

CHAPTER

31

**INDICATING/
RECORDING
SYSTEMS**



**737-600/700/800/900
FAULT ISOLATION MANUAL**

**CHAPTER 31
INDICATING/RECORDING SYSTEMS**

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2	Oct 15/2021		209	Jun 15/2023		220	Oct 15/2022	
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102	Oct 15/2021		219	Oct 15/2021		230	BLANK	
103	Oct 15/2021		220	BLANK		31-52 TASKS		
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107	Oct 15/2021		203	Oct 15/2021		204	BLANK	
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114	BLANK		R 205	Oct 15/2023		206	Oct 15/2021	
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201	Oct 15/2021		R 207	Oct 15/2023		208	Oct 15/2021	
202	Oct 15/2021		208	Oct 15/2021		209	Oct 15/2021	
203	Oct 15/2021		R 209	Oct 15/2023		210	Oct 15/2021	
204	BLANK		R 210	Oct 15/2023		211	Oct 15/2021	
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219	Oct 15/2021		255	Oct 15/2021		291	Feb 15/2023	
220	Oct 15/2021		256	Oct 15/2021		292	Feb 15/2023	
221	Oct 15/2021		257	Oct 15/2021		293	Feb 15/2023	
222	Oct 15/2021		258	Oct 15/2021		294	Feb 15/2023	
223	Oct 15/2021		259	Oct 15/2021		295	Feb 15/2023	
224	Oct 15/2021		260	Oct 15/2021		296	Feb 15/2023	
225	Oct 15/2021		261	Oct 15/2021		297	Feb 15/2023	
226	Oct 15/2021		262	Oct 15/2021		298	Feb 15/2023	
227	Oct 15/2021		263	Oct 15/2021		298.1	Feb 15/2023	
228	Oct 15/2021		264	Oct 15/2021		298.2	Feb 15/2023	
229	Oct 15/2021		265	Oct 15/2021		298.3	Feb 15/2023	
230	Oct 15/2021		266	Oct 15/2021		298.4	Feb 15/2023	
231	Oct 15/2021		267	Oct 15/2021		298.5	Feb 15/2023	
232	Oct 15/2021		268	Oct 15/2021		298.6	Feb 15/2023	
233	Oct 15/2021		269	Oct 15/2021		298.7	Feb 15/2023	
234	Oct 15/2021		270	Oct 15/2021		298.8	Feb 15/2023	
235	Oct 15/2021		271	Oct 15/2021		298.9	Feb 15/2023	
236	Oct 15/2021		272	Oct 15/2021		298.10	Feb 15/2023	
237	Oct 15/2021		273	Feb 15/2023		298.11	Feb 15/2023	
238	Oct 15/2021		274	Feb 15/2023		298.12	Feb 15/2023	
239	Oct 15/2021		275	Feb 15/2023		298.13	Feb 15/2023	
240	Oct 15/2021		276	Feb 15/2023		298.14	Feb 15/2023	
241	Oct 15/2021		277	Feb 15/2023		298.15	Feb 15/2023	
242	Oct 15/2021		278	Feb 15/2023		298.16	Feb 15/2023	
243	Oct 15/2021		279	Feb 15/2023		298.17	Feb 15/2023	
244	Oct 15/2021		280	Feb 15/2023		298.18	Feb 15/2023	
245	Oct 15/2021		281	Feb 15/2023		298.19	Feb 15/2023	
246	Oct 15/2021		282	Feb 15/2023		298.20	Feb 15/2023	
247	Oct 15/2021		283	Feb 15/2023		298.21	Feb 15/2023	
248	Oct 15/2021		284	Feb 15/2023		298.22	Feb 15/2023	
249	Oct 15/2021		285	Feb 15/2023		298.23	Feb 15/2023	
250	Oct 15/2021		286	Feb 15/2023		298.24	Feb 15/2023	
251	Oct 15/2021		287	Feb 15/2023		298.25	Feb 15/2023	
252	Oct 15/2021		288	Feb 15/2023		298.26	Feb 15/2023	
253	Oct 15/2021		289	Feb 15/2023		298.27	Feb 15/2023	

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ECCN 9E991 BOEING PROPRIETARY - See title page for details

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298.28	Feb 15/2023		207	Oct 15/2021		R 243	Oct 15/2023	
298.29	Feb 15/2023		208	Oct 15/2021		R 244	Oct 15/2023	
298.30	Feb 15/2023		209	Oct 15/2021		R 245	Oct 15/2023	
298.31	Feb 15/2023		210	Oct 15/2021		R 246	Oct 15/2023	
298.32	Feb 15/2023		211	Oct 15/2021		R 247	Oct 15/2023	
298.33	Feb 15/2023		212	Oct 15/2021		O 248	Oct 15/2023	
298.34	Feb 15/2023		213	Oct 15/2021		O 249	Oct 15/2023	
298.35	Feb 15/2023		214	Oct 15/2021		R 250	Oct 15/2023	
298.36	Feb 15/2023		215	Oct 15/2021		R 251	Oct 15/2023	
R 298.37	Oct 15/2023		216	Oct 15/2021		R 252	Oct 15/2023	
298.38	Feb 15/2023		217	Oct 15/2021		R 253	Oct 15/2023	
298.39	Feb 15/2023		R 218	Oct 15/2023		R 254	Oct 15/2023	
298.40	Feb 15/2023		R 219	Oct 15/2023		R 255	Oct 15/2023	
298.41	Feb 15/2023		R 220	Oct 15/2023		O 256	Oct 15/2023	
298.42	Feb 15/2023		R 221	Oct 15/2023		O 257	Oct 15/2023	
298.43	Feb 15/2023		R 222	Oct 15/2023		O 258	Oct 15/2023	
R 298.44	Oct 15/2023		R 223	Oct 15/2023		O 259	Oct 15/2023	
298.45	Feb 15/2023		R 224	Oct 15/2023		O 260	Oct 15/2023	
298.46	Feb 15/2023		O 225	Oct 15/2023		O 261	Oct 15/2023	
298.47	Feb 15/2023		O 226	Oct 15/2023		O 262	Oct 15/2023	
298.48	Feb 15/2023		O 227	Oct 15/2023		O 263	Oct 15/2023	
298.49	Feb 15/2023		O 228	Oct 15/2023		O 264	Oct 15/2023	
298.50	Feb 15/2023		O 229	Oct 15/2023		O 265	Oct 15/2023	
298.51	Feb 15/2023		O 230	Oct 15/2023		O 266	Oct 15/2023	
298.52	Feb 15/2023		R 231	Oct 15/2023		O 267	Oct 15/2023	
298.53	Feb 15/2023		R 232	Oct 15/2023		O 268	Oct 15/2023	
298.54	BLANK		O 233	Oct 15/2023		O 269	Oct 15/2023	
31-62 TASK SUPPORT			O 234	Oct 15/2023		R 270	Oct 15/2023	
301	Oct 15/2021		R 235	Oct 15/2023		R 271	Oct 15/2023	
302	Oct 15/2021		R 236	Oct 15/2023		O 272	Oct 15/2023	
31-63 TASKS			R 237	Oct 15/2023		O 273	Oct 15/2023	
201	Oct 15/2021		R 238	Oct 15/2023		O 274	Oct 15/2023	
202	Oct 15/2021		R 239	Oct 15/2023		R 275	Oct 15/2023	
203	Oct 15/2021		O 240	Oct 15/2023		R 276	Oct 15/2023	
204	Oct 15/2021		O 241	Oct 15/2023		R 277	Oct 15/2023	
205	Oct 15/2021		O 242	Oct 15/2023		R 278	Oct 15/2023	
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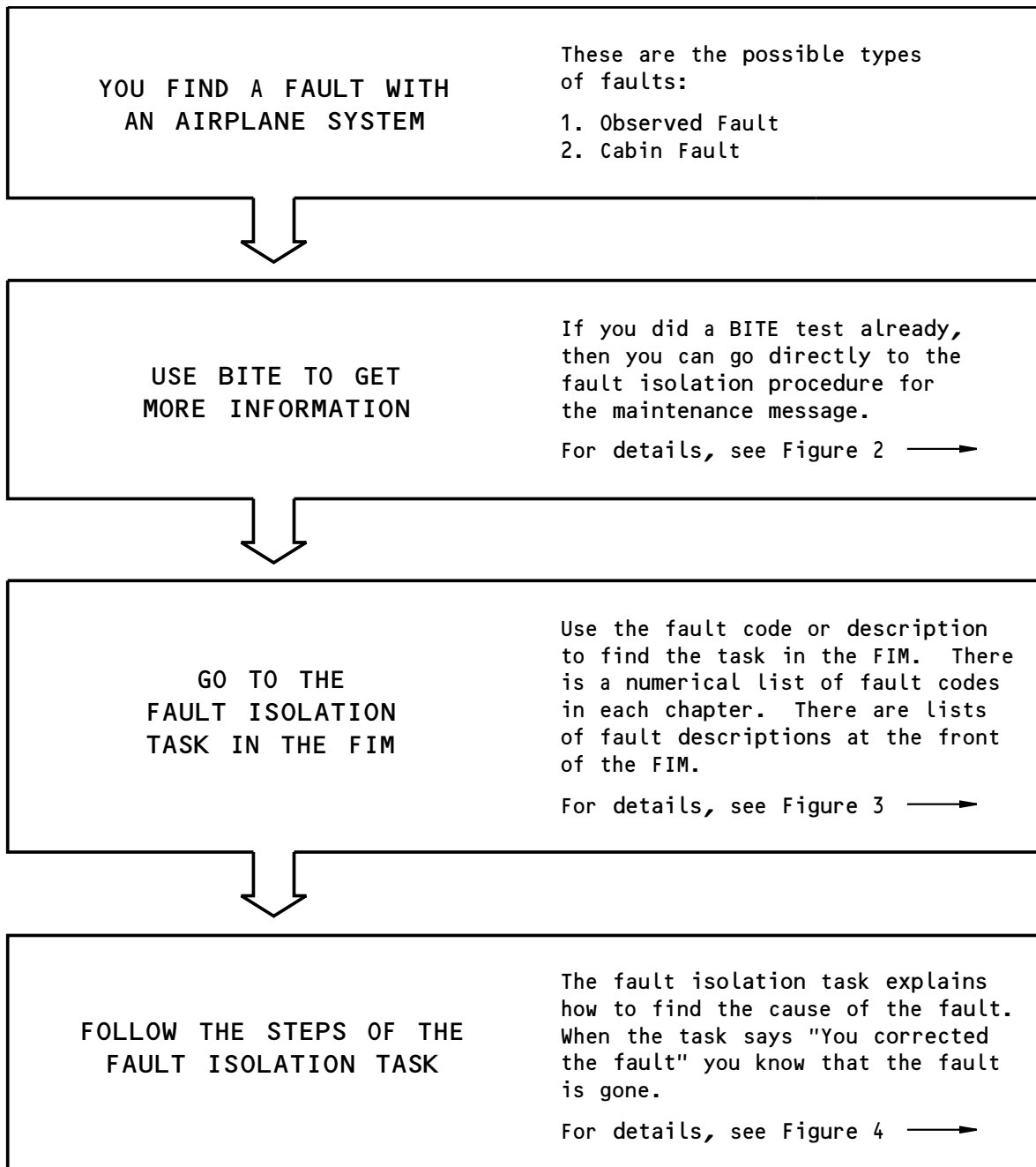
Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
31-63 TASKS (cont)								
R 279	Oct 15/2023							
R 280	Oct 15/2023							
R 281	Oct 15/2023							
R 282	Oct 15/2023							
O 283	Oct 15/2023							
O 284	Oct 15/2023							
O 285	Oct 15/2023							
O 286	Oct 15/2023							
R 287	Oct 15/2023							
O 288	Oct 15/2023							
R 289	Oct 15/2023							
R 290	Oct 15/2023							
R 291	Oct 15/2023							
R 292	Oct 15/2023							
O 293	Oct 15/2023							
O 294	Oct 15/2023							
R 295	Oct 15/2023							
R 296	Oct 15/2023							
R 297	Oct 15/2023							
O 298	Oct 15/2023							
O 298.1	Oct 15/2023							
O 298.2	Oct 15/2023							
O 298.3	Oct 15/2023							
O 298.4	Oct 15/2023							
R 298.5	Oct 15/2023							
O 298.6	Oct 15/2023							
R 298.7	Oct 15/2023							
R 298.8	Oct 15/2023							
31-98 TASKS								
201	Oct 15/2021							
202	BLANK							

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G04902 S0000148576_V1

**Basic Fault Isolation Process
Figure 1**

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Some airplane systems have built-in test equipment (BITE). IF the system finds a fault when you do a BITE test, it will give you a maintenance message.

A maintenance message can be any of these:

- a code
- a text message
- a light
- an indication.

To find the fault isolation task for a maintenance message, go to the Maintenance Message Index in the chapter for the applicable system.

If you do not know which chapter is the correct one, look at the list at the front of any Maintenance Message Index. For each system or component (LRU) that has BITE, this list gives the chapter number where you can find the Index that you need.

Find the maintenance message for the applicable LRU or system in the Index. Then find the task number on the same line as the maintenance message. Go to the task in the FIM and do the steps of the task (see Figure 4).

G04950 S0000148578_V1

Getting Fault Information from BITE
Figure 2

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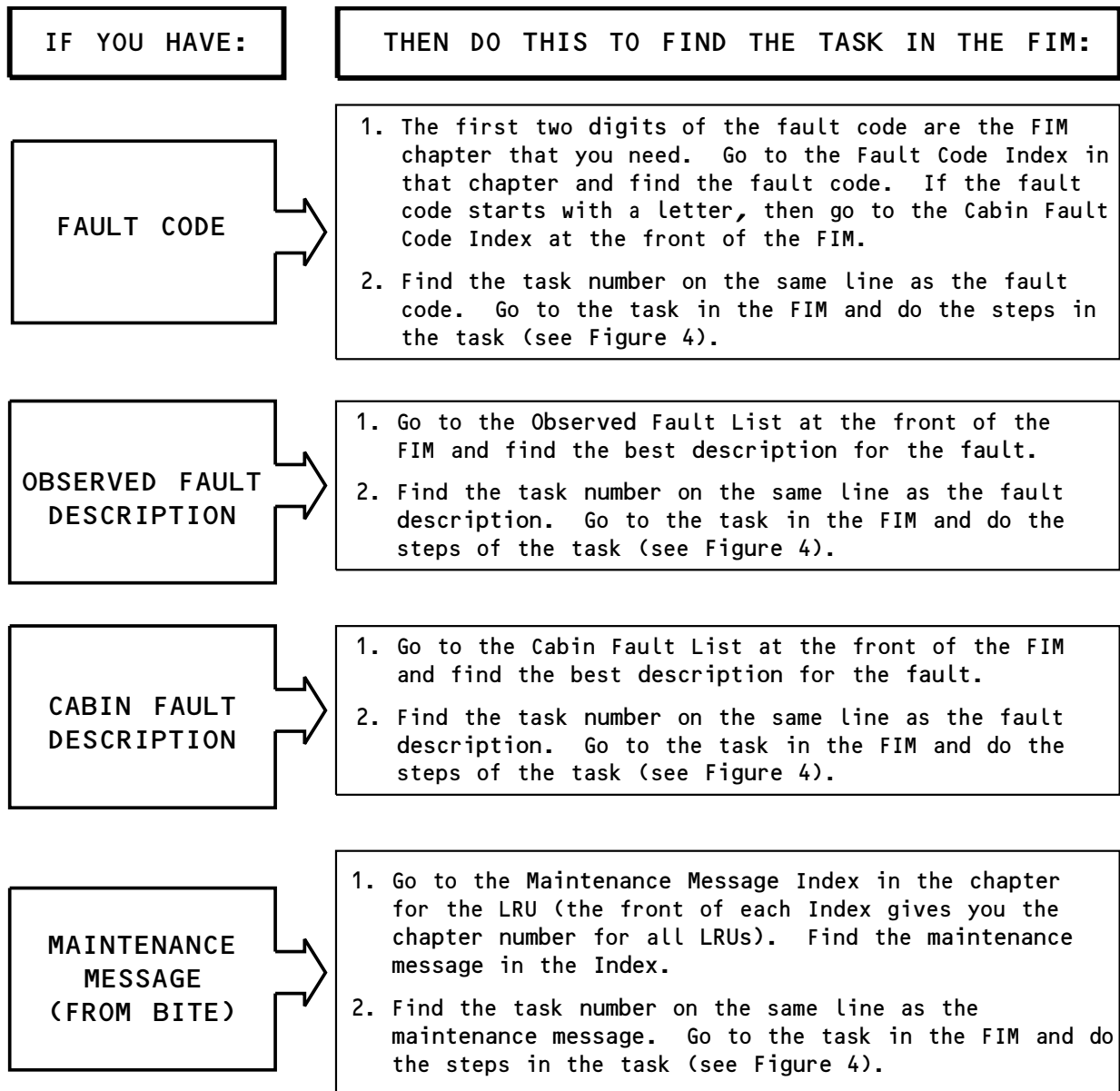
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G04979 S0000148579_V2

**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

POSSIBLE CAUSES

- The list of possible causes has the most likely cause first and the least likely cause last.
- You can use the maintenance records of your airline to determine if the fault occurred before. Compare the list of possible causes to the past maintenance actions. This will help prevent repetition of the same maintenance actions.

INITIAL EVALUATION PARAGRAPH

- The primary purpose of the Initial Evaluation paragraph at the start of the task is to help you find out if 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 maintenance action to take. Then monitor the airplane to see if the fault happens again on subsequent flights.
- The Initial Evaluation paragraph can also help you find out which Fault Isolation Procedure to use to isolate and correct the fault.

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.

G05009 S0000148580_V3

Doing the Fault Isolation Task Figure 4

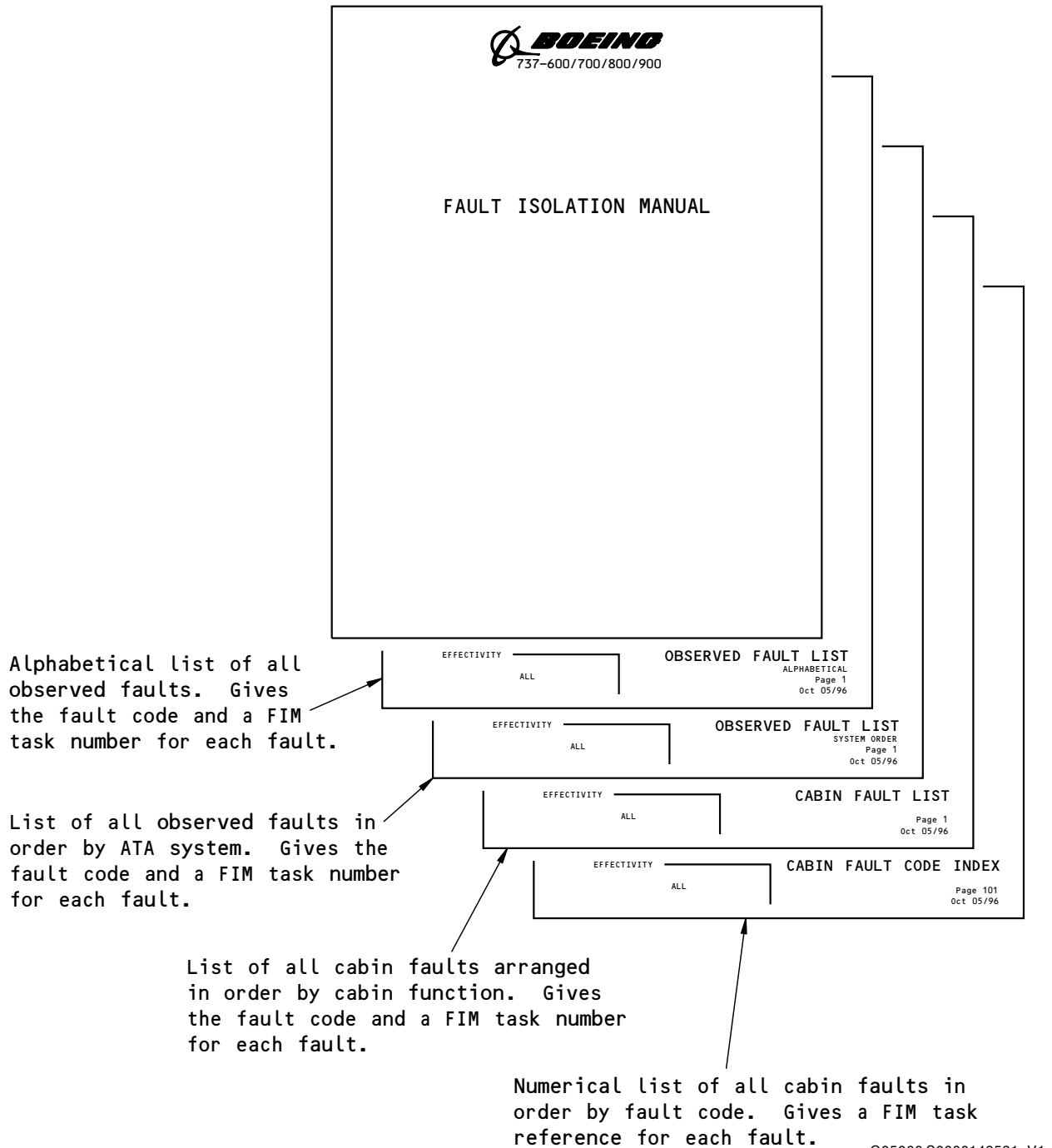
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Subjects at Front of FIM
Figure 5

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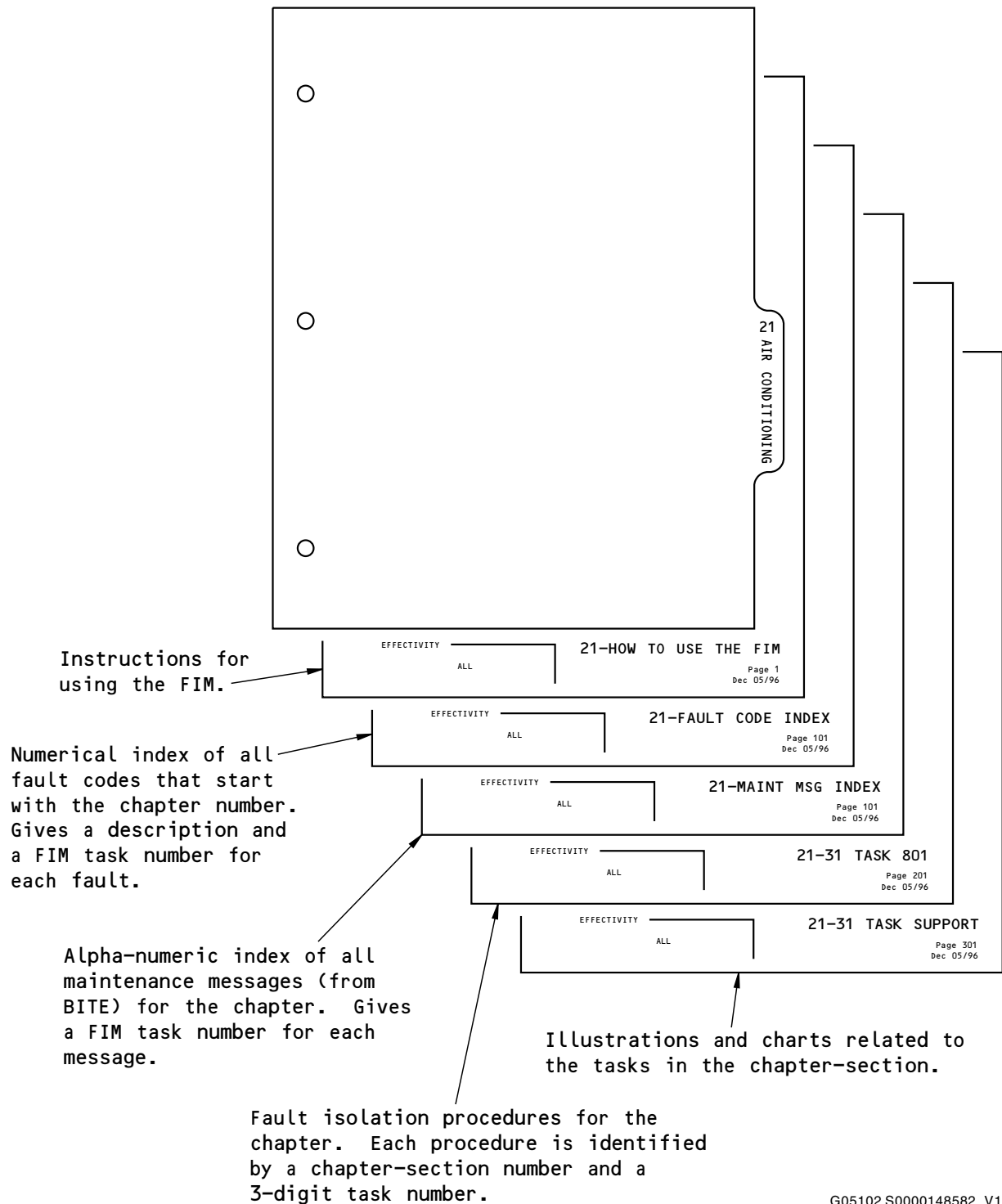
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Subjects in Each FIM Chapter
Figure 6

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
312 010 00	Takeoff warning horn: does not sound.	31-51 TASK 803
312 015 00	Takeoff warning horn: sounds (false warning).	31-51 TASK 803
312 020 31	Clock: does not operate - captain's.	31-25 TASK 801
312 020 32	Clock: does not operate - first officer's.	31-25 TASK 802
312 030 00	Landing warning horn: does not sound.	31-51 TASK 815
312 035 00	Landing warning horn: sounds (false warning).	31-51 TASK 815
313 010 00	FLIGHT RECORDER OFF light: light on.	31-31 TASK 805
313 015 41	Spoiler: does not agree with spoiler position - spoiler panel 03.	31-31 TASK 877
313 015 42	Spoiler: does not agree with spoiler position - spoiler panel 10.	31-31 TASK 877
313 121 00	Wireless Quick Access Recorder: data does not transmit.	31-31 TASK 809
313 201 00	Printer (flight deck): FAULT light is on.	31-33 TASK 801
315 101 00	MASTER CAUTION light: light does not come on during test.	31-52 TASK 801
316 020 31	EFIS control panel problem - captain's.	31-63 TASK 819
316 020 32	EFIS control panel problem - first officer's.	31-63 TASK 821
316 026 31	DISPLAYS CONTROL PANEL annunciation shows on pilot's display - captain's.	31-62 TASK 801
316 026 32	DISPLAYS CONTROL PANEL annunciation shows on pilot's display - first officer's.	31-62 TASK 801
316 030 41	CDS display unit problem - left inboard.	31-63 TASK 824
316 030 42	CDS display unit problem - right inboard.	31-63 TASK 824
316 040 41	CDS display unit problem - left outboard.	31-63 TASK 824
316 040 42	CDS display unit problem - right outboard.	31-63 TASK 824
316 050 46	CDS display unit problem - center upper.	31-63 TASK 824
316 050 47	CDS display unit problem - center lower.	31-63 TASK 824
316 060 31	CDS MAINT annunciation shows on pilot's display - captain's.	31-62 TASK 884
316 060 32	CDS MAINT annunciation shows on pilot's display - first officer's.	31-62 TASK 884
316 070 31	CDS FAULT annunciation shows on pilot's display - captain's.	31-62 TASK 884
316 070 32	CDS FAULT annunciation shows on pilot's display - first officer's.	31-62 TASK 884
316 080 31	DSPLY SOURCE annunciation shows on pilot's display - captain's.	31-63 TASK 820
316 080 32	DSPLY SOURCE annunciation shows on pilot's display - first officer's.	31-63 TASK 820
316 081 00	Common Display System: Display Units are blanking during an APU Start on Battery Only.	31-63 TASK 828
316 082 01	Common Display System: DEU-1 Restart during an APU Start on Battery Only - No. 1.	31-63 TASK 828

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
316 083 41	DSPLY SOURCE 1 annunciation shows on display: captains's and first officer's.	31-63 TASK 820
316 083 42	DSPLY SOURCE 2 annunciation shows on display: captains's and first officer's.	31-63 TASK 820
316 084 00	Flap Maneuvering Speed Cursor: Does Not Show on the PFD.	31-63 TASK 829

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<u>LRU/SYSTEM</u>	<u>SHORT NAME</u>	<u>CHAPTER</u>
Air Data Inertial Reference System	ADIRS	34
Air Traffic Controller Transponder - 1 (Left)	ATC XPDR - 1 (L)	34
Air Traffic Controller Transponder - 2 (Right)	ATC XPDR - 2 (R)	34
Airborne Vibration Monitor System Signal Conditioner	AVM SIG COND	77
Antiskid Control Unit	ANTISKID	32
Attendant Control Panel	ACP	23
Automatic Direction Finder Receiver - 1	ADF RECVR - 1	34
Automatic Direction Finder Receiver - 2	ADF RECVR - 2	34
Autothrottle Computer	A/T COMPUTER	22
Auxiliary Power Unit	APU	49
Auxiliary Power Unit Generator Control Unit	APU GCU	24
Bus Power Control Unit	BPCU	24
Cabin Pressure Controller	CAB PRESS CON	21
Cargo Electronic Unit - Lower Aft	CEU - LWR AFT	26
Cargo Electronic Unit - Lower Forward	CEU - LWR FWD	26
Cargo Electronic Unit - Main Aft	CEU - MAIN AFT	26
Cargo Fire Control Panel	CFCP	26
Common Display System	CDS	31
Compartment Overheat Detection Control Module	WING/BODY OHT	26
Digital Flight Control System	DFCS	22
Distance Measurement Equipment Interrogator	DME INTROGTR	34
Electrical Meters, Battery, and Galley Power Module	P5-13	24
Electronic Engine Controller - 1	ENGINE - 1	73
Electronic Engine Controller - 2	ENGINE - 2	73
Emergency Locator Transmitter	ELT	23
Engine Accessory Unit	EAU	78
Engine Accessory Unit/TR DEPLOY ENG 1	EAU/TR DPLOY-ENG 1	78
Engine Accessory Unit/TR DEPLOY ENG 2	EAU/TR DPLOY-ENG 2	78
Engine Accessory Unit/TR STOW ENG 1	EAU/TR STOW-ENG 1	78
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Engine and Auxiliary Power Unit Fire Detection Control Module	ENG/APU FIRE	26
Enhanced Digital Flight Control Computer-A	EDFCC-A	22
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Flap/Slat Electronics Unit	FSEU	27
Flight Data Acquisition Unit	FDAU	31

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<u>LRU/SYSTEM</u>	<u>SHORT NAME</u>	<u>CHAPTER</u>
Flight Management Computer System	FMCS	34
Fuel Quantity Indicating System	FQIS	28
Generator Control Unit - 1	GCU - 1	24
Generator Control Unit - 2	GCU - 2	24
Ground Proximity Computer	GROUND PROX	34
High Frequency Transceiver	HF XCVR	23
Multi-Mode Receiver	MMR	34
Nitrogen Generation System BITE Display Unit	NGS	47
Pack Flow Temperature Controller	PFTC	21
Pack/Zone Temperature Controller - Left	PACK/ZN CON - L	21
Pack/Zone Temperature Controller - Right	PACK/ZN CON - R	21
Proximity Switch Electronics Unit	PSEU	32
Radio Altimeter Receiver/Transmitter	RADIO ALTIMTR	34
Satellite Communications System	SATCOM	23
Stall Management Yaw Damper Computer - 1	SMYD - 1	27
Stall Management Yaw Damper Computer - 2	SMYD - 2	27
Traffic Alert and Collision Avoidance System Computer	TCAS COMPUTER	34
VHF Omnidirectional Ranging Marker Beacon Receiver	VOR/MKR RCVR	34
Very High Frequency Transceiver	VHF XCVR	23
Waste Tank Logic Control Module	WASTE TANK	38
Weather Radar Receiver/Transmitter	WEATHER RADAR	34
Window Heat Control Unit - Left Forward	WHCU - L FWD	30
Window Heat Control Unit - Left Side	WHCU - L SIDE	30
Window Heat Control Unit - Right Forward	WHCU - R FWD	30
Window Heat Control Unit - Right Side	WHCU - R SIDE	30
Window Heat Control Unit 1 - Left Forward and Right Side	WHCU1 - L FWD/R SIDE	30
Window Heat Control Unit 2 - Right Forward and Left Side	WHCU2 - R FWD/L SIDE	30

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CDS	31-60011 DEU-1 FAULT	31-62 TASK 805
CDS	31-60012 DEU-2 FAULT	31-62 TASK 806
CDS	31-60031 DEU-1 RESET	31-62 TASK 807
CDS	31-60032 DEU-2 RESET	31-62 TASK 808
CDS	31-60041 DEU-1 SOFTWARE RESET	31-62 TASK 809
CDS	31-60042 DEU-2 SOFTWARE RESET	31-62 TASK 810
CDS	31-60051 DEU-1 COAX FAULT	31-62 TASK 811
CDS	31-60052 DEU-2 COAX FAULT	31-62 TASK 812
CDS	31-60060 DEU-1 AND DEU-2 PROGRAM PIN POSITION FAULT	31-62 TASK 813
CDS	31-60061 DEU-1 PROGRAM PIN FAULT	31-62 TASK 814
CDS	31-60062 DEU-2 PROGRAM PIN FAULT	31-62 TASK 815
CDS	31-60070 DEU1 AND DEU2 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 816
CDS	31-60071 DEU-1 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 817
CDS	31-60072 DEU-2 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 818
CDS	31-60101 NO HOT BATTERY POWER	31-62 TASK 819
CDS	31-60102 NO HOT BATTERY POWER	31-62 TASK 820
CDS	31-60221 DEU-1 A429 XMITTER FAULT -EEC1 CHANNEL A BUS	31-62 TASK 871
CDS	31-60222 DEU-2 A429 XMITTER FAULT -EEC1 CHANNEL A BUS	31-62 TASK 872
CDS	31-60231 DEU-1 A429 XMITTER FAULT -CHANNEL 1 XTALK BUS	31-62 TASK 871
CDS	31-60232 DEU-2 A429 XMITTER FAULT -CHANNEL 1 XTALK BUS	31-62 TASK 872
CDS	31-60241 DEU-1 A429 XMITTER FAULT -FMC/MAINTENANCE BUS	31-62 TASK 871
CDS	31-60242 DEU-2 A429 XMITTER FAULT -FMC/MAINTENANCE BUS	31-62 TASK 872
CDS	31-60251 DEU-1 A429 XMITTER FAULT -EEC1 CHANNEL B BUS	31-62 TASK 871
CDS	31-60252 DEU-2 A429 XMITTER FAULT -EEC1 CHANNEL B BUS	31-62 TASK 872
CDS	31-60261 DEU-1 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 1	31-62 TASK 871

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CDS	31-60262 DEU-2 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 1	31-62 TASK 872
CDS	31-60271 DEU-1 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 1	31-62 TASK 871
CDS	31-60272 DEU-2 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 1	31-62 TASK 872
CDS	31-60281 DEU-1 A429 XMITTER FAULT -DEU-EEC BUS	31-62 TASK 871
CDS	31-60282 DEU-2 A429 XMITTER FAULT -DEU-EEC BUS	31-62 TASK 872
CDS	31-60311 DEU-1 A429 XMITTER FAULT -CDS GEN PURPOSE BUS	31-62 TASK 871
CDS	31-60312 DEU-2 A429 XMITTER FAULT -CDS GEN PURPOSE BUS	31-62 TASK 872
CDS	31-60321 DEU-1 A429 XMITTER FAULT -EEC 2 CHANNEL A BUS	31-62 TASK 871
CDS	31-60322 DEU-2 A429 XMITTER FAULT -EEC 2 CHANNEL A BUS	31-62 TASK 872
CDS	31-60331 DEU-1 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 2	31-62 TASK 871
CDS	31-60332 DEU-2 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 2	31-62 TASK 872
CDS	31-60351 DEU-1 A429 XMITTER FAULT -CHANNEL 2 XTALK BUS	31-62 TASK 871
CDS	31-60352 DEU-2 A429 XMITTER FAULT -CHANNEL 2 XTALK BUS	31-62 TASK 872
CDS	31-60361 DEU-1 A429 XMITTER FAULT -EEC 2 CHANNEL B BUS	31-62 TASK 871
CDS	31-60362 DEU-2 A429 XMITTER FAULT -EEC 2 CHANNEL B BUS	31-62 TASK 872
CDS	31-60371 DEU-1 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 2	31-62 TASK 871
CDS	31-60372 DEU-2 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 2	31-62 TASK 872
CDS	31-60411 DEU-1 DUDB AND DU-LOB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60412 DEU-2 DUDB AND DU-LOB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60421 DEU-1 DUDB AND DU-LIB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60422 DEU-2 DUDB AND DU-LIB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60431 DEU-1 DUDB AND DU-C1 ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60432 DEU-2 DUDB AND DU-C1 ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60441 DEU-1 DUDB AND DU-RIB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60442 DEU-2 DUDB AND DU-RIB ARE INCOMPATIBLE	31-62 TASK 874

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CDS	31-60451 DEU-1 DUDB AND DU-ROB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60452 DEU-2 DUDB AND DU-ROB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60461 DEU-1 DUDB AND DU-C2 ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60462 DEU-2 DUDB AND DU-C2 ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-61011 DU-LOB FAIL	31-62 TASK 821
CDS	31-61012 DU-LIB FAIL	31-62 TASK 822
CDS	31-61013 DU-CU FAIL	31-62 TASK 823
CDS	31-61014 DU-RIB FAIL	31-62 TASK 824
CDS	31-61015 DU-ROB FAIL	31-62 TASK 825
CDS	31-61016 DU-CL FAIL	31-62 TASK 826
CDS	31-61017 RLS-L FAIL	31-62 TASK 827
CDS	31-61018 RLS-R FAIL	31-62 TASK 828
CDS	31-61021 DU-LOB COAX FAULT	31-62 TASK 829
CDS	31-61022 DU-LIB COAX FAULT	31-62 TASK 830
CDS	31-61023 DU-CU COAX FAULT	31-62 TASK 831
CDS	31-61024 DU-RIB COAX FAULT	31-62 TASK 832
CDS	31-61025 DU-ROB COAX FAULT	31-62 TASK 833
CDS	31-61026 DU-CL COAX FAULT	31-62 TASK 834
CDS	31-61031 DU-LOB LOW BRIGHTNESS	31-62 TASK 835
CDS	31-61032 DU-LIB LOW BRIGHTNESS	31-62 TASK 836
CDS	31-61033 DU-CU LOW BRIGHTNESS	31-62 TASK 837
CDS	31-61034 DU-RIB LOW BRIGHTNESS	31-62 TASK 838
CDS	31-61035 DU-ROB LOW BRIGHTNESS	31-62 TASK 839
CDS	31-61036 DU-CL LOW BRIGHTNESS	31-62 TASK 840
CDS	31-61037 DU-LOB OVERHEAT	31-62 TASK 886
CDS	31-61038 DU-LIB OVERHEAT	31-62 TASK 886
CDS	31-61039 DU-CU OVERHEAT	31-62 TASK 886
CDS	31-61040 DU-RIB OVERHEAT	31-62 TASK 886
CDS	31-61041 DU-ROB OVERHEAT	31-62 TASK 886
CDS	31-61042 DU-CL OVERHEAT	31-62 TASK 886
CDS	31-63110 ENGINE 1 OIL QUANTITY INVALID	31-62 TASK 841
CDS	31-63120 ENGINE 2 OIL QUANTITY INVALID	31-62 TASK 842
CDS	31-63130 ENGINE 1 N1 RPM INVALID	31-62 TASK 843
CDS	31-63140 ENGINE 2 N1 RPM INVALID	31-62 TASK 844
CDS	31-63150 ENGINE 1 N2 RPM INVALID	31-62 TASK 845

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CDS	31-63160 ENGINE 2 N2 RPM INVALID	31-62 TASK 846
CDS	31-63210 HYDRAULIC OIL QUANTITY SYS A INVALID	31-62 TASK 847
CDS	31-63220 HYDRAULIC OIL QUANTITY SYS B INVALID	31-62 TASK 848
CDS	31-64111 ENGINE 1 OIL QUANTITY INVALID TO DEU-1	31-62 TASK 849
CDS	31-64112 ENGINE 1 OIL QUANTITY INVALID TO DEU-2	31-62 TASK 850
CDS	31-64121 ENGINE 2 OIL QUANTITY INVALID TO DEU-1	31-62 TASK 851
CDS	31-64122 ENGINE 2 OIL QUANTITY INVALID TO DEU-2	31-62 TASK 852
CDS	31-64131 ENGINE 1 N1 RPM INVALID TO DEU-1	31-62 TASK 853
CDS	31-64132 ENGINE 1 N1 RPM INVALID TO DEU-2	31-62 TASK 854
CDS	31-64141 ENGINE 2 N1 RPM INVALID TO DEU-1	31-62 TASK 855
CDS	31-64142 ENGINE 2 N1 RPM INVALID TO DEU-2	31-62 TASK 856
CDS	31-64151 ENGINE 1 N2 RPM INVALID TO DEU-1	31-62 TASK 857
CDS	31-64152 ENGINE 1 N2 RPM INVALID TO DEU-2	31-62 TASK 858
CDS	31-64161 ENGINE 2 N2 RPM INVALID TO DEU-1	31-62 TASK 859
CDS	31-64162 ENGINE 2 N2 RPM INVALID TO DEU-2	31-62 TASK 860
CDS	31-64201 HYDRAULIC OIL PRESSURE SYS A INVALID	31-62 TASK 861
CDS	31-64202 HYDRAULIC OIL PRESSURE SYS B INVALID	31-62 TASK 862
CDS	31-64211 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-1	31-62 TASK 863
CDS	31-64212 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-2	31-62 TASK 864
CDS	31-64221 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-1	31-62 TASK 865
CDS	31-64222 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-2	31-62 TASK 866
CDS	31-65010 PITCH DISAGREE	31-62 TASK 867
CDS	31-65020 ROLL DISAGREE	31-62 TASK 868
CDS	31-65030 EEC DISAGREE	31-62 TASK 869
CDS	31-65040 FMC DATA DISAGREE	31-62 TASK 870
CDS	31-65050 ALTITUDE DISAGREE	31-62 TASK 875
CDS	31-65060 AIRSPEED DISAGREE	31-62 TASK 876
CDS	31-65070 AOA DISAGREE	34-21 TASK 834
CDS	31-67020 NO ADF-1 DATA	31-63 TASK 809
CDS	31-67030 NO ADF-2 DATA	31-63 TASK 809
CDS	31-67051 NO ADIRU-1 DATA	31-63 TASK 809
CDS	31-67052 NO ADIRU-1 DATA	31-63 TASK 809

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CDS	31-67061 NO ADIRU-2 DATA	31-63 TASK 809
CDS	31-67062 NO ADIRU-2 DATA	31-63 TASK 809
CDS	31-67070 NO AUTO-THROTTLE DATA	31-63 TASK 809
CDS	31-67081 NO DEU-2 DATA	31-63 TASK 807
CDS	31-67082 NO DEU-1 DATA	31-63 TASK 808
CDS	31-67100 NO DFDAU DATA	31-63 TASK 809
CDS	31-67110 NO DU-LOB DATA	31-63 TASK 801
CDS	31-67120 NO DU-LIB DATA	31-63 TASK 802
CDS	31-67130 NO DU-CU DATA	31-63 TASK 803
CDS	31-67140 NO DU-RIB DATA	31-63 TASK 805
CDS	31-67150 NO DU-ROB DATA	31-63 TASK 806
CDS	31-67160 NO DU-CL DATA	31-63 TASK 804
CDS	31-67170 NO DME-1 DATA	31-63 TASK 809
CDS	31-67180 NO DME-2 DATA	31-63 TASK 809
CDS	31-67200 NO EEC-1 DATA	31-63 TASK 809
CDS	31-67230 NO EEC-2 DATA	31-63 TASK 809
CDS	31-67300 NO CAPT EFIS CP DATA	31-63 TASK 809
CDS	31-67310 NO F/O EFIS CP DATA	31-63 TASK 809
CDS	31-67320 NO AVM DATA	31-63 TASK 809
CDS	31-67330 NO FCC-A DATA	31-63 TASK 809
CDS	31-67340 NO FCC-B DATA	31-63 TASK 809
CDS	31-67400 NO FMC-1 DATA	31-63 TASK 809
CDS	31-67440 NO FMC-2 DATA	31-63 TASK 809
CDS	31-67470 NO FSEU DATA	31-63 TASK 809
CDS	31-67500 NO FQPU DATA	31-63 TASK 809
CDS	31-67550 NO GPWC DATA	31-63 TASK 809
CDS	31-67560 NO ILS-1 DATA	31-63 TASK 809
CDS	31-67570 NO ILS-2 DATA	31-63 TASK 809
CDS	31-67600 NO MCP DATA	31-63 TASK 809
CDS	31-67700 NO RA-1 DATA	31-63 TASK 809
CDS	31-67710 NO RA-2 DATA	31-63 TASK 809
CDS	31-67730 NO STALL MANAGEMENT-1 DATA	31-63 TASK 809
CDS	31-67740 NO STALL MANAGEMENT-2 DATA	31-63 TASK 809
CDS	31-67800 NO TCAS DATA	31-63 TASK 809
CDS	31-67830 NO VOR-1 DATA	31-63 TASK 809

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CDS	31-67840 NO VOR-2 DATA	31-63 TASK 809
CDS	31-68051 NO ADIRU-1 DATA ON ADR-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68052 NO ADIRU-1 DATA ON ADR-L-4 BUS 1 AND 2	31-63 TASK 812
CDS	31-68055 NO ADIRU-1 DATA ON IR-L-1 BUS	31-63 TASK 812
CDS	31-68056 NO ADIRU-1 DATA ON IR-L-3 BUS	31-63 TASK 812
CDS	31-68061 NO ADIRU-2 DATA ON ADR-R-4 BUS 1 AND 2	31-63 TASK 812
CDS	31-68062 NO ADIRU-2 DATA ON ADR-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68065 NO ADIRU-2 DATA ON IR-R-3 BUS	31-63 TASK 812
CDS	31-68066 NO ADIRU-2 DATA ON IR-R-1 BUS	31-63 TASK 812
CDS	31-68081 NO DEU-2 DATA ON CHANNEL 1 CROSSTALK BUS	31-63 TASK 810
CDS	31-68082 NO DEU-1 DATA ON CHANNEL 1 CROSSTALK BUS	31-63 TASK 811
CDS	31-68083 NO DEU-2 DATA ON CHANNEL 2 CROSSTALK BUS	31-63 TASK 810
CDS	31-68084 NO DEU-1 DATA ON CHANNEL 2 CROSSTALK BUS	31-63 TASK 811
CDS	31-68210 NO EEC-1 CHANNEL-A BUS DATA	31-63 TASK 812
CDS	31-68220 NO EEC-1 CHANNEL-B BUS DATA	31-63 TASK 812
CDS	31-68240 NO EEC-2 CHANNEL-A BUS DATA	31-63 TASK 812
CDS	31-68250 NO EEC-2 CHANNEL-B BUS DATA	31-63 TASK 812
CDS	31-68410 NO FMC-1 DATA ON FMC-L-08 BUS	31-63 TASK 812
CDS	31-68420 NO FMC-1 DATA ON FMC-L-09 BUS	31-63 TASK 812
CDS	31-68431 NO FMC-1 DATA ON FMC-01 BUS	31-63 TASK 813
CDS	31-68432 NO FMC-1 DATA ON FMC-02 BUS	31-63 TASK 814
CDS	31-68450 NO FMC-2 DATA ON FMC-R-08 BUS	31-63 TASK 812
CDS	31-68460 NO FMC-2 DATA ON FMC-R-09 BUS	31-63 TASK 812
CDS	31-68471 NO FMC-2 DATA ON FMC-01 BUS	31-63 TASK 815
CDS	31-68472 NO FMC-2 DATA ON FMC-02 BUS	31-63 TASK 816
CDS	31-68510 NO FQPU DATA ON DATA BUS-1	31-63 TASK 812
CDS	31-68520 NO FQPU DATA ON DATA BUS-2	31-63 TASK 812
CDS	31-68530 NO FQPU DATA ON DATA BUS-3	31-63 TASK 812
CDS	31-68561 NO ILS-1 DATA ON ILS-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68562 NO ILS-1 DATA ON ILS-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68571 NO ILS-2 DATA ON ILS-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68572 NO ILS-2 DATA ON ILS-R-2 BUS 1 AND 2	31-63 TASK 812

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CDS	31-68610 NO MCP DATA ON MCP-1 BUS	31-63 TASK 812
CDS	31-68620 NO MCP DATA ON MCP-2 BUS	31-63 TASK 812
CDS	31-68810 NO TCAS DATA ON TCAS-1 BUS	31-63 TASK 812
CDS	31-68820 NO TCAS DATA ON TCAS-2 BUS	31-63 TASK 812
CDS	31-68861 NO ARINC-708 CAPT DATA	31-63 TASK 823
CDS	31-68862 NO ARINC-708 CAPT DATA	31-63 TASK 823
CDS	31-68871 NO ARINC-708 F/O DATA	31-63 TASK 823
CDS	31-68872 NO ARINC-708 F/O DATA	31-63 TASK 823
CDS	31-69021 NO ADF-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69022 NO ADF-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69031 NO ADF-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69032 NO ADF-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69051 NO ADIRU-1 DATA ON ADR-L-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69052 NO ADIRU-1 DATA ON ADR-L-4 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69053 NO ADIRU-1 DATA ON ADR-L-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69054 NO ADIRU-1 DATA ON ADR-L-4 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69061 NO ADIRU-2 DATA ON ADR-R-4 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69062 NO ADIRU-2 DATA ON ADR-R-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69063 NO ADIRU-2 DATA ON ADR-R-4 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69064 NO ADIRU-2 DATA ON ADR-R-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69071 NO AUTO-THROTTLE DATA TO DEU-1	31-63 TASK 817
CDS	31-69072 NO AUTO-THROTTLE DATA TO DEU-2	31-63 TASK 818
CDS	31-69101 NO DFDAU DATA TO DEU-1	31-63 TASK 817
CDS	31-69102 NO DFDAU DATA TO DEU-2	31-63 TASK 818
CDS	31-69111 NO DU-LOB DATA TO DEU-1	31-63 TASK 817
CDS	31-69112 NO DU-LOB DATA TO DEU-2	31-63 TASK 818
CDS	31-69121 NO DU-LIB DATA TO DEU-1	31-63 TASK 817
CDS	31-69122 NO DU-LIB DATA TO DEU-2	31-63 TASK 818
CDS	31-69131 NO DU-CU DATA TO DEU-1	31-63 TASK 817
CDS	31-69132 NO DU-CU DATA TO DEU-2	31-63 TASK 818
CDS	31-69141 NO DU-RIB DATA TO DEU-1	31-63 TASK 817
CDS	31-69142 NO DU-RIB DATA TO DEU-2	31-63 TASK 818
CDS	31-69151 NO DU-ROB DATA TO DEU-1	31-63 TASK 817
CDS	31-69152 NO DU-ROB DATA TO DEU-2	31-63 TASK 818
CDS	31-69161 NO DU-CL DATA TO DEU-1	31-63 TASK 817

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CDS	31-69162 NO DU-CL DATA TO DEU-2	31-63 TASK 818
CDS	31-69171 NO DME-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69172 NO DME-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69181 NO DME-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69182 NO DME-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69211 NO EEC-1 CHANNEL-A BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69212 NO EEC-1 CHANNEL-A BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69221 NO EEC-1 CHANNEL-B BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69222 NO EEC-1 CHANNEL-B BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69241 NO EEC-2 CHANNEL-A BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69242 NO EEC-2 CHANNEL-A BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69251 NO EEC-2 CHANNEL-B BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69252 NO EEC-2 CHANNEL-B BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69301 NO CAPT EFIS CP DATA TO DEU-1	31-63 TASK 817
CDS	31-69302 NO CAPT EFIS CP DATA TO DEU-2	31-63 TASK 818
CDS	31-69311 NO F/O EFIS CP DATA TO DEU-1	31-63 TASK 817
CDS	31-69312 NO F/O EFIS CP DATA TO DEU-2	31-63 TASK 818
CDS	31-69321 NO AVM DATA TO DEU-1	31-63 TASK 817
CDS	31-69322 NO AVM DATA TO DEU-2	31-63 TASK 818
CDS	31-69331 NO FCC-A DATA TO DEU-1	31-63 TASK 817
CDS	31-69332 NO FCC-A DATA TO DEU-2	31-63 TASK 818
CDS	31-69341 NO FCC-B DATA TO DEU-1	31-63 TASK 817
CDS	31-69342 NO FCC-B DATA TO DEU-2	31-63 TASK 818
CDS	31-69411 NO FMC-1 DATA ON FMC-L-08 BUS TO DEU-1	31-63 TASK 817
CDS	31-69412 NO FMC-1 DATA ON FMC-L-08 BUS TO DEU-2	31-63 TASK 818
CDS	31-69421 NO FMC-1 DATA ON FMC-L-09 BUS TO DEU-1	31-63 TASK 817
CDS	31-69422 NO FMC-1 DATA ON FMC-L-09 BUS TO DEU-2	31-63 TASK 818
CDS	31-69451 NO FMC-2 DATA ON FMC-R-08 BUS TO DEU-1	31-63 TASK 817
CDS	31-69452 NO FMC-2 DATA ON FMC-R-08 BUS TO DEU-2	31-63 TASK 818
CDS	31-69461 NO FMC-2 DATA ON FMC-R-09 BUS TO DEU-1	31-63 TASK 817
CDS	31-69462 NO FMC-2 DATA ON FMC-R-09 BUS TO DEU-2	31-63 TASK 818
CDS	31-69471 NO FSEU DATA TO DEU-1	31-63 TASK 817
CDS	31-69472 NO FSEU DATA TO DEU-2	31-63 TASK 818
CDS	31-69511 NO FQPU DATA ON DATA BUS-1 TO DEU-1	31-63 TASK 817
CDS	31-69512 NO FQPU DATA ON DATA BUS-1 TO DEU-2	31-63 TASK 818

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CDS	31-69521 NO FQPU DATA ON DATA BUS-2 TO DEU-1	31-63 TASK 817
CDS	31-69522 NO FQPU DATA ON DATA BUS-2 TO DEU-2	31-63 TASK 818
CDS	31-69531 NO FQPU DATA ON DATA BUS-3 TO DEU-1	31-63 TASK 817
CDS	31-69532 NO FQPU DATA ON DATA BUS-3 TO DEU-2	31-63 TASK 818
CDS	31-69551 NO GPWC DATA TO DEU-1	31-63 TASK 817
CDS	31-69552 NO GPWC DATA TO DEU-2	31-63 TASK 818
CDS	31-69561 NO ILS-1 DATA ON ILS-L-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69562 NO ILS-1 DATA ON ILS-L-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69563 NO ILS-1 DATA ON ILS-L-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69564 NO ILS-1 DATA ON ILS-L-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69571 NO ILS-2 DATA ON ILS-R-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69572 NO ILS-2 DATA ON ILS-R-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69573 NO ILS-2 DATA ON ILS-R-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69574 NO ILS-2 DATA ON ILS-R-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69611 NO MCP DATA ON MCP-1 BUS TO DEU-1	31-63 TASK 817
CDS	31-69612 NO MCP DATA ON MCP-1 BUS TO DEU-2	31-63 TASK 818
CDS	31-69621 NO MCP DATA ON MCP-2 BUS TO DEU-1	31-63 TASK 817
CDS	31-69622 NO MCP DATA ON MCP-2 BUS TO DEU-2	31-63 TASK 818
CDS	31-69701 NO RA-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69702 NO RA-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69711 NO RA-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69712 NO RA-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69731 NO STALL MANAGEMENT-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69732 NO STALL MANAGEMENT-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69741 NO STALL MANAGEMENT-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69742 NO STALL MANAGEMENT-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69811 NO TCAS DATA ON TCAS-1 BUS TO DEU-1	31-63 TASK 817
CDS	31-69812 NO TCAS DATA ON TCAS-1 BUS TO DEU-2	31-63 TASK 818
CDS	31-69821 NO TCAS DATA ON TCAS-2 BUS TO DEU-1	31-63 TASK 817
CDS	31-69822 NO TCAS DATA ON TCAS-2 BUS TO DEU-2	31-63 TASK 818
CDS	31-69831 NO VOR-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69832 NO VOR-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69841 NO VOR-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69842 NO VOR-2 DATA TO DEU-2	31-63 TASK 818
FDAU	DFDAU CAUTION	31-31 TASK 802

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
FDAU	DFDAU FAIL	31-31 TASK 802
FDAU	DFDR FAIL	31-31 TASK 803
FDAU	PS FAIL 103	31-31 TASK 808
FDAU	PS FAIL 104	31-31 TASK 807
FDAU	PS FAIL 105	31-31 TASK 808
PSEU	31-51001 GSBV CL FAULT	32-61 TASK 825
PSEU	31-51101 GSBV CL FAULT	32-61 TASK 825
PSEU	31-52001 TOW INHB FAULT	32-09 TASK 810
PSEU	31-52002 TRA L LT 53 FAULT	32-09 TASK 815
PSEU	31-52003 TRA R LT 53 FAULT	32-09 TASK 815
PSEU	31-52004 STAB TRIM DISAGREE	32-09 TASK 817
PSEU	31-52005 LE FLAPS EXT FLT	32-09 TASK 812
PSEU	31-52006 T/O FLPS A FAULT	32-09 TASK 814
PSEU	31-52007 T/O FLPS B FAULT	32-09 TASK 814
PSEU	31-52008 GS PRESS A FAULT	32-61 TASK 824
PSEU	31-52009 GS PRESS B FAULT	32-61 TASK 824
PSEU	31-52010 SPDBRK UP FAULT	27-62 TASK 808
PSEU	31-52011 LE FP EX BITE FLT	32-09 TASK 812
PSEU	31-52012 LE EXT IN FAULT	32-09 TASK 812
PSEU	31-52108 GS PRESS A FAULT	32-61 TASK 824
PSEU	31-52109 GS PRESS B FAULT	32-61 TASK 824
PSEU	31-52208 GS PRESS A FAULT	32-61 TASK 824
PSEU	31-52209 GS PRESS B FAULT	32-61 TASK 824
PSEU	31-53001 GS PRESS A GT 750	31-51 TASK 804
PSEU	31-53002 GS PRESS B GT 750	31-51 TASK 804
PSEU	31-53003 NOT STAB TRM GRN	31-51 TASK 821
PSEU	31-53007 SPDBRK HDL UP or NOT SBRK HDL DOWN	27-62 TASK 808
PSEU	31-53008 NOT T/O FLAPS A	32-09 TASK 814
PSEU	31-53009 NOT T/O FLAPS B	32-09 TASK 814
PSEU	31-53010 LE FLAPS NOT EXT	32-09 TASK 812
PSEU	31-55001 GS PRESS A	31-51 TASK 804
PSEU	31-55002 GS PRESS B	31-51 TASK 804
PSEU	31-55003 GSBV CLOSED	31-51 TASK 805
PSEU	31-55004 LE FLAPS EXTEND	32-09 TASK 812
PSEU	31-55005 SPDBRK UP	31-51 TASK 806

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PSEU	31-55006 STAB TRM GREEN	31-51 TASK 820
PSEU	31-55007 STAB TRM NOT GRN	31-51 TASK 821
PSEU	31-55008 T/O WARN INHIBIT	31-51 TASK 809
PSEU	31-55009 TAKEOFF FLAPS A	31-51 TASK 810
PSEU	31-55010 TAKEOFF FLAPS B	31-51 TASK 811
PSEU	31-55011 TRA LT 53 LEFT	32-09 TASK 815
PSEU	31-55012 TRA LT 53 RIGHT	32-09 TASK 815
PSEU	31-56001 GSBV CL OUT FLT	32-09 TASK 813
PSEU	31-56002 T/O WARN 1 FAULT	31-51 TASK 801
PSEU	31-56003 T/O WARN 2 FAULT	31-51 TASK 801

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801. Captain's Clock Problem - Fault Isolation

A. Description

- (1) The captain's clock does not operate correctly.

