DM24002AC at the E1-1 shelf and connector DB24106 at the P111 panel (WDM 24-28-41).

DM24002AC	DB24106
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect connector DM24002AC to the BPCU.
 - 3) Re-connect connector DB24106 to the coupler, B24106.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring from the AGCU to the coupler:
- (a) Disconnect connector DM24305AC from the AGCU.
 - (b) Disconnect connector DB24105 from the coupler, B24105.
 - (c) Do a wiring check between these pins of connector DM24305AC at the E2-3 shelf and connector DB24105 at the P111 panel (WDM 24-28-31).

DM24305AC	DB24105
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect connector DM24305AC to the AGCU.
 - 3) Re-connect connector DB24105 to the coupler, B24105.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

808. BPCU 28 Volt Switch Power Wiring Short Problem - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22230.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

(1) Do this check of the wiring:

- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
- (b) Remove the ground service switch, S24001 from the attendant's switch panel, P87 at door 1L (SWPM 20-91-00).
- (c) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector D8700P at the attendant's switch panel, P87 at door 1L (WDM 24-22-41).

DM24002AA	D8700P
pin 119	pin 8
pin E6	pin 18

(d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 3) Re-install the ground service switch, S24001 to the attendant's switch panel, P87 (SWPM 20-91-00).
- 4) Push the PRIMARY EXT PWR switch to the off position.
 - a) Make sure the AVAIL light in the switch comes on.
- 5) Push the PRIMARY EXT PWR switch to the on position.
 - a) Make sure the ON light in the switch comes on.
- 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

(2) Do this check of the wiring:

- (a) Remove the primary external power switch, S7, from the electrical module assembly, M24023 at the overhead panel, P5 (SWPM 20-91-00).
- (b) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector DS7 at the electrical system control panel, P5 (WDM 24-41-11).

DM24002AA	DS7
pin 119	pin 9
pin 119	pin 18
pin 119	pin 13
pin G9	pin 8

(c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 3) Re-install the primary external power switch, S7, to the electrical module assembly, M24023 at the overhead panel, P5 (SWPM 20-91-00).
- 4) Push the PRIMARY EXT PWR switch to the on position.

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- a) Make sure the AVAIL light in the switch comes on.
- 5) Push the PRIMARY EXT PWR switch to the off position.
 - a) Make sure the ON light in the switch comes on.
- 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (3) Do this check of the wiring:
 - (a) Remove the secondary external power switch, S13, from the electrical module assembly, M24023 at the overhead panel, P5 (SWPM 20-91-00).
 - (b) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and the secondary external power switch, S13, at the electrical system control panel, P5 (WDM 24-41-31).

DM24002AA	S13
pin 119	pin 9
pin 119	pin 18
pin 119	pin 13
pin G11	pin 8
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-install the secondary external power switch, S13, to the electrical module assembly, M24023 at the overhead panel, P5 (SWPM 20-91-00).
 - 4) Push the PRIMARY EXT PWR switch to the on position.
 - a) Make sure the AVAIL light in the switch comes on.
 - 5) Push the PRIMARY EXT PWR switch to the off position.
 - a) Make sure the ON light in the switch comes on.
 - 6) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- (4) Do this check of the wiring:
 - (a) Do a wiring check between connector DM24002AA, pin E9 and the primary external power POWER NOT IN USE light, L24018, pin 1 at the external power panel, P30 (WDM 24-41-11).
 - (b) Do a wiring check between connector DM24002AA, pin E9 and the primary external power AC CONNECTED light, L24018, pin 1 at the external power panel, P30 (WDM 24-41-11).
 - (c) Do a wiring check between connector DM24002AA, pin E11 and the secondary external power POWER NOT IN USE light, L24020, pin 1 at the external power panel, P30 (WDM 24-41-31).
 - (d) Do a wiring check between connector DM24002AA, pin E11 and the secondary external power AC CONNECTED light, L24021, pin 1 at the external power panel, P30 (WDM 24-41-31).

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- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Push the PRIMARY EXT PWR switch to the on position.
 - a) Make sure the AVAIL light in the switch comes on.
 - 4) Push the PRIMARY EXT PWR switch to the off position.
 - a) Make sure the ON light in the switch comes on.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
- (5) Do these steps:
 - (a) Replace the primary external power switch, S7 (SWPM 20-91-00).
 - 1) Push the PRIMARY EXT PWR switch to the on position.
 - a) Make sure the AVAIL light in the switch comes on.
 - 2) Push the PRIMARY EXT PWR switch to the off position.
 - a) Make sure the ON light in the switch comes on.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE for the maintenance message, then continue.
- (6) Do these steps:
 - (a) Replace the secondary external power switch, S13 (SWPM 20-91-00).
 - 1) Push the PRIMARY EXT PWR switch to the on position.
 - a) Make sure the AVAIL light in the switch comes on.
 - 2) Push the PRIMARY EXT PWR switch to the off position.
 - a) Make sure the ON light in the switch comes on.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE for the maintenance message, then continue.
- (7) Do these steps:
 - (a) Replace the ground service switch, S24001 (SWPM 20-91-00).
 - 1) Push the PRIMARY EXT PWR switch to the on position.
 - a) Make sure the AVAIL light in the switch comes on.
 - 2) Push the PRIMARY EXT PWR switch to the off position.
 - a) Make sure the ON light in the switch comes on.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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810. PEP/SEP Source has High Current, 115 VAC Main Bus has Unbalanced Current, or No Power on Airplane Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22610, 24-22700, 24-22830, 24-22920.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- For maintenance messages 24-22610, 24-22700, and 24-22920, try to supply the airplane with primary external power.
 - For maintenance message 24-22830, try to supply the airplane with secondary external power.
 - If you cannot supply external power, do the Fault Isolation Procedure below.
 - If you can supply external power, and the maintenance message shows ACTIVE or LATCHED, then do the Fault Isolation Procedure below.
 - If you can supply external power, and the maintenance message shows NOT ACTIVE, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do these steps to identify a short to ground in the right main bus wiring.
- Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - Put the PRIMARY EXT PWR switch in the ON position. If the ON light does not come on, do this check of the wiring:
 - Remove the right bus tie breakers:
(WDM 24-22-21)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- Remove the right generator circuit breakers:
(WDM 24-22-21)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

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- 3) Do a wiring check between the receptacle for the right bus tie breaker, C24334 and the receptacle for the right generator circuit breaker, C24332 (WDM 24-22-21).

C24332	C24334
A2	A2
B2	B2
C2	C2

- 4) If you find a problem with the wiring, then do these steps:
- Repair the wiring.
 - Re-install the right bus tie breakers:
(WDM 24-22-21)

Right Power Panel, P200

Row	Col	Number	Name
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- Re-install the right generator circuit breakers:
(WDM 24-22-21)

Right Power Panel, P200

Row	Col	Number	Name
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - If the MAT shows NOT ACTIVE for the maintenance message, or does not show, then you corrected the fault.
- (c) If the ON light in the PRIMARY EXT PWR switch comes on, then continue.
- (2) Do these steps to identify a short to ground in the tie bus wiring.
- Set the L BUS TIE and R BUS TIE switches to the ISLN position.



WARNING

REMOVE THE ELECTRICAL POWER FROM THE EXTERNAL POWER CABLE BEFORE YOU DISCONNECT THE CABLE FROM THE AIRPLANE. INJURY TO PERSONS CAN BE CAUSED BY AN ELECTRICAL SHOCK.

- Remove the external power source connector from the primary external power receptacle.

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WARNING

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- (c) Connect the external power source to the secondary external power receptacle.
- (d) Energize the external power cable.
- (e) Set the SECONDARY EXT PWR switch to the ON position.
- (f) If the ON light for SECONDARY EXT PWR does not stay on for more than 2 minutes, then do this check of the tie bus wiring (SSM 24-21-32):
 - 1) Remove the auxiliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 2) Remove the secondary external power contactor, K24023. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
- 3) Remove the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 4) Remove the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 5) Do a wiring check between the receptacle for the left bus tie breaker, DC24333 and the receptacle for the auxiliary power breaker, DC24335.

DC24333		DC24335	
A1		A2	
B1		B2	
C1		C2	

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- 6) Do a wiring check between the receptacle for the left bus tie breaker, DC24333 and the receptacle for the right bus tie breaker, DC24334.

DC24333		DC24334	
A1	.....	A1	
B1	.....	B1	
C1	.....	C1	

- 7) Do a wiring check between the receptacle for the left bus tie breaker, DC24333 and the receptacle for the secondary external power contactor, DK24023.

DC24333		DK24023	
A1	.....	A2	
B1	.....	B2	
C1	.....	C2	

- 8) If you find a problem with the wiring, then do these steps:
- Repair the wiring.
 - Re-install the auxiliary power breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- Re-install the secondary external power contactor, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- Re-install the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- Re-install the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

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- g) If the MAT shows NOT ACTIVE for the maintenance message, or the message does not show, you corrected the fault.
 - g) If the ON light for SECONDARY EXT PWR stays on for more than 2 minutes, then continue.
- (3) Do these steps to identify a short to ground in the left main bus wiring.
 - (a) Set the L BUS TIE switch to the AUTO position.
 - (b) Make sure the R BUS TIE switch is in the ISLN position.



WARNING

REMOVE THE ELECTRICAL POWER FROM THE EXTERNAL POWER CABLE BEFORE YOU DISCONNECT THE CABLE FROM THE AIRPLANE. INJURY TO PERSONS CAN BE CAUSED BY AN ELECTRICAL SHOCK.

- (c) Remove the external power source connector from the primary external power receptacle.



WARNING

REMOVE THE ELECTRICAL POWER FROM THE EXTERNAL POWER CABLE BEFORE YOU CONNECT THE CABLE TO THE AIRPLANE. INJURY TO PERSONS CAN BE CAUSED BY AN ELECTRICAL SHOCK.

- (d) Connect the external power source to the secondary external power receptacle.
 - (e) Energize the external power cable.
 - (f) Set the SECONDARY EXT PWR switch to the ON position.
 - (g) If the ON light on the SECONDARY EXT PWR switch goes off, then do this check of the left main bus wiring (WDM 24-51-11):
 - 1) Remove the left generator control breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 2) Remove the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- 3) Do a wiring check between the receptacle for the left bus tie breaker, DC24333 and the receptacle for the left generator control breaker, DC24331.

DC24333

A2		A2
B2		B2
C2		C2

DC24331

A2
B2
C2

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- 4) If you find a problem with the wiring, then do these steps:
- Repair the wiring.
 - Re-install the left bus tie breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- Re-install the left generator control breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - If the MAT shows NOT ACTIVE for the maintenance message, or the message does not show, you corrected the fault.
- (h) If the ON light on the SECONDARY EXT PWR switch stays on, then continue:
- (4) Do these steps to identify a short to ground in the ground handling bus.
- Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - On the electrical systems maintenance page, make sure the ground handling bus is powered.
 - If the ground handling bus is not powered, do this check of the wiring (SSM 24-22-41):
 - Remove the ground handling relay, K24004. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - Remove the primary external power contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - Do a wiring check between the receptacle for the ground handling relay, DK24004 and the receptacle for the primary external power contactor, DK24022 (WDM 24-22-41).

DK24022	DK24004
A1	A3
B1	B3
C1	C3

- If you find a problem with the wiring, then do these steps:
- Repair the wiring.
- Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- Re-install the ground handling relay, K24004. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
- Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.

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- 9) If the MAT shows NOT ACTIVE for the maintenance message, or the message does not show, you corrected the fault.
- (d) If the ground handling bus is powered, then continue.
- (5) Push the ground service switch on the attendants panel.
 - (a) On the electrical systems maintenance page, make sure the ground service bus is powered.
 - (b) If the ground service bus is not powered, do this check of the wiring (SSM 24-22-41).
 - 1) Remove the primary external power contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - 2) Remove the ground service transfer relay, K24003. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - 3) Do a wiring check between the receptacle for the ground service transfer relay, DK24003 and the receptacle for the primary external power contactor, DK24022.

DK24022

A1	.....	A1
B1	.....	B1
C1	.....	C1

DK24003

- 4) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - c) Re-install the ground service transfer relay, K24003. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - d) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - e) If the MAT shows NOT ACTIVE for the maintenance message, or does not show, you corrected the fault.

- (c) If the ground service bus is powered, then continue.
- (6) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
- (b) If the MAT shows NOT ACTIVE for the maintenance message, or does not show, then you corrected the fault.

————— END OF TASK —————

811. Primary External Power Source Phase Sequence Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22670, 24-22680.

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B. Initial Evaluation

- (1) Power the airplane with secondary external power.

NOTE: Let the primary external power source stay connected to the airplane.

- (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the primary external power source.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring between the primary external power receptacle, DP30A and the right power panel, P200 (WDM 24-41-11):
 - (a) Do a wiring check between pin A of the primary external power receptacle and L11 on the right power panel, P200.
 - (b) Do a wiring check between pin B of the primary external power receptacle and L12 on the right power panel, P200.
 - (c) Do a wiring check between pin C of the primary external power receptacle and L13 on the right power panel, P200.
 - (d) Do a wiring check between pin N of the primary external power receptacle and airplane ground.
 - (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring between the right power panel, P200 and the BPCU, M24002 (WDM 24-41-11).
 - (a) Remove connector D20020P from the right power panel, P200.
 - (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (c) Do a wiring check between these pins of connector DM24002AB at the E1-1 shelf and connector DM20020P at the right power panel (P200) (WDM 24-41-11).

DM24002AB

pin 115	.....	pin 19
pin 114	.....	pin 20
pin 113	.....	pin 21
pin 112	.....	pin 22

DM20020P

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector DM20020P to the right power panel, P200.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do this check of the primary external power feeder wiring inside the right power panel, P200 (WDM 24-41-11):
- (a) Remove connector D20020P from the right power panel, P200.
 - (b) Do a wiring check between pin 19 of connector D20020P and L11 on the right power panel, P200.
 - (c) Do a wiring check between pin 20 of connector D20020P and L12 on the right power panel, P200.
 - (d) Do a wiring check between pin 21 of connector D20020P and L13 on the right power panel, P200.
 - (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM20020P to the right power panel, P200.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 4) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (5) Replace the BPCU, M24002.
- These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

812. Primary External Power Interlock Wiring Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22690.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the primary external power source.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

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- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Do a wiring check between these pins of connector DM24002AB at the E1-1 shelf and connector DP30A at the primary external power receptacle (WDM 24-41-11).

DM24002AB	DP30A
pin J4	pin E
pin G4	pin F

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
- (d) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- (e) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (f) If the MAT shows ACTIVE for the maintenance message then continue.
- (3) Replace the BPCU, M24002.

These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

813. Secondary External Power Source Phase Sequence Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22890, 24-22900.

B. Initial Evaluation

- (1) Power the airplane with primary external power.

NOTE: Let the secondary external power source stay connected to the airplane.

 - (a) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the secondary external power source.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the secondary external power feeder wiring between the secondary external power receptacle, DP30B and the auxiliary power panel, P300 (WDM 24-41-31):

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- (a) Do a wiring check between pin A of the secondary external power receptacle and L11 on the auxiliary power panel, P300.
 - (b) Do a wiring check between pin B of the secondary external power receptacle and L12 on the auxiliary power panel, P300.
 - (c) Do a wiring check between pin C of the secondary external power receptacle and L13 on the auxiliary power panel, P300.
 - (d) Do a wiring check between pin N of the secondary external power receptacle and airplane ground.
 - (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Do this check of the wiring between the auxiliary power panel, P300 and the BPCU, M24002 (WDM 24-41-31).
- (a) Remove connector D30022P from the auxiliary power panel, P300.
 - (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (c) Do a wiring check between these pins of connector DM24002AB at the E1-1 shelf and connector DM30022P at the auxiliary power panel (P300) (WDM 24-41-31).

DM24002AB	DM30022P
pin J10	pin 9
pin G10	pin 10
pin E10	pin 11
pin C10	pin 12

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector DM30022P to the auxiliary power panel, P300.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 5) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do this check of the secondary external power feeder wiring inside the auxiliary power panel, P300 (WDM 24-41-31):
- (a) Do this task: Remove Secondary External Power, AMM TASK 24-22-00-860-808.
 - (b) Remove connector D30022P from the auxiliary power panel, P300.
 - (c) Do a wiring check between pin 9 of connector D30022P and L11 on the auxiliary power panel, P300.
 - (d) Do a wiring check between pin 10 of connector D30022P and L12 on the auxiliary power panel, P300.

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- (e) Do a wiring check between pin 11 of connector D30022P and L13 on the auxiliary power panel, P300.
- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM30022P to the auxiliary power panel, P300.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 4) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (5) Replace the BPCU, M24002.
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.

———— END OF TASK ————

814. Secondary External Power Interlock Wiring Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22910.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the secondary external power source.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Remove secondary external power from the airplane. To remove it, do this task: Remove Secondary External Power, AMM TASK 24-22-00-860-808.
 - (c) Do a wiring check between these pins of connector DM24002AB at the E1-1 shelf and connector DP30B at the secondary external power receptacle (WDM 24-41-31).

