

CHAPTER

26

FIRE PROTECTION



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

**CHAPTER 26
FIRE PROTECTION**

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1 thru 3	Oct 15/2023		216	Oct 15/2021		221	Oct 15/2021	
4	BLANK		217	Oct 15/2021		222	Oct 15/2021	
26-HOW TO USE THE FIM			218	Oct 15/2021		223	Oct 15/2021	
1	Oct 15/2021		219	Jun 15/2023		224	BLANK	
2	Oct 15/2021		220	Oct 15/2021		26-18 TASKS		
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5	Oct 15/2021		223	Oct 15/2021		203	Oct 15/2021	
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101	Feb 15/2023		226	Jun 15/2023		206	Feb 15/2022	
102	Jun 15/2023		227	Jun 15/2023		207	Oct 15/2021	
103	Feb 15/2023		228	BLANK		208	Oct 15/2021	
104	BLANK		26-14 TASKS			209	Oct 15/2021	
26-MAINT MSG INDEX			201	Jun 15/2023		210	Oct 15/2021	
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202	Jun 15/2022		207	Oct 15/2021		219	Feb 15/2023	
203	Jun 15/2022		208	Oct 15/2021		220	Feb 15/2023	
204	Jun 15/2022		209	Oct 15/2021		221	Feb 15/2023	
205	Oct 15/2021		210	Oct 15/2021		222	Feb 15/2023	
206	Oct 15/2021		211	Oct 15/2022		223	Feb 15/2023	
207	Oct 15/2021		212	Oct 15/2021		224	Feb 15/2023	
208	Oct 15/2021		213	Oct 15/2021		225	Feb 15/2023	
209	Oct 15/2021		214	Oct 15/2021		226	Feb 15/2023	
210	Oct 15/2021		215	Oct 15/2021		227	Feb 15/2023	
211	Jun 15/2022		216	Oct 15/2021		228	Feb 15/2023	
212	Oct 15/2021		217	Oct 15/2022		229	Feb 15/2023	
213	Oct 15/2021		218	Oct 15/2021		230	Feb 15/2023	
214	Oct 15/2021		219	Oct 15/2021		231	Feb 15/2023	
215	Oct 15/2021		220	Oct 15/2021				

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232	Feb 15/2023		268	Feb 15/2023		298.6	Feb 15/2023	
233	Feb 15/2023		269	Feb 15/2023		298.7	Feb 15/2023	
234	Feb 15/2023		270	Feb 15/2023		298.8	Feb 15/2023	
235	Feb 15/2023		271	Feb 15/2023		298.9	Feb 15/2023	
236	Feb 15/2023		272	Feb 15/2023		298.10	Feb 15/2023	
237	Feb 15/2023		273	Feb 15/2023		298.11	Feb 15/2023	
238	Feb 15/2023		274	Feb 15/2023		298.12	Feb 15/2023	
239	Feb 15/2023		275	Feb 15/2023		298.13	Feb 15/2023	
240	Feb 15/2023		276	Feb 15/2023		298.14	Feb 15/2023	
241	Feb 15/2023		277	Feb 15/2023		298.15	Feb 15/2023	
242	Feb 15/2023		278	Feb 15/2023		298.16	Feb 15/2023	
243	Feb 15/2023		279	Feb 15/2023		298.17	Feb 15/2023	
244	Feb 15/2023		280	Feb 15/2023		298.18	Feb 15/2023	
245	Feb 15/2023		281	Feb 15/2023		298.19	Feb 15/2023	
246	Feb 15/2023		282	Feb 15/2023		298.20	Feb 15/2023	
247	Feb 15/2023		283	Feb 15/2023		298.21	Feb 15/2023	
248	Feb 15/2023		284	Feb 15/2023		298.22	Feb 15/2023	
249	Feb 15/2023		285	Feb 15/2023		298.23	Feb 15/2023	
250	Feb 15/2023		286	Feb 15/2023		298.24	Feb 15/2023	
251	Feb 15/2023		287	Feb 15/2023		298.25	Feb 15/2023	
252	Feb 15/2023		288	Feb 15/2023		298.26	Jun 15/2023	
253	Feb 15/2023		289	Feb 15/2023		298.27	Feb 15/2023	
254	Feb 15/2023		290	Feb 15/2023		298.28	Feb 15/2023	
255	Feb 15/2023		291	Feb 15/2023		298.29	Feb 15/2023	
256	Feb 15/2023		292	Feb 15/2023		298.30	Feb 15/2023	
257	Feb 15/2023		293	Feb 15/2023		298.31	Feb 15/2023	
258	Feb 15/2023		294	Feb 15/2023		298.32	Feb 15/2023	
259	Feb 15/2023		295	Feb 15/2023		298.33	Feb 15/2023	
260	Feb 15/2023		296	Feb 15/2023		298.34	Feb 15/2023	
261	Feb 15/2023		297	Feb 15/2023		298.35	Feb 15/2023	
262	Feb 15/2023		298	Feb 15/2023		298.36	Feb 15/2023	
263	Feb 15/2023		298.1	Feb 15/2023		298.37	Feb 15/2023	
264	Feb 15/2023		298.2	Feb 15/2023		298.38	Feb 15/2023	
265	Feb 15/2023		298.3	Feb 15/2023		298.39	Feb 15/2023	
266	Feb 15/2023		298.4	Feb 15/2023		298.40	Feb 15/2023	
267	Feb 15/2023		298.5	Feb 15/2023		298.41	Feb 15/2023	

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ECCN 9E991 BOEING PROPRIETARY - See title page for details



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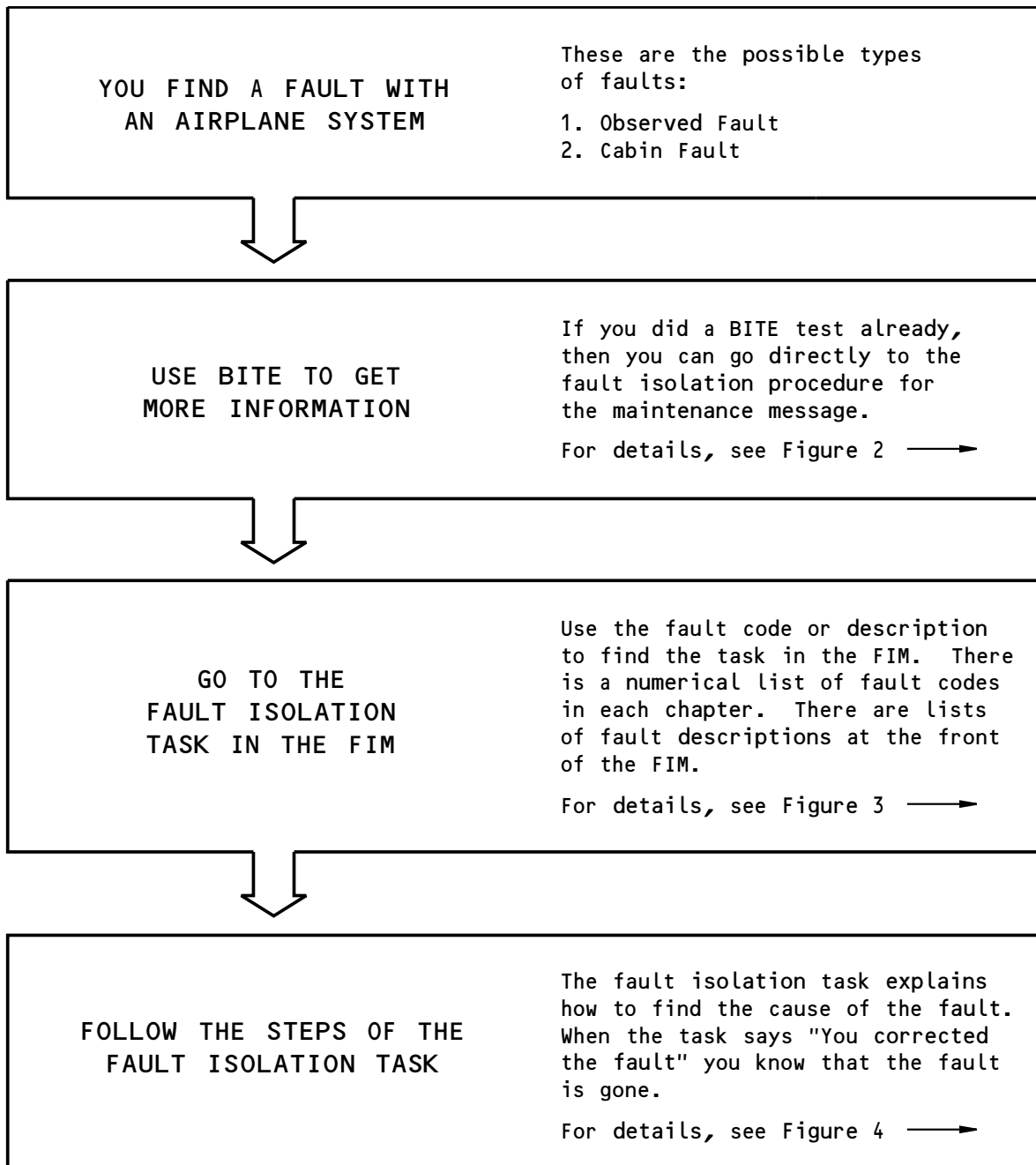
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26-18 TASKS (cont)			26-20 TASKS (cont)					
298.42	Feb 15/2023		215	Oct 15/2021				
298.43	Feb 15/2023		216	Oct 15/2021				
298.44	Feb 15/2023		217	Oct 15/2021				
298.45	Feb 15/2023		218	Feb 15/2022				
298.46	Feb 15/2023		26-23 TASKS					
298.47	Feb 15/2023		201	Oct 15/2021				
298.48	Feb 15/2023		202	Oct 15/2021				
298.49	Feb 15/2023		203	Oct 15/2021				
298.50	Feb 15/2023		204	Oct 15/2021				
298.51	Feb 15/2023		205	Oct 15/2021				
298.52	Feb 15/2023		206	Oct 15/2021				
298.53	Feb 15/2023		207	Feb 15/2023				
298.54	Feb 15/2023		208	Oct 15/2021				
298.55	Feb 15/2023		209	Oct 15/2021				
298.56	BLANK		210	BLANK				
26-18 TASK SUPPORT			26-99 TASKS					
301	Oct 15/2021		201	Oct 15/2021				
302	Oct 15/2021		202	BLANK				
303	Oct 15/2021							
304	Oct 15/2021							
305	Oct 15/2021							
306	Oct 15/2021							
26-20 TASKS								
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202	Oct 15/2021							
203	Oct 15/2021							
204	Oct 15/2021							
205	Oct 15/2021							
206	Oct 15/2021							
207	Oct 15/2021							
208	Oct 15/2021							
209	Oct 15/2021							
210	Oct 15/2021							
211	Oct 15/2021							
212	Oct 15/2021							
213	Oct 15/2021							
214	Oct 15/2021							

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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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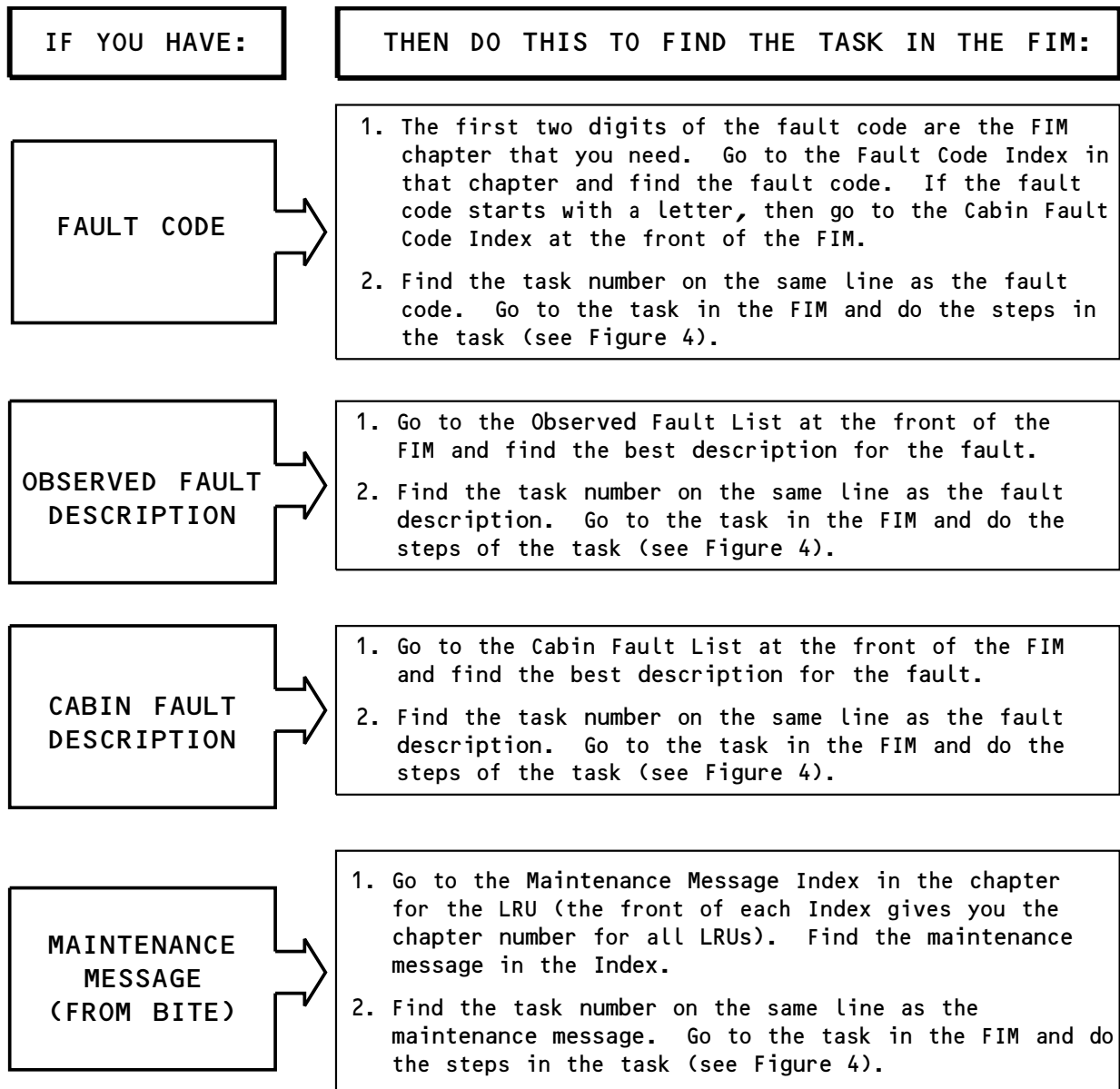
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G04979 S0000148579_V2

**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

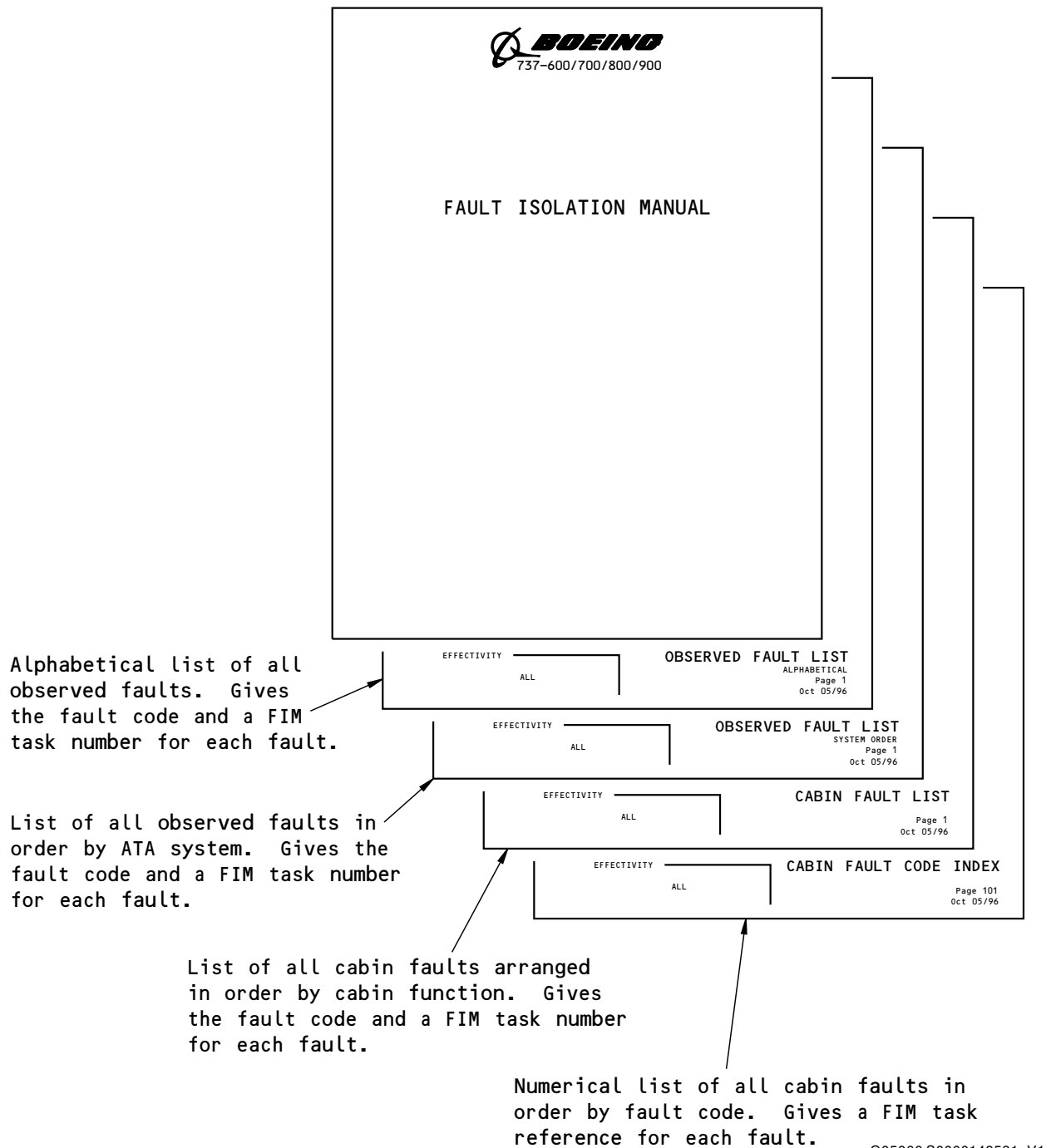
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Subjects at Front of FIM
Figure 5

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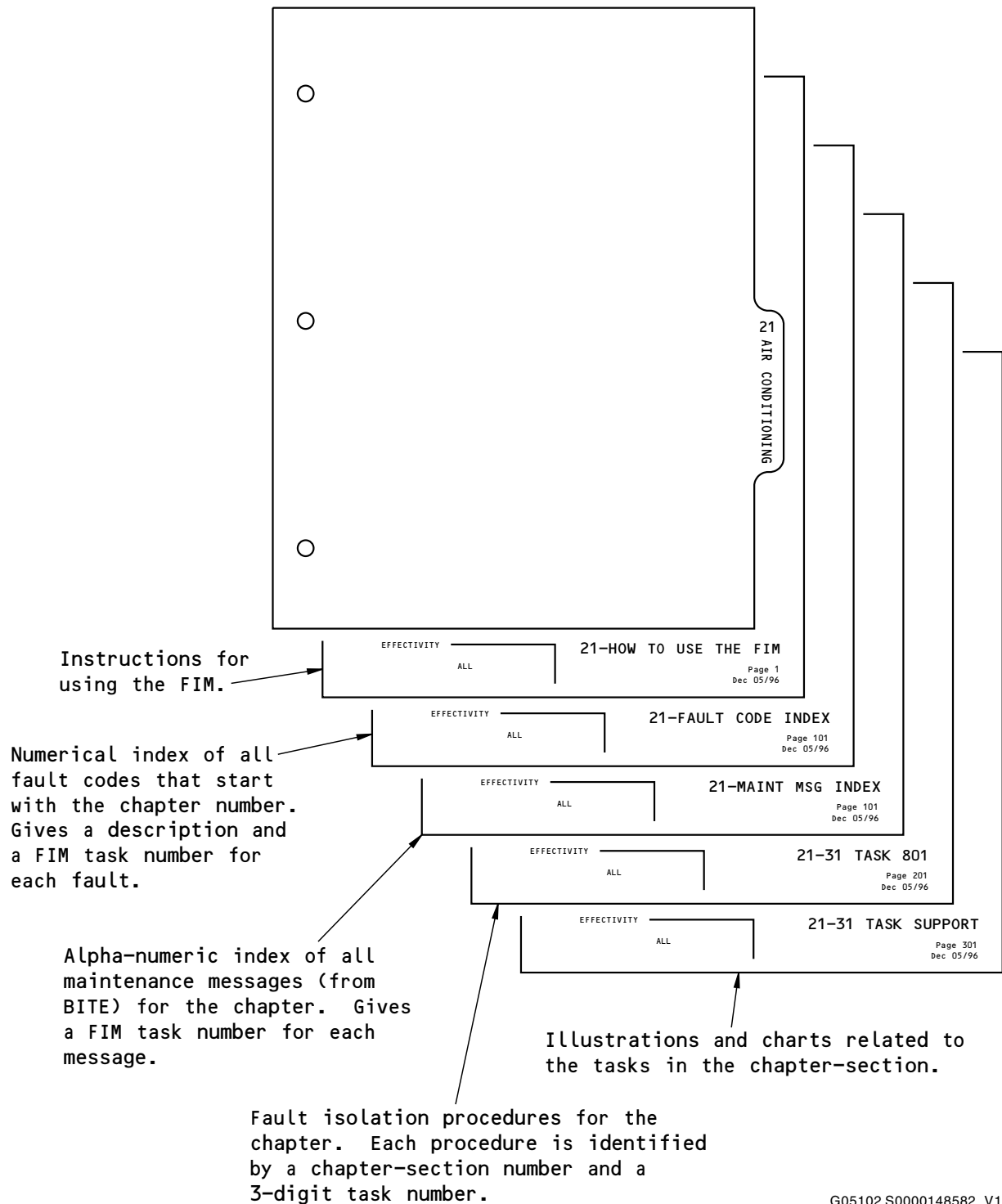
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G05102 S0000148582_V1

Subjects in Each FIM Chapter
Figure 6

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
261 011 51	ENG 1 OVERHEAT light: light is on.	26-10 TASK 811
261 011 52	ENG 2 OVERHEAT light: light is on.	26-10 TASK 811
261 021 51	Engine fire light: light is on - engine 1.	26-10 TASK 811
261 021 52	Engine fire light: light is on - engine 2.	26-10 TASK 811
261 030 51	OVHT/FIRE TEST: Test failed, warning lights and alarm do not operate - engine 1.	26-10 TASK 801
261 030 52	OVHT/FIRE TEST: Test failed, warning lights and alarm do not operate - engine 2.	26-10 TASK 801
261 040 51	FAULT light for the fire detection system on (P8 control stand) - engine 1.	26-10 TASK 801
261 040 52	FAULT light for the fire detection system on (P8 control stand) - engine 2.	26-10 TASK 801
261 050 00	APU DET INOP light: light on.	26-10 TASK 801
261 060 00	APU: fire false alarm.	26-10 TASK 801
261 070 00	OVHT/FIRE TEST: Test failed, warning lights and alarm do not operate - APU.	26-10 TASK 801
261 075 00	Cargo fire test: DETECTOR FAULT light stays ON after TEST switch is pushed.	26-16 TASK 802
261 090 00	WHEEL WELL light: light on.	26-18 TASK 801
261 100 00	OVHT/FIRE TEST: Test failed, warning lights and alarm do not operate - wheel well.	26-18 TASK 833
261 110 00	WING-BODY OVERHEAT light: light on.	26-18 TASK 801
261 120 41	WING-BODY OVERHEAT light: light does not come on when OVHT/TEST switch is pushed - left.	26-18 TASK 834
261 120 42	WING-BODY OVERHEAT light: light does not come on when OVHT/TEST switch is pushed - right.	26-18 TASK 834
261 120 48	WING-BODY OVERHEAT light: light does not come on when OVHT/TEST switch is pushed - left and right.	26-18 TASK 834
261 200 44	Cargo fire test: Test failed, FWD cargo fire light does not come on, DETECTOR FAULT light is off.	26-16 TASK 806
261 200 45	Cargo fire test: Test failed, AFT cargo fire light does not come on, DETECTOR FAULT light is off.	26-16 TASK 806
261 205 44	Cargo fire test: Test failed, FWD cargo fire light does not come on, DETECTOR FAULT light comes on - DET SELECT switch at A.	26-16 TASK 804
261 205 45	Cargo fire test: Test failed, AFT cargo fire light does not come on, DETECTOR FAULT light comes on - DET SELECT switch at A.	26-16 TASK 804

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
261 210 44	Cargo fire test: Test failed, FWD cargo fire light does not come on, DETECTOR FAULT light comes on - DET SELECT switch at B.	26-16 TASK 804
261 210 45	Cargo fire test: Test failed, AFT cargo fire light does not come on, DETECTOR FAULT light comes on - DET SELECT switch at B.	26-16 TASK 804
261 215 44	Cargo fire test: Test failed, FWD cargo fire light does not come on, DETECTOR FAULT light comes on - DET SELECT switch at NORM.	26-16 TASK 804
261 215 45	Cargo fire test: Test failed, AFT cargo fire light does not come on, DETECTOR FAULT light comes on - DET SELECT switch at NORM.	26-16 TASK 804
261 220 00	Cargo fire test: Test failed, warning lights and alarm do not operate.	26-16 TASK 807
261 225 00	Cargo fire detection: MAIN cargo fire light on (false alarm).	26-16 TASK 801
261 225 44	Cargo fire detection: FWD cargo fire light on (false alarm).	26-16 TASK 801
261 225 45	Cargo fire detection: AFT cargo fire light on (false alarm).	26-16 TASK 801
261 641 00	Smoke Detector in Lavatory: Red light flashes.	26-14 TASK 802
262 010 00	Engine fire extinguishing: indication not normal when the EXT TEST switch is moved to 1.	26-20 TASK 801
262 020 00	Engine fire extinguishing: indication not normal when the EXT TEST switch is moved to 2.	26-20 TASK 801
262 030 00	Engine fire extinguishing: left bottle does not release extinguishant when the fire handle is turned.	26-20 TASK 803
262 040 00	Engine fire extinguishing: right bottle does not release extinguishant when the fire handle is turned.	26-20 TASK 803
262 050 00	L BOTTLE DISCHARGED light: light on for the engine fire extinguishing.	26-20 TASK 802
262 060 00	R BOTTLE DISCHARGED light: light on for the engine fire extinguishing.	26-20 TASK 802
262 070 00	APU BOTTLE DISCHARGED light for the APU fire extinguishing system: light on.	26-20 TASK 802
262 080 00	APU fire extinguishing: indication not normal when the EXT TEST switch is moved to 1 or 2.	26-20 TASK 801
262 090 00	Fire extinguisher, flight compartment: seal broken or missing.	26-99 TASK 801
262 100 00	Fire extinguisher, flight compartment: used.	26-99 TASK 801
262 110 00	Fire extinguisher, flight compartment: missing.	26-99 TASK 801
262 120 00	APU fire extinguishing: Bottle does not release extinguishant when the fire handle is turned.	26-20 TASK 803
262 130 00	APU fire extinguishing: Bottle does not release extinguishant when activated at the remote APU fire control panel.	26-20 TASK 804