B. Possible Causes

- (1) The captain's clock, N145
(2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C00736	MISC CLOCK DISPLAY
A	2	C00737	MISC CLOCK

D. Related Data

- (1) (SSM 31-22-11)
(2) (WDM 31-22-11)

E. Initial Evaluation

- (1) If the captain's clock operates correctly, then there was an intermittent fault.
(2) If the captain's clock does not operate correctly, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Replace the captain's clock, N145.

These are the tasks:

Clock Removal, AMM TASK 31-25-11-000-801,

Clock Installation, AMM TASK 31-25-11-400-801.

- (a) If the captain's clock operates correctly, then you corrected the fault.
(b) If the captain's clock does not operate correctly, then continue.
(2) Do this check of the wiring:
(a) Remove the captain's clock, N145. To remove it, do this task: Clock Removal, AMM TASK 31-25-11-000-801.
(b) Do a wiring check between these pins of the clock connector D714 and connector D46052P at the circuit breaker panel, P6-3.

D714		D46052P
pin 3	.....	pin 1
pin 8	.....	pin 2

- (c) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-install the captain's clock, N145. To install it, do this task: Clock Installation, AMM TASK 31-25-11-400-801.
3) If the captain's clock operates correctly, then you corrected the fault.

———— **END OF TASK** ————

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802. First Officer's Clock Problem - Fault Isolation

A. Description

- (1) The first officer's clock does not operate correctly.

B. Possible Causes

- (1) The first officer's clock, N146
(2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	1	C00736	MISC CLOCK DISPLAY
A	2	C00737	MISC CLOCK

D. Related Data

- (1) (SSM 31-22-11)
(2) (WDM 31-22-11)

E. Initial Evaluation

- (1) If the first officer's clock operates correctly, then there was an intermittent fault.
(2) If the first officer's clock does not operate correctly, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Replace the first officer's clock, N146.

These are the tasks:

Clock Removal, AMM TASK 31-25-11-000-801,

Clock Installation, AMM TASK 31-25-11-400-801.

- (a) If the first officer's clock operates correctly, then you corrected the fault.
(b) If the first officer's clock does not operate correctly, then continue.
(2) Do this check of the wiring:
(a) Remove the first officer's clock, N146. To remove it, do this task: Clock Removal, AMM TASK 31-25-11-000-801.
(b) Do a wiring check between these pins of the clock connector D716 and connector D46052P at the circuit breaker panel, P6-3.

CONNECTOR

D716

pin 3
pin 8

CONNECTOR

D46052P

pin 1
pin 2

- (c) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-install the first officer's clock, N146. To install it, do this task: Clock Installation, AMM TASK 31-25-11-400-801.

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- 3) If the first officer's clock operates correctly, then you corrected the fault.

———— **END OF TASK** ————

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801. Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure

A. General

- (1) You do the Digital Flight Data Acquisition Unit (DFDAU) BITE Test from the DFDAU front panel. The DFDAU is installed on the Electronic Equipment (EE) Bay, E3-2 Shelf.
- (2) The DFDAU BITE Test does an operational check of the Digital Flight Data Recorder (DFDR) System. An LED light on the DFDAU front panel comes ON when the DFDAU detects a failure in the DFDR or the DFDAU.
- (3) The OFF light on the P5-19 FLIGHT RECORDER/MACH AIRSPEED WARNING panel also comes ON when one of these conditions occur:
 - (a) DFDR is OFF
 - (b) DFDR fails
 - (c) DFDAU fails.

B. BITE Procedure

(Figure 201)

NOTE: It is normal to see a cautionary message DFDR PB: 502 when the Flight Data Recorder (FDR) is powered OFF. The cautionary message will clear itself when the FDR is powered ON. On the P5-19 panel, you can put the FLIGHT RECORDER TEST/NORMAL switch to the NORMAL position to test this.

- (1) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, to the TEST position.
 - (a) Open and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	8	C00544	FLIGHT RECORDER POSITION SENSOR
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

- (b) If one of the Fault Lights on the DFDAU is ON, then refer to the table at the end of this task to find the applicable Fault Isolation Manual (FIM) task for the maintenance message that shows.
- (c) If the Fault Lights on the DFDAU are OFF, then the DFDAU does not find a fault.
 - 1) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, to the NORMAL position.

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
FDAU	DFDAU CAUTION	31-31 TASK 802
FDAU	DFDAU FAIL	31-31 TASK 802
FDAU	DFDR FAIL	31-31 TASK 803
FDAU	PS FAIL 103	31-31 TASK 808
FDAU	PS FAIL 104	31-31 TASK 807
FDAU	PS FAIL 105	31-31 TASK 808

————— **END OF TASK** —————

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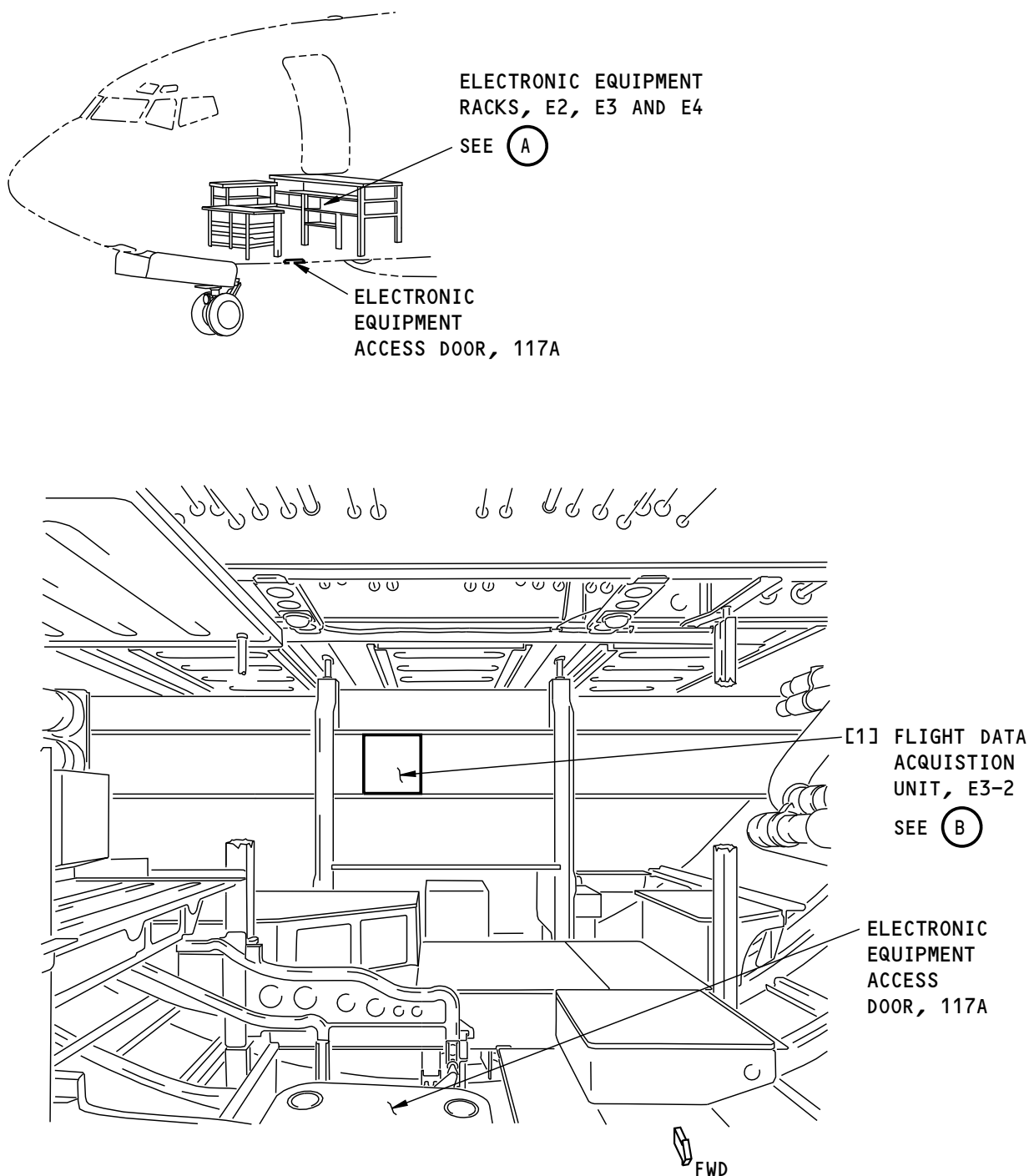
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ELECTRONIC EQUIPMENT RACKS, E2, E3 AND E4

G51908 S0000146991_V1

Flight Data Recorder System - Fault Isolation Figure 201/31-31-00-990-802 (Sheet 1 of 4)

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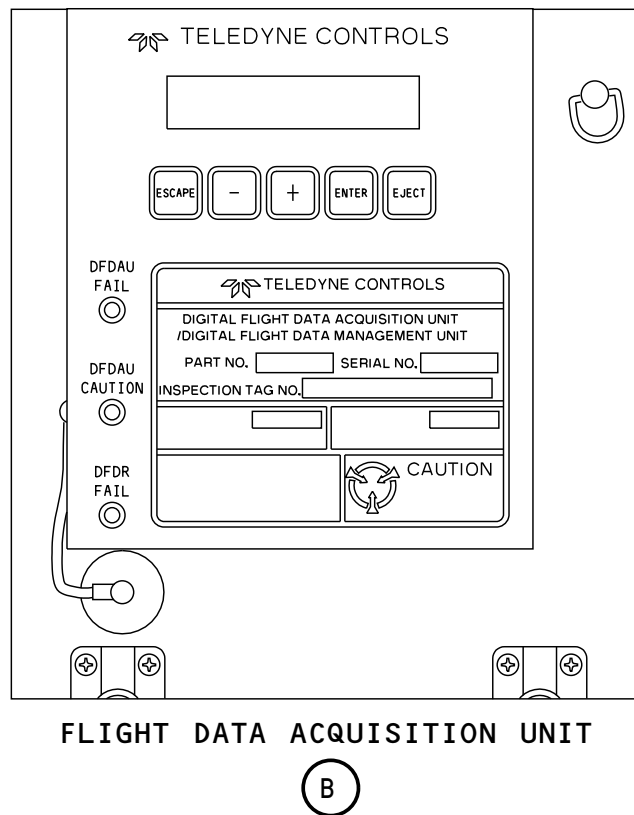
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H95688 S0000146995_V1

Flight Data Recorder System - Fault Isolation
Figure 201/31-31-00-990-802 (Sheet 2 of 4)

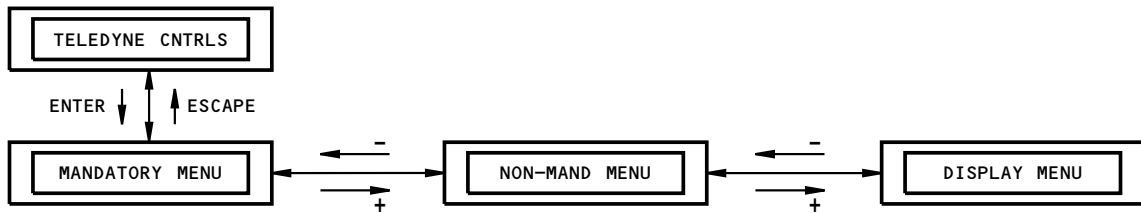
EFFECTIVITY
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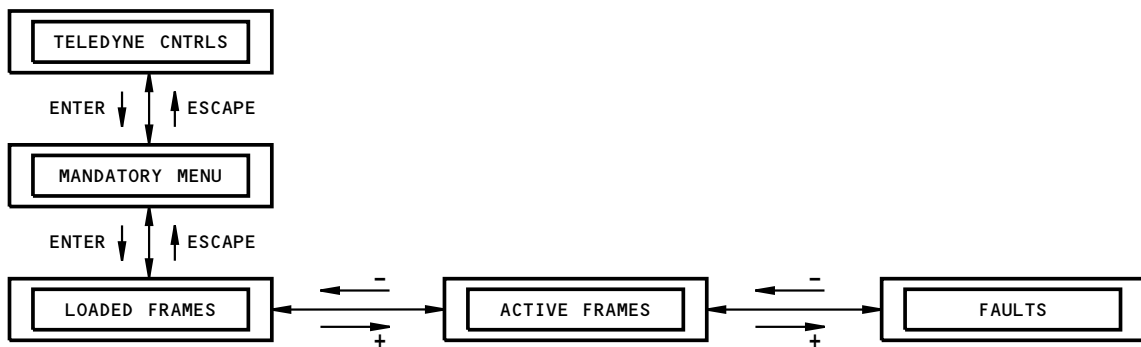
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TOP MENU STRUCTURE



MANDATORY MENU STRUCTURE

2501710 S0000587182_V1

Flight Data Recorder System - Fault Isolation
Figure 201/31-31-00-990-802 (Sheet 3 of 4)

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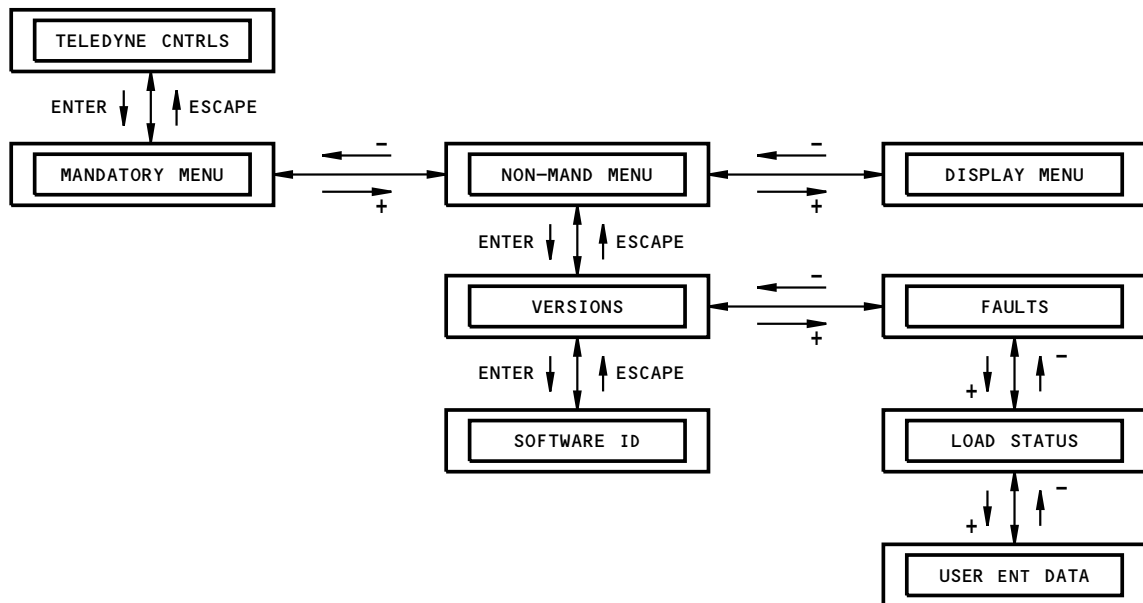
EFFECTIVITY
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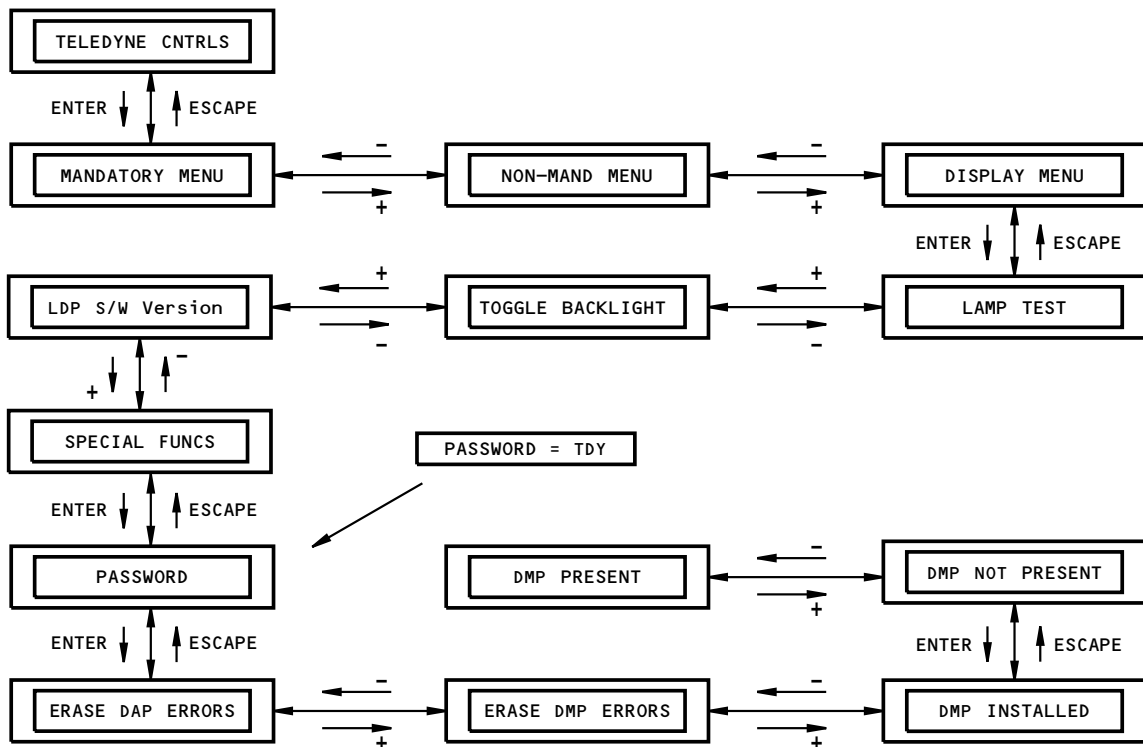
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BOEING
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NON-MAND MENU STRUCTURE



DISPLAY MENU STRUCTURE

2501711 S0000587183_V1

Flight Data Recorder System - Fault Isolation
Figure 201/31-31-00-990-802 (Sheet 4 of 4)

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802. DFDAU Internal Failure - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) DFDAU CAUTION
 - (b) DFDAU FAIL
- (2) The DFDAU detects an internal fault.

B. Possible Causes

- (1) DFDAU, M675

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

D. Related Data

- (1) WDM 31-31-11
- (2) SSM 31-31-11

E. Initial Evaluation

- (1) Make sure that the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, is in the TEST position.
- (2) Open and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

- (3) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (4) If the maintenance message does not show, then there was an intermittent problem.
 - (a) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, to the NORMAL position.

F. Fault Isolation Procedure

- (1) Do these steps: See Figure 201 (Sheet 3)

NOTE: The DFDAU front panel contains a membrane keypad consisting of 5 buttons labeled ENTER, ESCAPE, EJECT, +, and -. A LCD Status Display Panel is used to display the menu and hardware error messages.

- (a) Push any key on the DFDAU keypad to wake-up the display. See
 - 1) The DFDAU status display shows "TELEDYNE CNTRLS".
 - a) If the DFDAU status display does not show "TELEDYNE CNTRLS", push the "ESC" key until "TELEDYNE CNTRLS" shows.
- (b) Push the "ENTER" key.
 - 1) The DFDAU status display shows "MANDATORY MENU".

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- (c) Press "ENTER" key.
 - 1) The DFDAU status display shows "LOADED FRAMES".
- (d) Press "+" key.
 - 1) The DFDAU status display shows "Active Frames".
- (e) Press "+" key.
 - 1) The DFDAU status display shows "Faults".
- (f) Press the "ENTER" key to show the faults.
 - 1) If fault code "PS FAIL 104" shows on the DFDAU status display, do this task: PS Fail 104 - Fault Isolation, 31-31 TASK 807.
 - 2) If fault code "PS FAIL 104" does not show on the DFDAU status display, then continue.
- (2) Do the Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
 - (a) If the maintenance message does not show, then you corrected the fault.
- (3) If the maintenance message shows replace the DFDAU, M675. These are the tasks:
 - Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801
 - Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801

END OF TASK

803. DFDR Fail Light ON - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) DFDR FAIL
- (2) The DFDAU receives a fault flag from the FDR.
- (3) The DFDR fail light on the DFDAU will be ON when the flight data recorder is disconnected from the DFDAU or when the FDR has a fault and the FDR is powered.

B. Possible Causes

- (1) FDR, M96
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

D. Related Data

- (1) WDM 31-31-11
- (2) SSM 31-31-11

E. Initial Evaluation

- (1) Make sure that the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, is in the TEST position.

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- (2) Open and close these circuit breakers:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

- (3) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (4) If the maintenance message does not show, then there was an intermittent problem.
- (a) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, to the NORMAL position.

F. Fault Isolation Procedure

- (1) Replace the FDR, M96. These are the tasks:
- Flight Data Recorder Removal, AMM TASK 31-31-11-000-802
 - Flight Data Recorder Installation, AMM TASK 31-31-11-400-802
- (a) Do the Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
- (b) If the maintenance message does not show, then you corrected the problem.
- (c) If the maintenance messages shows, then continue.
- (2) Do this check of the wiring (WDM 31-31-11):
- (a) Remove the DFDAU, M675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801.
- (b) Remove the DFDR, M96. This is the task: Flight Data Recorder Removal, AMM TASK 31-31-11-000-802.
- (c) Do a continuity check between these pins of connector D2295A for the DFDAU and connector D183A for the DFDAU:

D2295A	D183A
pin A9	pin 7

- (d) If you find a problem with the wiring, do these steps:
- 1) Repair the wiring (SWPM Ch 20).
 - 2) Re-install the DFDAU, M675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
 - 3) Re-install the DFDR, M96. This is the task: Flight Data Recorder Installation, AMM TASK 31-31-11-400-802.
 - 4) Do the Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
 - 5) If the maintenance message does not show, then you corrected the problem.

———— **END OF TASK** ————

805. Flight Data Recorder OFF Light On - Fault Isolation

A. Description

- (1) The P5-19 flight data recorder/mach airspeed warning panel, receives fault flag from the Flight Data Acquisition Unit (FDAU) and/or the FDR. These faults will cause the OFF light on the P5-19 flight data recorder/mach airspeed warning panel, to come on.

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- (2) The OFF light will also come on when the FDR is not on or the FDAU status relay is not activated.
- (3) The FDR or FDAU faults that cause the OFF light to come on can also cause the flight control surface position indications to not show on the lower Control Display Unit (CDU) after engine start.

B. Possible Causes

- (1) Flight data recorder, M00096
- (2) Flight Data Acquisition Unit, M00675
- (3) FDAU status relay, R263
- (4) P5-19 flight data recorder/mach airspeed warning panel
- (5) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C01399	PSEU PRI

D. Related Data

- (1) WDM 31-31-11
- (2) SSM 31-31-11

E. Initial Evaluation

- (1) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, in the TEST position.
- (2) If the OFF light, on the P5-19 panel, comes on, and the DFDR or DFDAU fault lights on the FDAU come on, then go to the fault isolation task for the applicable maintenance message.
 - (a) For the DFDAU maintenance message, do this task: DFDAU Internal Failure - Fault Isolation, 31-31 TASK 802.
 - (b) For the DFDR maintenance message, do this task: DFDR Fail Light ON - Fault Isolation, 31-31 TASK 803.
- (3) If the OFF light, on the P5-19 panel, comes on, and the DFDR or DFDR fault light on the FDAU does not come on, do the steps below:
 - (a) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, to the NORMAL position.

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MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR DOOR AREAS. THE CONTROL SURFACES, THE LANDING GEAR, AND THE LANDING GEAR DOORS CAN MOVE WHEN YOU DO THE AIR MODE SIMULATION. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (b) Do the air mode simulation with the PSEU BITE. To do the air mode simulation, do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.
 - (c) If the OFF light comes on then do the Fault Isolation Procedure - OFF Light On.
 - (d) If the OFF does not come on, then do the Fault Isolation Procedure - OFF Light Off.
 - (e) Return the airplane to the ground mode with the PSEU BITE. To return the airplane to the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.
- (4) If the OFF light did not come on, then there was an intermittent fault.

F. Fault Isolation Procedure - OFF light On

- (1) Replace the FDAU M00675.
 - (a) Remove the FDAU, M00675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801.
 - (b) Install the FDAU, M00675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
 - (c) Do the Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
 - (d) If the OFF light, on the P5-19 panel, is off, then you corrected the fault.
 - (e) If the OFF light, on the P5-19 panel, is on, then continue.
- (2) Replace the FDAU status relay, R263.
 - (a) Do the Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
 - (b) If the OFF light, on the P5-19 panel, is off, then you corrected the fault.
 - (c) If the OFF light, on the P5-19 panel, is on, then continue.
- (3) Do this check of the wiring:
 - (a) Disconnect connector D1805.
 - (b) Remove the FDAU, M00675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801.
 - (c) Do a continuity check between these pins of connector D2295A for the FDAU and connector D1805 for the FDAU status relay:

D2295A	D1805
pin A11	pin X2
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-Install the FDAU, M00675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
 - 3) Re-connect connector D1805.
 - 4) Do the Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.

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- 5) If the OFF light, on the P5-19 panel, is off, then you corrected the fault.
 - 6) If the OFF light, on the P5-19 panel, is on, then continue.
- (4) Replace the FDR. These are the tasks:
- Flight Data Recorder Removal, AMM TASK 31-31-11-000-802
 - Flight Data Recorder Installation, AMM TASK 31-31-11-400-802.
- (a) Do the Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
- (b) If the OFF light, on the P5-19 panel, is off, then you corrected the fault.

G. Fault Isolation Procedure - OFF Light Off

- (1) Replace the P5-19 flight data recorder/mach airspeed warning panel. These are the tasks:
- Flight Recorder/Mach Airspeed Warning Test Module Removal, AMM TASK 31-31-12-000-801
 - Flight Recorder/Mach Airspeed Warning Test Module Installation, AMM TASK 31-31-12-400-801
- (a) Do the Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
- (b) If the OFF light, on the P5-19 panel, is off, then you corrected the fault.

————— **END OF TASK** —————

806. Wheel Sensor Fault - Fault Isolation

A. Description

- (1) This task is for this SMYD 2 maintenance message:
- (a) 27-22001 whl sig error
- (2) The Stall Management Yaw Damper (SMYD) computer No. 2 did not receive input data from the left control wheel position sensor, M00520.

B. Possible Causes

- (1) Control wheel position sensor, M00520
- (2) SMYD computer 2, M1748
- (3) Wiring problem

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	8	C00544	FLIGHT RECORDER POSITION SENSOR

D. Related Data

- (1) WDM 31-31-14

E. Initial Evaluation

- (1) Do the Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
- (2) If the maintenance message shows on the SMYD BITE display, then do the Fault Isolation Procedure below.
- (3) If the maintenance message does not show on the SMYD BITE display, then there was an intermittent fault.

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F. Fault Isolation Procedure

- (1) Replace the control wheel position sensor, M00520. These are the tasks:
 - Control Wheel Position Sensor Removal, AMM TASK 31-31-32-000-801
 - Control Wheel Position Sensor Installation, AMM TASK 31-31-32-400-801
- (a) Do the Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
- (b) If the maintenance message does not show on the SMYD BITE display, then you corrected the fault.
- (c) If the maintenance message shows on the SMYD BITE display, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the SMYD computer No. 2, M1748. This is the task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
 - (b) Disconnect connector D815.
 - (c) Do a continuity check of these pins of connector D815 for the control wheel position sensor and connector for the SMYD computer No. 2:

**CONNECTOR
D815**

pin 2	.....	pin 82
pin 3	.....	pin 81
pin 4	.....	pin 95
pin 5	.....	pin 13

**CONNECTOR
D3685B**

- 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the stall management yaw damper computer 2, M1748. This is the task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
 - c) Do the Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
 - d) If the maintenance message does not show on the SMYD BITE display, then you corrected the fault.

———— **END OF TASK** ————

807. PS Fail 104 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) PS FAIL 104

B. Possible Causes

- (1) DFDAU, M00675
- (2) Accelerometer, M00517
- (3) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
C	8	C00544	FLIGHT RECORDER POSITION SENSOR
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

D. Related Data

- (1) WDM 31-31-11
(2) SSM 31-31-11

E. Initial Evaluation

- (1) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, in the TEST position.
- (2) Select FAULTS sub-menu from the MANDATORY MENU on the front of the FDAU.
- NOTE:** Use the + and - key to move between sub-menu items, ENT key to select an item and the ESC key to return to the main menu.
- (a) If the maintenance message shows on the FDAU status display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the FDAU status display, then there was an intermittent fault.
- 1) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, to the NORMAL position.

F. Fault Isolation Procedure

- (1) Replace the DFDAU, M00675. These are the tasks:
- Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801
 - Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801
- (a) If the maintenance message does not show on the FDAU status display, then you corrected the fault.
- (b) If the maintenance message shows on the FDAU status display, then continues.
- (2) Replace the accelerometer, M00517. These are the tasks:
- Flight Data Recorder Accelerometer - Removal, AMM TASK 31-31-81-000-801
 - Flight Data Recorder Accelerometer - Installation, AMM TASK 31-31-81-400-801
- (a) If the maintenance message does not show on the FDAU status display, then you corrected the fault.
- (b) If the maintenance message shows on the FDAU status display, then continues.
- (3) Do this check of the wiring:
- (a) Remove the FDAU, M00675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801.
- (b) Remove the accelerometer, M00517. This is the task: Flight Data Recorder Accelerometer - Removal, AMM TASK 31-31-81-000-801.
- (c) Do a continuity check between these pins of connector D2295B for the FDAU and connector D821 for the accelerometer:

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D2295B	D821
pin F14	pin A
pin F15	pin B

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Install the FDAU, M00675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
 - 3) Install the accelerometer, M00517. This is the task: Flight Data Recorder Accelerometer - Installation, AMM TASK 31-31-81-400-801.
- (e) If the maintenance message does not show on the FDAU status display, then you corrected the fault.

———— **END OF TASK** ————

808. PS Fail 103 or PS Fail 105 - Fault Isolation

A. Description

- (1) This task is for this maintenance messages:
- (a) PS FAIL 103
 - (b) PS FAIL 105

B. Possible Causes

- (1) Power failure within FDAU, M00675.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

D. Related Data

- (1) WDM 31-31-11
- (2) SSM 31-31-11

E. Initial Evaluation

- (1) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, in the TEST position.
- (2) Select FAULTS sub-menu from the MANDATORY MENU on the front of the FDAU.

NOTE: Use the + and - key to move between sub-menu items, ENT key to select an item and the ESC key to return to the main menu.

- (a) If the maintenance message shows on the FDAU status display, then do the Fault Isolation Procedure below.
- (b) If the maintenance message does not show on the FDAU status display, then there was an intermittent fault.
 - 1) Put the FLIGHT RECORDER TEST/NORMAL switch, on the P5-19 panel, to the NORMAL position.

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F. Fault Isolation Procedure

- (1) Replace the FDAU, M00675. These are the tasks:
 - Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801
 - Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801
- (2) If the maintenance message does not show on the FDAU status display, then you corrected the fault.

———— **END OF TASK** ————

809. WQAR Internal Failure - Fault Isolation

A. Description

- (1) This task is for this Observed Fault:
 - (a) The Wireless Quick Access Recorder (WQAR) does not transmit Recorder Data.

B. Possible Causes

- (1) WQAR Internal Fault

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	4	C01196	ACMS

D. Related Data

- (1) SSM 31-35-03
- (2) WDM 31-35-03

E. Initial Evaluation

- (1) Make sure that the airplane is on the ground and in GROUND Mode, and the Engine is not in START Mode.
 - (a) If the WQAR works correctly, then you had an intermittent fault.
 - (b) If the WQAR does not work correctly, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

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- (1) Signal Level Test.
 - (a) Push the MODE Key one time, or until SYSTEM STATE is shown.
 - (b) Push the “-” Key two times, or until DIAGNOSTICS shows.
 - (c) Push the SEL Key one time and then press the - key until RADIO TESTS is shown.
 - (d) Push the SEL Key two times to start the Signal Level Test.

NOTE: The WQAR Front Panel will indicate that a Band Test is done and then show UNKNOWN.

- (e) Wait until the WQAR Display changes to:

- 1) 1 2 3 4 5 6 7 8
- 2) aabbccddeeffgghh

NOTE: Line 2, “aa” through “hh,” indicates the signal strength of each radio.

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SIA ALL; AIRPLANES WITH 2243800-71, 2243800-73 OR 2243800-81 WQAR (Continued)

- (f) Wait until the signal strength shows for radios 1 - 8.
 - 1) A value between 0 and 32 is acceptable.
- (g) If the Signal Level Test value is not as specified above, then replace the WQAR. These are the tasks:
 - Quick Access Recorder (QAR) Removal, AMM TASK 31-31-24-000-801
 - Quick Access Recorder (QAR) Installation, AMM TASK 31-31-24-400-801

SIA ALL; AIRPLANES WITH 2243800-362 OR 2243800-364 WQAR

- (2) Signal Level Test.
 - (a) Push the MODE Key one time, or until SYSTEM STATE is shown.
 - (b) Push the "+" Key until STATUS is shown.
 - (c) Push the SEL Key.
 - 1) Make sure that ACQUISITION is shown.
 - (d) Push the "+" Key until WIRELESS is shown.
 - (e) Push the SEL Key.
 - 1) Make sure that REMOVABLE SIM MODULE is shown.
 - (f) Push the "+" Key until RADIO STATUS is shown.
 - (g) Push the SEL Key and the WQAR Display will show:
 - 1) 1:S 2:S 3:S 4:S
SL SL SL SL
- NOTE: SL = Signal Level (Range: 0 to 31)
- NOTE: S = Radio Connection Phase (See table below)

Phase	Description
0	Radio is not connected to the Cellular Network
1	Radio is connected to a Local Cellular Network
2	Radio is connected to the Internet
3	Radio is connected to the Teledyne Base Station

- (h) Make sure that the Radio Connection Phase on all radios displayed is 1.

NOTE: Radios in which SIM cards are installed and properly configured will, when powered on, maintain a normal status of 1. If, at any point, the radios attempt to contact the base station, the status will advance to 2 and then 3. After all transmissions are complete, the status will revert back to 1.
- (i) Wait until the signal strength is shown for the radios.
 - 1) A value between 0 and 31 is acceptable.
- (j) Push the MODE Key until STATUS is shown.
- (k) Push the "-" Key until SYSTEM STATE is shown.
- (l) Push the SEL Key.

NOTE: Display shows normal status.

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SIA ALL; AIRPLANES WITH 2243800-362 OR 2243800-364 WQAR (Continued)

- (m) If the Radio Connection Phase and the Signal Level Test is not as specified above, then replace the WQAR. These are the tasks:
- Quick Access Recorder (QAR) Removal, AMM TASK 31-31-24-000-801
 - Quick Access Recorder (QAR) Installation, AMM TASK 31-31-24-400-801

SIA ALL

END OF TASK

877. Spoiler 3 (10) Position Sensor Does Not Agree With Spoiler Position - Fault Isolation

A. Description

- (1) This task is for this observed fault:
- (a) Spoiler 3 (10) Position Sensor Does Not Agree With Spoiler Position Problem.
- (2) This fault can be detected after a reasonability assessment of the FDR required data parameters of the Spoiler 3 (10) Position Sensor, or by AHM data.

B. Possible Causes

- (1) Spoiler 3 (10) Position Sensor, T539 (T540)
- (2) DFDAU, M675
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	9	C00109	FLIGHT RECORDER AC
C	10	C00468	FLIGHT RECORDER DC

D. Related Data

- (1) WDM 27-62-14
- (2) SSM 27-62-14

E. Fault Isolation Procedure

- (1) Do the adjustment for the Spoiler No. 3 (No. 10) Position Sensor, T539 (T540).
- (a) Do this task: Spoiler Position Sensor Adjustment, AMM TASK 22-11-27-820-801.
- 1) Do the Repair Confirmation at the end of this task.
- (2) Replace the Spoiler No. 3 (No. 10) Position Sensor, T539 (T540). These are the tasks:
- Spoiler Position Transmitter Removal, AMM TASK 27-61-04-000-801
 - Spoiler Position transmitter Installation, AMM TASK 27-61-04-400-801.
- (a) Do the Repair Confirmation at the end of this task.
- (3) Replace the DFDAU, M675. These are the tasks:
- Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801
 - Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
- (a) Do the Repair Confirmation at the end of this task.

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- (4) Do this check of the wiring for the Spoiler 3 (10) Position Sensor, T539 (T540) (WDM 27-62-14):
- (a) Remove the DFDAU, M675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801.
 - (b) Disconnect the connector, D10539.

LEFT WING

Spoiler 3	
Position	
Sensor, T539	DFDAU, M675
D10539	D2295B
4	B10
5	B12
3	B11

RIGHT WING

Spoiler 10	
Position	
Sensor, T540	DFDAU, M675
D10541	D2295E
4	B10
5	B12
3	B11

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect the connector, D10539.
 - 3) Re-install the DFDAU, M675. This is the task: Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
 - 4) Do the Repair Confirmation at the end of this task.

F. Repair Confirmation

- (1) Do this task: Spoiler Position Sensor Test for No. 3 and 10, AMM TASK 27-61-00-820-813.
- (a) Monitor the airplane on subsequent flights. Do a check of the FDR and/or AHM data to verify the Spoiler 3 (10) Position Sensor required parameters.
NOTE: The copied data then can be analyzed at a different location by the applicable airline personnel or this service can be ordered through Flight Recorder Data Services found on MyBoeingFleet.
 - 1) Do this task: Copy of the Data from the SSFDR with the use of a Hand Held Multi-Purpose Portable Interface (HHMPI) or Portable Interface, AMM TASK 31-31-00-970-806 or Copy the Data from the Solid State Flight Data Recorder (SSFDR) with the Hand Held Multi Purpose Interface (HHMPI), AMM TASK 31-31-00-970-808.
 - (b) If the test passes, and this fault is not subsequently detected after a reasonability assessment of the FDR, or by AHM data, then you corrected the problem.

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- (c) If the test fails, or this fault is again detected after a reasonability assessment of the FDR, or by AHM data, then continue the Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

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801. Printer FAULT light is ON - Fault Isolation

A. Description

- (1) The FAULT light (amber) on the printer comes on.

B. Possible Causes

- (1) The printer is out of paper.
- (2) The printer front cover is open.
- (3) The printer internal BITE detected a fault.

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01216	PRINTER

D. Related Data

- (1) WDM 31-33-01.

E. Initial Evaluation

- (1) Make sure that electrical power is on (AMM TASK 24-22-00-860-811).
- (2) Open this circuit breaker for a minimum of 10 seconds:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01216	PRINTER

- (3) Close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01216	PRINTER

- (4) Wait for 2 minutes.
- (5) If the FAULT light (amber) on the printer comes on, then do the Fault Isolation Procedure below.
- (6) If the FAULT light on the printer is off, then you corrected the fault.

F. Fault Isolation Procedure

- (1) Make sure the printer OFF light is off.
- (2) Make sure the printer has enough paper to do the test.
- (3) Make sure the printer front cover is closed.
- (4) Push the TEST switch on the front of the printer.
 - (a) Make sure the printer prints out a test pattern.
 - 1) If the printer does not print out a test pattern, then replace the printer. These are the tasks:
 - Printer Removal, AMM TASK 31-33-01-000-801
 - Printer Installation, AMM TASK 31-33-01-400-801



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- (b) If the printer prints out a test pattern, then continue.
- (5) If the FAULT light is off, then you corrected the fault
- (6) If the FAULT light is on, then replace the printer. These are the tasks:
 - Printer Removal, AMM TASK 31-33-01-000-801
 - Printer Installation, AMM TASK 31-33-01-400-801

END OF TASK

804. PRINTER FAIL Message Displayed - Fault Isolation

A. Description

- (1) The PRINTER FAIL Message shows in the FMC CDU scratchpad.

NOTE: The PRINTER FAIL Message will show in the FMC CDU scratchpad if the printer is not installed or if there is no communication between the printer and the ACARS.

B. Possible Causes

- (1) The printer is not installed.
- (2) There is no communication between the printer and the ACARS.
- (3) Wiring problem between the printer and the Communications Management Unit (CMU).

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01216	PRINTER
E	8	C01483	CMU-1 AC

This circuit breaker is inoperative and should remain open:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	9	C01500	CMU/ACARS DC (INOP)

D. Related Data

- (1) WDM 31-33-01
- (2) WDM 23-27-14

E. Initial Evaluation

- (1) Make sure that electrical power is on (Supply Electrical Power, AMM TASK 24-22-00-860-811).
 - (a) If the PRINTER FAIL Message shows in the FMC CDU scratchpad, then do the Fault Isolation Procedure below.
 - (b) If the PRINTER FAIL Message does not show in the FMC CDU scratchpad, then there was an intermittent fault.

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F. Fault Isolation Procedure

- (1) If the printer is not installed on the airplane and the PRINTER FAIL Message shows, then do these steps:

- (a) Use the CDU CLR key to remove the message.

NOTE: Contact the ACARS vendor to find if there is a software update that can prevent the PRINTER FAIL Message when there is no printer installed.

- (2) If the printer is installed on the airplane, then continue.
(3) Open these circuit breakers for a minimum of 10 seconds:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01216	PRINTER
E	8	C01483	CMU-1 AC

- (4) Close these circuit breakers:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01216	PRINTER
E	8	C01483	CMU-1 AC

- (5) Wait for 2 minutes.
(6) If the PRINTER FAIL Message does not show in the FMC CDU scratchpad, then you corrected the fault.
(7) If the PRINTER FAIL Message shows in the FMC CDU scratchpad, then do these steps:
(a) Make sure the printer OFF light is off.
(b) Make sure the printer has enough paper to do the test.
(c) Push the TEST button on the front of the printer.
(d) If the printer does not print out a test pattern, then replace the printer. These are the tasks:
 - Printer Removal, AMM TASK 31-33-01-000-801
 - Printer Installation, AMM TASK 31-33-01-400-801
(e) If the printer successfully prints out a test pattern, then continue.
(8) Do this check of the wiring:
(a) Remove the ACARS Communications Management Unit, M2127 or M2128. To remove it, do this task: ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801.
(b) Remove the printer. To remove it, do this task: Printer Removal, AMM TASK 31-33-01-000-801.
(c) For printer M2196, do a continuity check between these pins of connector D10727B for the ACARS Communications Management Unit and connector D2649 for the printer (WDM 31-33-01):

D10727B	D2649
pin J12	pin KK
pin K12	pin LL

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- (d) For printer M2195 or M2551, do a continuity check between these pins of connector D10727B for the ACARS Communications Management Unit and connector D2649 for the printer (WDM 31-33-01):

D10727B	D2649
pin J12	pin E
pin K12	pin F

- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reinstall the printer. To install it, do this task: Printer Installation, AMM TASK 31-33-01-400-801.
 - 3) Reinstall the ACARS Communications Management Unit, M2127. To Install it, do this task: ACARS Communications Management Unit (CMU) Removal, AMM TASK 23-27-33-020-801.
- (f) If the PRINTER FAIL Message does not show in the FMC CDU scratchpad, then you corrected the fault.
- (9) If the PRINTER FAIL Message shows in the FMC CDU scratchpad, then replace the printer. These are the tasks:
- Printer Removal, AMM TASK 31-33-01-000-801
 - Printer Installation, AMM TASK 31-33-01-400-801
- (a) If the PRINTER FAIL Message does not show in the FMC CDU scratchpad, then you corrected the fault.

———— **END OF TASK** ————

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801. Takeoff Warning (TOW) BITE Test

A. General

- (1) You do the Takeoff Warning System BITE Test from the PSEU BITE Control Panel, M2061. The PSEU is located in the forward electronic bay.
- (2) The Takeoff Warning (TOW) BITE test check the functionality of a specific set of the airplane inputs that are used to generate a takeoff aural warning.
- (3) The Takeoff Warning (TOW) BITE test will list any takeoff warning input that has not been cycled between the on and off state during the current flight leg.

NOTE: Three of the takeoff warning inputs - stab trim in green band, stab trim not in green band and takeoff warning cutoff - may normally not cycle between the on and off state during a flight leg. The messages for these inputs (31-55006, 31-55007 and 31-55008) may be displayed after performing the Takeoff Warning (TOW) BITE test.

- (4) The Takeoff Warning (TOW) BITE test should only be used when indicated in a Fault Isolation Procedure and should NOT be used in an attempt to determine the cause of a false takeoff aural warning. To determine the cause of a false takeoff aural warning, do this task: Takeoff Warning System Fault (No Warning or False warning) - Fault Isolation, 31-51 TASK 803.

B. BITE Procedure

- (1) Do these steps to do the TOW BITE test:
 - (a) Push the ON/OFF switch on the PSEU BITE control panel.
 - (b) Use the up and down arrow until GROUND TESTS? shows.
 - (c) Push the YES switch.
 - (d) Use the up and down arrow until T/O WARN TEST? shows.
 - (e) Push the YES switch.
 - (f) Make sure the PSEU BITE display shows TEST PASS.
 - (g) If a maintenance message shows, then go to the maintenance message index to find the fault isolation procedure for the applicable message.

————— **END OF TASK** —————

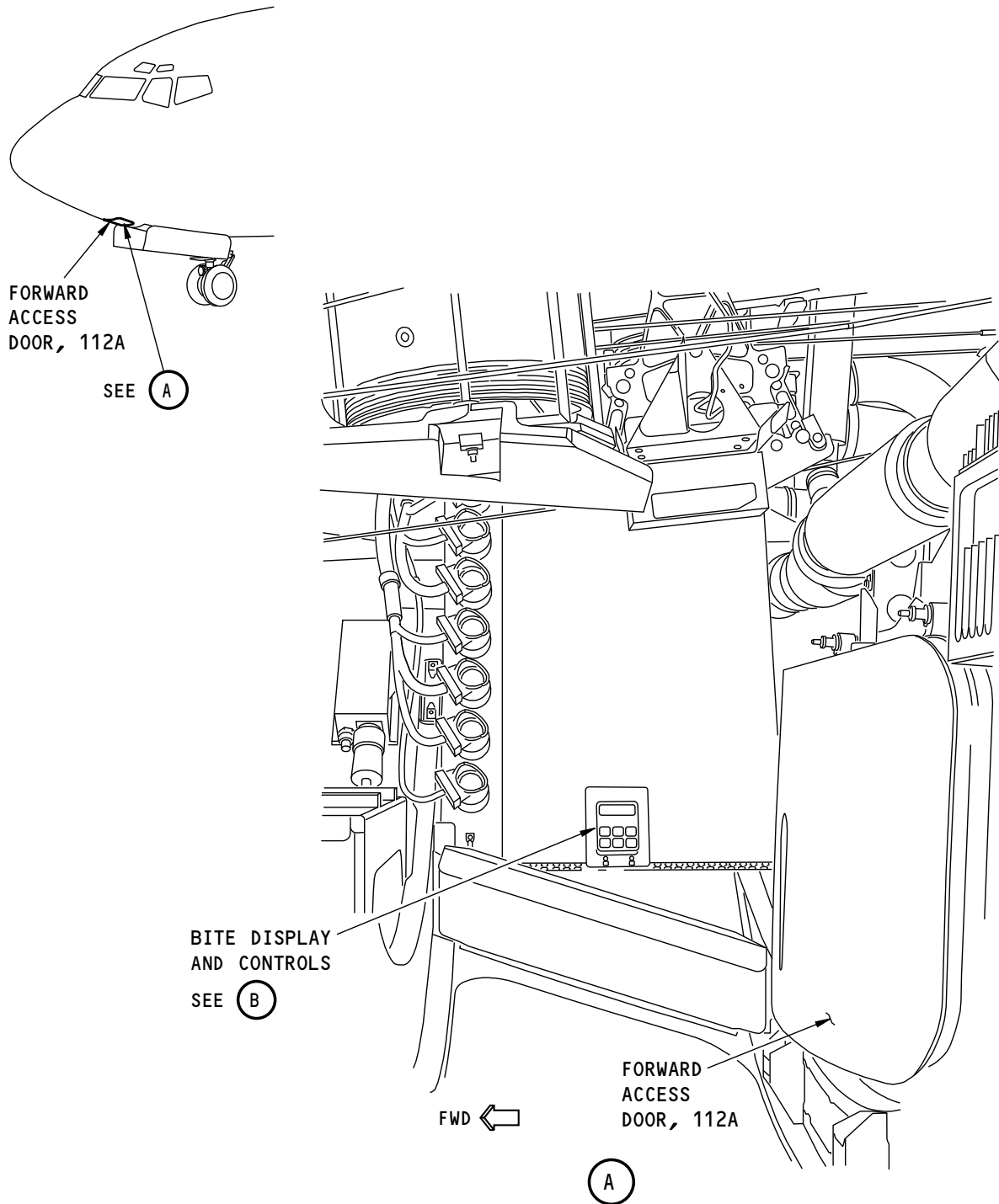
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G71183 S0000147080_V1

Proximity Switch Electronics Unit BITE Display
Figure 201/31-51-00-990-803 (Sheet 1 of 2)

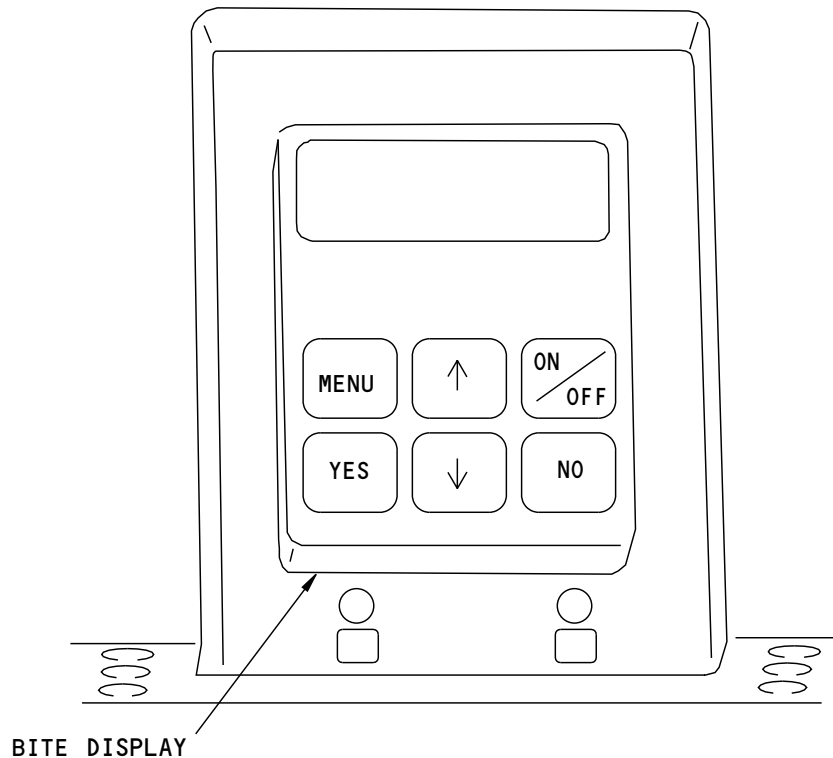
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BITE DISPLAY AND CONTROLS

(B)

G71185 S0000147081_V1

Proximity Switch Electronics Unit BITE Display
Figure 201/31-51-00-990-803 (Sheet 2 of 2)

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ECCN 9E991 BOEING PROPRIETARY - See title page for details

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803. Takeoff Warning System Fault (No Warning or False warning) - Fault Isolation

A. Description

- (1) The aural warning module will give an intermittent horn when the airplane is on the ground with one of the thrust levers TRA angle is greater than 53 degree and at least one of the following conditions exist:
 - (a) Stab trim is not in the green band.
 - (b) Speedbrake lever is not down.
 - (c) The trailing edge flaps are less than 1 units or greater than 25 units.
 - (d) The parking brake is set.
 - (e) The spoilers are extended.
 - (f) The leading edge flaps are not extended.
- (2) The aural warning module will also give an intermittent horn when the airplane is in the air, and all the conditions below exist:
 - (a) The landing gear cutoff circuit breaker closed.
 - (b) The leading edge flaps are not extended.
 - (c) The ground spoiler interlock valve opens.

B. Possible Causes

- (1) No Warning or False Warning in the AIR
 - (a) Ground Spoiler Up Interlock Valve Sensor, S1050
 - (b) Wiring problem
- (2) No Warning or False Warning on the GROUND
 - (a) Stabilizer Takeoff Warning Switches; S132, S1184, S546, S1183
 - (b) Ground Spoiler Up Pressure Switch, S1049
 - (c) Speedbrake Takeoff Warn Switch, S651
 - (d) Parking Brake Switch, S100
 - (e) Stall Management Yaw Damper (SMYD) 1, M1747
 - (f) SMYD 2, M1748
 - (g) Autothrottle Switch S8 of pack #1 Eng, M1766
 - (h) Autothrottle Switch S8 of pack #2 Eng, M1767
 - (i) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	3	C00170	MACH WARN SYS-1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00549	MACH WARN SYS -2

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F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) SSM 31-51-11
- (2) SSM 31-53-11
- (3) WDM 31-51-11
- (4) WDM 31-53-11

E. Initial Evaluation

- (1) If the No Warning or False Warning condition occurred when the airplane was in the air, then do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
 - (a) If the maintenance message for the ground spoiler up interlock valve sensor, S1050, shows, then do this task: Ground Spoiler Interlock Valve Input Problem - Fault Isolation, 31-51 TASK 805.
 - (b) If the maintenance message for the ground spoiler up interlock valve sensor, S1050, does not show, then continue.
- (2) Do this task: Takeoff Warning Report Faults - Fault Isolation, 31-51 TASK 822.

NOTE: PSEU NVM will only show last takeoff warning cause. A second takeoff warning will override the initial cause.
- (3) If the Takeoff Warning Report Faults - Fault Isolation, 31-51 TASK 822 is not satisfactory, then do the Fault Isolation Procedure - Input Monitoring below.
- (4) If either the Takeoff Warning Report Faults - Fault Isolation, 31-51 TASK 822 or the Fault Isolation Procedure - Input Monitoring is satisfactory, then there was an intermittent fault.

F. Fault Isolation Procedure - Input Monitoring

- (1) Do these steps from the Proximity Sensor Electronics Unit (PSEU) Built-In-Test Equipment (BITE) display to check the takeoff warning inputs to the PSEU:
 - (a) Push the ON button.
 - (b) Push the NO button until OTHER FUNCTNS? shows.
 - (c) Push the YES button.
 - 1) Make sure T/O WARN REPORTS? shows.
 - (d) Push the NO button until I/O MONITOR? shows.
 - (e) Push the YES button until SENSORS? shows.
 - (f) Push the NO button until INPUTS? shows.

NOTE: Use the arrow down button if INPUT INACTIVE shows.
 - (g) Push the YES button.

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- (h) Select a connector.

NOTE: Use the arrow buttons to move to the desired connector, then push the YES button to select a connector.

- (i) Select a pin.

NOTE: Use the arrow buttons to move to the desired pin, then push the YES button to select the pin.

- (j) Do a check of the PSEU takeoff warning inputs.