DM24002AB

pin C4 pin E
pin E4 pin F

DP30B

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- (e) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - (f) Supply secondary external power to the airplane. To supply it, do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
 - (g) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (h) If the MAT shows ACTIVE for the maintenance message then continue.
- (3) Replace the BPCU, M24002.
- These are the tasks:
- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

815. BPCU No Output On Any Bus Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-28801.

B. Fault Isolation

- (1) Replace the bus power control unit (BPCU), M24002.
- These are the tasks:
- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) Push the PRIMARY EXT PWR switch on the P5 panel to the AVAIL position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the PRIMARY EXT PWR switch to the ON position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

816. BPCU No Input Or Output On 629 System Bus-R - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-28860, 24-29600.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the bus power control unit (BPCU), M24002.

These are the tasks:

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BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Replace the ARINC 629 coupler, B24206, in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the BPCU to the Systems 629 Bus-R.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring from the BPCU to the coupler:
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Disconnect connector DB24206 from the coupler, B24206.
 - (c) Do a wiring check between these pins of connector DM24002AC at the E1-1 shelf and connector DB24206 at the P211 panel (WDM 24-28-41).

DM24002AC	DB24206
pin 2T	pin 2
pin 2TR	pin 1
pin 5T	pin 5
pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector DB24206 to the coupler, B24206.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

821. **Bus Power Control Unit Internal Fault - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-22000, 24-22001, 24-22002.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) If the MAT shows LATCHED for the maintenance message 24-22000, then do these steps:

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- 1) Make sure the airplane is supplied with APU generator power. To supply it, do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - 2) Make sure both engines are stopped. To stop the engine, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 3) If primary external power is connected, then do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - 4) Do this task: Supply Primary External Power to the Ground Service Bus, AMM TASK 24-22-00-860-812.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.
 - 6) If the MAT shows ACTIVE or LATCHED for this maintenance message, then do the Fault Isolation Procedure below.
- (b) If the MAT shows LATCHED for the maintenance message 24-22001, then do these steps:
- 1) Make sure the airplane is supplied with APU generator power. To supply it, do this task: Supply APU Generator Power, AMM TASK 24-22-00-860-803.
 - 2) If secondary external power is connected, then do this task: Remove Secondary External Power, AMM TASK 24-22-00-860-808.
 - 3) If primary external power is connected, then do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - 4) Use a maintenance access terminal (MAT) to do the LRU replacement test of the BPCU. To operate the MAT, do this task: How to Operate the MAT in the Flight Compartment, AMM TASK 45-10-00-910-810.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.
 - 6) If the MAT shows ACTIVE or LATCHED for this maintenance message, then do the Fault Isolation Procedure below.
- (c) If the MAT shows LATCHED for the maintenance message 24-22001, then do these steps:
- 1) Make sure secondary external power is supplied to the airplane. To supply it, do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
 - 2) Make sure primary external power is supplied to the airplane. To supply it, do this task: Supply Primary External Power to the Main 115V AC Buses, AMM TASK 24-22-00-860-813.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.
 - 4) If the MAT shows ACTIVE or LATCHED for this maintenance message, then do the Fault Isolation Procedure below.

C. Fault Isolation Procedure

- (1) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,

BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) Push the PRIMARY EXT PWR switch to the off position.

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- 1) Make sure the AVAIL light in the switch comes on.
- (b) Push the PRIMARY EXT PWR switch to the on position.
 - 1) Make sure the ON light in the switch comes on.
- (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

END OF TASK

822. Primary External Power Source Open Phase - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22590.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the external power source.
 - (a) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the primary external power control contactor, K24022.

These are the tasks:

External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.

 - (a) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
- (3) Do this check for continuity from the BPCU, M24002 through phase A current sensing transformer, T24007 (WDM 24-41-11):

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- (a) Remove the bus power control unit (BPCU), M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Do a check for continuity between pin J6 and pin C6 of connector DM24002AB:
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - 3) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
 - a) Make sure the AVAIL light in the switch comes on.
 - 4) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
 - a) Make sure the ON light in the switch comes on.
 - 5) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - (d) If you do not find a problem with the wiring, then continue.
- (4) Replace the BPCU, M24002.
- These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) Push the PRIMARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the PRIMARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

823. BPCU No Input From LRU On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-29405, 24-29407, 24-29409, 24-29410, 24-29414, 24-29415, 24-29605, 24-29607, 24-29609, 24-29610, 24-29614, 24-29615.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) In the list below, find the source LRU and ARINC 629 couplers for the applicable maintenance message.

MAINT MESSAGE	SOURCE LRU	SYSTEMS 629 BUS	BPCU COUPLER	SOURCE LRU COUPLER
24-29405	IOM(M009) (AIMS-L)	Left	B24106 (P111)	B31112 (P111)
24-29407	GCU-L M24105	Left	B24106 (P111)	B24103 (P111)
24-29409	IOM(M009) (AIMS-R)	Left	B24106 (P111)	B31116 (P111)
24-29410	GCU-R M24205	Left	B24106 (P111)	B24104 (P111)
	AGCU			
24-29414	M24305	Left	B24106 (P111)	B24105 (P111)
24-29415	EDIU-L M73103	Left	B24106 (P111)	B73103 (P111)
24-29605	IOM(M004) (AIMS-L)	Right	B24206 (P211)	B31211 (P211)
24-29607	GCU-L M24105	Right	B24206 (P211)	B24203 (P211)
24-29609	IOM(M004) (AIMS-R)	Right	B24206 (P211)	B31214 (P211)
24-29610	GCU-R M24205	Right	B24206 (P211)	B24204 (P211)
	AGCU			
24-29614	M24305	Right	B24206 (P211)	B24205 (P211)
24-29615	EDIU-R M73203	Right	B24206 (P211)	B73201 (P211)

- (2) Replace the bus power control unit (BPCU), M24002.
- These are the tasks:
- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the applicable source LRU:
- (a) GCU-L, M24105 or GCU-R, M24205 or AGCU, M24305.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (b) IOM(009), or IOM(004).
- These are the tasks:
- Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801,
Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.
- (c) EDIU, M73103 or EDIU, M73203.
- These are the tasks:
- Engine Data Interface Unit (EDIU) Removal, AMM TASK 73-21-22-000-804-H00,
Engine Data Interface Unit (EDIU) Installation, AMM TASK 73-21-22-400-808-H00.

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- (d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the applicable ARINC 629 coupler for the BPCU.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Replace the applicable ARINC 629 coupler for the source LRU.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

824. Primary External Power Contactor Position Sense Problems - Fault Isolation

A. Fault Isolation Procedure

- (1) Replace the primary external power contactor, K24022. To replace it,
These are the tasks:
External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - (a) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Remove the primary external power contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (c) Do a wiring check between these pins of connector DM24002AA at the E1-1 shelf and connector DK24022 at the right power panel, P200 (WDM 24-41-11).

DM24002AA	DK24022
pin J9	pin 1
pin K9	pin 2
pin G1	pin 3

- (d) Do a wiring check between pin 4 of connector DK24022 at the right power panel, P200 and structure ground (WDM 24-41-11).

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- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 4) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (f) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- (3) Replace the BPCU, M24002. To replace the BPCU,
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) Push the PRIMARY EXT PWR switch on the P5 panel two times.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

825. Secondary External Power Contactor Position Sense Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22790.

B. Fault Isolation Procedure

- (1) Replace the secondary external power contactor, K24023.
These are the tasks:
External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - (a) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Remove the secondary external power contactor, K24023. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.

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- (c) Do a wiring check between the pins of the Bus Power Control Unit Connector, DM24002AA and the Secondary External Power Contactor, K24023 terminals (WDM 24-41-31).

DM24002AA	K24023
pin J11	pin 1
pin K11	pin 2
pin G4	pin 3

- (d) Do a wiring check between pin 4 of connector DK24023 at the auxiliary power panel, P300 and structure ground (WDM 24-41-31).
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-install the secondary external power contactor, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 4) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (f) If you do not find a problem with the wiring, then continue.
- 1) Re-install the secondary external power contactor, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- (3) Replace the BPCU, M24002. To replace the BPCU,
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
- (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

826. Secondary External Power Contactor Coil Short Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22800.

B. Fault Isolation Procedure

- (1) Replace the secondary external power contactor, K24023.
These are the tasks:
External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- (2) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
- (3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (4) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

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- (5) Do this check of the wiring:
- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Remove the secondary external power contactor, K24023. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (c) Do a wiring check between the pins of the Bus Power Control Unit Connector, DM24002AA and the Secondary External Power Contactor, K24023 terminals (WDM 24-41-31).

DM24002AA	K24023
pin J11	pin 1
pin K11	pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-install the secondary external power contactor, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 4) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

827. BPCU No Input From LRU On System Arinc 629 Bus - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-29408, 24-29411, 24-29608, 24-29611.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) In the list below, find the source LRU and ARINC 629 couplers for the applicable maintenance message.

MAINT MESSAGE	SOURCE LRU	SYSTEMS 629 BUS	BPCU COUPLER	SOURCE LRU COUPLER
24-29408	P85A12 (LSCF)	Left	B24106 (P111)	B31101 (P111)
24-29411	P84A12 (RSCF)	Left	B24106 (P111)	B31201 (P111)
24-29608	P85A15 (LSCF)	Right	B24206 (P211)	B31102 (P211)
24-29611	P84A15 (RSCF)	Right	B24206 (P211)	B31202 (P211)

- (2) Replace the bus power control unit (BPCU), M24002.

These are the tasks:

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BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the applicable source LRU:
 - (a) P85A12(LSCF), P84A12(RSCF), P85A15(LSCF), or P84A15(RSCF).

These are the tasks:
Card File Power Supply (CFPS) Removal, AMM TASK 31-09-01-000-801,
Card File Power Supply (CFPS) Installation, AMM TASK 31-09-01-400-801.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the applicable ARINC 629 coupler for the BPCU.

These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Replace the applicable ARINC 629 coupler for the source LRU.

These are the tasks:
ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

828. Primary External Power Undervoltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22740.

B. Initial Evaluation

- (1) Do these steps to cycle primary external power.

NOTE: To unlatch this fault, you must remove and then supply external power to the right main AC bus.

- (a) Put the PRIMARY EXT PWR switch in the AVAIL position.
- (b) Put the PRIMARY EXT PWR switch in the ON position.
- (c) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Replace the primary external power source.
 - (a) Do these steps to cycle primary external power.

NOTE: To unlatch this fault, you must remove and then supply external power to the right main AC bus.

 - 1) Put the PRIMARY EXT PWR switch in the AVAIL position.
 - 2) Put the PRIMARY EXT PWR switch in the ON position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Make sure that these circuit breakers are closed:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	6	C24305	BPCU-AC
ARO 001-010			
E	7	C24305	BPCU-AC

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- (a) If the circuit breaker is open, close it and do these steps:
 - 1) Do these steps to cycle primary external power.

NOTE: To unlatch this fault, you must remove and then supply external power to the right main AC bus.

 - a) Put the PRIMARY EXT PWR switch in the AVAIL position.
 - b) Put the PRIMARY EXT PWR switch in the ON position.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (b) If the circuit breaker is not open, then continue.
- (3) Do this check of the wiring between the right power panel, P200 and the BPCU, M24002 (WDM 24-41-11).
 - (a) Remove connector D20020P from the right power panel, P200.
 - (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (c) Do a wiring check between these pins of connector DM24002AB at the E1-1 shelf and connector DM20020P at the right power panel (P200) (WDM 24-41-11).

DM24002AB	DM20020P
pin 115	pin 19
pin 114	pin 20
pin 113	pin 21
pin 112	pin 22

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- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector DM20020P to the right power panel, P200.
 - 4) Do these steps to cycle primary external power.
NOTE: To unlatch this fault, you must remove and then supply external power to the right main AC bus.
 - a) Put the PRIMARY EXT PWR switch in the AVAIL position.
 - b) Put the PRIMARY EXT PWR switch in the ON position.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (e) If you do not find a problem with the wiring, then do these steps:
- 1) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 2) Re-connect connector DM20020P to the right power panel, P200.
- (4) Do this check of the primary external power feeder wires from the primary external power receptacle to the primary external power contactor (WDM 24-41-11):
- (a) Do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - (b) Remove the primary external power contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (c) Do a wiring check between pin A of the primary external power receptacle, DP30A and pin A1 of the receptacle for the primary external power contactor, K24022.
 - (d) Do a wiring check between pin B of the primary external power receptacle, DP30A and pin B1 of the receptacle for the primary external power contactor, K24022.
 - (e) Do a wiring check between pin C of the primary external power receptacle, DP30A and pin C1 of the receptacle for the primary external power contactor, K24022.
 - (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 3) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
 - 4) Do these steps to cycle primary external power.
NOTE: To unlatch this fault, you must remove and then supply external power to the right main AC bus.
 - a) Put the PRIMARY EXT PWR switch in the AVAIL position.
 - b) Put the PRIMARY EXT PWR switch in the ON position.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

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- (g) If you do not find a problem with the wiring, then do these steps:
 - 1) Re-install the primary external power contactor, K24022. To install it, do this task:
External Power Contactor Installation, AMM TASK 24-41-01-400-801
 - 2) Do this task: Supply Primary External Power, AMM TASK 24-22-00-860-801.
- (5) Replace the BPCU, M24002.
These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.

————— END OF TASK —————

830. Secondary External Power Source Open Phase - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22810.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the secondary external power source.
 - (a) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Replace the secondary external power control contactor, K24023.
These are the tasks:
External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - (a) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.

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- 1) Make sure the AVAIL light in the switch comes on.
- (b) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
- (3) Do this check for continuity from the BPCU, M24002 through phase A current sensing transformer, T24010 (WDM 24-41-31):
 - (a) Remove the bus power control unit (BPCU), M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Do a check for continuity between pin J8 and pin C8 of connector DM24002AB:
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - 3) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - a) Make sure the AVAIL light in the switch comes on.
 - 4) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - a) Make sure the ON light in the switch comes on.
 - 5) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - (d) If you do not find a problem with the wiring, then continue.
- (4) Replace the BPCU, M24002.

These are the tasks:
BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

 - (a) Push the SECONDARY EXT PWR switch on the P5 panel to the off position.
 - 1) Make sure the AVAIL light in the switch comes on.
 - (b) Push the SECONDARY EXT PWR switch on the P5 panel to the on position.
 - 1) Make sure the ON light in the switch comes on.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

831. Secondary External Power Undervoltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-22960.

B. Initial Evaluation

- (1) Do these steps to cycle secondary external power.

NOTE: To unlatch this fault, you must remove and then supply secondary external power.

- (a) Put the SECONDARY EXT PWR switch in the AVAIL position.
- (b) Put the SECONDARY EXT PWR switch in the ON position.

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- (c) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (d) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the secondary external power source.
 - (a) Do these steps to cycle secondary external power.

NOTE: To unlatch this fault, you must remove and then supply secondary external power.

 - 1) Put the SECONDARY EXT PWR switch in the AVAIL position.
 - 2) Put the SECONDARY EXT PWR switch in the ON position.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Make sure that these circuit breakers are closed:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	6	C24305	BPCU-AC
ARO 001-010			
E	7	C24305	BPCU-AC

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- (a) If the circuit breaker is open, close it and do these steps:
 - 1) Do these steps to cycle secondary external power.

NOTE: To unlatch this fault, you must remove and then supply secondary external power.

 - a) Put the SECONDARY EXT PWR switch in the AVAIL position.
 - b) Put the SECONDARY EXT PWR switch in the ON position.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (b) If the circuit breaker is not open, then continue.
- (3) Do this check of the wiring between the auxiliary power panel, P300 and the BPCU, M24002 (WDM 24-41-31).
 - (a) Remove connector D30022P from the auxiliary power panel, P300.
 - (b) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (c) Do a wiring check between these pins of connector DM24002AB at the E1-1 shelf and connector DM30022P at the auxiliary power panel (P300) (WDM 24-41-31).

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DM24002AB

pin J10		pin 9
pin G10		pin 10
pin E10		pin 11
pin C10		pin 12

DM30022P

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 3) Re-connect connector DM30022P to the auxiliary power panel, P300.
- 4) Do these steps to cycle secondary external power.

NOTE: To unlatch this fault, you must remove and then supply secondary external power.

- a) Put the SECONDARY EXT PWR switch in the AVAIL position.
 - b) Put the SECONDARY EXT PWR switch in the ON position.
- 5) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

- (e) If you do not find a problem with the wiring, then do these steps:

- 1) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
- 2) Re-connect connector DM30022P to the auxiliary power panel, P300.