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262 140 00	APU fire extinguishing: Bottle does not release extinguishant automatically, extinguishant releases when manually activated.	26-20 TASK 805
262 200 00	Cargo fire extinguishing: Bottle does not release extinguishant when DISCH switch is pushed.	26-23 TASK 803
262 205 00	Cargo fire extinguishing: DISCH light on, DISCH switch not pushed.	26-23 TASK 802
262 210 44	Cargo fire test: Test failed, EXT FWD light does not come on.	26-23 TASK 812
262 210 45	Cargo fire test: Test failed, EXT AFT light does not come on.	26-23 TASK 812
262 221 00	APU fire extinguishing: APU light on fire control panel comes on when not commanded.	26-20 TASK 806
262 222 50	Fire extinguishing: during test fire handle light does not come on - APU.	26-20 TASK 807
262 222 51	Fire extinguishing: during test fire handle light does not come on - engine 1.	26-20 TASK 807
262 222 52	Fire extinguishing: during test fire handle light does not come on - engine 2.	26-20 TASK 807

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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 INTRROGTR	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
Engine Accessory Unit/TR STOW ENG 2	EAU/TR STOW-ENG 2	78
Engine and Auxiliary Power Unit Fire Detection Control Module	ENG/APU FIRE	26
Enhanced Digital Flight Control Computer-A	EDFCC-A	22
Enhanced Digital Flight Control System	EDFCS	22
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
CEU - LWR AFT	A1 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	A1 (stays ON)	26-16 TASK 803
CEU - LWR AFT	A1 and A2 (stay ON)	26-16 TASK 803
CEU - LWR AFT	A1, A2 and A3 (stay ON)	26-16 TASK 803
CEU - LWR AFT	A2 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	A2 (stays ON)	26-16 TASK 803
CEU - LWR AFT	A3 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	A3 (stays ON)	26-16 TASK 803
CEU - LWR AFT	B1 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	B1 (stays ON)	26-16 TASK 803
CEU - LWR AFT	B1 and B2 (stay ON)	26-16 TASK 803
CEU - LWR AFT	B1, B2 and B3 (stay ON)	26-16 TASK 803
CEU - LWR AFT	B2 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	B2 (stays ON)	26-16 TASK 803
CEU - LWR AFT	B3 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	B3 (stays ON)	26-16 TASK 803
CEU - LWR FWD	A1 (OFF during self-test)	26-16 TASK 805
CEU - LWR FWD	A1 (stays ON)	26-16 TASK 803
CEU - LWR FWD	A1 and A2 (stay ON)	26-16 TASK 803
CEU - LWR FWD	A2 (OFF during self-test)	26-16 TASK 805
CEU - LWR FWD	A2 (stays ON)	26-16 TASK 803
CEU - LWR FWD	B1 (OFF during self-test)	26-16 TASK 805
CEU - LWR FWD	B1 (stays ON)	26-16 TASK 803
CEU - LWR FWD	B1 and B2 (stay ON)	26-16 TASK 803
CEU - LWR FWD	B2 (OFF during self-test)	26-16 TASK 805
CEU - LWR FWD	B2 (stays ON)	26-16 TASK 803
CEU - MAIN AFT	A6 (stays ON)	26-16 TASK 803
CFCP	AFT EXT (Green Front Panel Light Not ON During Test)	26-23 TASK 812
CFCP	ARM AFT (Red Front Panel Fault Light Not ON During Test)	26-16 TASK 806
CFCP	ARM FWD (Red Front Panel Fault Light Not ON During Test)	26-16 TASK 806
CFCP	DETECTOR FAULT (Amber Front Panel Fault Light ON During Test)	26-16 TASK 804
CFCP	DISCH (Amber Front Panel Fault Light ON)	26-23 TASK 802
CFCP	FWD EXT (Green Front Panel Light Not ON During Test)	26-23 TASK 812
ENG/APU FIRE	APU - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	APU - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 808

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ENG/APU FIRE	APU - LOWER DETECTOR FAULT	26-10 TASK 802
ENG/APU FIRE	APU - TAILPIPE DETECTOR FAULT	26-10 TASK 802
ENG/APU FIRE	APU - UPPER DETECTOR FAULT	26-10 TASK 802
ENG/APU FIRE	APU - WIRING OPEN OR DETECTOR(S) FAULT	26-10 TASK 809
ENG/APU FIRE	APU - WIRING SHORT TO GND	26-10 TASK 809
ENG/APU FIRE	ENGINE 1 - LOOP A - CORE LEFT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - CORE RIGHT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - FAN LOWER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - FAN UPPER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	ENGINE 1 - LOOP A - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 810
ENG/APU FIRE	ENGINE 1 - LOOP A - WIRING OPEN OR DETECTOR(S) FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - WIRING SHORT TO GND	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - CORE LEFT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - CORE RIGHT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - FAN LOWER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - FAN UPPER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	ENGINE 1 - LOOP B - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 810
ENG/APU FIRE	ENGINE 1 - LOOP B - WIRING OPEN OR DETECTOR(S) FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - WIRING SHORT TO GND	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - CORE LEFT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - CORE RIGHT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - FAN LOWER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - FAN UPPER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	ENGINE 2 - LOOP A - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 810
ENG/APU FIRE	ENGINE 2 - LOOP A - WIRING OPEN OR DETECTOR(S) FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - WIRING SHORT TO GND	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - CORE LEFT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - CORE RIGHT DETECTOR FAULT	26-10 TASK 805

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ENG/APU FIRE	ENGINE 2 - LOOP B - FAN LOWER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - FAN UPPER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	ENGINE 2 - LOOP B - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 810
ENG/APU FIRE	ENGINE 2 - LOOP B - WIRING OPEN OR DETECTOR(S) FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - WIRING SHORT TO GND	26-10 TASK 805
WING/BODY OHT	00 - CONTROL OR POWER SUPPLY FAILURE	26-18 TASK 803
WING/BODY OHT	01 - 115VAC OR POWER SUPPLY CARD FAILURE	26-18 TASK 803
WING/BODY OHT	02 - 115VAC OR POWER SUPPLY CARD FAILURE	26-18 TASK 803
WING/BODY OHT	03 - CONTROL CARD FAILURE	26-18 TASK 803
WING/BODY OHT	04 - CONTROL CARD FAILURE	26-18 TASK 803
WING/BODY OHT	05 - CONTROL CARD FAILURE	26-18 TASK 803
WING/BODY OHT	10 - LEFT WING LE - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	12 - LEFT WING LE - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	14 - LEFT WING LE - ALARM	26-18 TASK 802
WING/BODY OHT	20 - LEFT AC PACK BAY - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	22 - LEFT AC PACK BAY - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	24 - LEFT AC PACK BAY - ALARM	26-18 TASK 802
WING/BODY OHT	30 - KEELBEAM - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	32 - KEELBEAM - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	34 - KEELBEAM - ALARM	26-18 TASK 802
WING/BODY OHT	40 - AFT CARGO SECT. - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	42 - AFT CARGO SECT. - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	44 - AFT CARGO SECT. - ALARM	26-18 TASK 802
WING/BODY OHT	60 - RIGHT WING LE AND AC PACK BAY - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	62 - RIGHT WING LE AND AC PACK BAY - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	64 - RIGHT WING LE AND AC PACK BAY - ALARM	26-18 TASK 802
WING/BODY OHT	84 - WHEEL WELL FIRE - ALARM	26-18 TASK 802
WING/BODY OHT	98 - LOCAL TEST - NOT COMPLETE	26-18 TASK 803
WING/BODY OHT	AFT BODY APU OPEN	26-18 TASK 814
WING/BODY OHT	AFT BODY APU OVHT	26-18 TASK 815
WING/BODY OHT	AFT BODY APU SHRT	26-18 TASK 813
WING/BODY OHT	CONFIG INVALID 1	26-18 TASK 825
WING/BODY OHT	CONFIG INVALID 2	26-18 TASK 825

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
WING/BODY OHT	CONFIG INVALID 4	26-18 TASK 825
WING/BODY OHT	CONFIG INVALID 7	26-18 TASK 825
WING/BODY OHT	CONFIG MAX1	26-18 TASK 825
WING/BODY OHT	CONFIG MAX2	26-18 TASK 825
WING/BODY OHT	CONFIG NEXTGEN2	26-18 TASK 825
WING/BODY OHT	KEELBEAM OPEN	26-18 TASK 811
WING/BODY OHT	KEELBEAM OVHT	26-18 TASK 812
WING/BODY OHT	KEELBEAM SHRT	26-18 TASK 810
WING/BODY OHT	L PACK BAY OPEN	26-18 TASK 808
WING/BODY OHT	L PACK BAY OVHT	26-18 TASK 809
WING/BODY OHT	L PACK BAY SHRT	26-18 TASK 807
WING/BODY OHT	L WING OPEN	26-18 TASK 805
WING/BODY OHT	L WING OVHT	26-18 TASK 806
WING/BODY OHT	L WING SHRT	26-18 TASK 804
WING/BODY OHT	MWW LOOP A FIRE	26-18 TASK 823
WING/BODY OHT	MWW LOOP A OPEN	26-18 TASK 821
WING/BODY OHT	MWW LOOP A SHRT	26-18 TASK 819
WING/BODY OHT	PIN 16 FAULT	26-18 TASK 827
WING/BODY OHT	PIN 18 FAULT	26-18 TASK 828
WING/BODY OHT	PIN 19 FAULT	26-18 TASK 829
WING/BODY OHT	PIN 22 FAULT	26-18 TASK 830
WING/BODY OHT	PIN 23 FAULT	26-18 TASK 831
WING/BODY OHT	PIN 25 FAULT	26-18 TASK 832
WING/BODY OHT	PIN 3 FAULT	26-18 TASK 826
WING/BODY OHT	R SIDE OPEN	26-18 TASK 817
WING/BODY OHT	R SIDE OVHT	26-18 TASK 818
WING/BODY OHT	R SIDE SHRT	26-18 TASK 816

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801. Engine/APU Fire Detection Control Module BITE Procedure

A. General

- (1) The Engine & Auxiliary Power Unit (APU) Fire Detection Control Module, M279 is located on the E2-2 Shelf in the Electronic Equipment (EE) Compartment. The Engine & APU Fire Detection Control Module will be referred to as the Control Module throughout this procedure. Access the front panel of the Control Module to do the Built-In-Test Equipment (BITE) test.
- (2) The front of the Control Module contains five amber fault area lights, a FAULT/INOP TEST Switch, and three red fault display lights. The Control Module has these fault lights:
 - (a) ENGINE 1 LOOP A Fault Area Light
 - (b) ENGINE 1 LOOP B Fault Area Light
 - (c) ENGINE 2 LOOP A Fault Area Light
 - (d) ENGINE 2 LOOP B Fault Area Light
 - (e) APU Fault Area Light
 - (f) Three Fault Display Lights (red) which indicate the type of fault and the approximate location of the fault, if it is known.
- (3) The amber fault area lights indicate which loop has a fault. The red fault display lights tell the type of fault and location, if known. If there is a fault, the applicable fault area lights will stay on until the fault is corrected. For each combination of fault display lights, there is a related maintenance message.
- (4) If more than one of the amber fault area lights come on, then there are multiple faults. In this case, the Control Module employs a priority sequence. The red fault display lights indicate the fault for the first loop in the sequence. When that fault is corrected, the corresponding amber light goes off, and the red fault display lights change to indicate the fault for the next loop in the sequence. The priority sequence follows:
 - (a) ENGINE 1 LOOP A
 - (b) ENGINE 1 LOOP B
 - (c) ENGINE 2 LOOP A
 - (d) ENGINE 2 LOOP B
 - (e) APU
- (5) To do the BITE test, push and hold the FAULT/INOP TEST Switch for five seconds. If all of the fault lights come on when you do the test, and all of the fault lights go off when you release the switch, the test passes. If fault lights stay on after you release the switch, there is a fault.

B. BITE Procedure

- (1) Do these steps to do the BITE procedure for the Control Module:
 - (a) Make sure that the two OVHT DET Switches on the Engine and APU Fire Control Panel, P8-1, are in the NORMAL positions.
 - (b) Push and hold the FAULT/INOP TEST Switch on the Control Module for five seconds.
 - (c) On the Control Module on the E2-2 Shelf, make sure that these lights come on:
 - 1) ENGINE 1 LOOP A (amber)
 - 2) ENGINE 1 LOOP B (amber)
 - 3) ENGINE 2 LOOP A (amber)
 - 4) ENGINE 2 LOOP B (amber)
 - 5) APU (amber)

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- 6) The three FAULT DISPLAY Lights (red).
- (d) Release the FAULT/INOP TEST Switch.
- (e) On the Control Module on the E2-2 Shelf, make sure that these lights go off:
 - 1) ENGINE 1 LOOP A (amber)
 - 2) ENGINE 1 LOOP B (amber)
 - 3) ENGINE 2 LOOP A (amber)
 - 4) ENGINE 2 LOOP B (amber)
 - 5) APU (amber)
- 6) The three FAULT DISPLAY Lights (red).
- (f) If the lights on the Control Module go off, then the BITE test passed.
- (g) If lights on the Control Module stay on, then the BITE test fails and there is a fault.
- (h) Do these steps to find the applicable maintenance message if there is a fault:
 - 1) Examine the amber lights in the FAULT AREA on the Control Module.

NOTE: The amber lights indicate if the fault is in the APU or one of the engines. If the fault is in the engine, the light indicates whether it is engine 1 or 2, and whether it is loop A or B. If more than one of the lights are on, then there are multiple faults.
 - 2) Examine the red lights in the FAULT DISPLAY area on the Control Module.

NOTE: The red lights indicate if the fault is a wiring problem or a detector problem. If it is a detector problem, the lights indicate which detector has the problem.
 - 3) Refer to the table at the end of this task to find the Fault Isolation Task for the applicable maintenance message for the fault indicated by the FAULT AREA Light and the FAULT DISPLAY Lights.

NOTE: For example, if the amber ENGINE 1 LOOP A Light is ON and the three red FAULT DISPLAY Lights are ON-OFF-OFF, then the applicable maintenance message is "ENGINE 1 LOOP A - FAN LOWER".
- (i) If the message FAN UPPER FAULT is shown for the APU, then do these steps:

NOTE: The FAN UPPER FAULT display relates to the unexpected failure mode in which one of the heat detectors shows a fault because of high resistance.

 - 1) Measure the resistance of each APU Detector.

LOCATION	EQUIPMENT NUMBER	RESISTANCE (OHMS)
UPPER	M1755	2985 (+/- 297)
LOWER	M1756	2485 (+/- 112)
TAILPIPE	M1925	3945 (+/- 177)

- a) If the resistance of the detector is not in the range given, then replace the detector. These are the tasks:
 - APU Overheat Detector Element Removal, AMM TASK 26-15-01-000-801
 - APU Overheat Detector Element Installation, AMM TASK 26-15-01-400-801
- 2) If the replacement of any detector is not required, then replace the Control Module, M279. These are the tasks:

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- Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801
- Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
ENG/APU FIRE	APU - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	APU - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 808
ENG/APU FIRE	APU - LOWER DETECTOR FAULT	26-10 TASK 802
ENG/APU FIRE	APU - TAILPIPE DETECTOR FAULT	26-10 TASK 802
ENG/APU FIRE	APU - UPPER DETECTOR FAULT	26-10 TASK 802
ENG/APU FIRE	APU - WIRING OPEN OR DETECTOR(S) FAULT	26-10 TASK 809
ENG/APU FIRE	APU - WIRING SHORT TO GND	26-10 TASK 809
ENG/APU FIRE	ENGINE 1 - LOOP A - CORE LEFT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - CORE RIGHT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - FAN LOWER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - FAN UPPER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	ENGINE 1 - LOOP A - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 810
ENG/APU FIRE	ENGINE 1 - LOOP A - WIRING OPEN OR DETECTOR(S) FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP A - WIRING SHORT TO GND	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - CORE LEFT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - CORE RIGHT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - FAN LOWER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - FAN UPPER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	ENGINE 1 - LOOP B - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 810
ENG/APU FIRE	ENGINE 1 - LOOP B - WIRING OPEN OR DETECTOR(S) FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 1 - LOOP B - WIRING SHORT TO GND	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - CORE LEFT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - CORE RIGHT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - FAN LOWER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - FAN UPPER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP A - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	ENGINE 2 - LOOP A - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 810

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ENG/APU FIRE	ENGINE 2 - LOOP A - WIRING SHORT TO GND	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - CORE LEFT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - CORE RIGHT DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - FAN LOWER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - FAN UPPER DETECTOR FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - LOOP POWER	26-10 TASK 803
ENG/APU FIRE	ENGINE 2 - LOOP B - LOW DET. RESISTANCE CLEAN CONNECTIONS	26-10 TASK 810
ENG/APU FIRE	ENGINE 2 - LOOP B - WIRING OPEN OR DETECTOR(S) FAULT	26-10 TASK 805
ENG/APU FIRE	ENGINE 2 - LOOP B - WIRING SHORT TO GND	26-10 TASK 805

———— **END OF TASK** ————

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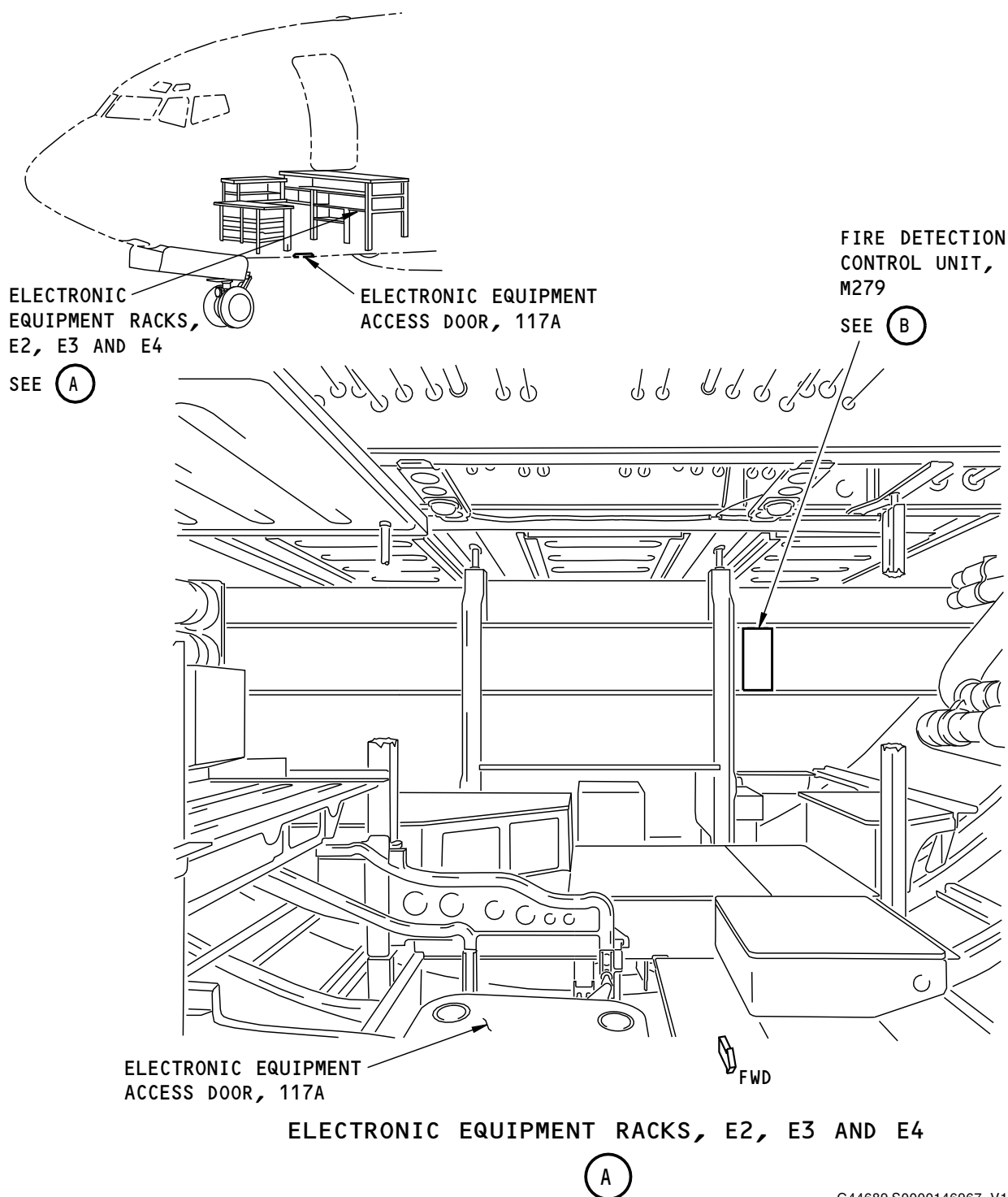
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G44689 S0000146967_V1

Engine and APU Fire Detection Control Unit, M279
Figure 201/26-10-00-990-802 (Sheet 1 of 2)

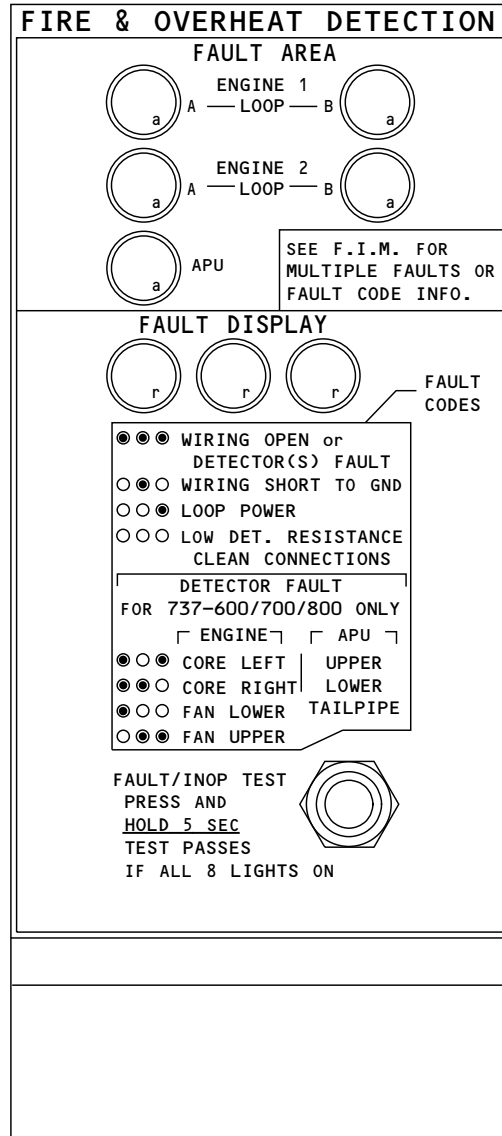
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FIRE DETECTION CONTROL UNIT, M279

(B)

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Engine and APU Fire Detection Control Unit, M279
Figure 201/26-10-00-990-802 (Sheet 2 of 2)

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802. APU - Overheat Detector - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) APU - UPPER
 - (b) APU - LOWER
 - (c) APU - TAILPIPE
- (2) These messages occur when the control module, M279 detects a fault with an APU fire detector. The detectors are listed in the table below.

DESCRIPTION	EQUIPMENT NUMBER
APU UPPER OVERHEAT DETECTOR ASSEMBLY	M1755
APU LOWER OVERHEAT DETECTOR ASSEMBLY	M1756
APU TAILPIPE OVERHEAT DETECTOR ASSEMBLY	M1925

B. Possible Causes

- (1) Fire detector Element
- (2) Control module, M279.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU

D. Related Data

- (1) (SSM 26-00-01)
- (2) (SSM 26-11-31)
- (3) (WDM 26-11-31)

E. Initial Evaluation

- (1) Do this task: Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.
 - (a) If a 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) Prepare the airplane for fault isolation.
 - (a) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

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- (b) To access the upper or lower APU detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

- (c) To access the APU tailpipe overheat detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
318BR	Tailcone Access Door

- (2) Replace the detector element called out in the maintenance message. These are the tasks:
- APU Overheat Detector Element Removal, AMM TASK 26-15-01-000-801
 - APU Overheat Detector Element Installation, AMM TASK 26-15-01-400-801
- (a) If the replacement test passes, then you corrected the fault.
- (b) If the replacement test fails, then continue.
- (3) Replace the control module, M279. These are the tasks:
- Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801
 - Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801
- (a) If the replacement test passes, then you corrected the fault.
- (4) Return the airplane to its usual condition.

Close this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

————— **END OF TASK** —————

803. Engine and APU - Loop Power - Fault Isolation

A. Description

- (1) This task is for these Maintenance Messages:
- (a) ENGINE 1 LOOP A - LOOP POWER
 - (b) ENGINE 1 LOOP B - LOOP POWER
 - (c) ENGINE 2 LOOP A - LOOP POWER
 - (d) ENGINE 2 LOOP B - LOOP POWER
 - (e) APU - LOOP POWER
- (2) These problems occur when the Loop Power to the Control Module (CM), M279 is interrupted.

B. Possible Causes

- (1) Fire Control Panel (FCP), P8-1
- (2) CM, M279.