Table 201

Connector	Pin	Test Condition	PSEU BITE Display
D10984	51	stab trim in green band	GND
D10982	51	stab trim in green band	NO GND
D10984	51	stab trim not in green (nose dwn)	NO GND
D10982	51	stab trim not in green (nose dwn)	GND
D10984	51	stab trim not in green (nose up)	NO GND
D10982	51	stab trim not in green (nose up)	GND
D10986	27	leading edge flap not extended	GND
D10986	27	leading edge flap extended	NO GND
D10982	61	parking brake set	GND
D10984	28	parking brake set	NO GND
D10982	61	parking brake not set	NO GND
D10984	28	parking brake not set	GND
D10982	29	speedbrake lever UP	GND
D10982	29	speedbrake lever DOWN	NO GND
D10986	29	ground spoiler deployed	NO GND
D10986	14	ground spoiler deployed	GND
D10986	14	ground spoiler not deployed	NO GND
D10986	29	ground spoiler not deployed	GND
D10982	15	flap = 10	NO GND
D10982	31	flap = 10	NO GND
D10982	15	flap > 25	GND
D10982	31	flap > 25	GND
D10982	42	autothrottle left TRA < 53 deg	NO GND
D10984	42	autothrottle right TRA < 53 deg	NO GND
D10982	42	autothrottle left TRA > 53 deg	GND
D10984	42	autothrottle right TRA > 53 deg	GND

- (k) If you do not find a problem with any of the inputs in the table, then do the Fault Isolation Procedure - Aural Warning Module Input Fault below.

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- (l) If you find a problem with the stabilizer trim inputs, then do the Fault Isolation Procedure - Stab Trim Input Fault below.
- (m) If you find a problem with the leading edge flap inputs, then do the Fault Isolation Procedure - Leading Edge Flap Input Fault below.
- (n) If you find a problem with the autothrottle inputs, then do the Fault Isolation Procedure - Autothrottle Microswitch Pack Input Fault below.
- (o) If you find a problem with ground spoiler, then do the Fault Isolation Procedure - Ground Spoiler Input Fault below.

G. Fault Isolation Procedure - Aural Warning Module Input Fault

- (1) Do the Aural Warning Module BITE Test, AMM TASK 31-51-00-740-801.
 - (a) If the Aural Warning Module BITE test is not satisfactory then do these steps:
 - 1) Replace the Aural Warning Module, M315. These are the tasks:
 - Aural Warning Module Removal, AMM TASK 31-51-04-000-801
 - Aural Warning Module Installation, AMM TASK 31-51-04-400-801
 - 2) Do the Takeoff Warning System Test, AMM TASK 31-51-00-730-803.
 - a) If the takeoff warning system test is satisfactory, then the fault is corrected.
 - b) If the takeoff warning system test is not satisfactory, then continue.
 - (b) If the Aural Warning Module BITE test is satisfactory then continue.
 - (2) Do this check of the wiring:
 - (a) Remove the Aural Warning Module, M315. This is the task: Aural Warning Module Removal, AMM TASK 31-51-04-000-801.
 - (b) Disconnect connector D10982.
 - (c) Do this wiring check:

M2061 PSEU	M315 AURAL
D10982	WARNING
	MODULE
	D940
pin 53	pin 3
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D10982.
 - 3) Re-install the Aural Warning Module, M315. This is the task: Aural Warning Module Installation, AMM TASK 31-51-04-400-801.
- (3) Replace the Diode, R1999 (WDM 31-53-11).
 - (a) Do the Takeoff Warning System Test. This is the task: Takeoff Warning System Test, AMM TASK 31-51-00-730-803.
 - 1) If the takeoff warning system test is satisfactory, then the fault is corrected.
 - 2) If the takeoff warning system test is not satisfactory, then continue.

H. Fault Isolation Procedure - Stab Trim Input Fault

- (1) Replace the stabilizer takeoff warn switches, S546 and S1183.

These are the tasks:

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- Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
- Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801
- (a) Do the steps in the Takeoff Warning System Test that test the stabilizer input to the takeoff warning system (AMM TASK 31-51-00-730-803).
 - 1) If the test of the stabilizer input to the takeoff warning system is not satisfactory, then continue.
- (2) Replace the stabilizer takeoff warn switches; S132 and S1184
These are the tasks:
 - Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801
 - Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801
 - (a) Do the steps in the Takeoff Warning System Test that test the stabilizer input to the takeoff warning system (AMM TASK 31-51-00-730-803).
 - 1) If the test of the stabilizer input to the takeoff warning system is not satisfactory, then continue.
- (3) Do this check of the wiring:
 - (a) Disconnect connector D10982.
 - (b) Disconnect connector D10984.
 - (c) Remove Stabilizer Takeoff Warning Switches, S132, S546 and S1184. This is the task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801.
 - (d) Do a check of the wiring between these pins:

D10982	S132
pin 51	pin BD
 D10982	 S546
pin 51	pin AD
 D10984	 S1184
pin 51	pin CC
 - (e) Remove Stabilizer Takeoff Warning Switch S1183. This is the task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801.
 - (f) Do a check of the wiring between these pins:

D10984	S1183
pin 51	pin DC
 - (g) If you find a problem with the wiring, then do the steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D10982.
 - 3) Re-connect connector D10984.
 - 4) Re-install the Stabilizer Takeoff Warning Switches, S132, S546, S1183 and S1184. This is the task: Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.

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- 5) Do the steps in the Takeoff Warning System Test that test the stabilizer input to the takeoff warning system (AMM TASK 31-51-00-730-803).
 - a) If the test of the stabilizer input to the takeoff warning system is satisfactory, then you corrected the fault.

I. Fault Isolation Procedure - Leading Edge Flap Input Fault

- (1) Do this task: Flap/Slat Electronics Unit (FSEU) BITE Procedure, 27-51 TASK 801.
 - (a) Look for maintenance message 27-81421 on the Flap/Slat Electronics Unit (FSEU) BITE display, then go to the fault isolation task to do the corrective action.
 - (b) Use the PSEU BITE display to do a check of the leading edge flap inputs to the takeoff warning system:

Table 202

Connector	Pin	Test Condition	PSEU BITE Display
D10986	27	leading edge flap not extended	GND
D10986	27	leading edge flap extended	NO GND

- 1) If the PSEU BITE display agrees with the value in the table, then you corrected the fault.

J. Fault Isolation Procedure - Autothrottle Microswitch Pack Input Fault

- (1) For the left (right) autothrottle input problem, clean and test the autothrottle microswitch S8 of pack #1 (#2), M1766 (M1767). This is the task:
 - Switch Test and Cleaning, AMM TASK 76-11-07-820-802-F00
 - (a) Do the steps in the Takeoff Warning System test that the autothrottle inputs to the takeoff warning system, (AMM TASK 31-51-00-730-803).
 - 1) If the test of the autothrottle input to the takeoff warning system is satisfactory, then you corrected the fault.
 - 2) If the test of the autothrottle input to the takeoff warning system is not satisfactory, then you continue.
- (2) For the left (right) autothrottle input problem, replace the autothrottle microswitch S8 of pack #1 (#2), M1766 (M1767). These are the tasks:
 - Autothrottle Switchpack Switch Removal, AMM TASK 76-11-07-020-801-F00
 - Autothrottle Switchpack Switch Installation, AMM TASK 76-11-07-400-801-F00
 - (a) Do the steps in the Takeoff Warning System Test that test the autothrottle inputs to the takeoff warning system, (AMM TASK 31-51-00-730-803).
 - 1) If the test of the autothrottle input to the takeoff warning system is satisfactory, then you corrected the fault.
 - 2) If the test of the autothrottle input to the takeoff warning system is not satisfactory, then you continue.
- (3) Do this check of the wiring:
 - (a) Remove the switch S8 of the left Autothrottle Microswitch Pack Assembly, M1766. This is the task: Autothrottle Switchpack Switch Removal, AMM TASK 76-11-07-020-801-F00.
 - (b) Remove the switch S8 of the right Autothrottle Microswitch S8 Pack Assembly, M1767. This is the task: Autothrottle Switchpack Switch Removal, AMM TASK 76-11-07-020-801-F00.

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- (c) Disconnect connector D10982.
- (d) Disconnect connector D10984.
- (e) Do a continuity check between these pins of the connectors listed below:

M2061 PROX SWITCH ELECTRONICS UNIT D10982	M1766 L AUTOTHROTTLE MICROSW PACK ASSEMBLY D11128
pin 42	pin 16

M2061 PROX SWITCH ELECTRONICS UNIT D10984	M1767 R AUTOTHROTTLE MICROSW PACK ASSEMBLY D11132
pin 42	pin 16

- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install switch S8 of the left autothrottle microswitch pack, M1767. This is the task: Autothrottle Switchpack Switch Installation, AMM TASK 76-11-07-400-801-F00.
 - 3) Re-install switch S8 of the right autothrottle microswitch pack, M1766. This is the task: Autothrottle Switchpack Switch Installation, AMM TASK 76-11-07-400-801-F00.
 - 4) Re-connect connector D10982.
 - 5) Re-connect connector D10984.
 - 6) Do the steps in the Takeoff Warning System Test that test the autothrottle inputs to the takeoff warning system, (AMM TASK 31-51-00-730-803).
 - a) If the test of the autothrottle input to the takeoff warning system is satisfactory, then you corrected the fault.

K. Fault Isolation Procedure - Ground Spoiler Input Fault

- (1) Replace the Ground Spoiler Interlock Valve. These are the tasks:
 - Ground Spoiler Interlock Valve Removal, AMM TASK 27-62-61-000-801
 - Ground Spoiler Interlock Valve Installation, AMM TASK 27-62-61-400-801
- (a) If the test of the ground spoiler input to the takeoff warning system is satisfactory, then you corrected the fault.
- (b) If the test of the ground spoiler input to the takeoff warning system is not satisfactory, then continue.
- (2) Do this check of the wiring (WDM 27-62-21, WDM 31-53-11):
 - (a) Disconnect connector D11730 from the Ground Spoiler Up Pressure Switch, S1049.
 - (b) Disconnect connector D10986 from the PSEU, M2061.

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- (c) Do a continuity check between these pins of connector D10986 for the PSEU, M2061 and the connector D11730 for the Ground Spoiler Up Pressure Switch, S1049 as follows:

PROX SWITCH ELECTRONICS UNIT D10986	GROUND SPOILER UP PRESS SW D11730
pin 14	pin 1
pin 29	pin 3

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector D11730.
 - 3) Re-connect connector D10986.
 - 4) If the test of the ground spoiler input to the takeoff warning system is satisfactory, then you corrected the fault.

— END OF TASK —

804. Ground Spoilers Up Pressure Switch Fault - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-53001 GS PRESS A GT 750
 - (b) 31-53002 GS PRESS B GT 750
 - (c) 31-55001 GS PRESS A
 - (d) 31-55002 GS PRESS B
- (2) These messages will show on the Proximity Switch Electronic Unit (PSEU) BITE Display, M2061, when input from the Ground Spoiler Up Pressure Switch, S1049, has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Ground Spoiler Up Pressure Switch, S1049, of the Ground Spoiler Interlock Valve
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) SSM 31-51-11
- (2) SSM 31-53-11
- (3) SSM 27-62-21
- (4) WDM 31-51-11
- (5) WDM 31-53-11

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(6) WDM 27-62-21

E. Initial Evaluation

 WARNING	MAKE SURE ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING GEAR DOORS CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT.

- (1) Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.
- (2) Put the Speed Brake Handle in the UP position.
- (3) Move the Speed Brake Handle to the DOWN position.
- (4) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (5) If the maintenance message does not show, then there was an intermittent fault.
- (6) If the maintenance message shows, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Replace the Ground Spoiler Up Pressure Switch, S1049. These are the tasks:
 - Ground Spoiler Interlock Valve Pressure Switch Removal, AMM TASK 27-62-61-000-803
 - Ground Spoiler Interlock Valve Pressure Switch Installation, AMM TASK 27-62-61-400-804
- (2) Replace the Ground Spoiler Interlock Valve. These are the tasks:
 - Ground Spoiler Interlock Valve Removal, AMM TASK 27-62-61-000-801
 - Ground Spoiler Interlock Valve Installation, AMM TASK 27-62-61-400-801
- (a) Do the Repair Confirmation at the end of this task.
- (3) Do this check of the wiring (WDM 27-62-21, WDM 31-53-11):
 - (a) Disconnect connector D11730 from the Ground Spoiler Up Pressure Switch, S1049.
 - (b) Disconnect connector D10986 from the PSEU, M2061.
 - (c) Do a continuity check between these pins of connector D10986 for the PSEU, M2061 and the connector D11730 for the Ground Spoiler Up Pressure Switch, S1049 as follows:

PROX SWITCH ELECTRONICS UNIT	GROUND SPOILER UP PRESS SW
D10986	D11730
pin 14	pin 1
pin 29	pin 3

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D11730.
 - 3) Re-connect connector D10986.
 - 4) Do the Repair Confirmation at the end of this task.

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G. Repair Confirmation

- (1) Do these steps to check the Ground Spoiler Up Pressure Switch input to the PSEU:
 - (a) Push the ON Button.
 - (b) Push the NO Button until OTHER FUNCTNS? shows.
 - (c) Push the YES Button until T/O WRN shows on the display.
 - (d) Push the NO Button until I/O MONITOR shows.
 - (e) Push the YES Button until SENSORS shows.
 - (f) Push the NO Button until INPUTS shows.
 - (g) Do a check of the pins listed below:

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PSEU Connector	Pin	Ground Spoiler Position	PSEU BITE Display
D10986	14	DEPLOYED	GND
D10986	14	NOT DEPLOYED	NO GND
D10986	29	DEPLOYED	NO GND
D10986	29	NOT DEPLOYED	GND

- (h) If the PSEU BITE Display agrees with the value in the table, then you corrected the problem.
 - (i) If the PSEU BITE Display does not agree with the value in the table, then continue the Fault Isolation Procedure at the subsequent step.
- (2) Do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.

END OF TASK

805. Ground Spoiler Interlock Valve Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-55003 GSBV CLOSED
- (2) These messages will show on the PSEU BITE display, M2061, when the input from the ground spoiler up interlock valve sensor, S1050, has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Ground spoiler interlock valve
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

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D. Related Data

- (1) SSM 31-53-11
- (2) WDM 31-53-11

E. Initial Evaluation

 WARNING	KEEP PERSONNEL AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES, THE THRUST REVERSERS, AND THE LANDING GEAR. THESE COMPONENTS CAN MOVE SUDDENLY WHEN YOU SUPPLY HYDRAULIC POWER. THIS CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

- (1) Do the Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805.
- (2) Disconnect the push-pull cable from the right hand main landing gear upper link.
- (3) Push the push-pull cable upward until it stops.
- (4) Pull the push-pull cable downward until it stops.
- (5) Do the Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
 - (a) If the maintenance message shows, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the ground spoiler interlock valve, these are the tasks:
 - Ground Spoiler Interlock Valve Removal, AMM TASK 27-62-61-000-801
 - Ground Spoiler Interlock Valve Installation, AMM TASK 27-62-61-400-801.
 - (a) Do the Repair Confirmation at the end of this task.
 - 1) If the Repair Confirmation is not satisfactory, then continue.
- (2) Do this check of the wiring (WDM 31-53-11):
 - (a) Disconnect connector D11142.
 - (b) Disconnect connector D11728.

D11142	D11728
pin 20	pin 1
pin 8	pin 2

- (d) If you find a problem with the wiring, then repair the wiring.
- (e) Re-connect connector D11142.
- (f) Re-connect connector D11728.
- (g) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Push the push-pull cable upward until it stops.
- (2) Pull the push-pull cable downward until it stops.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
 - (a) If the maintenance message does not show, then you corrected the fault.

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- (b) If the maintenance message does not show, connect the push-pull cable to the right hand main landing gear upper link.

————— **END OF TASK** —————

806. Speedbrake Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-55005 SPDBRK UP
- (2) This maintenance message will show on the proximity switch electronic units, M2061, when the speedbrake input has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Speedbrake takeoff warning switch, S651
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation

- (1) Set the speedbrake handle to the UP position.
- (2) Set the speedbrake handle to the DOWN position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (5) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the speedbrake takeoff warn switch, S651.

These are the tasks:

Speedbrake Takeoff Warning Switch - Removal, AMM TASK 31-51-03-000-801,

Speedbrake Takeoff Warning Switch - Installation, AMM TASK 31-51-03-400-801.

- (a) Do the Repair Confirmation at the end of this task.

1) If the Repair Confirmation is not satisfactory, then continue.

- (2) Do this check of the wiring:

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- (a) Remove the speedbrake takeoff warn switch, S651. To remove it, do this task:
Speedbrake Takeoff Warning Switch - Removal, AMM TASK 31-51-03-000-801.
- (b) Disconnect connector D10982.
- (c) Do a continuity check between these pins of connector D10982 for the PSEU and the connector D5148P for the speedbrake takeoff warn switch:

D10982	D5148P
pin 29	pin 10

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the speedbrake takeoff warn switch, S651. To install it, do this task:
Speedbrake Takeoff Warning Switch - Installation, AMM TASK 31-51-03-400-801.
 - 3) Re-connect connector D10982.
 - 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Set the speedbrake handle in the UP position.
- (2) Set the speedbrake handle in the DOWN position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message does not show, then you corrected the fault.

———— **END OF TASK** ————

809. Takeoff Warning Inhibit Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-55008 T/O WARN INHIBIT
- (2) This message will show on the proximity switch electronic units, M2061, when the input from the landing gear takeoff warning cutoff circuit breaker, C1398, has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Landing gear takeoff warning cutoff circuit breaker, C1398
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)

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(4) (WDM 31-53-11)

E. Initial Evaluation

(1) Open this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

(2) Close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

(3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.

(4) If the maintenance message shows, then do the Fault Isolation Procedure below.

(5) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

(1) Replace this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

(a) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

(b) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.

1) If the maintenance message does not show, then you corrected the fault.

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring:

(a) Disconnect connector D10982 from the PSEU, M2061.

(b) Do a continuity between these pins of connector D10982 for the PSEU and the terminals for circuit breaker C1398:

D10982	C/B C1398
pin 52	term B

Gnd GD624-DC	C/B C1398
GD624-DC	term L

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

1) Repair the wiring.

2) Re-connect connector D10982.

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- (d) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF

- (e) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
1) If the maintenance message does not show, then you corrected the fault.

———— **END OF TASK** ————

810. Takeoff Flap A Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-55009 TAKEOFF FLAP A
(2) This maintenance message will show on the proximity switch electronic unit (PSEU), M2061, when the trailing edge takeoff flaps input from stall management yaw damper 2 has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Stall management yaw damper (SMYD) 2, M1748
(2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
(2) (SSM 31-53-11)
(3) (WDM 31-51-11)
(4) (WDM 31-53-11)

E. Initial Evaluation

- (1) Set the flap lever to 10 unit position.
(2) Move the flap lever to 0 unit position.
(3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
(4) If the maintenance message shows, then do the Fault Isolation Procedure below.
(5) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) For SMYD 2, do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
(a) If a SMYD maintenance message shows, then go to the applicable fault isolation task for the maintenance message to correct the fault.
(b) Do the Repair Confirmation at the end of this task.

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- 1) If the Repair Confirmation is not satisfactory, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the SMYD 2, M1748. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
 - (b) Disconnect connector D10982.
 - (c) Do a continuity check between these pins of the connectors listed below:

D10982	D3685A
pin 15	pin 63
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the SMYD 2, M1748. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
 - 3) Re-connect connector D10982.
 - 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Set the flap lever to 10 unit position.
- (2) Move the flap lever to 0 unit position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message does not show, then you corrected the fault.

———— **END OF TASK** ————

811. Takeoff Flap B Input Problem - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-55010 TAKEOFF FLAP B
- (2) This maintenance message will show on the proximity switch electronic unit (PSEU), M2061, when the trailing edge flaps input from the yaw damper management computer 1, M1747 has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Stall management yaw damper (SMYD) 1, M1747
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)

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- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation

- (1) Set the flap lever to 10 unit position.
- (2) Move the flap lever to 0 unit position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (5) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) For SMYD 1, do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
 - (a) If a SMYD maintenance message shows, then go to the applicable fault isolation task for the maintenance message to correct the fault.
 - (b) Do the Repair Confirmation at the end of this task.
 - 1) If the Repair Confirmation is not satisfactory, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the SMYD 1, M1747. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
 - (b) Disconnect connector D10982.
 - (c) Do a continuity check between these pins of connector D10982 for the PSEU and D3683A for the stall management yaw damper 1:

D10982	D3683A
pin 31	pin 63
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the SMYD 1, M1747. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
 - 3) Re-connect connector D10982.
 - 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Set the flap lever to 10 unit position.
- (2) Move the flap lever to 0 unit position.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (4) If the maintenance message does not show, then you corrected the fault.

———— **END OF TASK** ————

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815. Landing Warning System Fault (False Warning or No Warning) - Fault Isolation

A. Description

- (1) The continuous landing warning horn will sound when a gear is not down and locked and one of these conditions exist:
 - (a) The flaps between 0 and 10 units with one of the thrust lever angle (TLA) is less than 20 degrees of thrust, the other TLA is less than 34 degree and the radio altitude is less than 800 feet.

NOTE: The horn can be silenced with the horn cutout switch only when the radio altitude is between 200 and 800 feet.
 - (b) The flaps between 15 to 25 with one of the TLA is at less than 20 degrees of thrust and the other TLA is at less than 34 degrees of thrust. The horn cannot be stopped.

NOTE: The thrust lever settings are different during a single engine landing.
 - (c) The flaps are at more than 25 units. The TLA does not matter. The horn cannot be stopped.

B. Possible Causes

- (1) Stall management yaw damper (SMYD) 1, M1747
- (2) Stall management yaw damper (SMYD) 2, M1748
- (3) Flap landing warning switch, S138
- (4) Autothrottle microswitch pack left, M1766
- (5) Autothrottle microswitch pack right, M1767
- (6) Aural warning module, M315
- (7) Proximity switch electronics unit, M2061
- (8) LRRA receivers/transmitters, M1735 or M1736
- (9) LRRA transmit/receive antennas, M1737 or M1738 or M1739 or M1740
- (10) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) SSM 31-51-11
- (2) SSM 31-53-11
- (3) SSM 31-62-21
- (4) WDM 31-51-11
- (5) WDM 31-53-11
- (6) WDM 32-64-21

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E. Initial Evaluation

- (1) Do the Landing Warning System Test, AMM TASK 31-51-00-730-802.
 - (a) If the landing warning system test is not satisfactory, then do the Fault Isolation Procedure below.
 - (b) If the landing warning system test is satisfactory, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Do the Landing Warning System Test, AMM TASK 31-51-00-730-802.
 - (a) If the landing warning system test is satisfactory, then you corrected the fault.
 - (b) If the landing warning system test is not satisfactory, then continue.
- (2) Do the Aural Warning Module BITE Test, AMM TASK 31-51-00-740-801.
 - (a) If the aural warning module BITE test is satisfactory, then continue.
 - (b) If the aural warning module BITE test is not satisfactory, then do these steps:
 - 1) Replace the aural warning module, M315.
 - Aural Warning Module Removal, AMM TASK 31-51-04-000-801
 - Aural Warning Module Installation, AMM TASK 31-51-04-400-801
 - 2) Do the Landing Warning System Test, AMM TASK 31-51-00-730-802.
 - a) If the landing warning system test is satisfactory, then you corrected the fault.
 - b) If the landing warning system test is not satisfactory, then continue.
- (3) Do this check of the wiring:
 - (a) Disconnect connector D10984 from the PSEU, M2061.
 - (b) Remove the aural warning module, M315 (AMM TASK 31-51-04-000-801).
 - (c) Do a continuity check between these pins of connector D10984 for the PSEU and connector D940 for the aural warning module:

D10984	D940
pin 53	pin 2
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the aural warning module, M315 (AMM TASK 31-51-04-400-801).
 - 3) Re-connect connector D10984.
 - 4) Do the Landing Warning System Test, AMM TASK 31-51-00-730-802.
 - a) If the landing warning system test is satisfactory, then you corrected the fault.
 - b) If the landing warning system test is not satisfactory, then continue.
- (4) Replace the PSEU, M2061.
 - Proximity Switch Electronics Unit (PSEU) Removal, AMM TASK 32-09-10-000-801
 - Proximity Switch Electronics Unit (PSEU) Installation, AMM TASK 32-09-10-400-801
- (a) Do the Landing Warning System Test, AMM TASK 31-51-00-730-802.
 - 1) If the landing warning system test is satisfactory, then you corrected the fault.
 - 2) If the landing warning system test is not satisfactory, then continue.
- (5) Do the Low Range Radio Altimeter (LRRA) BITE Procedure, 34-33 TASK 801.

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- (a) Do the Landing Warning System Test, AMM TASK 31-51-00-730-802.
 - 1) If the landing warning system test is satisfactory, then you corrected the fault.

— END OF TASK —

820. Stab Trim Green Input Fault - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-55006 STAB TRIM GRN
- (2) These messages will show on the proximity switch electronic units (PSEU) BITE display, M2061, when input from the stabilizer takeoff warning switches, S1183 or S1184 has not been cycled between the on and off state during the current flight leg.

B. Possible Causes

- (1) Stabilizer takeoff warning switches, S1183 and S1184
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation



MAKE SURE PERSON AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING DOOR CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSON OR DAMAGE TO EQUIPMENT.

- (1) Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.
- (2) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (3) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (4) If the maintenance message does not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the stabilizer takeoff warning switches, S1183 and S1184.

These are the tasks:

Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801,

Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.

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- (a) Do the Repair Confirmation at the end of this task.
 - 1) If the Repair Confirmation is not satisfactory, then continue.
- (2) Do this check of the wiring:
 - (a) Disconnect connector D10984.
 - (b) Remove the stabilizer takeoff warning switch, S1184. To remove it, do this task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801.
 - (c) Do a continuity check between these pins of connector D10984 for the PSEU and S1184 for the stabilizer takeoff warning switch:

D10984	S1184
pin 51	pin CC
 - (d) Remove the stabilizer takeoff warning switch, S1183. To remove it, do this task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801.
 - (e) Do a continuity check between these pins of connector D10984 for the PSEU and S1183 for the stabilizer takeoff warning switch:

D10984	S1183
pin 51	pin DC
 - (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Install the stabilizer takeoff warning switch, S1183 and S1184. To install it, do this task: Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.
 - 3) Re-connect connector D10984.
 - 4) Do the Repair Confirmation at the end of this task.
 - (g) If you do not find a problem with the wiring, then continue.

G. Repair Confirmation

- (1) Set the stabilizer trim outside the green band toward nose down.
- (2) Set the stabilizer trim inside the green band.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
 - (a) If the maintenance message does not show then you corrected the fault.
- (4) Do this task: Hydraulic System A or B Power Removal, AMM TASK 29-11-00-860-805

———— **END OF TASK** ————

821. Stab Trim Not Green Input Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message(s):
 - (a) 31-53003 NOT STAB TRM GRN
 - (b) 31-55007 STAB TRIM NOT GRN
- (2) These messages will show on the proximity switch electronic units (PSEU) BITE display, M2061, when input from the stabilizer takeoff warning switches, S546, S132, S1183 or S1184 has not been cycled between the on and off state during the current flight leg.

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B. Possible Causes

- (1) Stabilizer takeoff warning switches, S132, S546, S1183 and S1184.
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) (SSM 31-51-11)
- (2) (SSM 31-53-11)
- (3) (WDM 31-51-11)
- (4) (WDM 31-53-11)

E. Initial Evaluation



MAKE SURE PERSON AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR AREAS. THE CONTROL SURFACES AND LANDING DOOR CAN MOVE WHEN YOU PRESSURIZE THE HYDRAULIC SYSTEMS. THIS CAN CAUSE INJURY TO PERSON OR DAMAGE TO EQUIPMENT.

- (1) Do this task: Hydraulic System A or B Pressurization, AMM TASK 29-11-00-860-801.
- (2) Set the stabilizer trim outside the green band toward nose up.
- (3) Set the stabilizer trim inside the green band.
- (4) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (5) If the maintenance message shows, then do the Fault Isolation Procedure below.
- (6) If the maintenance messages do not show, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Replace the stabilizer takeoff warn switches, S546 and S1183.

These are the tasks:

Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801,

Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.

- (a) Do the steps in the Takeoff Warning System Test that test the stabilizer input to the takeoff warning system (AMM TASK 31-51-00-730-803).

- 1) If the test of the stabilizer input to the takeoff warning system is not satisfactory, then continue.

- (2) Replace the stabilizer takeoff warn switches; S132 and S1184

These are the tasks:

Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801,

Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.

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- (a) Do the steps in the Takeoff Warning System Test that test the stabilizer input to the takeoff warning system (AMM TASK 31-51-00-730-803).
 - 1) If the test of the stabilizer input to the takeoff warning system is not satisfactory, then continue.
- (3) Do this check of the wiring:
 - (a) Disconnect connector D10982.
 - (b) Disconnect connector D10984.
 - (c) Remove stabilizer takeoff warning switches, S132, S546 and S1184. To remove it, do this task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801.
 - (d) Do a check of the wiring between these pins:

D10982	S132
pin 51	pin BD
 D10982	 S546
pin 51	pin AD
 D10984	 S1184
pin 51	pin CC
 - (e) Remove stabilizer takeoff warning switch S1183. To remove it, do this task: Stabilizer Takeoff Warning Switch Removal, AMM TASK 31-51-02-000-801.

D10984	S1183
pin 51	pin DC
 - (f) If you find a problem with the wiring, then do the steps:
 - 1) Repair the wiring.
 - 2) Re-connect connector D10982.
 - 3) Re-connect connector D10984.
 - 4) Re-install the stabilizer takeoff warning switches, S132, S546, S1183 and S1184. To install it, do this task: Stabilizer Takeoff Warning Switch Installation, AMM TASK 31-51-02-400-801.
 - 5) Do the steps in the Takeoff Warning System Test that test the stabilizer input to the takeoff warning system (AMM TASK 31-51-00-730-803).
 - a) If the test of the stabilizer input to the takeoff warning system is satisfactory, then you corrected the fault.

G. Repair Confirmation

- (1) Set the stabilizer trim outside the green band toward nose up.
- (2) Set the stabilizer trim inside the green band.
- (3) Do this task: Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
 - (a) If the maintenance message do not show then you corrected the fault.

————— **END OF TASK** —————

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822. Takeoff Warning Report Faults - Fault Isolation

A. General

- (1) You do the Takeoff Warning Report from the PSEU BITE Control Panel, M2061. The PSEU is located in the Forward Electronic Bay.

B. Fault Isolation Procedure

- (1) Do these steps from the PSEU BITE display to check the Takeoff Warning Report for messages:
 - (a) Push the ON Button
 - (b) Push the NO Button until OTHER FUNCTNS? shows.
 - (c) Push the YES Button.
 - 1) Make sure T/O WARN REPORTS? shows.
 - (d) Push the YES Button.
 - 1) Look for these maintenance messages, then go to the applicable Fault Isolation Task for the message to correct the problem.

NOTE: Push the down arrow button to scroll through the list of fault messages. One or more of these maintenance messages may be found:

 - a) 31-53001 GS PRESS A GT 750
 - b) 31-53002 GS PRESS B GT 750
 - c) 31-53003 NOT STAB TRM GRN
 - d) 31-53007 SPDBRK HDL UP
 - e) 31-53008 NOT T/O FLAPS A
 - f) 31-53009 NOT T/O FLAPS B
 - g) 31-53010 LE FLAPS NOT EXT
 - h) 32-03001 PARK BRK A SET
 - i) 32-03002 PARK BRK B SET
- (2) The PSEU does not reset these messages when the problems are corrected.

————— **END OF TASK** —————

823. MDCD TOW Disable - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 52-72104 MDCD TOW DISABLE
- (2) This nuisance message may show on the PSEU BITE display.

B. Possible Causes

- (1) Wiring problem
- (2) PSEU, M2061

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	18	C01398	LANDING GEAR TAKEOFF WARNING CUTOFF
D	18	C00451	LANDING GEAR AURAL WARN

D. Related Data

- (1) SSM 32-61-21
(2) WDM 32-64-21

E. Initial Evaluation

- (1) Do the Takeoff Warning (TOW) BITE Test, 31-51 TASK 801.
- (a) If the PSEU BITE display shows the maintenance message, then do the Fault Isolation Procedure below.
- (b) If the PSEU BITE display does not show the maintenance message, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) On the BITE display, do these steps to check the takeoff warning inputs to the PSEU:
- (a) Push the ON button.
- (b) Make sure that EXISTING FAULTS? shows.
- (c) Push the down arrow button until OTHER FUNCTNS? shows.
- (d) Push the YES button.
- (e) Make sure that T/O WARN REPORT? shows.
- (f) Push the down arrow button until I/O MONITOR? shows.
- (g) Push the YES button.
- (h) Make sure that SENSORS? shows.
- (i) Push the NO button until INPUTS? shows.
- 1) If INPUT INACTIVE shows on the display, push the arrow down button.
- (j) Push the YES button.
- (k) Push the NO button until CONN D10984? shows.
- (l) Push the YES button.
- (m) Push the arrow buttons until PIN 18 shows.
- (n) If NO GND shows, then do these steps:
- 1) Do this check of the wiring:
- a) Disconnect the connector D10984 from the PSEU, M2061.
- b) Do a wiring check to make sure that pin 18 of D10984 has continuity to ground (WDM 32-64-21).
- c) If you find a problem with the wiring, then do these steps:
- <1> Repair the wiring.
- <2> Re-connect the connector D10984 to the PSEU, M2061.
- <3> Use the PSEU to do a check of the existing faults.

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- <a> If the maintenance message does not show, then you corrected the problem.
- If the maintenance message shows, then continue.
- d) If you do not find a problem with the wiring, then continue.
- (o) If GND shows, then continue.
- (2) Replace the PSEU (AMM PAGEBLOCK 32-09-10/401).
- (a) If the maintenance message does not show, then you corrected the problem.

———— **END OF TASK** ————

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801. Master Caution Problem - Fault Isolation

A. Description

- (1) During the pre-flight Master Caution Test, not all the System Annunciator lights (six pack, L342/L343) come on.

B. Possible Causes

- (1) The pre-flight power-on sequence to the master caution circuit.
- (2) A failed master caution light switch.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
C	11	C01275	MASTER CAUTION ANNUNCIATOR CONT 1
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2
C	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	14	C00026	DC BUS INDICATION BAT
F	16	C00023	DC BUS INDICATION BUS 1

D. Related Data

- (1) This fault can occur when the pre-flight power-up sequence of the System Annunciator indication lights are energized before the master caution circuit.

E. Initial Evaluation

- (1) If a System Annunciator light does not operate correctly while performing the pre-flight Master Caution Test, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Open these circuit breakers:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT

- (2) Cycle the circuit breaker for the applicable System Annunciator light that is inoperative.

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- (a) FUEL, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	11	C01275	MASTER CAUTION ANNUNCIATOR CONT 1

- (b) FLT CONT, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	11	C01275	MASTER CAUTION ANNUNCIATOR CONT 1

- (c) APU, open and close this circuit breaker:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	14	C00026	DC BUS INDICATION BAT

- (d) ELEC, open and close these circuit breakers:

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	14	C00026	DC BUS INDICATION BAT
F	16	C00023	DC BUS INDICATION BUS 1

- (e) HYD, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2

- (f) ANTI-ICE, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2

- (g) AIR COND, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

- (h) OVERHEAD, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4

- (i) DOOR, open and close this circuit breaker

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2

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- (j) ENG, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

- (k) IRS, open and close this circuit breaker:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4

- (l) OVHT/DET, open and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

- (3) Close these circuit breakers:

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT

- (4) If the System Annunciator lights display correctly, then you have corrected the fault.

———— **END OF TASK** ————

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801. CDS BITE Procedure

A. General

- (1) The Common Display System (CDS) BITE data is displayed from the Control Display Unit (CDU). These are the items on the CDS DEU main menu that you will use in this task:
 - (a) CURRENT STATUS
 - (b) INFLIGHT FAULTS
- (2) CURRENT STATUS
 - (a) The CURRENT STATUS display will show any maintenance messages that are currently active. A maintenance message identifies a specific failure which is found by the CDS. The maintenance messages are in English text and have a seven digit number.

NOTE: Any faults that become active are added to the list, and the faults that become not active are shown as NOT ACTIVE.
- (3) INFLIGHT FAULTS
 - (a) The INFLIGHT FAULTS display shows the flight legs during which faults occurred. The CDS can show data for LEG 01 through LEG 64. The flight legs are shown with the flight leg that had the most recent fault at the top of the first page. Only the flight legs during which faults occurred will show. You can use the PREV PAGE and NEXT PAGE keys to see all the legs. The takeoff time, the takeoff date, and the number of faults in the leg will show under each leg.
 - (b) When you press the line select key next to the prompt for one of the flight legs, you will see more data. You will see this data for each fault in the flight leg:
 - 1) A maintenance message number and the message text.
 - 2) The date that the fault occurred.
 - 3) The time that the fault occurred.
 - 4) The altitude when the fault occurred.
 - 5) The flight number.
 - (c) If there are more than one maintenance message for that flight leg, they will show on subsequent pages. You can use the PREV PAGE to see all the pages.

B. BITE Procedure

- (1) It is normal to see the "CDS FAULT" message shows for up to 3 minutes during the CDS standby power testing and power-up operations.

NOTE: It is important that the flight crews wait for up to 3 minutes after the "CDS FAULT" message is observed for the message to clear before proceeding with the fault isolation procedure.
- (2) If the "CDS FAULT" message continues to show, refer to the flow chart: Figure 202

NOTE: The dedicated Hold-up C/B provides power to the Volatile Memory in the DEU. If the C/B is pulled, any fault codes stored in this memory will be lost. The fault codes will not be available for movement to the Non-volatile memory during the Safe Store process performed before a Bite Down load.

NOTE: If both C/Bs are pulled, Primary and Hold-up, no problem is expected regarding trouble shooting, unless the Primary C/B is Closed before the Hold-Up C/B. This will cause a CDS Fault, with Fault Code 31-60101 or 31-60102, NO HOT BATTERY POWER showing up on the Current Status page.

 - (a) To do a safe-store procedure, follow these steps:

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- 1) On the MCDU MAINT BITE INDEX page select CDS.
 - 2) On the CDS BITE page select DEU 1 or DEU 2.
 - 3) On the CDS DEU X BITE page select GROUND TEST.
 - 4) On the CDS DEU X MAINT/BITE page select the DEU X SELF-TEST.
 - 5) Select RUN SELF-TEST.
NOTE: The self-test can take up to 3 minutes. At this time the MCDU page will show : DEU SELF-TEST (3 MIN) OR DEU-X BITE INOP CHECK DEU OR INTERFACE. Do not be concerned with this message the test page will read: SELF-TEST IN PROGRESS.
 - 6) At the end of the SELF-TEST the test page will show PASSED or FAILED.
 - 7) To exit the test select INDEX.
- (3) Do the BITE procedure for the CDS (Figure 201).
- (a) If you are not at one of the CDS DEU BITE displays, then do these steps:
 - 1) Push the INIT REF function key.
 - 2) If the POS INIT display shows, then push the line select key next to the INDEX prompt.
NOTE: This makes the INIT/REF INDEX show.
 - 3) Push the line select key next to the MAINT prompt.
 - (b) From the MAINT BITE INDEX, push the line select key next to the CDS prompt.
 - (c) For DEU-1 CDS BITE, push the line select key next to the DEU-1 prompt.
 - (d) For DEU-2 CDS BITE, push the line select key next to the DEU-2 prompt.
 - (e) Do these steps to look for maintenance messages in CURRENT STATUS:
 - 1) Push the line select key next to the CURRENT STATUS prompt.
NOTE: If there are active faults detected by the applicable DEU, you will see a maintenance message number and the maintenance message text.
 - 2) If there are any maintenance messages, then refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message.
NOTE: The number of maintenance messages that are in Current Status are shown in the upper right corner of the display. You can use the PREV PAGE and NEXT PAGE buttons to move from one maintenance message to another.
 - 3) If NO FAULTS shows for DEU 1 and 2, then do these steps:
NOTE: There are no faults that are currently active.
 - a) Push the line select key next to the INDEX prompt.
NOTE: This will bring you back to the CDS DEU BITE main menu.
 - b) Do the steps that follow to look for maintenance messages in the INFLIGHT FAULTS menu selection.
 - (f) If there are no maintenance messages in CURRENT STATUS for both DEU 1 and 2, then do these steps to look for maintenance messages in INFLIGHT FAULTS for both DEU 1 and 2:
 - 1) Push the line select key next to the INFLIGHT FAULTS prompt.



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- 2) Push the line select key next to the prompt for the flight leg (LEG) during which the fault occurred.

NOTE: The most recent flight leg is LEG 01.

- 3) Refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message.

NOTE: The number of maintenance messages that are in Current Status are shown in the upper right corner of the display. You can use the PREV PAGE and NEXT PAGE buttons to move from one maintenance message to another.

- (g) Push the line select key next to the INDEX prompt twice to return to the CDS DEU BITE Main Menu.

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CDS	31-60011 DEU-1 FAULT	31-62 TASK 805
CDS	31-60012 DEU-2 FAULT	31-62 TASK 806
CDS	31-60031 DEU-1 RESET	31-62 TASK 807
CDS	31-60032 DEU-2 RESET	31-62 TASK 808
CDS	31-60041 DEU-1 SOFTWARE RESET	31-62 TASK 809
CDS	31-60042 DEU-2 SOFTWARE RESET	31-62 TASK 810
CDS	31-60051 DEU-1 COAX FAULT	31-62 TASK 811
CDS	31-60052 DEU-2 COAX FAULT	31-62 TASK 812
CDS	31-60060 DEU-1 AND DEU-2 PROGRAM PIN POSITION FAULT	31-62 TASK 813
CDS	31-60061 DEU-1 PROGRAM PIN FAULT	31-62 TASK 814
CDS	31-60062 DEU-2 PROGRAM PIN FAULT	31-62 TASK 815
CDS	31-60070 DEU1 AND DEU2 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 816
CDS	31-60071 DEU-1 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 817
CDS	31-60072 DEU-2 INCORRECT SOFTWARE CONFIGURATION	31-62 TASK 818
CDS	31-60101 NO HOT BATTERY POWER	31-62 TASK 819
CDS	31-60102 NO HOT BATTERY POWER	31-62 TASK 820
CDS	31-60221 DEU-1 A429 XMITTER FAULT -EEC1 CHANNEL A BUS	31-62 TASK 871
CDS	31-60222 DEU-2 A429 XMITTER FAULT -EEC1 CHANNEL A BUS	31-62 TASK 872
CDS	31-60231 DEU-1 A429 XMITTER FAULT -CHANNEL 1 XTALK BUS	31-62 TASK 871
CDS	31-60232 DEU-2 A429 XMITTER FAULT -CHANNEL 1 XTALK BUS	31-62 TASK 872

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CDS	31-60241 DEU-1 A429 XMITTER FAULT -FMC/MAINTENANCE BUS	31-62 TASK 871
CDS	31-60242 DEU-2 A429 XMITTER FAULT -FMC/MAINTENANCE BUS	31-62 TASK 872
CDS	31-60251 DEU-1 A429 XMITTER FAULT -EEC1 CHANNEL B BUS	31-62 TASK 871
CDS	31-60252 DEU-2 A429 XMITTER FAULT -EEC1 CHANNEL B BUS	31-62 TASK 872
CDS	31-60261 DEU-1 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 1	31-62 TASK 871
CDS	31-60262 DEU-2 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 1	31-62 TASK 872
CDS	31-60271 DEU-1 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 1	31-62 TASK 871
CDS	31-60272 DEU-2 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 1	31-62 TASK 872
CDS	31-60281 DEU-1 A429 XMITTER FAULT -DEU-EEC BUS	31-62 TASK 871
CDS	31-60282 DEU-2 A429 XMITTER FAULT -DEU-EEC BUS	31-62 TASK 872
CDS	31-60311 DEU-1 A429 XMITTER FAULT -CDS GEN PURPOSE BUS	31-62 TASK 871
CDS	31-60312 DEU-2 A429 XMITTER FAULT -CDS GEN PURPOSE BUS	31-62 TASK 872
CDS	31-60321 DEU-1 A429 XMITTER FAULT -EEC 2 CHANNEL A BUS	31-62 TASK 871
CDS	31-60322 DEU-2 A429 XMITTER FAULT -EEC 2 CHANNEL A BUS	31-62 TASK 872
CDS	31-60331 DEU-1 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 2	31-62 TASK 871
CDS	31-60332 DEU-2 A429 XMITTER FAULT -CNTRL PANEL FEEDTHRU 2	31-62 TASK 872
CDS	31-60351 DEU-1 A429 XMITTER FAULT -CHANNEL 2 XTALK BUS	31-62 TASK 871
CDS	31-60352 DEU-2 A429 XMITTER FAULT -CHANNEL 2 XTALK BUS	31-62 TASK 872
CDS	31-60361 DEU-1 A429 XMITTER FAULT -EEC 2 CHANNEL B BUS	31-62 TASK 871
CDS	31-60362 DEU-2 A429 XMITTER FAULT -EEC 2 CHANNEL B BUS	31-62 TASK 872
CDS	31-60371 DEU-1 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 2	31-62 TASK 871

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CDS	31-60372 DEU-2 A429 XMITTER FAULT -WRAP MONITOR OUTPUT 2	31-62 TASK 872
CDS	31-60411 DEU-1 DUDB AND DU-LOB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60412 DEU-2 DUDB AND DU-LOB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60421 DEU-1 DUDB AND DU-LIB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60422 DEU-2 DUDB AND DU-LIB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60431 DEU-1 DUDB AND DU-C1 ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60432 DEU-2 DUDB AND DU-C1 ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60441 DEU-1 DUDB AND DU-RIB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60442 DEU-2 DUDB AND DU-RIB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60451 DEU-1 DUDB AND DU-ROB ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60452 DEU-2 DUDB AND DU-ROB ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-60461 DEU-1 DUDB AND DU-C2 ARE INCOMPATIBLE	31-62 TASK 873
CDS	31-60462 DEU-2 DUDB AND DU-C2 ARE INCOMPATIBLE	31-62 TASK 874
CDS	31-61011 DU-LOB FAIL	31-62 TASK 821
CDS	31-61012 DU-LIB FAIL	31-62 TASK 822
CDS	31-61013 DU-CU FAIL	31-62 TASK 823
CDS	31-61014 DU-RIB FAIL	31-62 TASK 824
CDS	31-61015 DU-ROB FAIL	31-62 TASK 825
CDS	31-61016 DU-CL FAIL	31-62 TASK 826
CDS	31-61017 RLS-L FAIL	31-62 TASK 827
CDS	31-61018 RLS-R FAIL	31-62 TASK 828
CDS	31-61021 DU-LOB COAX FAULT	31-62 TASK 829
CDS	31-61022 DU-LIB COAX FAULT	31-62 TASK 830
CDS	31-61023 DU-CU COAX FAULT	31-62 TASK 831
CDS	31-61024 DU-RIB COAX FAULT	31-62 TASK 832
CDS	31-61025 DU-ROB COAX FAULT	31-62 TASK 833
CDS	31-61026 DU-CL COAX FAULT	31-62 TASK 834
CDS	31-61031 DU-LOB LOW BRIGHTNESS	31-62 TASK 835
CDS	31-61032 DU-LIB LOW BRIGHTNESS	31-62 TASK 836
CDS	31-61033 DU-CU LOW BRIGHTNESS	31-62 TASK 837
CDS	31-61034 DU-RIB LOW BRIGHTNESS	31-62 TASK 838
CDS	31-61035 DU-ROB LOW BRIGHTNESS	31-62 TASK 839
CDS	31-61036 DU-CL LOW BRIGHTNESS	31-62 TASK 840
CDS	31-61037 DU-LOB OVERHEAT	31-62 TASK 886

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CDS	31-61038 DU-LIB OVERHEAT	31-62 TASK 886
CDS	31-61039 DU-CU OVERHEAT	31-62 TASK 886
CDS	31-61040 DU-RIB OVERHEAT	31-62 TASK 886
CDS	31-61041 DU-ROB OVERHEAT	31-62 TASK 886
CDS	31-61042 DU-CL OVERHEAT	31-62 TASK 886
CDS	31-63110 ENGINE 1 OIL QUANTITY INVALID	31-62 TASK 841
CDS	31-63120 ENGINE 2 OIL QUANTITY INVALID	31-62 TASK 842
CDS	31-63130 ENGINE 1 N1 RPM INVALID	31-62 TASK 843
CDS	31-63140 ENGINE 2 N1 RPM INVALID	31-62 TASK 844
CDS	31-63150 ENGINE 1 N2 RPM INVALID	31-62 TASK 845
CDS	31-63160 ENGINE 2 N2 RPM INVALID	31-62 TASK 846
CDS	31-63210 HYDRAULIC OIL QUANTITY SYS A INVALID	31-62 TASK 847
CDS	31-63220 HYDRAULIC OIL QUANTITY SYS B INVALID	31-62 TASK 848
CDS	31-64111 ENGINE 1 OIL QUANTITY INVALID TO DEU-1	31-62 TASK 849
CDS	31-64112 ENGINE 1 OIL QUANTITY INVALID TO DEU-2	31-62 TASK 850
CDS	31-64121 ENGINE 2 OIL QUANTITY INVALID TO DEU-1	31-62 TASK 851
CDS	31-64122 ENGINE 2 OIL QUANTITY INVALID TO DEU-2	31-62 TASK 852
CDS	31-64131 ENGINE 1 N1 RPM INVALID TO DEU-1	31-62 TASK 853
CDS	31-64132 ENGINE 1 N1 RPM INVALID TO DEU-2	31-62 TASK 854
CDS	31-64141 ENGINE 2 N1 RPM INVALID TO DEU-1	31-62 TASK 855
CDS	31-64142 ENGINE 2 N1 RPM INVALID TO DEU-2	31-62 TASK 856
CDS	31-64151 ENGINE 1 N2 RPM INVALID TO DEU-1	31-62 TASK 857
CDS	31-64152 ENGINE 1 N2 RPM INVALID TO DEU-2	31-62 TASK 858
CDS	31-64161 ENGINE 2 N2 RPM INVALID TO DEU-1	31-62 TASK 859
CDS	31-64162 ENGINE 2 N2 RPM INVALID TO DEU-2	31-62 TASK 860
CDS	31-64201 HYDRAULIC OIL PRESSURE SYS A INVALID	31-62 TASK 861
CDS	31-64202 HYDRAULIC OIL PRESSURE SYS B INVALID	31-62 TASK 862
CDS	31-64211 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-1	31-62 TASK 863
CDS	31-64212 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-2	31-62 TASK 864
CDS	31-64221 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-1	31-62 TASK 865
CDS	31-64222 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-2	31-62 TASK 866
CDS	31-65010 PITCH DISAGREE	31-62 TASK 867

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CDS	31-65020 ROLL DISAGREE	31-62 TASK 868
CDS	31-65030 EEC DISAGREE	31-62 TASK 869
CDS	31-65040 FMC DATA DISAGREE	31-62 TASK 870
CDS	31-65050 ALTITUDE DISAGREE	31-62 TASK 875
CDS	31-65060 AIRSPEED DISAGREE	31-62 TASK 876
CDS	31-65070 AOA DISAGREE	34-21 TASK 834
CDS	31-67020 NO ADF-1 DATA	31-63 TASK 809
CDS	31-67030 NO ADF-2 DATA	31-63 TASK 809
CDS	31-67051 NO ADIRU-1 DATA	31-63 TASK 809
CDS	31-67052 NO ADIRU-1 DATA	31-63 TASK 809
CDS	31-67061 NO ADIRU-2 DATA	31-63 TASK 809
CDS	31-67062 NO ADIRU-2 DATA	31-63 TASK 809
CDS	31-67070 NO AUTO-THROTTLE DATA	31-63 TASK 809
CDS	31-67081 NO DEU-2 DATA	31-63 TASK 807
CDS	31-67082 NO DEU-1 DATA	31-63 TASK 808
CDS	31-67100 NO DFDAU DATA	31-63 TASK 809
CDS	31-67110 NO DU-LOB DATA	31-63 TASK 801
CDS	31-67120 NO DU-LIB DATA	31-63 TASK 802
CDS	31-67130 NO DU-CU DATA	31-63 TASK 803
CDS	31-67140 NO DU-RIB DATA	31-63 TASK 805
CDS	31-67150 NO DU-ROB DATA	31-63 TASK 806
CDS	31-67160 NO DU-CL DATA	31-63 TASK 804
CDS	31-67170 NO DME-1 DATA	31-63 TASK 809
CDS	31-67180 NO DME-2 DATA	31-63 TASK 809
CDS	31-67200 NO EEC-1 DATA	31-63 TASK 809
CDS	31-67230 NO EEC-2 DATA	31-63 TASK 809
CDS	31-67300 NO CAPT EFIS CP DATA	31-63 TASK 809
CDS	31-67310 NO F/O EFIS CP DATA	31-63 TASK 809
CDS	31-67320 NO AVM DATA	31-63 TASK 809
CDS	31-67330 NO FCC-A DATA	31-63 TASK 809
CDS	31-67340 NO FCC-B DATA	31-63 TASK 809
CDS	31-67400 NO FMC-1 DATA	31-63 TASK 809
CDS	31-67440 NO FMC-2 DATA	31-63 TASK 809
CDS	31-67470 NO FSEU DATA	31-63 TASK 809
CDS	31-67500 NO FQPU DATA	31-63 TASK 809

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CDS	31-67550 NO GPWC DATA	31-63 TASK 809
CDS	31-67560 NO ILS-1 DATA	31-63 TASK 809
CDS	31-67570 NO ILS-2 DATA	31-63 TASK 809
CDS	31-67600 NO MCP DATA	31-63 TASK 809
CDS	31-67700 NO RA-1 DATA	31-63 TASK 809
CDS	31-67710 NO RA-2 DATA	31-63 TASK 809
CDS	31-67730 NO STALL MANAGEMENT-1 DATA	31-63 TASK 809
CDS	31-67740 NO STALL MANAGEMENT-2 DATA	31-63 TASK 809
CDS	31-67800 NO TCAS DATA	31-63 TASK 809
CDS	31-67830 NO VOR-1 DATA	31-63 TASK 809
CDS	31-67840 NO VOR-2 DATA	31-63 TASK 809
CDS	31-68051 NO ADIRU-1 DATA ON ADR-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68052 NO ADIRU-1 DATA ON ADR-L-4 BUS 1 AND 2	31-63 TASK 812
CDS	31-68055 NO ADIRU-1 DATA ON IR-L-1 BUS	31-63 TASK 812
CDS	31-68056 NO ADIRU-1 DATA ON IR-L-3 BUS	31-63 TASK 812
CDS	31-68061 NO ADIRU-2 DATA ON ADR-R-4 BUS 1 AND 2	31-63 TASK 812
CDS	31-68062 NO ADIRU-2 DATA ON ADR-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68065 NO ADIRU-2 DATA ON IR-R-3 BUS	31-63 TASK 812
CDS	31-68066 NO ADIRU-2 DATA ON IR-R-1 BUS	31-63 TASK 812
CDS	31-68081 NO DEU-2 DATA ON CHANNEL 1 CROSSTALK BUS	31-63 TASK 810
CDS	31-68082 NO DEU-1 DATA ON CHANNEL 1 CROSSTALK BUS	31-63 TASK 811
CDS	31-68083 NO DEU-2 DATA ON CHANNEL 2 CROSSTALK BUS	31-63 TASK 810
CDS	31-68084 NO DEU-1 DATA ON CHANNEL 2 CROSSTALK BUS	31-63 TASK 811
CDS	31-68210 NO EEC-1 CHANNEL-A BUS DATA	31-63 TASK 812
CDS	31-68220 NO EEC-1 CHANNEL-B BUS DATA	31-63 TASK 812
CDS	31-68240 NO EEC-2 CHANNEL-A BUS DATA	31-63 TASK 812
CDS	31-68250 NO EEC-2 CHANNEL-B BUS DATA	31-63 TASK 812
CDS	31-68410 NO FMC-1 DATA ON FMC-L-08 BUS	31-63 TASK 812
CDS	31-68420 NO FMC-1 DATA ON FMC-L-09 BUS	31-63 TASK 812
CDS	31-68431 NO FMC-1 DATA ON FMC-01 BUS	31-63 TASK 813
CDS	31-68432 NO FMC-1 DATA ON FMC-02 BUS	31-63 TASK 814
CDS	31-68450 NO FMC-2 DATA ON FMC-R-08 BUS	31-63 TASK 812

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CDS	31-68460 NO FMC-2 DATA ON FMC-R-09 BUS	31-63 TASK 812
CDS	31-68471 NO FMC-2 DATA ON FMC-01 BUS	31-63 TASK 815
CDS	31-68472 NO FMC-2 DATA ON FMC-02 BUS	31-63 TASK 816
CDS	31-68510 NO FQPU DATA ON DATA BUS-1	31-63 TASK 812
CDS	31-68520 NO FQPU DATA ON DATA BUS-2	31-63 TASK 812
CDS	31-68530 NO FQPU DATA ON DATA BUS-3	31-63 TASK 812
CDS	31-68561 NO ILS-1 DATA ON ILS-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68562 NO ILS-1 DATA ON ILS-L-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68571 NO ILS-2 DATA ON ILS-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68572 NO ILS-2 DATA ON ILS-R-2 BUS 1 AND 2	31-63 TASK 812
CDS	31-68610 NO MCP DATA ON MCP-1 BUS	31-63 TASK 812
CDS	31-68620 NO MCP DATA ON MCP-2 BUS	31-63 TASK 812
CDS	31-68810 NO TCAS DATA ON TCAS-1 BUS	31-63 TASK 812
CDS	31-68820 NO TCAS DATA ON TCAS-2 BUS	31-63 TASK 812
CDS	31-68861 NO ARINC-708 CAPT DATA	31-63 TASK 823
CDS	31-68862 NO ARINC-708 CAPT DATA	31-63 TASK 823
CDS	31-68871 NO ARINC-708 F/O DATA	31-63 TASK 823
CDS	31-68872 NO ARINC-708 F/O DATA	31-63 TASK 823
CDS	31-69021 NO ADF-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69022 NO ADF-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69031 NO ADF-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69032 NO ADF-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69051 NO ADIRU-1 DATA ON ADR-L-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69052 NO ADIRU-1 DATA ON ADR-L-4 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69053 NO ADIRU-1 DATA ON ADR-L-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69054 NO ADIRU-1 DATA ON ADR-L-4 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69061 NO ADIRU-2 DATA ON ADR-R-4 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69062 NO ADIRU-2 DATA ON ADR-R-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69063 NO ADIRU-2 DATA ON ADR-R-4 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69064 NO ADIRU-2 DATA ON ADR-R-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69071 NO AUTO-THROTTLE DATA TO DEU-1	31-63 TASK 817
CDS	31-69072 NO AUTO-THROTTLE DATA TO DEU-2	31-63 TASK 818
CDS	31-69101 NO DFDAU DATA TO DEU-1	31-63 TASK 817
CDS	31-69102 NO DFDAU DATA TO DEU-2	31-63 TASK 818
CDS	31-69111 NO DU-LOB DATA TO DEU-1	31-63 TASK 817