- (4) Do this check of the secondary external power feeder wires from the secondary external power receptacle to the secondary external power contactor (WDM 24-41-31):

- (a) Do this task: Remove Secondary External Power, AMM TASK 24-22-00-860-808.
- (b) Remove the secondary external power contactor, K24023. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
- (c) Do a wiring check between pin A of the secondary external power receptacle, DP30B and pin A1 of the receptacle for the secondary external power contactor, K24023.
- (d) Do a wiring check between pin B of the secondary external power receptacle, DP30B and pin B1 of the receptacle for the secondary external power contactor, K24023.
- (e) Do a wiring check between pin C of the secondary external power receptacle, DP30B and pin C1 of the receptacle for the secondary external power contactor, K24023.
- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the secondary external power contactor, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 3) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
 - 4) Do these steps to cycle secondary external power.

NOTE: To unlatch this fault, you must remove and then supply secondary external power.

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- a) Put the SECONDARY EXT PWR switch in the AVAIL position.
- b) Put the SECONDARY EXT PWR switch in the ON position.
- 5) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.
- 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (g) If you do not find a problem with the wiring, then do these steps:
 - 1) Re-install the secondary external power contactor, K24023. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801
 - 2) Do this task: Supply Secondary External Power, AMM TASK 24-22-00-860-802.
- (5) Replace the BPCU, M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault.

————— END OF TASK —————

832. BPCU No Input From ELMS P210 EU On System Arinc 629 Bus-R - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-29616.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the bus power control unit (BPCU), M24002.

These are the tasks:

BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do a check of the Computing and Communications Unit (CCU), M24506, in the P210 panel.

This is the task:

Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler, B24206, in the P211 panel.

These are the tasks:

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ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the BPCU to the Systems 629 Bus-R.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler, B24208, in the P211 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the ELMS P210 EU to the Systems 629 Bus-R.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the BPCU to the coupler:
- (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Disconnect connector DB24206 from the coupler, B24206.
 - (c) Do a wiring check between these pins of connector DM24002AC at the E1-1 shelf and connector DB24206 at the P211 panel (WDM 24-28-41).

DM24002AC	DB24206
pin 2T	pin 2
pin 2TR	pin 1
pin 5T	pin 5
pin 5TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector DB24206 to the coupler, B24206.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 2) Re-connect connector DB24206 to the coupler, B24206.
- (6) Do this check of the wiring from the Power Management Panel (PMP), P210, to the coupler:
- (a) Disconnect connector D21009 from the PMP, P210.
 - (b) Disconnect connector DB24208 from the coupler, B24208.
 - (c) Do a wiring check between these pins of connector D21009 at the PMP P210 and connector DB24208 at the P211 panel (WDM 24-09-25).

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D21009	DB24208
pin 1	pin 1
pin 2	pin 2
pin 4	pin 4
pin 5	pin 5

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect connector D21009 to the PMP, P210.
 - 3) Re-connect connector DB24208 to the coupler, B24208.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

833. BPCU No Input From ELMS P210 EU On System Arinc 629 Bus-L - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-29401.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the bus power control unit (BPCU), M24002.
- These are the tasks:
- BPCU Removal, AMM TASK 24-41-05-000-801,
BPCU Installation, AMM TASK 24-41-05-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (2) Do a check of the Computing and Communications Unit (CCU), M24506, in the P210 panel.
- This is the task:
- Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Replace the ARINC 629 coupler, B24106, in the P111 panel.
- These are the tasks:
- ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,
ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.
- NOTE: This coupler connects the BPCU to the Systems 629 Bus-R.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Replace the ARINC 629 coupler, B24108, in the P111 panel.

These are the tasks:

ARINC 629 Current-Mode Coupler Removal, AMM TASK 23-91-01-000-801,

ARINC 629 Current-Mode Coupler Installation, AMM TASK 23-91-01-400-801.

NOTE: This coupler connects the ELMS P210 EU to the Systems 629 Bus-R.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (5) Do this check of the wiring from the BPCU to the coupler:
 - (a) Remove the BPCU, M24002. To remove it, do this task: BPCU Removal, AMM TASK 24-41-05-000-801.
 - (b) Disconnect connector DB24106 from the coupler, B24106.
 - (c) Do a wiring check between these pins of connector DM24002AC at the E1-1 shelf and connector DB24106 at the P111 panel (WDM 24-28-41).

DM24002AC	DB24206
pin 3T	pin 2
pin 3TR	pin 1
pin 6T	pin 5
pin 6TR	pin 4

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 3) Re-connect connector DB24106 to the coupler, B24106.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the BPCU, M24002. To install it, do this task: BPCU Installation, AMM TASK 24-41-05-400-801.
 - 2) Re-connect connector DB24106 to the coupler, B24106.
- (6) Do this check of the wiring from the Power Management Panel (PMP), P210, to the coupler:
 - (a) Disconnect connector D21008 from the PMP, P210.
 - (b) Disconnect connector DB24108 from the coupler, B24108.
 - (c) Do a wiring check between these pins of connector D21008 at the PMP P210 and connector DB24108 at the P111 panel (WDM 24-09-25).

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D21008

pin 1
pin 2
pin 4
pin 5

DB24108

pin 1
pin 2
pin 4
pin 5

- (d) If you find a problem with the wiring, then do these steps:
- 1) Replace the ARINC 629 wiring (SWPM 20-11-11).
 - 2) Re-connect connector D21008 to the PMP, P210.
 - 3) Re-connect connector DB24108 to the coupler, B24108.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

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813. Left 115 VAC Main Bus Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31711.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps.
 - (a) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
Do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault. Stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

C. Fault Isolation Procedure

- (1) Replace the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) Push the L GEN CTRL switch two times.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault. Stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
then continue.
- (2) Do this check of the wiring (SSM 24-51-11):
 - (a) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

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- (b) Remove the first ELCU in the list below.
- (c) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle, and pins A1, B1 and C1 of the ELCU receptacle at the left power panel, P100 (SSM 24-51-11).
- (d) If you find a problem with the wiring, repair the wiring, and do the steps that follow the list.
- (e) If you do not find a problem with the wiring, replace the ELCU and do a wiring check of the next ELCU in the list.
 - 1) Right Electrical Hydraulic Pump ELCU, M29203
 - 2) Center Electrical Hydraulic Pump ELCU, M29303
 - 3) Door 2 Galley Power ELCU, M25044
 - 4) Door 4L Galley Power ELCU, M25135
 - 5) Equipment Cooling Vent Fan ELCU, M21101
 - 6) Equipment Cooling Supply Fan 1 ELCU, M21102
 - 7) Left Lavatory/Galley Fan ELCU, M21265
 - 8) Left Utility Bus ELCU, M24111
 - 9) Left Fuel Jettison Pump ELCU, M28108
 - 10) Center Left Override Fuel Pump ELCU, M28109
- (f) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (g) Re-install the ELCU that was removed.
 - (h) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (i) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault. Stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
then continue.
- (3) Do this check of the wiring (SSM 24-51-11):
- (a) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

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- (b) Remove each of the circuit breakers in the list below. To remove it, do this task: Circuit Breaker - Removal, AMM TASK 24-09-00-000-818-002.

NOTE: Remove and do a check of the wiring for the circuit breakers one at a time.

- (c) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle and pins A1, B1 and C1 of each of the circuit breakers:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C24319	L XFR BUS
D	2	C27301	FLAPS ELEC MOT PWR
D	3	C24309	L MAIN AC SECT 2 BUS DISTR P110

(SSM 24-51-11)

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install each of the circuit breakers that was removed. To install it, do this task: Circuit Breaker - Installation, AMM TASK 24-09-00-400-814-002.
- 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 5) Push the L GEN CTRL switch two times.
- 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

————— **END OF TASK** —————

814. 115 VAC Main Bus Voltage Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31713.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
 - (2) If the MAT shows LATCHED for the maintenance message, then do these steps.
 - (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - (b) Make sure the APU GEN switch is in the ON position.
 - (c) Push the APU GEN switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805
- Do the Fault Isolation Procedure below.

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- 2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.

C. Fault Isolation Procedure

- (1) Replace the auxiliary power breaker (APB):

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (b) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE For the maintenance message, (or if the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
- (2) Replace the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (b) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE For the maintenance message, (or if the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
- (3) Replace the right bus tie breaker (R BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

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These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- (b) Push the APU GEN switch two times.
 - 1) If the MAT shows NOT ACTIVE For the maintenance message, (or if the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 2) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
- (4) Do this check of the tie bus wiring between the left power panel and the right power panel (SSM 24-21-32):
 - (a) Do a wiring check between terminals L7, L8 and L9 of the left power panel P100 and terminals L27, L28, and L29 of the right power panel (P200).
 - (b) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - (c) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 1) Push the APU GEN switch two times.
 - 2) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
 - (d) If you do not find a problem with the wiring, then continue.
- (5) Do this check of the wiring between the left BTB and the left power panel receptacle (SSM 24-21-32):
 - (a) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between pins A1, B1 and C1 of the left BTB receptacle and terminals L7, L8 and L9 of the left power panel (P100).
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- 2) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (d) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- 1) Push the APU GEN switch two times.
 - 2) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
- (e) If you do not find a problem with the wiring, then continue.
- (6) Do this check of the wiring between the right BTB and the right power panel receptacle (SSM 24-21-32):
- (a) Remove the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between pins A1, B1 and C1 of the right BTB receptacle and terminals L27, L28 and L29 of the right power panel (P200).
- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

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- (d) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 1) Push the APU GEN switch two times.
 - 2) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
- (e) If you do not find a problem with the wiring, then continue.
- (7) Do this check of the wiring between the primary external power contactor and the ground service transfer relay (GSTR) (SSM 24-22-41):
 - (a) Remove the GSTR, K24003. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - (b) Remove the primary external power contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (c) Do a wiring check between pins A2, B2 and C2 of the primary external power contactor receptacle, and pins A3, B3 and C3 of the GSTR receptacle.
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the GSTR, M24003. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - (e) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 1) Push the APU GEN switch two times.
 - 2) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
 - (f) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the GSTR, M24003. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
- (8) Do this check of the wiring between the right GCB and the right BTB (SSM 24-51-21):

- (a) Remove the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

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- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle, and pins A2, B2 and C2 of the right BTB receptacle.
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the right bus tie breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (d) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 1) Push the APU GEN switch two times.
 - 2) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 3) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (9) Do this check of the wiring between the right GCB and the ELCUs inside the P200 panel (SSM 24-51-21):

- (a) Remove the ELCU in the list below. To remove it, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.

NOTE: Remove and do a check of the wiring for the ELCU one at a time.

- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle and pins A1, B1 and C1 of the ELCU power contactor receptacle that follows:

- 1) Door 1 Galley Power ELCU, M25043
- 2) Door 4R Galley Power ELCU, M25235
- 3) Left Hydraulic Electrical Pump ELCU, M29103
- 4) Equipment Cooling Supply ELCU, M21202
- 5) Right Lavatory/Galley Fan ELCU, M21266
- 6) Center Hydraulic Electrical Pump ELCU, M29308.
- 7) Right Utility Bus ELCU, M24211.
- 8) Right Fuel Jettison Pump ELCU, M28212
- 9) Center Right Override Fuel Pump ELCU, M28213

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
 - 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 5) Push the APU GEN switch two times.
 - 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 7) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
- (d) If you do not find a problem with the wiring, then continue.

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- 1) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
- (10) Do this check of the wiring between the right GCB and the circuit breakers inside the P200 panel (WDM 24-51-21):
 - (a) Remove the circuit breaker in the list below.

NOTE: Remove and do a check of the wiring for the circuit breaker one at a time.
 - (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle and pins A1, B1 and C1 of the circuit breakers in the list that follows:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 005-999			
A	4	C30300	WDO HTR 1R
ARO 001-004			
B	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
ARO 011-999			
B	1	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	2	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
B	3	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	4	C30300	WDO HTR 1R
ARO 011-999			
B	6	C24318	R XFR BUS
ARO 006-999			
C	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
C	6	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
C	6	C24318	R XFR BUS

ARO ALL

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the circuit breaker that was removed.

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- 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 5) Push the APU GEN switch two times.
 - 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 7) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 2) Re-install the circuit breaker that was removed.
- (11) Do this check of the wiring between the left GCB and the left BTB (WDM 24-51-11):
- (a) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle and pins A2, B2 and C2 of the left BTB receptacle.
- (d) If you find a problem with the wiring, repair the wiring, then do these steps.
 - 1) Repair the wiring.

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- 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- 5) Push the APU GEN switch two times.
- 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
- 7) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.

- (e) If you do not find a problem with the wiring, then continue.

- 1) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (12) Do this check of the wiring between the left GCB and the ELCUs inside the P100 panel (WDM 24-51-11):

- (a) Remove the ELCU in the list below. To remove it, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.

NOTE: Remove and do a check of the wiring for the ELCU one at a time.

- (b) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle, and pins A1, B1 and C1 of the ELCU that follows:
- 1) Right Electrical Hydraulic Pump ELCU, M29203
 - 2) Center Electrical Hydraulic Pump ELCU, M29303
 - 3) Door 4L Galley Power ELCU, M25135
 - 4) Equipment Cooling Vent Fan ELCU, M21101
 - 5) Equipment Cooling Supply Fan 1 ELCU, M21102
 - 6) Left Lavatory/Galley Fan ELCU, M21265
 - 7) Left Brake Cooling Fans ELCU, M32126

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- 8) Left Utility Bus ELCU, M24111
- 9) Left Fuel Jettison Pump ELCU, M28108
- 10) Center Left Override Fuel Pump ELCU, M28109
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
 - 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
 - 5) Push the APU GEN switch two times.
 - 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.
 - 7) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805 and continue.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
- (13) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle at the left power panel, P100 and pins A1, B1 and C1 of the first circuit breaker that follows:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C24319	L XFR BUS
D	1	C24307	L MAIN AC SECT 1 BUS DISTR P110
D	2	C27301	FLAPS ELEC MOT PWR
D	3	C24309	L MAIN AC SECT 2 BUS DISTR P110

- (a) If you find a problem with the wiring, repair the wiring, and do the steps that follow the list.
- (b) If you do not find a problem with the wiring, do a wiring check of the next circuit breaker in the list.
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the circuit breaker that was removed.
- 4) Do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.
- 5) Push the APU GEN switch two times.
- 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the APU. To stop it, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-805.

END OF TASK

815. Left 115 VAC Main Bus Phase Balance Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31721.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps.
 - (a) Start the left engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) Make sure the L GEN CTRL switch is in the ON position.
 - (c) Push the L GEN CTRL switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
Do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault. Stop the left engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

C. Fault Isolation Procedure

- (1) Do this check of the wiring between the left GCB and the left BTB (WDM 24-51-11):
 - (a) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

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- (c) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle and pins A2, B2 and C2 of the left BTB receptacle.
- (d) If you find a problem with the wiring, then do these steps.

- 1) Repair the wiring.
- 2) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) Push the L GEN CTRL switch two times.
 - 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 7) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00 and continue.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (2) Do this check of the wiring between the left GCB and the ELCUs inside the P100 panel (SSM 24-51-11):
 - (a) Remove the ELCU in the list below. To remove it, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.
NOTE: Remove and do a check of the wiring for the ELCUs one at a time.
 - (b) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle, and pins A1, B1 and C1 of the ELCU that follows:
 - 1) Right Electrical Hydraulic Pump ELCU, M29203
 - 2) Center Electrical Hydraulic Pump ELCU, M29303

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- 3) Door 4L Galley Power ELCU, M25135
 - 4) Equipment Cooling Vent Fan ELCU, M21101
 - 5) Equipment Cooling Supply Fan 1 ELCU, M21102
 - 6) Left Lavatory/Galley Fan ELCU, M21265
 - 7) Left Brake Cooling Fans ELCU, M32126
 - 8) Left Utility Bus ELCU, M24111
 - 9) Left Fuel Jettison Pump ELCU, M28108
 - 10) Center Left Override Fuel Pump ELCU, M28109
- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (d) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (e) Re-install the ELCU that was removed.
- 1) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 2) Push the L GEN CTRL switch two times.
 - 3) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 4) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00 and continue.
- (f) If you do not find a problem with the wiring, then continue.
- 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (g) If you do not find a problem with the wiring, then continue.
- 1) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
- (3) Do this check of the wiring between the left GCB and the circuit breakers inside the P100 panel (SSM 24-51-11):
- (a) Remove the circuit breaker in the list below.
- NOTE: Remove and do a check of the wiring for the circuit breakers one at a time.

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- (b) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle and pins A1, B1 and C1 of the circuit breakers in the list that follows:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C24319	L XFR BUS
D	1	C24307	L MAIN AC SECT 1 BUS DISTR P110
D	2	C27301	FLAPS ELEC MOT PWR
D	3	C24309	L MAIN AC SECT 2 BUS DISTR P110

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the circuit breaker that was removed.
- 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 5) Push the L GEN CTRL switch two times.
- 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

————— END OF TASK —————

816. Right 115 VAC Main Bus Unbalance Phase Currents - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31841.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Use only primary external power to supply electrical power to the airplane (AMM TASK 24-22-00-860-801).
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring between the primary external power contactor and the ground service transfer relay (GSTR) (SSM 24-22-41):
 - (a) Remove the GSTR, K24003. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.