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

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(Continued)

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
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

F/O Electrical System Panel, P6-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1

D. Related Data

- (1) WDM 26-11-11
- (2) WDM 26-11-21
- (3) WDM 26-11-31
- (4) SSM 26-00-01
- (5) SSM 26-11-11
- (6) SSM 26-11-21
- (7) SSM 26-11-31

E. Initial Evaluation

- (1) Do this task: Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.
 - (a) If a Maintenance Message shows, then do the Fault Isolation Procedure.
 - (b) If the Maintenance Message does not show, then there was an intermittent problem.

F. Fault Isolation Procedure

- (1) Do this wiring check (WDM 26-11-11,WDM 26-11-21,WDM 26-11-31):
 - (a) Do this task: Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801.
 - (b) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

- (c) At the FCP, P8-1, set the OVHT DET SW, S5, to the NORMAL position.
- (d) Do a check for power at the CM, M279.

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Control Module	Control Module	Voltage
D1002	D1002	
pin 1	pin 2	28V DC
pin 5	pin 2	28V DC
pin 6	pin 2	28V DC
D998	D998	Voltage
pin 1	pin 2	28V DC
pin 5	pin 2	28V DC
pin 6	pin 2	28VDC
D1000	D1000	Voltage
pin 1	pin 2	28V DC

- (e) If there is not 28V DC at the CM, M279, then replace the FCP, P8-1. These are the tasks:
- Engine and APU Fire Control Panel Removal, AMM TASK 26-00-01-000-801
 - Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801
 - 1) Do this task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.
 - 2) Do the Repair Confirmation at the end of this task.
- (f) If there is 28V DC, replace the CM, M279. These are the tasks:
- Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801
 - Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.
- (a) If a Maintenance Message does not show, then you corrected the problem.
- (b) If the problem still exists, continue the Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

805. Engine - Wiring Harness/Fire Detector - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
- (a) ENGINE 1 LOOP A - CORE LEFT
 - (b) ENGINE 1 LOOP B - CORE LEFT
 - (c) ENGINE 2 LOOP A - CORE LEFT
 - (d) ENGINE 2 LOOP B - CORE LEFT
 - (e) ENGINE 1 LOOP A - CORE RIGHT
 - (f) ENGINE 1 LOOP B - CORE RIGHT
 - (g) ENGINE 2 LOOP A - CORE RIGHT
 - (h) ENGINE 2 LOOP B - CORE RIGHT

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- (i) ENGINE 1 LOOP A - FAN LOWER
 - (j) ENGINE 1 LOOP B - FAN LOWER
 - (k) ENGINE 2 LOOP A - FAN LOWER
 - (l) ENGINE 2 LOOP B - FAN LOWER
 - (m) ENGINE 1 LOOP A - FAN UPPER
 - (n) ENGINE 1 LOOP B - FAN UPPER
 - (o) ENGINE 2 LOOP A - FAN UPPER
 - (p) ENGINE 2 LOOP B - FAN UPPER
 - (q) ENGINE 1 LOOP A - WIRING OPEN/DETECTOR FAULT
 - (r) ENGINE 1 LOOP B - WIRING OPEN/DETECTOR FAULT
 - (s) ENGINE 2 LOOP A - WIRING OPEN/DETECTOR FAULT
 - (t) ENGINE 2 LOOP B - WIRING OPEN/DETECTOR FAULT
 - (u) ENGINE 1 LOOP A - WIRING SHORT TO GROUND
 - (v) ENGINE 1 LOOP B - WIRING SHORT TO GROUND
 - (w) ENGINE 2 LOOP A - WIRING SHORT TO GROUND
 - (x) ENGINE 2 LOOP B - WIRING SHORT TO GROUND
- (2) These maintenance messages show when the Engine and APU Fire Detection Control Module, M279 detects a fault with an Engine Fire Detector Element.
- (a) Loop A and B Elements for each Detector Assembly have the same equipment number.

DETECTOR ASSEMBLY	EQUIPMENT NUMBER
ENGINE FAN UPPER FIRE DETECTOR ASSEMBLY	M1757
ENGINE FAN LOWER FIRE DETECTOR ASSEMBLY	M1758
ENGINE CORE LEFT FIRE DETECTOR ASSEMBLY	M1759
ENGINE CORE RIGHT FIRE DETECTOR ASSEMBLY	M1760

- (3) A CORE RIGHT fault indication could be caused by many different problems:
- Engine Right Core Detector
 - Upper and Lower Fan Detectors
 - Wire Bundle between the Left and Right Core Detector
 - Wire Bundle between the Right Core Detector and Engine and APU Fire Detection Control Module

B. Possible Causes

- (1) Loop A (B) Fan Detector Harness, MW0315 (MW0316)
- (2) Loop A (B) Core Detector Harness, MW0325 (MW0326)
- (3) ENG Fan UPR (LWR) Fire Detector Assembly Element, M1757 (M1758)
- (4) ENG Core Left (Right) Fire Detector Assembly Element, M1759 (M1760)
- (5) Engine and APU Fire Detection Control Module, M279

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ECCN 9E991 BOEING PROPRIETARY - See title page for details

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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	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

D. Related Data

- (1) WDM 26-11-11
- (2) WDM 26-11-21
- (3) SSM 26-00-01
- (4) SSM 26-11-11
- (5) SSM 26-11-21

E. Initial Evaluation

- (1) Do the Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.
 - (a) If the maintenance message does not show, there was an intermittent fault.
 - (b) If the maintenance message shows, do the Fault Isolation Procedure below.

F. Fault Isolation Procedure



DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

- (1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.
- (2) Open the applicable circuit breakers and install safety tags:

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
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

- (3) Remove the Engine and APU Fire Detection Control Module, M279 from the E2-2 Shelf. This is the task: Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801.

NOTE: A Wire Harness or Fire Detector fault could be intermittent because of the Engine Temperature. Do the Resistance check below in 20 minutes or less after the engines stop. Do the test again 30 minutes and again 40 minutes after the engines stop. If the Resistance is out of limits during the test, continue the Fault Isolation Procedure.

- (4) Do a Resistance check as follows (WDM 26-11-11, WDM 26-11-21):

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ENGINE 1, LOOP A

FIRE DET CTRL MODULE	FIRE DET CTRL MOD	
D1002	D1002	RESISTANCE
pin 25	pin 24	< 3.0 Ohms
pin 25	pin 2	862 ±40 Ohms

ENGINE 1, LOOP B

FIRE DET CTRL MODULE	FIRE DET CTRL MOD	
D1002	D1002	RESISTANCE
pin 12	pin 10	< 3.0 Ohms
pin 12	pin 2	862 ±40 Ohms

ENGINE 2, LOOP A

FIRE DET CTRL MODULE	FIRE DET CTRL MOD	
D998	D998	RESISTANCE
pin 25	pin 24	< 3.0 Ohms
pin 25	pin 2	862 ±40 Ohms

ENGINE 2, LOOP B

FIRE DET CTRL MODULE	FIRE DET CTRL MOD	
D998	D998	RESISTANCE
pin 12	pin 10	< 3.0 Ohms
pin 12	pin 2	862 ±40 Ohms

- (a) If the Resistance is as specified above, replace the Engine and APU Fire Detection Module, M279. These are the tasks:
- Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801,
 - Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801
- 1) Do the Repair Confirmation at the end of this task.
- (b) If the Resistance between pins 12 and 2 is not as specified above, then there is a Fire Detector problem at Loop B. Do these steps:
- 1) Disconnect the terminal lugs at one end of the Detector Loops.
 - 2) Do a Resistance check between each Fire Detector Terminal and Ground as follows (WDM 26-11-11):

ENG FAN UPR LOOP B

M1757		
Terminal		RESISTANCE
term B/2	GND	5921 ±297 Ohms

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ENG FAN LWR LOOP B

M1758

Terminal

term B/2 GND

RESISTANCE

3931 $\pm$ 297 Ohms

ENG CORE LEFT LOOP B

M1759

Terminal

term B/2 GND

RESISTANCE

3011 $\pm$ 297 Ohms

ENG CORE RIGHT LOOP B

M1760

Terminal

term B/2 GND

RESISTANCE

2471 $\pm$ 297 Ohms

- a) If a Detector Resistance is not in the limits, then replace the applicable detector. These are the tasks:

- Engine Fire Detector Element Removal, AMM TASK 26-11-01-000-801
- Engine Fire Detector Element Installation, AMM TASK 26-11-01-400-801

NOTE: If a Detector Resistance is much higher/lower than the specified value (many Hundreds of Ohms higher/lower), the Control Module can incorrectly identify a loop as a defective one.

- <1> Re-install the Engine and APU Fire Detection Module, M279. This is the task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.
- <2> Make sure that all wires/lugs at the Fire Detectors are correctly installed.
- <3> Do the Repair Confirmation at the end of this task.

- (c) If the Resistance between pins 25 and 2 is not as specified above, then there is a Fire Detector problem at Loop A. Do these steps:

- 1) Disconnect the terminal lugs at one end of the Detector Loops.
- 2) Do a Resistance check between each Fire Detector Terminal and Ground as follows (WDM 26-11-11):

ENG FAN UPR LOOP A

M1757

Terminal

term A/1 GND

RESISTANCE

5921 $\pm$ 297 Ohms

ENG FAN LWR LOOP A

M1758

Terminal

term A/1 GND

RESISTANCE

3931 $\pm$ 297 Ohms

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ENG CORE LEFT LOOP A

M1759

Terminal

term A/1 GND

RESISTANCE

3011 $\pm$ 297 Ohms

ENG CORE RIGHT LOOP A

M1760

Terminal

term A/1 GND

RESISTANCE

2471 $\pm$ 297 Ohms

- a) If a Detector Resistance is not in the limits, then replace the applicable detector. These are the tasks:

- Engine Fire Detector Element Removal, AMM TASK 26-11-01-000-801
- Engine Fire Detector Element Installation, AMM TASK 26-11-01-400-801

NOTE: If a Detector Resistance is much higher/lower than the specified value (many Hundreds of Ohms higher/lower), the Control Module can incorrectly identify a loop as a defective one.

<1> Re-install the Engine and APU Fire Detection Module, M279. This is the task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.

<2> Make sure that all wires/lugs at the Fire Detectors are correctly installed.

<3> Do the Repair Confirmation at the end of this task.

- (d) If the Resistance between pins 25 and 24 (Loop A) or pins 12 and 10 (Loop B) is more than 3.0 Ohms, then there is a problem in the Loop A (Loop B) Wiring Harness(es) MW0325/MW0315 (MW0326/MW0316).

- 1) For Loop A, disconnect connectors DP1501 and DP1552 and do a Resistance check of the MW0315 and MW0325 Wire Harnesses as follows (WDM 26-11-11):

- a) Connect a jumper between pins 1 and 2 of connector DP1501.
- b) Move the wires that are attached to the Upper and Lower Engine Fan Fire Detector while you measure the Resistance between pins 1 and 2 of connector DP1552.

<1> If the Resistance is more than 3.0 Ohms, replace Wire Harness MW0315. These are the tasks:

- Fan Fire Detection Harness Removal, AMM TASK 26-11-02-000-801
- Fan Fire Detection Harness Installation, AMM TASK 26-11-02-400-801

- c) Move the wires that are attached to the Left and Right Engine Core Fire Detector while you measure the Resistance.

- d) Do a Resistance check as follows:

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LEFT CORE FIRE DET M1759		3 O'CLOCK STRUT (PENETRATION) DJ2501	RESISTANCE
term A/1		pin 1	< 3.0 Ohms
term A/1	.....	pin 2	< 3.0 Ohms

RIGHT CORE FIRE DET M1760		3 O'CLOCK STRUT (PENETRATION) DJ2501	RESISTANCE
term A/1	.....	pin 2	< 3.0 Ohms
term A/1	.....	pin 1	< 3.0 Ohms

- <1> If the Resistance for each pair of terminal and pin is not as specified above, replace Wire Harness MW0325. These are the tasks:
- Core Fire Detection Harnesses - Removal, AMM TASK 26-11-02-000-802
 - Core Fire Detection Harness - Installation, AMM TASK 26-11-02-400-802
- e) Connect the connectors that you disconnected.
- f) Re-install the Engine and APU Fire Detection Module, M279. This is the task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.
- g) Do the Repair Confirmation at the end of this task.
- 2) For Loop B, disconnect connectors DP1601 and DP1620 and do a Resistance check of the MW0316 and MW0326 Wire Harnesses as follows (WDM 26-11-11):
- a) Connect a jumper between pins 1 and 2 of connector DP1601.
- b) Move the wires that are attached to the Upper and Lower Engine Fan Fire Detectors while you measure the Resistance between pins 3 and 4 of connector DP1620.
- <1> If the Resistance is more than 3.0 Ohms, replace Wire Harness MW0316. These are the tasks:
- Fan Fire Detection Harness Removal, AMM TASK 26-11-02-000-801
 - Fan Fire Detection Harness Installation, AMM TASK 26-11-02-400-801
- c) Move the wires that are attached to the Left and Right Engine Core Fire Detector while you measure the Resistance.
- d) Do a Resistance check as follows:

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LEFT CORE FIRE DET M1759		3 O'CLOCK STRUT (PENETRATION) DJ2601	RESISTANCE
term B/2		pin 1	< 3.0 Ohms
term B/2	.....	pin 2	< 3.0 Ohms

RIGHT CORE FIRE DET M1760		3 O'CLOCK STRUT (PENETRATION) DJ2601	RESISTANCE
term B/2	.....	pin 2	< 3.0 Ohms
term B/2	.....	pin 1	< 3.0 Ohms

<1> If the Resistance for each pair of terminal and pin is not as specified above, replace Wire Harness MW0326. These are the tasks:

- Core Fire Detection Harnesses - Removal, AMM TASK 26-11-02-000-802
- Core Fire Detection Harness - Installation, AMM TASK 26-11-02-400-802

- e) Connect the connectors that you disconnected.
 - f) Re-install the Engine and APU Fire Detection Module, M279. This is the task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.
 - g) Do the Repair Confirmation at the end of this task.
- (5) If the problem continues, do this check of the wiring:
- (a) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.
 - (b) If installed, remove the Engine and APU Fire Detection Module, M279. This is the task: Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801.
 - (c) Disconnect the wires from the Loop A (B) Engine Fan Upper and Lower Fire Detectors.
 - (d) Disconnect the wires from the Loop A (B) Left and Right Engine Core Fire Detectors.
 - (e) Examine the wiring between the Engine and APU Fire Detection Module and Engine Fan Upper Fire Detector Terminals as follows (WDM 26-11-11, WDM 26-11-21):

LOOP A		
	FIRE DET CTRL MODULE	FAN UPR FIRE DETECTOR
ENG 1	D1002	M1757
	pin 25	term A/1
ENG 2	D998	M1757
	pin 25	term A/1

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LOOP B

	FIRE DET CTRL MODULE	FAN UPR FIRE DETECTOR
ENG 1	D1002 pin 12	M1757 term B/2
ENG 2	D998 pin 12	M1757 term B/2

- (f) Examine the wiring between the Engine and APU Fire Detection Module and Engine 1 (2) Left Core Fire Detector Terminals as follows (WDM 26-11-11, WDM 26-11-21):

LOOP A

	FIRE DET CTRL MODULE	CORE RIGHT FIRE DETECTOR
ENG 1	D1002 pin 24	M1760 term A/1
ENG 2	D998 pin 24	M1760 term A/1

LOOP B

	FIRE DET CTRL MODULE	CORE RIGHT FIRE DETECTOR
ENG 1	D1002 pin 10	M1760 term B/2
ENG 2	D998 pin 10	M1760 term B/2

- (g) Examine the wiring between the Engine Fan Upper and Lower Fire Detector Terminals as follows (WDM 26-11-11):

	FAN UPR FIRE DETECTOR	FAN LWR FIRE DETECTOR
LOOP A	M1757 term A/1	M1758 term A/1
LOOP B	M1757 term B/2	M1758 term B/2

- (h) Examine the wiring between the Engine Fan Lower and Engine Core Left Fire Detector Terminals as follows (WDM 26-11-11):

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	FAN LWR FIRE DETECTOR	LEFT CORE FIRE DET
LOOP A	M1758	M1759
	term A/1	term A/1
LOOP B	M1758	M1759
	term B/2	term B/2

- (i) Examine the wiring between the Left and Right Engine Core Fire Detector Terminals as follows (WDM 26-11-11):

	LEFT CORE FIRE DET	RIGHT CORE FIRE DET
LOOP A	M1759	M1760
	term A/1	term A/1
LOOP B	M1759	M1760
	term B/2	term B/2

- (j) If you find a problem in the wiring, repair it as necessary.
- 1) Re-install the Engine and APU Fire Detection Module, M279. This is the task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.
 - 2) Connect the wires to the Fire Detectors.
 - 3) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Make sure that the Engine and APU Fire Control Module, M279 is installed in the E2-2 Shelf. This is the task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.
- (2) Remove the safety tags and close the applicable circuit breakers:

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
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

- (3) Do the Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.
 - (a) If the maintenance message does not show, then you corrected the problem.
 - 1) Put the airplane in its usual condition.

	OBEDY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.
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- a) Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

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- (b) If the maintenance message still shows, open the circuit breakers below and continue the Fault Isolation Procedure at the subsequent step.
- 1) Open the applicable circuit breakers and install safety tags:

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
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

———— **END OF TASK** ————

808. APU - Low Detector Resistance - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) APU - LOW DET RESISTANCE
- (2) This fault occurs when the control module, M279 detects a low resistance on the overheat detection loop. Usually this indication is caused by the failure of the control module, M279. The detector elements are listed in the table below.

DESCRIPTION	EQUIPMENT NUMBER
APU UPPER OVERHEAT DETECTOR ASSEMBLY	M1755
APU LOWER OVERHEAT DETECTOR ASSEMBLY	M1756
APU TAILPIPE OVERHEAT DETECTOR ASSEMBLY	M1925

B. Possible Causes

- (1) Control Module, M279
- (2) Dirty or damaged electrical connectors

C. Circuit Breakers

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

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	23	C00403	FIRE PROTECTION DETECTION APU

D. Related Data

- (1) (SSM 26-00-01)
- (2) (SSM 26-11-31)
- (3) (WDM 26-11-31)

E. Initial Evaluation

- (1) Do this task: Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.
- (a) If a 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) Prepare the airplane for connector inspection.

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- (a) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

- (b) To access the upper or lower APU detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

- (c) To access the APU tailpipe overheat detector, open this access panel:
316DR

- (2) Examine the connectors of the wiring in the APU overheat detection loop for contamination, wear, or damage.

- (a) Repair the wiring as required.

- 1) Do this task: Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.

- (3) If wire harness repair is not required, there is a detector fault.

- (a) Measure the resistance of the detector.

LOCATION	EQUIPMENT NUMBER	RESISTANCE (OHMS)
UPPER	M1755	2985 (+/- 297)
LOWER	M1756	2485 (+/- 112)
TAILPIPE	M1925	3945 (+/- 177)

- (b) If the resistance of the detector is not in the range given, then do these steps:

- 1) Replace the detector.

These are the tasks:

APU Overheat Detector Element Removal, AMM TASK 26-15-01-000-801

APU Overheat Detector Element Installation, AMM TASK 26-15-01-400-801

- (4) If the replacement of any detector is not required, then do these steps:

- (a) Replace the control module, M279.

These are the tasks:

Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801,

Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.

- (5) Return the airplane to its usual condition.

Close this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

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————— END OF TASK —————

809. APU - Wiring/Detector(s) - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) APU - WIRING OPEN/DETECTOR FAULT
 - (b) APU - WIRING SHORT TO GROUND
- (2) These faults occur when the control module, M279 detects a fault with the wiring between a detector and the control module. The Wiring Open or Detector(s) fault can occur because of the failure of two or more detectors in the same loop. The detectors are listed in the table below.

DESCRIPTION	EQUIPMENT NUMBER
APU UPPER OVERHEAT DETECTOR ASSEMBLY	M1755
APU LOWER OVERHEAT DETECTOR ASSEMBLY	M1756
APU TAILPIPE OVERHEAT DETECTOR ASSEMBLY	M1925

B. Possible Causes

- (1) Wiring
- (2) Fire detector elements

C. Circuit Breakers

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

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	23	C00403	FIRE PROTECTION DETECTION APU

D. Related Data

- (1) (SSM 26-00-01)
- (2) (SSM 26-11-31)
- (3) (WDM 26-11-31)

E. Initial Evaluation

- (1) Do this task: Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.
 - (a) If a 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) Prepare the airplane for fault isolation.
 - (a) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

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F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	14	C00033	AUX POWER UNIT CONT

- (b) To access the upper or lower APU detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

- (c) Remove the APU. To remove it, do this task: APU Power Plant Removal, AMM TASK 49-11-00-000-801.

- (d) To access the APU tailpipe overheat detector, open this access panel:

<u>Number</u>	<u>Name/Location</u>
318BR	Tailcone Access Door

- (e) To access the APU tailpipe overheat detector, open this access panel: 316DR

- (2) Examine the wiring for the loop called out in the maintenance message.

- (a) Repair or replace the damaged wiring.

- 1) Do this task: Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.

- a) If the maintenance message does not show, then you corrected the fault.
b) If the maintenance message shows, then continue.

- (3) Replace the control module, M279.

These are the tasks:

Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801,
Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.

- (a) If the replacement test passes, then you corrected the fault.

- (4) Return the airplane to its usual condition.

- (a) Close this access panel: 316DR

- (b) Do this task: APU Power Plant Installation, AMM TASK 49-11-00-400-801.

- (c) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
315A	APU Cowl Door

————— END OF TASK —————

810. Engine - Low Detector Resistance - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:

- (a) ENGINE 1 LOOP A - LOW DET. RESISTANCE CLEAN CONNECTIONS
(b) ENGINE 1 LOOP B - LOW DET. RESISTANCE CLEAN CONNECTIONS
(c) ENGINE 2 LOOP A - LOW DET. RESISTANCE CLEAN CONNECTIONS
(d) ENGINE 2 LOOP B - LOW DET. RESISTANCE CLEAN CONNECTIONS

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- (2) These maintenance messages show when the Engine and APU Fire Detection Control Module, M279 detects a problem with an Engine Fire Detector Element.
 - (a) Loop A and B Elements for each Detector Assembly have the same equipment number.

DETECTOR ASSEMBLY	EQUIPMENT NUMBER
ENGINE FAN UPPER FIRE DETECTOR ASSEMBLY	M1757
ENGINE FAN LOWER FIRE DETECTOR ASSEMBLY	M1758
ENGINE CORE LEFT FIRE DETECTOR ASSEMBLY	M1759
ENGINE CORE RIGHT FIRE DETECTOR ASSEMBLY	M1760

B. Possible Causes

- (1) ENG Fan UPR (LWR) Fire Detector Assembly Element, M1757 (M1758)
- (2) ENG Core Left (Right) Fire Detector Assembly Element, M1759 (M1760)
- (3) Fire Detection Control Module, M279

C. Circuit Breakers

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

D. Related Data

- (1) WDM 26-11-11
- (2) WDM 26-11-21
- (3) SSM 26-00-01
- (4) SSM 26-11-11
- (5) SSM 26-11-21

E. Initial Evaluation

- (1) Do the Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.
 - (a) If the maintenance message does not show, there was an intermittent fault.
 - (b) If the maintenance message shows, do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

 WARNING	DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. ACCIDENTAL OPERATION OF THE THRUST REVERSE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.
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- (1) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.

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- (2) Open the applicable circuit breakers and install safety tags:

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
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

- (3) Remove the Engine and APU Fire Detection Control Module, M279 from the E2-2 Shelf. This is the task: Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801.
- (4) Examine the wiring connectors in the indicated loop for contamination, wear, or damage.
- (a) If you find a problem in the wiring, repair the wiring as necessary.
- 1) Do the Repair Confirmation at the end of this task.
- (b) If the wiring is OK, do a Resistance check of the Engine Fire Detectors (WDM 26-11-11, WDM 26-11-21):
- 1) Disconnect the terminal lugs at one end of the Detector Loops.
- 2) Do a Resistance check between each Fire Detector Terminal and Ground as follows:

ENG FAN UPR LOOP A

M1757

Terminal

term A/1 GND

RESISTANCE

5921 $\pm$ 297 Ohms

ENG FAN LWR LOOP A

M1758

Terminal

term A/1 GND

RESISTANCE

3931 $\pm$ 297 Ohms

ENG CORE LEFT LOOP A

M1759

Terminal

term A/1 GND

RESISTANCE

3011 $\pm$ 297 Ohms

ENG CORE RIGHT LOOP A

M1760

Terminal

term A/1 GND

RESISTANCE

2471 $\pm$ 297 Ohms

ENG FAN UPR LOOP B

M1757

Terminal

term B/2 GND

RESISTANCE

5921 $\pm$ 297 Ohms

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ENG FAN LWR LOOP B

M1758

Terminal

term B/2 GND

RESISTANCE

3931 ±297 Ohms

ENG CORE LEFT LOOP B

M1759

Terminal

term B/2 GND

RESISTANCE

3011 ±297 Ohms

ENG CORE RIGHT LOOP B

M1760

Terminal

term B/2 GND

RESISTANCE

2471 ±297 Ohms

- 3) If the Fire Detector Resistance check is not as specified above, replace the applicable Engine Fire Detector Element. These are the tasks:
- Engine Fire Detector Element Removal, AMM TASK 26-11-01-000-801
 - Engine Fire Detector Element Installation, AMM TASK 26-11-01-400-801
- a) Make sure that all wires/lugs at the Fire Detectors are correctly installed.
- b) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Make sure that the Engine and APU Fire Control Module, M279 is installed in the E2-2 Shelf. This is the task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.
- (2) Remove the safety tags and close the applicable circuit breakers:

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
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

- (3) Do the Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801.
- (a) If the maintenance message does not show, then you corrected the problem.
- 1) Put the airplane in its usual condition.



WARNING

OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

- a) Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.

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- (b) If the maintenance message shows, then continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

811. Engine Fire Condition

A. Description

This task is for troubleshooting an engine overheat condition.

B. Possible Causes

- (1) Overheat conditions and duct leakage.
- (2) Fire detector element M1757, M1758, M1759, or M1760.
- (3) Fire detection control module M279.
- (4) Wiring.

C. Initial Evaluation

- (1) Do this task: Engine/APU Fire Detection Control Module BITE Procedure, 26-10 TASK 801
 - (a) If there is no faults found then do the Fault Isolation Procedure below.
 - (b) If the engine fire or overheat indication can not be duplicated, perform a high power engine run with N1 above 70%. Reference AMM PAGEBLOCK 71-00-00/201.