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CDS	31-69112 NO DU-LOB DATA TO DEU-2	31-63 TASK 818
CDS	31-69121 NO DU-LIB DATA TO DEU-1	31-63 TASK 817
CDS	31-69122 NO DU-LIB DATA TO DEU-2	31-63 TASK 818
CDS	31-69131 NO DU-CU DATA TO DEU-1	31-63 TASK 817
CDS	31-69132 NO DU-CU DATA TO DEU-2	31-63 TASK 818
CDS	31-69141 NO DU-RIB DATA TO DEU-1	31-63 TASK 817
CDS	31-69142 NO DU-RIB DATA TO DEU-2	31-63 TASK 818
CDS	31-69151 NO DU-ROB DATA TO DEU-1	31-63 TASK 817
CDS	31-69152 NO DU-ROB DATA TO DEU-2	31-63 TASK 818
CDS	31-69161 NO DU-CL DATA TO DEU-1	31-63 TASK 817
CDS	31-69162 NO DU-CL DATA TO DEU-2	31-63 TASK 818
CDS	31-69171 NO DME-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69172 NO DME-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69181 NO DME-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69182 NO DME-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69211 NO EEC-1 CHANNEL-A BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69212 NO EEC-1 CHANNEL-A BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69221 NO EEC-1 CHANNEL-B BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69222 NO EEC-1 CHANNEL-B BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69241 NO EEC-2 CHANNEL-A BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69242 NO EEC-2 CHANNEL-A BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69251 NO EEC-2 CHANNEL-B BUS DATA TO DEU-1	31-63 TASK 817
CDS	31-69252 NO EEC-2 CHANNEL-B BUS DATA TO DEU-2	31-63 TASK 818
CDS	31-69301 NO CAPT EFIS CP DATA TO DEU-1	31-63 TASK 817
CDS	31-69302 NO CAPT EFIS CP DATA TO DEU-2	31-63 TASK 818
CDS	31-69311 NO F/O EFIS CP DATA TO DEU-1	31-63 TASK 817
CDS	31-69312 NO F/O EFIS CP DATA TO DEU-2	31-63 TASK 818
CDS	31-69321 NO AVM DATA TO DEU-1	31-63 TASK 817
CDS	31-69322 NO AVM DATA TO DEU-2	31-63 TASK 818
CDS	31-69331 NO FCC-A DATA TO DEU-1	31-63 TASK 817
CDS	31-69332 NO FCC-A DATA TO DEU-2	31-63 TASK 818
CDS	31-69341 NO FCC-B DATA TO DEU-1	31-63 TASK 817
CDS	31-69342 NO FCC-B DATA TO DEU-2	31-63 TASK 818
CDS	31-69411 NO FMC-1 DATA ON FMC-L-08 BUS TO DEU-1	31-63 TASK 817
CDS	31-69412 NO FMC-1 DATA ON FMC-L-08 BUS TO DEU-2	31-63 TASK 818

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CDS	31-69421 NO FMC-1 DATA ON FMC-L-09 BUS TO DEU-1	31-63 TASK 817
CDS	31-69422 NO FMC-1 DATA ON FMC-L-09 BUS TO DEU-2	31-63 TASK 818
CDS	31-69451 NO FMC-2 DATA ON FMC-R-08 BUS TO DEU-1	31-63 TASK 817
CDS	31-69452 NO FMC-2 DATA ON FMC-R-08 BUS TO DEU-2	31-63 TASK 818
CDS	31-69461 NO FMC-2 DATA ON FMC-R-09 BUS TO DEU-1	31-63 TASK 817
CDS	31-69462 NO FMC-2 DATA ON FMC-R-09 BUS TO DEU-2	31-63 TASK 818
CDS	31-69471 NO FSEU DATA TO DEU-1	31-63 TASK 817
CDS	31-69472 NO FSEU DATA TO DEU-2	31-63 TASK 818
CDS	31-69511 NO FQPU DATA ON DATA BUS-1 TO DEU-1	31-63 TASK 817
CDS	31-69512 NO FQPU DATA ON DATA BUS-1 TO DEU-2	31-63 TASK 818
CDS	31-69521 NO FQPU DATA ON DATA BUS-2 TO DEU-1	31-63 TASK 817
CDS	31-69522 NO FQPU DATA ON DATA BUS-2 TO DEU-2	31-63 TASK 818
CDS	31-69531 NO FQPU DATA ON DATA BUS-3 TO DEU-1	31-63 TASK 817
CDS	31-69532 NO FQPU DATA ON DATA BUS-3 TO DEU-2	31-63 TASK 818
CDS	31-69551 NO GPWC DATA TO DEU-1	31-63 TASK 817
CDS	31-69552 NO GPWC DATA TO DEU-2	31-63 TASK 818
CDS	31-69561 NO ILS-1 DATA ON ILS-L-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69562 NO ILS-1 DATA ON ILS-L-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69563 NO ILS-1 DATA ON ILS-L-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69564 NO ILS-1 DATA ON ILS-L-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69571 NO ILS-2 DATA ON ILS-R-2 BUS 1 TO DEU-1	31-63 TASK 817
CDS	31-69572 NO ILS-2 DATA ON ILS-R-2 BUS 1 TO DEU-2	31-63 TASK 818
CDS	31-69573 NO ILS-2 DATA ON ILS-R-2 BUS 2 TO DEU-1	31-63 TASK 817
CDS	31-69574 NO ILS-2 DATA ON ILS-R-2 BUS 2 TO DEU-2	31-63 TASK 818
CDS	31-69611 NO MCP DATA ON MCP-1 BUS TO DEU-1	31-63 TASK 817
CDS	31-69612 NO MCP DATA ON MCP-1 BUS TO DEU-2	31-63 TASK 818
CDS	31-69621 NO MCP DATA ON MCP-2 BUS TO DEU-1	31-63 TASK 817
CDS	31-69622 NO MCP DATA ON MCP-2 BUS TO DEU-2	31-63 TASK 818
CDS	31-69701 NO RA-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69702 NO RA-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69711 NO RA-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69712 NO RA-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69731 NO STALL MANAGEMENT-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69732 NO STALL MANAGEMENT-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69741 NO STALL MANAGEMENT-2 DATA TO DEU-1	31-63 TASK 817

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CDS	31-69742 NO STALL MANAGEMENT-2 DATA TO DEU-2	31-63 TASK 818
CDS	31-69811 NO TCAS DATA ON TCAS-1 BUS TO DEU-1	31-63 TASK 817
CDS	31-69812 NO TCAS DATA ON TCAS-1 BUS TO DEU-2	31-63 TASK 818
CDS	31-69821 NO TCAS DATA ON TCAS-2 BUS TO DEU-1	31-63 TASK 817
CDS	31-69822 NO TCAS DATA ON TCAS-2 BUS TO DEU-2	31-63 TASK 818
CDS	31-69831 NO VOR-1 DATA TO DEU-1	31-63 TASK 817
CDS	31-69832 NO VOR-1 DATA TO DEU-2	31-63 TASK 818
CDS	31-69841 NO VOR-2 DATA TO DEU-1	31-63 TASK 817
CDS	31-69842 NO VOR-2 DATA TO DEU-2	31-63 TASK 818

———— **END OF TASK** ————

EFFECTIVITY
SIA ALL

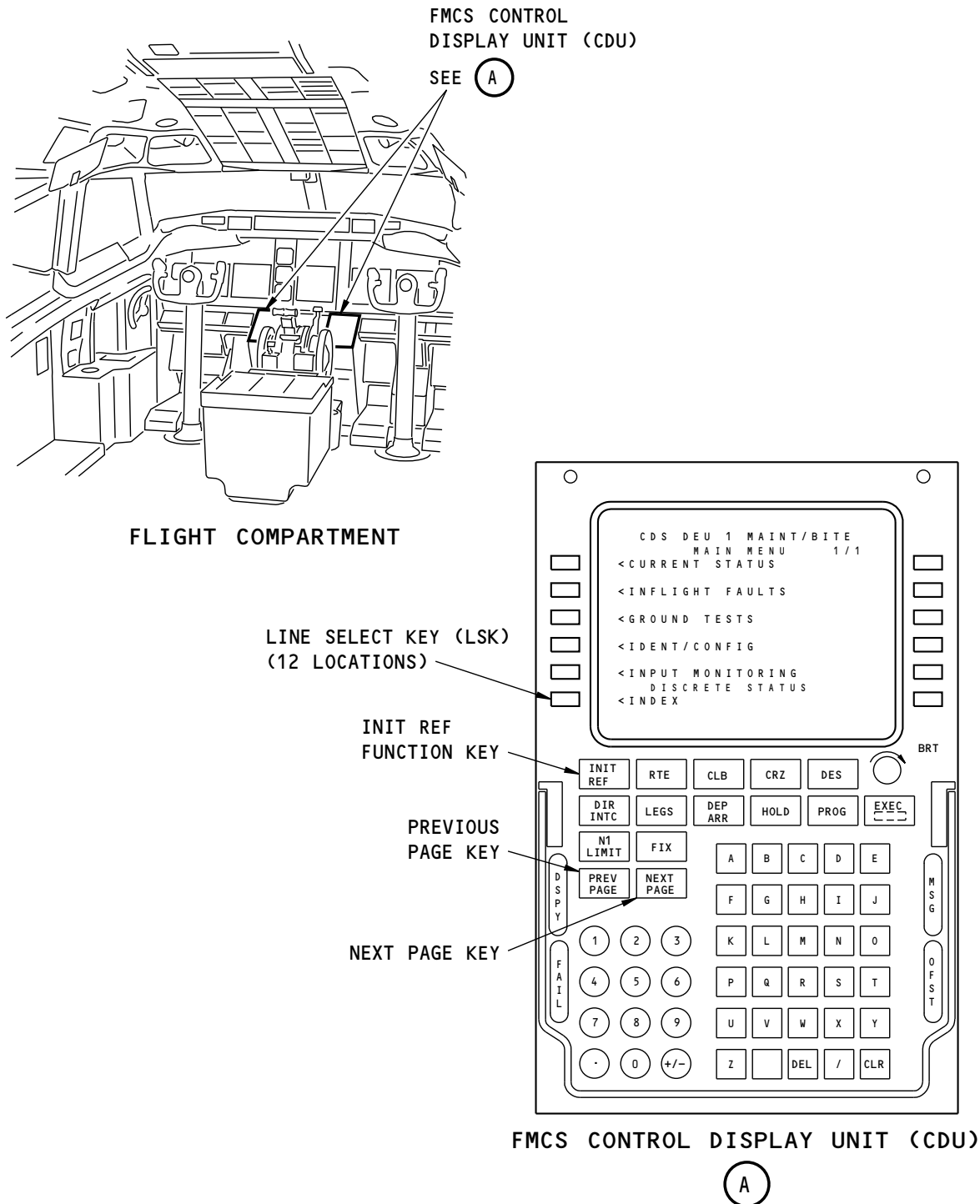
31-62 TASK 801

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G35450 S0006743427_V1

CDS DEU BITE Main Menu
Figure 201/31-62-00-990-804

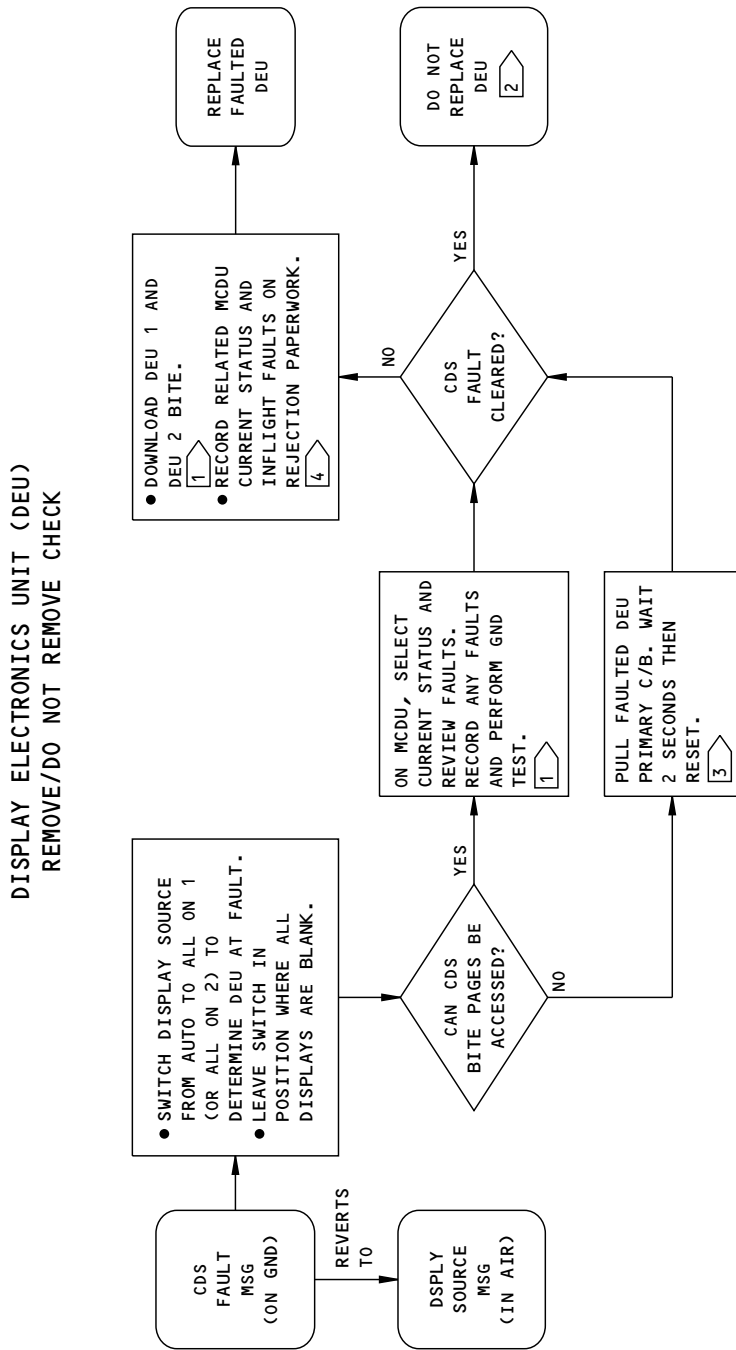
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1 > PERFORM I.A.W AMM 31-62-21/201.

2 > PERFORM BITE DOWNLOAD IF INVESTIGATION IS REQUIRED.

3 > DO NOT PULL HOLD-UP C/B.

4 > RECORD FAULT DESCRIPTION, DATE, TIME, ALTITUDE, AIRSPEED AND PILOT'S REPORT.

NOTE: IF NEEDED TO CLEAR A CDS FAULT, LIMIT PRI C/B RECYCLING TO THE FOLLOWING 3 REASONS ONLY:

A. AFTER APU START

B. BITE PAGE CANNOT BE ACCESSED

C. NOT CLEARED AFTER SAFE-STORE

1933605 S0000365261_V4

**CDS Fault Isolation Flow Chart
Figure 202/31-62-00-990-805**

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802. DEU Self-Test Procedure

A. General

- (1) You do the display electronic unit (DEU) self test from the Control Display Unit (CDU). Self test of the DEU performs the following check:
 - (a) Make sure that the hardware is fully operational.

B. Procedure

- (1) Do these steps to start the DEU self test:

NOTE: While this test may take up to 3 minutes to finish, the normal test duration is 1.5 minutes. If there is a fault, the power-up test will automatically retry, then the full 3 minutes is required.

- (a) If you are not at one of the CDS DEU BITE displays, then do these steps:

- 1) Push the INIT REF function key.
- 2) If the POS INIT display shows, then push the line select key next to the INDEX prompt.

NOTE: This makes the INIT/REF INDEX show.

- 3) Push the line select key next to the MAINT prompt.

NOTE: This brings you to the MAINT BITE INDEX.

- (b) For DEU-1 self test, do these steps:

- 1) Push the line select key next to the CDS prompt.
- 2) Push the line select key next to the DEU 1 prompt.
- 3) Push the line select key next to the GROUND TESTS prompt.
- 4) Push the line select key next to the DEU 1 SELF-TEST prompt.
- 5) Push the line select key next to the RUN SELF-TEST prompt.
- 6) After the self test is completed, the CDU display will show the results as below:

- a) DEU 1 SELF-TEST PASSED.

NOTE: If the DEU 1 is fully operational.

- b) DEU 1 SELF-TEST FAILED.

NOTE: If the DEU 1 is not fully operational.

- (c) For DEU-2 self test, do these steps:

- 1) Push the line select key next to the CDS prompt.
- 2) Push the line select key next to the DEU 2 prompt.
- 3) Push the line select key next to the GROUND TESTS prompt.
- 4) Push the line select key next to the DEU 2 SELF-TEST prompt.
- 5) Push the line select key next to the RUN SELF-TEST prompt.
- 6) After the self test is completed, the CDU display will show the results as below:

- a) DEU 2 SELF-TEST PASSED.

NOTE: If the DEU 2 is fully operational.

- b) DEU 2 SELF-TEST FAILED.

NOTE: If the DEU 2 is not fully operational.

————— **END OF TASK** —————

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803. IDENT/CONFIG Test Procedure

A. General

- (1) You do the display electronic unit (DEU) IDENT/CONFIG TEST from the Control Display Unit (CDU). This test checks the DEU hardware part number, configurations of the Operational Program Software (OPS), Operational Program Configuration (OPC), display unit database (DUDB), and the wired states of the program pins.

B. Procedure

- (1) Do these steps to start the IDENT/CONFIG TEST:
 - (a) If you are not at one of the CDS DEU BITE displays, then do these steps:
 - 1) Push the INIT REF function key.
 - 2) If the POS INIT display shows, then push the line select key next to the INDEX prompt.
NOTE: This makes the INIT/REF INDEX show.
 - 3) Push the line select key next to the MAINT prompt.
 - (b) From the MAINT BITE INDEX, push the line select key next to the CDS prompt.
 - (c) For DEU-1 IDENT/CONFIG TEST, push the line select key next to the DEU 1 prompt.
 - (d) For DEU-2 IDENT/CONFIG TEST, push the line select key next to the DEU 2 prompt.
 - (e) Push the line select key next to the IDENT/CONFIG prompt.
 - 1) After the self test is completed, the CDU display will show the OPS P/N, OPC P/N, DUDB P/N, DEU HW P/N, and the PROGRAM PINS.
NOTE: The PROGRAM PINS shall be displayed as four hex digits, which are defined from the right most hex character as: parity, DEU installed position, airframe type, and spares.
 - 2) The OPS CNN also shows in the CDU display at the end of the self test.

————— **END OF TASK** —————

804. DU Loop Test Procedure

A. General

- (1) You do the DU Loop Test from the Control Display Unit (CDU). This test checks all coax interfaces between the selected display electronic unit (DEU) and the six display units (DU).

B. Procedure

- (1) Do these steps to start the DU Loop Test:
 - (a) If you are not at one of the CDS DEU BITE displays, then do these steps:
 - 1) Push the INIT REF function key.
 - 2) If the POS INIT display shows, then push the line select key next to the INDEX prompt.
NOTE: This makes the INIT/REF INDEX show.
 - 3) Push the line select key next to the MAINT prompt.
 - (b) From the MAINT BITE INDEX, push the line select key next to the CDS prompt.
 - (c) For DEU-1 test, push the line select key next to the DEU 1 prompt.
 - (d) For DEU-2 test, push the line select key next to the DEU 2 prompt.

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- (e) Push the line select key next to the GROUND TESTS prompt.
- (f) Push the line select key next to the DU LOOP TEST prompt.
- (g) Press the line select key next to the COAX 1 TO LT DISPLAYS & COAX 2 TO RT DISPLAYS.

NOTE: The applicable DEU sends a test pattern to the display units. Coaxial output 1 goes to the left display units

(LOB, LIB, CU), and Coaxial output 2 goes to the right display units (ROB, RIB, CL).

————— END OF TASK —————

805. DEU-1 Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60011 DEU-1 FAULT
- (2) All display units receive partial data or no data from the display electronic unit 1 (DEU-1).

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows maintenance messages 31-60011 and 31-60012 on the CURRENT STATUS page, then do this task: Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
 - (b) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (c) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

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- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

806. DEU-2 Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-60012 DEU-2 FAULT
- (2) All display units receive partial data or no data from the display electronic unit 2 (DEU-2).

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows maintenance messages 31-60011 and 31-60012 on the CURRENT STATUS page, then do this task: Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
- (b) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (c) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace DEU-2.
- These are the tasks:
- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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807. DEU-1 Reset - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60031 DEU-1 RESET
- (2) The display electronic unit 1 (DEU-1) begins all normal cold-start hardware tests.
NOTE: This message can occur when there is no failure of the DEU-1.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

NOTE: This message can occur when there is no failure of the DEU-1.

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU display shows DEU 1 SELF-TEST PASSED, then you corrected the fault.
 - 1) If the CDU shows this maintenance message, then continue.
 - (b) If the CDU display shows DEU 1 SELF-TEST FAILED, then continue.
- (2) Replace DEU-1.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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808. DEU-2 Reset - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60032 DEU-2 RESET
- (2) The display electronic unit 2 (DEU-2) begins all normal cold-start hardware tests.

NOTE: This message can occur when there is no failure of the DEU-2.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

NOTE: This message can occur when there is no failure of the DEU-2.

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU display shows DEU 2 SELF-TEST PASSED, then you corrected the fault.
 - 1) If the CDU shows this maintenance message, then continue.
 - (b) If the CDU display shows DEU 2 SELF-TEST FAILED, then continue.
- (2) Replace DEU-2.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

 - (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

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809. DEU-1 Software Reset - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60041 DEU-1 SOFTWARE RESET
- (2) The display electronic unit 1 (DEU-1) software begins the test to check the software configuration.

NOTE: This message can occur when there is no failure of the DEU-1 software.

B. Possible Causes

- (1) Operational program software (OPS)

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

E. Fault Isolation Procedure

NOTE: This message can occur when there is no failure of the operational program software (OPS).

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU display shows DEU 1 SELF-TEST PASSED, then you corrected the fault.
 - 1) If the CDU shows this maintenance message, then continue.
 - (b) If the CDU display shows DEU 1 SELF-TEST FAILED, then continue.
- (2) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

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810. DEU-2 Software Reset - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60042 DEU-2 SOFTWARE RESET
- (2) The display electronic unit 2 (DEU-2) software begins the test to check the software configuration.

NOTE: This message can occur when there is no failure of the DEU-2 software.

B. Possible Causes

- (1) Operational program software (OPS)

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

E. Fault Isolation Procedure

NOTE: This message can occur when there is no failure of the operational program software (OPS).

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802
 - (a) If the CDU display shows DEU 2 SELF-TEST PASSED, then you corrected the fault.
 - 1) If the CDU shows this maintenance message, then continue.
 - (b) If the CDU display shows DEU 2 SELF-TEST FAILED, then continue.
- (2) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

811. DEU-1 Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60051 DEU-1 COAX FAULT

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- (2) All display units receive no video data from one of the coaxial outputs of display electronic unit 1 (DEU-1).

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
(2) Coaxial coupler 1 or 2, M1810 or M1811
(3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) Simplified Schematic (31-62 TASK SUPPORT Figure 301)
(2) (SSM 31-62-12)
(3) (SSM 31-62-22)
(4) (WDM 31-62-12)
(5) (WDM 31-62-22)

E. Initial Evaluation

- (1) Do this visual check of the CDS MAINT message:
(a) If the display shows the message CDS MAINT, then do the Fault Isolation Procedure below.
(b) If the display does not show the message CDS MAINT, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of display electronic unit 1 (DEU-1):
NOTE: This check has you exchange DEU-1 and DEU-2 and look at the maintenance messages in CURRENT STATUS
(a) Exchange the DEU-1, M1808 with the DEU-2, M1809.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

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- (b) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: The CDU shows CDS DEU 2 MAINT/BITE, CURRENT STATUS. The data comes from the DEU in position 2 which was originally DEU-1.

NOTE: If there are no active faults, then the CURRENT STATUS page shows NO FAULTS. If there are active faults, then the CURRENT STATUS page shows the maintenance message number and the maintenance message text. Use the NEXT and the PREV keys on the CDU to see all of the active maintenance messages.

- (c) If the CURRENT STATUS page shows the maintenance message 31-60052 DEU-2 COAX FAULT, then do these steps:

NOTE: The fault is in the display electronic unit which is now in position 2 (originally DEU-1).

- 1) Remove the DEU which is in position 2. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- 2) Move the DEU which is in position 1 to position 2. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) Install a new DEU in position 1. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) If the CDS MAINT message does not show on the display, then you corrected the fault.

- (d) If the CURRENT STATUS page for CDS DEU 2 MAINT/BITE shows no FAULTS or you do not see the maintenance message 31-60052, DEU-2 COAX FAULT, then continue.

NOTE: The maintenance message does not follow the DEU, thus the DEU is good.

- 1) Exchange the DEU-1, M1808 with the DEU-2, M1809.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (2) Do this check of the coaxial couplers 1 and 2:

NOTE: This check uses the DU LOOP TEST to test the interface between DEU-1 and the display units. The DU LOOP TEST is part of the DEU BITE. You use the CDU to control this test.

- (a) For DEU-1, do this task: DU Loop Test Procedure, 31-62 TASK 804.

- (b) If the left display(s) (left outboard, left inboard, and center upper displays) are blank, then do these steps:

NOTE: It is possible to have one, two or three display units blank due to a single coax coupler fault.

NOTE: If the left display(s) are blank, then the data on coaxial output 1 from DEU-1 does not get to the display units. There is wiring problem or the coaxial coupler 1 is unserviceable.

- 1) Remove the control display unit 1 (CDU-1). To remove it, do this task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.

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- 2) Locate the coaxial coupler 1 (top) and coaxial 3 (bottom) inside the P9 electronic panel.

NOTE: Be sure to identify and label the coaxial cables before you remove them from the coaxial couplers. You need this data when you reconnect the coaxial cables back to the original coaxial couplers later in the procedure.

- 3) Exchange the coaxial cables which come from DEU-2 (bottom) and DEU-1 (top), at the input ports of coaxial coupler 3 (bottom) and coaxial coupler 1 (top).

NOTE: To remove the coaxial cable from the coaxial coupler, gently slide the collar back (away from the coaxial coupler) and pull the cable away from the coupler.

- 4) Look at the test pattern on the left display units.

- 5) If the left display unit(s) show the test pattern and you see N Y Y Y below INPUT ACTIVITY, then do these steps:

NOTE: The N means there is no input activity on that input port. In this case the coaxial coupler 1 is unserviceable.

- a) Replace the coaxial coupler 1.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- b) Install the coaxial cable from DEU-2 into coaxial coupler 3.

- c) Install the coaxial cable from DEU-1 into coaxial coupler 1.

- d) Re-install the CDU-1. To install the CDU, do this task: FMCS Control Display Unit (CDU) - Installation, AMM TASK 34-61-01-400-802.

- e) If the CDS MAINT message does not show on the display, then you corrected the fault.

- 6) If the left display units are blank, then do these steps:

NOTE: If the left display units are blank, then the coaxial cable from DEU-1, coaxial output 1, is unserviceable.

- a) Install the coaxial cable from DEU-2 into the coaxial coupler 3.

- b) Repair or replace coaxial cable from DEU-1, coaxial output 1, to coaxial coupler 1.

- c) If the CDS MAINT message does not show on the display, then you corrected the fault.

- (c) If the right display(s) (right outboard, right inboard, and center lower displays) are blank, then do these steps:

NOTE: It is possible to have one, two or three display units blank due to a single coax coupler fault.

NOTE: If the right display(s) are blank, then the data on coaxial output 2 from DEU-1 does not get to the display units. There is wiring problem or the coaxial coupler 2 is unserviceable.

- 1) Remove the control display unit 2 (CDU-2). To remove it, do this task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.

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- 2) Locate the coaxial coupler 2 (top) and coaxial coupler 4 (bottom) inside the P9 electronic panel.

NOTE: Be sure to identify and label the coaxial cables before you remove them from the coaxial couplers. You need this data when you reconnect the coaxial cables back to the original coaxial couplers later in the procedure

- 3) Exchange the coaxial cables which come from DEU-2 (bottom) and DEU-1 (top), at the input ports of coaxial coupler 4 (bottom) and coaxial coupler 2 (top).

NOTE: To remove the coaxial cable from the coaxial coupler, gently slide the collar back (away from the coaxial coupler) and pull the cable away from the coupler.

- 4) Look at the test pattern on the right display units.

- 5) If the right display units show the test pattern and you see Y N Y Y below INPUT ACTIVITY, then do these steps:

NOTE: The N means there is no input activity on that input port. In this case the coaxial coupler 2 is unserviceable.

- a) Replace the coaxial coupler 2. To replace it,

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- b) Install the coaxial cable from DEU-2 into coaxial coupler 4.

- c) Install the coaxial cable from DEU-1 into coaxial coupler 2.

- d) Re-install the CDU-2. To install the CDU, do this task: FMCS Control Display Unit (CDU) - Installation, AMM TASK 34-61-01-400-802.

- e) If the CDS MAINT message does not show on the display, then you corrected the fault.

- 6) If the right display unit(s) are blank, then do these steps:

NOTE: If the right display unit(s) are blank, then the coaxial cable from DEU-1, coaxial output 2, is unserviceable.

- a) Install the coaxial cable from DEU-2 into the coaxial coupler 4.

- b) Repair or replace coaxial cable from DEU-1, coaxial output 2, to coaxial coupler 2.

- c) If the CDS MAINT message does not show on the display, then you corrected the fault.

————— **END OF TASK** —————

812. DEU-2 Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:

- (a) 31-60052 DEU-2 COAX FAULT

- (2) All display units receive no video data from one of the coaxial outputs of display electronic unit 2 (DEU-2).

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B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Coaxial coupler 3 or 4, M1812 or M1813
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) Simplified Schematic (31-62 TASK SUPPORT Figure 301)
- (2) (SSM 31-62-12)
- (3) (SSM 31-62-22)
- (4) (WDM 31-62-12)
- (5) (WDM 31-62-22)

E. Initial Evaluation

- (1) Do this visual check of the CDS MAINT message:
 - (a) If the display shows the message CDS MAINT, then do the Fault Isolation Procedure below.
 - (b) If the display does not show the message CDS MAINT, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of display electronic unit 2 (DEU-2):

NOTE: This check has you exchange DEU-2 and DEU-1 and look at the maintenance messages in CURRENT STATUS

- (a) Exchange the DEU-2, M1809 with the DEU-1, M1808.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

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- (b) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801

NOTE: The CDU shows CDS DEU 1 MAINT/BITE, CURRENT STATUS. The data comes from the DEU in position 1 which was originally DEU-2.

NOTE: If there are no active faults, then the CURRENT STATUS page shows NO FAULTS. If there are active faults, then the CURRENT STATUS page shows the maintenance message number and the maintenance message text. Use the NEXT and the PREV keys on the CDU to see all of the active maintenance messages.

- (c) If the CURRENT STATUS page shows the maintenance message 31-60051 DEU-1 COAX FAULT, then do these steps:

NOTE: The fault is in the display electronic unit which is now in position 1 (originally DEU-2).

- 1) Remove the DEU which is in position 1. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
- 2) Move the DEU which is in position 2 to position 1. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
- 3) Install a new DEU in position 2. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
- 4) If the CDS MAINT message does not show on the display, then you corrected the fault.

- (d) If the CURRENT STATUS page for CDS DEU 1 MAINT/BITE shows no FAULTS or you do not see the maintenance message 31-60051, DEU-1 COAX FAULT, then continue:

NOTE: The maintenance message does not follow the DEU, thus the DEU is good.

- 1) Exchange the DEU-2, M1809 with the DEU-1, M1808.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- (2) Do this check of the coaxial couplers 3 and 4:

NOTE: This check uses the DU LOOP TEST to test the interface between DEU-2 and the display units. The DU LOOP TEST is part of the DEU BITE. You use the CDU to control this test.

- (a) For DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.

- (b) If the left display(s) (left outboard, left inboard, and center upper displays) are blank, then do these steps:

NOTE: It is possible to have one, two or three display units blank due to a single coax coupler fault.

NOTE: If the left display(s) are blank, then the data on coaxial output 1 from DEU-2 does not get to the display units. There is wiring problem or the coaxial coupler 4 is unserviceable.

- 1) Remove the control display unit 2 (CDU-2). To remove it, do this task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.

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- 2) Locate the coaxial coupler 2 (top) and coaxial 4 (bottom) inside the P9 electronic panel.

NOTE: Be sure to identify and label the coaxial cables before you remove them from the coaxial couplers. You need this data when you reconnect the coaxial cables back to the original coaxial couplers later in the procedure.

- 3) Exchange the coaxial cables which come from DEU-1 (top) and DEU-2 (bottom), at the input ports of coaxial coupler 2 (top) and coaxial coupler 4 (bottom).

NOTE: To remove the coaxial cable from the coaxial coupler, gently slide the collar back (away from the coaxial coupler) and pull the cable away from the coupler.

- 4) Look at the test pattern on the left display units.

- 5) If the left display units show the test pattern and you see Y Y N Y below INPUT ACTIVITY, then do these steps:

NOTE: The N means there is no input activity on that input port. In this case the coaxial coupler 4 is unserviceable.

- a) Replace the coaxial coupler 4.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- b) Install the coaxial cable from DEU-1 into coaxial coupler 2.
- c) Install the coaxial cable from DEU-2 into coaxial coupler 4.
- d) Re-install the CDU-2. To install the CDU, do this task: FMCS Control Display Unit (CDU) - Installation, AMM TASK 34-61-01-400-802.
- e) If the CDS MAINT message does not show on the display, then you corrected the fault.

- 6) If the left display unit(s) are blank, then do these steps:

NOTE: If the left display unit(s) are blank, then the coaxial cable from DEU-2, coaxial output 1, is unserviceable.

- a) Install the coaxial cable from DEU-1 into the coaxial coupler 2.
- b) Repair or replace coaxial cable from DEU-2, coaxial output 1, to coaxial coupler 4.
- c) If the CDS MAINT message does not show on the display, then you corrected the fault.

- (c) If the right display(s) (right outboard, right inboard, and center lower displays) are blank, then do these steps:

NOTE: It is possible to have one, two or three display units blank due to a single coax coupler fault.

NOTE: If the right display(s) are blank, then the data on coaxial output 2 from DEU-2 does not get to the display units. There is wiring problem or the coaxial coupler 3 is unserviceable.

- 1) Remove the control display unit 1 (CDU-1). To remove it, do this task: FMCS Control Display Unit (CDU) Removal, AMM TASK 34-61-01-000-802.

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- 2) Locate the coaxial coupler 1 (top) and coaxial coupler 3 (bottom) inside the P9 electronic panel.

NOTE: Be sure to identify and label the coaxial cables before you remove them from the coaxial couplers. You need this data when you reconnect the coaxial cables back to the original coaxial couplers later in the procedure

- 3) Exchange the coaxial cables which come from DEU-1 (top) and DEU-2 (bottom), at the input ports of coaxial coupler 1 (top) and coaxial coupler 3 (bottom).

NOTE: To remove the coaxial cable from the coaxial coupler, gently slide the collar back (away from the coaxial coupler) and pull the cable away from the coupler.

- 4) Look at the test pattern on the right display units.

- 5) If the right display unit(s) show the test pattern and you see Y Y Y N below INPUT ACTIVITY, then do these steps:

NOTE: The N means there is no input activity on that input port. In this case the coaxial coupler 3 is unserviceable.

- a) Replace the coaxial coupler 3. To replace it,

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- b) Install the coaxial cable from DEU-1 into coaxial coupler 1.

- c) Install the coaxial cable from DEU-2 into coaxial coupler 3.

- d) Re-install the CDU-1. To install the CDU, do this task: FMCS Control Display Unit (CDU) - Installation, AMM TASK 34-61-01-400-802.

- e) If the CDS MAINT message does not show on the display, then you corrected the fault.

- 6) If the right display unit(s) are blank, then do these steps:

NOTE: If the right display units are blank, then the coaxial cable from DEU-2, coaxial output 2, is unserviceable.

- a) Install the coaxial cable from DEU-1 into the coaxial coupler 1.

- b) Repair or replace coaxial cable from DEU-2, coaxial output 2, to coaxial coupler 3.

- c) If the CDS MAINT message does not show on the display, then you corrected the fault.

————— **END OF TASK** —————

813. DEU-1 and DEU-2 Program Pin Position Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:

- (a) 31-60060 DEU-1 AND DEU-2 PROGRAM PIN POSITION FAULT

- (2) The CDU display will show incorrect locations of DEU-1 and DEU-2.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1) position program pins, M1808

- (2) Display electronic unit 2 (DEU-2) position program pins, M1809

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (WDM 31-62-41)
(2) (SSM 31-62-41)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do a check of the DEU-1 position program pins: do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803
- NOTE: The second hex character (from the right most character) of the PROGRAM PINS is assigned for DEU installed position.
- (a) Make sure the program pins are XX1X.
- NOTE: X means not important for this check.
- (b) If the DEU-1 installed position is incorrect, then do these steps:
- 1) Install the correct position program pins in DEU-1.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If the DEU-1 installed position is correct, then continue.
- (2) Do a check of the DEU-2 position program pins: do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803
- NOTE: The second hex character (from the right most character) of the PROGRAM PINS is assigned for DEU installed position.

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- (a) Make sure the program pins are XX2X.
NOTE: X means not important for this check.
- (b) If the DEU-2 installed position is incorrect, then do these steps:
 - 1) Install the correct position program pins in DEU-2.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

814. DEU-1 Program Pin Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60061 DEU-1 PROGRAM PIN FAULT
- (2) The CDU display will show incorrect location of DEU-1.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1) program pins, M1808

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-41)
- (2) (WDM 31-62-41)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do a check of the DEU-1 program pins. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.
 - (a) Make sure the PROGRAM PINS are correct:
 - 1) The odd parity must be "0" or "1".

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- 2) DEU positions must be 1 for DEU-1.
- 3) Airframe must be "1" for 737.
- (b) If PROGRAM PINS of the DEU-1 are incorrect, then do these steps:
 - 1) Use the wiring diagram to install the correct program pins for DEU-1.
 - 2) Push the LSK next to INPUT MONITORING/DISCRETE STATUS from the CDS BITE menu (31-62 TASK 801)
 - a) Make sure the PROGRAM PINS show a "G" (ground).
 - b) Make sure the remaining PROGRAM PINS listed in the WDM do not show a "G" (ground):

NOTE: A ground will cause an invalid condition.

NOTE: A ground to open discrete change occurs when the ground is equal to input potential of less than +3.5 VDC or source impedance less than 100 Ohms to signal common.
 - 3) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

815. DEU-2 Program Pin Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60062 DEU-2 PROGRAM PIN FAULT
- (2) The CDU display will show incorrect location of DEU-2.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2) program pins, M1809

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-41)
- (2) (WDM 31-62-41)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do a check of the DEU-2 program pins. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803

- (a) Make sure the PROGRAM PINS are correct:

- 1) The odd parity must be "0" or "1".
- 2) DEU position must be 2 for DEU-2.
- 3) Airframe must be "1" for 737.

- (b) If PROGRAM PINS of the DEU-2 are incorrect, then do these steps:

- 1) Use the wiring diagram to install the correct program pins for DEU-2.
- 2) Push the LSK next to INPUT MONITORING/DISCRETE STATUS from the CDS BITE menu (31-62 TASK 801)
 - a) Make sure the PROGRAM PINS show a "G" (ground).
 - b) Make sure the remaining PROGRAM PINS listed in the WDM do not show a "G" (ground):

NOTE: A ground will cause an invalid condition.

NOTE: A ground to open discrete change occurs when the ground is equal to input potential of less than +3.5 VDC or source impedance less than 100 Ohms to signal common.

- 3) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

816. DEU-1 and DEU-2 Incorrect Software Configuration - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-60070 DEU-1 AND DEU-2 INCORRECT SOFTWARE CONFIGURATION
- (2) Incorrect operational program software (OPS) and operational program configuration (OPC) are installed in DEU-1 and DEU-2.

B. Possible Causes

- (1) Operational program software (OPS)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: DEU-I will always have a different OPS software part number than DEU-II. These differing OPS part numbers may or may not be incompatible. Incompatible OPS part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.

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- (2) Operational program configuration (OPC)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: The OPC part number must be the same between DEU-I and DEU-II. Non-matching OPC part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Do a check of the DEU-1 software configuration. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803

NOTE: Look for OPS P/N, CCN, and OPC P/N.

- (a) If the software is incorrect, then do these steps:

- 1) Install the correct software in DEU-1.

- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (b) If the software is correct, then continue.

- (2) Do a check of the DEU-2 software configuration. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803

NOTE: Look for OPS P/N, CCN, and OPC P/N.

- (a) If the software is incorrect, then do these steps:

- 1) Install the correct software in DEU-2.

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- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU still shows this maintenance message on the CURRENT STATUS page, then continue.
- (3) Compare the Configuration Class Number (CCN) for DEU-1 with the CNN for DEU-2.
- (a) If the CCNs are not the same, the software in DEU-1 is not compatible with the software in DEU-2. Do these steps:
 - 1) Install software in DEU-2 with the same CCN as the software in DEU-1.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

817. DEU-1 Incorrect Software Configuration - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60071 DEU-1 INCORRECT SOFTWARE CONFIGURATION
- (2) Incorrect operational program software (OPS) and operational program configuration (OPC) are installed in DEU-1.

B. Possible Causes

- (1) Operational program software (OPS)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: DEU-I will always have a different OPS software part number than DEU-II. These differing OPS part numbers may or may not be incompatible. Incompatible OPS part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.
- (2) Operational program configuration (OPC)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: The OPC part number must be the same between DEU-I and DEU-II. Non-matching OPC part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

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F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Do a check of the DEU-1 software configuration. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.

NOTE: Look for OPS P/N and OPC P/N.

 - (a) If the software is incorrect, then do these steps:
 - 1) Install the correct software in DEU-1.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

818. DEU-2 Incorrect Software Configuration - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-60072 DEU-2 INCORRECT SOFTWARE CONFIGURATION
- (2) Incorrect operational program software (OPS) and operational program configuration (OPC) are installed in DEU-2.

B. Possible Causes

- (1) Operational program software (OPS)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: DEU-I will always have a different OPS software part number than DEU-II. These differing OPS part numbers may or may not be incompatible. Incompatible OPS part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers

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- (2) Operational program configuration (OPC)

NOTE: In this case DEU-I and DEU-II refers to the DEU hardware rather than the DEU installation position.

NOTE: The OPC part number must be the same between DEU-I and DEU-II. Non-matching OPC part numbers between the two installed DEU's will always be detected and annunciated by CDS as a software configuration fault. Consult with the authorized Airline Department for the correct software part numbers.

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Do a check of the DEU-2 software configuration. To do the check, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.

NOTE: Look for OPS P/N and OPC P/N.

- (a) If the software is incorrect, then do these steps:
- 1) Install the correct software in DEU-2.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

819. No Hot Battery Power - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-60101 NO HOT BATTERY POWER
- (2) There is not 28V DC at DEU-1.

B. Possible Causes

- (1) Circuit breaker, C1361
- (2) Display electronic unit 1 (DEU-1), M1808
- (3) Wiring problem

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C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-11)
(2) (WDM 31-62-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do a check for 28V DC at the DEU-1.
- (a) Remove DEU-1. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a check for 28V DC between pin 10 and pin 8 (ground) of connector D3973C.
- (c) If there is 28V DC, then do these steps:
- 1) Install a new DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (d) If there is not 28V DC, then continue.
- 1) Re-install DEU-1. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (2) Do this check for 28V DC at the circuit breaker.
- (a) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

- (b) Do a check for 28V DC at terminal 2 of circuit breaker C1361.
- (c) If there is not 28V DC at terminal 2 of circuit breaker C1361, then do these steps:

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- 1) Replace this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

- 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (d) If there is 28V DC at terminal 2 for circuit breaker C1361, then continue.

- (3) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between these pins of the DEU-1 connector D3973C and the circuit breaker C1361:

D3973C	C1361
pin 10	TERM 2

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

- 1) Repair the wiring.
- 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

820. No Hot Battery Power - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-60102 NO HOT BATTERY POWER
- (2) There is not 28V DC at DEU-2.

B. Possible Causes

- (1) Circuit breaker, C1362
- (2) Display electronic unit 2 (DEU-2), M1809
- (3) Wiring problem

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP

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D. Related Data

- (1) (SSM 31-62-21)
- (2) (WDM 31-62-21)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do this check for 28V DC at the DEU-2:
 - (a) Do a check for 28V DC between pin 10 and pin 8 (ground) of connector D3975C.
 - (b) If there is 28V DC, then do these steps:
 - 1) Replace DEU-2, M1809.These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is not 28V DC, then continue.
- (2) Do this check for 28V DC at the circuit breaker.
 - (a) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

- (b) Do a check for 28V DC at terminal 2 of circuit breaker C1362.
- (c) If there is not 28V DC at terminal 2 of circuit breaker C1362, then do these steps:
 - 1) Replace this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP

- 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (d) If there is 28V DC at terminal 2 for circuit breaker C1362, then continue.
- (3) Do this check of the wiring:
 - (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - (b) Do a wiring check between these pins of the DEU-2 connector D3975C and the circuit breaker C1362:

D3975C	C1362
pin 10	TERM 2
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

821. DU-LOB Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61011 DU-LOB FAIL
- (2) The left outboard display unit (LOB-DU) is blank.

B. Possible Causes

- (1) Left outboard display unit (LOB-DU), N187

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD

D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the LOB-DU, N187.

These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

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- (a) If the display is not blank, then you corrected the fault.

————— **END OF TASK** —————

822. DU-LIB Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-61012 DU-LIB FAIL
(2) The left inboard display unit (LIB-DU) is blank.

B. Possible Causes

- (1) Left inboard display unit (LIB-DU), N188

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01365	DISPLAY CAPT INBD

D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
(2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the LIB-DU, N188.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
(a) If the display is not blank, then you corrected the fault.

————— **END OF TASK** —————

823. DU-CU Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-61013 DU-CU FAIL
(2) The center upper display unit (CU-DU) is blank.

B. Possible Causes

- (1) Center upper display unit (CU-DU), N189.

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR

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D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the CU-DU, N189.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) If the display is not blank, then you corrected the fault.

———— **END OF TASK** ————

824. DU-RIB Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61014 DU-RIB FAIL
- (2) The right inboard display unit (RIB-DU) is blank.

B. Possible Causes

- (1) Right inboard display unit (RIB-DU), N192

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	11	C01366	DISPLAY F/O INBD

D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the RIB-DU, N192.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) If the display is not blank, then you corrected the fault.

———— **END OF TASK** ————

825. DU-ROB Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61015 DU-ROB FAIL
- (2) The right outboard display unit (ROB-DU) is blank.

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B. Possible Causes

- (1) Right outboard display unit (ROB-DU), N191

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

D. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the ROB-DU, N191.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) If the display is not blank, then you corrected the fault.

———— **END OF TASK** ————

826. DU-CL Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61016 DU-CL FAIL
- (2) The center lower display unit (CL-DU) is blank.

B. Possible Causes

- (1) Center lower display unit (CL-DU), N190

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01373	DISPLAY CTR LWR

D. Initial Evaluation

- (1) Turn the knob on the LOWER DU switch on the captain's (or first officer's) display switching module to ENG PRI.
 - (a) If the display is not blank, then there was an intermittent fault.
 - (b) If the display is blank, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

NOTE: Refer to Maintenance Tip 737 MT 31-011 for additional information.

- (1) If the display has a non-active indication of surface position information do the steps that follow:

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Open and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	8	C00544	FLIGHT RECORDER POSITION SENSOR

- (a) If the display is not blank, then you corrected the fault.
- (b) If the display is blank, then continue.
- (2) Replace the CL-DU, N190.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) If the display is not blank, then you corrected the fault.

———— **END OF TASK** ————

827. RLS-L Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61017 RLS-L FAIL
- (2) The left outboard display unit (LOB-DU) receives no data from the remote light sensor (RLS-L).

B. Possible Causes

- (1) Left remote light sensor (RLS-L), T507
- (2) Wiring problem

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the steps that follow:
 - 1) If the remote light sensor is functioning correctly, then this is a nuisance message and you can ignore it.
 - 2) If the remote light sensor is not functioning correctly, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the RLS-L, T507.

These are the tasks:

Remote Light Sensor Removal, AMM TASK 31-62-41-000-801,

Remote Light Sensor Installation, AMM TASK 31-62-41-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Do this check of the wiring:
- (a) Remove the left outboard display unit (LOB DU), N187. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- (b) Disconnect connector D40738J from the lightshield panel, P7.
- (c) Do a wiring check between these pins of connector D40738J at the lightshield panel, P7, and connector D3977B at the P1 panel:

D40738J	D3977B
pin 22	pin C3
pin 23	pin D3
pin 24	pin C4
pin 25	pin E3
pin 26	pin E4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector D40738J.
 - 3) Re-install the left outboard display unit, N187. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 5) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

828. RLS-R Fail - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-61018 RLS-R FAIL
- (2) The right outboard display unit (ROB-DU) receives no data from the remote light sensor (RLS-R).

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B. Possible Causes

- (1) Right remote light sensor (RLS-R), T508
- (2) Wiring problem

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

D. Related Data

- (1) (SSM 31-62-21)
- (2) (SSM 31-62-22)
- (3) (WDM 31-62-21)
- (4) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the steps that follow:
 - 1) If the remote light sensor is functioning correctly, then this is a nuisance message and you can ignore it.
 - 2) If the remote light sensor is not functioning correctly, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the RLS-R, T508.

These are the tasks:

Remote Light Sensor Removal, AMM TASK 31-62-41-000-801,

Remote Light Sensor Installation, AMM TASK 31-62-41-400-801.

 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - (c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the right outboard display unit (ROB-DU), N191. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - (b) Disconnect connector D40740J from the lightshield panel, P7 (WDM 31-62-21).
 - (c) Do a wiring check between these pins of connector D40740J at the lightshield panel, P7, and connector D3985B at the P3 panel:

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D40740J	D3985B
pin 22	pin C3
pin 23	pin D3
pin 24	pin C4
pin 25	pin E3
pin 26	pin E4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-connect connector D40740J.
 - 3) Re-install the right outboard display unit, N191. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 5) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

829. DU-LOB Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61021 DU-LOB COAX FAULT
- (2) The left outboard display unit (LOB-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Left outboard display unit (LOB-DU), N187
- (2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)

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- (3) (SSM 31-62-22)
- (4) (WDM 31-62-11)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the LOB-DU, N187:
 - (a) Exchange the LOB-DU, N187 with the left inboard display unit (LIB- DU), N188.

These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (c) If the CDU does not show maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then continue:

NOTE: If the maintenance message does not follow the DU, then the DU is good.

 - 1) Exchange the LOB-DU, N187 with the left inboard display unit (LIB-DU), N188.

These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (d) If the CDU shows maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the left inboard position (originally left outboard).

 - 1) Remove the DU which is in the left inboard position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the DU which is in the left outboard position to the left inboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) Install a new DU in the left outboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 5) If the CDU does not show maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

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- 6) If the CDU shows maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then continue.
- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.
- NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 201

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.
- These are the tasks:
- Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- (f) If the CDU shows maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then continue.
- (3) Do this check of the coaxial cables between the LOB-DU and the coaxial couplers:
- NOTE: Make sure the coaxial cable connection is satisfactory.
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.
- NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

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	DU COAX CONNECTOR	COUPLER COAX CONNECTOR
INPUT ACTIVITY: YYYY	D3977A PIN 1T PIN=1T	D10041 (#1) PIN A1 PIN C1
INPUT ACTIVITY: YNYN	D3977A PIN 2T PIN=2T	D10055 (#2) PIN A1 PIN C1
INPUT ACTIVITY: YYNY	D3977A PIN 3T PIN=3T	D10083 (#4) PIN A1 PIN C1
INPUT ACTIVITY: YYYN	D3977A PIN 4T PIN=4T	D10069 (#3) PIN A1 PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

830. DU-LIB Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61022 DU-LIB COAX FAULT
- (2) The left inboard display unit (LIB-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Left inboard display unit (LIB-DU), N188
- (2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
- (3) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01365	DISPLAY CAPT INBD
D	5	C01359	DISPLAY DEU 1 PRI

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (SSM 31-62-22)
- (4) (WDM 31-62-11)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.
- NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the LIB-DU, N188:
- (a) Exchange the LIB-DU, N188 with the left outboard display unit (LOB- DU), N187.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (c) If the CDU does not show maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then continue:
NOTE: If the maintenance message does not follow the DU, then the DU is good.
 - 1) Exchange the LIB-DU, N188 with the left outboard display unit (LOB-DU), N187.
These are the tasks:

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Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

- (d) If the CDU shows maintenance message DU-LOB COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the left outboard position (originally left inboard).

- 1) Remove the DU which is in the left outboard position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the DU which is in the left inboard position to the left outboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) Install a new DU in the left inboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 5) If the CDU does not show maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
 - 6) If the CDU shows maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then continue.
- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
 - (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.

NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 202

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

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- (f) If the CDU shows maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then continue.
- (3) Do this check of the coaxial cables between the LIB-DU and the coaxial couplers:
- NOTE: Make sure the coaxial cable connection is satisfactory.
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.
- NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

	DU COAX CONNECTOR	COUPLER COAX CONNECTOR
INPUT ACTIVITY: YYYY	D3979A	D10039 (#1)
	PIN 1T	PIN A1
	PIN=1T	PIN C1
INPUT ACTIVITY: YNNY	D3979A	D10053 (#2)
	PIN 2T	PIN A1
	PIN=2T	PIN C1
INPUT ACTIVITY: YYNY	D3979A	D10081 (#4)
	PIN 3T	PIN A1
	PIN=3T	PIN C1
INPUT ACTIVITY: YYYN	D3979A	D10067 (#3)
	PIN 4T	PIN A1
	PIN=4T	PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-LIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

831. DU-CU Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-61023 DU-CU COAX FAULT

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- (2) The center upper display unit (CU-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Center upper display unit (CU-DU), N189
(2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
(3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-11)
(2) (SSM 31-62-12)
(3) (SSM 31-62-22)
(4) (WDM 31-62-11)
(5) (WDM 31-62-12)
(6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.
- NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the CU-DU, N189:
- (a) Exchange the CU-DU, N189 with the center lower display unit (CL- DU), N190.
- These are the tasks:
- Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

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- (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (c) If the CDU does not show maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then continue:

NOTE: If the maintenance message does not follow the DU, then the DU is good.

- 1) Exchange the CU-DU, N189 with the center lower display unit (CL-DU), N190.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (d) If the CDU shows maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the center lower position (originally center upper).

- 1) Remove the DU which is in the center lower position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the center upper position to the center lower position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new DU in the center upper position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- 6) If the CDU shows maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then continue.

- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.

NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 203

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
NYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.

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These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (e) If the CDU does not show maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
 - (f) If the CDU shows maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then continue.
- (3) Do this check of the coaxial cables between the CU-DU and the coaxial couplers:
- NOTE: Make sure the coaxial cable connection is satisfactory.
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
 - (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.
- NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

	DU COAX CONNECTOR	COUPLER COAX CONNECTOR
INPUT ACTIVITY: NYYY	D3981A	D10037 (#1)
	PIN 1T	PIN A1
	PIN=1T	PIN C1
INPUT ACTIVITY: YNY	D3981A	D10051 (#2)
	PIN 2T	PIN A1
	PIN=2T	PIN C1
INPUT ACTIVITY: YYNY	D3981A	D10079 (#4)
	PIN 3T	PIN A1
	PIN=3T	PIN C1
INPUT ACTIVITY: YYYN	D3981A	D10065 (#3)
	PIN 4T	PIN A1
	PIN=4T	PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (e) If the CDU does not show maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

832. DU-RIB Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-61024 DU-RIB COAX FAULT
- (2) The right inboard display unit (RIB-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Right inboard display unit (RIB-DU), N192
- (2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI
E	11	C01366	DISPLAY F/O INBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (SSM 31-62-22)
- (4) (WDM 31-62-11)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the RIB-DU, N192:

- (a) Exchange the RIB-DU, N192 with the right outboard display unit (ROB-DU), N191.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (c) If the CDU does not show maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then continue:

NOTE: If the maintenance message does not follow the DU, then the DU is good.

- 1) Exchange the RIB-DU, N192 with the right outboard display unit (ROB-DU), N191.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (d) If the CDU shows maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the right outboard position (originally right inboard).

- 1) Remove the DU which is in the right outboard position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the right inboard position to the right outboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new DU in the right inboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- 6) If the CDU shows maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then continue.

- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.

- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.

NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

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Table 204

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,

Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (e) If the CDU does not show maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

- (f) If the CDU shows maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then continue.

- (3) Do this check of the coaxial cables between the RIB-DU and the coaxial couplers:

NOTE: Make sure the coaxial cable connection is satisfactory.

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.

- (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.

NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

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	DU COAX CONNECTOR	COUPLER COAX CONNECTOR
INPUT ACTIVITY: YYYY	D3987A PIN 1T PIN=1T	D10033 (#1) PIN A1 PIN C1
INPUT ACTIVITY: YNYN	D3987A PIN 2T PIN=2T	D10047 (#2) PIN A1 PIN C1
INPUT ACTIVITY: YYNY	D3987A PIN 3T PIN=3T	D10075 (#4) PIN A1 PIN C1
INPUT ACTIVITY: YYYN	D3987A PIN 4T PIN=4T	D10061 (#3) PIN A1 PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

833. DU-ROB Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61025 DU-ROB COAX FAULT
- (2) The right outboard display unit (ROB-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Right outboard display unit (ROB-DU), N191
- (2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
- (3) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI
E	10	C01364	DISPLAY F/O OUTBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (SSM 31-62-22)
- (4) (WDM 31-62-11)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.
- NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the ROB-DU, N191:
- (a) Exchange the ROB-DU, N191 with the right inboard display unit (RIB-DU), N192.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (c) If the CDU does not show maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then continue:
NOTE: If the maintenance message does not follow the DU, then the DU is good.
 - 1) Exchange the ROB-DU, N191 with the right inboard display unit (RIB-DU), N192.
These are the tasks:

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Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

- (d) If the CDU shows maintenance message DU-RIB COAX FAULT on the CURRENT STATUS page, then do these steps:

NOTE: The fault is in the display unit which is now in the right inboard position (originally right outboard).

- 1) Remove the DU which is in the right inboard position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the right outboard position to the right inboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new DU in the right outboard position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- 6) If the CDU shows maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then continue.

- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:

- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.

NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 205

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
YYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.

These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

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- (f) If the CDU shows maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then continue.
- (3) Do this check of the coaxial cables between the ROB-DU and the coaxial couplers:
- NOTE: Make sure the coaxial cable connection is satisfactory.
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.
- NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

	DU COAX CONNECTOR	COUPLER COAX CONNECTOR
INPUT ACTIVITY: YYYY	D3985A	D10031 (#1)
	PIN 1T	PIN A1
	PIN=1T	PIN C1
INPUT ACTIVITY: YNNY	D3985A	D10045 (#2)
	PIN 2T	PIN A1
	PIN=2T	PIN C1
INPUT ACTIVITY: YYNY	D3985A	D10073 (#4)
	PIN 3T	PIN A1
	PIN=3T	PIN C1
INPUT ACTIVITY: YYYN	D3985A	D10059 (#3)
	PIN 4T	PIN A1
	PIN=4T	PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (e) If the CDU does not show maintenance message DU-ROB COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

834. DU-CL Coax Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-61026 DU-CL COAX FAULT

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- (2) The center lower display unit (CL-DU) receives no video data from one or all of the four coaxial outputs of the coaxial couplers 1, 2, 3, and 4.

B. Possible Causes

- (1) Center lower display unit (CL-DU), N190
(2) Coaxial coupler 1, 2, 3, or 4, M1810, M1811, M1812, M1813
(3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI
E	12	C01373	DISPLAY CTR LWR

D. Related Data

- (1) (SSM 31-62-11)
(2) (SSM 31-62-12)
(3) (SSM 31-62-22)
(4) (WDM 31-62-11)
(5) (WDM 31-62-12)
(6) (WDM 31-62-22)

E. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.
- NOTE: A loose coaxial cable connection at a coaxial coupler can cause an intermittent fault.

F. Fault Isolation Procedure

- (1) Do this check of the CL-DU, N190:
- (a) Exchange the CL-DU, N190 with the center upper display unit (CU- DU), N189.
- These are the tasks:
- Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

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- (b) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (c) If the CDU does not show maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then continue:
- NOTE: If the maintenance message does not follow the DU, then the DU is good.
- 1) Exchange the CL-DU, N190 with the center upper display unit (CU- DU), N189.
- These are the tasks:
- Display Unit Removal, AMM TASK 31-62-11-000-801,
- Display Unit Installation, AMM TASK 31-62-11-400-801.
- (d) If the CDU shows maintenance message DU-CU COAX FAULT on the CURRENT STATUS page, then do these steps:
- NOTE: The fault is in the display unit which is now in the center upper position (originally center lower).
- 1) Remove the DU which is in the center upper position. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 2) Move the DU which is in the center upper position to the center lower position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) Install a new DU in the center lower position. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 5) If the CDU does not show maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
- 6) If the CDU shows maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then continue.
- (2) Do this check of the coaxial couplers 1, 2, 3 and 4:
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
- (b) In the list below, find the coaxial coupler for the applicable test pattern under Input Activity.
- NOTE: The N means there is no output activity from that coaxial coupler. In this case the coaxial coupler is unserviceable.

Table 206

INPUT ACTIVITY	COAXIAL COUPLER
	M1810
NYYY	#1
	M1811
YNYN	#2
	M1813
YYNY	#4
	M1812
YYYN	#3

- (c) Replace the applicable coaxial coupler.

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These are the tasks:

Coaxial Coupler Removal, AMM TASK 31-62-31-000-801,
Coaxial Coupler Installation, AMM TASK 31-62-31-400-801.

- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (e) If the CDU does not show maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then you corrected the fault.
 - (f) If the CDU shows maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then continue.
- (3) Do this check of the coaxial cables between the CL-DU and the coaxial couplers:
- NOTE: Make sure the coaxial cable connection is satisfactory.
- (a) For DEU-1 and DEU-2, do this task: DU Loop Test Procedure, 31-62 TASK 804.
 - (b) In the list below, find the coaxial cable for the applicable test pattern adjacent to Input Activity.
- NOTE: The N means there is no input activity on that coaxial cable. In this case the coaxial cable is unserviceable.

	DU COAX CONNECTOR	COUPLER COAX CONNECTOR
INPUT ACTIVITY: NYYY	D3983A	D10035 (#1)
	PIN 1T	PIN A1
	PIN=1T	PIN C1
INPUT ACTIVITY: YNYN	D3983A	D10049 (#2)
	PIN 2T	PIN A1
	PIN=2T	PIN C1
INPUT ACTIVITY: YYNY	D3983A	D10077 (#4)
	PIN 3T	PIN A1
	PIN=3T	PIN C1
INPUT ACTIVITY: YYYN	D3983A	D10063 (#3)
	PIN 4T	PIN A1
	PIN=4T	PIN C1

- (c) Repair the applicable coaxial cable.
- (d) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (e) If the CDU does not show maintenance message DU-CL COAX FAULT on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

835. DU-LOB Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-61031 DU-LOB LOW BRIGHTNESS
(2) The left outboard display unit (LOB-DU) brightness is low.

B. Possible Causes

- (1) Left outboard display unit (LOB-DU), N187

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace the LOB-DU, N187.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
(a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
(b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

836. DU-LIB Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-61032 DU-LIB LOW BRIGHTNESS
(2) The left inboard display unit (LIB-DU) brightness is low.

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B. Possible Causes

- (1) Left inboard display unit (LIB-DU), N188

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01365	DISPLAY CAPT INBD

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace the LIB-DU, N188.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

837. DU-CU Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61033 DU-CU LOW BRIGHTNESS
- (2) The center upper display unit (CU-DU) brightness is low.

B. Possible Causes

- (1) Center upper display unit (CU-DU), N189

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR

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D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace the CU-DU, N189.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

838. DU-RIB Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61034 DU-RIB LOW BRIGHTNESS
- (2) The right inboard display unit (RIB-DU) brightness is low.

B. Possible Causes

- (1) Right inboard display unit (RIB-DU), N192

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	11	C01366	DISPLAY F/O INBD

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the FAULT HISTORY or MAINTENANCE HISTORY page.

E. Fault Isolation Procedure

- (1) Replace the RIB-DU, N192.

These are the tasks:

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Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

839. DU-ROB Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61035 DU-ROB LOW BRIGHTNESS
- (2) The right outboard display unit (ROB-DU) brightness is low.

B. Possible Causes

- (1) Right outboard display unit (ROB-DU), N191

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace the ROB-DU, N191.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.

 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

840. DU-CL Low Brightness - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-61036 DU-CL LOW BRIGHTNESS

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- (2) The center lower display unit (CL-DU) brightness is low.

B. Possible Causes

- (1) Center lower display unit (CL-DU), N190

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01373	DISPLAY CTR LWR

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Replace the CL-DU, N190. These are the tasks:
- Display Unit Removal, AMM TASK 31-62-11-000-801
 - Display Unit Installation, AMM TASK 31-62-11-400-801
- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

841. Engine 1 Oil Quantity Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-63110 ENGINE 1 OIL QUANTITY INVALID.
- (2) Display Electronic Unit (DEU)-1, DEU-2 receive no data from Engine 1 Oil Quantity Transmitter.

B. Possible Causes

- (1) Engine 1 Oil Quantity Transmitter, M213
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

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F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) SSM 31-62-14
- (2) SSM 31-62-24
- (3) SSM 79-31-11
- (4) WDM 79-31-11

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) does not show the maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of the maintenance message on the INFLIGHT FAULTS page.
 - (b) If the CDU shows the maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Replace Engine 1 Oil Quantity Transmitter, M213. These are the tasks:
 - Oil Quantity Transmitter Removal, AMM TASK 79-31-01-000-801-F00
 - Oil Quantity Transmitter Installation, AMM TASK 79-31-01-400-801-F00
 - (a) Do the Repair Confirmation at the end of this task.
- (2) Do this check of the wiring (WDM 79-31-11):
 - (a) Remove the DEU-1, M1808 and DEU-2, M1809. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect connector DP1301 from the Engine 1 Oil Quantity Transmitter, M213.

NOTE: The Engine 1 Oil Quantity Transmitter, M213 is located on top of the Oil Tank cover.
 - (c) Do a wiring check between these pins of connectors at the DEU-1, M1808 and connector at the Engine 1 Oil Quantity Transmitter, M213 as follows:

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DEU-1		ENG 1 OIL QUANTITY SENSOR
D3973B		DP1301
pin J4		pin 3
pin A6		pin 1
pin B6		pin 2
pin K4	.....	pin 2
D3973A		DP1301
pin E14	.....	pin 1
pin F14	.....	pin 2

- (d) Do a wiring check between these pins of connectors at the DEU-2, M1809 and connector at the Engine 1 Oil Quantity Transmitter, M213 as follows:

DEU-2		ENG 1 OIL QUANTITY SENSOR
D3975B		DP1301
pin J4	.....	pin 3
pin A6	.....	pin 1
pin B6	.....	pin 2
pin K4	.....	pin 2
D3975A		DP1301
pin E14	.....	pin 1
pin F14	.....	pin 2

- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808 and DEU-2, M1809. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect connector DP1301 to the Engine 1 Oil Quantity Transmitter, M213.
 - 4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the CDU does not show the maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - (b) If the CDU shows the maintenance message on the CURRENT STATUS page, then continue the Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

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842. Engine 2 Oil Quantity Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63120 ENGINE 2 OIL QUANTITY INVALID
- (2) Display electronic units (DEU-1, DEU-2) receive no data from engine 2 oil quantity transmitter.

B. Possible Causes

- (1) Engine 2 oil quantity transmitter, M213
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-24)
- (3) (WDM 79-31-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace engine 2 oil quantity transmitter, M213.

These are the tasks:
Oil Quantity Transmitter Removal, AMM TASK 79-31-01-000-801-F00,
Oil Quantity Transmitter Installation, AMM TASK 79-31-01-400-801-F00.
- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

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(2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector DP1301 from the engine 2 oil quantity transmitter, M213.
NOTE: The transmitter, M213 is located on top of the oil tank cover.
- (d) Do a wiring check between these pins of the DEU-1 connectors and the engine 2 oil quantity transmitter connector:

D3973E	Dp1301
pin J4	pin 3
pin A6	pin 1
pin B6	pin 2
pin K4	pin 2

D3973D	DP1301
pin E14	pin 1
pin F14	pin 2

- (e) Do a wiring check between these pins of the DEU-2 connectors and the engine 2 oil quantity transmitter connector:

D3975E	DP1301
pin J4	pin 3
pin A6	pin 1
pin B6	pin 2
pin K4	pin 2

D3975D	DP1301
pin E14	pin 1
pin F14	pin 2

- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Re-connect the DP1301 connector to the engine 2 oil quantity transmitter, M213.
 - 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

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843. Engine 1 N1 RPM Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63130 ENGINE 1 N1 RPM INVALID
- (2) The Display Electronic Units (DEU-1 and DEU-2) receive no data from the Engine 1 N1 Speed Transmitter.

B. Possible Causes

- (1) N1 Speed Transmitter, T421
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) SSM 31-62-14
- (2) WDM 77-12-11

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the N1 Speed Sensor, T421. These are the tasks:
 - N1 Speed Sensor Removal, AMM TASK 77-11-01-000-801-F00
 - N1 Speed Sensor Installation, AMM TASK 77-11-01-400-801-F00
- (2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - (b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (3) Do this check of the wiring (WDM 77-12-11):

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- (a) Remove the DEU-1, M1808. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector DP0103 from the ENG-1 N1 Speed Transmitter, T421 (WDM 77-12-11).

NOTE: The Speed Transmitter T421 is located on the fan frame, at the 4 o'clock position.

- (d) Do a wiring check between the ENG-1 N1 Speed Transmitter and DEU-1 as follows:

DEU-1	N1 Speed XMTR
D3973A	DP0103
pin A10	pin 1
pin B10	pin 2

- (e) Do a wiring check between the ENG-1 N1 Speed Transmitter and DEU-2 as follows:

DEU-2	N1 Speed XMTR
D3975A	DP0103
pin A10	pin 1
pin B10	pin 2

- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the DEU-2, M1809. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Re-connect the DP0103 connector to the ENG-1 N1 Speed Transmitter, T421.
 - 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

———— **END OF TASK** ————

844. Engine 2 N1 RPM Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63140 ENGINE 2 N1 RPM INVALID
- (2) The Display Electronic Units (DEU-1 and DEU-2) receive no data from the Engine 2 N1 Speed Transmitter.

B. Possible Causes

- (1) N1 Speed Sensor, T421
- (2) Wiring

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) SSM 31-62-14
(2) WDM 77-12-11

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the N1 Speed Transmitter, T421. These are the tasks:
- N1 Speed Sensor Removal, AMM TASK 77-11-01-000-801-F00
 - N1 Speed Sensor Installation, AMM TASK 77-11-01-400-801-F00
- (2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
- (b) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then continue.
- (3) Do this check of the wiring (WDM 77-12-11):
- (a) Remove the DEU-1, M1808. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector DP0103 from the Engine 1 N1 Speed Transmitter, T421 (WDM 77-12-11).
- NOTE: The Speed Transmitter T421 is located on the fan frame at the 4 o'clock position.
- (d) Do a wiring check between the ENG-2 N1 Speed Transmitter and DEU-1 as follows:

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DEU-1	N1 Speed XMTR
D3973D	DP0103
pin A10	pin 1
pin B10	pin 2

- (e) Do a wiring check between the ENG-2 N1 Speed Transmitter and DEU-2 as follows:

DEU-2	N1 Speed XMTR
D3975D	DP0103
pin A10	pin 1
pin B10	pin 2

- (f) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 3) Re-install the DEU-2, M1809. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 4) Re-connect the DP0103 connector to the ENG-2 N1 Speed Transmitter, T421.
 - 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

————— **END OF TASK** —————

845. Engine 1 N2 RPM Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63150 ENGINE 1 N2 RPM INVALID
- (2) The Display Electronic Units (DEU-1 and DEU-2) receive no data from the Engine 1 N2 Speed Transmitter.

B. Possible Causes

- (1) N2 Speed Transmitter, T422
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

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D. Related Data

- (1) SSM 31-62-24
- (2) WDM 77-12-21

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the N2 Speed Transmitter, T422. These are the tasks:
 - N2 Speed Sensor Removal, AMM TASK 77-11-02-000-801-F00
 - N2 Speed Sensor Installation, AMM TASK 77-11-02-400-801-F00
 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Do this check of the wiring (WDM 77-12-21):
 - (a) Remove the DEU-1, M1808. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Remove the DEU-2, M1809. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (c) Disconnect the connector DP1201 from the ENG-1 N2 Speed Transmitter, T422.
NOTE: The Speed Transmitter T422 is located on the forward side of the Accessory Gearbox (AGB), between the EEC Alternator and the Engine Air Starter.
 - (d) Do a wiring check between the ENG-1 N2 Speed Transmitter and DEU-1 as follows:

DEU-1	N2 Speed XMTR
D3973B	DP1201
pin A10	pin 1
pin B10	pin 2

- (e) Do a wiring check between the ENG-1 N2 Speed Transmitter and DEU-2 as follows:

DEU-2	N2 Speed XMTR
D3975B	DP1201
pin A10	pin 1
pin B10	pin 2

- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.

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- 2) Re-install the DEU-1, M1808. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 3) Re-install the DEU-2, M1809. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) Re-connect the DP1201 connector to the ENG-1 N2 Speed Transmitter, T422.
- 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

END OF TASK

846. Engine 2 N2 RPM Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63160 ENGINE 2 N2 RPM INVALID
- (2) The Display Electronic Units (DEU-1 and DEU-2) receive no data from the Engine 2 N2 Speed Transmitter.

B. Possible Causes

- (1) N2 Speed Transmitter, T422
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) SSM 31-62-24
- (2) WDM 77-12-21

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

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F. Fault Isolation Procedure

- (1) Replace the N2 Speed Transmitter, T422. These are the tasks:
 - N2 Speed Sensor Removal, AMM TASK 77-11-02-000-801-F00
 - N2 Speed Sensor Installation, AMM TASK 77-11-02-400-801-F00
- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Do this check of the wiring (WDM 77-12-21):
 - (a) Remove the DEU-1, M1808. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Remove the DEU-2, M1809. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (c) Disconnect the connector DP1201 from the ENG-2 N2 Speed Transmitter, T422.

NOTE: The Speed Transmitter T422 is located on the forward side of the Accessory Gearbox (AGB), between the EEC Alternator and the Engine Air Starter.
 - (d) Do a wiring check between the ENG-2 N2 Speed Transmitter and DEU-1 as follows:

DEU-1	N2 Speed XMTR
D3973E	DP1201
pin A10	pin 1
pin B10	pin 2

- (e) Do a wiring check between the ENG-2 N2 Speed Transmitter and DEU-2 as follows:

DEU-2	N2 Speed XMTR
D3975E	DP1201
pin A10	pin 1
pin B10	pin 2

- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the DEU-2, M1809. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Re-connect the DP1201 connector to the ENG-2 N2 Speed Transmitter, T422.
 - 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

———— **END OF TASK** ————

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847. Hydraulic Oil Quantity Sys A Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-63210 HYDRAULIC OIL QUANTITY SYS A INVALID
- (2) Display electronic units (DEU-1, DEU-2) receive no data from the hydraulic oil quantity system A transmitter.

B. Possible Causes

- (1) Hydraulic oil quantity system A transmitter, T436
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-24)
- (3) (WDM 29-31-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the hydraulic oil quantity system A transmitter, T436.

These are the tasks:

Hydraulic Fluid Quantity Transmitter/Indicator Removal, AMM TASK 29-33-12-000-801,
Hydraulic Fluid Quantity Transmitter/Indicator Installation, AMM TASK 29-33-12-400-801.

 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Do this check of the wiring:
- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (c) Disconnect the connector D674 from the hydraulic oil quantity system A transmitter, T436.
NOTE: The sensor T436 is located on the right main wheel well forward left.
 - (d) Do a wiring check between these pins of the DEU-1 connectors and the hydraulic oil quantity system A transmitter connector:

D3973B	D674
pin F14	pin 1
pin E14	pin 3

D3973A	D674
pin J4	pin 2
pin K4	pin 1
pin A6	pin 3
pin B6	pin 1

- (e) Do a wiring check between these pins of the DEU-2 connector and the hydraulic oil quantity system A transmitter connector:

D3975B	D674
pin F14	pin 1
pin E14	pin 3

D3975A	D674
pin J4	pin 2
pin K4	pin 1
pin A6	pin 3
pin B6	pin 1

- (f) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Re-connect the connector D674 to the hydraulic oil quantity system A transmitter, T436.
 - 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

848. Hydraulic Oil Quantity Sys B Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-63220 HYDRAULIC OIL QUANTITY SYS B INVALID
(2) Display electronic units (DEU-1, DEU-2) receive no data from the hydraulic oil quantity system B transmitter.

B. Possible Causes

- (1) Hydraulic oil quantity system B transmitter, T184
(2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
(2) (SSM 31-62-24)
(3) (WDM 29-31-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the hydraulic oil quantity system B transmitter, T184.

These are the tasks:

Hydraulic Fluid Quantity Transmitter/Indicator Removal, AMM TASK 29-33-12-000-801,

Hydraulic Fluid Quantity Transmitter/Indicator Installation, AMM TASK 29-33-12-400-801.

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- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(2) Do this check of the wiring:

- (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (c) Disconnect the connector D2674 from the hydraulic oil quantity system B transmitter, T184.

NOTE: The sensor T184 is located on the right main wheel well forward right.

- (d) Do a wiring check between these pins of the DEU-1 connectors and the hydraulic oil quantity system B transmitter connector:

D3973E	D2674
pin F14	pin 1
pin E14	pin 3

D3973D	D2674
pin J4	pin 2
pin K4	pin 1
pin A6	pin 3
pin B6	pin 1

- (e) Do a wiring check between these pins of the DEU-2 connector and the hydraulic oil quantity system B transmitter connector:

D3975E	D2674
pin F14	pin 1
pin E14	pin 3

D3975D	D2674
pin J4	pin 2
pin K4	pin 1
pin A6	pin 3
pin B6	pin 1

- (f) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Re-connect the connector D2674 to the hydraulic oil quantity system B transmitter, T184.

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- 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

849. Engine 1 Oil Quantity Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64111 ENGINE 1 OIL QUANTITY INVALID TO DEU-1
- (2) Display electronic unit 1 (DEU-1) receives no data from the engine 1 oil quantity transmitter.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 79-31-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1, M1808.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP1301 from the engine 1 oil quantity transmitter, M213.
NOTE: The transmitter, M213 is located on top of the oil tank cover.
 - (c) Do a wiring check between these pins of the DEU-1 connectors and the engine 1 oil quantity transmitter connector:

D3973B	DP1301
pin J4	pin 3
pin A6	pin 1
pin B6	pin 2
pin K4	pin 2

D3973A	DP1301
pin E14	pin 1
pin F14	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1301 to the engine 1 oil quantity transmitter, M213.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

850. Engine 1 Oil Quantity Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64112 ENGINE 1 OIL QUANTITY INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the engine 1 oil quantity transmitter.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-14)
(2) (WDM 79-31-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-2, M1809.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
- (a) Remove the DEU-2, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP1301 from the engine 1 oil quantity transmitter, M213.
NOTE: The transmitter, M213 is located on top of the oil tank cover.
- (c) Do a wiring check between these pins of the DEU-2 connectors and the engine 1 oil quantity transmitter connector:

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D3975B	DP1301
pin J4	pin 3
pin A6	pin 1
pin B6	pin 2
pin K4	pin 2

D3975A	DP1301
pin E14	pin 1
pin F14	pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1301 to the engine 1 oil quantity transmitter, M213.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

851. Engine 2 Oil Quantity Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64121 ENGINE 2 OIL QUANTITY INVALID TO DEU-1
- (2) Display electronic unit 1 (DEU-1) receives no data from the engine 2 oil quantity transmitter.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 79-31-11)

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E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1, M1808.These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP1301 from the engine 2 oil quantity transmitter, M213.

NOTE: The transmitter, M213 is located on top of the oil tank cover.
 - (c) Do a wiring check between these pins of the DEU-1 connectors and the engine 2 oil quantity transmitter connector:

D3973E	DP1301
pin J4	pin 3
pin A6	pin 1
pin B6	pin 2
pin K4	pin 2

D3973D	DP1301
pin E14	pin 1
pin F14	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1301 to the engine 2 oil quantity transmitter, M213.

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- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

852. Engine 2 Oil Quantity Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64122 ENGINE 2 OIL QUANTITY INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the engine 2 oil quantity transmitter.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 79-31-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Replace DEU-2, M1809.
- These are the tasks:
- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (3) Do this check of the wiring:
- (a) Remove the DEU-2, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP1301 from the engine 2 oil quantity transmitter, M213.
NOTE: The transmitter, M213 is located on top of the oil tank cover.
- (c) Do a wiring check between these pins of the DEU-2 connectors and the engine 2 oil quantity transmitter connector:

D3975E	DP1301
pin J4	pin 3
pin A6	pin 1
pin B6	pin 2
pin F14	pin 2

D3975D	DP1301
pin E14	pin 1
pin F14	pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1301 to the engine 2 oil quantity transmitter, M213.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

853. Engine 1 N1 RPM Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-64131 ENGINE 1 N1 RPM INVALID TO DEU-1

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- (2) Display Electronic Unit (DEU)-1 receives no data from the Engine 1 N1 Speed Transmitter.

B. Possible Causes

- (1) Display Electronic Unit (DEU)-1, M1808
(2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) SSM 31-62-14
(2) WDM 77-12-11

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-1, M1808. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring (WDM 77-12-11):
- (a) Remove the DEU-1, M1808. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP0103 from the ENG-1 N1 Speed Transmitter, T421.

NOTE: The Speed Transmitter T421 is located on the fan frame at the 4 o'clock position.

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- (c) Do a wiring check between the ENG-1 N1 Speed Transmitter and DEU-1 as follows:

DEU-1	N1 Speed XMTR
D3973A	DP0103
pin A10	pin 1
pin B10	pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801..
 - 3) Re-connect the connector DP0103 to the ENG-1 N1 Speed Transmitter, T421.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

————— **END OF TASK** —————

854. Engine 1 N1 RPM Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64132 ENGINE 1 N1 RPM INVALID TO DEU-2
- (2) Display Electronic Unit (DEU)-2 receives no data from the Engine 1 N1 Speed Transmitter.

B. Possible Causes

- (1) Display Electronic Unit (DEU)-2, M1809
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) SSM 31-62-14
- (2) WDM 77-12-11

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

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F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring (WDM 77-12-11):
 - (a) Remove the DEU-2, M1809. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP0103 from the ENG-1 N1 Speed Transmitter, T421.
NOTE: The Speed Transmitter T421 is located on the fan frame at the 4 o'clock position.
 - (c) Do a wiring check between the ENG-1 N1 Speed Transmitter and DEU-2 as follows:

DEU-2	N1 Speed XMTR
D3975A	DP0103
pin A10	pin 1
pin B10	pin 2
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP0103 to the ENG-1 N1 Speed Transmitter, T421.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

————— **END OF TASK** —————

855. Engine 2 N1 RPM Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64141 ENGINE 2 N1 RPM INVALID TO DEU-1
- (2) Display Electronic Unit (DEU)-1 receives no data from the Engine 2 N1 Speed Transmitter.

B. Possible Causes

- (1) Display Electronic Unit (DEU)-1, M1808
- (2) Wiring

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) SSM 31-62-14
(2) WDM 77-12-11

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-1, M1808. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring (WDM 77-12-11):
- (a) Remove the DEU-1, M1808. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP0103 from the ENG-2 N1 Speed Transmitter, T421.
- NOTE: The Speed Transmitter T421 is located on the fan frame at the 4 o'clock position.
- (c) Do a wiring check between the ENG-2 N1 Speed Transmitter and DEU-1 as follows:

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DEU-1	N1 Speed XMTR
D3973D	DP0103
pin A10	pin 1
pin B10	pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP0103 to the ENG-2 N1 Speed Transmitter, T421.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

————— **END OF TASK** —————

856. Engine 2 N1 RPM Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64142 ENGINE 2 N1 RPM INVALID TO DEU-2
- (2) Display Electronic Unit (DEU)-2 receives no data from the Engine 2 N1 Speed Transmitter.

B. Possible Causes

- (1) Display Electronic Unit (DEU)-2, M1809
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) SSM 31-62-14
- (2) WDM 77-12-11

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

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F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring (WDM 77-12-11):
 - (a) Remove the DEU-2, M1809. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP0103 from the ENG-2 N1 Speed Transmitter, T421.
NOTE: The sensor T421 is located on the fan frame at the 4 o'clock position.
 - (c) Do a wiring check between the ENG-2 N1 Speed Transmitter and DEU-2 as follows:

DEU-2	N1 Speed XMTR
D3975D	DP0103
pin A10	pin 1
pin B10	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP0103 to the ENG-2 N1 Speed Transmitter, T421.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

———— **END OF TASK** ————

857. Engine 1 N2 RPM Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64151 ENGINE 1 N2 RPM INVALID TO DEU-1
- (2) Display Electronic Unit (DEU)-1 receives no data from the Engine 1 N2 Speed Transmitter.

B. Possible Causes

- (1) Display Electronic Unit (DEU)-1, M1808
- (2) Wiring

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) SSM 31-62-24
(2) WDM 77-12-21

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-1, M1808. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring (WDM 77-12-21):
- (a) Remove the DEU-1, M1808. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP0103 from the ENG-1 N2 Speed Transmitter, T422.
- NOTE: The Speed Transmitter T422 is located on the forward side of the Accessory Gearbox (AGB), between the EEC Alternator and the Engine Air Starter.
- (c) Do a wiring check between the ENG-1 N2 Speed Transmitter and DEU-1 as follows:

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DEU-1	N2 Speed XMTR
D3973B	DP1201
pin A10	pin 1
pin B10	pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1201 to the ENG-1 N2 Speed Transmitter, T422.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

————— **END OF TASK** —————

858. Engine 1 N2 RPM Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64152 ENGINE 1 N2 RPM INVALID TO DEU-2
- (2) Display Electronic Unit (DEU)-2 receives no data from the Engine 1 N2 Speed Transmitter.

B. Possible Causes

- (1) Display Electronic Unit (DEU)-2, M1809
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) SSM 31-62-24
- (2) WDM 77-12-21

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

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F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring (WDM 77-12-21):
 - (a) Remove the DEU-2, M1809. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP1201 from the ENG-1 N2 Speed Transmitter, T422.

NOTE: The Speed Transmitter T422 is located on the forward side of the Accessory Gearbox (AGB), between the EEC Alternator and the Engine Air Starter.
 - (c) Do a wiring check between the ENG-1 N2 Speed Transmitter and DEU-2 as follows:

DEU-2	N2 Speed XMTR
D3975B	DP1201
pin A10	pin 1
pin B10	pin 2

 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1201 to the ENG-1 N2 Speed Transmitter, T422.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

————— **END OF TASK** —————

859. Engine 2 N2 RPM Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64161 ENGINE 2 N2 RPM INVALID TO DEU-1
- (2) Display Electronic Unit (DEU)-1 receives no data from the Engine 2 N2 Speed Transmitter.

B. Possible Causes

- (1) Display Electronic Unit (DEU)-1, M1808
- (2) Wiring

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) SSM 31-62-24
(2) WDM 77-12-21

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-1, M1808. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring (WDM 77-12-21):
- (a) Remove the DEU-1, M1808. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector DP1201 from the ENG-2 N2 Speed Transmitter, T422.
- NOTE: The Speed Transmitter T422 is located on the forward side of the Accessory Gearbox (AGB), between the EEC Alternator and the Engine Air Starter.
- (c) Do a wiring check between the ENG-2 N2 Speed Transmitter and DEU-1 as follows:

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DEU-1	N2 Speed XMTR
D3973E	DP1201
pin A10	pin 1
pin B10	pin 2

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1201 to the ENG-2 N2 Speed Transmitter, T422.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

————— **END OF TASK** —————

860. Engine 2 N2 RPM Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64162 ENGINE 2 N2 RPM INVALID TO DEU-2
- (2) Display Electronic Unit (DEU)-2 receives no data from the Engine 2 N2 Speed Transmitter.

B. Possible Causes

- (1) Display Electronic Unit (DEU)-2, M1809
- (2) Wiring

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) SSM 31-62-24
- (2) WDM 77-12-21

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of this maintenance message on the FLIGHT FAULTS page.

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F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the DEU-2, M1809. This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector DP1201 from the ENG-2 N2 Speed Transmitter, T422.

NOTE: The Speed Transmitter T422 is located on the forward side of the Accessory Gearbox (AGB), between the EEC Alternator and the Engine Air Starter.
 - (c) Do a wiring check between the ENG-2 N2 Speed Transmitter and DEU-2 as follows:

DEU-2	N2 Speed XMTR
D3975E	DP1201
pin A10	pin 1
pin B10	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector DP1201 to the ENG-2 N2 Speed Transmitter, T422.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

————— **END OF TASK** —————

861. Hydraulic Oil Pressure Sys A Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64201 HYDRAULIC OIL PRESSURE SYS A INVALID
- (2) Display electronic unit 1 (DEU-1) receives no data from the hydraulic oil pressure transmitter (system A).

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B. Possible Causes

- (1) Hydraulic oil pressure transmitter (system A), T424
- (2) Display electronic unit 1 (DEU-1), M1808
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 29-32-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the hydraulic oil pressure transmitter (system A), T424.

These are the tasks:
AMM TASK 29-31-12-000-801,
AMM TASK 29-31-12-400-801.

 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Replace DEU-1, M1808.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (3) Do this check of the wiring:
 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector D662 from the hydraulic oil pressure transmitter, T424 (system A).

NOTE: The transmitter T424 is located on the left main wheel well forward.
 - (c) Do a wiring check between these pins of the DEU-1 connector and the hydraulic oil pressure transmitter connector (system A):

D3973A	D662
pin A9	pin 3
pin B9	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector D662 to the hydraulic oil pressure transmitter, T424 (system A).
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

862. Hydraulic Oil Pressure Sys B Invalid - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64202 HYDRAULIC OIL PRESSURE SYS B INVALID
- (2) Display electronic unit 2 (DEU-2) receives no data from the hydraulic oil pressure transmitter (system B).

B. Possible Causes

- (1) Hydraulic oil pressure transmitter (system B), T423
- (2) Display electronic unit 2 (DEU-2), M1809
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

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D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 29-32-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Replace the hydraulic oil pressure transmitter (system B), T423.
These are the tasks:
System Pressure Transmitter Removal, AMM TASK 29-31-12-000-801,
System Pressure Transmitter Installation, AMM TASK 29-31-12-400-801.
 - (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (2) Replace DEU-2, M1809.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 2) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (3) Do this check of the wiring:
 - (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector D660 from the hydraulic oil pressure transmitter, T423 (system B).
NOTE: The transmitter T423 is located on the right main wheel well forward.
 - (c) Do a wiring check between these pins of the DEU-2 connector and the hydraulic oil pressure transmitter connector (system B):

D3975A	D660
pin A9	pin 3
pin B9	pin 2

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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 DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector D660 to the hydraulic oil pressure transmitter, T423 (system B).
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

863. Hydraulic Oil Quantity Sys A Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-64211 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-1
- (2) Display electronic unit 1 (DEU-1) receives no data from the hydraulic oil quantity system A transmitter.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 29-32-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1, M1808.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector D674 from the hydraulic oil quantity system A transmitter, T436.

NOTE: The sensor T436 is located on the right main wheel well forward left.
 - (c) Do a wiring check between these pins of the DEU-1 connectors and the hydraulic oil quantity system A transmitter connector:

D3973B	D674
pin F14	pin 1
pin E14	pin 3
 D3973A	 D674
pin J4	pin 2
pin K4	pin 1
pin A6	pin 3
pin B6	pin 1
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector D674 to the hydraulic oil quantity system A transmitter, T436.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

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864. Hydraulic Oil Quantity Sys A Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64212 HYDRAULIC OIL QUANTITY SYS A INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the hydraulic oil quantity system A transmitter.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 29-31-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:

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- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector D674 from the hydraulic oil quantity system A transmitter, T436.

NOTE: The sensor T436 is located on the right main wheel well forward left.

- (c) Do a wiring check between these pins of the DEU-2 connectors and the hydraulic oil quantity system A transmitter connector:

D3975B	D674
pin F14	pin 1
pin E14	pin 3

D3975A	D674
pin J4	pin 2
pin K4	pin 1
pin A6	pin 3
pin B6	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector D674 to the hydraulic oil quantity system A transmitter, T436.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— END OF TASK ————

865. Hydraulic Oil Quantity Sys B Invalid To DEU-1 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) 31-64221 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-1
- (2) Display electronic unit 1 (DEU-1) receives no data from the hydraulic oil quantity system B transmitter.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-14)
- (2) (WDM 29-31-11)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU-1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1, M1808.These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-1 SELF-TEST PASSED, then continue.
 - (2) Do this check of the wiring:
 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Disconnect the connector D2674 from the hydraulic oil quantity system B transmitter, T184.
- NOTE: The sensor T184 is located on the right main wheel well forward right.
- (c) Do a wiring check between these pins of the DEU-1 connectors and the hydraulic oil quantity system B transmitter connector:

D3973E	D2674
pin F14	pin 1
pin E14	pin 3

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D3973D	D2674
pin J4	pin 2
pin K4	pin 1
pin A6	pin 3
pin B6	pin 1

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-connect the connector D2674 to the hydraulic oil quantity system B transmitter, T184.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

866. Hydraulic Oil Quantity Sys B Invalid To DEU-2 - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-64222 HYDRAULIC OIL QUANTITY SYS B INVALID TO DEU-2
- (2) Display electronic unit 2 (DEU-2) receives no data from the hydraulic oil quantity system B transmitter.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-24)
- (2) (WDM 29-31-11)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU-2 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-2, M1809.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU-2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Disconnect the connector D2674 from the hydraulic oil quantity system B transmitter, T184.
NOTE: The sensor T184 is located on the right main wheel well forward right.
- (c) Do a wiring check between these pins of the DEU-2 connectors and the hydraulic oil quantity system B transmitter connector:
- | D3975E | D2674 |
|-------------------|--------------|
| pin F14 | pin 1 |
| pin E14 | pin 3 |
-
D3975D	D2674
pin J4	pin 2
pin K4	pin 1
pin A6	pin 3
pin B6	pin 1
- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Rudder Aft Quadrant Removal, AMM TASK 27-21-61-000-801.
 - 3) Re-connect the connector D2674 to the hydraulic oil quantity system B transmitter, T184.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

867. Pitch Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
(a) 31-65010 PITCH DISAGREE
- (2) The pitch disagree annunciation will be displayed when the difference between the captain's displayed pitch value and the first officer's displayed pitch value is greater than or equal to 5 degrees for 1.5 seconds.

B. Possible Causes

- (1) Left air data inertial reference unit (ADIRU-1), M1749
(2) Right air data inertial reference unit (ADIRU-2), M1752
(3) Display electronic unit 1 (DEU-1), M1808
(4) Display electronic unit 2 (DEU-2), M1809

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI
E	8	C00425	ADIRU LEFT EXC

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

NOTE: This message can occur when there are no failures of the ADIRUs or the DEUs.

- (1) Do this check of the ADIRU-1:

(a) For ADIRU-1, do this task: ADIRS BITE Procedure, 34-21 TASK 801.

(b) If there is a fault message, then go to the FIM task for that message.

- 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: This step checks the status of the pitch disagree message on the CDS.

- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(c) If there is no maintenance message, then continue.

- (2) Do this check of the ADIRU-2:

(a) For ADIRU-2, do this task: ADIRS BITE Procedure, 34-21 TASK 801.

(b) If there is a fault message, then go to the FIM task for that message.

- 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: This step checks the status of the pitch disagree message on the CDS.

- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(c) If there is no maintenance message, then continue.

- (3) Do this check of the DEU-1:

(a) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

(b) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(c) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.

- (4) Do this check of the DEU-2:

(a) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

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(b) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

868. Roll Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-65020 ROLL DISAGREE
- (2) The roll disagree annunciation will be displayed when the difference between the captain's displayed roll value and the first officer's displayed roll value is greater than or equal to 5 degrees for 1.5 seconds.

B. Possible Causes

- (1) Left air data inertial reference unit (ADIRU-1), M1749
- (2) Right air data inertial reference unit (ADIRU-2), M1752
- (3) Display electronic unit 1 (DEU-1), M1808
- (4) Display electronic unit 2 (DEU-2), M1809

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI
E	8	C00425	ADIRU LEFT EXC

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

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D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

NOTE: This message can occur when there are no failures of the ADIRUs or the DEUs.

- (1) Do this check of the ADIRU-1:
 - (a) For ADIRU-1, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - (b) If there is a fault message, then go to the FIM task for that message.
 - 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: This step checks the status of the roll disagree message on the CDS.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is no fault message, then continue.
- (2) Do this check of the ADIRU-2:
 - (a) For ADIRU-2, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - (b) If there is a fault message, then go to the FIM task for that message.
 - 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

NOTE: This step checks the status of the roll disagree message on the CDS.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is no fault message, then continue.
- (3) Do this check of the DEU-1:
 - (a) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.
 - (4) Do this check of the DEU-2:
 - (a) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2.
- These are the tasks:
- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

869. EEC Data Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-65030 EEC DISAGREE
- (2) The Electronic Engine Control (EEC) data received by the Display Electronic Units (DEU-1 and DEU-2) from the Electronic Engine controls (EEC-1 and EEC-2) and the Engine Sensors do not agree.
- (3) This message can occur when there are no failures of the EECs or the DEUs.

B. Possible Causes

- (1) EEC, M1818
- (2) DEU-1 (2), M1808 (M1809)

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

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D. Initial Evaluation

- (1) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.
 - (b) If the CDU shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Do a test of the EEC. This is the task: EEC TEST, AMM TASK 73-21-00-700-804-F00.
 - (a) If you find related maintenance messages, then do the Fault Isolation Task for the related maintenance messages.
 - 1) For the DEU-1 and DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - 2) If the CDU does not show MMg 31-65030, then you corrected the problem.
 - 3) If the CDU shows MMg 31-65030, then continue.
 - (b) If you do not find maintenance messages, then continue.
- (2) Do this check of the DEU-1:
 - (a) For the DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 1 SELF-TEST PASSED, then there is no failure of DEU-1.

NOTE: The fault was intermittent.
 - (c) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace the DEU-1. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - a) For the DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

<1> If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.
- (3) Do this check of the DEU-2:
 - (a) For the DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 2 SELF-TEST PASSED, then there is no failure of DEU-2.

NOTE: The fault was intermittent.
 - (c) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace the DEU-2. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - a) For the DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

<1> If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the problem.

———— **END OF TASK** ————

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870. FMC Data Disagree - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-65040 FMC DATA DISAGREE
- (2) This message will show when the data on the FMC output busses, FMC-08 and FMC-09, received by the display electronic units do not agree.

B. Possible Causes

- (1) Display electronic unit (DEU-1), M1808 or (DEU-2), M1809
- (2) Wiring Problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 34-61-15)
- (2) (WDM 34-61-15)

E. Initial Evaluation

- (1) Make sure the ADIRUs are aligned. If the ADIRUs are not aligned, do this task: Air Data Inertial Reference System - Alignment from the ISDU, AMM TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, AMM TASK 34-21-00-820-801.
- (2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page and a MAP flag shows on the display unit, then do the Fault Isolation Procedure below.
 - (b) DEU OPS S/W -03;
If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page and a MAP flag does not show on the display unit, then this is a nuisance message.
NOTE: This message can show when there are no failures of the DEU.
 - (c) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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F. Fault Isolation Procedure

(1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

(a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

2) Do this check of the wiring:

a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

b) Remove the FMC-1, M1175. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

c) Remove the FMC-2, M1632. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.

d) Do a wiring check between these pins of FMC-1 connector D2179A and DEU-1 connector D3973A:

D2179A	D3973A
pin A11	pin C9
pin B11	pin D9

e) Do a wiring check between these pins of FMC-1 connector D2179B and DEU-1 connector D3973E:

D2179B	D3973E
pin G9	pin C1
pin H9	pin D1

f) Do a wiring check between these pins of FMC-2 connector D3261A and DEU-1 connector D3973B:

D3261A	D3973B
pin A11	pin E1
pin B11	pin F1

g) Do a wiring check between these pins of FMC-2 connector D3261B and DEU-1 connector D3973D:

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D3261B	D3973D
pin G9	pin C9
pin H9	pin D9

- 3) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - c) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - d) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - e) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - f) If the CDU does not show this maintenance message on the **CURRENT STATUS** page, then you corrected the fault.
- (b) If the CDU shows **DEU 1 SELF-TEST PASSED**, then continue.
- (2) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows **DEU 2 SELF-TEST PASSED**, then there is no failure of DEU-2.

NOTE: The fault was intermittent.

- (b) If the CDU shows **DEU 2 SELF-TEST FAILED**, then do these steps:

- 1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU shows this maintenance message on the **CURRENT STATUS** page, then continue.
- 2) Do this check of the wiring:
 - a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - b) Remove the FMC-1, M1175. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
 - c) Remove the FMC-2, M1632. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
 - d) Do a wiring check between these pins of FMC-1 connector D2179A and DEU-2 connector D3975A:

D2179A	D3975A
pin A11	pin C9
pin B11	pin D9

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- e) Do a wiring check between these pins of FMC-1 connector D2179B and DEU-2 connector D3975E:

D2179B	D3975E
pin G9	pin C1
pin H9	pin D1

- f) Do a wiring check between these pins of FMC-2 connector D3261A and DEU-2 connector D3975B:

D3261A	D3975B
pin A11	pin E1
pin B11	pin F1

- g) Do a wiring check between these pins of FMC-2 connector D3261B and DEU-2 connector D3975D:

D3261B	D3975D
pin G9	pin C9
pin H9	pin D9

- 3) If you find a problem with the wiring, then do these steps:
- Repair the wiring.
 - Re-install the DEU-2, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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END OF TASK

871. DEU-1 ARINC 429 Transmitter Problem - Fault Isolation

A. Description

- This task is for these maintenance messages:
 - 31-60221, 31-60231, 31-60241, 31-60251, 31-60261, 31-60271, 31-60281, 31-60311, 31-60321, 31-60331, 31-60351, 31-60361, 31-60371
- Display electronic unit (DEU-1) has an ARINC 429 transmitter problem.

B. Possible Causes

- Display electronic unit (DEU-1), M1808

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-1.
- These are the tasks:
- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

872. DEU-2 ARINC 429 Transmitter Problem - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
- (a) 31-60222, 31-60232, 31-60242, 31-60252, 31-60262, 31-60272, 31-60282, 31-60312, 31-60322, 31-60332, 31-60352, 31-60362, 31-60372
- (2) Display electronic unit (DEU-2) has an ARINC 429 transmitter problem.

B. Possible Causes

- (1) Display electronic unit (DEU-2), M1809

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- (a) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
- 1) Replace DEU-2.
- These are the tasks:
- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

873. Display Unit Database in DEU-1 and Display Unit are Not Compatible - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
- (a) 31-60411, 31-60421, 31-60431, 31-60441, 31-60451, 31-60461
- (2) The display unit database in DEU-1 is not compatible with the applicable display unit.

B. Possible Causes

- (1) Display unit database (DUDB) is not correct
- (2) Display unit

C. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

D. Fault Isolation Procedure

- (1) Make sure that the software part number for the display unit database (DUDB) in DEU-1 is correct. To do a check of the DUDB P/N in DEU-1, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.
- (a) If the part number is incorrect, then install the correct DUDB. To install it, do this task: Display Electronic Unit Software - Installation with a Portable Data Loader, AMM TASK 31-62-21-470-802
- 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (b) If the part number is correct, then replace the applicable display unit with one that is compatible with DUDB. To replace it,
- These are the tasks:
- Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
- 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

874. Display Unit Database in DEU-2 and Display Unit are Not Compatible - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
- (a) 31-60412, 31-60422, 31-60432, 31-60442, 31-60452, 31-60462
- (2) The display unit database in DEU-2 is not compatible with the applicable display unit.

B. Possible Causes

- (1) Display unit database (DUDB) is not correct
- (2) Display unit

C. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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D. Fault Isolation Procedure

- (1) Make sure that the software part number for the display unit database (DUDB) in DEU-2 is correct. To do a check of the DUDB P/N in DEU-2, do this task: IDENT/CONFIG Test Procedure, 31-62 TASK 803.
 - (a) If the part number is incorrect, then install the correct DUDB. To install it, do this task: Display Electronic Unit Software - Installation with a Portable Data Loader, AMM TASK 31-62-21-470-802
 - 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - (b) If the part number is correct, then replace the applicable display unit with one that is compatible with DUDB. To replace it,
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

875. Altitude Disagree - Fault Isolation

A. Description

- (1) This task is for this Observed Fault:
 - (a) Altitude Unreliable
 - 1) Altitude unreliable is when the altitude on the PFD is unreliable - incorrect, erroneous, fluctuates, erratic, momentary drop, split, or disagree.
 - 2) Unreliable altitude conditions can be caused by erroneous data from the pitot/static system, Angle of Attack (AOA) vanes or damage to the radome. Some of these can be caused by factors which are not visible to the flight crew such as damaged or disconnected pitot/static hoses. While damage can also occur in flight, unreliable altitude conditions due to ground damage to the pitot tubes, static ports, AOA vanes or radome, can be avoided with a thorough inspection.
 - (b) ALT DISAGREE message shows on the Primary Flight Displays.
 - 1) This message shows when the Air Data Reference (ADR) data received by the DEUs (DEU-1 and DEU-2) from the ADIRUs (ADIRU-L and ADIRU-R) do not agree. The "ALT DISAGREE" annunciation is displayed when the difference between the Captain's displayed Altitude value and the f/o's displayed Altitude value is 200 feet or greater for 5 consecutive seconds.
- (2) This task is for this maintenance message:
 - (a) 31-65050 ALTITUDE DISAGREE
- (3) The ADR function in the Air Data Inertial Reference Unit (ADIRU) receives digital inputs of Pitot and Static Pressure from the Air Data Modules (ADMs) and Temperature inputs from the Total Air Temperature Probe. It uses these inputs to calculate the Air Data parameters. The ADR function also receives analog inputs from the Angle of Attack (AOA) Vane and Pitot Probes for Altitude error correction.

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- (4) There have been reports of momentary erroneous barometric-corrected altitude displayed on the Captain's Primary Flight Display (PFD). The Captain's altitude display briefly scrolls up or down and then returns to normal after a second or two. These events are infrequent, last a very short duration, and always self-recover. The root cause of this has not been determined (737NG-FTD-22-11002).
- (5) If all three flight deck effects, AOA DISAGREE, ALT DISAGREE, and IAS DISAGREE show, then do the FIM task for AOA DISAGREE first.

B. Possible Causes

- (1) The Barometric settings on the EFIS control panels were not set to identical values within 5 seconds of each other
- (2) Blockage and leakage:
 - (a) Blockage of the Static Ports
 - (b) Blockage of the Pitot Probes
 - (c) Moisture in Pitot or Static Systems
 - (d) Leak in the Static Tubing
 - (e) Routing of the Static or Pitot System Tubing
- (3) Sensor Heater (i.e., pitot probe, TAT probe, or AOA vane heaters)
- (4) AOA Vane
- (5) Airplane Wiring
- (6) Static ADMs
- (7) Pitot ADMs
- (8) ADIRU, M1749 or M1752

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC
C	17	C01010	ADIRU RIGHT DC

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F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	16	C00570	PROBE INDICATION F/O
F	18	C00569	PROBE INDICATION CAPT

D. Related Data

- (1) SSM 30-31-11
- (2) SSM 30-31-12
- (3) SSM 34-21-14
- (4) SSM 34-21-24
- (5) WDM 30-31-11
- (6) WDM 30-31-12
- (7) WDM 34-21-14
- (8) WDM 34-21-24

E. Initial Evaluation

- (1) Make sure that the barometric settings on the Captain's and F/O's EFIS Control Panels are set to identical values within 5 seconds of each other.
- (2) For the Left and the Right ADIRUs, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - (a) Look for the maintenance messages related to the following components:
 - 1) Pitot Probe
 - 2) TAT Probe
 - 3) Sensor heaters (i.e., pitot probe, TAT probe, or AOA vane heaters)
 - 4) AOA vane
 - 5) ADM
 - 6) Barometric correction input from DEU to ADIRU
 - (b) If the ADIRS BITE Procedure shows a fault, then go to the Fault Isolation Task for the applicable maintenance message to correct the problem before continuing.
- (3) For both DEUs, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) shows a maintenance message on the CURRENT STATUS page that could be related to the ALTITUDE DISAGREE event, then do the applicable Fault Isolation Procedure for the related maintenance message.
 - (b) If the Control Display Unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then continue.

NOTE: Because altitude discrepancy issues are often only detectable when the airplane is in motion, the ALTITUDE DISAGREE message may not be listed on the CURRENT STATUS page when the airplane is stationary on the ground. Absence of the ALTITUDE DISAGREE fault in the CURRENT STATUS page does not necessarily indicate that the condition that caused the fault has been corrected.

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- (c) The FMCS stores all in-flight faults for later retrieval on the ground. Review the IN-FLIGHT FAULTS stored by the FMCS for occurrence of the ALTITUDE DISAGREE maintenance message. Look for other faults that may have occurred at the same time, or around the same time, that could be related to issuance of the ALTITUDE DISAGREE maintenance message. If a related fault is found, do the applicable Fault Isolation Procedure for the related maintenance fault.
- (4) If you have found and corrected any ADIRU or DEU related maintenance messages, and the fault symptom does not occur on the subsequent flight, then you corrected the fault.
- (5) If you did not find and correct any ADIRU or DEU related maintenance messages, then do the fault isolation procedure below.

F. Fault Isolation Procedure

- (1) Perform this task Pitot Static System - Flushing, AMM TASK 34-11-00-170-802.
NOTE: The flushing task includes a leak check and sensor inspection that applies to the left and right primary systems.
 - (a) If you find unwanted moisture, contamination, or other problems during the task, then do these steps:
 - 1) Repair the problems that you find.
 - 2) If the symptom does not occur on the subsequent flight, then you corrected the fault.
 - (b) If you do not find unwanted moisture, contamination, or other problems during the task then continue.
- (2) Inspect the routing of the Static and Pitot System tubing to ensure there are no sharp turns, kinks, or anything that might be pinching the lines.
 - (a) If you find a problem during the inspection; do these steps:
 - 1) Repair or replace the faulty component.
 - 2) If the symptom does not occur on the subsequent flight, then you corrected the problem.
 - (b) If no problems were found during the inspection, then continue.
- (3) Do the test: Pitot Probe, AOA Sensor, and TAT Probe Heater - System Test, AMM TASK 30-31-00-730-801.
 - (a) If you find a problem during the test, then correct the problem and re-run the test.
 - 1) If the test is satisfactory and the symptom does not occur on the subsequent flight, then you corrected the fault.
 - (b) If the test is not satisfactory, then continue.
- (4) Do a test of the AOA sensors. This is the task: Angle of Attack System Test, AMM TASK 34-21-05-730-801.
 - (a) If the test is satisfactory, then continue.
 - (b) If the test is unsatisfactory, then replace the applicable AOA sensor. These are the tasks:
 - Angle of Attack Sensor Removal, AMM TASK 34-21-05-000-801
 - Angle of Attack Sensor Installation, AMM TASK 34-21-05-400-801
 - 1) If AOA sensor test is satisfactory, and the symptom does not occur on the subsequent flight, then you corrected the problem.
 - 2) If the test is unsatisfactory, then continue.

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- (5) Do a resistance check of the Pitot Probe.
- (a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
C	4	C00236	HEATERS ELEV PITOT LEFT

SIA 702-714

D	1	C00226	WINDOW HEAT CONTROL RIGHT FRONT AC
D	2	C00225	WINDOW HEAT CONTROL LEFT SIDE AC

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D	3	C01071	HEATERS ALPHA VANE RIGHT
D	4	C00237	HEATERS ELEV PITOT RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

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E	1	C00224	WINDOW HEAT CONTROL LEFT FRONT AC
E	2	C00227	WINDOW HEAT CONTROL RIGHT SIDE AC

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
SIA ALL			
F	16	C00570	PROBE INDICATION F/O
F	18	C00569	PROBE INDICATION CAPT

F/O Electrical System Panel, P6-11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C01650	WINDOW HEAT POWER L3

F/O Electrical System Panel, P6-12

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C01649	WINDOW HEAT POWER R3

- (b) Remove the connector D644 from the P5-9 Window and Pitot Heat Panel.
- (c) Do a resistance check of the Left Pitot Probe.

NOTE: The resistance values specified below are with the Probe at Normal Ambient Temperature of 68° F (20° C).

LEFT PITOT

PROBE - A23	D644	Ground	
	Pin 41	Ground	48 ± 8 Ohms

- 1) If the resistance is not between 40 to 56 Ohms then replace the Left Pitot Probe A23.
- a) Remove the Left Pitot Probe A23. This is the task: Pitot Probe - Removal, AMM TASK 34-11-01-000-801.

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- b) Install the Left Pitot Probe A23. This is the task: Pitot Probe - Installation, AMM TASK 34-11-01-400-801.
- c) Measure the resistance again, if the test is satisfactory and the symptom does not occur on the subsequent flight, then you corrected the problem.
- 2) If the resistance is between 40 to 56 Ohms then reconnect connector D644 to the P5-9 Window and Pitot Heat Panel and continue.
- (d) Remove the connector D638 from the P5-9 Window and Pitot Heat Panel.
- (e) Do a resistance check of the Upper Right Pitot Probe.

NOTE: The resistance values specified below are with the Probe at Normal Ambient Temperature of 68° F (20° C).