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- (b) Remove the primary external power contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (c) Do a wiring check between pins A2, B2 and C2 of the primary external power contactor receptacle, and pins A3, B3 and C3 of the GSTR receptacle.
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the GSTR, K24003. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
 - 3) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 4) Make sure that you only use primary external power to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the GSTR, K24003. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
- (2) Do this check of the wiring between the right GCB and the primary external power contactor (SSM 24-51-21):
- (a) Remove the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle, and pins A2, B2 and C2 of the primary external power contactor receptacle.
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 4) Make sure that you only use primary external power to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the primary external power contactor. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- (3) Do this check of the wiring between the right GCB and the right BTB (SSM 24-51-21):
- (a) Remove the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle, and pins A2, B2 and C2 of the right BTB receptacle.
- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB

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Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) Make sure that you only use primary external power to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (4) Do this check of the wiring between the right GCB and the ELCUs inside the P200 panel (SSM 24-51-21):
- (a) Remove the ELCU in the list below. To remove it, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.
- NOTE:** Remove and do a check of the wiring for the ELCU one at a time.
- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle, and pins A1, B1 and C1 of the ELCU that follows:
- 1) Door 1 Galley Power ELCU, M25043
 - 2) Door 4R Galley Power ELCU, M25235
 - 3) Left Hydraulic Electrical Pump ELCU, M29103
 - 4) Equipment Cooling Supply ELCU, M21202
 - 5) Right Lavatory/Galley Fan ELCU, M21266
 - 6) Center Hydraulic Electrical Pump ELCU, M29308
 - 7) Right Utility Bus ELCU, M24211
 - 8) Right Fuel Jettison Pump ELCU, M28212
 - 9) Center Right Override Fuel Pump ELCU, M28213
- (c) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
 - 4) Make sure that you only use primary external power to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
- (5) Do this check of the wiring between the right GCB and the circuit breakers inside the P200 panel (SSM 24-51-21):
- (a) Remove the circuit breaker in the list below.
NOTE: Remove and do a check of the wiring for the circuit breaker one at a time.
 - (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle and pins A1, B1 and C1 of the circuit breakers in the list that follows:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 005-999			
A	4	C30300	WDO HTR 1R
ARO 001-004			
B	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
ARO 011-999			
B	1	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	2	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
B	3	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	4	C30300	WDO HTR 1R
ARO 011-999			
B	6	C24318	R XFR BUS

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Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 006-999			
C	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
C	6	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
C	6	C24318	R XFR BUS

ARO ALL

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the circuit breaker that was removed.
- 4) Make sure that you only use primary external power to supply electrical power to the airplane.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

817. Left 115 VAC Main Bus Unbalance Phase Currents - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31842.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Use only primary external power to supply electrical power to the airplane (AMM TASK 24-22-00-860-801).
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do this check of the wiring between the left GCB and the left BTB (SSM 24-51-11):

- (a) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle, and pins A2, B2 and C2 of the left BTB receptacle.

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) Make sure that you only use primary external power source to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- 1) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (2) Do this check of the wiring between the left GCB and the ELCUs inside the P100 panel (SSM 24-51-11):

- (a) Remove the ELCU in the list below. To remove it, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.

NOTE: Remove and do a check of the wiring for the ELCU one at a time.

- (b) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle, and pins A1, B1 and C1 of the ELCU that follows:

- 1) Right Electrical Hydraulic Pump ELCU, M29203
- 2) Center Electrical Hydraulic Pump ELCU, M29303
- 3) Door 2 Galley Power ELCU, M25044
- 4) Door 4L Galley Power ELCU, M25135
- 5) Equipment Cooling Vent Fan ELCU, M21101
- 6) Equipment Cooling Supply Fan 1 ELCU, M21102
- 7) Left Lavatory/Galley Fan ELCU, M21265
- 8) Left Utility Bus ELCU, M24111
- 9) Left Fuel Jettison Pump ELCU, M28108
- 10) Center Left Override Fuel Pump ELCU, M28109

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
 - 4) Make sure that you only use primary external power to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
- (3) Do this check of the wiring between the left GCB and the circuit breakers inside the P100 panel (SSM 24-51-11):
- (a) Remove the circuit breaker in the list below.

NOTE: Remove and do a check of the wiring for the circuit breaker one at a time.

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- (b) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle and pins A1, B1 and C1 of the circuit breaker in the list that follows:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C24319	L XFR BUS
D	1	C24307	L MAIN AC SECT 1 BUS DISTR P110
D	2	C27301	FLAPS ELEC MOT PWR
D	3	C24309	L MAIN AC SECT 2 BUS DISTR P110

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the circuit breaker that was removed.
- 4) Make sure that you only use primary external power to supply electrical power to the airplane.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

818. Main AC Bus Unbalance Current Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-32063.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Use only primary external power to supply electrical power to the airplane (AMM TASK 24-22-00-860-805).
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring between the left GCB and the left BTB (SSM 24-51-11):

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- (a) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle and pins A2, B2 and C2 of the left BTB receptacle.

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) Make sure that you only use primary external power source to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.

- 1) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

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- (2) Do this check of the wiring between the left GCB and the ELCUs inside the P100 panel (SSM 24-51-11):

- (a) Remove the ELCU in the list below. To remove it, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.

NOTE: Remove and do a check of the wiring for the ELCU one at a time.

- (b) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle, and pins A1, B1 and C1 of the ELCU that follows:

- 1) Right Electrical Hydraulic Pump ELCU, M29203
- 2) Center Electrical Hydraulic Pump ELCU, M29303
- 3) Door 2 Galley Power ELCU, M25044
- 4) Door 4L Galley Power ELCU, M25135
- 5) Equipment Cooling Vent Fan ELCU, M21101
- 6) Equipment Cooling Supply Fan 1 ELCU, M21102
- 7) Left Lavatory/Galley Fan ELCU, M21265
- 8) Left Utility Bus ELCU, M24111
- 9) Left Fuel Jettison Pump ELCU, M28108
- 10) Center Left Override Fuel Pump ELCU, M28109

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
- 4) Make sure that you only use primary external power source to supply electrical power to the airplane.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (d) If you do not find a problem with the wiring, then continue.

- 1) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.

- (3) Do this check of the wiring between the left GCB and the circuit breakers inside the P100 panel (SSM 24-51-11):

- (a) Remove each circuit breaker in the list below.

NOTE: Remove and do a check of the wiring for each circuit breaker one at a time.

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- (b) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle and pins A1, B1 and C1 of the circuit breakers in the list that follows:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C24319	L XFR BUS
D	1	C24307	L MAIN AC SECT 1 BUS DISTR P110
D	2	C27301	FLAPS ELEC MOT PWR
D	3	C24309	L MAIN AC SECT 2 BUS DISTR P110

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the circuit breaker that was removed.
 - 4) Make sure that you only use primary external power source to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 2) Re-install the circuit breaker that was removed.
- (4) Do this check of the wiring between the primary external power contactor and the ground service transfer relay (GSTR) (SSM 24-22-41):
- (a) Remove the GSTR, K24003. To remove it, do this task: Ground Handling and Ground Service Relay Removal, AMM TASK 24-22-05-000-801.
 - (b) Remove the primary external power contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (c) Do a wiring check between pins A2, B2 and C2 of the primary external power contactor receptacle, and pins A3, B3 and C3 of the GSTR receptacle.
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the GSTR, K24003. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.

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- 3) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 4) Make sure that you only use primary external power to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
- 1) Re-install the GSTR, K24003. To install it, do this task: Ground Handling and Ground Service Relay Installation, AMM TASK 24-22-05-400-801.
- (5) Do this check of the wiring between the right GCB and the primary external power contactor (SSM 24-51-21):
- (a) Remove the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle, and pins A2, B2 and C2 of the primary external power contactor receptacle.
- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 4) Make sure that you only use primary external power to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.

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- 1) Re-install the primary external power contactor. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- (6) Do this check of the wiring between the right GCB and the right BTB (SSM 24-51-21):
 - (a) Remove the right BTB, C24334.
To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.
 - (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle, and pins A2, B2 and C2 of the right BTB receptacle.
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) Make sure that you only use primary external power source to supply electrical power to the airplane.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (7) Do this check of the wiring between the right GCB and the ELCUs inside the P200 panel (SSM 24-51-21):

- (a) Remove the ELCU in the list below. To remove it, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.

NOTE: Remove and do a check of the wiring for the ELCU one at a time.

- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle, and pins A1, B1 and C1 of the ELCU that follows:

- 1) Door 1 Galley Power ELCU, M25043
- 2) Door 4R Galley Power ELCU, M25235
- 3) Left Hydraulic Electrical Pump ELCU, M29103
- 4) Equipment Cooling Supply ELCU, M21202
- 5) Right Lavatory/Galley Fan ELCU, M21266
- 6) Center Hydraulic Electrical Pump ELCU, M29308
- 7) Right Utility Bus ELCU, M24211
- 8) Right Fuel Jettison Pump ELCU, M28212
- 9) Center Right Override Fuel Pump ELCU, M28213

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the right generator control breaker (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
 - 4) Make sure that you only use primary external power source to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.

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- (8) Do this check of the wiring between the right GCB and the circuit breakers inside the P200 panel (SSM 24-51-21):
- (a) Remove each circuit breaker in the list below.
NOTE: Remove and do a check of the wiring for each circuit breaker one at a time.
- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle and pins A1, B1 and C1 of the circuit breakers in the list that follows:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 005-999			
A	4	C30300	WDO HTR 1R
ARO 001-004			
B	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
ARO 011-999			
B	1	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	2	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
B	3	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	4	C30300	WDO HTR 1R
ARO 011-999			
B	6	C24318	R XFR BUS
ARO 006-999			
C	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
C	6	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
C	6	C24318	R XFR BUS

ARO ALL

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the circuit breaker that was removed.
- 4) Make sure that you only use primary external power source to supply electrical power to the airplane.

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- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 2) Re-install the circuit breaker that was removed.
- (9) Do this check of the tie bus wiring between the left power panel and the right power panel (SSM 24-21-32):
- (a) Do a wiring check between terminals L7, L8 and L9 of the left power panel P100 and terminals L27, L28 and L29 of the right power panel (P200).
 - (b) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Make sure that you only use primary external power source to supply electrical power to the airplane.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If you do not find a problem with the wiring, then continue.
- (10) Do this check of the wiring between the left BTB and the left power panel receptacle (SSM 24-21-32):
- (a) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between pins A1, B1 and C1 of the left BTB receptacle and terminals L7, L8 and L9 of the left power panel (P100).
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Make sure that you only use primary external power source to supply electrical power to the airplane.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (11) Do this check of the wiring between the right BTB and the right power panel receptacle (SSM 24-21-32):
 - (a) Remove the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between pins A1, B1 and C1 of the right BTB receptacle and terminals L27, L28 and L29 of the right power panel (P200).
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Make sure that you only use primary external power source to supply electrical power to the airplane.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

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819. Left 115 VAC Main Bus Unbalance Current - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-32083.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Use only primary or secondary external power to supply electrical power to the airplane (AMM TASK 24-22-00-860-805).
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring between the left GCB and the left BTB (SSM 24-51-11):
- (a) Remove the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (c) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle and pins A2, B2 and C2 of the left BTB receptacle.
- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

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- 3) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 4) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (2) Do this check of the wiring between the left GCB and the ELCUs inside the P100 panel (SSM 24-51-11):
 - (a) Remove the ELCU in the list below. To remove it, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.

NOTE: Remove and do a check of the wiring for the ELCU one at a time.
 - (b) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle, and pins A1, B1 and C1 of the ELCU that follows:
 - 1) Right Electrical Hydraulic Pump ELCU, M29203
 - 2) Center Electrical Hydraulic Pump ELCU, M29303
 - 3) Door 2 Galley Power ELCU, M25044
 - 4) Door 4L Galley Power ELCU, M25135
 - 5) Equipment Cooling Vent Fan ELCU, M21101
 - 6) Equipment Cooling Supply Fan 1 ELCU, M21102
 - 7) Left Lavatory/Galley Fan ELCU, M21265
 - 8) Left Utility Bus ELCU, M24111
 - 9) Left Fuel Jettison Pump ELCU, M28108
 - 10) Center Left Override Fuel Pump ELCU, M28109
 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
 - 4) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
- (3) Do this check of the wiring between the left GCB and the circuit breakers inside the P100 panel (SSM 24-51-11):
- (a) Remove each circuit breaker in the list below.
NOTE: Remove and do a check of the wiring for each circuit breaker one at a time.
 - (b) Do a wiring check between pins A2, B2 and C2 of the left GCB receptacle and pins A1, B1 and C1 of the circuit breakers in the list that follows:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C24319	L XFR BUS
D	1	C24307	L MAIN AC SECT 1 BUS DISTR P110
D	2	C27301	FLAPS ELEC MOT PWR
D	3	C24309	L MAIN AC SECT 2 BUS DISTR P110

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Re-install the circuit breaker that was removed.
 - 4) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the left generator control breaker (GCB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 2) Re-install the circuit breaker that was removed.
- (4) Do this check of the tie bus wiring between the left power panel and the right power panel (SSM 24-21-32):
 - (a) Do a wiring check between terminals L7, L8 and L9 of the left power panel P100 and terminals L27, L28 and L29 of the right power panel (P200).
 - (b) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If you do not find a problem with the wiring, then continue.
- (5) Do this check of the wiring between the left BTB and the left power panel receptacle (SSM 24-21-32):
 - (a) Remove the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between pins A1, B1 and C1 of the left BTB receptacle and terminals L7, L8 and L9 of the left power panel (P100).
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the left bus tie breaker (BTB):

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

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To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (6) Do this check of the wiring between the right BTB and the right power panel receptacle (SSM 24-21-32):
- (a) Remove the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To remove it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801.

- (b) Do a wiring check between pins A1, B1 and C1 of the right BTB receptacle and terminals L27, L28 and L29 of the right power panel (P200).
- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the right bus tie breakers (BTB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- 3) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

820. Right 115 VAC Main Bus Phase C Voltage Sense Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31962, 24-31972.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
- (a) Use primary external power to supply the right main AC bus.

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- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
- (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring (WDM 24-28-21).
 - (a) Remove the right GCU, M24205. To remove the GCU, do this task: Generator Control Unit Removal, AMM TASK 24-22-02-000-801.
 - (b) Use primary external power to supply the right main AC bus.
 - (c) Check for 115 volts AC at pin A9 of connector DM24205AA at the E2-2 rack.
 - (d) If you find 115 volts AC at pin A9, then do these steps:
 - 1) Replace the right GCU, M24205.
These are the tasks:
Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 2) Use primary external power to supply the right main AC bus.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message, then you corrected the fault.
 - 4) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - (e) If you do not find 115 volts AC at pin A9, then continue.
- (2) Do this check of the wiring (SSM 24-28-21).
 - (a) Remove primary external power. To remove it, do this task: Remove Primary External Power, AMM TASK 24-22-00-860-807.
 - (b) Remove the primary external power contactor, K24022. To remove it, do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801.
 - (c) Check the wiring between pin A9 on connector DM24205AA at the E2-2 rack and pin 16 of the primary external power contactor connector, DK24022 at the right power panel, P200.
 - (d) If you find a problem with the wiring, do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
 - 3) Re-install the primary external power contactor, K24022. To install it, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - 4) Use primary external power to supply the right main AC bus.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message, then you corrected the fault.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
 - (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the right GCU, M24205. To install it, do this task: Generator Control Unit Installation, AMM TASK 24-22-02-400-801.

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- (3) Replace the primary external power contactor, K24022.
These are the tasks:
External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - (a) Use primary external power to supply the right main AC bus.
 - (b) If the MAT shows NOT ACTIVE for the maintenance message, then you corrected the fault.
 - (c) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.

————— END OF TASK —————

821. Right 115 VAC Main Bus Unbalance Current - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-32093.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Use only primary or secondary external power to supply electrical power to the airplane (AMM TASK 24-22-00-860-805).
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation Procedure below.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do this check of the wiring between the right GCB and the right BTB (SSM 24-51-21):
 - (a) Remove the right generator control breakers (GCB):

(Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- (b) Remove the right bus tie breakers (BTB):
(Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801)

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Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- (c) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle and pins A2, B2 and C2 of the right BTB receptacle.
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):
(Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- 3) Re-install the right bus tie breakers (BTB):
(Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- 4) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the right bus tie breakers (BTB):
(Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801)

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Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- (2) Do this check of the wiring between the right GCB and the ELCUs inside the P200 panel (SSM 24-51-21):

- (a) Remove the ELCU in the list below. To remove it, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.

NOTE: Remove and do a check of the wiring for the ELCU one at a time.

- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle, and pins A1, B1 and C1 of the ELCU in the list that follows:

- 1) Door 1 Galley Power ELCU, M25043
- 2) Door 4 Galley Power ELCU, M25235
- 3) Left Hydraulic Electrical Pump ELCU, M29103
- 4) Equipment Cooling Supply Fan 2 ELCU, M21202
- 5) Center Hydraulic Electrical Pump ELCU, M29038
- 6) Right Brake Cooling Fan, M32226
- 7) Center Right Override Fuel Pump ELCU, M28213
- 8) Right Lavatory/Galley Fan ELCU, M21266

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the right generator control breakers (GCB):
(Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- 3) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
 - 4) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
 - 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.

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- 1) Re-install the ELCU that was removed. To install it, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
- (3) Do this check of the wiring between the right GCB and the circuit breakers inside the P200 panel (SSM 24-51-11):
 - (a) Remove each circuit breaker in the list below.

NOTE: Remove and do a check of the wiring for each circuit breaker one at a time.
 - (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle and pins A1, B1 and C1 of the circuit breakers in the list that follows:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 005-999			
A	4	C30300	WDO HTR 1R
ARO 001-004			
B	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
ARO 011-999			
B	1	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	2	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
B	3	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	4	C30300	WDO HTR 1R
ARO 011-999			
B	6	C24318	R XFR BUS
ARO 006-999			
C	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
C	6	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
C	6	C24318	R XFR BUS

ARO ALL

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

(Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- 3) Re-install the circuit breaker that was removed.

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- 4) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the right generator control breakers (GCB):
(Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- 2) Re-install the circuit breaker that was removed.
- (4) Do this check of the tie bus wiring between the left power panel and the right power panel (SSM 24-21-32):
 - (a) Do a wiring check between terminals L7, L8 and L9 of the left power panel, P100 and terminals L27, L28 and L29 of the right power panel, P200.
 - (b) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If you do not find a problem with the wiring, then continue.
- (5) Do this check of the wiring between the right BTB and the right power panel receptacle (SSM 24-21-32):
 - (a) Remove the right bus tie breakers (BTB):
(Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- (b) Do a wiring check between pins A1, B1 and C1 of the right BTB receptacle and terminals L7, L8 and L9 of the right power panel, P200.
- (c) If you find a problem with the wiring, then do these steps:

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- 1) Repair the wiring.
- 2) Re-install the right bus tie breakers (BTB):
(Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- 3) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the right bus tie breakers (BTB):
(Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- (6) Do this check of the wiring between the left BTB and the right power panel receptacle (SSM 24-21-32):
- (a) Remove the left bus tie breaker (BTB):
(Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801)

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

- (b) Do a wiring check between pins A1, B1 and C1 of the left BTB receptacle and terminals L27, L28 and L29 of the right power panel (P200).
- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the left bus tie breaker (BTB):
(Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
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Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

- 3) Make sure that you only use either primary or secondary external power source to supply electrical power to the airplane.
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

825. Right 115 VAC Main Bus Single Phase Circuit Open or High Resistance Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31712.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps.
 - (a) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) Push the R GEN CTRL switch two times.
 - 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
Do the Fault Isolation Procedure below.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault. Stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

C. Fault Isolation Procedure

- (1) Replace the right GCB, M24332.

Replace the right generator control breakers (GCB):

(Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801 and Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- (a) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Push the R GEN CTRL switch two times.

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- (c) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault. Stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00 then continue.
- (2) Replace the right GCU, M24205.
- These are the tasks:
- Generator Control Unit Removal, AMM TASK 24-22-02-000-801,
Generator Control Unit Installation, AMM TASK 24-22-02-400-801.
- (a) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - (b) Push the R GEN CTRL switch two times.
 - (c) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault. Stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - (d) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00 then continue.
- (3) Do this check of the wiring:
- (a) Remove the right generator control breakers (GCB):
Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- (b) Use the table below and measure the resistance between the pins at the GCB receptacle and at the P200 panel terminals. Make sure the resistance is not more than 0.10 milliohms (SSM 24-21-21).

GCB Receptacle	P200 Panel
A1	L1
A1	L4
B1	L2
B1	L5
C1	L3
C1	L6

- (c) If you find the resistance is more than 0.10 milliohms, then do these steps:
 - 1) Replace the P200 panel.

These are the tasks:

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Power Panel Removal, AMM TASK 24-09-01-000-801,
Power Panel Installation, AMM TASK 24-09-01-400-801.

- 2) Re-install the right generator control breakers (GCB):
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

- 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
4) Push the R GEN CTRL switch two times.
5) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
6) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00 and continue.
(d) If you find the resistance is 0.10 milliohms or less, install the right GCB, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801 and continue.
(e) Remove the right bus tie breakers (BTB):
Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	3	C24334	R BTB

ARO 001-010

E	3	C24334	R BTB

ARO ALL

- (f) Use the table below and measure the resistance between the pins at the BTB receptacle and at the P200 panel terminals. Make sure the resistance is not more than 0.10 milliohms (SSM 24-21-32).

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BTB Receptacle	P200 Panel
A1	L7
A1	L27
B1	L8
B1	L28
C1	L9
C1	L29

(g) If you find the resistance is more than 0.10 milliohms, then do these steps:

- 1) Replace the P200 panel.

These are the tasks:

Power Panel Removal, AMM TASK 24-09-01-000-801,

Power Panel Installation, AMM TASK 24-09-01-400-801.

- 2) Re-install the right bus tie breakers (BTB):

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801

Right Power Panel, P200

Row	Col	Number	Name
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) Push the R GEN CTRL switch two times.
 - 5) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
and continue.
- (h) If you find the resistance is 0.10 milliohms or less, install the right BTB, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801
and continue.
- (i) Remove the Primary External Power (PEP) Contactor, K24022. do this task: External Power Contactor Removal, AMM TASK 24-41-01-000-801
 - (j) Use the table below and measure the resistance between the pins at the PEP contactor receptacle and at the P200 panel terminals. Make sure the resistance is not more than 0.10 milliohms (SSM 24-41-11).

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PEP Receptacle	P200 Panel
A1	L11
B1	L12
C1	L13

- (k) If you find the resistance is more than 0.10 milliohms, then do these steps:
- 1) Replace the P200 panel.
These are the tasks:
Power Panel Removal, AMM TASK 24-09-01-000-801,
Power Panel Installation, AMM TASK 24-09-01-400-801.
 - 2) Install the PEP contactor, K24022. do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) Push the R GEN CTRL switch two times.
 - 5) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
and continue.
- (l) If you find the resistance is 0.10 milliohms or less, install the PEP contactor, do this task: External Power Contactor Installation, AMM TASK 24-41-01-400-801
and continue.
- (m) Remove the ground handling three phase circuit breaker module:
Circuit Breaker - Removal, AMM TASK 24-09-00-000-818-002

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	7	C24401	GND HDLG BUS PH B
D	7	C24402	GND HDLG BUS PH C
ARO ALL			
E	6	C24400	GND HDLG BUS PH A
ARO 001-010			
E	6	C24401	GND HDLG BUS PH B
E	6	C24402	GND HDLG BUS PH C

ARO ALL

- (n) Use the table below and measure the resistance between the pins at the C24400 circuit breaker receptacle and at the P200 panel terminals. Make sure the resistance is not more than 1.50 milliohms (SSM 24-22-41).

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C24400

Receptacle

A2		L17
B2		L18
C2		L19

P200 Panel

- (o) If you find the resistance is more than 1.50 milliohms, then do these steps:

- 1) Replace the P200 panel.

These are the tasks:

Power Panel Removal, AMM TASK 24-09-01-000-801,

Power Panel Installation, AMM TASK 24-09-01-400-801.

- 2) Install the ground handling three phase circuit breaker module:

Circuit Breaker - Installation, AMM TASK 24-09-00-400-814-002

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	7	C24401	GND HDLG BUS PH B
D	7	C24402	GND HDLG BUS PH C
ARO ALL			
E	6	C24400	GND HDLG BUS PH A
ARO 001-010			
E	6	C24401	GND HDLG BUS PH B
E	6	C24402	GND HDLG BUS PH C

ARO ALL

- 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) Push the R GEN CTRL switch two times.
 - 5) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
and continue.
- (p) If you find the resistance is 1.50 milliohms or less, install the Ground Handling three phase circuit breaker module (C24400, C24401 and C24402), do this task: Circuit Breaker - Installation, AMM TASK 24-09-00-400-814-002
and continue.
- (q) Remove the Door 1 Galley Power ELCU, M25043. do this task: ELCU Removal, AMM TASK 24-51-05-000-801
- (r) Use the table below and measure the resistance between the pins at the ELCU receptacle and at the P200 panel terminals. Make sure the resistance is not more than 0.25 milliohms (SSM 25-31-11).

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ELCU

Receptacle

A2		L20
B2		L21
C2		L22

P200 Panel

- (s) If you find the resistance is more than 0.25 milliohms, then do these steps:
- 1) Replace the P200 panel.
These are the tasks:
Power Panel Removal, AMM TASK 24-09-01-000-801,
Power Panel Installation, AMM TASK 24-09-01-400-801.
 - 2) Install the Door 1 Galley Power ELCU, M25043, do this task: ELCU Installation, AMM TASK 24-51-05-400-801
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) Push the R GEN CTRL switch two times.
 - 5) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 6) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
and continue.
- (t) If you find the resistance is 0.25 milliohms or less, install the Door 1 Galley Power ELCU, M25043, do this task: ELCU Installation, AMM TASK 24-51-05-400-801
and continue.
- (u) Remove the Door 4R Galley Power ELCU, M25235. do this task: ELCU Removal, AMM TASK 24-51-05-000-801
- (v) Use the table below and measure the resistance between the pins at the ELCU receptacle and at the P200 panel terminals. Make sure the resistance is not more than 0.25 milliohms (SSM 25-31-14).

ELCU

Receptacle

A2		L23

P200 Panel

- (w) If you find the resistance is more than 0.25 milliohms, then do these steps:
- 1) Replace the P200 panel.
These are the tasks:
Power Panel Removal, AMM TASK 24-09-01-000-801,
Power Panel Installation, AMM TASK 24-09-01-400-801.
 - 2) Install the Door 4R Galley Power ELCU, M25235, do this task: ELCU Installation, AMM TASK 24-51-05-400-801
 - 3) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 4) Push the R GEN CTRL switch two times.

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- 5) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

END OF TASK

826. Right 115 VAC Main Bus Phase Balance Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-31722.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows LATCHED for the maintenance message, then do these steps.
- (a) Start the right engine. To start it, do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- (b) Make sure the R GEN CTRL switch is in the ON position.
- (c) Push the R GEN CTRL switch two times.
- 1) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00
- Do the Fault Isolation Procedure below.
- 2) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault. Stop the right engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

C. Fault Isolation Procedure

- (1) Do this check of the wiring between the right GCB and the right BTB (WDM 24-51-21):
- (a) Remove the right generator control breakers (GCB):
- Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- (b) Remove the right bus tie breakers (BTB):
- Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

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- (c) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle and pins A2, B2 and C2 of the right BTB receptacle.
- (d) If you find a problem with the wiring, then do these steps.
 - 1) Repair the wiring.
 - 2) Re-install the right generator control breakers (GCB):

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- 3) To install it, do this task: Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
 - 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 5) Push the R GEN CTRL switch two times.
 - 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 7) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00 and continue.
- (e) If you do not find a problem with the wiring, then continue.
- 1) Re-install the right bus tie breakers (BTB):

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

- (2) Do this check of the wiring between the right GCB and the ELCUs inside the P200 panel (SSM 24-51-21):
 - (a) Remove the ELCU in the list below.

NOTE: Remove and do a check of the wiring for the ELCUs one at a time.
 - (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle, and pins A1, B1 and C1 of the ELCU that follows:
 - 1) Left Electrical Hydraulic Pump ELCU, M29103

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- 2) Center Electrical Hydraulic Pump 2 ELCU, M29308
 - 3) Door 1 Galley Power ELCU, M25043
 - 4) Door 4R Galley Power ELCU, M25235
 - 5) Equipment Cooling Supply Fan 2 ELCU, M21202
 - 6) Right Utility Bus ELCU, M24211
 - 7) Right Jettison Pump ELCU, M28212
 - 8) Center Right Override Fuel Pump ELCU, M28213
- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
- (d) Re-install the right generator control breakers (GCB):
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- (e) Re-install the ELCU that was removed.
- 1) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
 - 2) Push the R GEN CTRL switch two times.
 - 3) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
 - 4) If the MAT shows ACTIVE or LATCHED for the maintenance message, stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00 and continue.
- (f) If you do not find a problem with the wiring, then continue.
- 1) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.
- (g) If you do not find a problem with the wiring, then continue.
- 1) Re-install the ELCU that was removed.
- (3) Do this check of the wiring between the right GCB and the circuit breakers inside the P200 panel (SSM 24-51-21):
- (a) Remove the circuit breaker in the list below. To remove it, do this task: Circuit Breaker - Removal, AMM TASK 24-09-00-000-818-002.

NOTE: Remove and do a check of the wiring for the circuit breakers one at a time.

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- (b) Do a wiring check between pins A2, B2 and C2 of the right GCB receptacle and pins A1, B1 and C1 of the circuit breakers in the list that follows:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 005-999			
A	4	C30300	WDO HTR 1R
ARO 001-004			
B	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
ARO 011-999			
B	1	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	2	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
B	3	C27300	SLATS ELEC MOT PWR
ARO 001-004			
B	4	C30300	WDO HTR 1R
ARO 011-999			
B	6	C24318	R XFR BUS
ARO 006-999			
C	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
C	6	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 001-010			
C	6	C24318	R XFR BUS

ARO ALL

- (c) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Re-install the right generator control breakers (GCB):

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- 3) Re-install the circuit breaker that was removed.
- 4) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.
- 5) Push the R GEN CTRL switch two times.
- 6) If the MAT shows NOT ACTIVE For the maintenance message, (or the message does not show), you corrected the fault. Stop the engine. To stop it, do this task: Usual Engine Stop, AMM TASK 71-00-00-800-837-H00.

————— END OF TASK —————

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827. EICAS Message ELEC STANDBY BUS - Fault Isolation

A. Initial Evaluation

NOTE: This message shows when there is no electrical power on the 115 VAC standby bus.

- (1) To supply electrical power to the airplane, do this task: Supply Electrical Power, AMM TASK 24-22-00-860-805.

————— **END OF TASK** —————

829. EICAS Message ELEC STANDBY BUS - Fault Isolation

A. Initial Evaluation

NOTE: This message shows when there is no electrical power on the 115 VAC standby bus.

- (1) To supply electrical power to the airplane, do this task: Supply Electrical Power, AMM TASK 24-22-00-860-805.

————— **END OF TASK** —————

831. EICAS Message ELEC CABIN/UTIL OFF - Fault Isolation

A. Initial Evaluation

NOTE: This message shows when the CABIN/UTIL switch is set to the OFF position by the flight crew.

- (1) To put the airplane to the normal configuration, put the CABIN/UTIL switch to the ON position.

————— **END OF TASK** —————

832. EICAS Message ELEC IFE/SEATS OFF - Fault Isolation

A. Initial Evaluation

NOTE: This message shows when the IFE/PASS SEATS switch is set to the OFF position by the flight crew.

- (1) To put the airplane to the normal configuration, put the IFE/PASS SEATS switch to the ON position.

————— **END OF TASK** —————

833. Left Main AC Bus Not Powered Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11786.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

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- (2) These are the tasks:
Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a check of the Signal Interface Unit 2, M24505 in P110.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring (WDM 24-09-31):
- (a) Remove this circuit breaker:
Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

- (b) Disconnect connector DM24505C from the SIU 2, M24505.
- (c) Do a wiring check between these pins of connector D24331 in the P100 and connector DM24505C in the P110, (WDM 24-09-31).

DM24505C	D24331
pin 66	pin 23

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24505C to SIU 2, M24505
 - 3) Re-install this circuit breaker:
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

834. ELCU (UTIL BUS L) Contactor Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11779, 24-11900.

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B. Initial Evaluation

- (1) If maintenance messages 25-31005 and 25-31006 are both ACTIVE also, then do this task:
P110 Configuration Loadshed - Fault Isolation, 24-51 TASK 851.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the ON light of the PRIMARY EXT PWR switch on the P5 panel is on.
 - (b) Make sure the ON light of the SECONDARY EXT PWR switch is off and the AVAIL light of the SECONDARY EXT PWR switch is on.
 - (c) Do this special function on the MAT: 24 ELMS Power Management Panel, P110 Initiated EU Self Test.
 - (d) Push the SECONDARY EXT PWR switch.
 - 1) Make sure the ON light comes on.
 - (e) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation procedure below.

NOTE: Stop for 2 minutes before you read the status of the maintenance message from the MAT.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 28 VDC from pin 2 of circuit breaker C24651 to ground (WDM 24-51-13).
 - (a) If there is not 28 VDC at pin 2 of circuit breaker C24651, then do these steps:
 - 1) Replace this circuit breaker:
(WDM 24-51-13)

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	22	C24651	L UTIL AC BUS CTRL

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 2 of circuit breaker C24651, then continue.
- (2) Replace the left ELCU, M24111.