D. Fault Isolation Procedure

- (1) Do this task: Open the Fan Cowl Panels, AMM TASK 71-11-02-010-801-F00.
- (2) Do this task: Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00.
 - (a) Inspect for signs of fire or overheat damage.
 - (b) Inspect pneumatic ducting for loose clamps, wear or damage.
 - (c) Inspect engine fire detectors, elements and harness assemblies for wear or damage.
 - (d) Do this task: Engine Fire Detection Loop Resistance - System Test, AMM TASK 26-11-00-730-801.
 - (e) Do the necessary repair.
- (3) Do this task: Close the Thrust Reverser (Selection), AMM TASK 78-31-00-010-804-F00.
- (4) Do this task: Close the Fan Cowl Panels, AMM TASK 71-11-02-410-801-F00.
- (5) Do this task: Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801.

NOTE: The Engine Bleed Air System Health Check is not necessary if no maintenance was performed on the engine bleed air system.

————— **END OF TASK** —————

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802. Smoke Detector in Lavatory Red Light Flashes - Fault Isolation

A. Description

- (1) This task for this observed fault:
 - (a) Smoke Detector in Lavatory: Red light flashes.
- (2) When the light on the Lavatory Smoke Detector is red and flashes, the Lavatory Smoke Detector cannot sense smoke correctly.

B. Possible Causes

- (1) Lavatory Smoke Detector, M3

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
E	12	C01125	LAVATORY SMOKE

D. Initial Evaluation

- (1) Make sure that status LED on the Lavatory Smoke Detector, M3 is red and flashing.
 - (a) If the status LED on the Lavatory Smoke Detector, M3 goes OFF, then there was an intermittent fault.
 - (b) If the status LED on the Lavatory Smoke Detector, M3 is red and flashing, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the Lavatory Smoke Detector, M3. These are the tasks:
 - Lavatory Smoke Detector Removal (Kidde), AMM TASK 26-14-01-000-802
 - Lavatory Smoke Detector Installation (Kidde), AMM TASK 26-14-01-400-802
- (a) If the observed fault symptom is gone, then you corrected the problem.

———— **END OF TASK** ————

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801. Cargo Electronic Unit (CEU) BITE Procedure

A. General

- (1) The Cargo Electronic Unit (CEU)s are located behind access panels in the ceiling of the Forward and Aft Cargo Compartments.
 - (a) The Lower FWD CEU, M2236 monitors detectors in the Lower Cargo Forward Compartment.
 - (b) The Lower AFT CEU, M2237 monitors detectors in the Lower Cargo Aft Compartment.
 - (c) You must get access to the Front Panel of the CEU to do the BITE Test.
- (2) The CEU Front Panel has 16 Fault Lights, a PRESS-TO-TEST Switch, and a LAMP TEST Switch.
 - (a) The LAMP TEST Switch makes sure that all the Fault Lights come ON.
 - (b) The PRESS-TO-TEST Switch sends a signal to do a test of all the detectors in the compartment.
 - (c) If a Smoke Detector fails, or a Smoke Detector detects smoke, then the light for that detector will come ON.
 - (d) The 16 Fault Lights are not always used.
 - 1) If there are four detectors in the Cargo Bay, only four lights will be used.
 - 2) If there are six detectors in the Cargo Bay, only six lights will be used.
 - (e) The letter and number associated with each light is referred to as a maintenance message.
 - (f) The letters on the CEU Front Panel correspond to the position of the detectors on the Left (Right) Cargo Bay.
 - (g) The numbers on the CEU Front Panel correspond to the position of the detector from Forward to Aft.
 - 1) For example, the first detector on the left side of the Cargo Bay corresponds to Light A1 on the CEU Front Panel.
 - 2) The second detector on the right side of the Cargo Bay corresponds to Light B2 on the CEU Front Panel.
- (3) On the CEU front Panel, there is a LAMP TEST Switch, which does a test all the Light Bulbs.

B. BITE Procedure

- (1) Do these steps to do the CEU BITE Procedure:
 - (a) To get access to the CEU Front Panel, remove the screws that secure the protective cover to the Cargo Bay Ceiling.
 - (b) Make sure that all the Fault Lights on the CEU Front Panel are OFF.
 - 1) If one or more Fault Light is ON, refer to the table at the end of this task to find the applicable Fault Isolation Manual (FIM) Tasks for the maintenance messages that show.

NOTE: Find the maintenance message that describes the light or lights that are ON and is followed by "(stays ON)" or "(stay ON)".
 - (c) On the CEU Front Panel, push and hold the LAMP TEST Switch.
 - 1) Make sure that all the Fault Lights on the CEU Front Panel come ON.
 - (d) Release the LAMP TEST Switch.

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- 1) Make sure that all the Fault Lights go OFF.
- (e) On the CEU Front Panel, push and hold the PRESS-TO-TEST Switch for 5 seconds.
 - 1) If all the Fault Lights on the CEU Front Panel come ON, then continue.
 - 2) If one or more lights do not come ON, then the BITE Test has failed and there is a fault.
- (f) Release the PRESS-TO-TEST Switch.
 - 1) If the Fault Lights on the CEU go OFF, then the BITE Test has passed.
 - 2) If one or more lights on the CEU stay ON, then the BITE Test has failed and there is a fault.
- (g) Refer to the table at the end of this task to find the applicable FIM Tasks for the maintenance messages that show.

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CEU - LWR AFT	A1 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	A1 (stays ON)	26-16 TASK 803
CEU - LWR AFT	A1 and A2 (stay ON)	26-16 TASK 803
CEU - LWR AFT	A1, A2 and A3 (stay ON)	26-16 TASK 803
CEU - LWR AFT	A2 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	A2 (stays ON)	26-16 TASK 803
CEU - LWR AFT	A3 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	A3 (stays ON)	26-16 TASK 803
CEU - LWR AFT	B1 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	B1 (stays ON)	26-16 TASK 803
CEU - LWR AFT	B1 and B2 (stay ON)	26-16 TASK 803
CEU - LWR AFT	B1, B2 and B3 (stay ON)	26-16 TASK 803
CEU - LWR AFT	B2 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	B2 (stays ON)	26-16 TASK 803
CEU - LWR AFT	B3 (OFF during self-test)	26-16 TASK 805
CEU - LWR AFT	B3 (stays ON)	26-16 TASK 803
CEU - LWR FWD	A1 (OFF during self-test)	26-16 TASK 805
CEU - LWR FWD	A1 (stays ON)	26-16 TASK 803
CEU - LWR FWD	A1 and A2 (stay ON)	26-16 TASK 803
CEU - LWR FWD	A2 (OFF during self-test)	26-16 TASK 805
CEU - LWR FWD	A2 (stays ON)	26-16 TASK 803
CEU - LWR FWD	B1 (OFF during self-test)	26-16 TASK 805
CEU - LWR FWD	B1 (stays ON)	26-16 TASK 803
CEU - LWR FWD	B1 and B2 (stay ON)	26-16 TASK 803
CEU - LWR FWD	B2 (OFF during self-test)	26-16 TASK 805
CEU - LWR FWD	B2 (stays ON)	26-16 TASK 803

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CEU - MAIN AFT	A6 (stays ON)	26-16 TASK 803

————— **END OF TASK** —————

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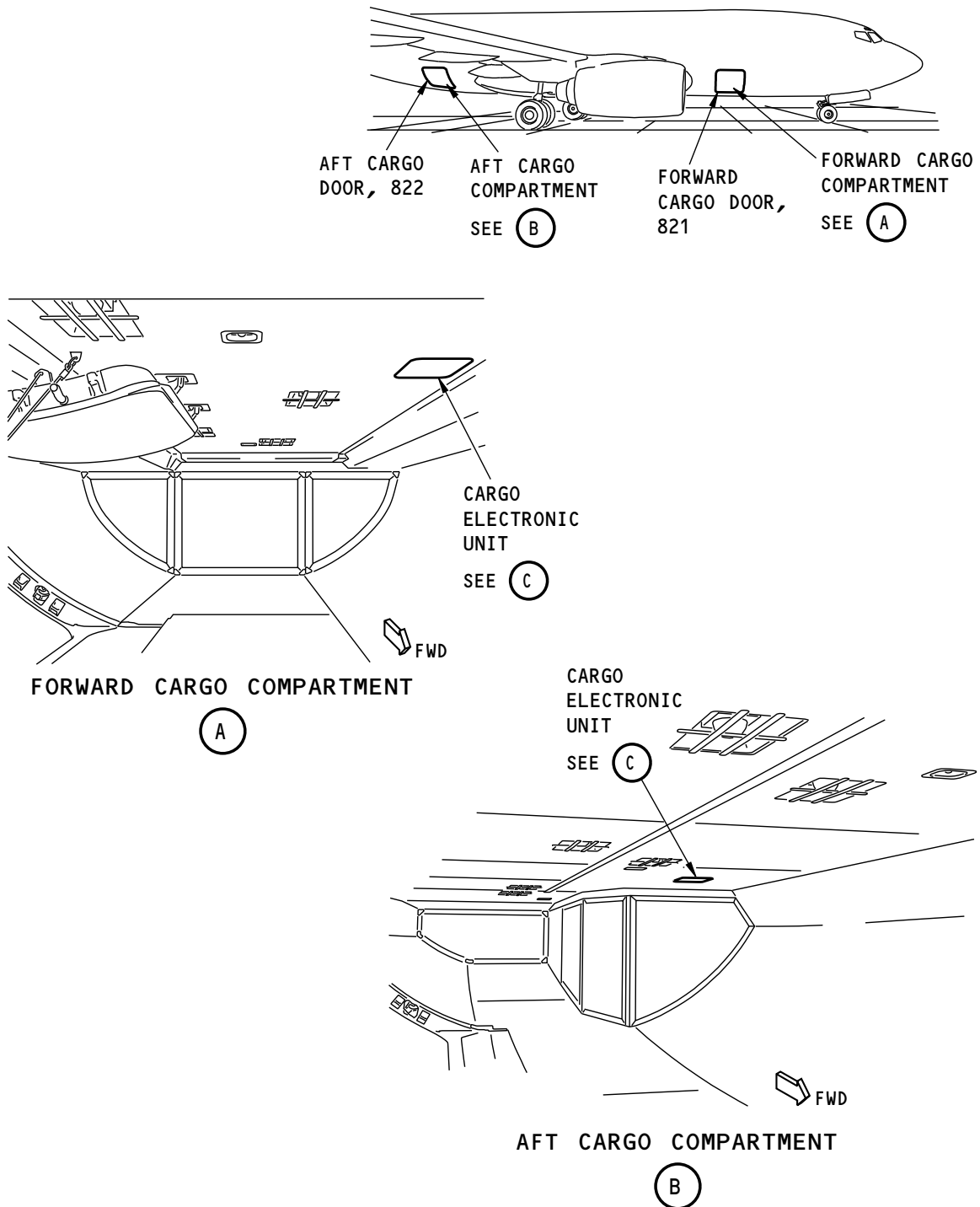
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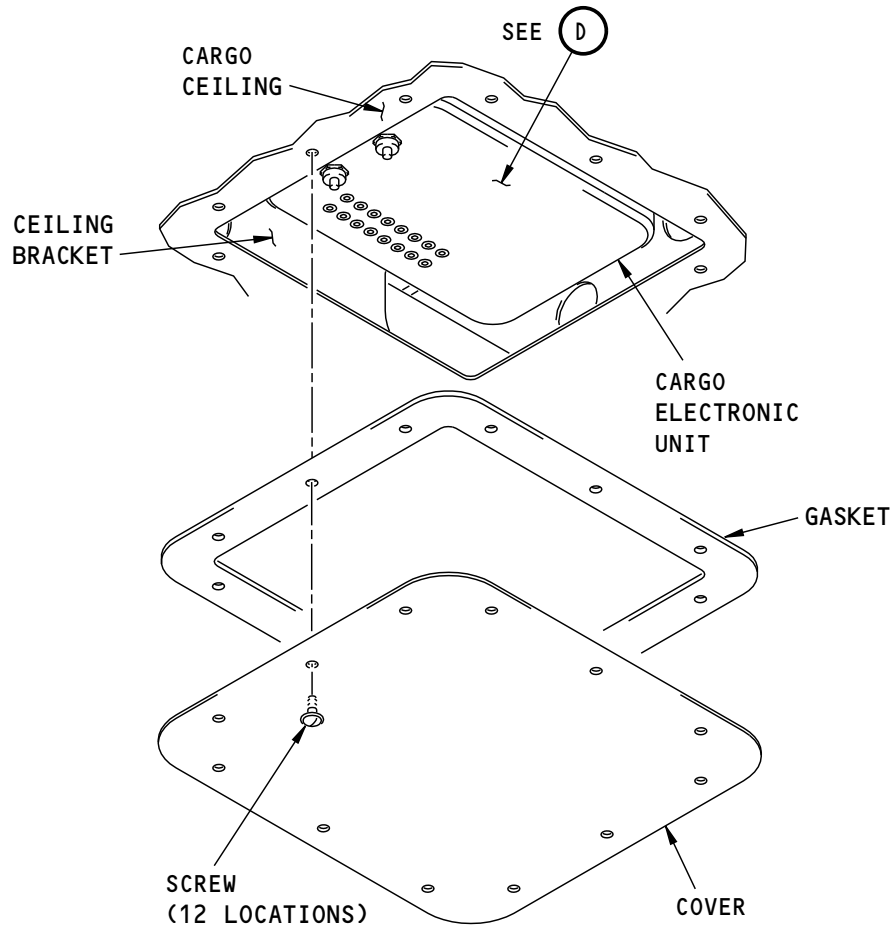
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CARGO ELECTRONIC UNIT
(EXAMPLE)

(C)

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Cargo Electronic Unit Installation
Figure 201/26-16-00-990-802 (Sheet 2 of 3)

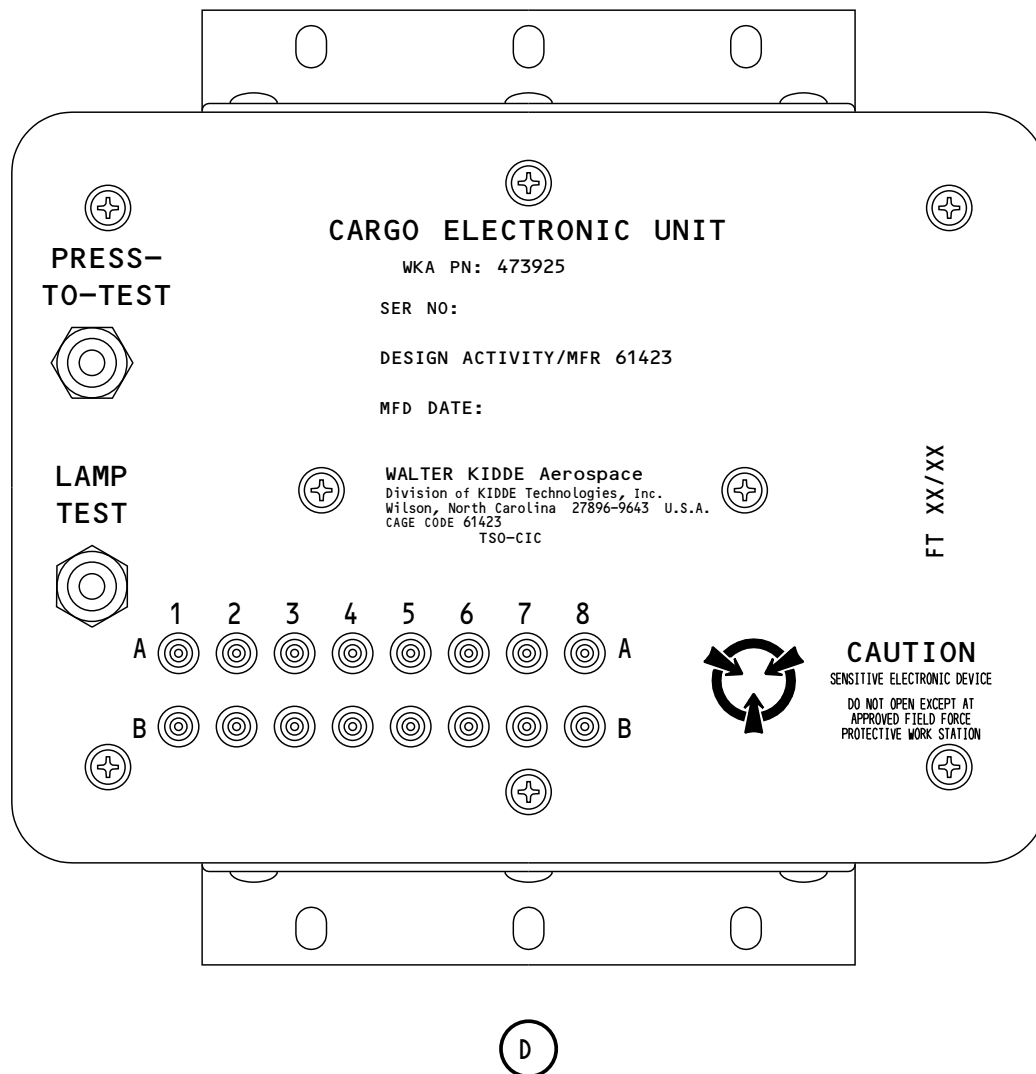
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802. DETECTOR FAULT Light Stays ON After TEST Switch is Pushed - Fault Isolation

A. Description

- (1) If the DETECTOR FAULT Light stays ON after the TEST Switch is pushed, then there is a power failure to one or more of the Smoke Detectors in the Cargo Bay.
- (2) The DETECTOR FAULT Light can also come ON because of a Smoke Detector failure.

B. Possible Causes

- (1) Smoke Detector
- (2) Wiring
- (3) Lower FWD (Lower AFT) CEU, M2236 (M2237)

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

D. Initial Evaluation

- (1) Do these steps to identify the loop that has the fault.
 - (a) On the CARGO FIRE Panel, move the FWD DET SELECT Switch to A.
 - (b) Push and release the TEST Switch.
 - 1) If the DETECTOR FAULT Light goes OFF, then the fault is on Loop B in the Forward Cargo Bay.
 - 2) If the DETECTOR FAULT Light stays ON, continue.
 - (c) Move the FWD DET SELECT Switch to B.
 - (d) Push and release the TEST Switch.
 - 1) If the DETECTOR FAULT Light goes OFF, then the fault is on Loop A in the Forward Cargo Bay.
 - 2) If the DETECTOR FAULT Light stays ON, continue.
 - (e) Move the FWD DET SELECT Switch to NORM.
 - (f) Move the AFT DET SELECT Switch to A.
 - (g) Push and release the TEST Switch.
 - 1) If the DETECTOR FAULT Light goes OFF, then the fault is on Loop B in the Aft Cargo Bay.
 - 2) If the DETECTOR FAULT Light stays ON, continue.
 - (h) Move the AFT DET SELECT Switch to B.
 - (i) Push and release the TEST Switch.
 - 1) If the DETECTOR FAULT Light goes OFF, then the fault is on Loop A in the Aft Cargo Bay.
 - 2) If the DETECTOR FAULT Light stays ON, continue.



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- (j) Move the AFT DET SELECT Switch to NORM.
- (2) Do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) For the applicable CEU, do this task: Cargo Electronic Unit (CEU) BITE Procedure, 26-16 TASK 801 .
 - (a) If a maintenance messages shows, refer to the table at the end of the BITE Task to find the applicable FIM Tasks for the messages that show.
 - 1) Do this task: Cargo Bay Smoke Detection - Operational Test, AMM TASK 26-16-00-710-801.
 - 2) If the Operational Test is satisfactory, then you corrected the problem.

————— **END OF TASK** —————

803. Detector Power Problem - Fault Isolation

A. Description

- (1) This task is for these CEU maintenance messages:
 - (a) A Lights (stay ON)
 - (b) B Lights (stay ON)
- (2) If the CEU Front Panel Fault Lights are ON or stay ON after you PRESS-TO-TEST Switch, then there is a power failure to one or more of the Smoke Detectors in the Cargo Bay.
- (3) This problem can also occur because of a Smoke Detector failure. The Detector Elements are shown in the table below:

Table 201 LOWER DECK CARGO COMPARTMENT

SMOKE DETECTOR ASSEMBLY	EQUIPMENT NUMBER
A1 FWD CARGO	M2238
A2 FWD CARGO	M2239
B1 FWD CARGO	M2240
B2 FWD CARGO	M2241
A1 AFT CARGO	M2242
A2 AFT CARGO	M2243
A3 AFT CARGO	M2244
B1 AFT CARGO	M2245
B2 AFT CARGO	M2246
B3 AFT CARGO	M2247

B. Possible Causes

- (1) Smoke Detector
- (2) Wiring
- (3) Lower FWD (Lower AFT) CEU, M2236 (M2237)

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C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

D. Related Data

- (1) WDM 26-16-21
(2) SSM 26-16-21
(3) WDM 26-16-22
(4) SSM 26-16-22

E. Initial Evaluation

- (1) For the applicable CEU, do this task: Cargo Electronic Unit (CEU) BITE Procedure, 26-16 TASK 801.
- (a) If none of the Fault Lights on the CEU Front Panel stay ON when you release the PRESS-TO-TEST Switch, then there was an intermittent fault.
- (b) If ALL of the Fault Lights for one Loop stay ON, then do the "Fault Isolation Procedure - All Fault Lights on One Loop Stay ON" below.
- (c) If only ONE Fault Light on the CEU stays ON, then do the "Fault Isolation Procedure - Only ONE Fault Light Stays ON" below.

F. Fault Isolation Procedure - ALL Fault Lights for One Loop Stay ON

- (1) Do this check for 28V DC Power.
- (a) Disconnect connector D12762 (D12774) from the Lower FWD (Lower AFT) CEU, M2236 (M2237) (WDM 26-16-21, WDM 26-16-22).
- (b) Do a check for 28V DC at the applicable FWD (AFT) Cargo CEU connector as follows:

**LOWER FWD CARGO
COMPARTMENT**

CEU CONNECTOR	CEU CONNECTOR	VOLTAGE
D12762	D12762	
pin 5	pin 4	28V DC
pin 31	pin 4	28V DC

**LOWER AFT CARGO
COMPARTMENT**

CEU CONNECTOR	CEU CONNECTOR	VOLTAGE
D12774	D12774	
pin 5	pin 4	28V DC
pin 31	pin 4	28V DC

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- 1) If you find 28V DC at the CEU connector, replace the applicable CEU, M2236 (M2237). These are the tasks:
 - Cargo Electronic Unit Removal, AMM TASK 26-16-02-000-801
 - Cargo Electronic Unit Installation, AMM TASK 26-16-02-400-801
 - a) Do the Repair Confirmation at the end of this task.
 - 2) If you do not find 28V DC at the CEU connector, continue.
- (2) Do this check of the 28V DC Power Wiring.
- (a) Disconnect connector D40504P from the P18-3 Circuit Breaker Panel.
 - (b) Examine the wiring between the P18-3 Panel and the applicable CEU as follows (WDM 26-16-21, WDM 26-16-22):

LOWER FWD CARGO COMPARTMENT

P18-3	CEU, M2236
D40504P	D12762
pin 2	pin 5
pin 3	pin 31

CEU, M2236

D12762

pin 4	DC GND
pin 2	DC GND

LOWER AFT CARGO COMPARTMENT

P18-3	CEU, M2237
D40504P	D12774
pin 8	pin 5
pin 9	pin 31

CEU, M2237

D12774

pin 4	DC GND
pin 2	DC GND

- 1) If you find a problem with the wiring, do these steps:
 - a) Repair the wiring (WDM 26-16-21, WDM 26-16-22).
 - b) Connect connector D12762 (D12774) to the Lower FWD (Lower AFT) CEU, M2236 (M2237).
 - c) Connect connector D40504P to the P18-3 Circuit Breaker Panel.
 - d) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Only ONE Fault Light Stays ON

- (1) Do this check for 28V DC Power at the Smoke Detector indicated by the Fault Light.
 - (a) Disconnect the applicable connector from the suspect Smoke Detector (WDM 26-16-21, WDM 26-16-22).
 - (b) Do a check for 28V DC at the pins indicated by the applicable table below:

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LOWER FWD CARGO COMPARTMENT

	CONNECTOR	CONNECTOR	
SMOKE DET-A1	D12766 pin 4	D12766 pin 5	28V DC
SMOKE DET-A2	D12768 pin 4	D12768 pin 5	28V DC
SMOKE DET-B1	D12770 pin 4	D12770 pin 5	28V DC
SMOKE DET-B2	D12772 pin 4	D12772 pin 5	28V DC

LOWER AFT CARGO COMPARTMENT

	CONNECTOR	CONNECTOR	
SMOKE DET-A1	D12778 pin 4	D12778 pin 5	28V DC
SMOKE DET-A2	D12780 pin 4	D12780 pin 5	28V DC
SMOKE DET-A3	D12782 pin 4	D12782 pin 5	28V DC
SMOKE DET-B1	D12784 pin 4	D12784 pin 5	28V DC
SMOKE DET-B2	D12786 pin 4	D12786 pin 5	28V DC
SMOKE DET-B3	D12788 pin 4	D12788 pin 5	28V DC

- 1) If you find 28V DC at the Smoke Detector connector, replace the applicable detector. These are the tasks:
- Cargo Bay Smoke Detector Removal, AMM TASK 26-16-01-000-801
 - Cargo Bay Smoke Detector Installation, AMM TASK 26-16-01-400-801

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- a) Do the Repair Confirmation at the end of this task.
- 2) If you do not find 28V DC at the Smoke Detector connector, then continue.
- (2) Do this check of the CEU for correct Output Power Voltage to the Smoke Detectors.
 - (a) Disconnect connector D12764 (D12776) from the Lower FWD (Lower AFT) CEU, M2236 (M2237).
- (3) Do a check for 28V DC at the indicated CEU Receptacle pins on the applicable table below (WDM 26-16-21, WDM 26-16-22):

LOWER FWD CARGO COMPARTMENT

	CEU CONNECTOR	CEU CONNECTOR	
SMOKE DET-A1	D12764 pin 37	D12764 pin 16	28V DC
SMOKE DET-A2	D12764 pin 26	D12764 pin 22	28V DC
SMOKE DET-B1	D12764 pin 13	D12764 pin 11	28V DC
SMOKE DET-B2	D12764 pin 8	D12764 pin 18	28V DC

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CEU CONNECTOR

CEU CONNECTOR

SMOKE
DET-A1

D12776

D12776

pin 37 pin 16

28V DC

SMOKE
DET-A2

D12776

D12776

pin 26 pin 22

28V DC

SMOKE
DET-A3

D12776

D12776

pin 27 pin 38

28V DC

SMOKE
DET-B1

D12776

D12776

pin 13 pin 11

28V DC

SMOKE
DET-B2

D12776

D12776

pin 8 pin 18

28V DC

SMOKE
DET-B3

D12776

D12776

pin 25 pin 9

28V DC

- (a) If you do not find 28V DC, replace the applicable CEU, M2236 (M2237). These are the tasks:
- Cargo Electronic Unit Removal, AMM TASK 26-16-02-000-801
 - Cargo Electronic Unit Installation, AMM TASK 26-16-02-400-801
 - 1) Connect the applicable Smoke Detector connector.
 - 2) Do the Repair Confirmation at the end of this task.
- (b) If you find 28V DC at the applicable CEU Receptacle, then continue.
- (4) Examine the wiring between the applicable CEU and the applicable Smoke Detector connector as follows (WDM 26-16-21, WDM 26-16-22):

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LOWER FWD CARGO COMPARTMENT

	CEU CONNECTOR	DETECTOR CONNECTOR
SMOKE DET-A1	D12764 pin 37 pin 16	D12766 pin 4 pin 5
SMOKE DET-A2	D12764 pin 4 pin 22	D12768 pin 26 pin 5
SMOKE DET-B1	D12764 pin 13 pin 11	D12770 pin 4 pin 5
SMOKE DET-B2	D12764 pin 8 pin 18	D12772 pin 4 pin 5

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LOWER AFT CARGO COMPARTMENT

	CEU CONNECTOR	DETECTOR CONNECTOR
SMOKE DET-A1	D12776 pin 37 pin 16	D12778 pin 4 pin 5
SMOKE DET-A2	D12776 pin 26 pin 22	D12780 pin 4 pin 5
SMOKE DET-A3	D12776 pin 27 pin 38	D12782 pin 4 pin 5
SMOKE DET-B1	D12776 pin 13 pin 11	D12784 pin 4 pin 5
SMOKE DET-B2	D12776 pin 8 pin 18	D12786 pin 4 pin 5
SMOKE DET-B3	D12776 pin 25 pin 9	D12788 pin 4 pin 5

- (a) Repair the problems that you find.
- (b) Connect the connectors you disconnected from the suspect Smoke Detector and the associated CEU.
- (c) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do the Cargo Electronic Unit (CEU) BITE Procedure, 26-16 TASK 801.
 - (a) If the CEU BITE Test is satisfactory, then you corrected the problem.
 - (b) If the CEU BITE Test is not satisfactory, then continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

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804. DETECTOR FAULT Light Comes ON when TEST Switch is Pushed - Fault Isolation

A. Description

- (1) If the DETECTOR FAULT Light comes ON, when the TEST Switch is pushed, and goes out when the switch is released, then there is a failure with one of the Smoke Detectors in the Cargo Bay.