**UPPER RIGHT
PITOT PROBE**

- A26	D638	Ground	
	Pin 41	Ground	48 ± 8 Ohms

- 1) If the resistance is not between 40 to 56 Ohms then replace the Upper Right Pitot Probe A26.
 - a) Remove the Upper Right Pitot Probe A26. This is the task: Pitot Probe - Removal, AMM TASK 34-11-01-000-801.
 - b) Install the Upper Right Pitot Probe A26. This is the task: Pitot Probe - Installation, AMM TASK 34-11-01-400-801.
 - c) Retest the resistance, if the test is satisfactory and the symptom does not occur on the subsequent flight, then you corrected the problem.
- 2) If the resistance is between 40 to 56 Ohms then reconnect connector D638 to the P5-9 Window and Pitot Heat Panel and continue.
- (6) Make sure there is no partial shorting on the Pitot Probe Wiring.
 - (a) Do this check of the wiring for the Pitot Probes A23 and A26:
 - 1) Remove the connectors D644 and D638 from the Window and Pitot Heat Panel.
 - 2) Remove the Pitot Probes.
 - a) Remove the Left Pitot Probe, A23 and Upper Right Pitot Probe, A26. This is the task: Pitot Probe - Removal, AMM TASK 34-11-01-000-801.
 - 3) Do a wiring check between these pins of connectors D11294 (A23) and D11300 (A26) at the Pitot Probes and connectors D644 and D638 in the flight compartment:

**LEFT PITOT
PROBE - A23**

D11294	D644
pin A	pin 41

**UPPER RIGHT
PITOT PROBE
- A26**

D11300	D638
pin A	pin 41

- 4) Make sure pin B of connectors D11294 and D11300 goes to ground.
- 5) If you find a problem with the wiring, then do these steps:

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- a) Repair the wiring.
- b) Re-connect the connectors on the Window and Pitot Heat Panel.
- c) Re-install the Left and Right Pitot Probes (A23 and A26). This is the task: Pitot Probe - Installation, AMM TASK 34-11-01-400-801.
- d) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	4	C00236	HEATERS ELEV PITOT LEFT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	16	C00570	PROBE INDICATION F/O
F	18	C00569	PROBE INDICATION CAPT

- 6) If you did not find a problem with the wiring, then do these steps:
 - a) Examine the Pitot Probe Heater Insulation resistance.

NOTE: Make sure that the Probe Temperature is between $68 \pm 18^{\circ}\text{F}$ ($20 \pm 10^{\circ}\text{C}$) for a minimum of 1 hour prior to test.

<1> Make sure that all probe external surfaces are clean and dry.

<2> With an insulation resistance tester, COM-8676, measure the resistance between one terminal pin and the Pitot Tube Base.

<a> If the insulation resistance is less than 1 Megohm from either Heater pin to case after 2 minutes with 500 VDC applied, then replace the applicable probe. These are the tasks:

 - Pitot Probe - Removal, AMM TASK 34-11-01-000-801
 - Pitot Probe - Installation, AMM TASK 34-11-01-400-801

 If the resistance is greater than or equal to 1 Megohm from either heater pin to case after 2 minutes with 500 VDC applied, then continue.
 - b) Re-connect the connectors on the Window and Pitot Heat Panel.
 - c) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	16	C00570	PROBE INDICATION F/O
F	18	C00569	PROBE INDICATION CAPT

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- (7) Perform the "ADM and Integrated Standby Flight Display Test" section of this task: Air Data Reference - System Test, AMM TASK 34-21-00-730-802.

NOTE: It is optional to pressurize the AUX system when you do the test.

- (a) Compare the rate at which each side reaches the target airspeed and altitude test values.
 - (b) If the Pitot Air Data Module (ADM) or the static Air Data Module (ADM) does not operate as specified in the AMM task, or the Pitot Air Data Module (ADM) or the static Air Data Module (ADM) of one side lags the other, replace the applicable Pitot Air Data Module (ADM) or the static Air Data Module (ADM). These are the tasks:
 - Static Air Data Module - Removal, AMM TASK 34-21-04-000-802
 - Static Air Data Module - Installation, AMM TASK 34-21-04-400-802
 - Pitot Air Data Module - Removal, AMM TASK 34-21-04-000-801
 - Pitot Air Data Module - Installation, AMM TASK 34-21-04-400-801
 - 1) If the symptoms do not occur on the subsequent flight, then you corrected the fault.
 - (c) If the Pitot Air Data Module (ADM) or the static Air Data Module (ADM) does not operate as specified in the AMM task, then continue.
- (8) Replace the applicable ADIRU. These are the tasks:
- Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801
 - Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801
- (a) If you find a problem during the test, then correct the problem and re-run the test.
- 1) If the test is satisfactory, then you corrected the problem.

————— **END OF TASK** —————

876. Airspeed Disagree - Fault Isolation

A. Description

- (1) This task is for this Observed Fault:
- (a) Airspeed Unreliable
 - 1) Airspeed unreliable is when the airspeed on the PFD is unreliable - incorrect, erroneous, fluctuates, erratic, split, or disagree.
 - 2) Unreliable airspeed conditions can be caused by erroneous data from the pitot/static system, Angle of Attack (AOA) vanes or damage to the radome. Some of these can be caused by factors which are not visible to the flight crew such as damaged or disconnected pitot/static hoses. While damage can also occur in flight, unreliable airspeed conditions due to ground damage to the pitot tubes, static ports, AOA vanes or radome, can be avoided with a thorough inspection.
 - 3) Unreliable airspeed may not result in IAS DISAGREE message or Maintenance Message 31-65060.
 - (b) IAS DISAGREE message shows on the Primary Flight Displays.
 - 1) The IAS DISAGREE annunciation will be displayed when the difference between the captain's displayed airspeed value and the f/o's displayed airspeed value is 5 knots or greater for 5 consecutive seconds.
- (2) This task is for this maintenance message:
- (a) 31-65060 AIRSPEED DISAGREE

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- 1) The 31-65060 AIRSPEED DISAGREE Maintenance Message shows when the ADR data received by the DEUs (DEU-1 and DEU-2) from the ADIRUs (ADIRU-L and ADIRU-R) do not agree.
- (3) The ADR function in the ADIRU receives digital inputs of Pitot and Static pressure from the Air Data Module (ADM) and Temperature Inputs from the Total Air Temperature Probe. It uses these inputs to calculate the Air Data parameters. It also receives analog inputs from the Angle of Attack (AOA) Vane for error correction.
- (4) If all three flight deck effects, AOA DISAGREE, ALT DISAGREE, and IAS DISAGREE show, then do the FIM task for AOA DISAGREE first.

B. Possible Causes

- (1) Blockage and leakage:
 - (a) Blockage of the Pitot Probes
 - (b) Blockage of the Static Ports
 - (c) Moisture in Pitot or Static System
 - (d) Leak in the Pitot or Static System
 - (e) Routing of the Pitot or Static System Tubing
- (2) Sensor heater (pitot probe, TAT probe or AOA vane heater)
- (3) AOA vane
- (4) Airplane Wiring
- (5) Pitot ADMs
- (6) Static ADMs
- (7) ADIRU, M1749 or M1752
- (8) Damage to the Nose Radome

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	8	C00425	ADIRU LEFT EXC

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	14	C01008	ADIRU RIGHT AC
C	15	C00426	ADIRU RIGHT EXC

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F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	17	C01010	ADIRU RIGHT DC

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	16	C00570	PROBE INDICATION F/O
F	18	C00569	PROBE INDICATION CAPT

D. Related Data

- (1) SSM 30-31-11
- (2) SSM 30-31-12
- (3) SSM 34-21-14
- (4) SSM 34-21-24
- (5) WDM 30-31-11
- (6) WDM 30-31-12
- (7) WDM 34-21-14
- (8) WDM 34-21-24

E. Initial Evaluation

- (1) Make sure the Barometric setting on the captain's and first officer's EFIS control panels are the same.
- (2) For Left and Right ADIRU, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - (a) Look for the maintenance messages related to these components:
 - 1) Pitot Probe
 - 2) TAT Probe
 - 3) Sensor heater (i.e., pitot probe or TAT probe heater)
 - 4) Barometric correction input from DEU to ADIRU
 - 5) AOA vane
 - 6) ADM
 - (b) If the ADIRS BITE Procedure shows a fault, then go to the Fault Isolation Task for the applicable maintenance message to correct the problem before continuing.
- (3) For DEUs, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the Control Display Unit (CDU) shows a maintenance message on the CURRENT STATUS page that may be related to the AIRSPEED DISAGREE event, then do the applicable fault isolation procedure for the related maintenance message.
 - (b) If the Control Display Unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then continue.

NOTE: Because airspeed discrepancy issues are often only detectable when the airplane is in motion, the AIRSPEED DISAGREE message may not be listed on the CURRENT STATUS page when the airplane is stationary on the ground. Absence of the AIRSPEED DISAGREE fault in the CURRENT STATUS page does not necessarily indicate that the condition that caused the fault has been corrected.

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- (c) The FMCS stores all in-flight faults for later retrieval on the ground. Review the IN-FLIGHT FAULTS stored by the FMCS for occurrence of the AIRSPEED DISAGREE maintenance message. Look for other faults that may have occurred at the same time, or around the same time, that could be related to issuance of the AIRSPEED DISAGREE maintenance message. If a related fault is found, do the applicable Fault Isolation Procedure for the related maintenance fault.
- (4) If you have found and corrected any ADIRU or DEU related maintenance messages, and the fault symptom does not occur on the subsequent flight, then you corrected the fault.
- (5) If you did not find and correct any ADIRU or DEU related maintenance messages, then do the fault isolation procedure below.

F. Fault Isolation Procedure

- (1) Perform this task Pitot Static System - Flushing, AMM TASK 34-11-00-170-802.
NOTE: The flushing task includes a leak check and sensor inspection that applies to the left and right primary systems.
 - (a) If you find unwanted moisture, contamination, or other problems during the task, then do these steps:
 - 1) Repair the problems that you find.
 - 2) If the symptom does not occur on the subsequent flight, then you corrected the fault.
 - (b) If you do not find unwanted moisture, contamination, or other problems during the task then continue.
- (2) Inspect the routing of the Static and Pitot System tubing to ensure there are no sharp turns, kinks, or anything that might be pinching the lines.
 - (a) If you find a problem during the inspection; do these steps:
 - 1) Repair or replace the faulty component.
 - 2) If the symptom does not occur on the subsequent flight, then you corrected the problem.
 - (b) If no problems were found during the inspection, then continue.
- (3) Do the test: Pitot Probe, AOA Sensor, and TAT Probe Heater - System Test, AMM TASK 30-31-00-730-801.
 - (a) If you find a problem during the test, then correct the problem and re-run the test.
 - 1) If the test is satisfactory and the symptom does not occur on the subsequent flight, then you corrected the fault.
 - (b) If the test is not satisfactory, then continue.
- (4) Do a test of the AOA sensors. This is the task: Angle of Attack System Test, AMM TASK 34-21-05-730-801.
 - (a) If the test is satisfactory, then continue.
 - (b) If the test is unsatisfactory, then replace the applicable AOA sensor. These are the tasks:
 - Angle of Attack Sensor Removal, AMM TASK 34-21-05-000-801
 - Angle of Attack Sensor Installation, AMM TASK 34-21-05-400-801
 - 1) If AOA sensor test is satisfactory, and the symptom does not occur on the subsequent flight, then you corrected the problem.
 - 2) If the test is unsatisfactory, then continue.

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- (5) Do a resistance check of the Pitot Probe.
- (a) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	2	C00238	HEATERS TEMP PROBE
C	3	C01072	HEATERS ALPHA VANE LEFT
C	4	C00236	HEATERS ELEV PITOT LEFT

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D	1	C00226	WINDOW HEAT CONTROL RIGHT FRONT AC
D	2	C00225	WINDOW HEAT CONTROL LEFT SIDE AC

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D	3	C01071	HEATERS ALPHA VANE RIGHT
D	4	C00237	HEATERS ELEV PITOT RIGHT
D	5	C00525	HEATERS F/O PITOT
D	6	C00524	HEATERS AUX PITOT

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E	1	C00224	WINDOW HEAT CONTROL LEFT FRONT AC
E	2	C00227	WINDOW HEAT CONTROL RIGHT SIDE AC

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
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F	16	C00570	PROBE INDICATION F/O
F	18	C00569	PROBE INDICATION CAPT

F/O Electrical System Panel, P6-11

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C01650	WINDOW HEAT POWER L3

F/O Electrical System Panel, P6-12

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C01649	WINDOW HEAT POWER R3

- (b) Remove the connector D644 from the P5-9 Window and Pitot Heat Panel.
- (c) Do a resistance check of the Left Pitot Probe.

NOTE: The resistance values specified below are with the Probe at Normal Ambient Temperature of 68° F (20° C).

LEFT PITOT

PROBE - A23	D644	Ground	
	Pin 41	Ground	48 ± 8 Ohms

- 1) If the resistance is not between 40 to 56 Ohms then replace the Left Pitot Probe A23.
- a) Remove the Left Pitot Probe A23. This is the task: Pitot Probe - Removal, AMM TASK 34-11-01-000-801.

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- b) Install the Left Pitot Probe A23. This is the task: Pitot Probe - Installation, AMM TASK 34-11-01-400-801.
- c) Measure the resistance again, if the test is satisfactory and the symptom does not occur on the subsequent flight, then you corrected the problem.
- 2) If the resistance is between 40 to 56 Ohms then reconnect connector D644 to the P5-9 Window and Pitot Heat Panel and continue.
- (d) Remove the connector D638 from the P5-9 Window and Pitot Heat Panel.
- (e) Do a resistance check of the Upper Right Pitot Probe.

NOTE: The resistance values specified below are with the Probe at Normal Ambient Temperature of 68° F (20° C).

**UPPER RIGHT
PITOT PROBE**

- A26	D638	Ground	
	Pin 41	Ground	48 ± 8 Ohms

- 1) If the resistance is not between 40 to 56 Ohms then replace the Upper Right Pitot Probe A26.
 - a) Remove the Upper Right Pitot Probe A26. This is the task: Pitot Probe - Removal, AMM TASK 34-11-01-000-801.
 - b) Install the Upper Right Pitot Probe A26. This is the task: Pitot Probe - Installation, AMM TASK 34-11-01-400-801.
 - c) Retest the resistance, if the test is satisfactory and the symptom does not occur on the subsequent flight, then you corrected the problem.
- 2) If the resistance is between 40 to 56 Ohms then reconnect connector D638 to the P5-9 Window and Pitot Heat Panel and continue.
- (6) Make sure there is no partial shorting on the Pitot Probe Wiring.
 - (a) Do this check of the wiring for the Pitot Probes A23 and A26:
 - 1) Remove the connectors D644 and D638 from the Window and Pitot Heat Panel.
 - 2) Remove the Pitot Probes.
 - a) Remove the Left Pitot Probe, A23 and Upper Right Pitot Probe, A26. This is the task: Pitot Probe - Removal, AMM TASK 34-11-01-000-801.
 - 3) Do a wiring check between these pins of connectors D11294 (A23) and D11300 (A26) at the Pitot Probes and connectors D644 and D638 in the flight compartment:

**LEFT PITOT
PROBE - A23**

D11294	D644
pin A	pin 41

**UPPER RIGHT
PITOT PROBE
- A26**

D11300	D638
pin A	pin 41

- 4) Make sure pin B of connectors D11294 and D11300 goes to ground.
- 5) If you find a problem with the wiring, then do these steps:

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- a) Repair the wiring.
- b) Re-connect the connectors on the Window and Pitot Heat Panel.
- c) Re-install the Left and Right Pitot Probes (A23 and A26). This is the task: Pitot Probe - Installation, AMM TASK 34-11-01-400-801.
- d) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
C	4	C00236	HEATERS ELEV PITOT LEFT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	16	C00570	PROBE INDICATION F/O
F	18	C00569	PROBE INDICATION CAPT

- 6) If you did not find a problem with the wiring, then do these steps:

- a) Examine the Pitot Probe Heater Insulation resistance.

NOTE: Make sure that the Probe Temperature is between $68 \pm 18^{\circ}\text{F}$
($20 \pm 10^{\circ}\text{C}$) for a minimum of 1 hour prior to test.

<1> Make sure that all probe external surfaces are clean and dry.

<2> With an insulation resistance tester, COM-8676, measure the resistance between one terminal pin and the Pitot Tube Base.

<a> If the insulation resistance is less than 1 Megohm from either Heater pin to case after 2 minutes with 500 VDC applied, then replace the applicable probe. These are the tasks:

- Pitot Probe - Removal, AMM TASK 34-11-01-000-801
- Pitot Probe - Installation, AMM TASK 34-11-01-400-801

 If the resistance is greater than or equal to 1 Megohm from either heater pin to case after 2 minutes with 500 VDC applied, then continue.

- b) Re-connect the connectors on the Window and Pitot Heat Panel.
- c) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	1	C00523	HEATERS CAPT PITOT
D	5	C00525	HEATERS F/O PITOT

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
F	16	C00570	PROBE INDICATION F/O
F	18	C00569	PROBE INDICATION CAPT

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- (7) Perform the "ADM and Integrated Standby Flight Display Test" section of this task: Air Data Reference - System Test, AMM TASK 34-21-00-730-802.

NOTE: It is optional to pressurize the AUX system when you do the test.

- (a) Compare the rate at which each side reaches the target airspeed and altitude test values.
 - (b) If the Pitot Air Data Module (ADM) or the static Air Data Module (ADM) does not operate as specified in the AMM task, or the Pitot Air Data Module (ADM) or the static Air Data Module (ADM) of one side lags the other, replace the applicable Pitot Air Data Module (ADM) or the static Air Data Module (ADM). These are the tasks:
 - Static Air Data Module - Removal, AMM TASK 34-21-04-000-802
 - Static Air Data Module - Installation, AMM TASK 34-21-04-400-802
 - Pitot Air Data Module - Removal, AMM TASK 34-21-04-000-801
 - Pitot Air Data Module - Installation, AMM TASK 34-21-04-400-801
 - 1) If the symptoms do not occur on the subsequent flight, then you corrected the fault.
 - (c) If the Pitot Air Data Module (ADM) or the static Air Data Module (ADM) does not operate as specified in the AMM task, then continue.
- (8) Perform this task for the Nose Radome: Nose Radome - Inspection, AMM TASK 53-52-00-200-801.
- (a) If you find a problem during the inspection; do these steps:
 - 1) Repair or replace the faulty component.
 - 2) If the symptom does not occur on the subsequent flight, then you corrected the problem.
 - (b) If no problems were found during the inspection, then continue.
- (9) Replace the applicable ADIRU. These are the tasks:
- Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801
 - Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801
- (a) If you find a problem during the test, then correct the problem and re-run the test.
 - 1) If the test is satisfactory, then you corrected the problem.

————— **END OF TASK** —————

877. No ACARS/CMU Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67090 NO ACARS/CMU DATA

B. Possible Causes

- (1) The ACARS/CMU.
- (2) Wiring problem.

C. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)
- (3) (WDM 31-62-15)
- (4) (WDM 31-62-25)

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D. Initial Evaluation

- (1) The suspect LRU is ACARS/CMU .

NOTE: This message will only be active for customers that selected the ACARS system generated .ATC or .ACARS message option.

- (2) If the ACARS/CMU does not operate normally, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Check that the ACARS/CMU is working. To do the check, do this task: ACARS Communications Management Unit (CMU) Software Configuration Check, AMM TASK 23-27-33-700-802

- (a) If the ACARS/CMU failed, then do these tasks:

ACARS Communications Management Unit (CMU) Removal, AMM
TASK 23-27-33-020-801

ACARS Communications Management Unit (CMU) Installation, AMM
TASK 23-27-33-420-801

- (2) Check the wiring between the CMU and the DEUs.

NOTE: Pay special attention to the BURNDY blocks.

———— **END OF TASK** ————

884. CDS FAULT and/or CDS MAINT Message Shows on the Display - Fault Isolation

A. Description

- (1) On the ground, with one or both engines OFF, the CDS FAULT indication shows when the CDS has a non-dispatchable fault.

NOTE: If the CDS has a non-dispatchable fault when the airplane is in the air, DSPLY SOURCE shows. This indicates that only one DEU sends data to the Display Units. When the airplane is on the ground and the engines stop, DSPLY SOURCE does not show. Instead, CDS FAULT shows when the airplane is on the ground.

- (2) On the ground, with one or both engines OFF, the CDS MAINT indication shows when the CDS has a minor problem. The airplane can be temporarily dispatched in this condition.

NOTE: If the CDS has a dispatchable fault when the airplane is in the air or on the ground, DSPLY SOURCE does not show. Instead, CDS MAINT shows when the airplane is on the ground.

- (3) It is usual for the CDS FAULT indication to show for a maximum of 3 minutes during the CDS Test and Power-up operations.

- (a) If Power-up operation causes the CDS FAULT indication, the indication will stop after a maximum of 3 minutes. If you see the indication after 3 minutes, do the Fault Isolation Procedure below.

- (b) The CDS FAULT message shows before both engines start if Hot Battery Power is not available or if the DATA LOAD SELECTOR Switch is in the DEU-1 or DEU-2 position.

- (c) The CDS FAULT message is removed when both engines start. The CDS FAULT message is also removed when one or both engines are OFF with Hot Battery Power available, the DATA LOAD SELECTOR Switch is not in either the DEU-1 or DEU-2 position and the DEUs have no significant faults.

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B. Possible Causes

- (1) DEU-1, M1808
- (2) DEU-2, M1809
- (3) The DEU initializes and detects that some of the items below are not compatible:
 - (a) Program Pins in DEU-1 and DEU-2
 - (b) Operational Program Software (OPS) and Airplane Type
 - (c) OPS and Operational Program Configuration (OPC) in DEU-1 and DEU-2
 - (d) OPS and OPC
- (4) Mismatch of the N1, N2, Engine Oil Pressure, or EGT Data between DEU-1 and DEU-2
- (5) ARINC 429 Output Bus short circuit

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C01360	DISPLAY DEU 2 PRI

D. Initial Evaluation

- (1) Set the DSPLY SOURCE Switch on the Instrument Switching Module to ALL ON 1.
 - (a) If all six Display Units are blank, then the problem is in DEU-1, M1808 or DEU-1 Coax Coupler 1 or 2.
- (2) Set the DSPLY SOURCE Switch on the Instrument Switching Module to ALL ON 2.
 - (a) If all six Display Units are blank, then the problem is in DEU-2, M1809 or DEU-2 Coax Coupler 3 or 4.
- (3) Keep the DSPLY SOURCE Switch in the position where all six Display Units are blank and do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Access the CDS BITE pages on the FMC CDU.
 - (a) If you are not at one of the CDS DEU BITE Displays, then do these steps:
 - 1) Push the INIT REF function key.
 - 2) If the POS INT Display shows, then push the Line Select Key (LSK) next to the INDEX prompt.

NOTE: This shows the INIT/REF INDEX page.
 - 3) Push the LSK for MAINT.

NOTE: The MAINT BITE INDEX page will show.
 - 4) From the MAINT BITE INDEX, push the LSK next to the CDS prompt.
 - (b) If the CDS BITE pages can be accessed, then do these steps:
 - 1) Push the LSK next to the prompt for the DEU that you identified with a problem in the Initial Evaluation.

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- 2) Push the LSK next to the CURRENT STATUS prompt.
 - a) Record the faults shown on the CURRENT STATUS page.
 - b) If the CURRENT STATUS page shows faults for the DEU that you identified with a fault in the Initial Evaluation, then do the DEU Self-Test Procedure, 31-62 TASK 802.

NOTE: During the test, faults that occurred during ground operation are safely stored in the DEU Memory. If you cycle the circuit breakers before you safely store the CURRENT STATUS faults, you will erase those faults.

- 3) If the CDS FAULT indication or the CDS MAINT indication does not show, then you corrected the problem.
 - a) If necessary, download the Built-In-Test Equipment (BITE) data for DEU-1 and for DEU-2. This is the task:
 - BITE Data Output from the DEUs to a Portable Data Loader, AMM TASK 31-62-21-470-804
 - 4) If the CDS FAULT indication or the CDS MAINT indication shows, then continue.
- (c) If the CDS BITE pages can not be accessed, then do these steps:
- 1) If you identified DEU-1 with a problem in the Initial Evaluation, then do this step:
 - a) Open, wait for a minimum of 2 seconds, and then close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

NOTE: Do not pull Hold-up C/B.

- 2) If you identified DEU-2 with a problem in the Initial Evaluation, then do this step:
 - a) Open, wait for a minimum of 2 seconds, and then close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C01360	DISPLAY DEU 2 PRI

NOTE: Do not pull Hold-up C/B.

- 3) If the CDS FAULT indication or the CDS MAINT indication does not show, then you corrected the problem.
 - a) If necessary, download the BITE data for DEU-1 and for DEU-2. This is the task:
 - BITE Data Output from the DEUs to a Portable Data Loader, AMM TASK 31-62-21-470-804
 - 4) If the CDS FAULT indication or the CDS MAINT indication shows, then continue.
- (2) Download the BITE data for DEU-1 and for DEU-2. This is the task: BITE Data Output from the DEUs to a Portable Data Loader, AMM TASK 31-62-21-470-804.
- (3) Record the related fault data from the CDS CURRENT STATUS and INFLIGHT FAULTS on the Flight Management Computer / Control Display Unit (FMC CDU). This is the task: CDS BITE Procedure, 31-62 TASK 801.

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- (a) Record this data for each related fault:

NOTE: You can use this data to repair the DEU with the problem after you remove it from the airplane.

- Fault Description
- Date
- Time
- Altitude
- Airspeed
- Related entry from the pilot's log

- (4) Replace the DEU that you identified with a problem during the Initial Evaluation. These are the tasks:

- Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
- Display Electronic Unit Installation, AMM TASK 31-62-21-400-801

- (a) If the CDS FAULT indication or the CDS MAINT indication does not show, then you corrected the problem.

————— **END OF TASK** —————

885. Display Unit Degradation - Fault Isolation

A. Description

- (1) If a display unit screen defect impairs the Flight Crew's ability to operate the aircraft and therefore affects airworthiness, it must be corrected. These defect types include an obscured part of the display, missing pixels, or regions displaying unintended colors, which could prevent the correct interpretation of the displayed data.

B. Fault Isolation Procedure

- (1) These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801

Display Unit Installation, AMM TASK 31-62-11-400-801

NOTE: All other screen defects must be considered minor and the decision to remove units due to these minor defects must be made in accordance with the operator's operational and business requirements. These decisions must involve the same considerations that apply to CRT technology displays, or other flight deck instruments, which might also be removed for minor defects such as scratches, cover glass fogging, or degradation of painted dial graphics.

————— **END OF TASK** —————

886. CDS Display Unit Overheat - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:

- (a) 31-61037 DU-LOB OVERHEAT
- (b) 31-61038 DU-LIB OVERHEAT
- (c) 31-61039 DU-CU OVERHEAT
- (d) 31-61040 DU-RIB OVERHEAT
- (e) 31-61041 DU-ROB OVERHEAT

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(f) 31-61042 DU-CL OVERHEAT

B. Possible Causes

- (1) Display Unit (DU) overheating because the air vents are blocked.
- (2) DU overheating because the cooling air flow is not sufficient.
- (3) Left OutboardDU (DU-LOB), N187
- (4) Left InboardDU (DU-LIB), N188
- (5) Center UpperDU (DU-CU), N189
- (6) Right InboardDU (DU-RIB), N192
- (7) Right OutboardDU (DU-ROB), N191
- (8) Center LowerDU (DU-CL), N190

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR
D	3	C01365	DISPLAY CAPT INBD
D	4	C01363	DISPLAY CAPT OUTBD

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD
E	11	C01366	DISPLAY F/O INBD
E	12	C01373	DISPLAY CTR LWR

D. Initial Evaluation

- (1) Do the CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the CDU shows the maintenance message(s) on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show the maintenance message(s) on the CURRENT STATUS page, then there was an intermittent problem.

NOTE: You can find other occurrences of these maintenance messages on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Examine the air vents of the DU reported as overheated.
 - (a) If the air vents are clogged, then clean the air vents. This is the task: How to Clean the Holes on the Rear of the Display Unit, AMM TASK 31-62-11-100-803.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If the air vents are satisfactory (less than 25% blockage), then continue.
- (2) Make sure that the DUs have sufficient cooling air flow. This is the task: Flight Compartment Display Unit Air Flow Test, AMM TASK 21-27-00-700-806.
 - (a) Do the Repair Confirmation at the end of this task.
- (3) Replace the DU reported as overheated. These are the tasks:

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- Display Unit Removal, AMM TASK 31-62-11-000-801
- Display Unit Installation, AMM TASK 31-62-11-400-801
- (a) Do the Repair Confirmation at the end of this task.

F. Repair Confirmation

- (1) Do the CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the maintenance message does not show on the CDU, then you have corrected the problem.
 - (b) If the maintenance message still shows on the CDU, then continue the Fault Isolation at the subsequent step.

———— **END OF TASK** ————

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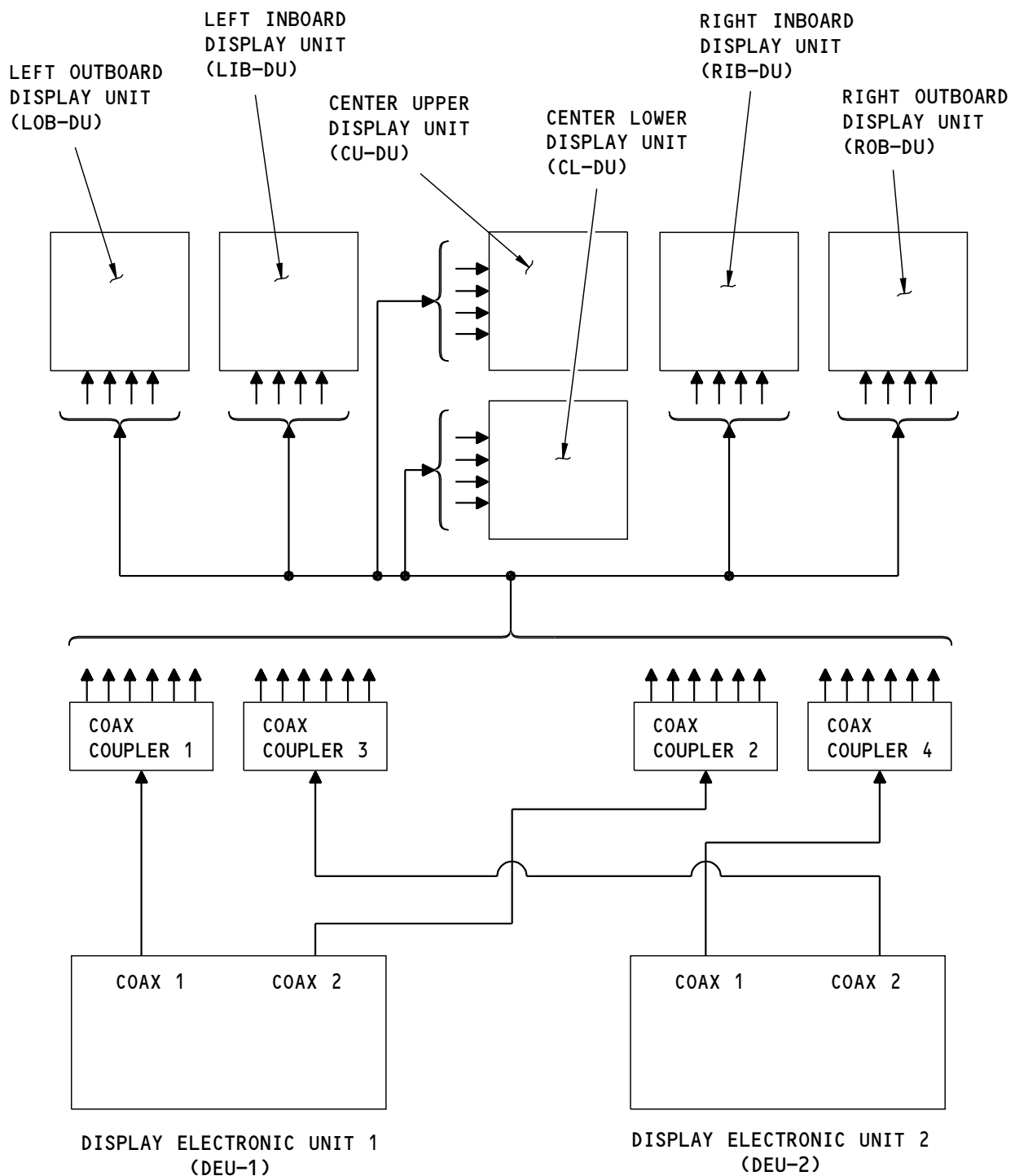
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CDS - Video Coax Block Diagram
Figure 301/31-62-00-990-802

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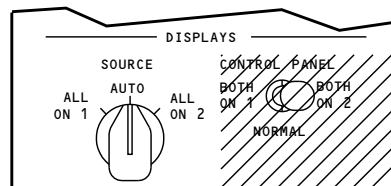
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SELECTOR POSITION \ DU		LOB	LIB	UPPER C	LOWER C	RIB	ROB
AUTO	FAILURES						
	NONE	DEU 1 GG A	DEU 1 GG A	DEU 1 GG B	DEU 2 GG A	DEU 2 GG B	DEU 2 GG B
	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 2 GG A	DEU 2 GG A	DEU 2 GG B	DEU 2 GG B
	DEU 1 GG B	DEU 1 GG A	DEU 1 GG A	DEU 2 GG A	DEU 2 GG A	DEU 2 GG B	DEU 2 GG B
	DEU 2 GG A	DEU 1 GG A	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 2 GG B	DEU 2 GG B
	DEU 2 GG B	DEU 1 GG A	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 2 GG A	DEU 2 GG A
	DEU 1 GG A & B	DEU 2 GG A	DEU 2 GG A	DEU 2 GG A	DEU 2 GG B	DEU 2 GG B	DEU 2 GG B
	DEU 2 GG A & B	DEU 1 GG A	DEU 1 GG A	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 1 GG B
	DEU 1 GG A DEU 2 GG A	DEU 1 GG B	DEU 1 GG B	DEU 1 GG B	DEU 2 GG B	DEU 2 GG B	DEU 2 GG B
	DEU 1 GG A DEU 2 GG B	DEU 1 GG B	DEU 1 GG B	DEU 1 GG B	DEU 2 GG A	DEU 2 GG A	DEU 2 GG A
	DEU 1 GG B DEU 2 GG A	DEU 1 GG A	DEU 1 GG A	DEU 1 GG A	DEU 2 GG B	DEU 2 GG B	DEU 2 GG B
	DEU 1 GG B DEU 2 GG B	DEU 1 GG A	DEU 1 GG A	DEU 1 GG A	DEU 2 GG A	DEU 2 GG A	DEU 2 GG A
	ALL ON 1	DEU 1 GG A	DEU 1 GG A	DEU 1 GG A	DEU 1 GG B	DEU 1 GG B	DEU 1 GG B
	ALL ON 2	DEU 2 GG A	DEU 2 GG A	DEU 2 GG A	DEU 2 GG B	DEU 2 GG B	DEU 2 GG B

COAX OUTPUT 1 = GG A
COAX OUTPUT 2 = GG B



L23722 S0006743563_V1

CDS - Display Source Selector
Figure 302/31-62-00-990-803

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801. No DU-LOB Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67110 NO DU-LOB DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the captain's outboard display unit (LOB-DU).

B. Possible Causes

- (1) Left outboard display unit (LOB-DU), N187
- (2) No power to the LOB-DU
- (3) Wiring problem
- (4) DU Program Pins

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the LOB-DU N187 operation:
 - (a) Exchange the LOB-DU N187 with the captain's inboard display unit (LIB-DU) N188.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) If the display unit that is now in the LIB-DU slot is blank, then do these steps:
 - 1) Remove the display unit that is in the LIB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the LOB-DU slot to the LIB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) Install a new display unit in the LOB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the fault.
 - (c) If the display unit that is in the LIB-DU slot is not blank, then do these steps:

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- 1) Remove the display unit that is in the LIB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the LOB-DU slot to the LIB-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- (2) Do this check for electrical power to the LOB-DU:
- (a) Remove the LOB-DU N187. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - (b) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	4	C01363	DISPLAY CAPT OUTBD

- (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the LOB-DU connector D3977B.
 - (d) If there is not 28 VDC at pin 59 of D3977B, then do these steps:
 - 1) Repair the wiring between pin 59 of D3977B and the terminal 2 of the circuit breaker C1363.
 - 2) Re-install the LOB-DU N187. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) If the display is not blank, then you corrected the fault.
 - (e) If there is 28 VDC at pin 59 of D3977B, then continue.
- (3) Do this check of the wiring between the LOB-DU and the display electronic units (DEU-1 and DEU-2):
- (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

NOTE: The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.

- (b) Do a wiring check between these pins of the LOB-DU connector D3977B and the DEU-1 connector D3973A:

D3977B	D3973A
pin A3	pin A1
pin A4	pin B1

- (c) Do a wiring check between these pins of the LOB-DU connector D3977B and the DEU-2 connector D3975A:

D3977B	D3975A
pin A3	pin A1
pin A4	pin B1

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

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- 3) Re-install the LOB-DU, N187. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
 - (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-12 for the Capt Outbrd Display Unit, N187.
 - (b) If you find a problem with the program pins, then do these steps:
 - 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-12 for the Capt Outbrd Display Unit, N187.
 - 2) Re-install the LOB-DU, N187. To install it, do this task: AMM TASK 31-62-11-400-801.

————— **END OF TASK** —————

802. No DU-LIB Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67120 NO DU-LIB DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the captain's inboard display unit (LIB-DU).

B. Possible Causes

- (1) Left inboard display unit (LIB-DU), N188
- (2) No power to the LIB-DU
- (3) Wiring problem
- (4) DU Program Pins

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	3	C01365	DISPLAY CAPT INBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the LIB-DU N188 operation:
 - (a) Exchange the LIB-DU N188 with the captain's outboard display unit (LOB-DU) N187.

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These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

- (b) If the display unit that is now in the L0B-DU slot is blank, then do these steps:
- 1) Remove the display unit that is in the L0B-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the LIB-DU slot to the LOB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) Install a new display unit in the LIB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the fault.
- (c) If the display unit that is in the LOB-DU slot is not blank, then do these steps:
- 1) Remove the display unit that is in the LOB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the LIB DU slot to the LOB-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- (2) Do this check for electrical power to the LIB-DU:
- (a) Remove the LIB-DU N188. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- (b) Remove the safety tag and close this circuit breaker:
- CAPT Electrical System Panel, P18-2**
- | <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
|------------|------------|---------------|-------------------|
| D | 3 | C01365 | DISPLAY CAPT INBD |
- (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the LIB-DU connector D3979B.
- (d) If there is not 28 VDC at pin 59 of D3979B, then do these steps:
- 1) Repair the wiring between pin 59 of D3979B and the terminal 2 of the circuit breaker C1365.
 - 2) Re-install the LIB-DU N188. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) If the display is not blank, then you corrected the fault.
- (e) If there is 28 VDC at pin 59 of D3979B, then continue.
- (3) Do this check of the wiring between the LIB-DU and the display electronic units (DEU-1 and DEU-2):
- (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- NOTE:** The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.
- (b) Do a wiring check between these pins of the LIB-DU connector D3979B and the DEU-1 connector D3973A:

D3979B

pin A3 pin J15
pin A4 pin K15

D3973B

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- (c) Do a wiring check between these pins of the LIB-DU connector D3979B and the DEU-2 connector D3975A:

D3979B	D3975B
pin A3	pin J15
pin A4	pin K15

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the LIB-DU, N188. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
- (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-12 for the Capt Inbrd Display Unit, N188.
- (b) If you find a problem with the program pins, then do these steps:
- 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-12 for the Capt Inbrd Display Unit, N188.
 - 2) Re-install the LIB-DU, N188. To install it, do this task: AMM TASK 31-62-11-400-801.

————— **END OF TASK** —————

803. No DU-CU Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67130 NO DU-CU DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the center upper display unit (CU-DU).

B. Possible Causes

- (1) Center upper display unit (CU-DU), N189
- (2) No power to the CU-DU
- (3) Wiring problem
- (4) DU Program Pins

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR

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D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

NOTE: The CL-DU is normally blank. You need to set the LOWER DU switch on the captain's or first officer's display select module to the ENG PRI position to do a check of the CL-DU, and to the NORMAL position to do a check of the CU-DU.

- (1) Do this check of the CU-DU N189 operation:
 - (a) Exchange the CU-DU N189 with the center lower display unit (CL-DU) N190.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) If the display unit that is now in the CL-DU slot is blank, then do these steps:
 - 1) Remove the display unit that is in the CL-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the CU-DU slot to the CL-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) Install a new display unit in the CU-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the fault.
 - (c) If the display unit that is in the CL-DU slot is not blank, then do these steps:
 - 1) Remove the display unit that is in the CL-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the CU-DU slot to the CL-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- (2) Do this check for electrical power to the CU-DU:
 - (a) Remove the CU-DU N189. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - (b) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	2	C01372	DISPLAY CTR UPR

- (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the CU-DU connector D3981B.
- (d) If there is not 28 VDC at pin 59 of D3981B, then do these steps:
 - 1) Repair the wiring between pin 59 of D3981B and the terminal 2 of the circuit breaker C1372.

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- 2) Re-install the CU-DU N189. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 3) If the display is not blank, then you corrected the fault.
- (e) If there is 28 VDC at pin 59 of D3981B, then continue.
- (3) Do this check of the wiring between the CU-DU and the display electronic units (DEU-1 and DEU-2):
 - (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

NOTE: The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.
 - (b) Do a wiring check between these pins of the CU-DU connector D3981B and the DEU-1 connector D3973B:

D3981B	D3973B
pin A3	pin A1
pin A4	pin B1
 - (c) Do a wiring check between these pins of the CU-DU connector D3981B and the DEU-2 connector D3975B:

D3981B	D3975B
pin A3	pin A1
pin A4	pin B1
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the CU-DU, N189. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
 - (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-12 for the Center Display Unit - Upper, N189.
 - (b) If you find a problem with the program pins, then do these steps:
 - 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-12 for the Center Display Unit - Upper, N189.
 - 2) Re-install the CU-DU, N189. To install it, do this task: AMM TASK 31-62-11-400-801.

———— **END OF TASK** ————

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804. No DU-CL Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67160 NO DU-CL DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the center lower display unit (CL-DU).

B. Possible Causes

- (1) Center lower display unit (CL-DU), N190
- (2) No power to the CL-DU
- (3) Wiring problem
- (4) DU Program Pins

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01373	DISPLAY CTR LWR

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) Turn the knob on the LOWER DU switch on the captain's or first officer's display switching module to the ENG PRI position.
- (2) If the display is not blank, then there was an intermittent fault.
- (3) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

NOTE: The CL-DU is normally blank. You need to set the LOWER DU switch on the captain's or first officer's display switching module to the ENG PRI position to do a check of the CL-DU, and to the NORMAL position to do a check of the CU-DU.

- (1) Do this check of the CL-DU N190 operation:
 - (a) Exchange the CL-DU N190 with the center upper display unit (CU-DU) N189.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) If the display unit that is now in the CU-DU slot is blank, then do these steps:
 - 1) Remove the display unit that is in the CU-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the CL-DU slot to the CU-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

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- 3) Install a new display unit in the CL-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- 4) If the display is not blank, then you corrected the fault.
- (c) If the display unit that is in the CU-DU slot is not blank, then do these steps:
 - 1) Remove the display unit that is in the CU-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the CL-DU slot to the CU-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- (2) Do this check for electrical power to the CL-DU:
 - (a) Remove the CL-DU N190. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - (b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01373	DISPLAY CTR LWR
 - (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the CL-DU connector D3983B.
 - (d) If there is not 28 VDC at pin 59 of D3983B, then do these steps:
 - 1) Repair the wiring between pin 59 of D3983B and the terminal 2 of the circuit breaker C1373.
 - 2) Re-install the CL-DU N190. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) If the display is not blank, then you corrected the fault.
 - (e) If there is 28 VDC at pin 59 of D3983B, then continue.
- (3) Do this check of the wiring between the CL-DU and the display electronic units (DEU-1 and DEU-2):
 - (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

NOTE: The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.
 - (b) Do a wiring check between these pins of the CL-DU connector D3983B and the DEU-1 connector D3973E:

D3983B	D3973E
pin A3	pin J15
pin A4	pin K15

- (c) Do a wiring check between these pins of the CL-DU connector D3983B and the DEU-2 connector D3975E:

D3983B	D3975E
pin A3	pin J15
pin A4	pin K15

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

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- 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the CL-DU, N190. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
- (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-12 for the Center Display Unit - Lower, N190.
 - (b) If you find a problem with the program pins, then do these steps:
 - 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-22 for the Center Display Unit - Lower, N190.
 - 2) Re-install the CL-DU, N190. To install it, do this task: AMM TASK 31-62-11-400-801.

————— END OF TASK —————

805. No DU-RIB Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67140 NO DU-RIB DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the center lower display unit (RIB-DU).

B. Possible Causes

- (1) Right inboard display unit (RIB-DU), N192
- (2) No power to the RIB-DU
- (3) Wiring problem
- (4) DU Program Pins

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	11	C01366	DISPLAY F/O INBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

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F. Fault Isolation Procedure

(1) Do this check of the RIB-DU N192 operation:

(a) Exchange the RIB-DU N192 with the right outboard display unit (ROB-DU) N191.

These are the tasks:

Display Unit Removal, AMM TASK 31-62-11-000-801,

Display Unit Installation, AMM TASK 31-62-11-400-801.

(b) If the display unit that is now in the ROB-DU slot is blank, then do these steps:

1) Remove the display unit that is in the ROB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

2) Move the display unit that is in the RIB-DU slot to the ROB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

3) Install a new display unit in the RIB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

4) If the display is not blank, then you corrected the fault.

(c) If the display unit that is in the ROB-DU slot is not blank, then do these steps:

1) Remove the display unit that is in the ROB-DU slot. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

2) Move the display unit that is in the RIB-DU slot to the ROB-DU slot, then continue. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

(2) Do this check for electrical power to the RIB-DU:

(a) Remove the RIB-DU N192. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

(b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	11	C01366	DISPLAY F/O INBD

(c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the RIB-DU connector D3987B.

(d) If there is not 28 VDC at pin 59 of D3987B, then do these steps:

1) Repair the wiring between pin 59 of D3987B and the terminal 2 of the circuit breaker C1366.

2) Re-install the RIB-DU N192. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

3) If the display is not blank, then you corrected the fault.

(e) If there is 28 VDC at pin 59 of D3987B, then continue.

(3) Do this check of the wiring between the RIB-DU and the display electronic units (DEU-1 and DEU-2):

(a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

NOTE: The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.

(b) Do a wiring check between these pins of the RIB-DU connector D3987B and the DEU-1 connector D3973E:

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D3983B

pin A3 pin A1
pin A4 pin B1

D3973E

- (c) Do a wiring check between these pins of the RIB-DU connector D3987B and the DEU-2 connector D3975E:

D3983B

pin A3 pin A1
pin A4 pin B1

D3975E

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the RIB-DU, N192. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
- (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-22 for the F/O Inbrd Display Unit, N192.
- (b) If you find a problem with the program pins, then do these steps:
- 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-22 for the F/O Inbrd Display Unit, N192.
 - 2) Re-install the RIB-DU, N192. To install it, do this task: AMM TASK 31-62-11-400-801.

————— **END OF TASK** —————

806. No DU-ROB Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67150 NO DU-ROB DATA
- (2) Both display electronic units (DEU-1 and DEU-2) receive no status data from the right outboard display unit (ROB-DU).

B. Possible Causes

- (1) Right outboard display unit (ROB-DU), N191
- (2) No power to the ROB-DU
- (3) Wiring problem
- (4) DU Program Pins

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C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

D. Related Data

- (1) (SSM 31-62-11)
- (2) (SSM 31-62-12)
- (3) (WDM 31-62-11)
- (4) (WDM 31-62-12)

E. Initial Evaluation

- (1) If the display is not blank, then there was an intermittent fault.
- (2) If the display is blank, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the ROB-DU N191 operation:
 - (a) Exchange the ROB-DU N191 with the right inboard display unit (RIB-DU) N192.
These are the tasks:
Display Unit Removal, AMM TASK 31-62-11-000-801,
Display Unit Installation, AMM TASK 31-62-11-400-801.
 - (b) If the display unit that is now in the RIB-DU slot is blank, then do these steps:
 - 1) Remove the display unit that is in the RIB-DU slot. To remove it, do this task:
Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the ROB-DU slot to the RIB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) Install a new display unit in the ROB-DU slot. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the fault.
 - (c) If the display unit that is in the RIB-DU slot is not blank, then do these steps:
 - 1) Remove the display unit that is in the RIB-DU slot. To remove it, do this task:
Display Unit Removal, AMM TASK 31-62-11-000-801.
 - 2) Move the display unit that is in the ROB-DU slot to the RIB-DU slot, then continue.
To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- (2) Do this check for electrical power to the ROB-DU:
 - (a) Remove the ROB-DU N191. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
 - (b) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	10	C01364	DISPLAY F/O OUTBD

- (c) Do a check for 28 VDC from pin 59 to pin 58 (ground) of the ROB-DU connector D3985B.

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- (d) If there is not 28 VDC at pin 59 of D3985B, then do these steps:
- 1) Repair the wiring between pin 59 of D3985B and the terminal 2 of the circuit breaker C1364.
 - 2) Re-install the ROB-DU, N1921. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 3) If the display is not blank, then you corrected the fault.
- (e) If there is 28 VDC at pin 59 of D3985B, then continue.
- (3) Do this check of the wiring between the ROB-DU and the display electronic units (DEU-1 and DEU-2):
- (a) Remove the DEU-1 M1808 and the DEU-2 M1809. To remove them, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- NOTE: The DEU-1 and the DEU-2 are on the E3-1 shelf in the electronic equipment bay.
- (b) Do a wiring check between these pins of the ROB-DU connector D3985B and the DEU-1 connector D3973D:
- | D3985B | | D3973D |
|---------------|-------|---------------|
| pin A3 | ..... | pin A1 |
| pin A4 | ..... | pin B1 |
- (c) Do a wiring check between these pins of the ROB-DU connector D3985B and the DEU-2 connector D3975D:
- | D3985B | | D3975D |
|---------------|-------|---------------|
| pin A3 | ..... | pin A1 |
| pin A4 | ..... | pin B1 |
- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Reinstall the DEU-1 M1808 and the DEU-2 M1809. To install them, These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the ROB-DU, N191. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - 4) If the display is not blank, then you corrected the problem.
- (4) Do this check of the DU Position Pins.
- (a) Do a check of the DU Address Select Program Pins as shown in WDM 31-62-22 for the F/O Outbrd Display Unit, N191.
- (b) If you find a problem with the program pins, then do these steps:
- 1) Repair the wiring so that ground is only on the pins shown in WDM 31-62-22 for the F/O Outbrd Display Unit, N191.
 - 2) Re-install the ROB-DU, N191. To install it, do this task: AMM TASK 31-62-11-400-801.

————— **END OF TASK** —————

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807. No DEU-2 Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67081 NO DEU-2 DATA
- (2) The display electronic unit 1 (DEU-1) receives no data from the DEU-2 on both cross talk buses.

B. Possible Causes

- (1) Display electronic unit 2 (DEU-2), M1809
- (2) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)
- (3) (WDM 31-62-15)
- (4) (WDM 31-62-25)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

NOTE: If DEU-2 is completely failed, then the CDU will show DEU SELF-TEST (3 min) or DEU-2 BITE INOP.

 - (a) If the CDU display shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2, M1809.These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

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Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (b) If the CDU display shows DEU 2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
 - (a) Remove DEU-1, M1808 and DEU-2, M1809. To remove them, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Do a wiring check between these pins of DEU-1 connector D3973E and DEU-2 (source) connector D3975A:

D3973E	D3975A
pin J13	pin C7
pin K13	pin D7
- (c) Do a wiring check between these pins of DEU-1 connector D3973B and DEU-2 (source) connector D3975D:

D3973B	D3975D
pin J13	pin C7
pin K13	pin D7
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install DEU-1, M1808 and DEU-2, M1809. To install them, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

808. No DEU-1 Data - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) 31-67082 NO DEU-1 DATA
- (2) The display electronic unit 2 (DEU-2) receives no data from the DEU-1 on both cross talk buses.

B. Possible Causes

- (1) Display electronic unit 1 (DEU-1), M1808
- (2) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)
- (3) (WDM 31-62-15)
- (4) (WDM 31-62-25)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
- NOTE: If DEU-1 is completely failed, then the CDU will show DEU SELF-TEST (3 min) or DEU-1 BITE INOP.
- (a) If the CDU display shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1, M1808.These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU display shows DEU 1 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:
- (a) Remove DEU-1, M1808 and DEU-2, M1809. To remove them, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

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- (b) Do a wiring check between these pins of DEU-1 (source) connector D3973A and DEU-2 connector D3975E:

D3973A	D3975E
pin C7	pin J13
pin D7	pin K13

- (c) Do a wiring check between these pins of DEU-1 (source) connector D3973D and DEU-2 connector D3975B:

D3973D	D3975B
pin C7	pin J13
pin D7	pin K13

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install DEU-1, M1808 and DEU-2, M1809. To install them, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

809. CDS No Input from LRU on 429 BUS - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-67010, 31-67020, 31-67030, 31-67051, 31-67052, 31-67061, 31-67062, 31-67070, 31-67100, 31-67170, 31-67180, 31-67200, 31-67230, 31-67300, 31-67310, 31-67320, 31-67330, 31-67340, 31-67400, 31-67440, 31-67470, 31-67500, 31-67550, 31-67560, 31-67570, 31-67600, 31-67700, 31-67710, 31-67730, 31-67740, 31-67800, 31-67830, 31-67840
- (2) Display electronic units (Display Electronic Unit (DEU)-1 and DEU-2) receive no ARINC 429 data from a Line Replaceable Unit (LRU).

B. Possible Causes

- (1) The applicable LRU.
- (2) Wiring Problem.

C. Related Data

- (1) (SSM 31-62-14)
- (2) (SSM 31-62-15)
- (3) (SSM 31-62-24)
- (4) (SSM 31-62-25)
- (5) (WDM 31-62-14)
- (6) (WDM 31-62-15)
- (7) (WDM 31-62-24)
- (8) (WDM 31-62-25)

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D. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the Control Display Unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
- NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) Do this check of the applicable source LRU:
 - (a) Automatic Direction Finder (ADF)-1
 - 1) For ADF-1, do this task: ADF BITE Procedure, 34-57 TASK 801.
 - 2) If there is a fault message, then go to the Fault Isolation Manual (FIM) task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
 - (b) ADF-2
 - 1) For ADF-2, do this task: ADF BITE Procedure, 34-57 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
 - (c) Air Data Inertial Reference Unit (ADIRU)-1
 - 1) For ADIRU-1, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
 - (d) ADIRU-2
 - 1) For ADIRU-2, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
 - (e) AUTO THROTTLE
 - 1) Do this task: Autothrottle BITE Procedure, 22-31 TASK 801.
 - 2) If the maintenance message A/T (Auto throttle) shows on the CURRENT STATUS page, then do these steps:
 - a) Replace the Flight Control Computer A (FCC-A), M1875.

These are the tasks:
Flight Control Computer Removal, AMM TASK 22-11-33-000-801,
Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
 - b) Do the repair confirmation at the end of this task.

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- 3) If the maintenance message A/T does not show on the CURRENT STATUS page, then continue.
- (f) Digital Flight Data Acquisition Unit (DFDAU)
 - 1) Do this task: Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
 - 2) If any of the Light Emitting Diode (LED)s come on, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If none of the LEDs come on, then continue.
- (g) Distance Measuring Equipment (DME)-1
 - 1) For DME-1, do this task: DME Interrogator BITE Procedure, 34-55 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (h) DME-2
 - 1) For DME-2, do this task: DME Interrogator BITE Procedure, 34-55 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (i) Electronic Engine Control (EEC)-1
 - 1) For EEC-1, do this task: EEC BITE Procedure, 73-00 TASK 801
Look for any of these maintenance messages:
 - a) INTERNAL EEC FAULT
 - b) DEU1 CANNOT READ EEC CHANNEL A DATA
 - c) DEU2 CANNOT READ EEC CHANNEL A DATA
 - d) DEU1 CANNOT READ EEC CHANNEL B DATA
 - e) DEU2 CANNOT READ EEC CHANNEL B DATA
 - f) DEU1 FAULT
 - g) DEU2 FAULT
 - h) DEU1 DATA IS MISSING
 - i) DEU2 DATA IS MISSING
 - 2) If any of the above EEC maintenance messages show, then go to the FIM task for that message as listed at the beginning of this chapter.
 - a) Do the repair confirmation at the end of this task.
 - 3) If none of the above EEC maintenance messages show, then continue.
- (j) EEC-2
 - 1) For EEC-2, do this task: EEC BITE Procedure, 73-00 TASK 801
Look for any of these maintenance messages:
 - a) INTERNAL EEC FAULT
 - b) DEU1 CANNOT READ EEC CHANNEL A DATA

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- c) DEU2 CANNOT READ EEC CHANNEL A DATA
 - d) DEU1 CANNOT READ EEC CHANNEL B DATA
 - e) DEU2 CANNOT READ EEC CHANNEL B DATA
 - f) DEU1 FAULT
 - g) DEU2 FAULT
 - h) DEU1 DATA IS MISSING
 - i) DEU2 DATA IS MISSING
- 2) If any of the above EEC maintenance messages show, then go to the FIM task for that message as listed at the beginning of this chapter..
- a) Do the repair confirmation at the end of this task.
- 3) If none of the above EEC maintenance messages show, then continue.
- (k) CAPT (Captain) Electronic Flight Instrument System (EFIS) Control Panel (CP)
- 1) If the captain's EFIS display is not normal, then do these steps:
 - a) Replace the captain's EFIS control panel P7-1.These are the tasks:
EFIS Control Panel Removal, AMM TASK 31-62-12-000-801,
EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
 - b) Do the repair confirmation at the end of this task.
- 2) If the captain's EFIS display is normal, then continue.
- (l) First Officer (F/O) EFIS CP
- 1) If the first officer's EFIS display is not normal, then do these steps:
 - a) Replace the first officer's EFIS control panel P7-2.These are the tasks:
EFIS Control Panel Removal, AMM TASK 31-62-12-000-801,
EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
 - b) Do the repair confirmation at the end of this task.
- 2) If the captain's EFIS display is normal, then continue.
- (m) Airborne Vibration Monitor (AVM)
- 1) Replace the AVM, M1240.
- These are the tasks:
Airborne Vibration Monitor (AVM) Signal Conditioner Removal, AMM TASK 77-31-03-000-801-F00,
Airborne Vibration Monitor (AVM) Signal Conditioner Installation, AMM TASK 77-31-03-400-801-F00.
- 2) Do the repair confirmation at the end of this task.
- (n) FCC-A and Flight Control Computer B (FCC-B)
- 1) For FCC-A and FCC-B, do this task: LRU Replacement Test, 22-11 TASK 802.
 - 2) Make the selection for the channels A and B.
 - 3) Make the selection for the Flight Control Computer (FCC) Test.
 - 4) If the FCC message shows, then go to the FIM task for that message.