These are the tasks:
ELCU Removal, AMM TASK 24-51-05-000-801,
ELCU Installation, AMM TASK 24-51-05-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Replace the Power Panel Controller (PPC), M24500.

These are the tasks:
Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002,
Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do this check of the wiring (WDM 24-51-13):
 - (a) Remove L Utility Bus ELCU, M24111, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.
 - (b) Remove PPC, M24500, do this task: Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002.
 - (c) Do a wiring check between these pins of connector DM24111 at the left ELCU and connector DM24500 at the PPC (WDM 24-51-13).

DM24500	DM24111
pin B36	pin 13
pin B38	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install L Utility Bus ELCU, M24111, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
 - 3) Re-install PPC, M24500, do this task: Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

835. Power Bus L AC UTIL BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11783.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for maintenance messages 24-11779 or 24-11900, then do the fault isolation procedure for these messages first.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the left ELCU, M24111.

These are the tasks:

ELCU Removal, AMM TASK 24-51-05-000-801,
ELCU Installation, AMM TASK 24-51-05-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do a check of the Signal Interface Unit 1, M24504 in P110.

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This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-51-13):
 - (a) Disconnect connector D11002 from the left Power Management Panel (PMP), P110.
 - (b) Disconnect connector DM24504C from the SIU 1, M24504.
 - (c) Do a resistance check for 18K ohms between these pins of connector D11002 at the left PMP, P110 and connector DM24504C at the SIU 1 (WDM 24-51-13).

DM24504C	D11002
pin 65	pin D

- (d) If you do not measure 18K ohms, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24504C to the SIU 1, M24504
 - 3) Re-connect connector D11002 to the P110.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

836. Power Bus L AC XFR BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-11784, 24-11785.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin A2 of circuit breaker C24339 to structure ground (WDM 24-51-12).
 - (a) If there is not 115 VAC at pin A2 of circuit breaker C24339, then do these steps:

- 1) Replace this circuit breaker:
(WDM 24-51-12)

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C24339	L XFR AC BUS DISTR P110

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If there is 115 VAC at pin A2 of circuit breaker C24339, then continue.

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- (2) Do a check of the Signal Interface Unit 1, M24504 in P110.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-51-12):
- (a) Disconnect connector D11002 from the left Power Management Panel (PMP).
- (b) Disconnect connector DM24504C from the SIU 1, M24504.
- (c) Do a resistance check for 18K ohms between these pins of connector D11002 at the left P110 and connector DM24504C at the SIU 1 (WDM 24-51-12).

DM24504C	D11002
pin 66	pin G

- (d) Do a resistance check for 18K ohms between these pins of connector DM24504C at the SIU 1 and terminal C2 of circuit breaker, C24321. (WDM 24-09-31, WDM 24-51-12).

DM24504C	C24321
pin 73	C2

- (e) Do a resistance check for 18K ohms between these pins of connector DM24504C at the SIU and terminal C2 of circuit breaker, C24339. (WDM 24-09-31, WDM 24-51-12).

DM24504C	C24339
pin 77	C2

- (f) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24504C from the SIU, M24504
 - 3) Re-connect connector D11002 to the left PMP, P110.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

837. Power Bus L AC SECT 1 BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11781.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin A2 of circuit breaker C24307 to structure ground (WDM 24-51-14).

- (a) If there is not 115 VAC at pin A2 of circuit breaker C24307, then do these steps:

- 1) Replace this circuit breaker:

(WDM 24-51-14)

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C24307	L MAIN AC SECT 1 BUS DISTR P110

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (b) If there is 115 VAC at pin A2 of circuit breaker C24307, then continue.

- (2) Do a check of the Signal Interface Unit 2, M24505 in P110.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (3) Do this check of the wiring (WDM 24-51-14):

- (a) Disconnect connector D11003 from the left Power Management Panel (PMP).

- (b) Disconnect connector DM24504C from the SIU 1, M24504.

- (c) Do a resistance check for 18K ohms between these pins of connector D11003 at the left P110 and connector DM24504C at the SIU (WDM 24-51-14).

DM24504C	D11003
pin 63	pin A

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.

- 2) Re-connect connector DM24504C from the SIU 1, M24504

- 3) Re-connect connector D11003 to the left PMP, P110.

- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

838. Power Bus L AC SECT 2 BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11782.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.

- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin A2 of circuit breaker C24309 to structure ground (WDM 24-51-15).

- (a) If there is not 115 VAC at pin A2 of circuit breaker C24309, then do these steps:

- 1) Replace the circuit breaker, C24309

Replace this circuit breaker:

(WDM 24-51-15)

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C24309	L MAIN AC SECT 2 BUS DISTR P110

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (b) If there is 115 VAC at pin A2 of circuit breaker C24309, then continue.

- (2) Do a check of the Signal Interface Unit 2, M24505 in P110.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (b) If the MAT shows ACTIVE for the maintenance message, then continue.

- (3) Do this check of the wiring (WDM 24-51-15):

- (a) Disconnect connector D11006 from the left Power Management Panel (PMP).

- (b) Disconnect connector DM24505C from the SIU 2, M24505.

- (c) Do a resistance check for 18K ohms between these pins of connector D11006 at the left P110 and connector DM24505C at the SIU (WDM 24-51-15).

DM24505C	D11006
pin 63	pin A

- (d) If you find a problem with the wiring, then do these steps:

- 1) Repair the wiring.

- 2) Re-connect connector DM24505C from the SIU 2, M24505

- 3) Re-connect connector D11006 to the left PMP, P110.

- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

839. ELCU (UTIL BUS R) Position Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12046, 24-12099.

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B. Initial Evaluation

- (1) If maintenance messages 25-32005 and 25-32006 are both ACTIVE also, then do this task:
P210 Configuration Loadshed - Fault Isolation, 24-51 TASK 852.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (3) If the MAT shows LATCHED for the maintenance message, then do these steps:
 - (a) Make sure the ON light of the PRIMARY EXT PWR switch on the P5 panel is on.
 - (b) Make sure the ON light of the SECONDARY EXT PWR switch is off and the AVAIL light of the SECONDARY EXT PWR switch is on.
 - (c) Do this special function on the MAT: 24 ELMS Power Management Panel, P210 Initiated EU Self Test.
 - (d) Push the SECONDARY EXT PWR switch.
 - 1) Make sure the ON light comes on.
 - (e) If the MAT shows ACTIVE or LATCHED for the maintenance message, then do the Fault Isolation procedure below.

NOTE: Stop for 2 minutes before you read the status of the maintenance message from the MAT.
 - (f) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then there was an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 28 VDC from pin 2 of circuit breaker C24650 to ground (WDM 24-51-23).
 - (a) If there is not 28 VDC at pin 2 of circuit breaker C24650, then do these steps:
 - 1) Replace the circuit breaker, C24650 (WDM 24-51-23).
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at pin 2 of circuit breaker C24650, then continue.
- (2) Replace the Power Panel Controller (PPC), M24501.

These are the tasks:

Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002,
Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (3) Replace the right ELCU, M24211.

These are the tasks:

ELCU Removal, AMM TASK 24-51-05-000-801,
ELCU Installation, AMM TASK 24-51-05-400-801.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (4) Do this check of the wiring (WDM 24-51-23):

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- (a) Remove the right ELCU M24211, do this task: ELCU Removal, AMM TASK 24-51-05-000-801.
- (b) Remove the PPC M24501, do this task: Power Panel Controller - Removal, AMM TASK 24-09-00-000-816-002.
- (c) Do a wiring check between these pins of connector DM24211 at the right ELCU and connector DM24501B at the PPC (WDM 24-51-23).

DM24501	DM24211
pin B36	pin 13
pin B38	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the PPC M24501, do this task: Power Panel Controller - Installation, AMM TASK 24-09-00-400-812-002.
 - 3) Re-install the left ELCU M24211, do this task: ELCU Installation, AMM TASK 24-51-05-400-801.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

840. Power Bus R AC SECT 1 BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12124.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin A2 of circuit breaker C24306 to structure ground (WDM 24-51-24).

- (a) If there is not 115 VAC at pin A2 of circuit breaker C24306, then do these steps:

- 1) Replace these circuit breakers:
(WDM 24-51-24)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-004			
B	2	C24306	R MAIN AC SECT 1 BUS DISTR P210
ARO 006-999			
C	6	C24306	R MAIN AC SECT 1 BUS DISTR P210

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- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If there is 115 VAC at pin A2 of circuit breaker C24306, then continue.
- (2) Do a check of the Signal Interface Unit 1, M24508 in P210.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-51-24):
 - (a) Disconnect connector D21003 from the right Power Management Panel P210.
 - (b) Disconnect connector DM24508C from the SIU 1, M24508.
 - (c) Do a resistance check for 18K ohms between these pins of connector D21003 at the right P210 and connector DM24508C at the SIU 1 (WDM 24-51-24).

DM24508C	D21003
pin 63	pin A
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24508C to the SIU 1, M24508
 - 3) Re-connect connector D21003 to the P210.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

— END OF TASK —

841. Power Bus R AC XFR BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-12125, 24-12126.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin A2 of circuit breaker C24324 to structure ground (WDM 24-51-22).
 - (a) If there is not 115 VAC at pin A2 of circuit breaker C24324, then do these steps:
 - 1) Replace these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-004			
A	6	C24324	R XFR AC BUS DISTR P210

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ARO 001-004 (Continued)

(Continued)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 006-999			
B	7	C24324	R XFR AC BUS DISTR P210

ARO ALL

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If there is 115 VAC at pin A2 of circuit breaker C24324, then continue.



MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE ELMS PANELS BEFORE YOU REMOVE COMPONENTS OF THE PANELS. IF YOU DO NOT REMOVE ELECTRICAL POWER, DAMAGE TO EQUIPMENT CAN OCCUR.

- (2) Do a check of the SIU-1, M24508.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show) on the existing faults display, then you corrected the fault.

NOTE: Wait up to 5 minutes, or until the maintenance message shows, after there is power to the ELMS panel before you read the status of the maintenance message from the MAT.

- (b) If the maintenance message shows on the existing fault display, then continue.
- (3) Do this check of the wiring:
 - (a) Disconnect connector D21002 from the right Power Management Panel (PMP), P210.
 - (b) Disconnect connector DM24508C from the SIU 1, M24508.
 - (c) Do a resistance check for 18K ohms between these pins of connector D21002 at the right P210 and connector DM24508C at the SIU (WDM 24-51-22).

DM24508C	D21002
pin 65	pin 7

- (d) Do a resistance check for 18K ohms between these pins of connector DM24508C at the SIU and terminal C2 of circuit breaker, C24324. (WDM 24-09-32).

DM24508C	C24324
pin 71	C2

- (e) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24508C to the SIU 1, M24508
 - 3) Re-connect connector D21002 to the right PMP, P210.

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- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

842. Right Main AC Bus Not Powered Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12127.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

ARO 001-010

E	2	C24332	R GCB

ARO ALL

- (2) These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM TASK 24-22-03-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a check of the Signal Interface Unit 2, M24509 in P210.
- This is the task:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring (WDM 24-09-32):
- (a) Remove these circuit breakers:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 011-999

D	2	C24332	R GCB

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ARO 011-999 (Continued)

(Continued)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- (b) Disconnect connector DM24509C from the SIU 2, M24509.
- (c) Do a wiring check between these pins at circuit breaker C24332 in the P200 and connector DM24509C at the SIU 2 (WDM 24-09-32).

DM24509C	C24332
pin 66	pin 23

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24509C to the SIU 2, M24509.,
 - 3) Re-install these circuit breakers:
Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

843. Power Bus R AC SECT 2 BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12128.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin A2 of circuit breaker C24308 to structure ground (WDM 24-51-25).
 - (a) If there is not 115 VAC at pin A2 of circuit breaker C24308, then do these steps:

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- 1) Replace these circuit breakers:
(WDM 24-51-25)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-004			
B	1	C24308	R MAIN AC SECT 2 BUS DISTR P210
ARO 006-999			
C	1	C24308	R MAIN AC SECT 2 BUS DISTR P210

ARO ALL

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 115 VAC at pin A2 of circuit breaker C24308, then continue.
- (2) Do a check of the Signal Interface Unit 1, M24508 in P210.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-51-25):
 - (a) Disconnect connector D21006 from the right Power Management Panel P210.
 - (b) Disconnect connector DM24508C from the SIU 1, M24508.
 - (c) Do a resistance check for 18K ohms between these pins of connector D21006 at the right P210 and connector DM24508C at the SIU (WDM 24-51-25).

DM24508C	D21006
pin 89	pin G
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24508C to the SIU 1, M24508
 - 3) Re-connect connector D21006 to the P210.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

END OF TASK

844. Power Bus R AC UTIL BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-12129.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for maintenance messages 24-12046 or 24-12099, then do the fault isolation procedure for these messages first.
- (2) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.

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- (3) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Replace the right ELCU, M24211.

These are the tasks:

ELCU Removal, AMM TASK 24-51-05-000-801,

ELCU Installation, AMM TASK 24-51-05-400-801.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE or LATCHED for the maintenance message, then continue.
- (2) Do a check of the Signal Interface Unit 1, M24508 in P210.
- This is the task:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-51-23):
- (a) Disconnect connector D21006 from the right Power Management Panel (PMP), P210.
- (b) Disconnect connector DM24508C from the SIU 1, M24508.
- (c) Do a resistance check for 18K ohms between these pins of connector D21006 at the right PMP, P210 and connector DM24508C at the SIU 1 (WDM 24-51-23).

DM24508C

D21006

pin 64 pin D

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24508C to the SIU 1, M24508
 - 3) Re-connect connector D21006 to the right PMP, P210.
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

845. Power Bus AC GND SVCE SECT 1 BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13810.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin C2 of circuit breaker C24322 to structure ground (WDM 24-51-41).
 - (a) If there is not 115 VAC at pin C2 of circuit breaker C24322, then do these steps:
 - 1) Replace the circuit breaker, C24322 (WDM 24-51-41).
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 115 VAC at pin C2 of circuit breaker C24322, then continue.
- (2) Do a check of the Signal Interface Unit 2, M24513 in P310.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-51-41):
 - (a) Disconnect connector DM24513C from the SIU 2, M24513.
 - (b) Do a resistance check for 33K ohms between these pins of connector DM24513C at the SIU M24513 and pin C1 of circuit breaker, C28301 (WDM 24-51-41).

DM24513C	C28301
pin 76	pin C1
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24513C to the SIU 2, M24513
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

846. Power Bus AC GND SVCE SECT 1 BUS (Relay K24050) Problems - Fault Isolation

A. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

B. Fault Isolation Procedure

- (1) Remove relay K24050 and do a check for 115 VAC at pins A2, B2, and C2 of of the relay socket to structure ground (WDM 24-51-41).
 - (a) If there is not 115 VAC at pins A2, B2, and C2 of the relay socket DK24050, then do these steps:
 - 1) Check the wiring between relay socket DK24050 and circuit breaker C24322.
 - 2) If you find a problem with the wiring then repair the wiring.
 - 3) If you do not find a problem with the wiring then continue.

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- 4) Replace this circuit breaker:
(WDM 24-51-41)

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	5	C24322	GND SVCE AC SECT 1 BUS DISTR P320

- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If there is 115 VAC at pins A2, B2, and C2 of relay socket KD24050, then continue.
- (2) Replace the GND service relay, K24050 in P320, (WDM 24-51-41).
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a check of the Signal Interface Unit 1, M24508 in P210.
- This is the task:
- Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring (WDM 24-51-41):
- (a) Disconnect connector DM24508C from the SIU 1, M24508.
- (b) Remove relay K24050.
- (c) Do a resistance check for 47K ohms between these pins of connector DM24508C at the SIU M24508 and pin C3 of relay socket DK24050 (WDM 24-51-41).

DM24508C	DK24050
pin 96	pin C3

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install relay K24050.
 - 3) Re-connect connector DM24508C to the SIU 1, M24508
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

847. Power Bus AC GND SVCE SECT 2 BUS (Relay K24051) Problems - Fault Isolation

A. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

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B. Fault Isolation Procedure

- (1) Remove relay K24051 and do a check for 115 VAC at pins A2, B2, and C2 of the relay socket to structure ground (WDM 24-51-41).
 - (a) If there is not 115 VAC at pins A2, B2, and C2 of the relay socket DK24051, then do these steps:
 - 1) Check the wiring between relay socket KD24051 and circuit breaker C24323.
 - 2) If you find a problem with the wiring then repair the wiring.
 - 3) If you do not find a problem with the wiring then continue.
 - 4) Replace these circuit breakers:
(WDM 24-51-41)

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 006-999			
A	5	C24323	GND SVCE AC SECT 2 BUS DISTR P320
ARO 001-004			
A	6	C24323	GND SVCE AC SECT 2 BUS DISTR P320

ARO ALL

- 5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 115 VAC at pins A2, B2, and C2 of relay socket KD24051, then continue.
- (2) Replace the GND service relay, K24051 in P320, (WDM 24-51-41).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a check of the Signal Interface Unit 1, M24508 in P210.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring (WDM 24-51-41):
 - (a) Disconnect connector DM24508C from the SIU 1, M24508.
 - (b) Remove relay K24051.
 - (c) Do a resistance check for 47K ohms between these pins of connector DM24508C at the SIU M24508 and pin C3 of relay socket DK24051 (WDM 24-51-41).