NOTE: The Fire Indicator (lower half of the ARMED Switch) will stay OFF for the Cargo Compartment that has the failed detector.

B. Possible Causes

- (1) Smoke Detector

C. Initial Evaluation

- (1) Push the TEST Switch on the CARGO FIRE Control Panel.
 - (a) If the DETECTOR FAULT Light stays OFF, then there was an intermittent fault.
 - (b) If the DETECTOR FAULT Light comes ON when the TEST Switch is pushed, then do the Fault Isolation Procedure below.

NOTE: The Fire Indicator (lower half of the ARMED Switch) will stay OFF for the Cargo Compartment that has the failed detector.

D. Fault Isolation Procedure

- (1) For the applicable CEU, do this task: Cargo Electronic Unit (CEU) BITE Procedure, 26-16 TASK 801.
 - (a) If the CEU BITE Test shows faults, then refer to the table at the end of the CEU BITE Task to find the applicable FIM Tasks for the maintenance messages that show.
 - 1) Do this task: Cargo Bay Smoke Detection - Operational Test, AMM TASK 26-16-00-710-801.
 - 2) If the Operational Test is satisfactory, then you corrected the problem.

————— **END OF TASK** —————

805. Detector Fault - Fault Isolation

A. Description

- (1) This task is for these CEU maintenance messages:
- (2) If one of the CEU Fault Lights stays OFF when you push the PRESS-TO-TEST Switch (during the self-test), then there is a failure with one of the Smoke Detectors.
- (3) The detector elements are shown in the table below:

Table 202

DETECTOR ASSEMBLY (CEU MESSAGE)	EQUIPMENT NUMBER
A1 FWD CARGO	M2238
A2 FWD CARGO	M2239
B1 FWD CARGO	M2240
B2 FWD CARGO	M2241
A1 AFT CARGO	M2242
A2 AFT CARGO	M2243

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Table 202 (Continued)

DETECTOR ASSEMBLY (CEU MESSAGE)	EQUIPMENT NUMBER
A3 AFT CARGO	M2244
B1 AFT CARGO	M2245
B2 AFT CARGO	M2246
B3 AFT CARGO	M2247

B. Possible Causes

- (1) Smoke Detector

C. Related Data

- (1) WDM 26-16-21
- (2) SSM 26-16-21
- (3) WDM 26-16-22
- (4) SSM 26-16-22

D. Initial Evaluation

- (1) For the applicable CEU, do this task: Cargo Electronic Unit (CEU) BITE Procedure, 26-16 TASK 801.
 - (a) If all of the CEU Front Panel Fault Lights come ON when you push the PRESS-TO-TEST Switch, then there was an intermittent fault.
 - (b) If one or more of the CEU Front Panel Fault Lights stays OFF when you push the PRESS-TO-TEST Switch, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

- (1) Replace the applicable defective Smoke Detector. These are the applicable tasks:
 - Cargo Bay Smoke Detector Removal, AMM TASK 26-16-01-000-801
 - Cargo Bay Smoke Detector Installation, AMM TASK 26-16-01-400-801
 - (a) If the Installation Test for the applicable Smoke Detector is satisfactory, then you corrected the problem.

————— END OF TASK —————

806. Cargo Fire Warning Light Does Not Come ON when TEST Switch is Pushed - Fault Isolation

A. Description

- (1) Different Indicator Combinations

If the Red FWD and AFT Fire Lights do not come ON when the TEST Switch is pushed, there is a failure in the Fire Detection System. The Table 203 below shows the Possible Causes for different indicator combinations:

Table 203 POSSIBLE CAUSES OF TEST INDICATIONS

TEST INDICATIONS	POSSIBLE CAUSE
One of the Fire Lights stays OFF and the DETECTOR FAULT Light comes ON	Detector
Both Fire Lights stay OFF	CARGO FIRE Panel
One of the Fire Lights stays OFF and DETECTOR FAULT Light stays OFF	CEU or CARGO FIRE Panel

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- (2) The DETECTOR FAULT Light can come ON because of a Smoke Detector failure. The Detector Elements are shown in the table below.

Table 204

DETECTOR ASSEMBLY (CEU MESSAGE)	EQUIPMENT NUMBER
A1 FWD CARGO	M2238
A2 FWD CARGO	M2239
B1 FWD CARGO	M2240
B2 FWD CARGO	M2241
A1 AFT CARGO	M2242
A2 AFT CARGO	M2243
A3 AFT CARGO	M2244
B1 AFT CARGO	M2245
B2 AFT CARGO	M2246
B3 AFT CARGO	M2247

B. Possible Causes

- (1) Smoke Detector
- (2) Lower FWD (Lower AFT) CEU, M2236 (M2237)
- (3) Cargo Fire Control Panel, P8-75
- (4) Wiring

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

D. Related Data

- (1) WDM 26-16-21
- (2) SSM 26-16-21
- (3) WDM 26-16-22
- (4) SSM 26-16-22

E. Initial Evaluation

- (1) On the CARGO FIRE Control Panel, push the TEST Switch.
- (2) Make sure that the DETECTOR FAULT Light does not come ON.
- (3) Make sure that these Fire Fault Lights come ON:
 - Green FWD EXT
 - Green AFT EX

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- Red ARM FWD
 - Red ARM AFT
 - Amber DISCH
- (4) If the DETECTOR FAULT Light comes ON, do this task: Detector Fault - Fault Isolation, 26-16 TASK 805.
- (5) If ALL Fire Lights on the CARGO FIRE Panel stay OFF when the TEST Switch is pushed, then do the "Fault Isolation Procedure - ALL Fire Lights OFF" below.
- (6) If one Fire Light on the CARGO FIRE Panel stays OFF when the TEST Switch is pushed, then do the "Fault Isolation Procedure - One Fire Light OFF" below.

F. Fault Isolation Procedure - ALL Fire Lights OFF

- (1) Replace the Cargo Fire Control Panel. These are the tasks:
- Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801
 - Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801
- (2) On the CARGO FIRE Control Panel, push the TEST Switch.
- (a) If all the Fire Fault Lights come ON, then you have corrected the problem.

G. Fault Isolation Procedure - One Fire Light OFF

- (1) Replace the applicable Lower FWD (Lower AFT) CEU, M2236 (M2237). These are the tasks:
- Cargo Electronic Unit Removal, AMM TASK 26-16-02-000-801
 - Cargo Electronic Unit Installation, AMM TASK 26-16-02-400-801
- (a) Do the Repair Confirmation at the end of this task.
- (2) Do this check of the wiring:
- (a) Disconnect connector D12762 (D12774) from the Lower FWD (Lower AFT) Cargo CEU, M2236 (M2237) (WDM 26-16-21, WDM 26-16-22).
- (b) Remove the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801.
- (c) Examine the wiring between the Cargo Fire Control Panel, P8-75 and the applicable Lower FWD (Lower AFT) CEU, M2236 (M2237) as follows (WDM 26-16-21, WDM 26-16-22):

LOWER FWD CARGO COMPARTMENT

CARGO FIRE

PANEL

D12760

pin 32		pin 23
pin 15		pin 24
pin 14		pin 26
pin 30		pin 28
pin 31		pin 9
pin 54		pin 11

CEU

D12762

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LOWER AFT CARGO COMPARTMENT

CARGO FIRE

PANEL

D12760

pin 20		pin 23
pin 21		pin 24
pin 22	.....	pin 26
pin 8	.....	pin 28
pin 37	.....	pin 9
pin 38	.....	pin 11

CEU

D12774

- (d) If you find a problem with the wiring do these steps:
- 1) Repair the wiring.
 - 2) Re-install the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801.
 - 3) Connect connector D12762 (D12774) to the Lower FWD (Lower AFT) CEU, M2236 (M2237).
 - 4) Do the Repair Confirmation at the end of this task.
- (e) If you do not find a problem with the wiring, then Install a new Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801.
- 1) Connect connector D12762 (D12774) to the Lower FWD (Lower AFT) CEU, M2236 (M2237).
 - 2) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) On the CARGO FIRE Control Panel, push the TEST Switch.
 - (a) If all Fire Fault Lights come ON, then you have corrected the problem.
 - (b) If a Fire Fault Light stays OFF, then continue the applicable Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

807. External Fire Warnings Do Not Come ON when TEST Switch is Pushed - Fault Isolation

A. Description

- (1) The External Fire Warnings include: the Captain's and First Officer (F/O) FIRE WARN Lights and the flight compartment fire bell. If the external fire warnings do not come on when the TEST switch on the CARGO FIRE panel is pushed, then there is a failure in the fire detection system.
 - (a) Captain's FIRE WARN Light
 - (b) F/O FIRE WARN Light
 - (c) Flight Compartment Fire Bell
- (2) If the External Fire Warnings do not operate correctly when the TEST Switch is pushed on the CARGO FIRE Panel, then there is a failure in the Fire Detection System.

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B. Possible Causes

- (1) Cargo Fire Control Panel, P8-75
- (2) Wiring

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

D. Related Data

- (1) WDM 26-11-21
- (2) SSM 26-11-21
- (3) WDM 26-16-21
- (4) SSM 26-16-21
- (5) WDM 26-16-22
- (6) SSM 26-16-22

E. Initial Evaluation

- (1) On the CARGO FIRE Control Panel, push the TEST Switch.
 - (a) If the External Fire Warnings come ON, then there was an intermittent fault.
 - (b) If ALL of the External Fire Warnings stay OFF, then do the "Fault Isolation Procedure - No External Fire Warnings" below.
 - (c) If the FIRE WARN Lights stay OFF, but the Fire Bell comes ON, then do the "Fault Isolation Procedure - No FIRE WARN Lights" below.
 - (d) If the Fire Bell stays OFF, but the FIRE WARN Lights come ON, then do the "Fault Isolation Procedure - No Fire Bell" below.

F. Fault Isolation Procedure - No External Fire Warnings

- (1) Replace the CARGO FIRE Control Panel. These are the tasks:

These are the tasks:

 - Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801
 - Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801
 - (a) If the External Fire Warnings come ON when the TEST Switch is pushed on the CARGO FIRE Control Panel, then you corrected the problem.

G. Fault Isolation Procedure - No FIRE WARN Lights

- (1) Do this check of the wiring (WDM 26-11-21):
 - (a) Remove the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801.
 - (b) Disconnect connector D1344 from the Annunciation and Dimming Module, M469 (P9).
 - (c) Do a wiring check between the CARGO FIRE Control Panel, P8-75 and the Annunciation and Dimming (A & D) Module, M469 as follows:

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CARGO FIRE

CTRL PNL

D12760

pin 56

A & D MODULE

D1344

pin 3

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801.
 - 3) Re-connect connector D1344 to the Annunciation and Dimming Module, M469.
 - 4) Do the Repair Confirmation at the end of this task.
- (e) If you do not find a problem with the wiring, then re-connect connector D1344 to the Annunciation and Dimming Module, M469 and continue.
- (2) Install a new Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801.
 - (a) Do the Repair Confirmation at the end of this task.

H. Fault Isolation Procedure - No Fire Bell

- (1) Do this check of the wiring:
 - (a) Remove the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801.
 - (b) Disconnect connector D940 from the Aural Warning Module, M315 (WDM 26-11-21).
 - (c) Do a wiring check between the CARGO FIRE Control Panel and the Aural Warning Module, M315 as follows:

CARGO FIRE

CTRL PNL

D12760

pin 49

AURAL

WARNING

MODULE

D940

pin 12

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801.
 - 3) Re-connect connector D940 to the Aural Warning Module, M315.
 - 4) Do the Repair Confirmation at the end of this task.
- (e) If you do not find a problem with the wiring, then re-connect connector D940 to the Aural Warning Module, M315 and continue.
- (2) Install a new Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801..
 - (a) Do the Repair Confirmation at the end of this task.

I. Repair Confirmation

- (1) On the CARGO FIRE Control Panel, push the TEST Switch.
 - (a) If the External Fire Warnings come ON, then you corrected the problem.

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- (b) If an External Fire Warning does not come ON, then continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

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801. Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure

A. General

- (1) The wheel well fire, wing & body overheat detection control module, M237 is located on the E1-4 shelf in the electronic equipment (EE) compartment. The wheel well fire, wing & body overheat detection control module will be referred to as the control module throughout this procedure. Access the front of panel of the control module to do the BITE test.

SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

- (2) The front of the control module contains a MAINT ADV light, a two digit FAULT & ALARM CODE display, and four test buttons.
 - (a) The MAINT ADV light identifies that there is fault data stored in memory. The light will stay on until corrective action is taken, and the memory is cleared.
 - (b) The FAULT & ALARM CODE display indicates the status of the system.
 - (c) The MEM READ switch is used to display the data stored in memory.
 - (d) The MEM CLEAR switch is used to clear the displayed memory data. This data can only be cleared if the original fault is corrected, and there are no additional faults in the same zone.
 - (e) The LOC TEST switch initiates the local test procedure.
 - (f) The DISP TEST switch checks the display.

SIA ALL; AIRPLANES WITH CODM P/N 475928-01

- (3) The front of the control module contains a MAINT ADV light, a sixteen digit FAULT & ALARM CODES display, and four test buttons.
 - (a) The MAINT ADV light identifies that there is fault data stored in memory. The light will stay on until corrective action is taken, and the memory is cleared.
 - (b) The FAULT & ALARM CODES display indicates the status of the system.
 - (c) The MEMORY READ switch is used to display the data stored in memory.
 - (d) The MEMORY CLEAR switch is used to clear the displayed memory data. This data can only be cleared if the original fault is corrected, and there are no additional faults in the same zone.
 - (e) The LOCAL TEST switch initiates the local test procedure.
 - (f) The DISPLAY TEST switch checks the display.

SIA ALL

- (4) Several procedures can be performed with the detection module. These are:
 - (a) Local Test Procedure
 - (b) Memory Read Procedure
 - (c) Memory Clear Procedure
 - (d) Alarm History Memory Read Procedure
 - (e) Alarm History Memory Clear Procedure
- (5) Do not hold the control module switches in the CLOSED position for more than 10 seconds or the software could stop the test.
- (6) Unless the test specifies differently, continue from one step to the subsequent step in less than 40 seconds.

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B. BITE Procedure

- (1) Do these steps to do the local test procedure for the control module:

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- (a) Push and release the LOC TEST switch on the control module.
- 1) The FAULT & ALARM CODE display shows code 90 while the self-test is running and shows code 99 when the test is complete.

SIA ALL; AIRPLANES WITH CODM P/N 475928-01

- (b) Push and release the LOCAL TEST switch on the control module.
- 1) The FAULT & ALARM CODES display shows CONFIG NEXTGEN1 or CONFIG NEXTGEN2 while the self-test is running and shows TEST COMPLETE when the test is complete, indicating that no faults exist.

SIA ALL

- (c) If an alarm/fault condition is found, the display will show a fault code.

SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

- 1) Refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message for the fault indicated by the FAULT & ALARM CODE display.

SIA ALL; AIRPLANES WITH CODM P/N 475928-01

- 2) Refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message for the fault indicated by the FAULT & ALARM CODES display.

SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

- (2) Do these steps to do the memory read procedure.

- (a) Push and release the MEM READ switch on the control module.

- 1) The FAULT & ALARM CODE display shows the latest fault code.

NOTE: As many as 10 alarm/fault codes can be kept in non-volatile memory. Code 97 shows that all codes have been read.

- (b) Push and release the MEM READ switch again until all the alarm/fault codes have been read, and code 97 shows.

- (c) Push and release the MEM READ switch again so the display shows no data.

SIA ALL; AIRPLANES WITH CODM P/N 475928-01

- (3) Do these steps to do the memory read procedure.

- (a) Push and release the MEMORY READ switch on the control module.

- 1) The FAULT & ALARM CODES display shows the latest fault code.

NOTE: As many as 10 alarm/fault codes can be kept in non-volatile memory. Code END OF MEMORY shows that all codes have been read.

- (b) Push and release the MEMORY READ switch again until all the alarm/fault codes have been read, and code END OF MEMORY shows.

NOTE: After code END OF MEMORY shows, display will go blank after 10 seconds. Pressing and releasing DISPLAY TEST will clear the display immediately.

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SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

- (4) Do these steps to do the memory clear procedure.
- (a) Push and release the DISP TEST switch on the control module.
 - 1) The FAULT & ALARM CODE display shows code 88 and then the display is blank.
 - (b) Push and release the LOC TEST switch on the control module.
 - 1) The FAULT & ALARM CODE display shows 90, then 99.
NOTE: After code 99 is shown, continue with the next step in less than 10 seconds.
 - 2) If code 93 or 94 is displayed, push and release LOC TEST until code 99 is shown.
NOTE: After code 99 is shown, continue with the next step in less than 10 seconds.
 - (c) Push and release the MEM READ switch on the control module until the display shows the code to be removed.
NOTE: If there are fault codes in the memory, the display will show the last code that was recorded. If there are no fault codes in the memory, the display will show code 97.
 - (d) Push and release the MEM CLEAR switch to clear the displayed code.
 - 1) The display shows no data.
 - (e) Push and release the MEM READ switch again to display the next code.
 - 1) Repeat the two steps above until code 97 appears.
NOTE: Alarm/fault codes can not be removed until the condition is corrected.
 - (f) Push the MEM READ switch again so the display shows no data and the MAINT ADV light is off.

SIA ALL; AIRPLANES WITH CODM P/N 475928-01

- (5) Do these steps to do the memory clear procedure.
- (a) Push and release the DISPLAY TEST switch on the control module.
 - 1) The FAULT & ALARM CODES display shows all LEDs lit and then the display is blank.
 - (b) Push and release the LOCAL TEST switch on the control module.
 - 1) The FAULT & ALARM CODES display shows CONFIG NEXTGEN1 or CONFIG NEXTGEN2, then TEST COMPLETE.
NOTE: After code TEST COMPLETE is shown, continue with the next step in less than 10 seconds.
 - 2) If any other code is displayed, push and release LOCAL TEST switch until code TEST COMPLETE is shown.
NOTE: After code TEST COMPLETE is shown, continue with the next step in less than 10 seconds.
 - (c) To clear the all codes at once do the following, or skip to the next step to clear sequentially:
 - 1) Press and hold MEMORY CLEAR switch until display counts down from 5,4,3,2,1 and display reads MEMORY CLEARED.

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SIA ALL; AIRPLANES WITH CODM P/N 475928-01 (Continued)

- (d) Push and release the MEMORY READ switch on the control module until the display shows the code to be removed.

NOTE: If there are fault codes in the memory, the display will show the last code that was recorded. If there are no fault codes in the memory, the display will show code END OF MEMORY.

- (e) Push and release the MEMORY CLEAR switch to clear the displayed code.
 - 1) The display shows no data.
- (f) Push and release the MEMORY READ switch again to display the next code.
 - 1) Repeat the two steps above until code END OF MEMORY appears.

NOTE: Alarm/fault codes can not be removed until the condition is corrected.

- (g) After code END OF MEMORY displays, display will go blank after 10 seconds. Make sure of the following:

NOTE: Pressing and releasing DISPLAY TEST will clear the display immediately.

- 1) The display shows no data.
- 2) And the MAINT ADV light is off.

SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

- (6) Do these steps to do the alarm history memory read procedure.
 - (a) Push and release the LOC TEST switch on the control module.
 - 1) The FAULT & ALARM CODE display shows 90, then 99.
 - (b) Push and release the MEM READ switch on the control module until the FAULT & ALARM CODE display shows code 97.
 - (c) Push and hold the DISP TEST switch.
 - (d) Push and hold the MEM READ switch.
 - (e) Release the DISP TEST switch.
 - (f) Release the MEM READ switch.
 - 1) The FAULT & ALARM CODE display shows the last alarm/fault history code.
 - (g) Push and release the MEM READ switch again until all the alarm/fault codes have been read, and code 97 shows.
 - (h) Push and release the MEM READ switch again so the display shows no data.

SIA ALL; AIRPLANES WITH CODM P/N 475928-01

- (7) Do these steps to do the alarm history memory read procedure.
 - (a) Push and release the LOCAL TEST switch on the control module.
 - 1) The FAULT & ALARM CODES display shows CONFIG NEXTGEN1 or CONFIG NEXTGEN2, then TEST COMPLETE.
 - (b) Push and release the MEMORY READ switch on the control module until the FAULT & ALARM CODES display shows code END OF MEMORY.
 - (c) Push and hold the DISPLAY TEST switch.
 - (d) Push and hold the MEMORY READ switch.
 - (e) Release the DISPLAY TEST switch.

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SIA ALL; AIRPLANES WITH CODM P/N 475928-01 (Continued)

- (f) Release the MEMORY READ switch.
 - 1) The FAULT & ALARM CODES display shows the last alarm/fault history code.
- (g) Push and release the MEMORY READ switch again until all the alarm/fault codes have been read, and code END OF MEMORY shows.
- (h) After code END OF MEMORY displays, display will go blank after 10 seconds.
NOTE: Pressing and releasing DISPLAY TEST will clear the display immediately.

SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

- (8) Do these steps to do the alarm history memory clear procedure.
 - (a) Push and release the LOC TEST switch on the control module.
 - 1) The FAULT & ALARM CODE display shows 90, then 99.
NOTE: After code 99 is shown, continue with the next step in less than 10 seconds.
 - 2) If code 93 or 94 is displayed, push and release LOC TEST until code 99 is shown.
NOTE: After code 99 is shown, continue with the next step in less than 10 seconds.
 - (b) Push and release the MEM READ switch on the control module until the FAULT & ALARM CODE display shows code 97.
 - (c) Push and hold the LOC TEST switch.
 - (d) Push and hold the MEM READ switch.
 - (e) Release the LOC TEST switch.
 - (f) Release the MEM READ switch and then push MEM CLEAR within 5 seconds.
NOTE: The FAULT & ALARM CODE display shows code 96 for 5 seconds.
 - 1) The FAULT & ALARM CODE display shows the first alarm code.
 - (g) Push and release the MEM CLEAR switch on the control module.
 - 1) The FAULT & ALARM CODE display goes blank.
 - (h) Push and release the MEM READ switch to show the next alarm code.
 - (i) Push and release the MEM READ and then MEM CLEAR switches as necessary until all the alarm/fault codes have been read, and code 97 shows.
NOTE: All alarm history codes kept in the memory will be shown sequentially until the memory read operation is complete and code 97 is shown.
 - (j) Push and release the MEM READ switch again and the display should be blank and the MAINT ADV light is off.

SIA ALL; AIRPLANES WITH CODM P/N 475928-01

- (9) Do these steps to do the alarm history memory clear procedure.
 - (a) Push and release the LOCAL TEST switch on the control module.
 - 1) The FAULT & ALARM CODES display shows CONFIG NEXTGEN1 or CONFIG NEXTGEN2, then TEST COMPLETE.
NOTE: After code TEST COMPLETE is shown, continue with the next step in less than 10 seconds.

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

SIA ALL; AIRPLANES WITH CODM P/N 475928-01 (Continued)

- 2) If any other code is displayed, push and release LOCAL TEST until code TEST COMPLETE is shown.

NOTE: After code TEST COMPLETE is shown, continue with the next step in less than 10 seconds.