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- a) Do the repair confirmation at the end of this task.
- 5) If the FCC message does not show, then continue.
- (o) Flight Management Computer (FMC)-1
 - 1) For FMC-1, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (p) FMC-2
 - 1) For FMC-2, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (q) Flap/Slat Electronics Unit (FSEU)
 - 1) Do this task: Flap/Slat Electronics Unit (FSEU) BITE Procedure, 27-51 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (r) Fuel Quantity Processor Unit (FQPU)
 - 1) Do this task: FQIS BITE Procedure, 28-41 TASK 801.
 - 2) If the maintenance message PROCESSOR FAILED shows on the CURRENT STATUS page, then do these steps:
 - a) Replace the FQPU, M1827.
These are the tasks:
Fuel Quantity Processor Unit Removal, AMM TASK 28-41-81-000-801,
Fuel Quantity Processor Unit Installation, AMM TASK 28-41-81-400-801.
 - b) Do the repair confirmation at the end of this task.
 - 3) If the maintenance message PROCESSOR FAILED does not show on the CURRENT STATUS page, then continue.
- (s) Ground Proximity Warning Computer (GPWC)
 - 1) If the Ground Proximity Warning System (GPWS) FAIL MONITOR light on the P3-7 panel comes on, then do these steps:
 - a) These are the tasks:
Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801,
Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801.
 - b) Do the repair confirmation at the end of this task.
 - 2) If the GPWS FAIL MONITOR light on the P3-7 panel does not come on, then continue.
- (t) Instrument Landing System (ILS)-1/Multi-Mode Receiver (MMR)-1

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- 1) For ILS-1/MMR-1, do this task: ILS or Multi-Mode Receiver BITE Procedure, 34-31 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (u) ILS-2/MMR-2
- 1) For ILS-2/MMR-2, do this task: ILS or Multi-Mode Receiver BITE Procedure, 34-31 TASK 801.
 - 2) If there is a fault message, then do the fault isolation procedure.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (v) Mode Control Panel (MCP)
- 1) For MCP, do this task: LRU Replacement Test, 22-11 TASK 802.
 - 2) Make the selection for the channels A and B.
 - 3) Make the selection for the MCP Test.
 - 4) If the MCP message shows, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 5) If the MCP message does not show, then continue.
- (w) Radio Altimeter (RA)-1
- 1) For RA-1, do this task: Low Range Radio Altimeter (LRRRA) BITE Procedure, 34-33 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (x) RA-2
- 1) For RA-2, do this task: Low Range Radio Altimeter (LRRRA) BITE Procedure, 34-33 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (y) STALL MANAGEMENT COMPUTER-1
- 1) Do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (z) STALL MANAGEMENT COMPUTER-2
- 1) Do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.

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- (aa) Traffic Alert and Collision Avoidance System (TCAS)
- 1) Do this task: Traffic Alert and Collision Avoidance System (TCAS) BITE Procedure, 34-45 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (ab) VHF Omnidirectional Range (VOR)-1
- 1) For VOR-1, do this task: VOR/Marker Beacon Receiver BITE Procedure, 34-51 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (ac) VOR-2
- 1) For VOR-2, do this task: VOR/Marker Beacon Receiver BITE Procedure, 34-51 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (2) Do this check of the wiring for the applicable LRU:
- NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the Wiring Diagram Manual (WDM) to tell which LRUs are on the bus). Then re-install the LRUs when you are done.
- (a) In the lists below, find the wiring diagram reference, source LRU, DEU(s), connectors and pin numbers for the applicable maintenance message.
- NOTE: These data will be used in the steps that follow.

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MAINTENANCE MESSAGE	WDM REFERENCE
31-67020	34-57-11
31-67030	34-57-21
31-67051	34-21-13, 34-21-14
31-67052	34-21-13, 34-21-14
31-67061	34-21-23, 34-21-24
31-67062	34-21-23, 34-21-24
31-67070	22-31-52
31-67100	31-35-02
31-67170	34-55-11
31-67180	34-55-21
31-67200	73-24-11

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Table 201 (Continued)

MAINTENANCE MESSAGE	WDM REFERENCE
31-67230	73-24-11
31-67300	31-62-13
31-67310	31-62-23
31-67320	77-31-11
31-67330	22-11-51
31-67340	22-11-51
31-67400	34-61-15
31-67440	34-61-15
31-67470	27-81-41
31-67500	28-41-11
31-67550	34-49-11
31-67560	34-31-11
31-67570	34-31-21
31-67600	22-11-51
31-67700	34-33-11
31-67710	34-33-21
31-67730	27-32-12
31-67740	27-32-22
31-67800	34-45-11
31-67830	34-51-11
31-67840	34-51-21

Table 202

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-67020	ADF-1 M1731	DEU-1 M1808	D3651B	D3973A
			pin B13	pin C3
			pin B14	pin D3
		DEU-2 M1809	D3651B	D3975A
			pin B13	pin C3
			pin B14	pin D3
31-67030	ADF-2 M1732	DEU-1 M1808	D3653B	D3973D
			pin B13	pin C3

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-67051	ADIRU-1 M1749 (ADR-L-2 BUS 1) (ADR-L-2 BUS 2) (IR-L-1)	DEU-1 M1808	pin B14	pin D3
			D3653B	D3675D
			pin B13	pin C3
			pin B14	pin D3
			D3687A	D3973B
			pin A5	pin C5
			pin B5	pin D5
			D3687A	D3973D
			pin A5	pin E5
			pin B5	pin F5
31-67052	ADIRU-1 M1749 (ADR-L-4 BUS 1) (ADR-L-4 BUS 2) (IR-L-3)	DEU-2 M1809	D3687B	D3973A
			pin G7	pin C2
			pin G8	pin D2
			D3687A	D3975B
			pin A9	pin C5
			pin B9	pin D5
			D3687A	D3975D
			pin A9	pin E5
			pin B9	pin F5
			D3687B	D3975A
31-67061	ADIRU-2 M1752 (ADR-R-4 BUS 1) (ADR-R-4 BUS 2)	DEU-1 M1808	pin C10	pin C2
			pin C11	pin D2
			D3693A	D3973E
			pin A9	pin C5
			pin B9	pin D5
			D3693A	D3973A
			pin A9	pin J15

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-67062	ADIRU-2 M1752 (IR-R-3) (ADR-R-2 BUS 1) (ADR-R-2 BUS 2) (IR-R-1)	DEU-2 M1809	pin B9	pin K15
			D3693B	D3973D
			pin A5	pin C5
			pin B5	pin D5
			D3693A	D3975E
			pin A5	pin C5
			pin B5	pin D5
			D3693A	D3975A
			pin A5	pin J15
			pin B5	pin K15
31-67070	AUTO THROTTLE (FCC-A) M1875	DEU-1 M1808	D3693B	D3975D
			pin G7	pin C2
			pin G8	pin D2
			D10135B	D3973A
			pin F9	pin E1
			pin F8	pin F1
31-67100	DFDAU M675	DEU-2 M1809	D10135B	D3975A
			pin F9	pin E1
			pin F8	pin F1
			D2295E	D3973D
			pin H5	pin C5
			pin H6	pin D5
31-67170	DME-1 M164	DEU-1 M1808	D2295E	D3975D
			pin H5	pin C5
			pin H6	pin D5
			D161B	D3973B
			pin G1	pin C9
			pin H1	pin D9

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-67180	DME-2 M165	DEU-2 M1809	D161B	D3975B
			pin G1	pin C9
		DEU-1 M1808	pin H1	pin D9
			D169B	D3973E
			pin G1	pin C9
			pin H1	pin D9
	EEC-1 M1818 CH-A	DEU-2 M1809	D169B	D3975E
			pin G1	pin C9
		DEU-1 M1808	pin H1	pin D9
			DP0303	D3973A
			pin N	pin A5
			pin M	pin B5
31-67200	EEC-1 M1818 CH-B	DEU-2 M1809	DP0303	D3975A
			pin N	pin A5
		DEU-1 M1808	pin M	pin B5
			DP0404	D3973A
			pin N	pin A5
			pin M	pin B5
	EEC-2 M1818 CH-A	DEU-2 M1809	DP0404	D3975A
			pin N	pin A5
		DEU-1 M1808	pin M	pin B5
			DP0303	D3973D
			pin N	pin A5
			pin M	pin B5
31-67230	EEC-2 M1818 CH-A	DEU-2 M1809	DP0303	D3975D
			pin N	pin A5
		DEU-1 M1808	pin M	pin B5
			DP0303	D3975D
			pin N	pin A5
			pin M	pin B5

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
	EEC-2 M1818 CH-B	DEU-1 M1808	DP0404		D3973E
			pin N	----	pin A5
			pin M	----	pin B5
		DEU-2 M1809	DP0404		D3975E
			pin N	----	pin A5
			pin M	----	pin B5
31-67300	CAPT EFIS CP P7-1	DEU-1 M1808	D3993		D3973A
			pin 35	----	pin J1
			pin 36	----	pin K1
		DEU-2 M1809	D3993		D3975A
			pin 35	----	pin J1
			pin 36	----	pin K1
31-67310	F/O EFIS CP P7-2	DEU-1 M1808	D3995		D3973D
			pin 35	----	pin J1
			pin 36	----	pin K1
		DEU-2 M1809	D3995		D3975D
			pin 35	----	pin J1
			pin 36	----	pin K1
31-67320	AVM M1240	DEU-1 M1808	D3228A		D3973B
			pin C6	----	pin C12
			pin D6	----	pin D12
		DEU-2 M1809	D3228A		D3975B
			pin C6	----	pin C12
			pin D6	----	pin D12
31-67330	FCC-A M1875	DEU-1 M1808	D10135A		D3973A
			pin B6	----	pin C12
			pin A6	----	pin D12

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
		DEU-2 M1809	D10135A	D3975A
			pin B6	pin C12
			pin A6	pin D12
31-67340	FCC-B M1876	DEU-1 M1808	D10137A	D3973D
			pin B6	pin C12
			pin A6	pin D12
		DEU-2 M1809	D10137A	D3975D
			pin B6	pin C12
			pin A6	pin D12
31-67400	FMC-1	DEU-1 M1808	D2179A	D3973A
	(FMC-L-08) M1175		pin A11	pin C9
			pin B11	pin D9
	FMC-1		D2179B	D3973E
	(FMC-L-09) M1175		pin G9	pin C1
			pin H9	pin D1
	FMC-1	DEU-2 M1809	D2179A	D3975A
	(FMC-L-08) M1175		pin A11	pin C9
			pin B11	pin D9
	FMC-1		D2179B	D3975E
	(FMC-L-09) M1175		pin G9	pin C1
			pin H9	pin D1
31-67440	FMC-2	DEU-1 M1808	D3261A	D3973B
	(FMC-R-08) M1632		pin A11	pin E1
			pin B11	pin F1
	FMC-2		D3261B	D3973D
	(FMC-R-09) M1632		pin G9	pin C9
			pin H9	pin D9

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
	FMC-2	DEU-2 M1809	D3261A		D3975B
	(FMC-R-08) M1632		pin A11	----	pin E1
			pin B11	----	pin F1
	FMC-2		D3261B		D3975D
	(FMC-R-09) M1632		pin G9	----	pin C9
			pin H9	----	pin D9
31-67470	FSEU M1746	DEU-1 M1808	D728B		D3973E
			pin D4	----	pin E1
			pin D5	----	pin F1
		DEU-2 M1809	D728B		D3975E
			pin D4	----	pin E1
			pin D5	----	pin F1
SIA 702-710					
31-67500	FQPU M1827 BUS-1	DEU-1 M1808	D11306		D3973D
			pin 25	----	pin J5
			pin 24	----	pin K5
	BUS-2		D11304		D3973A
			pin 25	----	pin J5
			pin 24	----	pin K5
	BUS-3		D11308		D3973B
			pin 25	----	pin J5
			pin 24	----	pin K5
	BUS-1	DEU-2 M1809	D11306		D3975D
			pin 25	----	pin J5
			pin 24	----	pin K5
	BUS-2		D11304		D3975A
			pin 25	----	pin J5
			pin 24	----	pin K5
	BUS-3		D11308		D3975B

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
			pin 25	----	pin J5
			pin 24	----	pin K5
SIA 711-714, 716-999					
31-67500	FQPU M1827 BUS-1	DEU-1 M1808	D15806		D3973D
			pin 12	----	pin J5
			pin 4	----	pin K5
	BUS-2		D11354		D3973A
			pin 3	----	pin J5
			pin 1	----	pin K5
	BUS-3		D11352		D3973B
			pin 2	----	pin J5
			pin 8	----	pin K5
	BUS-1	DEU-2 M1809	D15806		D3975D
			pin 12	----	pin J5
			pin 4	----	pin K5
	BUS-2		D11354		D3975A
			pin 3	----	pin J5
			pin 1	----	pin K5
	BUS-3		D11352		D3975B
			pin 2	----	pin J5
			pin 8	----	pin K5
SIA ALL					
31-67550	GPWC M652	DEU-1 M1808	D1153B		D3973D
			pin C1	----	pin A9
			pin D1	----	pin B9
		DEU-2 M1809	D1153B		D3975D
			pin C1	----	pin A9
			pin D1	----	pin B9
31-67560	MMR-1 M2104	DEU-1 M1808	D10719B		D3973A

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
	(ILS-L-2 BUS 1)		pin G1	----	pin C15
			pin H1	----	pin D15
	(ILS-L-2 BUS 2)		D10719B		D3973E
			pin G1	----	pin G3
			pin H1	----	pin H3
	(ILS-L-2 BUS 1)	DEU-2 M1809	D10719B		D3975A
			pin G1	----	pin C15
			pin H1	----	pin D15
	(ILS-L-2 BUS 2)		D10719B		D3975E
			pin G1	----	pin G3
			pin H1	----	pin H3
31-67570	MMR-2 M2105	DEU-1 M1808	D10721B		D3973D
	(ILS-R-2 BUS 1)		pin G1	----	pin C15
			pin H1	----	pin D15
	(ILS-R-2 BUS 2		D10721B		D3973B
			pin G1	----	pin G3
			pin H1	----	pin H3
	(ILS-R-2 BUS 1)	DEU-2 M1809	D10721B		D3975D
			pin G1	----	pin C15
			pin H1	----	pin D15
	(ILS-R-2 BUS 2)		D10721B		D3975B
			pin G1	----	pin G3
			pin H1	----	pin H3
31-67600	MCP M198	DEU-1 M1808	D299		D3973A
	(MCP-1 BUS)		pin 18	----	pin E5
			pin 17	----	pin F5
	(MCP-2 BUS)		D1815		D3973E
			pin 18	----	pin E5
			pin 17	----	pin F5

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
	(MCP-1 BUS)	DEU-2 M1809	D299	D3975A
			pin 18	pin E5
			pin 17	pin F5
	(MCP-2 BUS)		D1815	D3975E
			pin 18	pin E5
			pin 17	pin F5
31-67700	RA-1 M1735	DEU-1 M1808	D3667B	D3973A
			pin G2	pin G15
			pin G3	pin H15
		DEU-2 M1809	D3667B	D3975A
			pin G2	pin G15
			pin G3	pin H15
31-67710	RA-2 M1736	DEU-1 M1808	D3669B	D3973D
			pin G2	pin G15
			pin G3	pin H15
		DEU-2 M1809	D3669B	D3975D
			pin G2	pin G15
			pin G3	pin H15
31-67730	STALL MANAGEMENT COMPUTER-1 M1747	DEU-1 M1808	D3683A	D3973A
			pin 95	pin G1
			pin 94	pin H1
		DEU-2 M1809	D3683A	D3973A
			pin 95	pin G1
			pin 94	pin H1
31-67740	STALL MANAGEMENT COMPUTER-2 M1748	DEU-1 M1808	D3685A	D3973D
			pin 95	pin G1
			pin 94	pin H1

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Table 202 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
		DEU-2 M1809	D3685A		D3975D
			pin 95	----	pin G1
			pin 94	----	pin H1
31-67800	TCAS M1485 (TCAS-1 BUS)	DEU-1 M1808	D2743E		D3973A
			pin C7	----	pin J2
			pin D7	----	pin K2
	(TCAS-2 BUS)		D2743E		D3973D
			pin G7	----	pin E1
			pin H7	----	pin F1
	(TCAS-1 BUS)	DEU-2 M1809	D2743E		D3975A
			pin C7	----	pin J2
			pin D7	----	pin K2
	(TCAS-2 BUS)		D2743E		D3975D
			pin G7	----	pin E1
			pin H7	----	pin F1
31-67830	VOR-1 M1724	DEU-1 M1808	D3623B		D3973B
			pin B13	----	pin C3
			pin C13	----	pin D3
		DEU-2 M1809	D3623B		D3975B
			pin B13	----	pin C3
			pin C13	----	pin D3
31-67840	VOR-2 M1725	DEU-1 M1808	D3625B		D3973E
			pin B13	----	pin C3
			pin C13	----	pin D3
		DEU-2 M1809	D3625B		D3975E
			pin B13	----	pin C3
			pin C13	----	pin D3

(b) Remove the applicable source LRU:

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- 1) ADF-1. To remove it, do this task: ADF Receiver Removal, AMM TASK 34-57-03-000-801.
- 2) ADF-2. To remove it, do this task: ADF Receiver Removal, AMM TASK 34-57-03-000-801.
- 3) ADIRU-1. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 4) ADIRU-2. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 5) AUTO THROTTLE (Flight Control Computer A). To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 6) DFDAU. To remove it, do this task: Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801.
- 7) DME-1. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 8) DME-2. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 9) EEC-1. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 10) EEC-2. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 11) CAPT EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 12) F/O EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 13) AVM. To remove it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Removal, AMM TASK 77-31-03-000-801-F00.
- 14) FCC-A. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 15) FCC-B. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 16) FMC-1. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- 17) FMC-2. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- 18) FSEU. To remove it, do this task: Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801.
- 19) FQPU. To remove it, do this task: Fuel Quantity Processor Unit Removal, AMM TASK 28-41-81-000-801.
- 20) GPWC. To remove it, do this task: Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801.
- 21) ILS-1/MMR-1. To remove it, do this task: ILS and Multi-Mode Receiver (MMR) - Removal, AMM TASK 34-31-42-000-801.
- 22) ILS-2/MMR-2. To remove it, do this task: ILS and Multi-Mode Receiver (MMR) - Removal, AMM TASK 34-31-42-000-801.

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- 23) MCP. To remove it, do this task: DFCS Mode Control Panel Removal, AMM TASK 22-11-34-000-801.
- 24) RA-1. To remove it, do this task: Low Range Radio Altimeter (LRR) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
- 25) RA-2. To remove it, do this task: Low Range Radio Altimeter (LRR) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
- 26) STALL MANAGEMENT COMPUTER-1. To remove it, do this task: Stall Warning Test Module Removal, AMM TASK 27-32-21-000-801.
- 27) STALL MANAGEMENT COMPUTER-2. To remove it, do this task: Stall Warning Test Module Removal, AMM TASK 27-32-21-000-801.
- 28) TCAS. To remove it, do this task: TCAS Computer Removal, AMM TASK 34-45-01-000-801.
- 29) VOR-1. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801.
- 30) VOR-2. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801.
- (c) Remove the applicable DEU (DEU-1, M1808 or DEU-2, M1809). To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (d) Do a wiring check between the specified pins of the applicable LRU connector and the applicable DEU connector.
- (e) If you find a problem with the wiring, then do the steps that follow:
 - 1) Repair the wiring.
 - 2) Re-install the applicable LRU:
 - a) ADF-1. To install it, do this task: ADF Receiver Installation, AMM TASK 34-57-03-400-801.
 - b) ADF-2. To install it, do this task: ADF Receiver Installation, AMM TASK 34-57-03-400-801.
 - c) ADIRU-1. To install it, do this task: Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801.
 - d) ADIRU-2. To install it, do this task: Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801.
 - e) AUTO THROTTLE (Flight Control Computer A). To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
 - f) DFDAU. To install it, do this task: Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
 - g) DME-1. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
 - h) DME-2. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
 - i) EEC-1. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
 - j) EEC-2. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.

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- k) CAPT EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
 - l) F/O EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
 - m) AVM. To install it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Installation, AMM TASK 77-31-03-400-801-F00.
 - n) FCC-A. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
 - o) FCC-B. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
 - p) FMC-1. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - q) FMC-2. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - r) FSEU. To remove it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
 - s) FQPU. To install it, do this task: Fuel Quantity Processor Unit Installation, AMM TASK 28-41-81-400-801.
 - t) GPWC. To install it, do this task: Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801.
 - u) ILS-1/MMR-1. To install it, do this task: ILS and Multi-Mode Receiver (MMR) - Installation, AMM TASK 34-31-42-400-801.
 - v) ILS-2/MMR-2. To install it, do this task: ILS and Multi-Mode Receiver (MMR) - Installation, AMM TASK 34-31-42-400-801.
 - w) MCP. To install it, do this task: DFCS Mode Control Panel Installation, AMM TASK 22-11-34-400-801.
 - x) RA-1. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.
 - y) RA-2. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.
 - z) STALL MANAGEMENT COMPUTER-1. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
 - aa) STALL MANAGEMENT COMPUTER-2. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
 - ab) TCAS. To install it, do this task: TCAS Computer Installation, AMM TASK 34-45-01-400-801.
 - ac) VOR-1. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
 - ad) VOR-2. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- 3) Re-install the applicable DEU (DEU-1, M1808 or DEU-2, M1809). To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) Do the repair confirmation at the end of this task.

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F. Repair Confirmation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - (b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

810. No DEU-2 Data On Crosstalk Bus - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-68081 NO DEU-2 DATA ON CHANNEL 1 CROSSTALK BUS
 - (b) 31-68083 NO DEU-2 DATA ON CHANNEL 2 CROSSTALK BUS
- (2) Display electronic unit 1 (DEU-1) receives no ARINC 429 data from the crosstalk bus.

B. Possible Causes

- (1) Display Electronic Unit 2 (DEU-2), M1809
- (2) Display Electronic Unit 1 (DEU-1), M1808
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)
- (3) (WDM 31-62-15)
- (4) (WDM 31-62-25)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.

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- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

- (a) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (b) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.

- (2) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

- (a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

- (b) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.

- (3) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove DEU-1, M1808 and DEU-2, M1809. To remove them, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
(b) Do a wiring check between the specified pins of DEU-1 connector and DEU-2 (source) connector for the applicable maintenance message.

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MAINT MESSAGE 31-68081

DEU-2	DEU-1
CONNECTOR	CONNECTOR
D3975A	D3973E
pin C7	pin J13
pin D7	pin K13

MAINT MESSAGE 31-68083

DEU-2	DEU-1
CONNECTOR	CONNECTOR
D3975D	D3973B
pin C7	pin J13
pin D7	pin K13

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install DEU-1, M1808 and DEU-2, M1809. To install them, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

END OF TASK

811. No DEU-1 Data On Crosstalk Bus - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-68082 NO DEU-1 DATA ON CHANNEL 1 CROSSTALK BUS
 - (b) 31-68084 NO DEU-1 DATA ON CHANNEL 2 CROSSTALK BUS
- (2) Display electronic unit 2 (DEU-2) receives no ARINC 429 data from the crosstalk bus.

B. Possible Causes

- (1) Display Electronic Unit 1 (DEU-1), M1808
- (2) Display Electronic Unit 2 (DEU-2), M1809
- (3) Wiring problem

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	10	C01361	DISPLAY DEU 1 HOLDUP

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F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-15)
- (2) (SSM 31-62-25)
- (3) (WDM 31-62-15)
- (4) (WDM 31-62-25)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (b) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.
- (2) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

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- (b) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.
- (3) Do this check of the wiring:
- NOTE:** If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.
- (a) Remove DEU-1, M1808 and DEU-2, M1809. To remove them, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between the specified pins of DEU-1 (source) connector and DEU-2 connector for the applicable maintenance message.

MAINT MESSAGE 31-68082

DEU-1 CONNECTOR D3973A	DEU-2 CONNECTOR D3975E
pin C7	pin J13
pin D7	pin K13

MAINT MESSAGE 31-68084

DEU-1 CONNECTOR D3973D	DEU-2 CONNECTOR D3975B
pin C7	pin J13
pin D7	pin K13

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install DEU-1, M1808 and DEU-2, M1809. To install them, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 4) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— END OF TASK —————

812. NO LRU Data on 429 BUS - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
- (a) 31-68051, 31-68052, 31-68055, 31-68056, 31-68061, 31-68062, 31-68065, 31-68066, 31-68210, 31-68220, 31-68240, 31-68250, 31-68410, 31-68420, 31-68450, 31-68460, 31-68510, 31-68520, 31-68530, 31-68561, 31-68562, 31-68571, 31-68572 31-68610, 31-68620, 31-68810, 31-68820
- (b) Display Electronic Units (DEU-1 and DEU-2) receive no ARINC 429 data from an LRU.

B. Possible Causes

- (1) The applicable DEU
- (2) The applicable LRU

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- (3) Wiring

C. Related Data

- (1) SSM 31-62-14
- (2) SSM 31-62-15
- (3) WDM 31-62-14
- (4) WDM 31-62-15

D. Initial Evaluation

- (1) Make sure that the ADIRUs are aligned. If the ADIRUs are not aligned, do this task: Air Data Inertial Reference System - Alignment from the ISDU, AMM TASK 34-21-00-820-802 or Air Data Inertial Reference System - Alignment from the FMC CDU, AMM TASK 34-21-00-820-801.

NOTE: If the ADIRUs are not aligned, then the maintenance messages related to the ADIRU'S will show.

- (2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the CDU shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

E. Fault Isolation Procedure

- (1) For the applicable DEU (DEU-1 or DEU-2, or both), do this task: DEU Self-Test Procedure, 31-62 TASK 802.

NOTE: Depending on the applicable maintenance message in Table 204, you have to run the self-test for either DEU-1, DEU-2, or both.

- (a) For DEU-1, if the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-1. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801

- a) Do the repair confirmation at the end of this task.

- (b) For DEU-1, if the CDU shows DEU 1 SELF-TEST PASSED, then continue.

- (c) For DEU-2, if the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-2. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801

- a) Do the repair confirmation at the end of this task.

- (d) For DEU-2, if the CDU shows DEU 2 SELF-TEST PASSED, then continue.

- (2) In Table 204, find the applicable maintenance message. Do this check of the applicable source LRU:

- (a) ADIRU-1

- 1) For ADIRU-1, do this task: ADIRS BITE Procedure, 34-21 TASK 801.

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- 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (b) ADIRU-2
- 1) For ADIRU-2, do this task: ADIRS BITE Procedure, 34-21 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (c) EEC-1
- 1) For EEC-1, do this task: EEC BITE Procedure, 73-00 TASK 801
Look for any of these maintenance messages:
 - a) INTERNAL EEC FAULT
 - b) DEU1 CANNOT READ EEC CHANNEL A DATA
 - c) DEU2 CANNOT READ EEC CHANNEL A DATA
 - d) DEU1 CANNOT READ EEC CHANNEL B DATA
 - e) DEU2 CANNOT READ EEC CHANNEL B DATA
 - f) DEU1 FAULT
 - g) DEU2 FAULT
 - h) DEU1 DATA IS MISSING
 - i) DEU2 DATA IS MISSING
 - 2) If any of the above EEC maintenance messages show, then go to the FIM task for that message as listed at the beginning of this chapter.
 - a) Do the repair confirmation at the end of this task.
 - 3) If none of the above EEC maintenance messages show, then continue.
- (d) EEC-2
- 1) For EEC-2, do this task: EEC BITE Procedure, 73-00 TASK 801
Look for any of these maintenance messages:
 - a) INTERNAL EEC FAULT
 - b) DEU1 CANNOT READ EEC CHANNEL A DATA
 - c) DEU2 CANNOT READ EEC CHANNEL A DATA
 - d) DEU1 CANNOT READ EEC CHANNEL B DATA
 - e) DEU2 CANNOT READ EEC CHANNEL B DATA
 - f) DEU1 FAULT
 - g) DEU2 FAULT
 - h) DEU1 DATA IS MISSING
 - i) DEU2 DATA IS MISSING
 - 2) If any of the above EEC maintenance messages show, then go to the FIM task for that message at the beginning of this chapter.
 - a) Do the repair confirmation at the end of this task.
 - 3) If none of the above FIM maintenance messages show, then continue.

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- (e) FMC-1
- 1) For FMC-1, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (f) FMC-2
- 1) For FMC-2, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (g) FQPU
- 1) Do this task: FQIS BITE Procedure, 28-41 TASK 801.
 - 2) If the maintenance message PROCESSOR FAILED shows on the CURRENT STATUS page, then do these steps:
 - a) Replace the FQPU, M1827. These are the tasks:
 - Fuel Quantity Processor Unit Removal, AMM TASK 28-41-81-000-801
 - Fuel Quantity Processor Unit Installation, AMM TASK 28-41-81-400-801
 - b) Do the repair confirmation at the end of this task.
 - 3) If the maintenance message PROCESSOR FAILED does not show on the CURRENT STATUS page, then continue.
- (h) ILS-1/MMR-1
- 1) For ILS-1/MMR-1, do this task: ILS or Multi-Mode Receiver BITE Procedure, 34-31 TASK 801.
 - 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (i) ILS-2/MMR-2
- 1) For ILS-2/MMR-2, do this task: ILS or Multi-Mode Receiver BITE Procedure, 34-31 TASK 801.
 - 2) If there is a fault message, then do the fault isolation procedure.
 - a) Do the repair confirmation at the end of this task.
 - 3) If there is no fault message, then continue.
- (j) MCP
- 1) For MCP, do this task: LRU Replacement Test, 22-11 TASK 802.
 - 2) Make the selection for the channels A and B.
 - 3) Make the selection for the MCP Test.
 - 4) If the MCP message shows, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
 - 5) If the MCP message does not show, then continue.

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(k) TCAS

- 1) Do this task: Traffic Alert and Collision Avoidance System (TCAS) BITE Procedure, 34-45 TASK 801.
- 2) If there is a fault message, then go to the FIM task for that message.
 - a) Do the repair confirmation at the end of this task.
- 3) If there is no fault message, then continue.

(3) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) In the tables that follow, find the wiring diagram reference, source LRU, DEU(s), connectors and pin numbers for the applicable maintenance message.

NOTE: These data will be used in the steps that follow

Table 203

MAINT MESSAGE	WDM REFERENCE
31-68051	34-21-14
31-68052	34-21-14
31-68055	34-21-13
31-68056	34-21-13
31-68061	34-21-24
31-68062	34-21-24
31-68065	34-21-23
31-68066	34-21-23
31-68210	73-24-11
31-68220	73-24-11
31-68240	73-24-21
31-68250	73-24-21
31-68410	34-61-15
31-68420	34-61-15
31-68450	34-61-15
31-68460	34-61-15
31-68510	28-41-11
31-68520	28-41-11
31-68530	28-41-11
31-68561	34-31-11
31-68562	34-31-11
31-68571	34-31-21

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Table 203 (Continued)

MAINT MESSAGE	WDM REFERENCE
31-68572	34-21-21
31-68610	22-11-51
31-68620	22-11-51
31-68810	34-45-11
31-68220	34-45-11

Table 204

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-68051	ADIRU-1 M1749 (ADR-L-2 BUS 1)	DEU-1 M1808	D3687A	D3973B
			pin A5	pin C5
			pin B5	pin D5
			D3687A	D3973D
			pin A5	pin E5
			pin B5	pin F5
31-68052	ADIRU-1 M1749 (ADR-L-4 BUS 1)	DEU-2 M1809	D3687A	D3975B
			pin A9	pin C5
			pin B9	pin D5
			D3687A	D3975D
			pin A9	pin E5
			pin B9	pin F5
31-68055	ADIRU-1 M1749 (IR-L-1)	DEU-1 M1808	D3687B	D3973A
			pin G7	pin C2
			pin G8	pin D2
31-68056	ADIRU-1 M1749 (IR-L-3)	DEU-2 M1809	D3687B	D3975A
			pin C10	pin C2
			pin C11	pin D2
31-68061	ADIRU-2 M1752 (ADR-R-4 BUS 1)	DEU-1 M1808	D3693A	D3973E
			pin A9	pin C5
			pin B9	pin D5
			D3693A	D3973A
			pin A9	pin J15
			pin B9	pin K15
31-68062	ADIRU-2 M1752	DEU-2 M1809	D3693A	D3975E

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Table 204 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
	(ADR-R-2 BUS 1)		pin A5	----	pin C5
			pin B5	----	pin D5
			D3693A		D3975A
	(ADR-R-2 BUS 2)		pin A5	----	pin J15
			pin B5	----	pin K15
31-68065	ADIRU-2 M1752	DEU-1 M1808	D3693B		D3973D
	(IR-R-3)		pin C10	----	pin C2
			pin C11	----	pin D2
31-68066	ADIRU-2 M1752	DEU-2 M1809	D3693B		D3975D
	(IR-R-1)		pin G7	----	pin C2
			pin G8	----	pin D2
31-68210	EEC-1 M1818	DEU-1 M1808	DP0303		D3973A
	CH-A		pin N	----	pin A5
			pin M	----	pin B5
		DEU-2 M1809	DP0303		D3975A
			pin N	----	pin A5
			pin M	----	pin B5
31-68220	EEC-1 M1818	DEU-1 M1808	DP0404		D3973A
	CH-B		pin N	----	pin A5
			pin M	----	pin B5
		DEU-2 M1809	DP0404		D3975A
			pin N	----	pin A5
			pin M	----	pin B5
31-68240	EEC-2 M1818	DEU-1 M1808	DP0303		D3973D
	CH-A		pin N	----	pin A5
			pin M	----	pin B5
		DEU-2 M1809	DP0303		D3975D
			pin N	----	pin A5
			pin M	----	pin B5
31-68250	EEC-2 M1818	DEU-1 M1808	DP0404		D3973E
	CH-B		pin N	----	pin A5
			pin M	----	pin B5
		DEU-2 M1809	DP0404		D3975E
			pin N	----	pin A5

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Table 204 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
31-68410	FMC-1 (FMC-L-08) M1175	DEU-1 M1808	pin M	----	pin B5
			D2179A		D3973A
			pin A11	----	pin C9
			pin B11	----	pin D9
31-68420	FMC-1 (FMC-L-08) M1175	DEU-2 M1809	D2179A		D3975A
			pin A11	----	pin C9
			pin B11	----	pin D9
			D2179B		D3973E
31-68450	FMC-1 (FMC-L-09) M1175	DEU-1 M1808	pin G9	----	pin C1
			pin H9	----	pin D1
			D2179B		D3975E
			pin G9	----	pin C1
31-68460	FMC-2 (FMC-R-08) M1632	DEU-1 M1808	pin H9	----	pin D1
			D3261A		D3973B
			pin A11	----	pin E1
			pin B11	----	pin F1
31-68450	FMC-2 (FMC-R-08) M1632	DEU-2 M1809	D3261A		D3975B
			pin A11	----	pin E1
			pin B11	----	pin F1
			D3261B		D3973D
31-68460	FMC-2 (FMC-R-09) M1632	DEU-1 M1808	pin G9	----	pin C9
			pin H9	----	pin D9
			D3261B		D3975D
			pin G9	----	pin C9
31-68460	FMC-2 (FMC-R-09) M1632	DEU-2 M1809	pin H9	----	pin D9
			D3261B		D3975D
			pin G9	----	pin C9
			pin H9	----	pin D9

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31-68510	FQPU M1827	DEU-1 M1808	D11306		D3973D
	BUS-1		pin 25	----	pin J5
			pin 24	----	pin K5

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SIA 702-710 (Continued)

Table 204 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
31-68520	BUS-1	DEU-2 M1809	D11306	D3975D
			pin 25	pin J5
			pin 24	pin K5
	FQPU M1827	DEU-1 M1808	D11304	D3973A
			pin 25	pin J5
			pin 24	pin K5
31-68530	BUS-2	DEU-2 M1809	D11304	D3975A
			pin 25	pin J5
			pin 24	pin K5
	FQPU M1827	DEU-1 M1808	D11308	D3973B
			pin 25	pin J5
			pin 24	pin K5
	BUS-3	DEU-2 M1809	D11308	D3975B
			pin 25	pin J5
			pin 24	pin K5

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31-68510	FQPU M1827	DEU-1 M1808	D15806	D3973D
			pin 12	pin J5
			pin 4	pin K5
	BUS-1	DEU-2 M1809	D15806	D3975D
			pin 12	pin J5
			pin 4	pin K5
31-68520	FQPU M1827	DEU-1 M1808	D11354	D3973A
			pin 3	pin J5
			pin 1	pin K5
	BUS-2	DEU-2 M1809	D11354	D3975A
			pin 3	pin J5
			pin 1	pin K5
31-68530	FQPU M1827	DEU-1 M1808	D11352	D3973B
			pin 2	pin J5
			pin 8	pin K5
	BUS-3	DEU-2 M1809	D11352	D3975B
			pin 2	pin J5

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SIA 711-714, 716-999 (Continued)

Table 204 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR		DEU CONNECTOR
			pin 8	-----	pin K5
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31-68561	MMR-1 M2104	DEU-1 M1808	D10719B		D3973A
	(ILS-L-2 BUS 1)		pin G1	-----	pin C15
			pin H1	-----	pin D15
	(ILS-L-2 BUS 1)	DEU-2 M1809	D10719B		D3975A
			pin G1	-----	pin C15
			pin H1	-----	pin D15
31-68562	MMR-1 M2104	DEU-1 M1808	D10719B		D3973E
	(ILS-L-2 BUS 2)		pin G1	-----	pin G3
			pin H1	-----	pin H3
	(ILS-L-2 BUS 2)	DEU-2 M1809	D10719B		D3975E
			pin G1	-----	pin G3
			pin H1	-----	pin H3
31-68571	MMR-2 M2105	DEU-1 M1808	D10721B		D3973D
	(ILS-R-2 BUS 1)		pin G1	-----	pin C15
			pin H1	-----	pin D15
	(ILS-R-2 BUS 1)	DEU-2 M1809	D10721B		D3975D
			pin G1	-----	pin C15
			pin H1	-----	pin D15
31-68572	MMR-2 M2105	DEU-1 M1808	D10721B		D3973B
	(ILS-R-2 BUS 2)		pin G1	-----	pin G3
			pin H1	-----	pin H3
	(ILS-R-2 BUS 2)	DEU-2 M1809	B10721B		D3975B
			pin G1	-----	pin G3
			pin H1	-----	pin H3
31-68610	MCP M198	DEU-1 M1808	D299		D3973A
	(MCP-1 BUS)		pin 18	-----	pin E5
			pin 17	-----	pin F5
	(MCP-1 BUS)	DEU-2 M1809	D299		D3975A

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Table 204 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU	SOURCE LRU CONNECTOR	DEU CONNECTOR
			pin 18	pin E5
			pin 17	pin F5
31-68620	MCP M198	DEU-1 M1808	D1815	D3973E
	(MCP-2 BUS)		pin 18	pin E5
			pin 17	pin F5
	(MCP-2 BUS)	DEU-2 M1809	D1815	D3975E
			pin 18	pin E5
			pin 17	pin F5
31-68810	TCAS M1485	DEU-1 M1808	D2743E	D3973A
	(TCAS-1 BUS)		pin C7	pin J2
			pin D7	pin K2
	(TCAS-1 BUS)	DEU-2 M1809	D2743E	D3975A
			pin C7	pin J2
			pin D7	pin K2
31-68820	TCAS M1485	DEU-1 M1808	D2743E	D3973D
	(TCAS-2 BUS)		pin G7	pin E1
			pin H7	pin F1
	(TCAS-2 BUS)	DEU-2 M1809	D2743E	D3975D
			pin G7	pin E1
			pin H7	pin F1

(b) Remove the applicable source LRU:

- 1) Remove the ADIRU-1. This is the task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 2) Remove the ADIRU-2. This is the task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 3) Remove the EEC-1. This is the task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 4) Remove the EEC-2. This is the task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 5) Remove the FMC-1. This is the task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- 6) Remove the FMC-2. This is the task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- 7) Remove the FQPU. This is the task: Fuel Quantity Processor Unit Removal, AMM TASK 28-41-81-000-801.
- 8) Remove the ILS-1/MMR-1. This is the task: ILS and Multi-Mode Receiver (MMR) - Removal, AMM TASK 34-31-42-000-801.

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- 9) Remove the ILS-2/MMR-2. This is the task: ILS and Multi-Mode Receiver (MMR) - Removal, AMM TASK 34-31-42-000-801.
- 10) Remove the MCP. This is the task: DFCS Mode Control Panel Removal, AMM TASK 22-11-34-000-801.
- 11) Remove the TCAS. This is the task: TCAS Computer Removal, AMM TASK 34-45-01-000-801.
- (c) Remove the applicable DEU (DEU-1, M1808 or DEU-2, M1809). This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (d) Do a wiring check between the specified pins of the applicable LRU connector and the applicable DEU connector.
- (e) If you find a problem with the wiring, then do the applicable steps below:
 - 1) Repair the wiring.
 - 2) Re-install the applicable LRU:
 - a) Re-install the ADIRU-1. This is the task: Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801.
 - b) Re-install the ADIRU-2. This is the task: Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801.
 - c) Re-install the EEC-1. This is the task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
 - d) Re-install the EEC-2. This is the task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
 - e) Re-install the FMC-1. This is the task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - f) Re-install the FMC-2. This is the task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - g) Re-install the FQPU. This is the task: Fuel Quantity Processor Unit Installation, AMM TASK 28-41-81-400-801.
 - h) Re-install the ILS-1/MMR-1. This is the task: ILS and Multi-Mode Receiver (MMR) - Installation, AMM TASK 34-31-42-400-801.
 - i) Re-install the ILS-2/MMR-2. This is the task: ILS and Multi-Mode Receiver (MMR) - Installation, AMM TASK 34-31-42-400-801.
 - j) Re-install the MCP. This is the task: DFCS Mode Control Panel Installation, AMM TASK 22-11-34-400-801.
 - k) Re-install the TCAS. This is the task: TCAS Computer Installation, AMM TASK 34-45-01-400-801.
 - 3) Re-install the applicable DEU. This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 4) Do the repair confirmation at the end of this task.

F. Repair Confirmation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

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- (b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

813. No FMC-1 Data On FMC-01 429 Bus - Fault Isolation

A. Description

- (1) This task is for this maintenance messages:
(a) 31-68431 NO FMC-1 DATA ON FMC-01 BUS
(2) Display electronic unit 1 (DEU-1) receives no data output on FMC-01 bus from the flight management computer 1 (FMC-1).

B. Possible Causes

- (1) Flight management computer 1 (FMC-1), M1175.
(2) Display electronic unit 1 (DEU-1), M1808
(3) Wiring Problem
(4) FMCS transfer relay No. 1, R475

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 34-61-14)
(2) (SSM 31-62-14)
(3) (WDM 34-61-14)
(4) (WDM 31-62-14)

E. Initial Evaluation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
(a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
(b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.
NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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F. Fault Isolation Procedure

- (1) Do this check of the FMC-1:
 - (a) For FMC-1, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - (b) If there is a fault message, then go to the FIM task for that message.
 - 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is no fault message, then continue.
- (2) Do this check of the DEU-1:
 - (a) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.
- (3) Do this check of the wiring between the FMC-1 and the FMCS transfer relay No. 1:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

 - (a) Remove the FMC-1, M1175. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
 - (b) Remove the FMCS transfer relay No. 1, R475.
 - (c) Do a wiring check between these pins of the FMC-1 connector, D2179A and the relay No. 1 connector, D3267:

D2179A	D3267
pin H9	pin F
pin G9	pin E
 - (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

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- 3) Re-install the FMCS transfer relay No. 1, R475.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- (4) Do this check of the wiring between the DEU-1 and the FMCS transfer relay No. 1:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Do a wiring check between these pins of the DEU-1 connector, D3973B and the relay No. 1 connector, D3263:

D3973B	D3263
pin D2	pin F
pin C2	pin E

 - (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.- (5) Replace the FMCS transfer relay No. 1, R475.
 - (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

————— **END OF TASK** —————

814. No FMC-1 Data On FMC-02 429 Bus - Fault Isolation

A. Description

- (1) This task is for this maintenance messages:
 - (a) 31-68432 NO FMC-1 DATA ON FMC-02 BUS
- (2) Display electronic unit 2 (DEU-2) receives no data output on FMC-02 bus from the flight management computer 1 (FMC-1).

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B. Possible Causes

- (1) Flight management computer 1 (FMC-1), M1175
- (2) Display electronic unit 2 (DEU-2), M1809
- (3) Wiring Problem
- (4) FMCS transfer relay No. 1, R475

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	6	C01017	FMCS CMPTR 1

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 34-61-24)
- (2) (SSM 31-62-24)
- (3) (WDM 34-61-24)
- (4) (WDM 31-62-24)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the FAULT HISTORY or MAINTENANCE HISTORY page.

F. Fault Isolation Procedure

- (1) Do this check of the FMC-1:
 - (a) For FMC-1, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - (b) If there is a fault message, then go to the FIM task for that message.
 - 1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is no fault message, then continue.
- (2) Do this check of the DEU-2:
 - (a) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

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(b) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:

- 1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.

(c) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.

(3) Do this check of the wiring between the FMC-1 and the FMCS transfer relay No. 1:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the FMC-1, M1175. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- (b) Remove the FMCS transfer relay No. 1, R475.
- (c) Do a wiring check between these pins of the FMC-1 connector, D2179B and the relay No. 1 connector, D3267:

D2179B	D3267
pin E7	pin U
pin D7	pin T

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

- 1) Repair the wiring.
- 2) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- 3) Re-install the FMCS transfer relay No. 1, R475.
- 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

- 1) Re-install the FMC-1, M1175. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

(4) Do this check of the wiring between the DEU-2 and the FMCS transfer relay No. 1:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

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- (b) Do a wiring check between these pins of the DEU-2 connector, D3975B and the relay No. 1 connector, D3263:

D3975B	D3263
pin D2	pin U
pin C2	pin T

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If you did not find a problem with the wiring, then continue.
- 1) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (5) Replace the FMCS transfer relay No. 1, R475.
- (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

———— **END OF TASK** ————

815. No FMC-2 Data On FMC-01 429 Bus - Fault Isolation

A. Description

- (1) This task is for this maintenance messages:
 - (a) 31-68471 NO FMC-2 DATA ON FMC-01 BUS
- (2) Display electronic unit 1 (DEU-1) receives no data output on FMC-01 bus from the flight management computer 2 (FMC-2).

B. Possible Causes

- (1) Flight management computer 2 (FMC-2), M1632
- (2) Display electronic unit 1 (DEU-1), M1808
- (3) FMCS TRANSFER circuit breaker, C1263
- (4) Wiring problem
- (5) FMCS transfer relay No. 1, R475

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP
D	16	C01262	FMCS CMPTR 2
E	15	C01263	FMCS XFR

D. Related Data

- (1) (SSM 34-61-12)
- (2) (SSM 34-61-14)
- (3) (SSM 31-62-14)
- (4) (WDM 34-61-12)
- (5) (WDM 34-61-14)
- (6) (WDM 31-62-14)

E. Initial Evaluation

- (1) Set the FMC switch on the P5-28 instrument switching module to BOTH ON R.
- (2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801
 - (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do this check of the FMC-2:
 - (a) For FMC-2, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - (b) If there is a maintenance message, then go to the FIM task for that message.
 - 1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is no maintenance message, then continue.
- (2) Do this check of the DEU-1:
 - (a) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-1.

These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
- (c) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.
- (3) Do this check for 28V DC at the circuit breaker.
- (a) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (b) Do a check for 28V DC between terminal 2 for circuit breaker C1263 and structure ground.
- (c) If there is not 28V DC at terminal 2 of circuit breaker C1263, then do these steps:
 - 1) Replace this circuit breaker

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- 2) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If there is 28V DC at terminal 2 for circuit breaker C1263, then continue.
- (4) Do this check of the FMC-2 wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

 - (a) Remove the FMC-2, M1632. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
 - (b) Remove the FMCS transfer relay No. 1, R475.
 - (c) Do a wiring check between these pins of the FMC-2 connector, D3261A and the relay No. 1 connector, D3265:

D3261A		D3265
pin H9	.....	pin F
pin G9	.....	pin E

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- (5) Do this check of the DEU-2 wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

 - (a) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
 - (b) Do a wiring check between these pins of the DEU-1 connector, D3973B and the relay No. 1 connector, D3263:

D3973B	D3263
pin D2	pin F
pin C2	pin E

- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (6) Do this check of the wiring to the FMC transfer relay No. 1:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Disconnect the connector D1817 from the instrument switching module, P5-28.
- (b) Do a wiring check between these pins of the instrument switching module connector and the relay No. 1 connectors:

D1817	D3265
pin 10	pin P

D1817	D3267
pin 8	pin T

- (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 FMCS transfer relay No. 1, R475.
- 3) Re-connect connector D1817 to the instrument switching module, P5-28.
- 4) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
 - 1) Re-install the FMCS transfer relay No. 1, R475.
- (7) Do this check of the wiring to the instrument switching module:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (b) Disconnect the connector D40536P from the electronic load circuit breaker panel, P6-1.
- (c) Do a wiring check between these pins of the instrument switching module connector and the electronic load circuit breaker panel connector:

D1817	D40536P
pin 7	pin 2

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the connector D1817 to the instrument switching module, P5-28.
 - 3) Re-connect the connector D40536P to the electronic load circuit breaker panel, P6-1.
 - 4) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- 5) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (e) If you do not find a problem with the wiring, then continue.
 - 1) Re-connect the connector D1817 to the instrument switching module, P5-28.
 - 2) Re-connect the connector D40536P to the electronic load circuit breaker panel, P6-1.

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- 3) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (8) Replace FMCS transfer relay No. 1, R475.
- (a) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
- 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (b) Set the FMC switch on the P5-28 instrument switching module to NORMAL.

———— **END OF TASK** ————

816. No FMC-2 Data On FMC-02 429 Bus - Fault Isolation

A. Description

- (1) This task is for this maintenance messages:
- (a) 31-68472 NO FMC-2 DATA ON FMC-02 BUS
- (2) Display electronic unit 2 (DEU-2) receives no data output on FMC-02 bus from the flight management computer 2 (FMC-2).

B. Possible Causes

- (1) Flight management computer 2 (FMC-2), M1632
- (2) Display electronic unit 2 (DEU-2), M1809
- (3) FMCS TRANSFER circuit breaker, C1263
- (4) Wiring problem
- (5) FMCS transfer relay No. 1, R475

C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI
E	15	C01263	FMCS XFR

D. Related Data

- (1) (SSM 34-61-12)
- (2) (SSM 34-61-24)
- (3) (SSM 31-62-24)
- (4) (WDM 34-61-12)
- (5) (WDM 34-61-24)
- (6) (WDM 31-62-24)

E. Initial Evaluation

- (1) Set the FMC switch on the P5-28 instrument switching module to BOTH ON R.
- (2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- (a) If the control display unit (CDU) shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
- (b) If the control display unit (CDU) does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) Do this check of the FMC-2:
 - (a) For FMC-2, do this task: Flight Management Computer System BITE Procedure, 34-61 TASK 801.
 - (b) If there is a maintenance message, then go to the FIM task for that message.
 - 1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 2) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - 3) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If there is no maintenance message, then continue.
- (2) Do this check of the DEU-2:
 - (a) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (b) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2.
These are the tasks:
Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,
Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - c) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue.
 - (c) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.
- (3) Do this check for 28V DC at the circuit breaker.
 - (a) Make sure that this circuit breaker is closed:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (b) Do a check for 28V DC between terminal 2 for circuit breaker C1263 and structure ground.
- (c) If there is not 28V DC at terminal 2 of circuit breaker C1263, then do these steps:

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- 1) Replace this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- 2) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.

- a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- (d) If there is 28V DC at terminal 2 for circuit breaker C1263, then continue.

- (4) Do this check of the FMC-2 wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the FMC-2, M1632. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- (b) Remove the FMCS transfer relay No. 1, R475.
- (c) Do a wiring check between these pins of the FMC-2 connector, D3261B and the relay No. 1 connector, D3265:

D3261B		D3265
pin D7	.....	pin T
pin E7	.....	pin U

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

- 1) Repair the wiring.
- 2) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- 3) Re-install the FMCS transfer relay No. 1, R475.
- 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- (e) If you do not find a problem with the wiring, then continue.

- 1) Re-install the FMC-2, M1632. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.

- (5) Do this check of the DEU-2 wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Do a wiring check between these pins of the DEU-2 connector, D3975B and the relay No. 1 connector, D3263:

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D3975B

pin D2 pin U
pin C2 pin T

D3263

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - 3) Re-install the FMCS transfer relay No. 1, R475.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If you do not find a problem with the wiring, then continue.
- 1) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- (6) Do this check of the wiring to the FMC transfer relay No. 1:
- (a) Disconnect the connector D1817 from the instrument switching module, P5-28.
 - (b) Do a wiring check between these pins of the instrument switching module connector and the relay No. 1 connectors:

D1817

pin 10 pin P

D3265

D1817

pin 8 pin T

D3267

- (c) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the FMCS transfer relay No. 1, R475.
 - 3) Re-connect connector D1817 to the instrument switching module, P5-28.
 - 4) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
- (d) If you did not find a problem with the wiring, then continue.
- 1) Re-install the FMCS transfer relay No. 1, R475.
- (7) Do this check of the wiring to the instrument switching module:
- NOTE:** If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

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- (a) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (b) Disconnect the connector D40536P from the electronic load circuit breaker panel, P6-1.
(c) Do a wiring check between these pins of the instrument switching module connector and the electronic load circuit breaker panel connector:

D1817	D40536P
pin 7	pin 2

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

- 1) Repair the wiring.
- 2) Re-connect the connector D1817 to the instrument switching module, P5-28.
- 3) Re-connect the connector D40536P to the electronic load circuit breaker panel, P6-1.
- 4) Close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- 5) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

- (e) If you did not find a problem with the wiring, then continue.

- 1) Re-connect the connector D1817 to the instrument switching module, P5-28.
- 2) Re-connect the connector D40536P to the electronic load circuit breaker panel, P6-1.
- 3) Close this circuit breaker:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	15	C01263	FMCS XFR

- (8) Replace FMCS transfer relay No. 1, R475.

- (a) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.

(b) Set the FMC switch on the P5-28 instrument switching module to NORMAL.

———— **END OF TASK** ————

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817. DEU-1 No Input from LRU on 429 BUS - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

- (a) 31-69011, 31-69021, 31-69031, 31-69051, 31-69053, 31-69061, 31-69063, 31-69071, 31-69101, 31-69111, 31-69121, 31-69131, 31-69141, 31-69151, 31-69161, 31-69171, 31-69181, 31-69211, 31-69221, 31-69241, 31-69251, 31-69301, 31-69311, 31-69321, 31-69331, 31-69341, 31-69411, 31-69421, 31-69451, 31-69461, 31-69471, 31-69511, 31-69521, 31-69531, 31-69551, 31-69561, 31-69563, 31-69571, 31-69573, 31-69611, 31-69621, 31-69701, 31-69711, 31-69721, 31-69731, 31-69741, 31-69811, 31-69821, 31-69831, 31-69841

(2) DEU-1 receives no ARINC 429 data from an LRU.

NOTE: The occurrence of any of these faults indicates that only DEU-1 can not receive this ARINC 429 bus, but DEU-2 can receive this bus.

B. Possible Causes

- (1) DEU-1, M1808
(2) Wiring problem

C. Circuit Breakers

(1) These are the primary circuit breakers related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	5	C01359	DISPLAY DEU 1 PRI

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	10	C01361	DISPLAY DEU 1 HOLDUP

D. Related Data

- (1) (SSM 31-62-12)
(2) (SSM 31-62-14)
(3) (SSM 31-62-15)
(4) (SSM 31-62-22)
(5) (WDM 31-62-12)
(6) (WDM 31-62-14)
(7) (WDM 31-62-15)
(8) (WDM 31-62-22)

E. Initial Evaluation

(1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.

- (a) If the CDU shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
(b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

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F. Fault Isolation Procedure

(1) For DEU-1, do this task: DEU Self-Test Procedure, 31-62 TASK 802.

(a) If the CDU shows DEU 1 SELF-TEST FAILED, then do these steps:

1) Replace DEU-1.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

a) Do the repair confirmation at the end of this task.

(b) If the CDU shows DEU 1 SELF-TEST PASSED, then continue.

(2) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(a) In the tables below, find the WDM reference, source LRU, connector numbers, and pin numbers for the applicable maintenance message.