DM24508C	DK24051
pin 97	pin C3

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install relay K24051.

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- 3) Re-connect connector DM24508C to the SIU 1, M24508
- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

848. CABIN/UTIL SWITCH (Relay K24301) Problems - Fault Isolation

A. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

B. Fault Isolation Procedure

- (1) Remove relay K24301 and do a check for 28 VDC at pin A2 of of the relay socket to structure ground (WDM 24-51-41).
 - (a) If there is not 28 VDC at pin A2 of the relay socket DK24301, then do these steps:
 - 1) Check the wiring between relay socket KD24301 and circuit breaker C24689.
 - 2) If you find a problem with the wiring then repair the wiring.
 - 3) Replace this circuit breaker:
(WDM 24-51-41)

Right Power Management Panel, P210

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
G	14	C24689	CABIN/UTIL SW CTRL RLY

- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 115 VAC at pin A2 of relay socket KD24301, then continue.
- (2) Replace the CABIN UTIL SW relay, K24301 in P210, (WDM 24-51-41).
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do a check of the Signal Interface Unit 1, M24508 in P210.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring (WDM 24-51-41):
 - (a) Disconnect connector DM24508C from the SIU 1, M24508.
 - (b) Remove relay K24301.
 - (c) Do a wiring check between these pins of connector DM24508A at the SIU 1 M24508 and DK24301 (WDM 24-51-41).

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DM24508A

pin 25 pin A1

DK24301

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install relay K24301.
 - 3) Re-connect connector DM24508A to the SIU 1, M24508
 - 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— END OF TASK ————

849. Power Bus AC GND HDLG BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13812.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin C2 of circuit breaker C24342 to structure ground (WDM 24-51-42).
 - (a) If there is not 115 VAC at pin C2 of circuit breaker C24342, then do these steps:
 - 1) Replace these circuit breakers:
(WDM 24-51-42)

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 006-999			
A	1	C24342	GND HDLG AC BUS DISTR P320
ARO 001-004			
B	2	C24342	GND HDLG AC BUS DISTR P320

ARO ALL

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If there is 115 VAC at pin C2 of circuit breaker C24342, then continue.
- (2) Do a check of the Signal Interface Unit 1, M24512 in P310.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.

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- (3) Do this check of the wiring (WDM 24-51-42):
- (a) Disconnect connector DM24512C from the SIU 1, M24512.
 - (b) Do a resistance check for 33K ohms between these pins of connector DM24512C at the SIU M24512 and pin C1 of circuit breaker, C24325 (WDM 24-51-42).

DM24512C	C24325
pin 70	pin C1

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24512C to the SIU 1, M24512
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

850. Power Bus AC GND SVCE SECT 2 BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13811.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin C2 of circuit breaker C24323 to structure ground (WDM 24-51-41).
- (a) If there is not 115 VAC at pin C2 of circuit breaker C24323, then do these steps:

- 1) Replace these circuit breakers:

(WDM 24-51-41)

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>

ARO 006-999

A	5	C24323	GND SVCE AC SECT 2 BUS DISTR P320

ARO 001-004

A	6	C24323	GND SVCE AC SECT 2 BUS DISTR P320

ARO ALL

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 115 VAC at pin C2 of circuit breaker C24323, then continue.
- (2) Do a check of the Signal Interface Unit 2, M24513 in P310.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

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- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring (WDM 24-51-41):
 - (a) Disconnect connector DM24513C from the SIU 2, M24513.
 - (b) Do a resistance check for 33K ohms between these pins of connector DM24513C at the SIU M24513 and pin C1 of circuit breaker, C24301 (WDM 24-51-41).

DM24513C	C24301
pin 63	pin C1

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24513C to the SIU 2, M24513
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

851. P110 Configuration Loadshed - Fault Isolation

A. Description

- (1) This task is applicable when all of these maintenance messages (24-11779, 25-31005 and 25-31006) are active at the same time and airplane power is being supplied from at least two of the following sources: left IDG, right IDG, Primary External Power, Secondary External Power, or the APU.
- (2) Symptoms include Galley 2 and 4L and the Left Utility bus are unpowered with two of the above sources powering the airplane.
- (3) With this fault, Galley 2 and 4L and the Left Utility bus may become powered during operation with a single source of power, or with a different combination of two power sources.

B. Initial Evaluation

- (1) If any of the these maintenance messages are active or latched, do the task for that specified maintenance message:
 - (a) 24-23670
 - (b) 24-23680
 - (c) 24-31121
 - (d) 24-31131
 - (e) 24-31181
 - (f) 24-31201
 - (g) 24-31231
 - (h) 24-31233
 - (i) 24-31241
 - (j) 24-31243
 - (k) 24-31251
 - (l) 24-31253

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- (m) 24-31261
- (n) 24-31263
- (2) This fault can only be isolated if the airplane is powered from at least two power sources of the following combinations:
 - NOTE:** All selectable electrical loads, such as hydraulic pumps and fuel pumps, that are not being used should be switched off so the galleys are not loadshed during the accomplishment of this task.
 - (a) Primary External Power and Secondary External Power.
 - (b) Primary External Power and APU.
 - (c) Primary External Power and left IDG.
 - (d) Secondary External Power and right IDG.
 - (e) Secondary External Power and left IDG.
 - (f) APU and left IDG.
 - (g) APU and right IDG.
 - (h) Left IDG and right IDG.
- (3) If the MAT shows NOT ACTIVE for some or all three of the maintenance messages, or does not display all three of the maintenance messages, then there was an intermittent fault.
 - NOTE:** This fault is dependent on which two airplane power sources are being used (left IDG, Secondary External Power, or APU) to power the airplane.
- (4) If the MAT shows LATCHED for some or all three of the maintenance messages, then a loadshed was probably initiated by ELMS. All loads must be restored by applying an additional power source, or switching off all selectable electrical loads.
- (5) If the MAT shows ACTIVE for all three maintenance messages, then do the Fault Isolation Procedure below.

C. Fault Isolation Procedure

- (1) Do this check of the P110 Configuration Loadshed wiring:
 - (a) Disconnect connector D11007P from the ELMS P110 panel (SSM 24-09-61).



WARNING

BE CAREFUL WHEN YOU CONNECT THE VOLTMETER TEST LEADS TO THE RECEPTACLE. THE RECEPTACLE HAS DANGEROUSLY HIGH VOLTAGE. THIS WILL PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (b) Do a continuity check from pin 17 of connector D11007P to airplane structural ground.
 - NOTE:** Two separate sources of electrical power (left IDG, Secondary External Power, or APU) must be provided to the airplane busses while this measurement is being made.
- (c) If there is continuity between pin 17 and airplane ground, then do these steps:
 - 1) Disconnect connector DM24504C from Signal Interface Unit 1, M24504, located inside the ELMS P110 panel.
 - 2) Disconnect connector DM24505C from Signal Interface Unit 2, M24505, located inside the ELMS P110 panel.
 - 3) Do a continuity check between pin 17 of connector D11007 on the P110 panel and pins 43 of connectors DM24504C and DM24505C (WDM 24-09-61).

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- 4) If a problem is found with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Reconnect connector D11007P to the ELMS P110 panel.
 - c) Reconnect connector DM24504C from Signal Interface Unit 1, M24504.
 - d) Reconnect connector DM24505C from Signal Interface Unit 2, M24505.
 - e) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- 5) If no problem is found with the wiring, then do these steps:
 - a) In the P110 panel, do a check of the CCU, M24502.
This is the task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.
 - b) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
 - c) If the maintenance messages still show ACTIVE on the MAT, then continue.
- 6) In the P110 panel, do a check of the SIU-1, M24504 and SIU 2, M24505.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - a) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
 - b) If the maintenance messages still show ACTIVE on the MAT, then continue.
- (d) If there is no continuity between pin 17 and airplane ground, then continue.
 - 1) Reconnect connector D11007P to the ELMS P110 panel.
- (2) If the Left IDG is one of the two electrical sources providing power to the airplane, then do these steps:
 - (a) Disconnect connector D20024 from the ELMS P200 panel.
 - (b) Do a continuity check between pin 55 of connector D20024 and airplane structural ground (WDM 24-09-61).
 - (c) If there is continuity between pin 55 and airplane ground, then do these steps:
 - 1) Replace these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM TASK 24-22-03-000-801,

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Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

- 2) Reconnect connector D20024 to the ELMS P200 panel.
- 3) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- (d) If there is no continuity between pin 55 and airplane ground, then do these steps:
 - 1) Disconnect connector D10024 from the ELMS P100 panel.
 - 2) Do a continuity check between pin 55 of connector D20024 and and pin 1 of connector D10024.
 - 3) If there is continuity between pin 55 and pin 1, then do these steps:
 - a) Replace this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	2	C24331	L GCB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

- b) Reconnect connector D20024 to the ELMS P200 panel.
 - c) Reconnect connector D10024 to the ELMS P100 panel.
 - d) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
 - 4) If there is no continuity between pin 55 and pin 1, then do these steps:
 - a) Repair the wiring between connector D20024 pin 55 and connector D10024 pin 1.
 - b) Reconnect connector D20024 to the ELMS P200 panel.
 - c) Reconnect connector D10024 to the ELMS P100 panel.
 - d) If the maintenance messages show ACTIVE on the MAT, then continue.
- (3) If the APU and/or the Secondary External Power system are providing power to the airplane, then do these steps:
 - (a) Disconnect connector D20024 from the ELMS P200 panel.
 - (b) Do a continuity check between pin 55 of conector D20024 and structure ground (WDM 24-09-61).
 - (c) If there is continuity between pin 55 and airplane ground, then do these steps:
 - 1) Replace these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB

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ARO 011-999 (Continued)

(Continued)

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

- 2) Reconnect connector D20024 to the ELMS P200 panel.
 - 3) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- (d) If there is no continuity between pin 55 and airplane ground, then continue:
- 1) Reconnect connector D20024 to the ELMS P200 panel.
- (e) Disconnect connector D10024 from the ELMS P100 panel.
- (f) Do a continuity check between pin 48 of connector D10024 and structure ground.
- (g) If there is continuity between pin 48 and structure ground, then do these steps:
- 1) Replace this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

- 2) Reconnect connector D10024 to the ELMS P100 panel.
 - 3) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- (h) If there is no continuity between pin 48 and airplane ground, and Secondary External Power is one of the sources providing airplane power, then do these steps:
- 1) Disconnect connector D30023 from the ELMS P300 panel.
 - 2) Do a continuity check between pin 48 of connector D10024 and pin 1 of connector D30023.
 - 3) If there is no continuity between pin 48 and pin 1, then do these steps:
 - a) Repair the wiring between connector D10024 pin 48 and connector D30023 pin 1.
 - b) Reconnect connector D10024 to the ELMS P100 panel.

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- c) Reconnect connector D30023 to the ELMS P300 panel.
 - d) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- 4) If there is continuity between pin 48 and pin 1, then do these steps:
- a) Replace the Secondary External Power Contactor, K24023, located in the ELMS P300 panel.
- These are the tasks:
- External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.
- b) Reconnect connector D10024 to the ELMS P100 panel.
 - c) Reconnect connector D30023 to the ELMS P300 panel.
 - d) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- (i) If there is no continuity between pin 48 and airplane ground, and the APU is one of the sources providing airplane power, then do these steps:
- 1) Disconnect connector D30021 from the ELMS P300 panel.
 - 2) Do a continuity check between pin 48 of connector D10024 and pin 7 of connector D30021.
 - 3) If there is no continuity between pin 48 and pin 7, then do these steps:
 - a) Repair the wiring between connector D10024 pin 48 and connector D30021 pin 7.
 - b) Reconnect connector D10024 to the ELMS P100 panel.
 - c) Reconnect connector D30021 to the ELMS P300 panel.
 - d) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
 - 4) If there is continuity between pin 48 and pin 7, then do these steps:
 - a) Replace this circuit breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

- b) Reconnect connector D10024 to the ELMS P100 panel.
- c) Reconnect connector D30021 to the ELMS P300 panel.
- d) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.

————— **END OF TASK** —————

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852. P210 Configuration Loadshed - Fault Isolation

A. Description

- (1) This task is applicable when all of these maintenance messages (24-12046, 25-32005 and 25-32006) are active at the same time and airplane power is being supplied from at least two of the following sources: Right IDG, Secondary External Power, or the APU.
- (2) Symptoms include Galley 1 and 4R and the Right Utility bus are unpowered with two of the above sources powering the airplane.
- (3) With this fault, Galley 1 and 4R and the Right Utility bus may become powered during operation with a single source of power, or with a different combination of two power sources.

B. Initial Evaluation

- (1) If any of the following maintenance messages are active or latched, do the task for that specific maintenance message: 24-23690, 24-23700, 24-31122, 24-31132, 24-31182, 24-31202, 24-31232, 24-31233, 24-31242, 24-31243, 24-31252, 24-31253, 24-31221, 24-31263.
 - (a) 24-23690
 - (b) 24-23700
 - (c) 24-31122
 - (d) 24-31132
 - (e) 24-31182
 - (f) 24-31202
 - (g) 24-31232
 - (h) 24-31233
 - (i) 24-31242
 - (j) 24-31243
 - (k) 24-31252
 - (l) 24-31253
 - (m) 24-31221
 - (n) 24-31263
- (2) This fault can only be isolated if the airplane is powered from at least two of the following power sources: Right IDG, Secondary External Power, or the APU.

NOTE: All selectable electrical loads, such as hydraulic pumps and fuel pumps, that are not being used should be switched off so the galleys are not loadshed during the accomplishment of this task.
- (3) If the MAT shows NOT ACTIVE for some or all three of the maintenance messages, or does not display all three of the maintenance messages, then there was an intermittent fault.

NOTE: This fault is dependent on which two airplane power sources are being used (Right IDG, Secondary External Power, or APU) to power the airplane.
- (4) If the MAT shows LATCHED for some or all three of the maintenance messages, then a loadshed was probably initiated by ELMS. All loads must be restored by applying an additional power source, or switching off all selectable electrical loads.
- (5) If the MAT shows ACTIVE for all three maintenance messages, then do the Fault Isolation Procedure below.

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C. Fault Isolation Procedure

(1) Do this check of the P210 Configuration Loadshed wiring:

(a) Disconnect connector D21007P from the ELMS P210 panel (SSM 24-09-62).



WARNING

BE CAREFUL WHEN YOU CONNECT THE VOLTMETER TEST LEADS TO THE RECEPTACLE. THE RECEPTACLE HAS DANGEROUSLY HIGH VOLTAGE. THIS WILL PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(b) Do a continuity check from pin 25 of connector D21007P to airplane structural ground.

NOTE: Two separate sources of electrical power (left IDG, Secondary External Power, or APU) must be provided to the airplane busses while this measurement is being made.

(c) If there is continuity between pin 25 and airplane ground, then do these steps:

- 1) Disconnect connector DM24508C from Signal Interface Unit 1, M24508, located inside the ELMS P210 panel.
 - 2) Disconnect connector DM24509C from Signal Interface Unit 2, M24509, located inside the ELMS P210 panel.
 - 3) Do a continuity check between pin 25 of connector J7 on the P210 panel and pins 43 of connectors DM24508C and DM24509C (WDM 24-09-62).
 - 4) If a problem is found with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Reconnect connector D21007P to the ELMS P210 panel.
 - c) Reconnect connector DM24508C from Signal Interface Unit 1, M24508.
 - d) Reconnect connector DM24509C from Signal Interface Unit 2, M24509.
 - e) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
 - 5) If no problem is found with the wiring, then do these steps:
 - a) In the P210 panel, do a check of the CCU, M24506.

This is the task:
Computing and Communication Unit - Exchange Check, AMM TASK 24-09-00-700-802-002.
 - b) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
 - c) If the maintenance messages still show ACTIVE on the MAT, then continue.
 - 6) In the P210 panel, do a check of the SIU-1, M24508 and SIU 2, M24509.

This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - a) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
 - b) If the maintenance messages still show ACTIVE on the MAT, then continue.
- (d) If there is no continuity between pin 25 and airplane ground, then continue.
- 1) Reconnect connector D21007P to the ELMS P210 panel.