- (b) Push and release the MEMORY READ switch on the control module until the FAULT & ALARM CODES display shows code END OF MEMORY.
- (c) Push and hold the LOCAL TEST switch.
- (d) Push and hold the MEMORY READ switch.
- (e) Release the LOCAL TEST switch.
- (f) Release the MEMORY READ switch and then push MEMORY CLEAR within 5 seconds.
- 1) The FAULT & ALARM CODE display shows the first alarm code.
- (g) To clear the all alarm history codes at once do the following, or skip to the next step to clear sequentially:
- 1) Press and hold MEMORY CLEAR switch until display counts down from 5,4,3,2,1 and display reads MEMORY CLEARED.
- (h) Push and release the MEMORY CLEAR switch on the control module.
- 1) The FAULT & ALARM CODES display goes blank.
- (i) Push and release the MEMORY READ switch to show the next alarm code.
- (j) Push and release the MEMORY READ and then MEMORY CLEAR switches as necessary until all the alarm/fault codes have been read, and code END OF MEMORY shows.
- NOTE: All alarm history codes kept in the memory will be shown sequentially until the memory read operation is complete and code END OF MEMORY is shown.
- (k) After code END OF MEMORY displays, display will go blank after 10 seconds. Make sure of the following:
- NOTE: Pressing and releasing DISPLAY TEST will clear the display immediately.
- 1) The display shows no data.
- 2) And the MAINT ADV light is off.

SIA ALL

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
WING/BODY OHT	00 - CONTROL OR POWER SUPPLY FAILURE	26-18 TASK 803
WING/BODY OHT	01 - 115VAC OR POWER SUPPLY CARD FAILURE	26-18 TASK 803
WING/BODY OHT	02 - 115VAC OR POWER SUPPLY CARD FAILURE	26-18 TASK 803
WING/BODY OHT	03 - CONTROL CARD FAILURE	26-18 TASK 803
WING/BODY OHT	04 - CONTROL CARD FAILURE	26-18 TASK 803
WING/BODY OHT	05 - CONTROL CARD FAILURE	26-18 TASK 803
WING/BODY OHT	10 - LEFT WING LE - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	12 - LEFT WING LE - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	14 - LEFT WING LE - ALARM	26-18 TASK 802

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
WING/BODY OHT	20 - LEFT AC PACK BAY - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	22 - LEFT AC PACK BAY - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	24 - LEFT AC PACK BAY - ALARM	26-18 TASK 802
WING/BODY OHT	30 - KEELBEAM - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	32 - KEELBEAM - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	34 - KEELBEAM - ALARM	26-18 TASK 802
WING/BODY OHT	40 - AFT CARGO SECT. - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	42 - AFT CARGO SECT. - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	44 - AFT CARGO SECT. - ALARM	26-18 TASK 802
WING/BODY OHT	60 - RIGHT WING LE AND AC PACK BAY - SHORT LOOP	26-18 TASK 802
WING/BODY OHT	62 - RIGHT WING LE AND AC PACK BAY - OPEN LOOP	26-18 TASK 802
WING/BODY OHT	64 - RIGHT WING LE AND AC PACK BAY - ALARM	26-18 TASK 802
WING/BODY OHT	84 - WHEEL WELL FIRE - ALARM	26-18 TASK 802
WING/BODY OHT	98 - LOCAL TEST - NOT COMPLETE	26-18 TASK 803
WING/BODY OHT	AFT BODY APU OPEN	26-18 TASK 814
WING/BODY OHT	AFT BODY APU OVHT	26-18 TASK 815
WING/BODY OHT	AFT BODY APU SHRT	26-18 TASK 813
WING/BODY OHT	CONFIG INVALID 1	26-18 TASK 825
WING/BODY OHT	CONFIG INVALID 2	26-18 TASK 825
WING/BODY OHT	CONFIG INVALID 4	26-18 TASK 825
WING/BODY OHT	CONFIG INVALID 7	26-18 TASK 825
WING/BODY OHT	CONFIG MAX1	26-18 TASK 825
WING/BODY OHT	CONFIG MAX2	26-18 TASK 825
WING/BODY OHT	CONFIG NEXTGEN2	26-18 TASK 825
WING/BODY OHT	KEELBEAM OPEN	26-18 TASK 811
WING/BODY OHT	KEELBEAM OVHT	26-18 TASK 812
WING/BODY OHT	KEELBEAM SHRT	26-18 TASK 810
WING/BODY OHT	L PACK BAY OPEN	26-18 TASK 808
WING/BODY OHT	L PACK BAY OVHT	26-18 TASK 809
WING/BODY OHT	L PACK BAY SHRT	26-18 TASK 807
WING/BODY OHT	L WING OPEN	26-18 TASK 805
WING/BODY OHT	L WING OVHT	26-18 TASK 806
WING/BODY OHT	L WING SHRT	26-18 TASK 804
WING/BODY OHT	MWW LOOP A FIRE	26-18 TASK 823
WING/BODY OHT	MWW LOOP A OPEN	26-18 TASK 821

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
WING/BODY OHT	MWW LOOP A SHRT	26-18 TASK 819
WING/BODY OHT	PIN 16 FAULT	26-18 TASK 827
WING/BODY OHT	PIN 18 FAULT	26-18 TASK 828
WING/BODY OHT	PIN 19 FAULT	26-18 TASK 829
WING/BODY OHT	PIN 22 FAULT	26-18 TASK 830
WING/BODY OHT	PIN 23 FAULT	26-18 TASK 831
WING/BODY OHT	PIN 25 FAULT	26-18 TASK 832
WING/BODY OHT	PIN 3 FAULT	26-18 TASK 826
WING/BODY OHT	R SIDE OPEN	26-18 TASK 817
WING/BODY OHT	R SIDE OVHT	26-18 TASK 818
WING/BODY OHT	R SIDE SHRT	26-18 TASK 816

———— **END OF TASK** ————

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SIA ALL

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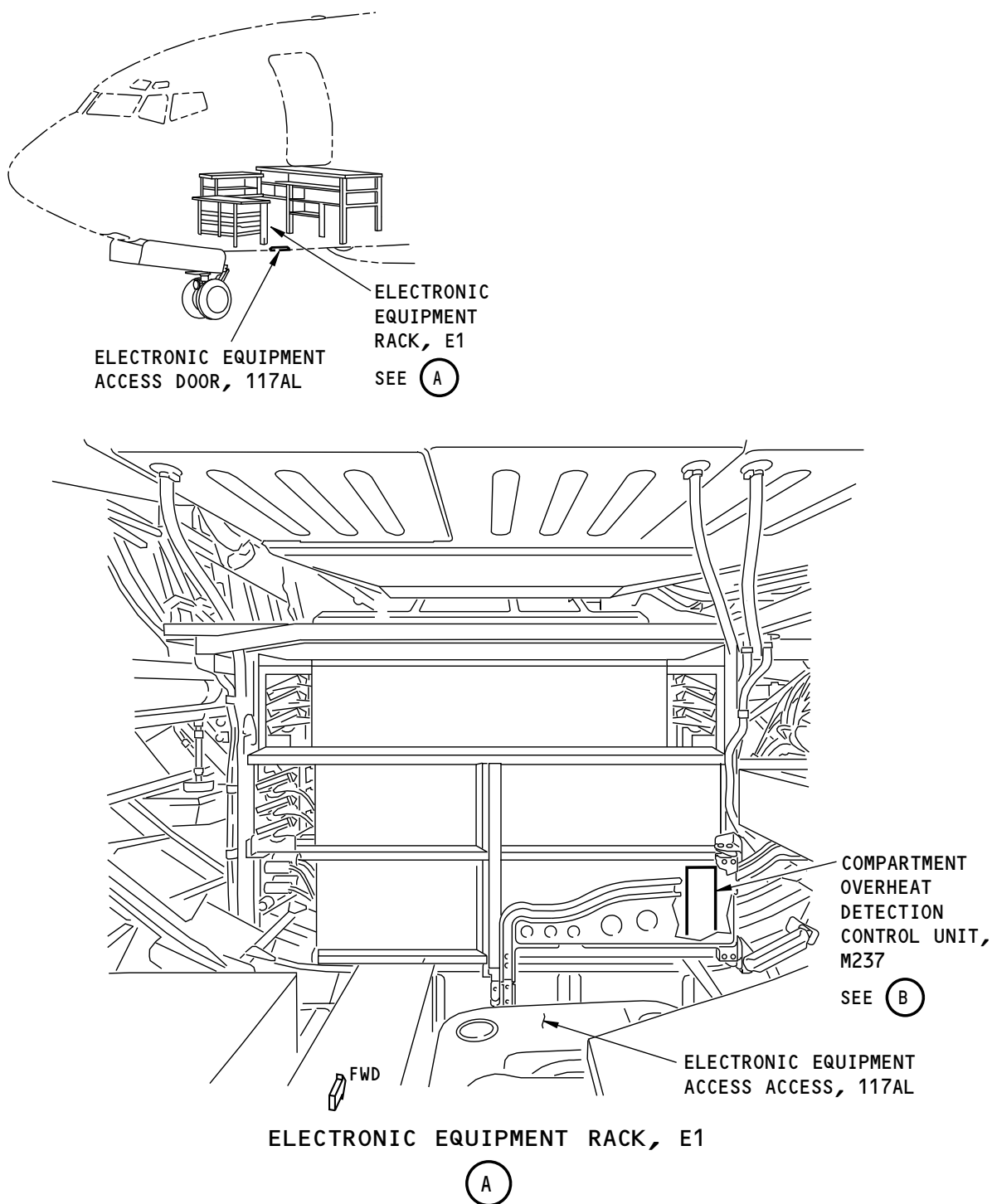
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F95464 S0000146978_V1

Compartment Overheat Detection Control Unit, M237
Figure 201/26-18-00-990-803 (Sheet 1 of 3)

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WHEEL WELL FIRE, WING & BODY
OVERHEAT DETECTION

REFER TO MAINT. MANUAL FOR COMPLETE
EXPLANATION OF SYSTEM CHARACTERISTICS.

MAINT.
ADV.

FAULT & ALARM CODE
MAINT. ADV. LIGHT WILL BE
ON DURING FAULTS AND
ALARMS-OFF AFTER
ERASURE
00 FAILURE IN CONTROL OR
POWER SUPPLY CARDS
01,02 115VAC FAILURE OR
CONTROL CARD FAILURE
03,04,05 FAILED CONTROL CARD

STEP	TEST	ACTION	RESPONSE
1	TEST DISPLAY	DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK
2	READ ALARM FAULT MEMORY	MOMENTARILY DEPRESS "MEM READ"*	FAULTS & ALARMS ARE DISPLAYED THEN 97 (MEM READ COMPLETE) & THEN BLANK
3	SYSTEM TEST	MOMENTARILY DEPRESS "LOC TEST"*	CODE 90 EXISTING FAULT CODES & THEN 99
4	ERASE(1) ALARM FAULT MEMORY	DEPRESS "MEM READ" * UNTIL CODE TO BE ERASED IS DISPLAYED THEN PRESS "MEM CLR" *	ERASE CODE GOES BLANK DEPRESS "MEM CLR" AGAIN WHEN 97 IS DISPLAYED AND DISPLAY WILL BLANK
5	ABORT	MOMENTARILY DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK

MEM READ 

NOTE: *MOMENTARILY DEPRESS AGAIN TO
CONTINUE READ
**EXISTING FAULTS & ALARMS
CANNOT BE ERASED UNTIL CORRECTED

ZONE/ SITUATION	ALARM (2)	OPEN LOOP	SHORT LOOP
LEFT WING LE	14	12	10
LEFT AC PACK BAY	24	22	20
KEELBEAM	34	32	30
AFT CARGO SECT.	44	42	40
RIGHT WING LE AND AC PACK BAY	64	62	60
WHEEL WELL FIRE	84	-	-

MEM CLEAR 

LOC TEST 

LOCAL TEST	IN PROGRESS	NOT COMPLETE	COMPLETE
	90	98	99

DISP TEST 

(1) ALARMS BECOME
ALARM HISTORY
AFTER ERASURE

TO DISPLAY ALARM
HISTORY DEPRESS
"DISP TEST" AND
"MEM READ"

TO CLEAR ALARM
HISTORY SEE
MAINT. MANUAL

(2) SHORT LOOP CODE
DISPLAYED AFTER
LOCAL TEST IS
COMPLETED


FENWAL®
 ASHLAND, MA 01721

 CAT. NO.
20-035008-300

 SER. NO.

 DATE CODE

 BOEING PART NO.
10-62187-1

COMPARTMENT OVERHEAT DETECTION CONTROL UNIT, M237

(B)

F95468 S0000146979_V1

Compartment Overheat Detection Control Unit, M237
Figure 201/26-18-00-990-803 (Sheet 2 of 3)

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SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N
35008-307 OR P/N 20-035008-300

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**WHEEL WELL FIRE, WING & BODY
OVERHEAT DETECTION**

REFER TO MAINT MANUAL FOR COMPLETE EXPLANATION OF SYSTEM CHARACTERISTICS ○ MAINT
ADV

FAULT & ALARM CODES

MAINT ADV LIGHT BE ON DURING FAULTS AND ALARMS-OFF AFTER ERASURE

MEMORY
READ

MEMORY
CLEAR

LOCAL
TEST

DISPLAY
TEST

STEP	TEST	ACTION	RESPONSE
1	TEST DISPLAY	DEPRESS "DISPLAY TEST"	ON THEN BLANK
2	READ STATUS	*DEPRESS "MEMORY READ"	RECORDS ARE DISPLAYED
3	SYSTEM TEST	DEPRESS "LOCAL TEST"	CONFIG AND FAULTS DISPLAY
4	CLEAR MEMORY	HOLD "MEMORY CLEAR"	MEMORY CLEARED

NOTE * MOMENTARILY DEPRESS AGAIN TO CONTINUE READ
EXISTING FAULTS & ALARMS CANNOT BE ERASED UNTIL CORRECTED

SOURCE CENTER WIRE

RETURN 2GND

LOOP=Resistance between
SOURCE & RETURN
2GND = Resistance between
CENTER WIRE and GND



Kidde Aerospace & Defense
WILSON, NORTH CAROLINA 27896-8630 U.S.A.

(1)ALARMS BECOME
ALARM HISTORY
AFTER ERASURE

TO DISPLAY ALARM
HISTORY, DEPRESS
"DISPLAY TEST"
AND "MEMORY READ"

TO CLEAR ALARM
HISTORY, SEE
MAINT. MANUAL

BOEING PART NO.
5218A300-1

COMPARTMENT OVERHEAT DETECTION CONTROL UNIT, M237

B

2458192 S0000571927_V1

Compartment Overheat Detection Control Unit, M237
Figure 201/26-18-00-990-803 (Sheet 3 of 3)

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SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

802. Wheel Well Fire, Wing and Overheat Detectors - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
- (a) 12 - LEFT WING LE - OPEN LOOP
 - (b) 22 - LEFT AC PACK BAY - OPEN LOOP
 - (c) 32 - KEELBEAM - OPEN LOOP
 - (d) 42 - AFT CARGO SECT. - OPEN LOOP
 - (e) 62 - RIGHT WING LE AND AC PACK BAY - OPEN LOOP
 - (f) 10 - LEFT WING LE - SHORT LOOP
 - (g) 14 - LEFT WING LE - ALARM
 - (h) 20 - LEFT AC PACK BAY - SHORT LOOP
 - (i) 24 - LEFT AC PACK BAY - ALARM
 - (j) 30 - KEELBEAM - SHORT LOOP
 - (k) 34 - KEELBEAM - ALARM
 - (l) 40 - AFT CARGO SECT. - SHORT LOOP
 - (m) 44 - AFT CARGO SECT. - ALARM
 - (n) 60 - RIGHT WING LE AND AC PACK BAY - SHORT LOOP
 - (o) 64 - RIGHT WING LE AND AC PACK BAY - ALARM
 - (p) 84 - WHEEL WELL FIRE - ALARM
- (2) These faults occur when the Control Module, M237 detects a fault with a detector, or the wiring between a detector and the Control Module. The detectors are shown in the table below.

DETECTOR	EQUIPMENT NUMBER
LEFT WING OUTBOARD OVERHEAT	M268
RIGHT WING OUTBOARD OVERHEAT	M269
MAIN WHEEL WELL FIRE	M270
FWD KEELBEAM OVERHEAT	M272
AFT KEELBEAM OVERHEAT	M273
AFT OVERHEAT SECTION 47	M275
AFT OVERHEAT SECTION 48	M276
AFT OVERHEAT	M347
AFT OVERHEAT SECTION 46	M348
LEFT FWD A/C PACK BAY OVERHEAT	M355
RIGHT FWD A/C PACK OVERHEAT	M356
LEFT WING INBOARD OVERHEAT	M370
RIGHT WING INBOARD OVERHEAT	M371

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(Continued)

DETECTOR

EQUIPMENT NUMBER

SIA ALL

AFT OVERHEAT	M1147
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LEFT FWD STRUT CAVITY OVERHEAT	M1761
LEFT AFT STRUT CAVITY OVERHEAT	M1762
RIGHT FWD STRUT CAVITY OVERHEAT	M1763
RIGHT AFT STRUT CAVITY OVERHEAT	M1764
LEFT MID A/C PACK OVERHEAT	M1909
RIGHT MID A/C PACK OVERHEAT	M1910
LEFT AFT A/C PACK OVERHEAT	M1911
RIGHT AFT A/C PACK OVERHEAT	M1912

(3) This table shows the BITE codes supplied by the Control Module and the related detectors in each loop.

BITE CODE	FAULT DESCRIPTION	POSSIBLE BAD DETECTORS OR RELATED WIRING
10	LEFT WING LEADING EDGE SHORT	M268, M370, M1761, M1762
12	LEFT WING LEADING EDGE OPEN LOOP	M268, M370, M1761, M1762
14	LEFT WING LEADING EDGE ALARM	M268, M370, M1761, M1762
20	LEFT A/C PACK SHORT	M355, M1909, M1911
22	LEFT A/C PACK OPEN LOOP	M355, M1909, M1911
24	LEFT A/C PACK ALARM	M355, M1909, M1911
30	KEEL BEAM SHORT	M272, M273
32	KEEL BEAM OPEN LOOP	M272, M273
34	KEEL BEAM ALARM	M272, M273
SIA ALL		
40	AFT CARGO SECTION SHORT	M275, M276, M347, M348, M1147
42	AFT CARGO SECTION OPEN LOOP	M275, M276, M347, M348, M1147
44	AFT CARGO SECTION ALARM	M275, M276, M347, M348, M1147
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60	RIGHT WING LEADING EDGE OR RIGHT A/C PACK SHORT	M269, M356, M371, M1763, M1764, M1910, M1912
62	RIGHT WING LEADING EDGE OR RIGHT A/C PACK OPEN LOOP	M269, M356, M371, M1763, M1764, M1910, M1912

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(Continued)

BITE CODE	FAULT DESCRIPTION	POSSIBLE BAD DETECTORS OR RELATED WIRING
64	RIGHT WING LEADING EDGE OR RIGHT A/C PACK ALARM	M269, M356, M371, M1763, M1764, M1910, M1912
84	WHEEL WELL FIRE ALARM	M270

B. Possible Causes

- (1) Fire Detector Element
- (2) Overheat Detector Control Module, M237
- (3) Duct Leakage
- (4) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

D. Related Data

- (1) Component location and tool set up (26-18 TASK SUPPORT Figure 302)
- (2) WDM 26-12-11
- (3) SSM 26-12-11

E. Tools and Equipment

- (1) Loop Controller Method:
 - (a) loop controller, COM-17158, or loop controller, COM-17417.
- (2) Other Methods:
 - (a) overheat detection module test equipment, SPL-12921, refers to C26007-2, part of C26007-72 or -1 Kit.
 - (b) overheat detection module extender box assembly, C26007-3, -73, SPL-12922, refers to C26007-3, part of C26007-72 or -1 Kit.
 - (c) adapter cable assembly, STD-12923, refers to C26007-4, part of C26007-72 or -1 Kit.
 - (d) digital multimeter, STD-274, refers to DMM.
 - (e) LCR meter (Inductance, Capacitance, Resistance), COM-1741, refers to the 875B, 878B, 879B, 878A (Optional), or 879 (Optional) models of LCR meter made by B&K Precision Corporation, 22820 Savi Ranch Parkway Yorba Linda, CA 92887 U.S.A. or any equivalent LCR meter. The LCR meter must be capable of a frequency setting of 1 KHz.
 - (f) Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443.

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F. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows, then do the applicable Fault Isolation Procedure below.
 - (b) If the maintenance message does not show, then there was an intermittent fault.

NOTE: The Wing-body Overheat Light is designed to illuminate when an Overheat Condition is detected. It is possible under some operating conditions for a duct leak to result in wing-body overheat light illumination. Under some operating conditions, a duct leak can cause a WING-BODY OVERHEAT Light to come ON.

When this happens, usually an alarm, the OVERHEAT Light, the MASTER CAUTION Light and the SHORT LOOP maintenance messages will show.

- 1) If the loop controller, COM-17158, or loop controller, COM-17417, tool is available, do the Fault Isolation Procedure - Loop Controller Method below.
- 2) If the loop controller, COM-17158, or loop controller, COM-17417, tool is not available, then do one of these Fault Isolation Procedures as applicable:
 - a) Fault Codes 12, 22, 32, 42, and 62:
 - Fault Isolation Procedure - OPEN LOOP With the Loop Continuity Test
 - b) Fault Codes 10, 14, 20, 24, 30, 34, 40, 44, 60, 64 and 84:
 - Fault Isolation Procedure - C26007 Test Box (Voltage Measurement)
 - OR
 - Fault Isolation Procedure - Resistance Measurement

SIA ALL

- 3) Do a visual inspection of the ducts from the Nitrogen Generation System (NGS) at the Environmental Control System (ECS) Ram Air Inlet Mixing Duct Panel.
 - a) If you find a problem with the NGS ducting, then repair or replace the necessary components.

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G. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a faulty detector or wiring, replace the defective detector or repair the wiring.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a faulty detector or wiring, replace the Overheat Detector Control Module, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

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H. Fault Isolation Procedure - OPEN LOOP With the Loop Continuity Test

NOTE: The Loop Continuity Test requires removal of the Overheat Detection Control Module, M237 from the airplane.

The Loop Continuity Test can be done by one of these methods:

- Use of the DMM and C26007-3 Extender Box or Equivalent Breakout Box
- Use of the LCR and C26007-3 Extender Box or Equivalent Breakout Box
- Use of the DMM to take the measurement at connector D00742 (*)
- Use of the LCR to take the measurement at connector D00742 (*)

* Avoid damage to the connector. Use the last 2 methods only when the C26007-3 Extender Box or Equivalent Breakout Box is not available.

- (1) Do this Lever Adjustment each time the M237 or the C26007 Line Replaceable Unit (LRU) is installed or removed:
 - (a) Put the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, in place of the M237 (Compartment Overheat Accessory Unit).
 - (b) On the Electronic Equipment (EE) Rack, rotate the shaft to a position where the forks start to exert pressure on the locking lever to adjust the forks.
 - 1) Make sure that the lever is in vertical position when locked and the electrical connector is correctly installed.
 - a) Do the Repair Confirmation at the end of this task.
 - 2) Make sure that the plug on the rear of the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, is fully engaged with the Airplane Receptacle.
 - (c) Readjust the forks when you install the M237 LRU back onto the EE Rack.

NOTE: The unique adjustment is required for both the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, and the M237 LRU.
- (2) Do this CONTINUITY TEST for fault codes 12, 22, 32, 42, and 62 only.
- (3) Make sure that the Center Conductor Resistance is in the limits specified in the Table below:

Table 201 Sensing Loop Test Data

FENWAL ALARM/FAULT CODES	LOOP CONNECTOR/PINS		LOOP CENTER CONDUCTOR RESISTANCE (< 130 ° F)	SENSORS
12 (Zone 1, Loop 1)	D742, pin 4	D742, pin 12	< 15 Ω	M370, M268, M1761, M1762
22 (Zone 2, Loop 2)	D742, pin 2	D742, pin 8	< 15 Ω	M1911, M1909, M355
32 (Zone 3, Loop 3)	D742, pin 9	D742, pin 29	< 15 Ω	M272, M273
SIA ALL				
42 (Zone 4, Loop 4)	D742, pin 13	D742, pin 27	< 20 Ω	M276, M275, M347, M1147, M348
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Table 201 Sensing Loop Test Data (Continued)

FENWAL ALARM/FAULT CODES	LOOP CONNECTOR/PINS		LOOP CENTER CONDUCTOR RESISTANCE (< 130 ° F)	SENSORS
62 (Zone 6, Loop 6)	D742, pin 10	D742, pin 11	< 20 Ω	M1763, M1764, M269, M371, M356, M1910, M1912
N/A (wheel well, Loop 8)	D742, pin 21	D742, pin 24	< 15 Ω	M270

I. Fault Isolation Procedure - C26007 Test Box (Voltage Measurement)

NOTE: The applicable fault codes for this procedure are 10, 14, 20, 24, 30, 34, 40, 44, 60, 64 and 84.

- (1) This table matches the Voltage Units Test readings to its corresponding Unit Part Number.

Table 202 Unit Voltage Table

Voltage	Boeing Part Number
4.1V	10-62187-1
5.1V	10-62187-2

- (2) Do this Lever Adjustment each time the M237 or the C26007 LRU is installed or removed:
- Put the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, in place of the M237 (Compartment Overheat Accessory Unit).
 - On the EE Rack, rotate the shaft to a position where the forks start to exert pressure on the locking lever to adjust the forks.
 - Make sure that the lever is in vertical position when locked and the electrical connector is correctly installed.
 - Make sure that the plug on the rear of the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, is fully engaged with the Airplane Receptacle.
 - Readjust the forks when you install the M237 LRU back onto the EE Rack.

NOTE: The unique adjustment is required for both the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, and the M237 LRU.

- (3) Do this SENSOR TEST for fault code 10 and 14

CONDITIONS:

- Power ON (External or APU Power) (Supply External Power, AMM TASK 24-22-00-860-813 or Supply APU Generator Power, AMM TASK 24-22-00-860-815)
- No Bleed or PACK Running

- Rotate the dial on the overheat detection module test equipment, SPL-12921, to 4 and read the voltage.
- Rotate the dial on the overheat detection module test equipment, SPL-12921, to 12 and read the voltage.