Table 205

MAINT MESSAGE	WDM REFERENCE
31-69021	34-57-11
31-69031	34-57-21
31-69051	34-21-14
31-69053	34-21-14
31-69061	31-21-24
31-69063	31-21-24
31-69071	22-31-52
31-69101	31-31-12
31-69111	31-62-12
31-69121	31-62-12
31-69131	31-62-12
31-69141	31-62-22
31-69151	31-62-22
31-69161	31-62-22
31-69171	34-55-11
31-69181	34-55-21
31-69211	73-24-11
31-69221	73-24-11
31-69241	73-24-21
31-69251	34-24-21

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ECCN 9E991 BOEING PROPRIETARY - See title page for details

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Table 205 (Continued)

MAINT MESSAGE	WDM REFERENCE
31-69301	31-62-13
31-69311	31-62-23
31-69321	77-31-11
31-69331	22-11-51
31-69341	22-11-51
31-69411	34-61-15
31-69421	31-61-15
31-69451	34-61-15
31-69461	34-61-15
31-69471	27-81-41
31-69511	28-41-11
31-69521	28-41-11
31-69531	28-41-11
31-69551	34-49-11
31-69561	34-31-11
31-69563	34-31-11
31-69571	34-31-21
31-69573	34-31-21
31-69611	22-11-51
31-69621	22-11-51
31-69701	34-33-11
31-69711	34-33-11
31-69731	27-32-12
31-69741	27-32-22
31-69811	34-45-11
31-69821	34-45-11
31-69831	34-51-11
31-69841	34-51-21

Table 206

MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69011	ACARS M1109 (If installed)	D3973D pin J15 pin K15	D1967X pin OA pin OB

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Table 206 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69021	ADF-1 M1731	D3973A pin C3 pin D3	D3651B pin B13 pin B14
31-69031	ADF-2 M1732	D3973D pin C3 pin D3	D3653B pin B13 pin B14
31-69051	ADIRU-1 (ADR-L-2 BUS 1) M1749	D3973B pin C5 pin D5	D3687A pin A5 pin B5
31-69053	ADIRU-1 (ADR-L-2 BUS 2) M1749	D3973D pin E5 pin F5	D3687A pin A5 pin B5
31-69061	ADIRU-2 (ADR-R-4 BUS 1) M1752	D3973E pin C5 pin D5	D3693A pin A9 pin B9
31-69063	ADIRU-2 (ADR-R-4 BUS 2) M1752	D3973A pin J15 pin K15	D3693A pin A9 pin B9
31-69071	AUTO THROTTLE M917	D3973A pin E1 pin F1	D10009A pin C10 pin D10
31-69101	DFDAU M675	D3973D pin C5 pin D5	D2295E pin H5 pin H6
31-69111	DU-LOB N187	D3973A pin A1 pin B1	D3977B pin A3 pin A4
31-69121	DU-LIB N188	D3973B pin J15 pin K15	D3979B pin A3 pin A4
31-69131	DU-CU N189	D3973B pin A1 pin B1	D3981B pin A3 pin A4
31-69141	DU-RIB N192	D3973E	D3987B

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Table 206 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
		pin A1	pin A3
		pin B1	pin A4
31-69151	DU-ROB N191	D3973D	D3985B
		pin A1	pin A3
		pin B1	pin A4
31-69161	DU-CL N190	D3973E	D3983B
		pin J15	pin A3
		pin K15	pin A4
31-69171	DME-1 M164	D3973B	D161B
		pin C9	pin G1
		pin D9	pin H1
31-69181	DME-2 M165	D3973E	D169B
		pin C9	pin G1
		pin D9	pin H1
31-69211	EEC-1 (CH-A) M1818	D3973A	DP0303
		pin A5	pin N
		pin B5	pin M
31-69221	EEC-1 (CH-B) M1818	D3973B	DP0404
		pin A5	pin N
		pin B5	pin M
31-69241	EEC-2 (CH-A) M1818	D3973D	DP0303
		pin A5	pin N
		pin B5	pin M
31-69251	EEC-2 (CH-B) M1818	D3973E	DP0404
		pin A5	pin N
		pin B5	pin M
31-69301	CAPT EFIS CP P7-1	D3973A	D3993
		pin J1	pin 35
		pin K1	pin 36
31-69311	F/O EFIS CP P7-2	D3973D	D3995
		pin 35	pin J1
		pin 36	pin K1
31-69321	AVM M1240	D3973B	D3228A
		pin C12	pin C6

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Table 206 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
		pin D12	pin D6
31-69331	FCC-A M1875	D3973A	D10135A
		pin C12	pin B6
		pin D12	pin A6
31-69341	FCC-B M1876	D3973D	D10137A
		pin C12	pin B6
		pin D12	pin A6
31-69411	FMC-1 (FMC-L-08) M1175	D3973A	D2179A
		pin C9	pin A11
		pin D9	pin B11
31-69421	FMC-1 (FMC-L-09) M1175	D3973E	D2179B
		pin C1	pin G9
		pin D1	pin H9
31-69451	FMC-2 (FMC-R-08) M1632	D3973B	D3261A
		pin E1	pin A11
		pin F1	pin B11
31-69461	FMC-2 (FMC-R-09) M1632	D3973D	D3261B
		pin C9	pin G9
		pin D9	pin H9
31-69471	FSEU M1746	D3973E	D728B
		pin E1	pin D4
		pin F1	pin D5
SIA 702-710			
31-69511	FQPU (BUS-1) M1827	D3973D	D11306
		pin J5	pin 25
		pin K5	pin 24
31-69521	FQPU (BUS-2) M1827	D3973A	D11304
		pin J5	pin 25
		pin K5	pin 24
31-69531	FQPU (BUS-3) M1827	D3973B	D11308
		pin J5	pin 25
		pin K5	pin 24
SIA 711-714, 716-999			
31-69511	FQPU (BUS-1) M1827	D3973D	D15806

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SIA 711-714, 716-999 (Continued)

Table 206 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR		SOURCE LRU CONNECTOR
31-69521	FQPU (BUS-2) M1827	pin J5	-----	pin 12
		pin K5	-----	pin 4
		D3973A		D11354
		pin J5	-----	pin 3
31-69531	FQPU (BUS-3) M1827	pin K5	-----	pin 1
		D3973B		D11352
		pin J5	-----	pin 2
		pin K5	-----	pin 8
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31-69551	GPWC M652	D3973D		D1153B
31-69561	MMR-1 (ILS-L-2 BUS 1) M2104	pin A9	-----	pin C1
		pin B9	-----	pin D1
		D3973A		D10719B
		pin C15	-----	pin G1
31-69563	MMR-1 (ILS-L-2 BUS 2) M2104	pin D15	-----	pin H1
		D3973E		D10719B
		pin G3	-----	pin G1
		pin H3	-----	pin H1
31-69571	MMR-2 (ILS-R-2 BUS 1) M2105	D3973D		D10721B
31-69573	MMR-2 (ILS-R-2 BUS 2) M2105	pin C15	-----	pin G1
		pin D15	-----	pin H1
		D3973B		D10721B
		pin G3	-----	pin G1
31-69611	MCP (MCP-1 BUS) M198	pin H3	-----	pin H1
		D3973A		D299
		pin E5	-----	pin 18
		pin F5	-----	pin 17
31-69621	MCP (MCP-L-2 BUS) M198	D3973E		D1815
		pin E5	-----	pin 18
		pin F5	-----	pin 17

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Table 206 (Continued)

MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69701	RA-1 M1735	D3973A	D3667B
		pin G15 -----	pin G2
		pin H15 -----	pin G3
31-69711	RA-2 M1736	D3973D	D3669B
		pin G15 -----	pin G2
		pin H15 -----	pin G3
31-69731	STALL MANAGEMENT COMPUTER-1 M1747	D3973A	D3683A
		pin G1 -----	pin 95
		pin H1 -----	pin 94
31-69741	STALL MANAGEMENT COMPUTER-2 M1748	D3973D	D3685A
		pin G1 -----	pin 95
		pin H1 -----	pin 94
31-69811	TCAS (TCAS-1 BUS) M1485	D3973A	D2743E
		pin J2 -----	pin C7
		pin K2 -----	pin D7
31-69821	TCAS (TCAS-2 BUS) M1485	D3973D	D2743E
		pin E1 -----	pin G7
		pin F1 -----	pin H7
31-69831	VOR-1 M1724	D3973B	D3623B
		pin C3 -----	pin B13
		pin D3 -----	pin C13
31-69841	VOR-2 M1725	D3973E	D3625B
		pin C3 -----	pin B13
		pin D3 -----	pin C13

(b) Remove the DEU-1, M1808. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

(c) Remove the applicable source LRU:

- 1) ADF-1. To remove it, do this task: ADF Receiver Removal, AMM TASK 34-57-03-000-801.
- 2) ADF-2. To remove it, do this task: ADF Receiver Removal, AMM TASK 34-57-03-000-801.

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- 3) ADIRU-1. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 4) ADIRU-2. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 5) AUTO THROTTLE. To remove it, do this task: Autothrottle Servo Motor and Gearbox Removal, AMM TASK 22-31-91-020-801.
- 6) DFDAU. To remove it, do this task: Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801.
- 7) Display Unit (DU)-Left Outboard (LOB). To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 8) DU-Left Inboard (LIB). To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 9) DU-CU. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 10) DU-Right Inboard (RIB). To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 11) DU-Right Outboard (ROB). To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 12) DU-CL. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 13) DME-1. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 14) DME-2. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 15) EEC-1. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 16) EEC-2. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 17) CAPT EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 18) F/O EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 19) AVM. To remove it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Removal, AMM TASK 77-31-03-000-801-F00.
- 20) FCC-A. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 21) FCC-B. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 22) FMC-1. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- 23) FMC-2. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- 24) FSEU. To remove it, do this task: Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801.

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- 25) FQPU. To remove it, do this task: Fuel Quantity Processor Unit Removal, AMM TASK 28-41-81-000-801.
 - 26) GPWC. To remove it, do this task: Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801.
 - 27) ILS-1/MMR-1. To remove it, do this task: ILS and Multi-Mode Receiver (MMR) - Removal, AMM TASK 34-31-42-000-801.
 - 28) ILS-2/MMR-2. To remove it, do this task: ILS and Multi-Mode Receiver (MMR) - Removal, AMM TASK 34-31-42-000-801.
 - 29) MCP. To remove it, do this task: DFCS Mode Control Panel Removal, AMM TASK 22-11-34-000-801.
 - 30) RA-1. To remove it, do this task: Low Range Radio Altimeter (LRRR) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
 - 31) RA-2. To remove it, do this task: Low Range Radio Altimeter (LRRR) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
 - 32) STALL MANAGEMENT-1. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801
 - 33) STALL MANAGEMENT-2. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801
 - 34) TCAS. To remove it, do this task: TCAS Computer Removal, AMM TASK 34-45-01-000-801
 - 35) VOR-1. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801
 - 36) VOR-2. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801
- (d) Do a wiring check between the specified pins of the applicable connectors.
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the applicable LRU:
 - a) ADF-1. To install it, do this task: ADF Receiver Installation, AMM TASK 34-57-03-400-801.
 - b) ADF-2. To install it, do this task: ADF Receiver Installation, AMM TASK 34-57-03-400-801.
 - c) ADIRUADIRU-1. To install it, do this task: Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801.
 - d) ADIRUADIRU-2. To install it, do this task: Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801.
 - e) AUTO THROTTLE. To install it, do this task: Autothrottle Servo Motor and Gearbox Installation, AMM TASK 22-31-91-400-801.
 - f) DFDAU. To install it, do this task: Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
 - g) DU-LOB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - h) DU-LIB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.

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- i) DU-CU. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- j) DU-RIB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- k) DU-ROB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- l) DU-CL. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
- m) DME-1. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
- n) DME-2. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
- o) EEC-1. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
- p) EEC-2. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
- q) CAPT EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
- r) F/O EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
- s) AVM. To install it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Installation, AMM TASK 77-31-03-400-801-F00.
- t) FCC-A. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- u) FCC-B. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- v) FMC-1. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- w) FMC-2. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- x) FSEU. To install it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
- y) FQPU. To install it, do this task: Fuel Quantity Processor Unit Installation, AMM TASK 28-41-81-400-801.
- z) GPWC. To install it, do this task: Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801.
- aa) ILS-1/MMR-1. To install it, do this task: ILS and Multi-Mode Receiver (MMR) - Installation, AMM TASK 34-31-42-400-801.
- ab) ILS-2/MMR-2. To install it, do this task: ILS and Multi-Mode Receiver (MMR) - Installation, AMM TASK 34-31-42-400-801.
- ac) MCP. To install it, do this task: DFCS Mode Control Panel Installation, AMM TASK 22-11-34-400-801.
- ad) RA-1. To install it, do this task: Low Range Radio Altimeter (LRR) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.

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- ae) RA-2. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.
- af) STALL MANAGEMENT-1. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- ag) STALL MANAGEMENT-2. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- ah) TCAS. To install it, do this task: TCAS Computer Installation, AMM TASK 34-45-01-400-801.
- ai) VOR-1. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- aj) VOR-2. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- 3) Re-install the DEU-1, M1808. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) Do the repair confirmation at the end of this task.

G. Repair Confirmation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - (b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue the Fault Isolation Procedure at the subsequent step.

————— END OF TASK —————

818. DEU-2 No Input from LRU on 429 BUS - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 31-69012, 31-69022, 31-69032, 31-69052, 31-69054, 31-69062, 31-69064, 31-69072, 31-69102, 31-69112, 31-69122, 31-69132, 31-69142, 31-69152, 31-69162, 31-69172, 31-69182, 31-69212, 31-69222, 31-69242, 31-69252, 31-69302, 31-69312, 31-69322, 31-69332, 31-69342, 31-69412, 31-69422, 31-69452, 31-69462, 31-69472, 31-69512, 31-69522, 31-69532, 31-69552, 31-69562, 31-69564, 31-69572, 31-69574, 31-69612, 31-69622, 31-69702, 31-69712, 31-69722, 31-69732, 31-69742, 31-69812, 31-69822, 31-69832, 31-69842
- (2) DEU-2 receives no ARINC 429 data from an LRU.

NOTE: The occurrence of any of these faults indicates that only DEU-2 can not receive this ARINC 429 bus, but DEU-1 can receive this bus.

B. Possible Causes

- (1) DEU-2, M1809
- (2) Wiring problem

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C. Circuit Breakers

- (1) These are the primary circuit breakers related to the fault:

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
D	9	C01362	DISPLAY DEU 2 HOLDUP
D	11	C01360	DISPLAY DEU 2 PRI

D. Related Data

- (1) (SSM 31-62-12)
- (2) (SSM 31-62-22)
- (3) (SSM 31-62-24)
- (4) (SSM 31-62-25)
- (5) (WDM 31-62-12)
- (6) (WDM 31-62-22)
- (7) (WDM 31-62-24)
- (8) (WDM 31-62-25)

E. Initial Evaluation

- (1) For DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the CDU shows this maintenance message on the CURRENT STATUS page, then do the Fault Isolation Procedure below.
 - (b) If the CDU does not show this maintenance message on the CURRENT STATUS page, then there was an intermittent fault.

NOTE: You can find other occurrences of this maintenance message on the INFLIGHT FAULTS page.

F. Fault Isolation Procedure

- (1) For DEU-2, do this task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU 2 SELF-TEST FAILED, then do these steps:
 - 1) Replace DEU-2.

These are the tasks:

Display Electronic Unit Removal, AMM TASK 31-62-21-000-801,

Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.

- a) Do the repair confirmation at the end of this task.
 - (b) If the CDU shows DEU 2 SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring:

NOTE: If you use a megohmmeter to do wiring check on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

- (a) In the lists below, find the WDM Reference, source LRU, connector numbers, and pin numbers for the applicable maintenance message.

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MAINT MESSAGE

WDM REFERENCE

31-69022	34-57-11
31-69032	34-57-21
31-69052	34-21-14
31-69052	34-21-14
31-69062	34-21-24
31-69064	34-21-24
31-69072	22-31-52
31-69102	31-35-02
31-69112	31-62-12
31-69122	31-62-12
31-69132	31-62-12
31-69142	31-62-22
31-69152	31-62-22
31-69162	31-62-22
31-69172	34-55-11
31-69182	34-55-21
31-69212	73-24-11
31-69222	73-24-11
31-69242	73-24-21
31-69252	73-24-21
31-69302	31-62-13
31-69312	31-62-23
31-69322	77-31-11
31-69332	22-11-51
31-69342	22-11-51
31-69412	34-61-15
31-69422	31-61-15
31-69452	34-61-15
31-69462	34-61-15
31-69472	27-81-41
31-69512	28-41-11
31-69522	28-41-11
31-69532	28-41-11
31-69552	34-49-11
31-69562	34-31-11

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ECCN 9E991 BOEING PROPRIETARY - See title page for details

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MAINT MESSAGE	WDM REFERENCE
31-69564	34-31-11
31-69572	34-31-21
31-69574	34-31-21
31-69612	22-11-51
31-69622	22-11-51
31-69702	34-33-11
31-69712	34-33-21
31-69732	27-32-12
31-69742	27-32-22
31-69812	34-45-11
31-69822	34-45-11
31-69832	34-51-11
31-69842	34-51-21

Table 207

MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69022	ADF-1 M1731	D3975A	D3651B
		pin C3	pin B13
		pin D3	pin B14
31-69032	ADF-2 M1732	D3973D	D3653B
		pin C3	pin B13
		pin D3	pin B14
31-69052	ADIRU-1 (ADR-L-4 BUS 1) M1749	D3973B	D3687A
		pin C5	pin A9
		pin D5	pin B9
31-69054	ADIRU-1 (ADR-L-4 BUS 2) M1749	D3975D	D3687A
		pin E5	pin A9
		pin F5	pin B9
31-69062	ADIRU-2 (ADR-R-2 BUS 1) M1752	D3975E	D3693A
		pin C5	pin A5
		pin D5	pin B5
31-69064	ADIRU-2 (ADR-R-2 BUS 2) M1752	D3975A	D3693A
		pin J15	pin A5
		pin K15	pin B5

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69072	AUTO THROTTLE M917	D3975A pin E1 pin F1	D10009A pin C10 pin D10
31-69102	DFDAU M675	D3975D pin C5 pin D5	D2295E pin H5 pin H6
31-69112	DU-LOB N187	D3975A pin A1 pin B1	D3977B pin A3 pin A4
31-69122	DU-LIB N188	D3975B pin J15 pin K15	D3979B pin A3 pin A4
31-69132	DU-CU N189	D3975B pin A1 pin B1	D3981B pin A3 pin A4
31-69142	DU-RIB N192	D3973E pin A1 pin B1	D3987B pin A3 pin A4
31-69152	DU-ROB N191	D3975D pin A1 pin B1	D3987B pin A3 pin A4
31-69162	DU-CL N190	D3975E pin J15 pin K15	D3983B pin A3 pin A4
31-69172	DME-1 M164	D3975B pin C9 pin D9	D161B pin G1 pin H1
31-69182	DME-2 M165	D3975E pin C9 pin D9	D169B pin G1 pin H1
31-69212	EEC-1 (CH-A) M1818	D3975A pin A5 pin B5	DP0303 pin N pin M
31-69222	EEC-1 (CH-B) M1818	D3975B	DP0404

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
		pin A5	pin N
		pin B5	pin M
31-69242	EEC-2 (CH-A) M1818	D3975D	DP0303
		pin A5	pin N
		pin B5	pin M
31-69252	EEC-2 (CH-B) M1818	D3975E	DP0404
		pin A5	pin N
		pin B5	pin M
31-69302	CAPT EFIS CP P7-1	D3975A	D3993
		pin J1	pin 35
		pin K1	pin 36
31-69312	F/O EFIS CP P7-2	D3975D	D3995
		pin J1	pin 35
		pin K1	pin 36
31-69322	AVM M1240	D3975B	D3228A
		pin C12	pin C6
		pin D12	pin D6
31-69332	FCC-A M1875	D3975A	D10135A
		pin C12	pin B6
		pin D12	pin A6
31-69342	FCC-B M1876	D3975D	D10137A
		pin C12	pin B6
		pin D12	pin A6
31-69412	FMC-1 (FMC-L-08) M1175	D3975A	D2179A
		pin C9	pin A11
		pin D9	pin B11
31-69422	FMC-1 (FMC-L-09) M1175	D3975E	D2179B
		pin C1	pin G9
		pin D1	pin H9
31-69452	FMC-2 (FMC-R-08) M1632	D3975B	D3261A
		pin E1	pin A11
		pin F1	pin B11
31-69462	FMC-2 (FMC-R-09) M1632	D3975D	D3261B
		pin C9	pin G9

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR		SOURCE LRU CONNECTOR
31-69472	FSEU M1746	pin D9	-----	pin H9
		D3973E		D728B
		pin E1	-----	pin D4
		pin F1	-----	pin D5
SIA 702-710				
31-69512	FQPU (BUS-1) M1827	D3975D		D11306
		pin J5	-----	pin 25
		pin K5	-----	pin 24
31-69522	FQPU (BUS-2) M1827	D3975A		D11304
		pin J5	-----	pin 25
		pin K5	-----	pin 24
31-69532	FQPU (BUS-3) M1827	D3973B		D11308
		pin J5	-----	pin 25
		pin K5	-----	pin 24
SIA 711-714, 716-999				
31-69512	FQPU (BUS-1) M1827	D3975D		D15806
		pin J5	-----	pin 12
		pin K5	-----	pin 4
31-69522	FQPU (BUS-2) M1827	D3975A		D11354
		pin J5	-----	pin 3
		pin K5	-----	pin 1
31-69532	FQPU (BUS-3) M1827	D3975B		D11352
		pin J5	-----	pin 2
		pin K5	-----	pin 8
SIA ALL				
31-69552	GPWC M652	D3975D		D1153B
		pin A9	-----	pin C1
		pin B9	-----	pin D1
31-69562	MMR-1 (ILS-L-2 BUS 1) M2104	D3975A		D10719B
		pin C15	-----	pin G1
		pin D15	-----	pin H1
31-69564	MMR-1 (ILS-L-2 BUS 2) M2104	D3975E		D10719B

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
		pin G3	pin G1
		pin H3	pin H1
31-69572	MMR-2 (ILS-R-2 BUS 1) M2105	D3975D	D10721B
		pin C15	pin G1
		pin D15	pin H1
31-69574	MMR-2 (ILS-R-2 BUS 2) M2105	D3975B	D10721B
		pin G3	pin G1
		pin H3	pin H1
31-69612	MCP (MCP-1 BUS) M198	D3975A	D299
		pin E5	pin 18
		pin F5	pin 17
31-69622	MCP (MCP-L-2 BUS) M198	D3975E	D1815
		pin E5	pin 18
		pin F5	pin 17
31-69702	RA-1 M1735	D3975A	D3667B
		pin G15	pin G2
		pin H15	pin G3
31-69712	RA-2 M1736	D3975D	D3669B
		pin G15	pin G2
		pin H15	pin G3
31-69732	STALL MANAGEMENT COMPUTER-1 M1747	D3975A	D3683A
		pin G1	pin 95
		pin H1	pin 94
31-69742	STALL MANAGEMENT COMPUTER-2 M1748	D3975D	D3685A
		pin G1	pin 95
		pin H1	pin 94
31-69812	TCAS (TCAS-1 BUS) M1485	D3975A	D2743E
		pin J2	pin C7
		pin K2	pin D7

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MAINT MESSAGE	SOURCE LRU	DEU-1 CONNECTOR	SOURCE LRU CONNECTOR
31-69822	TCAS (TCAS-2 BUS) M1485	D3975D	D2743E
		pin E1	pin G7
		pin F1	pin H7
31-69832	VOR-1 M1724	D3975B	D3623B
		pin C3	pin B13
		pin D3	pin C13
31-69842	VOR-2 M1725	D3975E	D3625B
		pin C3	pin B13
		pin D3	pin C13

(b) Remove the DEU-2, M1809. To remove it, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.

(c) Remove the applicable source LRU:

- 1) ADF-1. To remove it, do this task: ADF Receiver Removal, AMM TASK 34-57-03-000-801.
- 2) ADF-2. To remove it, do this task: ADF Receiver Removal, AMM TASK 34-57-03-000-801.
- 3) ADIRU-1. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 4) ADIRU-2. To remove it, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.
- 5) AUTO THROTTLE. To remove it, do this task: Autothrottle Servo Motor and Gearbox Removal, AMM TASK 22-31-91-020-801.
- 6) DFDAU. To remove it, do this task: Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801.
- 7) DU-LOB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 8) DU-LIB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 9) DU-CU. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 10) DU-RIB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 11) DU-ROB. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 12) DU-CL. To remove it, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.
- 13) DME-1. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.

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- 14) DME-2. To remove it, do this task: DME Interrogator Removal, AMM TASK 34-55-21-000-801.
- 15) EEC-1. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 16) EEC-2. To remove it, do this task: EEC Removal, AMM TASK 73-21-60-000-801-F00.
- 17) CAPT EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 18) F/O EFIS CP. To remove it, do this task: EFIS Control Panel Removal, AMM TASK 31-62-12-000-801.
- 19) AVM. To remove it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Removal, AMM TASK 77-31-03-000-801-F00.
- 20) FCC-A. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 21) FCC-B. To remove it, do this task: Flight Control Computer Removal, AMM TASK 22-11-33-000-801.
- 22) FMC-1. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- 23) FMC-2. To remove it, do this task: FMCS Computer Removal, AMM TASK 34-61-02-000-801.
- 24) FSEU. To remove it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
- 25) FQPU. To remove it, do this task: Fuel Quantity Processor Unit Removal, AMM TASK 28-41-81-000-801.
- 26) GPWC. To remove it, do this task: Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801.
- 27) ILS-1/MMR-1. To remove it, do this task: ILS and Multi-Mode Receiver (MMR) - Removal, AMM TASK 34-31-42-000-801.
- 28) ILS-2/MMR-2. To remove it, do this task: ILS and Multi-Mode Receiver (MMR) - Removal, AMM TASK 34-31-42-000-801.
- 29) MCP. To remove it, do this task: DFCS Mode Control Panel Removal, AMM TASK 22-11-34-000-801.
- 30) RA-1. To remove it, do this task: Low Range Radio Altimeter (LRR) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
- 31) RA-2. To remove it, do this task: Low Range Radio Altimeter (LRR) Receiver/Transmitter (R/T) Removal, AMM TASK 34-33-21-000-801.
- 32) STALL MANAGEMENT-1. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
- 33) STALL MANAGEMENT-2. To remove it, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.
- 34) TCAS. To remove it, do this task: TCAS Computer Removal, AMM TASK 34-45-01-000-801.
- 35) VOR-1. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801.

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- 36) VOR-2. To remove it, do this task: VOR/MKR Receiver Removal, AMM TASK 34-51-01-000-801.
- (d) Do a wiring check between the specified pins of the applicable connectors.
- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Re-install the applicable LRU:
 - a) ADF-1. To install it, do this task: ADF Receiver Installation, AMM TASK 34-57-03-400-801.
 - b) ADF-2. To install it, do this task: ADF Receiver Installation, AMM TASK 34-57-03-400-801.
 - c) ADIRU-1. To install it, do this task: Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801.
 - d) ADIRU-2. To install it, do this task: Air Data Inertial Reference Unit - Installation, AMM TASK 34-21-01-400-801.
 - e) AUTO THROTTLE. To install it, do this task: Autothrottle Servo Motor and Gearbox Installation, AMM TASK 22-31-91-400-801.
 - f) DFDAU. To install it, do this task: Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
 - g) DU-LOB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - h) DU-LIB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - i) DU-CU. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - j) DU-RIB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - k) DU-ROB. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - l) DU-CL. To install it, do this task: Display Unit Installation, AMM TASK 31-62-11-400-801.
 - m) DME-1. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
 - n) DME-2. To install it, do this task: DME Interrogator Installation, AMM TASK 34-55-21-400-801.
 - o) EEC-1. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
 - p) EEC-2. To install it, do this task: EEC Installation, AMM TASK 73-21-60-400-801-F00.
 - q) CAPT EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
 - r) F/O EFIS CP. To install it, do this task: EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.
 - s) AVM. To install it, do this task: Airborne Vibration Monitor (AVM) Signal Conditioner Installation, AMM TASK 77-31-03-400-801-F00.

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- t) FCC-A. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- u) FCC-B. To install it, do this task: Flight Control Computer Installation, AMM TASK 22-11-33-400-801.
- v) FMC-1. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- w) FMC-2. To install it, do this task: FMCS Computer Installation, AMM TASK 34-61-02-400-801.
- x) FSEU. To install it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
- y) FQPU. To install it, do this task: Fuel Quantity Processor Unit Installation, AMM TASK 28-41-81-400-801.
- z) GPWC. To install it, do this task: Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801.
- aa) ILS-1/MMR-1. To install it, do this task: ILS and Multi-Mode Receiver (MMR) - Installation, AMM TASK 34-31-42-400-801.
- ab) ILS-2/MMR-2. To install it, do this task: ILS and Multi-Mode Receiver (MMR) - Installation, AMM TASK 34-31-42-400-801.
- ac) MCP. To install it, do this task: DFCS Mode Control Panel Installation, AMM TASK 22-11-34-400-801.
- ad) RA-1. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.
- ae) RA-2. To install it, do this task: Low Range Radio Altimeter (LRRRA) Receiver/Transmitter (R/T) Installation, AMM TASK 34-33-21-400-801.
- af) STALL MANAGEMENT-1. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- ag) STALL MANAGEMENT-2. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
- ah) TCAS. To install it, do this task: TCAS Computer Installation, AMM TASK 34-45-01-400-801.
- ai) VOR-1. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- aj) VOR-2. To install it, do this task: VOR/MKR Receiver Installation, AMM TASK 34-51-01-400-801.
- 3) Re-install the DEU-2, M1809. To install it, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
- 4) Do the repair confirmation at the end of this task.

G. Repair Confirmation

- (1) For DEU-1, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the CDU does not show this maintenance message on the CURRENT STATUS page, then you corrected the fault.
 - (b) If the CDU shows this maintenance message on the CURRENT STATUS page, then continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

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819. Captain's EFIS Control Panel problems - Fault Isolation

A. Description

- (1) The captain's display units (LOB-DU, LIB-DU) do not show desired information when the selection is made on the captain's EFIS control panel.

B. Possible Causes

- (1) Captain's EFIS control panel, P7-1

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
D	1	C01369	DISPLAY CAPT EFIS CONT PANEL

D. Initial Evaluation

- (1) Set the CONTROL PANEL switch on the instrument switching module to the BOTH ON 1 or NORMAL position.
- (2) Do the captain's EFIS control panel test. To do it, do this task: Common Display System - System Test, AMM TASK 31-62-00-730-801.
- (3) If the captain's EFIS control panel operates normally, then there was an intermittent fault.
- (4) If the captain's EFIS control panel does not operate normally, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the captain's EFIS control panel P7-1.

These are the tasks:

EFIS Control Panel Removal, AMM TASK 31-62-12-000-801,

EFIS Control Panel Installation, AMM TASK 31-62-12-400-801.

- (a) If the captain's EFIS control panel operates normally, then you corrected the fault.

————— **END OF TASK** —————

820. DSPLY SOURCE Message Shows On The Display - Fault Isolation

A. Description

- (1) The message DSPLY SOURCE 1 or DSPLY SOURCE 2 shows when all the display units get data from one DEU. This occurs when the DISPLAY SOURCE switch on the instrument switching module is set to ALL ON 1 or ALL ON 2.
- (2) When the airplane is in the air, the message DSPLY SOURCE 1 or DSPLY SOURCE 2 also shows when a DEU fails. On the ground with all the engines off, DSPLY SOURCE 1 or DSPLY SOURCE 2 does not show. During that condition, CDS FAULT shows in that location.

B. Possible Causes

- (1) Instrument Switching Module, P5-28

C. Initial Evaluation

- (1) Set the DSPLY SOURCE switch on the instrument switching module to the AUTO position.
 - (a) If the DSPLY SOURCE 1 or DSPLY SOURCE 2 message does not show, then message is erased correctly.

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- (b) If the CDS FAULT message shows, then do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) If the CDU shows a maintenance message on the CURRENT STATUS page, then do the applicable fault isolation task.
 - 2) If the CDU does not show a maintenance message on the CURRENT STATUS page, then continue.
- (c) If the DSDPLY SOURCE 1 or DSDPLY SOURCE 2 message still shows, then do the Fault Isolation Procedure below.

D. Fault Isolation Procedure

- (1) Replace the instrument switching module, P5-28. These are the tasks:
 - Instrument Switching Module Removal, AMM TASK 31-62-14-000-801
 - Instrument Switching Module Installation, AMM TASK 31-62-14-400-801
- (a) If the DSDPLY SOURCE 1 or DSDPLY SOURCE 2 message does not show, then you corrected the fault.
- (b) If the DSDPLY SOURCE 1 or DSDPLY SOURCE 2 message still shows, pull and hold up the DEU circuit breaker for two seconds then reset.
- (c) If the DSDPLY SOURCE 1 or DSDPLY SOURCE 2 message does not show, then there was an intermittent fault.
- (d) If the DSDPLY SOURCE 1 or DSDPLY SOURCE 2 message still shows, then continue with the following steps.
- (2) Safestoring the DEU ground faults.
 - (a) If this is a CURRENT FAILURE, do this task: AMM TASK 31-62-21-470-804.

END OF TASK

821. First Officer's EFIS Control Panel Problems - Fault Isolation

A. Description

- (1) The first officer's display units (ROB-DU, RIB-DU) do not show desired information when the selection is made on the first officer's EFIS control panel.

B. Possible Causes

- (1) First officer's EFIS control panel, P7-2

C. Circuit Breakers

- (1) This is the primary circuit breaker related to the fault:

F/O Electrical System Panel, P6-1

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	13	C01370	DISPLAY F/O EFIS CONT PANEL

D. Initial Evaluation

- (1) Set the CONTROL PANEL switch on the instrument switching module to the BOTH ON 2 or NORMAL position.
- (2) Do the first officer's EFIS control panel test. To do it, do this task: Common Display System - System Test, AMM TASK 31-62-00-730-801.
 - (a) If the first officer's EFIS control panel operates normally, then there was an intermittent fault.

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- (b) If the first officer's EFIS control panel does not operate normally, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the first officer's EFIS control panel P7-2. These are the tasks:
- EFIS Control Panel Removal, AMM TASK 31-62-12-000-801
 - EFIS Control Panel Installation, AMM TASK 31-62-12-400-801
- (a) If the first officer's EFIS control panel operates normally, then you corrected the fault.

————— **END OF TASK** —————

823. No LRU Data on 708 BUS - Fault Isolation

A. Description

- (1) This task is for these Maintenance Messages:
- NOTE: These messages can be considered nuisance messages if a concurrent "WXR FAIL" does not show on the Navigation Display.
- (a) 31-68861 NO ARINC-708 CAPT DATA
 - (b) 31-68862 NO ARINC-708 CAPT DATA
 - (c) 31-68871 NO ARINC-708 F/O DATA
 - (d) 31-68872 NO ARINC-708 F/O DATA
- (2) DEU 1 (2) receives no Aeronautical Radio Incorporated (ARINC) 708 Data from the Weather Radar (WXR) Receiver/Transmitter or the Enhanced Ground Proximity Warning Computer (EGPWC).

B. Possible Causes

- (1) WXR Receiver/Transmitter, M101
- (2) EGPWC, M652
- (3) Terrain/Weather Relay BUS 1 (2), R745 (R746)
- (4) DEU 1 (2), M1808 (M1809)
- (5) Wiring

C. Related Data

- (1) WDM 31-62-15
- (2) WDM 31-62-25
- (3) WDM 34-49-11
- (4) WDM 34-41-11
- (5) SSM 31-62-15
- (6) SSM 31-62-25
- (7) SSM 34-49-11
- (8) SSM 34-41-11
- (9) SWPM 20-81-22.

D. Initial Evaluation

- (1) Push the WXR button on EFIS Control Panels.
- (a) For DEU 1, M1808, do this task: CDS BITE Procedure, 31-62 TASK 801.

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- 1) Look for the Maintenance Message on the CURRENT STATUS Page.
- (2) Push the TERR button on EFIS Control Panels.
 - (a) For DEU 1, M1808, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) Look for the Maintenance Message on the CURRENT STATUS Page.
- (3) If the CDU does not show the Maintenance Message on the CURRENT STATUS page for either the WXR button or the TERR button on EFIS Control Panels, then there was an intermittent fault.

NOTE: You can find other occurrences of this Maintenance Message on the INFLIGHT FAULTS Page.
- (4) If the CDU shows the Maintenance Message on the CURRENT STATUS Page only when you push WXR button on EFIS Control Panels, then do the Fault Isolation Procedure - Weather Radar below.
- (5) If the CDU shows the Maintenance Message on the CURRENT STATUS Page only when you push TERR button on EFIS Control Panels, then do the Fault Isolation Procedure - Enhanced Ground Proximity Warning System below.
- (6) If the CDU shows the Maintenance Message on the CURRENT STATUS Page for both the WXR button and the TERR button on EFIS Control Panels, then do the Fault Isolation Procedure - DEU below.

E. Fault Isolation Procedure - Weather Radar

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

- (1) Do a check of the WXR System. This is the task: Weather Radar System Problem - Fault Isolation, 34-43 TASK 814.
 - (a) Repair any problems that you find.
 - (b) Do the Repair Confirmation at the end of this task.
- (2) Replace the Terrain/Weather Relay BUS 1 (2), R745 (R746) (SWPM 20-81-22).

NOTE: R745 is for Maintenance Message numbers 31-68861 and 31-68862.
R746 is for Maintenance Message numbers 31-68871 and 31-68872.
R745 is in the J24 Junction Box. R746 is in the J22 Junction Box.

 - (a) Do the Repair Confirmation at the end of this task.
- (3) Do this check of the wiring between the Weather Radar System and the Terrain/Weather Relay BUS 1 (2), R745 (R746):

NOTE: If you use a Megohmmeter to do the wiring check on an ARINC 708 Bus (or if you need the exact Resistance of the Bus Wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then, when you are done, re-install the LRUs.

 - (a) Remove the WXR Receiver/Transmitter, M101. This is the task: Weather Radar Receiver/Transmitter Removal, AMM TASK 34-43-41-000-801.
 - (b) Remove the Terrain/Weather Relay BUS 1 (2), R745 (R746) (WDM 34-41-11).
 - (c) Examine the wiring between the Weather Radar System and the Terrain/Weather Relay BUS 1 (2), R745 (R746) as follows (WDM 34-41-11):

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MAINT MSGS 31-68861 and 31-68862

WXR, M101	RELAY R745
D189B	D10847
pin D2	pin 13
pin D3	pin 3

MAINT MSGS 31-68871 and 31-68872

WXR, M101	RELAY R746
D189B	D10849
pin G2	pin 13
pin G3	pin 3

- 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-Install the Terrain/Weather Relay, BUS 1 (2), R745 (R746) (WDM 34-41-11, SWPM 20-81-22).
 - c) Re-Install the WXR Receiver/Transmitter, M101. This is the task: Weather Radar Receiver/Transmitter Installation, AMM TASK 34-43-41-400-801.
 - d) Do the Repair Confirmation at the end of this task.

F. Fault Isolation Procedure - Enhanced Ground Proximity Warning System

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

- (1) Do a check of the Enhanced Ground Proximity Warning System (EGPWS). This is the task: GPWS BITE Procedure, 34-46 TASK 801.
 - (a) If maintenance messages show, then go to the applicable Fault Isolation Tasks for the messages that show to correct the problem.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If no maintenance messages show, then continue.
- (2) Replace the Terrain/Weather Relay BUS 1 (2), R745 (R746) (WDM 34-41-11, SWPM 20-81-22).

NOTE: R745 is for Maintenance Message numbers 31-68861 and 31-68862.

R746 is for Maintenance Message numbers 31-68871 and 31-68872.

R745 is in the J24 Junction Box. R746 is in the J22 Junction Box.

- (a) Do the Repair Confirmation at the end of this task.
- (3) Do this check of the wiring between the GPWC, M652 and the Terrain/Weather Relay BUS 1 (2), R745 (R746):

NOTE: If you use a Megohmmeter to do the wiring check on an ARINC 708 Bus (or if you need the exact Resistance of the Bus Wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then, when you are done, re-install the LRUs.

- (a) Remove the GPWC, M652. This is the task: Ground Proximity Warning Computer Removal, AMM TASK 34-46-01-000-801.
- (b) Remove the Terrain/Weather Relay BUS 1 (2), R745 (R746) (WDM 34-49-11).

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- (c) Examine the wiring between the GPWC, M652 and the Terrain/Weather Relay BUS 1 (2), R745 (R746) as follows (WDM 34-49-11):

MAINT MSGS 31-68861 and 31-68862

GPWC	RELAY R745
D1153A	D10847
pin A3	pin 2
pin B3	pin 4

MAINT MSGS 31-68871 and 31-68872

GPWC	RELAY R746
D1153A	D10849
pin C3	pin 2
pin D3	pin 4

- 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-Install the Terrain/Weather Relay BUS 1 (2), R745 (R746) (WDM 34-49-11, SWPM 20-81-22).
 - c) Re-Install the GPWC, M652. This is the task: Ground Proximity Warning Computer Installation, AMM TASK 34-46-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - DEU

NOTE: You must do the steps in the Initial Evaluation before you can do these steps.

- (1) Do a check of the DEU 1 (2), M1808 (M1809). This is the task: DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the CDU shows DEU SELF-TEST FAILED, then do these steps:
 - 1) Replace the DEU 1 (2), M1808 (M1809). These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-801
 - 2) Do the Repair Confirmation at the end of this task.
 - (b) If the CDU shows DEU SELF-TEST PASSED, then continue.
- (2) Do this check of the wiring between the DEU 1 (2), M1808 (M1809) and the Terrain/Weather Relay BUS 1 (2), R745 (R746):

NOTE: If you use a Megohmmeter to do the wiring check on an ARINC 708 Bus (or if you need the exact Resistance of the Bus Wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then, when you are done, re-install the LRUs.

- (a) Remove the DEU 1 (2), M1808 (M1809). This is the task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (b) Remove the Terrain/Weather Relay BUS 1 (2), R745 (R746) (WDM 34-41-11).

NOTE: R745 is for Maintenance Message numbers 31-68861 and 31-68862.

R746 is for Maintenance Message numbers 31-68871 and 31-68872.

R745 is in the J24 Junction Box. R746 is in the J22 Junction Box.

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- (c) Examine the wiring between the DEU 1 (2), M1808 (M1809) and the Terrain/Weather Relay BUS 1 (2), R745 (R746) as follows WDM 34-41-11:

MAINT MSG 31-68861

DEU-1	RELAY R745
D3973F	D10847
pin J1	pin 1
pin K1	pin 5

MAINT MSG 31-68862

DEU-2	RELAY R745
D3975F	D10847
pin J1	pin 1
pin K1	pin 5

MAINT MSG 31-68871

DEU-1	RELAY R746
D3973F	D10849
pin A1	pin 1
pin B1	pin 5

MAINT MSG 31-68872

DEU-2	RELAY R746
D3975F	D10849
pin A1	pin 1
pin B1	pin 5

- 1) If you find a problem with the wiring, then do these steps:
 - a) Repair the wiring.
 - b) Re-Install the Terrain/Weather Relay BUS 1 (2), R745 (R746) (WDM 34-41-11, SWPM 20-81-22).
 - c) Re-Install the DEU 1 (2), M1808 (M1809). This is the task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - d) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) For DEU 1, M1808, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) If the maintenance message does not show on the CDU CURRENT STATUS Page, then you corrected the problem.
 - (b) If the maintenance message still shows on the CDU CURRENT STATUS Page, then continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

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824. CDS Display Unit Problems - Fault Isolation

A. Description

- (1) The Display Units (DU) are not normal.
- (2) The Display Units intermittently show no annunciations (blank).
- (3) The Display Units show intermittent fault indications.

B. Possible Causes

- (1) Display Electronic Units (DEU) are not properly seated.
- (2) Overheating of Display Unit because air vents are blocked
- (3) Overheating of Display Units because cooling air flow is not sufficient
- (4) Coaxial Cable Connection Problems
- (5) Display Unit faults

C. Fault Isolation Procedure

- (1) If the fault occurs in the Captain's DUs, or the Upper Center DU, then remove DEU 1.
- (2) If the fault occurs in the First Officer's DUs, or in the Lower Center DU, then remove DEU 2.
- (3) To remove a DEU, do this task: Display Electronic Unit Removal, AMM TASK 31-62-21-000-801.
- (4) Re-install the DEU which was removed. To do this, do this task: Display Electronic Unit Installation, AMM TASK 31-62-21-400-801.
 - (a) When re-installing the DEU, make sure to tighten the extractors until their clutch limit is reached (repeat clicking is felt as knob is turned) and then press firmly on the front of the DEU to ensure it is fully seated. Re-tighten the extractors.
NOTE: This is to ensure the DEU is fully seated.
 - (b) If the display unit operates normal, you corrected the fault.
 - (c) If the display unit problem continues, then continue.
- (5) Clean the air vents of the DU reported as intermittently blank. To do this, do this task: How to Clean the Holes on the Rear of the Display Unit, AMM TASK 31-62-11-100-803.
 - (a) If you cleaned the air vents holes of all the DUs because of blockage, then you corrected the fault.
 - (b) If there was blockage of less than 25 percent of the holes for the DU, then continue.
- (6) Make sure that the display units have sufficient cooling air flow. To do this, do this task: Flight Compartment Display Unit Air Flow Test, AMM TASK 21-27-00-700-806.
 - (a) If the display unit operates normal, you corrected the fault.
 - (b) If the display unit problem continues, then continue.
- (7) For DEU-1 and DEU-2, do this task: CDS BITE Procedure, 31-62 TASK 801.
 - (a) Go to the fault isolation task for the applicable maintenance message related to the display unit to correct the fault.

———— **END OF TASK** ————

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825. No Flight Control Position Indication Data on Display Unit

A. Description

- (1) Flight Control Position Indication on Center Lower Display Unit, Left Inboard Display Unit, and/or Right Inboard Display Unit missing data.

B. Possible Causes

- (1) Sensor Failure
- (2) DFDAU internal failure
- (3) Display Unit internal failure
- (4) Flight Data Recorder OFF Light On
- (5) Wiring problem

C. Related Data

- (1) SSM 31-31-14
- (2) WDM 27-18-11
- (3) WDM 31-35-02

D. Fault Isolation Procedure

- (1) Open and close this circuit breaker:

CAPT Electrical System Panel, P18-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	8	C00544	FLIGHT RECORDER POSITION SENSOR

- (a) If the Display Unit has Flight Control Surface Position Indication data, then you corrected the fault.
 - (b) If there is no Flight Control Surface Position Indication data, then continue.
- (2) Do the FDAU BITE procedure. To do the BITE procedure, do this task: Digital Flight Data Acquisition Unit (DFDAU) BITE Procedure, 31-31 TASK 801.
 - (a) If one of the fault lights on the FDAU are on, then refer to the table at the end of the BITE procedure to find the fault isolation task.
 - (b) If the fault lights on the FDAU are off, then continue.
- (3) For the Display Unit do this task: CDS Display Unit Problems - Fault Isolation, 31-63 TASK 824.
 - (a) If there is a maintenance message, then go to the maintenance message index at the beginning of the FIM.
 - (b) If there is no maintenance message(s), then continue.
- (4) For the Flight Data Recorder OFF Light On, do this task: Flight Data Recorder OFF Light On - Fault Isolation, 31-31 TASK 805.
 - (a) If the Display Unit has Flight Control Surface Position Indication data, then you corrected the fault.
 - (b) If there is no Flight Control Surface Position Indication data, then continue.
- (5) Do this check of the wiring between the DFDAU and the L and R Aileron Position Transmitters:
 - (a) Remove the DFDAU, M675. To remove it, do this task: AMM TASK 31-31-22-000-801.
 - (b) Disconnect connector D3574 and D3572 from the Aileron Position Transmitters.

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- (c) Do a continuity check between the pins on the connector of the DFDAU and the connectors of the L Aileron Position Transmitter and the R Aileron Position Transmitter.

D2295B	D3574
pin B2	pin 3
pin B3	pin 5
pin B1	pin 4

D2295E	D3572
pin A14	pin 3
pin A15	pin 5
pin A13	pin 4

- (d) If you find a problem with the wiring, then do these steps:
- 1) Repair or replace the wiring.
 - 2) Re-install the DFDAU, M675. To install it, do this task: AMM TASK 31-31-22-400-801.
 - 3) If the Display Unit has Flight Control Surface Position Indicating data, then you corrected the fault.
- (6) Do this wiring check for the DFDAU, M675 (WDM 31-35-02).
- (a) Remove the DFDAU, M675. This is the task: AMM TASK 31-31-22-000-801.
 - (b) Disconnect the electrical connector D3973D from the DEU 1, M1808.
 - (c) Disconnect the electrical connector D3975D from the DEU 2, M1809.
 - (d) Do a wiring check as follows:

Wiring Check Header

DFDAU	DEU 1
D2295E	D3973D
H5	C5
H6	D5

Wiring Check Table

DFDAU	DEU 2
D2295E	D3975D
H5	C5
H6	D5

- (e) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - a) Reconnect the electrical connector D3973D to the DEU 1, M1808.
 - b) Reconnect the electrical connector D3975D to the DEU 2, M1809.
 - c) Re-install the DFDAU, M675. This is the task: AMM TASK 31-31-22-400-801.
 - 2) If the Display Unit has Flight Control Surface Position Indicating data, then you corrected the fault.

———— **END OF TASK** ————

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827. Red Bar Shows on Oil Pressure and Oil Temperature Scales - Fault Isolation

A. Description

- (1) The oil pressure and oil temperature scales/bars are red, instead of the usual white color.
- (2) Other symptoms include, but are not limited to, a missing red tick mark on the N1, EGT and N2 engine dials.

B. Possible Causes

- (1) When on the ground, the DEUs are missing engine limits data from the EECs, and the EECs do not have power. This event may apply to the limits of either engine or both engines at the same time.
- (2) This fault may occur if a new DEU is installed since the new DEU has not been exposed to EEC downloaded engine limits.

C. Initial Evaluation

- (1) A red bar on the oil pressure and oil temperature scale/bar shows that the recording in the DEUs non-volatile memory of the downloaded engine limits data are missing, or have been erased.

D. Fault Isolation Procedure

- (1) Put the engine start switches to "CONT" for a minimum of 10 seconds. This will cause the EECs to transmit all of the download limits to the DEU.

————— **END OF TASK** —————

828. Display Units are Blanking and/or DEU-1 Restarts During an APU Start on Battery Only - Fault Isolation

A. Description

- (1) This task is for these Observed Faults:
 - (a) DU are blanking during an APU Start on Battery only'
 - (b) DEU-1 restarts during an APU Start on Battery only.
- (2) During the APU start sequence on battery only, the Main Battery Voltage drops below 19 Volts which causes blanking of the DU for 1-2 seconds. The Voltage drop can also cause the DEU 1 to restart, which will cause the DU to go blank for up to 1.5 minutes.

B. Possible Causes

- (1) Battery Charger, M5
- (2) Coaxial Couplers, M1810 (M1811, M1812, M1813)
- (3) Display Units (DUs), N187 (N188, N189, N190, N191, N192)
- (4) Display Electronic Unit 1 (DEU 1), M1808
- (5) Instrument Switching Module, P5-28
- (6) Start Converter Unit (SCU), M1710

C. Related Data

- (1) CDS Display Unit Problems - Fault Isolation, 31-63 TASK 824
- (2) Main Battery Charger Operational Test, AMM TASK 24-31-21-710-801
- (3) DU Loop Test Procedure, 31-62 TASK 804
- (4) DSPLY SOURCE Message Shows On The Display - Fault Isolation, 31-63 TASK 820

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- (5) DEU Self-Test Procedure, 31-62 TASK 802
- (6) APU Starting and Operation, AMM TASK 49-11-00-860-801

D. Initial Evaluation

- (1) If the DUs “blinking” and/or the DEU 1 restart occurred with the conditions that follow, then do the Fault Isolation Procedure below.
 - No electrical power is provided to the aircraft.
 - On the Electrical Panel, P5, the BAT Switch is set to ON.
 - The Display Units on the Captain's side are energized.
 - On the Electrical Panel, P5, the APU Switch is set to START and released to ON.
 - The APU start sequence starts.
- (2) If the DUs “blinking” did not occur with the above conditions, then do the CDS Display Unit Problems - Fault Isolation, 31-63 TASK 824.
 - (a) Use Battery Power to start the APU. This is the task: APU Starting and Operation, AMM TASK 49-11-00-860-801.
 - 1) If the DUs “blinking” did not occur, then you have corrected the fault.
 - 2) If the DUs “blinking” occurred, then continue.

E. Fault Isolation Procedure

- (1) Do the Main Battery Charger Operational Test, AMM TASK 24-31-21-710-801.
 - (a) If the test is not satisfactory, then replace the Main Battery Charger, M5. These are the tasks:
 - Main Battery Charger Removal, AMM TASK 24-31-21-000-802-002
 - Main Battery Charger Installation, AMM TASK 24-31-21-400-802-002
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If the test is satisfactory, then continue.
- (2) Do the DU Loop Test Procedure, 31-62 TASK 804.

NOTE: This test checks all coax interfaces between the selected DEU and the six DU. A more detailed DU Loop Test can be found in the Common Display System - Operational Test, AMM TASK 31-62-00-710-801, Display Unit Operation Test.

 - (a) If the DU Loop Test is not satisfactory, then replace the defective Coaxial Coupler that you find. These are the tasks:
 - Coaxial Coupler Removal, AMM TASK 31-62-31-000-801
 - Coaxial Coupler Installation, AMM TASK 31-62-31-400-801
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If the DU Loop Test is satisfactory, then continue.
- (3) Do a test of the DEU 1.
 - (a) Make sure that the DISPLAY SOURCE Switch on the Instrument Switching Panel, P5-28, is in the AUTO position.
 - (b) Make sure that DSPLY SOURCE or CDS FAULT does not show on the Outboard Display Unit.

NOTE: When the airplane is in the air, the message DSPLY SOURCE shows when a DEU fails. On the ground, with all the engines OFF, DSPLY SOURCE does not show. During that condition, CDS FAULT shows in that location.

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- 1) If the DSPLY SOURCE or CDS FAULT message shows, then do this task: DSPLY SOURCE Message Shows On The Display - Fault Isolation, 31-63 TASK 820.
 - a) If necessary, replace the Instrument Switch Panel, P5-28. These are the tasks:
 - Instrument Switching Module Removal, AMM TASK 31-62-14-000-801
 - Instrument Switching Module Installation, AMM TASK 31-62-14-400-801<1> Do the Repair Confirmation at the end of this task.
 - b) If necessary, safestore the DEU Ground Faults. This is the task: BITE Data Output from the DEUs to a Portable Data Loader, AMM TASK 31-62-21-470-804.
- 2) If the DSPLY SOURCE or CDS FAULT message does not show, then continue.
- (4) Do the DEU Self-Test Procedure, 31-62 TASK 802.
 - (a) If the test shows DEU X SELF-TEST FAILED, then replace the applicable DEU. These are the tasks:
 - Display Electronic Unit Removal, AMM TASK 31-62-21-000-801
 - Display Electronic Unit Installation, AMM TASK 31-62-21-400-8011) Do the Repair Confirmation at the end of this task.
 - (b) If the test shows DEU X SELF-TEST PASSED, then continue.
- (5) Replace the Start Converter Unit (SCU). These are the tasks:

NOTE: The SCU limits the “current draw” during an APU start to prevent a battery voltage drop below 20 Volts. If the voltage drops below this limit, it can affect other related systems.

 - Start Converter Unit Removal, AMM TASK 49-41-61-000-801
 - Start Converter Unit Installation, AMM TASK 49-41-61-400-801
 - (a) Do the Repair Confirmation at the end of this task.

F. Repair Confirmation

- (1) Use Battery Power to start the APU. This is the task: APU Starting and Operation, AMM TASK 49-11-00-860-801.
 - (a) If the DUs “blinking” did not occur, then you have corrected the fault.
 - (b) If the DUs “blinking” occurred, continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

829. Flap Maneuvering Speed Cursors does not display on the PFD - Fault Isolation

A. Description

- (1) This task is for this Observed Fault:
 - (a) Flap Maneuvering Speed Cursors does not display on the PFD.
- (2) The flap maneuver speed information can be blank due to the following conditions:
 - (a) The airplane weight data is valid from the FMC but the flap lever detent setting from the FSEU.
 - (b) The actual flap position data from the FCC (back up data) is invalid at the various flap settings.
 - (c) The FSEU and FCC data busses were to become invalid.

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- (d) The airplane weight data is invalid from the EFIS control panel.
- (e) The Flap Control Lever Position Sensor is not adjusted.

B. Possible Causes

- (1) Related maintenance messages from other systems
- (2) Flap Control Lever Position Sensor adjustment

C. Fault Isolation Procedure

- (1) Look for these related maintenance messages on CDU:
 - FMC: 31-68431, 31-68432, 31-68471, 31-68472.
 - FSEU: 31-67470, 31-69471, 31-69472.
 - FCC: 31-67330, 31-67340, 31-69331, 31-69332, 31-69341, 31-69342.
- (a) If you find any related maintenance messages, then do these steps:
 - 1) Do the Fault Isolation Task for each related maintenance message.
 - 2) Do the Repair Confirmation at the end of this task.
- (b) If you do not find any related maintenance messages, then continue.
- (2) Adjust the Flap Control Lever Position Sensor, T538. This is the task: Flap Control Lever Position Sensor Adjustment and Test, AMM TASK 27-51-06-820-802.
 - (a) Do the Repair Confirmation at the end of this task.
- (3) Do the Engine Control Module Test from this task: Common Display System - System Test, AMM TASK 31-62-00-730-801.
 - (a) If the DISPLAY CONTROL PANEL message shows on the PFD, then do this task: CDS BITE Procedure, 31-62 TASK 801.
 - 1) Do the applicable Fault Isolation Task for the related maintenance messages.
 - 2) Do the Repair Confirmation at the end of this task.

D. Repair Confirmation

- (1) If the Observed Fault symptom is gone and does not occur in the next flight, then you corrected the problem.
- (2) If the Observed Fault symptom stays or occurs in the next flight, then continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

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801. No Faults During Flight Leg - Fault Isolation

A. Initial Evaluation

- (1) No maintenance action is necessary for this fault.

———— **END OF TASK** ————

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