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- (2) If the Right IDG is one of the two electrical sources providing power to the airplane, then do these steps:
- Disconnect connector D10024 from the ELMS P100 panel.
 - Do a continuity check between pin 55 of connector D10024 and airplane structural ground (WDM 24-09-62).
 - If there is continuity between pin 55 and airplane ground, then do these steps:
 - Replace this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

- Reconnect connector D10024 to the ELMS P100 panel.
 - If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- (d) If there is no continuity between pin 55 and airplane ground, then do these steps:
- Disconnect connector D20024 from the ELMS P200 panel.
 - Do a continuity check between pin 55 of connector D10024 and and pin 1 of connector D20024.
 - If there is continuity between pin 55 and pin 1, then do these steps:
 - Replace these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	2	C24332	R GCB
ARO 001-010			
E	2	C24332	R GCB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

- Reconnect connector D10024 to the ELMS P100 panel.
 - Reconnect connector D20024 to the ELMS P200 panel.
 - If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- 4) If there is no continuity between pin 55 and pin 1, then do these steps:

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- a) Repair the wiring between connector D10024 pin 55 and connector D20024 pin 1.
 - b) Reconnect connector D20024 to the ELMS P200 panel.
 - c) Reconnect connector D10024 to the ELMS P100 panel.
 - d) If the maintenance messages show ACTIVE on the MAT, then continue.
- (3) If the APU and/or the Secondary External Power system are providing power to the airplane, then do these steps:
- (a) Disconnect connector D10024 from the ELMS P100 panel.
 - (b) Do a continuity check between pin 55 of connector D10024 and structure ground (WDM 24-09-62).
 - (c) If there is continuity between pin 55 and airplane ground, then do these steps:
 - 1) Replace this circuit breaker:

Left Power Panel, P100

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	3	C24333	L BTB

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

- 2) Reconnect connector D10024 to the ELMS P100 panel.
 - 3) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- (d) If there is no continuity between pin 55 and airplane ground, then continue.
- 1) Reconnect connector D10024 to the ELMS P100 panel.
- (e) Disconnect connector D20024 from the ELMS P200 panel.
- (f) Do a continuity check between pin 48 of connector D20024 and structure ground.
- (g) If there is continuity between pin 48 and structure ground, then do these steps:
- 1) Replace these circuit breakers:

Right Power Panel, P200

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
ARO 011-999			
D	3	C24334	R BTB
ARO 001-010			
E	3	C24334	R BTB

ARO ALL

These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

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- 2) Reconnect connector D20024 to the ELMS P200 panel.
 - 3) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- (h) If there is no continuity between pin 48 and airplane ground, and Secondary External Power is one of the sources providing airplane power, then do these steps:
- 1) Disconnect connector D30023 from the ELMS P300 panel.
 - 2) Do a continuity check between pin 48 of connector D20024 and pin 22 of connector D30023.
 - 3) If there is no continuity between pin 48 and pin 22, then do these steps:
 - a) Repair the wiring between connector D20024 pin 48 and connector D30023 pin 22.
 - b) Reconnect connector D20024 to the ELMS P200 panel.
 - c) Reconnect connector D30023 to the ELMS P300 panel.
 - d) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
 - 4) If there is continuity between pin 48 and pin 22, then do these steps:
 - a) Replace the Secondary External Power Contactor, K24023, located in the ELMS P300 panel.

These are the tasks:
External Power Contactor Removal, AMM TASK 24-41-01-000-801,
External Power Contactor Installation, AMM TASK 24-41-01-400-801.
 - b) Reconnect connector D20024 to the ELMS P200 panel.
 - c) Reconnect connector D30023 to the ELMS P300 panel.
 - d) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
- (i) If there is no continuity between pin 48 and airplane ground, and the APU is one of the sources providing airplane power, then do these steps:
- 1) Disconnect connector D30023 from the ELMS P300 panel.
 - 2) Do a continuity check between pin 48 of connector D20024 and pin 15 of connector D30023.
 - 3) If there is no continuity between pin 48 and pin 15, then do these steps:
 - a) Repair the wiring between connector D20024 pin 48 and connector D30023 pin 15.
 - b) Reconnect connector D20024 to the ELMS P200 panel.
 - c) Reconnect connector D30023 to the ELMS P300 panel.
 - d) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.
 - 4) If there is continuity between pin 48 and pin 15, then do these steps:
 - a) Replace this circuit breaker:

Auxiliary Power Panel, P300

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C24335	APB

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These are the tasks:

Generator, Bus Tie, and Auxiliary Power Breaker Removal, AMM
TASK 24-22-03-000-801,

Generator, Bus Tie, and Auxiliary Power Breaker Installation, AMM
TASK 24-22-03-400-801.

- b) Reconnect connector D20024 to the ELMS P200 panel.
- c) Reconnect connector D30023 to the ELMS P300 panel.
- d) If the maintenance messages show NOT ACTIVE on the MAT (or do not show at all), you corrected the fault.

————— **END OF TASK** —————

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805. Power Bus L 28 VAC BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-11780.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin 2 of this circuit breaker to structure ground:
(WDM 24-53-11)

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	27	C24449	L 28V AC BUS

- (a) If there is not 115 VAC at pin 2 of circuit breaker C24449, then do these steps:
 - 1) Replace the circuit breaker, C24449 (WDM 24-53-11).
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 115 VAC at pin 2 of circuit breaker C24449, then continue.
- (2) Do a check for 28 VAC from pin 1 of this circuit breaker to structure ground:
(WDM 24-53-21)

Left Power Management Panel, P110

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
H	8	C34501	AOA RESOLVER 1

- (a) If there is not 28 VAC at pin 1 of circuit breaker C34501, then do these steps:
 - 1) Replace the Left Bus xfmr, T24105 in the P110 panel.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE for the maintenance message, then continue.
 - (b) If there is 28 VAC at pin 1 of circuit breaker C34501, then continue.
- (3) Do a check of the Signal Interface Unit 2, M24505.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
 - (4) Do this check of the wiring between Signal Interface Unit 2 M24505 and 28 VAC L BUS XFMR, T24105, (WDM 24-53-11):
 - (a) Disconnect connector DM24505C from the Signal Interface Unit 2, M24505.

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- (b) Do a resistance check for 18K ohms between these pins of connector DM24505C and T24105.

DM24505C	T24105
pin 116	term LV

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector DM24505C to the Signal Interface Unit, M24505.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— END OF TASK —————

806. Power Bus 28 VAC GND SVCE BUS Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13813.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin 2 of circuit breaker C24450 to structure ground (WDM 24-53-21).

- (a) If there is not 115 VAC at pin 2 of circuit breaker C24450, then do these steps:

- 1) Replace this circuit breaker:

(WDM 24-53-21)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
H	13	C24450	GND SVCE 28VAC BUS

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

- (b) If there is 115 VAC at pin 2 of circuit breaker C24450, then continue.

- (2) Do a check for 28 VAC from pin 1 of this circuit breaker to structure ground:

(WDM 24-53-21)

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
J	10	C33519	WG LDG LTS HEATING

- (a) If there is not 28 VAC at pin 1 of circuit breaker C33519, then do these steps:

- 1) Replace the ground service xfmr, T24001 in the P320 panel.

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- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- 3) If the MAT shows ACTIVE for the maintenance message, then repair the wiring between circuit breakers C24450 and C33519.
 - (b) If there is 28 VAC at pin 1 of circuit breaker C33519, then continue.
- (3) Do a check of the Signal Interface Unit 1, M24512.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring between Signal Interface Unit 1 M24512 and 28 VAC GND SVCE XFMR, T24001, (WDM 24-53-21):
 - (a) Disconnect connector DM24512C from the Signal Interface Unit 1, M24512.
 - (b) Do a resistance check for 18K ohms between these pins of connector DM24512C and T24001.

T24001	DM24512C
term LV	pin 116

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24512C to the Signal Interface Unit, M24512.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

807. **Power Bus 28 VAC STANDBY BUS Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13818.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin 2 of circuit breaker C24420 to structure ground (WDM 24-53-11).
 - (a) If there is not 115 VAC at pin 2 of circuit breaker C24420, then do these steps:
 - 1) Replace this circuit breaker:
(WDM 24-53-11)

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Standby Power Management Panel, P310

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C24420	STBY 28V BUS

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (b) If there is 115 VAC at pin 2 of circuit breaker C24450, then continue.
- (2) Do a check for 28 VAC from pin 1 of circuit breaker C27513 to structure ground (WDM 24-53-11).
 - (a) If there is not 28 VAC at pin 1 of circuit breaker C27513, then do these steps:
 - 1) Replace the ground service xfmr, T24005 in the P310 panel.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - 3) If the MAT shows ACTIVE for the maintenance message, then repair the wiring between circuit breakers C24420 and C27513.
 - (b) If there is 28 VAC at pin 1 of circuit breaker C27513, then continue.
- (3) Do a check of the Signal Interface Unit 2, M24513.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (4) Do this check of the wiring between Signal Interface Unit 2, M24513 and 28 VAC STBY BUS XFMR (WDM 24-53-11):
 - (a) Disconnect connector DM24513C from the Signal Interface Unit 2, M24513.
 - (b) Do a resistance check for 18K ohms between these pins of connector DM24513C and T24005.

T24005	DM24513C
term LV	pin 116

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24513C to the Signal Interface Unit, M24513.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

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804. Transformer/Rectifier Unit DC Ground Handling Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13807.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 115 VAC from pin A2, B2, and C2 of circuit breaker C24325 to structure ground (WDM 24-61-42).
 - (a) If there is not 115 VAC at pin A2, B2, or C2 of circuit breaker C24325, then do these steps:

- 1) Replace the circuit breaker:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	12	C24325	TRU GND HDLG

(WDM 24-61-42)

- 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 115 VAC at pin A2, B2, and C2 of circuit breaker C24325, then continue.
- (2) Do a check from the negative terminal of TRU GND HDLG, M24021, to ground (WDM 24-61-42).
 - (a) If there is no ground, then do these steps:
 - 1) Repair the wiring.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is ground, then continue.
- (3) Do a check for 28 VDC between the positive terminal of TRU GND HDLG, M24021, and ground (WDM 24-61-42).
 - (a) If 28 VDC is not present, then do these steps:
 - 1) Replace the Ground Handling TRU, M24021.
These are the tasks:
Ground Handling (TRU) Removal, AMM TASK 24-61-01-000-801,
Ground Handling (TRU) Installation, AMM TASK 24-61-01-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If 28 VDC is present, then continue.
- (4) Do a wiring check between the DC GRND HNDLG TRU, M24021, and the SIU-2, M24513, in the P310 panel (WDM 24-61-42).

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- (a) Open this circuit breaker and install safety tag:

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	12	C24325	TRU GND HDLG

- (b) Disconnect connector DM24513A from the SIU-2, M24513, in the P310 panel.
- (c) Do a resistance check for 4.7 K ohms between this pin of connector DM24513A and the positive terminal of DC GRND HNDLG TRU, M24021.

M24021	DM24513A
pin + ...	pin 63

- (d) If there is a problem with the wiring, then do these steps:

- 1) Repair the wiring
- 2) Re-connect connector DM24513A to the SIU-2, M24513, in the P310 panel.
- 3) Remove the safety tag and close this circuit breaker:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	12	C24325	TRU GND HDLG

- 4) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (e) If there is no problem with the wiring, then do these steps:

- 1) Do a check of the SIU-2, M24513, in the P310 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- 2) Remove the safety tag and close this circuit breaker:

Ground Service/Handling Power Panel, P320

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	12	C24325	TRU GND HDLG

- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

805. Hot Battery Bus Power Problems - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13801.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

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C. Fault Isolation Procedure

- (1) Do this check of the main battery:
 - (a) Disconnect connector DM24013A from the main battery (WDM 24-31-11).
 - (b) Do a check for VDC from the positive (+) terminal of the main battery to structure ground.
 - (c) If the voltage is less than 26 VDC at the positive (+) terminal, then do these steps:
 - 1) Replace the main battery, M24013
These are the tasks:
Main Battery Removal, AMM TASK 24-31-01-000-801,
Main Battery Installation, AMM TASK 24-31-01-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (d) If the voltage is equal to or more than 26 VDC at the positive (+) terminal, then continue.
- (2) Do a check of the SIU-1, M24512, in the P310 panel.
This is the task:
Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.
 - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If the MAT shows ACTIVE for the maintenance message, then continue.
- (3) Do this check of the wiring between the main battery and the P310 panel: (WDM 24-31-11):
 - (a) Disconnect connector DM24013A from the main battery.
 - (b) Gain access to terminal L3 of panel P310.
 - (c) Do a check for continuity between terminal L3 at the P310 panel and the positive (+) terminal of main battery connector DM24013A.
 - (d) If there is no continuity between terminal L3 at the P310 panel and the positive (+) terminal of connector DM24013A, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24013A to the main battery.
 - 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (e) If there is continuity between terminal L3 at the P310 panel and the positive (+) terminal of main battery connector DM24013A, then do these steps:
 - 1) Re-connect connector DM24013A to the main battery and continue.
- (4) Do this check of the wiring between terminal L3 of panel P310 and the P310 panel SIU-1, M24512 (WDM 24-61-31):
 - (a) Disconnect connector DM24512A from the P310 panel SIU-1, M24512.
 - (b) Do a check of the wiring between connector DM24512A, pin 70 and terminal L3 at the P310 power management panel.
 - (c) If there is a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24512A to the P310 panel SIU-1, M24512.



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- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

————— **END OF TASK** —————

806. **Power Bus CAPT FLT INST BUS Problems - Fault Isolation**

A. Maintenance Messages

- (1) This task is for maintenance message: 24-13815.

B. Initial Evaluation

- (1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.
- (2) If the MAT shows NOT ACTIVE for the maintenance message, then there is an intermittent fault.

C. Fault Isolation Procedure

- (1) Do a check for 28 VDC from the positive (+) terminal of the TRU C1, M24300 to structure ground (WDM 24-32-21).
 - (a) If there is not 28 VDC at the positive (+) terminal, then do these steps:
 - 1) Replace the TRU C1, M24300.
These are the tasks:
Transformer Rectifier Unit Removal, AMM TASK 24-32-01-000-801,
Transformer Rectifier Unit Installation, AMM TASK 24-32-01-400-801.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (b) If there is 28 VDC at the positive (+) terminal, then continue.
- (2) Do a wiring check between terminal L4 of panel P310 and the positive (+) terminal of the TRU C1, M24300 (WDM 24-32-21):
 - (a) Do a check for 28 VDC from terminal L4 of panel P310 to structure ground.
 - (b) If there is not 28 VDC at terminal L4 of panel P310, then do these steps:
 - 1) Repair the wiring.
 - 2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
 - (c) If there is 28 VDC at terminal L4 of panel P310, then continue.
- (3) Do this check for 28 VDC between terminal L4 of panel P310 and pin 71 of connector DM24512A (WDM 24-61-33):
 - (a) Disconnect connector DM24512A from the SIU-1, M24512, in the P310 panel.
 - (b) Do a check for 28 VDC between this pin of connector DM24512A and this terminal of P310 panel.

P310 Terminal	DM24512A
pin L4	pin 71
 - (c) If there is not 28 VDC at pin 71 of connector DM24512A, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector DM24512A to the SIU-1, M24512, in the P310 panel.

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- 3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
- (d) If there is 28 VDC at pin 71 of connector DM24512A, then continue.
- (4) Do a check of the SIU-1, M24512, in the P310 panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

- (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

———— **END OF TASK** ————

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801. Procedure To Be Determined - Fault Isolation

A. Maintenance Messages

- (1) This task is for maintenance messages: 24-31601, 24-31602.

B. Fault Isolation Procedure

- (1) At this time the FIM does not have a procedure for this fault. The FIM will contain a procedure for this fault in the future.

————— **END OF TASK** —————

802. Observed Fault with Correlated Maintenance Messages - Fault Isolation

A. Initial Evaluation

- (1) Find the fault code to the right of the fault description in the Observed Faults List (at the front of the FIM).
- (a) The first two digits of the fault code are the FIM chapter that you need. Go to the Fault Code Index in that chapter and find the fault code.
- (b) Find the maintenance message to the right of the fault code.
- (c) Find the task number on the same line as the maintenance message number.
- (d) Go to the task in the FIM and do the steps in the task.

————— **END OF TASK** —————

803. EICAS Message Latched by AIMS - Fault Isolation

A. Initial Evaluation

NOTE: AIMS can latch this EICAS message when it occurs. After you find the cause of the fault and correct it, it is possible that the EICAS message will continue to show.

- (1) Do not erase the EICAS message until you complete the task for the correlated maintenance message.
- (2) When this EICAS message occurs, do these steps:
- (a) Make sure that you have the correlated maintenance message number that shows on the MAT with the EICAS message.
- (b) Go back to the FIM Fault Code Index and find the fault code for the EICAS message.
- (c) Find the correlated maintenance message number and the task number to the right of the fault code.
- (d) Go to the specified task in the FIM and do the steps in the task.
- (e) After you do the actions in the task to correct the fault, do these steps:
- 1) Look at the MAT for the EICAS message.
- 2) If the MAT shows LATCHED for the EICAS message, then you must erase it from the EICAS status display. To erase it, do this task: Erasing a EICAS Status Message Latched by AIMS, AMM TASK 31-61-00-800-802.

————— **END OF TASK** —————

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