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- (c) If the voltages at Pin 4 and at Pin 12 are ≥ 5.1 Volts (Reference Table 202), continue with the OVERHEAT TEST for fault code 14 and 10.
- (d) If the voltages at Pin 4 and at Pin 12 are < 5.1 Volts (Reference Table 202), disconnect the connector D834 from the Sensor Element M268 to divide the loop (AMM PAGEBLOCK 26-18-02/401)
 - 1) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 4 and read the voltage.
 - 2) If the voltage at Pin 4 is < 5.1 Volts (Reference Table 202), disconnect the Sensor Element M268 from M370 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Read the voltage at Pin 4.
 - b) If the voltage at Pin 4 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M370 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the voltage at Pin 4 is ≥ 5.1 Volts (Reference Table 202), replace the Sensor Element M268 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect the Sensor Element M268 to M370 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 3) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 12 and read the voltage.
 - a) If the voltage at Pin 12 is < 5.1 Volts (Reference Table 202), disconnect both sides of the Sensor Element M1761 from M1762 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - b) Read the voltage at Pin 12.
 - <1> If the voltage at Pin 12 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M1762 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <2> If the voltage at Pin 12 is ≥ 5.1 Volts (Reference Table 202), replace the Sensor Element M1761 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) Reconnect both sides of the Sensor Element M1761 to M1762 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 4) Reconnect the connector D834 to the Sensor Element M268 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 5) Measure the voltages at Pin 4 and at Pin 12 again.

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- a) If the voltages are < 5.1 Volts (Reference Table 202), then do the above steps again.
- b) If the voltages are ≥ 5.1 Volts (Reference Table 202), then continue to the OVERHEAT TEST.



MAKE SURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ENGINE DANGER AREAS. THE ENGINE INTAKE AND EXHAUST CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT IN THE DANGER AREAS.

- (4) Do this OVERHEAT TEST for fault code 10 and 14

CONDITIONS:

- Left Engine Idle, Left Bleed and Left Pack ON (Start the Engine Procedure (Normal Start), AMM TASK 71-00-00-800-808-F00)
- Isolation Valve Closed and APU Bleed OFF

- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 4 and read the voltage.
- (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 12 and read the voltage.
- (c) If the voltage at Pin 4 and Pin 12 are ≥ 5.1 Volts (Reference Table 202), you have corrected the problem.
 - 1) Do the Repair Confirmation at the end of this task.
- (d) If the voltages at Pin 4 and at Pin 12 are < 5.1 Volts (Reference Table 202), disconnect the connector D834 from the Sensor Element M268 to divide the loop (AMM PAGEBLOCK 26-18-02/401).
 - 1) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 4 and read the voltage.
 - 2) If the voltage at Pin 4 is < 5.1 Volts (Reference Table 202), disconnect the Sensor Element M268 from M370 (AMM PAGEBLOCK 26-18-02/401).
 - a) Read the voltage at Pin 4.
 - b) If the voltage at Pin 4 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M370. Do a check for these conditions at the areas around the Sensor Element M370 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - c) If the voltage at Pin 4 is ≥ 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M268. Do a check for these conditions at the areas around the Sensor Element M268 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces

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- <3> Degraded gold surface coating for the Bleed Ducting
 - d) Connect the Sensor Element M268 to M370 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 3) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 12 and read the voltage.
 - 4) If the voltage at Pin 12 is < 5.1 Volts (Reference Table 202), disconnect both wire connections to the Sensor Element M1761 (AMM PAGEBLOCK 26-18-02/401).
 - a) Read the voltage at Pin 12.
 - b) If the voltage at Pin 12 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M1762. Do a check for these conditions at the areas around the Sensor Element M1762 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - c) If the voltage at Pin 12 is $\geq$ 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M1761. Do a check for these conditions at the areas around the Sensor Element M1761 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - d) Reconnect both wire connections to the Sensor Element M1761 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 5) Reconnect the connector D834 to the Sensor Element M268 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- (e) If the voltages at Pin 4 and at Pin 12 are $\geq$ 5.1 Volts (Reference Table 202), you have corrected the problem.
- 1) Do the Repair Confirmation at the end of this task.
- (5) Do this SENSOR TEST for fault code 20 and 24
- CONDITIONS:
- Power ON (External or APU Power) (Supply External Power, AMM TASK 24-22-00-860-813 or Supply APU Generator Power, AMM TASK 24-22-00-860-815)
 - No Bleed or PACK Running
- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 2 and read the voltage.
 - (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 8 and read the voltage.

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- (c) If the voltages at Pin 2 and at Pin 8 are ≥ 5.1 Volts (Reference Table 202), continue with the OVERHEAT TEST for fault code 24 and 20.
 - (d) If the voltages at Pin 2 and at Pin 8 are < 5.1 Volts (Reference Table 202), disconnect the connector D856 from the Sensor Element M355 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 2 and read the voltage.
 - 2) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 8 and read the voltage.
 - 3) If the voltage at Pin 2 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M355 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 4) If the voltage at Pin 8 is < 5.1 Volts (Reference Table 202), disconnect both wire connections to the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 8 and read the voltage.
 - b) If the voltage at Pin 8 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M1911 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the voltage at Pin 8 is ≥ 5.1 Volts (Reference Table 202), replace the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect both wire connections to the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 5) Reconnect the connector D856 to the Sensor Element M355 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 6) Measure the voltages at Pin 2 and at Pin 8 again.
 - If the voltages are < 5.1 Volts (Reference Table 202), then do the above steps again.
 - If the voltages are ≥ 5.1 Volts (Reference Table 202), then continue to the OVERHEAT TEST.
 - (6) Do this OVERHEAT TEST for fault code 20 and 24
- CONDITIONS:
- APU Bleed ON, Left PACK ON
 - Isolation Valve Closed

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- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 2 and read the voltage.
- (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 8 and read the voltage.
- (c) If the voltages at Pin 2 and at Pin 8 are < 5.1 Volts (Reference Table 202), disconnect the connector D856 from the Sensor Element M355 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 2 and read the voltage.
 - 2) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 8 and read the voltage.
 - 3) If the voltage at Pin 2 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M355. Do a check for these conditions at the areas around the Sensor Element M355 and repair as necessary:
 - a) Bleed Air leaks through duct cracks and joints
 - b) Sensors located too close to the Bleed Duct surfaces
 - c) Degraded gold surface coating for the Bleed Ducting
 - 4) If the voltage at Pin 8 is < 5.1 Volts (Reference Table 202), disconnect both wire connections to the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Read the voltage at Pin 8.
 - b) If the voltage at Pin 8 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M1911. Do a check for these conditions at the areas around the Sensor Element M1911 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - c) If the voltage at Pin 8 is $\geq$ 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M1909. Do a check for these conditions at the areas around the Sensor Element M1909 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - d) Reconnect both wire connections to the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 5) Reconnect the connector D856 to the Sensor Element M355 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).

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- (d) If the voltages at Pin 2 and at Pin 8 are ≥ 5.1 Volts (Reference Table 202), you have corrected the problem.
- 1) Do the Repair Confirmation at the end of this task.
- (7) Do this SENSOR TEST for fault code 30 and 34
- CONDITIONS:
- Power ON (External or APU Power) (Supply External Power, AMM TASK 24-22-00-860-813 or Supply APU Generator Power, AMM TASK 24-22-00-860-815)
 - No Bleed or PACK Running
- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 9 and read the voltage.
- (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 29 and read the voltage
- (c) If the voltages at Pin 9 and at Pin 29 are ≥ 5.1 Volts (Reference Table 202), continue with the OVERHEAT TEST for fault code 34 and 30.
- (d) If the voltages at Pin 9 and at Pin 29 are < 5.1 Volts (Reference Table 202), disconnect the connector D850 from the Sensor Element M272 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 1) Read the voltage at Pin 9 and at Pin 29.
- 2) If the voltage at Pin 9 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M273 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 3) If the voltage at Pin 29 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M272 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 4) Reconnect the connector D850 to the Sensor Element M272 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 5) Measure the voltages at Pin 9 and at Pin 29 again.
- If the voltages are < 5.1 Volts (Reference Table 202), then do the above steps again.
 - If the voltages are ≥ 5.1 Volts (Reference Table 202), then continue to the OVERHEAT TEST.
- (8) Do this OVERHEAT TEST for fault code 30 and 34
- CONDITIONS:
- APU Bleed ON, Left PACK ON
 - Isolation Valve Closed
- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 9 and read the voltage.
- (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 29 and read the voltage

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- (c) If the voltage at Pin 9 and Pin 29 are < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M273 or M272, disconnect the loop at connector D850 or D852.
- 1) Read the voltage at Pin 9 and Pin 29.
 - 2) If the voltage at Pin 9 < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M273. Do a check for these conditions at the areas around the Sensor Element M273 and repair as necessary:
 - a) Bleed Air leaks through duct cracks and joints
 - b) Sensors located too close to the Bleed Duct surfaces
 - c) Degraded gold surface coating for the Bleed Ducting
 - 3) If the voltage at Pin 29 < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M272. Do a check for these conditions at the areas around the Sensor Element M272 and repair as necessary:
 - a) Bleed Air leaks through duct cracks and joints
 - b) Sensors located too close to the Bleed Duct surfaces
 - c) Degraded gold surface coating for the Bleed Ducting
- (d) If the voltages at Pin 9 and at Pin 29 are ≥ 5.1 Volts (Reference Table 202), you have corrected the problem.
- 1) Do the Repair Confirmation at the end of this task.
- (9) Do this SENSOR TEST for fault code 40 and 44
- CONDITIONS:
- Power ON (External or APU Power) (Supply External Power, AMM TASK 24-22-00-860-813 or Supply APU Generator Power, AMM TASK 24-22-00-860-815)
 - No Bleed or PACK Running
- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 13 and read the voltage.
 - (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 27 and read the voltage.
 - (c) If the voltages at Pin 13 and at Pin 27 are ≥ 5.1 Volts (Reference Table 202), continue with the OVERHEAT TEST for fault code 44 and 40.

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- (d) If the voltages at Pin 13 and at Pin 27 are < 5.1 Volts (Reference Table 202), disconnect the Sensor Element M275 from M347 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 1) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 27 and read the voltage.
 - 2) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 13 and read the voltage.

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- 3) If the voltage at Pin 13 is < 5.1 Volts (Reference Table 202), disconnect the connector D862 (or D864) from the Sensor Element M275 (or M276) (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Read the voltage at Pin 13.
 - b) If the voltage at Pin 13 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M276 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the voltage at Pin 13 is $\geq$ 5.1 Volts (Reference Table 202), replace the Sensor Element M275 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect the connector D862 (or D864) to the Sensor Element M275 (or M276) (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 4) If the voltage at Pin 27 is < 5.1 (Reference Table 202), disconnect the Sensor Element M347 from M1147 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 5) Reconnect the Sensor Element M275 to M347.
- 6) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 13 and read the voltage.
- 7) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 27 and read the voltage.
- 8) If the voltage at Pin 13 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M347 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 9) If the voltage at Pin 27 is < 5.1 Volts (Reference Table 202), disconnect the Sensor Element M1147 from M348. (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Read the voltage at Pin 27.
 - b) If the voltage at Pin 27 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M348 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the voltage at Pin 27 is $\geq$ 5.1 Volts (Reference Table 202), replace the Sensor Element M1147 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect the Sensor Element M1147 to the Sensor Element M348 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 10) Measure the voltages at Pin 13 and at Pin 27 again.

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- If the voltages are < 5.1 Volts (Reference Table 202), then do the above steps again.
- If the voltages are ≥ 5.1 Volts (Reference Table 202), then continue to the OVERHEAT TEST.

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(10) Do this OVERHEAT TEST for fault code 40 and 44

CONDITIONS:

- APU Bleed ON, Left PACK ON
 - Isolation Valve Closed
- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 13 and read the voltage.
 - (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 27 and read the voltage.

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- (c) If the voltages at Pin 13 and at Pin 27 are < 5.1 Volts (Reference Table 202), disconnect the Sensor Element M275 from M347 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 27 and read the voltage.
 - 2) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 13 and read the voltage.
 - 3) If the voltage at Pin 13 is < 5.1 Volts (Reference Table 202), disconnect the connector D862 (or D864) from the Sensor Element M275 (or M276) (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Read the voltage at Pin 13.
 - b) If the voltage at Pin 13 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M276. Do a check for these conditions at the areas around the Sensor Element M276 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - c) If the voltage at Pin 13 is ≥ 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M275. Do a check for these conditions at the areas around the Sensor Element M275 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting

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- d) Reconnect the connector D862 (or D864) to the Sensor Element M275 (or M276) (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 4) If the voltage at Pin 27 is < 5.1 Volts (Reference Table 202), disconnect the Sensor Element M347 from M1147 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 5) Reconnect the Sensor Element M275 to M347.
- 6) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 13 and read the voltage.
- 7) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 27 and read the voltage.
- 8) If the voltage at Pin 13 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M347. Do a check for these conditions at the areas around the Sensor Element M347 and repair as necessary:
 - a) Bleed Air leaks through duct cracks and joints
 - b) Sensors located too close to the Bleed Duct surfaces
 - c) Degraded gold surface coating for the Bleed Ducting
- 9) If the voltage at Pin 27 is < 5.1 Volts (Reference Table 202), disconnect the Sensor Element M1147 from M348 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Read the voltage at Pin 27.
 - b) If the voltage at Pin 27 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M348. Do a check for these conditions at the areas around the Sensor Element M348 and repair as necessary:
 - $<1>$ Bleed Air leaks through duct cracks and joints
 - $<2>$ Sensors located too close to the Bleed Duct surfaces
 - $<3>$ Degraded gold surface coating for the Bleed Ducting
 - c) If the voltage at Pin 27 is ≥ 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M1147. Do a check for these conditions at the areas around the Sensor Element M1147 and repair as necessary:
 - $<1>$ Bleed Air leaks through duct cracks and joints
 - $<2>$ Sensors located too close to the Bleed Duct surfaces
 - $<3>$ Degraded gold surface coating for the Bleed Ducting
 - d) Reconnect the Sensor Element M1147 to Sensor Element M348 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).

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- (d) If the voltages at Pin 13 and at Pin 27 are ≥ 5.1 Volts (Reference Table 202), you have corrected the problem.
 - 1) Do the Repair Confirmation at the end of this task.

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(11) Do this SENSOR TEST for fault code 60 and 64

CONDITIONS:

- Power ON (External or APU Power) (Supply External Power, AMM TASK 24-22-00-860-813 or Supply APU Generator Power, AMM TASK 24-22-00-860-815)
- No Bleed or PACK Running

- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 10 and read the voltage.
- (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 11 and read the voltage.
- (c) If the voltages at Pin 10 and at Pin 11 are ≥ 5.1 Volts (Reference Table 202), continue with the OVERHEAT TEST for fault code 64 and 60.
- (d) If the voltages at Pin 10 and at Pin 11 are < 5.1 Volts (Reference Table 202), disconnect the connector D844 from the Sensor Element M356 to divide the loop (AMM PAGEBLOCK 26-18-02/401).

- 1) Read the voltages at Pin 11 and at Pin 10.
- 2) If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), disconnect the connector D846 from the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Read the voltage at Pin 11.
 - b) If the voltage at Pin 11 is ≥ 5.1 Volts (Reference Table 202), replace the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), disconnect both wire connections to the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <1> Measure the voltage at Pin 11.
 - <2> If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M1912 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <3> If the voltage at Pin 11 is ≥ 5.1 Volts (Reference Table 202), replace the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <4> Reconnect both wire connections to the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- d) Reconnect the connector D846 to the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).

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- 3) If the voltage at Pin 10 is < 5.1 (Reference Table 202), reconnect the connector D844 to the Sensor Element M356 and disconnect the connector D838 at the Sensor Element M269 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to read the voltages at the Pin 11 and Pin 10.
 - b) If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), disconnect the Sensor Element M269 from M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - $<1>$ Measure the voltage at Pin 11.
 - $<2>$ If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - $<3>$ If the voltage at Pin 11 is ≥ 5.1 Volts (Reference Table 202), replace the Sensor Element M269 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - $<4>$ Reconnect the Sensor Element M269 to M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the voltage at Pin 10 is < 5.1 Volts (Reference Table 202), disconnect both wire connections to the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - $<1>$ Measure the voltage at Pin 10.
 - $<2>$ If the voltage at Pin 10 is < 5.1 Volts (Reference Table 202), replace the Sensor Element M1764 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - $<3>$ If the voltage at Pin 10 is ≥ 5.1 Volts (Reference Table 202), replace the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - $<4>$ Reconnect both wire connections to the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect the connector D838 to the Sensor Element M269 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 4) Measure the voltages at Pin 10 and at Pin 11 again.

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- If the voltages are < 5.1 Volts (Reference Table 202), then do the above steps again.
- If the voltages are ≥ 5.1 Volts (Reference Table 202), then continue to the OVERHEAT TEST.



MAKE SURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ENGINE DANGER AREAS. THE ENGINE INTAKE AND EXHAUST CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT IN THE DANGER AREAS.

- (12) Do this OVERHEAT TEST for fault code 60 and 64

CONDITIONS:

- Right Engine Idle, Right Bleed and Right PACK ON (Start the Engine Procedure (Normal Start), AMM TASK 71-00-00-800-808-F00)
 - Isolation Valve Closed and APU Bleed OFF
- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 10 and read the voltage.
- (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 11 and read the voltage.
- (c) If the voltage at Pin 10 and Pin 11 are ≥ 5.1 Volts (Reference Table 202), you have corrected the problem.
- 1) Do the Repair Confirmation at the end of this task.
- (d) If the voltages at Pin 10 and at Pin 11 are < 5.1 Volts (Reference Table 202), disconnect the connector D844 from the Sensor Element M356 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 1) Read the voltages at Pin 11 and at Pin 10.
- 2) If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), disconnect the connector D846 from the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- a) Read the voltage at Pin 11.
- b) If voltage at Pin 11 ≥ 5.1 (Reference Table 202), then an overheat condition is detected by the Sensor Element M356. Do a check for these conditions at the areas around the Sensor Element M356 and repair as necessary:
- <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
- c) If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), disconnect both wire connections from the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- <1> Measure the voltage at Pin 11.

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- <2> If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M1912. Do a check for these conditions at the areas around the Sensor Element M1912 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <3> If the voltage at Pin 11 is $\geq$ 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M1910. Do a check for these conditions at the areas around the Sensor Element M1910 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <4> Reconnect both wire connections to the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- d) Reconnect the connector D846 to the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 3) Reconnect the connector D844 to the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 4) If the voltage at Pin 10 is < 5.1 (Reference Table 202), disconnect the connector D838 at the Sensor Element M269 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 10 and read the voltage.
 - b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 11 and read the voltage.
 - c) If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), disconnect the Sensor Element M269 from M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <1> Read the voltage at Pin 11.
 - <2> If the voltage at Pin 11 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M371. Do a check for these conditions at the areas around the Sensor Element M371 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting

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- <3> If the voltage at Pin 11 is ≥ 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M269. Do a check for these conditions at the areas around the Sensor Element M269 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <4> Reconnect the Sensor Element M269 to M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) If the voltage at Pin 10 is < 5.1 Volts (Reference Table 202), disconnect both wire connections to the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <1> Measure the voltage at Pin 10.
 - <2> If the voltage at Pin 10 is < 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M1764. Do a check for these conditions at the areas around the Sensor Element M1764 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <3> If the voltage at Pin 10 is ≥ 5.1 Volts (Reference Table 202), an overheat condition is detected by the Sensor Element M1763. Do a check for these conditions at the areas around the Sensor Element M1763 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <4> Reconnect both wire connections to the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - e) Reconnect the connector D838 to the Sensor Element M269 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 5) If the voltages at Pin 10 and at Pin 11 are ≥ 5.1 Volts (Reference Table 202), you have corrected the problem.
 - a) Do the Repair Confirmation at the end of this task.
 - (13) Do this SENSOR TEST for fault code 84
- CONDITIONS:
- Power ON (External or APU Power) (Supply External Power, AMM TASK 24-22-00-860-813 or Supply APU Generator Power, AMM TASK 24-22-00-860-815)

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- No Bleed or PACK Running
- (a) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 21 and read the voltage.
- (b) Rotate the dial on the overheat detection module test equipment, SPL-12921, to 24 and read the voltage.
- (c) If the voltage at Pin 21 or Pin 24 is < 5.1 Volts (Reference Table 202), then replace the Sensor Element M270 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- (d) If the voltages at Pin 21 and at Pin 24 are ≥ 5.1 Volts (Reference Table 202), the fault was an intermittent fault.

J. Fault Isolation Procedure - Resistance Measurement

NOTE: Voltage measurement with the use of C26007-72 or -1 is the preferred troubleshooting method, because Voltage measurement is more reliable than Resistance measurement.

Resistance measurement should only be used when C26007-72 or -1 is not available. Both DMM and LCR can be used to measure Loop and Sensor Resistance, but the DMM can only be used as a last resort.

The use of a standard DMM to test the Fenwal System is acceptable as long as the Sensing Elements are not within 100 Degrees F of their Temperature Set Point, and the test is of short duration.

Boeing discourages the use of a DMM because repeated usage of DMM over time could potentially have a negative impact to the sensors.

Resistance measurement requires the removal of the Overheat Detection Control Module, M237 from the airplane.

Resistance measurement can be accomplished by one of these methods:

- Use of the DMM and C26007-3 Extender Box or Equivalent Breakout Box
- Use of the LCR and C26007-3 Extender Box or Equivalent Breakout Box
- Use of the DMM to take the measurement at connector D00742 (*)
- Use of the LCR to take the measurement at connector D00742 (*)

* Avoid damage to the connector. Use the last 2 methods only when the C26007-3 Extender Box or Equivalent Breakout Box is not available.

NOTE: The applicable fault codes for this procedure are 10, 14, 20, 24, 30, 34, 40, 44, 60, 64 and 84.

Make sure that the LCR frequency is set to 1 KHz.

It is necessary to use the R-mode of the LCR meter (Inductance, Capacitance, Resistance), COM-1741.

The LCR meter should be set to parallel mode.

- (1) Do this Lever Adjustment each time the M237 or the C26007 LRU is installed or removed:
 - (a) Put the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, in place of the M237 (Compartment Overheat Accessory Unit).
 - (b) On the EE Rack, rotate the shaft to a position where the forks start to exert pressure on the locking lever to adjust the forks.
 - 1) Make sure that the lever is in vertical position when locked and the electrical connector is correctly installed.
 - a) Do the Repair Confirmation at the end of this task.

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- 2) Make sure that the plug on the rear of the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, is fully engaged with the Airplane Receptacle.
- (c) Readjust the forks when you install the M237 LRU back onto the EE Rack.
NOTE: The unique adjustment is required for both the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, and the M237 LRU.
- (2) Do this SENSOR TEST for fault code 10 and 14
CONDITIONS:
 - No Power
 - No Bleed or PACK Running
 - (a) Measure the Resistance of pin 4 to Ground.
 - (b) Measure the Resistance of pin 12 to Ground.
 - (c) If the Resistances at Pin 4 to Ground and at Pin 12 to Ground are $\geq 1\text{ M}\Omega$, continue with the OVERHEAT TEST.
 - (d) If the Resistances at Pin 4 to Ground and at Pin 12 to Ground are $< 1\text{ M}\Omega$, disconnect the connector D834 from the Sensor Element M268 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Measure the Resistance of Pin 4 to Ground.
 - 2) If the Resistance at Pin 4 to Ground is $< 1\text{ M}\Omega$, disconnect the Sensor Element M268 from M370 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 4 to Ground.
 - b) If the Resistance at Pin 4 to Ground is $< 1\text{ M}\Omega$, replace the Sensor Element M370 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the Resistance at Pin 4 to Ground is $\geq 1\text{ M}\Omega$, replace the Sensor Element M268 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect the Sensor Element M268 to M370 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 3) Measure the Resistance at Pin 12 to Ground.
 - a) If the Resistance at Pin 12 to Ground is $< 1\text{ M}\Omega$, disconnect both wires from the Sensor Element M1761 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - b) Measure the Resistance at Pin 12 to Ground.

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- <1> If the Resistance at Pin 12 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M1762 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- <2> If the Resistance at Pin 12 to Ground is $\geq 1 \text{ M}\Omega$, replace the Sensor Element M1761 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- c) Reconnect both wires to the Sensor Element M1761 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 4) Reconnect the connector D834 to the Sensor Element M268 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 5) Measure the Resistances at Pin 4 to Ground and at Pin 12 to Ground again. If the Resistances are $< 1 \text{ M}\Omega$ then do the above steps again. If the Resistances are $\geq 1 \text{ M}\Omega$, then continue to the OVERHEAT TEST.



MAKE SURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ENGINE DANGER AREAS. THE ENGINE INTAKE AND EXHAUST CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT IN THE DANGER AREAS.

- (3) Do this OVERHEAT TEST for fault code 10 and 14
CONDITIONS:
 - Left Engine Idle, Left Bleed and Left Pack ON (Start the Engine Procedure (Normal Start), AMM TASK 71-00-00-800-808-F00)
 - Isolation Valve Closed and APU Bleed OFF
- (a) Measure the Resistance of pin 4 to Ground.
- (b) Measure the Resistance of pin 12 to Ground.
- (c) If the Resistances at Pin 4 to Ground and at Pin 12 to Ground are $\geq 1 \text{ M}\Omega$, you have corrected the problem.
 - 1) Do the Repair Confirmation at the end of this task.
- (d) If the Resistances at Pin 4 to Ground and at Pin 12 to Ground are $< 1 \text{ M}\Omega$, disconnect the connector D834 from the Sensor Element M268 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Measure the Resistance of Pin 4 to Ground.
 - 2) If the Resistance at Pin 4 to Ground is $< 1 \text{ M}\Omega$, disconnect the Sensor Element M268 from M370 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 4 to Ground.

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- b) If the Resistance at Pin 4 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M370. Do a check for these conditions at the areas around the Sensor Element M370 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - c) If the Resistance at Pin 4 to Ground is $\geq 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M268. Do a check for these conditions at the areas around the Sensor Element M268 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - d) Connect the Sensor Element M268 to M370 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 3) Measure the Resistance at Pin 12 to Ground.
- 4) If the Resistance at Pin 12 to Ground is $< 1 \text{ M}\Omega$, disconnect both wire connections to the Sensor Element M1761 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- a) Measure the Resistance at Pin 12 to Ground.
 - b) If the Resistance at Pin 12 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M1762. Do a check for these conditions at the areas around the Sensor Element M1762 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - c) If the Resistance at Pin 12 to Ground is $\geq 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M1761. Do a check for these conditions at the areas around the Sensor Element M1761 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - d) Reconnect both wire connections to the Sensor Element M1761 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 5) Reconnect the connector D834 to the Sensor Element M268 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- (4) Do this SENSOR TEST for fault code 20 and 24
CONDITIONS:
- No Power

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- No Bleed or PACK Running
 - (a) Measure the Resistance at Pin 2 to Ground.
 - (b) Measure the Resistance at Pin 8 to Ground.
 - (c) If the Resistances at Pin 2 to Ground and at Pin 8 to Ground are $\geq 1 \text{ M}\Omega$, continue with the OVERHEAT TEST.
 - (d) If the Resistances at Pin 2 to Ground and at Pin 8 to Ground are $< 1 \text{ M}\Omega$, disconnect the connector D856 from the Sensor Element M355 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Measure the Resistance of Pin 2 to Ground.
 - 2) Measure the Resistance of Pin 8 to Ground.
 - 3) If the Resistance at Pin 2 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M355 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 4) If the Resistance at Pin 8 to Ground is $< 1 \text{ M}\Omega$, disconnect both wire connections to the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 8 to Ground.
 - b) If the Resistance at Pin 8 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M1911 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the Resistance at Pin 8 to Ground is $\geq 1 \text{ M}\Omega$, replace the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect both wire connections to the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 5) Reconnect the connector D856 to the Sensor Element M355 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 6) Measure the Resistances at Pin 2 to Ground and at Pin 8 to Ground again.
 - If the Resistances are $< 1 \text{ M}\Omega$ then do the above steps again.
 - If the Resistances are $\geq 1 \text{ M}\Omega$, then continue to the OVERHEAT TEST.
 - (5) Do this OVERHEAT TEST for fault code 20 and 24
- CONDITIONS:
- APU Bleed ON, Left PACK ON
 - Isolation Valve Closed
- (a) Measure the Resistance at Pin 2 to Ground.
 - (b) Measure the Resistance at Pin 8 to Ground.
 - (c) If the Resistances at Pin 2 to Ground and at Pin 8 to Ground are $\geq 1 \text{ M}\Omega$, you have corrected the problem.

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- 1) Do the Repair Confirmation at the end of this task.
- (d) If the Resistances at Pin 2 to Ground and at Pin 8 to Ground are $< 1 \text{ M}\Omega$, disconnect the connector D856 from the Sensor Element M355 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Measure the Resistance of Pin 2 to Ground.
 - 2) Measure the Resistance of Pin 8 to Ground.
 - 3) If the Resistance at Pin 2 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M355. Do a check for these conditions at the areas around the Sensor Element M355 and repair as necessary:
 - a) Bleed Air leaks through duct cracks and joints
 - b) Sensors located too close to the Bleed Duct surfaces
 - c) Degraded gold surface coating for the Bleed Ducting
 - 4) If the Resistance at Pin 8 to Ground is $< 1 \text{ M}\Omega$, disconnect both wire connections to the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 8 to Ground.
 - b) If the Resistance at Pin 8 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M1911. Do a check for these conditions at the areas around the Sensor Element M1911 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - c) If the Resistance at Pin 8 to Ground is $\geq 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M1909. Do a check for these conditions at the areas around the Sensor Element M1909 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
 - d) Reconnect both wire connections to the Sensor Element M1909 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 5) Reconnect the connector D856 to the Sensor Element M355 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).

(6) Do this SENSOR TEST for fault code 30 and 34

CONDITIONS:

 - No Power
 - No Bleed or PACK Running
 - (a) Measure the Resistance at Pin 9 to Ground.
 - (b) Measure the Resistance at Pin 29 to Ground.

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- (c) If the Resistances at Pin 9 to Ground and at Pin 29 to Ground are $\geq 1 \text{ M}\Omega$, continue with the OVERHEAT TEST.
- (d) If the Resistances at Pin 9 to Ground and at Pin 29 to Ground are $< 1 \text{ M}\Omega$, disconnect the connector D850 from the Sensor Element M272 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Measure the Resistance at Pin 9 to Ground and at Pin 29 to Ground.
 - 2) If the Resistance at Pin 9 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M273 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 3) If the Resistance at Pin 29 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M272 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 4) Reconnect the connector D850 to the Sensor Element M272 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 5) Measure the Resistances at Pin 9 to Ground and at Pin 29 to Ground again.
 - If the Resistances are $< 1 \text{ M}\Omega$ then do the above steps again.
 - If the Resistances are $\geq 1 \text{ M}\Omega$, then continue to the OVERHEAT TEST.
- (7) Do this OVERHEAT TEST for fault code 30 and 34
CONDITIONS:
 - APU Bleed ON, Left PACK ON
 - Isolation Valve Closed
 - (a) Measure the Resistance at Pin 9 to Ground.
 - (b) Measure the Resistance at Pin 29 to Ground.
 - (c) If the Resistances at Pin 9 to Ground and at Pin 29 to Ground are $\geq 1 \text{ M}\Omega$, you have corrected the problem.
 - 1) Do the Repair Confirmation at the end of this task.
 - (d) If the Resistance at Pin 9 to Ground and at Pin 29 to Ground are $< 1 \text{ M}\Omega$, disconnect the connector D850 from the Sensor Element M272 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - (e) Measure the Resistance at Pin 9 to Ground and at Pin 29 to Ground.
 - (f) If the Resistance at Pin 9 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M273. Do a check for these conditions at the areas around the Sensor Element M273 and repair as necessary:
 - 1) Bleed Air leaks through duct cracks and joints
 - 2) Sensors located too close to the Bleed Duct surfaces
 - 3) Degraded gold surface coating for the Bleed Ducting
 - (g) Reconnect the connector D850 to the Sensor Element M272 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).

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- (h) If the Resistance at Pin 29 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M272. Do a check for these conditions at the areas around the Sensor Element M272 and repair as necessary:
 - 1) Bleed Air leaks through duct cracks and joints
 - 2) Sensors located too close to the Bleed Duct surfaces
 - 3) Degraded gold surface coating for the Bleed Ducting
- (8) Do this SENSOR TEST for fault code 40 and 44
CONDITIONS:
 - No Power
 - No Bleed or PACK Running
 - (a) Measure the Resistance at Pin 13 to Ground.
 - (b) Measure the Resistance at Pin 27 to Ground.
 - (c) If the Resistances at Pin 13 to Ground and at Pin 27 to Ground are $\geq 1 \text{ M}\Omega$, continue with the OVERHEAT TEST.

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- (d) If the Resistances at Pin 13 to Ground and at Pin 27 to Ground are $< 1 \text{ M}\Omega$, disconnect the Sensor Element M275 from M347 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Measure the Resistance at Pin 27 to Ground.
 - 2) Measure the Resistance at Pin 13 to Ground.
 - 3) If the Resistance at Pin 13 to Ground is $< 1 \text{ M}\Omega$, disconnect the connector D862 (or D864) from the Sensor Element M275 (or M276) (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 13 to Ground.
 - b) If the Resistance at Pin 13 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M276 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the Resistance at Pin 13 to Ground is $\geq 1 \text{ M}\Omega$, replace the Sensor Element M275 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect the connector D862 (or D864) to the Sensor Element M275 (or M276) (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 4) If the Resistance at Pin 27 to Ground is $< 1 \text{ M}\Omega$, disconnect the Sensor Element M347 from M1147 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 5) Reconnect the Sensor Element M275 to M347.

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- 6) Measure the Resistance at Pin 13 to Ground.
- 7) Measure the Resistance at Pin 27 to Ground.
- 8) If the Resistance at Pin 13 to Ground $< 1 \text{ M}\Omega$, replace the Sensor Element M347 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 9) If the Resistance at Pin 27 to Ground is $< 1 \text{ M}\Omega$, disconnect the Sensor Element M1147 from M348 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 27 to Ground.
 - b) If the Resistance at Pin 27 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M348 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the Resistance at Pin 27 to Ground is $\geq 1 \text{ M}\Omega$, replace the Sensor Element M1147 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect the Sensor Element M1147 to Sensor Element M348 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 10) Measure the Resistances at Pin 13 to Ground and at Pin 27 to Ground again.
 - If the Resistances are $< 1 \text{ M}\Omega$ then do the above steps again.
 - If the Resistances are $\geq 1 \text{ M}\Omega$, then continue to the OVERHEAT TEST.

SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

- (9) Do this OVERHEAT TEST for fault code 40 and 44

CONDITIONS:

- APU Bleed ON, Left PACK ON
 - Isolation Valve Closed
- (a) Measure the Resistance at Pin 13 to Ground.
 - (b) Measure the Resistance at Pin 27 to Ground.
 - (c) If the Resistances at Pin 13 to Ground and at Pin 27 to Ground are $\geq 1 \text{ M}\Omega$, you have corrected the problem.
 - 1) Do the Repair Confirmation at the end of this task.

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- (d) If the Resistances at Pin 13 to Ground and at Pin 27 to Ground are $< 1 \text{ M}\Omega$, disconnect the Sensor Element M275 from M347 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Measure the Resistance at Pin 27 to Ground.
 - 2) Measure the Resistance at Pin 13 to Ground.

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- 3) If the Resistance at Pin 13 to Ground is $< 1 \text{ M}\Omega$, disconnect the connector D862 (or D864) from the Sensor Element M275 (or M276) (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 13 to Ground.
 - b) If the Resistance at Pin 13 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M276. Do a check for these conditions at the areas around the Sensor Element M276 and repair as necessary:
 - $<1>$ Bleed Air leaks through duct cracks and joints
 - $<2>$ Sensors located too close to the Bleed Duct surfaces
 - $<3>$ Degraded gold surface coating for the Bleed Ducting
 - c) If the Resistance at Pin 13 to Ground is $\geq 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M275. Do a check for these conditions at the areas around the Sensor Element M275 and repair as necessary:
 - $<1>$ Bleed Air leaks through duct cracks and joints
 - $<2>$ Sensors located too close to the Bleed Duct surfaces
 - $<3>$ Degraded gold surface coating for the Bleed Ducting
 - d) Reconnect the connector D862 (or D864) to the Sensor Element M275 (or M276) (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 4) If the Resistance at Pin 27 to Ground is $< 1 \text{ M}\Omega$, disconnect the Sensor Element M347 from M1147 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 5) Reconnect the Sensor Element M275 to M347
- 6) Measure the Resistance at Pin 13 to Ground
- 7) Measure the Resistance at Pin 27 to Ground
- 8) If the Resistance at Pin 13 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M347. Do a check for these conditions at the areas around the Sensor Element M347 and repair as necessary:
 - a) Bleed Air leaks through duct cracks and joints
 - b) Sensors located too close to the Bleed Duct surfaces
 - c) Degraded gold surface coating for the Bleed Ducting
- 9) If the Resistance at Pin 27 to Ground is $< 1 \text{ M}\Omega$, disconnect the Sensor Element M1147 from M348 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 27 to Ground.
 - b) If the Resistance at Pin 27 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M348. Do a check for these conditions at the areas around the Sensor Element M348 and repair as necessary:
 - $<1>$ Bleed Air leaks through duct cracks and joints
 - $<2>$ Sensors located too close to the Bleed Duct surfaces

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- <3> Degraded gold surface coating for the Bleed Ducting
- c) If the Resistance at Pin 27 to Ground is $\geq 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M1147. Do a check for these conditions at the areas around the Sensor Element M1147 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting
- d) Reconnect the Sensor Element M1147 to Sensor Element M348 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).

SIA ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

- (10) Do this SENSOR TEST for fault code 60 and 64

CONDITIONS:

- No Power
- No Bleed or PACK Running

- (a) Measure the Resistance of pin 10 to Ground.
- (b) Measure the Resistance of pin 11 to Ground.
- (c) If the Resistances at Pin 10 to Ground and at Pin 11 to Ground are $\geq 1 \text{ M}\Omega$, continue with the OVERHEAT TEST.
- (d) If the Resistances at Pin 10 to Ground and at Pin 11 to Ground are $< 1 \text{ M}\Omega$, disconnect the connector D844 from the Sensor Element M356 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Measure the Resistances at Pin 11 to Ground and at Pin 10 to Ground.
 - 2) If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, disconnect the connector D846 from the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 11 to Ground.
 - b) If the Resistance at Pin 11 to Ground is $\geq 1 \text{ M}\Omega$, replace the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, disconnect both wire connections to the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <1> Measure the Resistance at Pin 11 to Ground.
 - <2> If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M1912 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).

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- <3> If the Resistance at Pin 11 to Ground is $\geq 1 \text{ M}\Omega$, replace the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <4> Reconnect both wire connections to the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect the connector D846 to the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 3) If the Resistance at Pin 10 to Ground is $< 1 \text{ M}\Omega$, reconnect the connector D844 to the Sensor Element M356 and disconnect the connector D838 at the Sensor Element M269 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistances at the Pin 11 to Ground and Pin 10 to Ground.
 - b) If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, disconnect the Sensor Element M269 from M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <1> Measure the Resistance at Pin 11 to Ground.
 - <2> If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <3> If the Resistance at Pin 11 to Ground is $\geq 1 \text{ M}\Omega$, replace the Sensor Element M269 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <4> Reconnect the Sensor Element M269 to M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - c) If the Resistance at Pin 10 to Ground is $< 1 \text{ M}\Omega$, disconnect both wire connections to the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <1> Measure the Resistance at Pin 10 to Ground.
 - <2> If the Resistance at Pin 10 to Ground is $< 1 \text{ M}\Omega$, replace the Sensor Element M1764 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <3> If the Resistance at Pin 10 to Ground is $\geq 1 \text{ M}\Omega$, replace the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).

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- <4> Reconnect both wire connections to the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- d) Reconnect the connector D838 to the Sensor Element M269 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 4) Measure the Resistances at Pin 10 to Ground and at Pin 11 to Ground again. If the Resistances are $< 1 \text{ M}\Omega$, then do the above steps again. If the Resistances are $\geq 1 \text{ M}\Omega$, then continue to the OVERHEAT TEST.



MAKE SURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF THE ENGINE DANGER AREAS. THE ENGINE INTAKE AND EXHAUST CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT IN THE DANGER AREAS.

- (11) Do this OVERHEAT TEST for fault code 60 and 64
CONDITIONS:
 - Right Engine Idle, Right Bleed and Right Pack ON (Start the Engine Procedure (Normal Start), AMM TASK 71-00-00-800-808-F00)
 - Isolation Valve Closed and APU Bleed OFF
- (a) Measure the Resistance of pin 10 to Ground.
- (b) Measure the Resistance of pin 11 to Ground.
- (c) If the Resistances at Pin 10 to Ground and at Pin 11 to Ground are $\geq 1 \text{ M}\Omega$, you have corrected the problem.
 - 1) Do the Repair Confirmation at the end of this task.
- (d) If the Resistances at Pin 10 to Ground and at Pin 11 to Ground are $< 1 \text{ M}\Omega$, disconnect the connector D844 from the Sensor Element M356 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - 1) Measure the Resistances at Pin 11 to Ground and at Pin 10 to Ground.
 - 2) If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, disconnect the connector D846 from the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 11 to Ground.
 - b) If the Resistance at Pin 11 to Ground $\geq 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M356. Do a check for these conditions at the areas around the Sensor Element M356 and repair as necessary:
 - <1> Bleed Air leaks through duct cracks and joints
 - <2> Sensors located too close to the Bleed Duct surfaces
 - <3> Degraded gold surface coating for the Bleed Ducting

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- c) If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, disconnect both wire connections from the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <1> Measure the Resistance at Pin 11 to Ground.
 - <2> If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M1912. Do a check for these conditions at the areas around the Sensor Element M1912 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <3> If the Resistance at Pin 11 to Ground is $\geq 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M1910. Do a check for these conditions at the areas around the Sensor Element M1910 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <4> Reconnect both wire connections to the Sensor Element M1910 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) Reconnect the connector D846 to the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 3) Reconnect the connector D844 to the Sensor Element M356 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- 4) If the Resistance at Pin 10 to Ground is $< 1 \text{ M}\Omega$, disconnect the connector D838 at the Sensor Element M269 to divide the loop (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - a) Measure the Resistance at Pin 10 to Ground.
 - b) Measure the Resistance at Pin 11 to Ground.
 - c) If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, disconnect the Sensor Element M269 from M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <1> Measure the Resistance at Pin 11 to Ground.
 - <2> If the Resistance at Pin 11 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M371. Do a check for these conditions at the areas around the Sensor Element M371 and repair as necessary:

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- <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <3> If the Resistance at Pin 11 to Ground is $\geq 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M269. Do a check for these conditions at the areas around the Sensor Element M269 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <4> Reconnect the Sensor Element M269 to M371 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - d) If the Resistance at Pin 10 to Ground is $< 1 \text{ M}\Omega$, disconnect both wire connections to the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - <1> Measure the Resistance at Pin 10 to Ground.
 - <2> If the Resistance at Pin 10 to Ground is $< 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M1764. Do a check for these conditions at the areas around the Sensor Element M1764 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <3> If the Resistance at Pin 10 to Ground is $\geq 1 \text{ M}\Omega$, an overheat condition is detected by the Sensor Element M1763. Do a check for these conditions at the areas around the Sensor Element M1763 and repair as necessary:
 - <a> Bleed Air leaks through duct cracks and joints
 - Sensors located too close to the Bleed Duct surfaces
 - <c> Degraded gold surface coating for the Bleed Ducting
 - <4> Reconnect both wire connections to the Sensor Element M1763 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
 - e) Reconnect the connector D838 to the Sensor Element M269 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).
- (12) Do this SENSOR TEST for fault code 84
- CONDITIONS:
- No Power

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- No Bleed or PACK Running
- (a) Measure the Resistance at Pin 21 to Ground.
- (b) Measure the Resistance at Pin 24 to Ground.
- (c) If the Resistances at Pin 21 to Ground and at Pin 24 to Ground are $\geq 1 \text{ M}\Omega$, the fault was an intermittent fault.
- (d) If the Resistance at Pin 21 to Ground or Pin 24 to Ground is $< 1 \text{ M}\Omega$, then replace the Sensor Element M270 (WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION, AMM 26-18-02/401).

K. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "MEMORY CLEAR" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message still shows, continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

803. Wheel Well, Wing and Body Overheat Detection Control Module - Fault Isolation

A. Description

- (1) This task is for these maintenance messages:
 - (a) 00 - CONTROL OR POWER SUPPLY FAILURE
 - (b) 01, 02 - 115VAC OR POWER SUPPLY CARD FAILURE
 - (c) 03, 04, 05 - CONTROL CARD FAILURE
 - (d) 98 - LOCAL TEST - NOT COMPLETE

B. Possible Causes

- (1) Compartment Overheat Detector Control Unit, M237

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

D. Related Data

- (1) WDM 26-12-11
- (2) SSM 26-00-05

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(3) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, then there was an intermittent fault.
 - (b) If the maintenance message shows, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Replace the Compartment Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
- (a) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the BITE Test is satisfactory, then you corrected the fault.

— END OF TASK —

SIA ALL; AIRPLANES WITH CODM P/N 475928-01

804. Left Wing Leading Edge Overheat Detectors - Short Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) L WING SHRT
 - 1) When the message is present, the 2GND Indicator will flash between “LOW” and a Resistance value.
- (2) This fault occurs when the Control Unit, M237 detects a fault with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Left Wing Outboard Overheat Detector, M268
- (2) Left Wing Inboard Overheat Detector, M370
- (3) Left Forward Strut Cavity Overheat Detector, M1761
- (4) Left Aft Strut Cavity Overheat Detector, M1762
- (5) Overheat Detector Control Unit, M237
- (6) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

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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

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the MEMORY CLEAR part of the Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801, to erase the maintenance message from the memory.
 - (b) If the maintenance message shows, do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, then do these steps:
 - a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
511AB	Inboard Leading Edge, Lower Removable Panel
 - b) Disconnect connector D30062 and jumper pins 6 and 8.
 - c) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - <1> If the maintenance message shows, do "Fault Isolation Procedure A" below.
 - <2> If the maintenance message does not show, do "Fault Isolation Procedure B" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a defective detector or wiring, replace the detector or repair the wiring as necessary.

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- 1) Do the Repair Confirmation at the end of this task.
- (b) If you do not find a defective detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
- 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure A

- (1) Get access to Overheat Detectors:



WARNING

KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Fully extend the Leading Edge Slats. This is the task: Leading Edge Flaps and Slats Extension, AMM TASK 27-81-00-860-803.
- (b) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
191FL	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HL	Ram Air Inlet Lip Panel - Forward
192CL	ECS Access Door
521AB	Outboard Leading Edge Blowout Door - Slat Station 20.04
- (2) Examine the Overheat Sensors and Wiring as follows:
 - (a) Disconnect the Wire Bundle at lug A and B of the Left Aft Strut Cavity Overheat Detector, M1762 and jumper the two ends of the ship-side wiring.
 - (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Left Aft Strut Cavity Overheat Detector, M1762. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumper and reconnect connector D30062.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Left Aft Strut Cavity Overheat Detector, M1762, then continue.

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- (c) Disconnect the Left Wing Outboard Overheat Detector, M268 from the Left Wing Inboard Overheat Detector, M370.
- (d) Disconnect connector D834 from the Left Wing Outboard Overheat Detector, M268 and jumper pin 1 of connector D834 to the Left Wing Inboard Overheat Detector, M370 connector.
- (e) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Left Wing Outboard Overheat Detector, M268. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumper and reconnect connector D30062.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connector D834 and the Left Wing Inboard Overheat Detector, M370.
 - b) Reconnect connector D834 to the Left Wing Outboard Overheat Detector, M268, then continue.
- (f) Disconnect connector D832 from the Left Wing Inboard Overheat Detector, M370 and jumper pin 1 of connector D832 to the connector of the Left Wing Outboard Overheat Detector, M268.
- (g) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Left Wing Inboard Overheat Detector, M370. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumper and reconnect connector D30062.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connector D832 and Left Wing Outboard Overheat Detector, M268.
 - b) Reconnect connector D832 to the Left Wing Inboard Overheat Detector, M370.
 - c) Reconnect the Left Wing Outboard Overheat Detector, M268 to the Left Wing Inboard Overheat Detector, M370, then continue.
- (h) Remove the jumper from connector D30062.
- (i) Disconnect connector D39903.

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- (j) Measure the Resistance between pin 1 of connector D39903 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair wire and/or connector that causes the short between connectors D39903 and D30062.
 - b) Reconnect connector D39903.
 - c) Reconnect connector D30062.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D39903, then continue.
- (k) Disconnect connector D39901.
- (l) Measure the Resistance between pin 1 of connector D39901 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair wire and/or connector that causes the short between connectors D39901 and D742.
 - b) Reconnect connector D39901.
 - c) Reconnect connector D30062.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D39901, then continue.
- (m) Disconnect connector D832 from the Left Wing Inboard Overheat Detector, M370.
- (n) Measure the Resistance between pin 1 of connector D832 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair wire and/or connector that causes the short between connectors D832 and D742.
 - b) Reconnect connector D832 to the Left Wing Inboard Overheat Detector, M370.
 - c) Reconnect connector D30062.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D832 to the Left Wing Inboard Overheat Detector, M370, then continue.
- (o) Disconnect connector D834 from the Left Wing Outboard Overheat Detector, M268.
- (p) Measure the Resistance between pin 1 of connector D834 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair wire and/or connector that causes the short between connectors D834 and D30062.
 - b) Reconnect connector D834.
 - c) Reconnect connector D30062.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms, and there is no short, do these steps and then continue.

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- a) Reconnect connector D834 to the Left Wing Outboard Overheat Detector, M628.
 - b) Reconnect connector D30062.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

H. Fault Isolation Procedure B

- (1) Get access to the Overheat Detectors:
 - (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
431BT	Forward Strut Fairing, Pressure Relief Door, Strut 1
- (2) Examine the Overheat Sensors and Wiring as follows:
 - (a) Remove the jumper and reconnect connector D30062.
 - (b) Disconnect the Wire Bundle from the two lug ends A and B of the Left Forward Strut Cavity Overheat Detector, M1761 and jumper the two ends of the ship-side wiring.
 - (c) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Left Forward Strut Cavity Overheat Detector, M1761. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - <1> Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Left Forward Strut Cavity Overheat Detector, M1761, then continue.
 - (d) Disconnect connector D30064.
 - (e) Measure the Resistance between pin 36 of connector D30064 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:

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- a) Examine and repair the wire and/or connector that causes the short between pins 36 and 37 of connector D30064.
 - b) Reconnect connector D30064.
 - c) Do the Repair Confirmation at the end of this task.
- 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D30064, then continue.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
- (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
- Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
- (a) Do the Repair Confirmation at the end of this task.

I. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- (a) If the maintenance message does not show, you corrected the problem.
- 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 2) If you did Fault Isolation Procedure A, also do these steps:
 - a) Close access to the Overheat Detectors:

Close these access panels:

<u>Number</u>	<u>Name/Location</u>
191FL	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HL	Ram Air Inlet Lip Panel - Forward
192CL	ECS Access Door
511AB	Inboard Leading Edge, Lower Removable Panel
521AB	Outboard Leading Edge Blowout Door - Slat Station 20.04

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WARNING

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- b) Fully retract the Leading Edge Slats. This is the task: Leading Edge Flaps and Slats Retraction, AMM TASK 27-81-00-860-804.
- 3) If you did Fault Isolation Procedure B, also close access to the Overheat Detectors:
Close these access panels:

<u>Number</u>	<u>Name/Location</u>
431BT	Forward Strut Fairing, Pressure Relief Door, Strut 1
511AB	Inboard Leading Edge, Lower Removable Panel

- (b) If the maintenance message still shows, continue the Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

805. Left Wing Leading Edge Overheat Detectors - Open Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) L WING OPEN
- 1) When this message shows, the LOOP Indicator flashes between “OPEN” and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Left Wing Outboard Overheat Detector, M268
- (2) Left Wing Inboard Overheat Detector, M370
- (3) Left Forward Strut Cavity Overheat Detector, M1761
- (4) Left Aft Strut Cavity Overheat Detector, M1762
- (5) Compartment Overheat Detector Control Unit, M237
- (6) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

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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

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message shows, do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, then do these steps:
 - a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
511AB	Inboard Leading Edge, Lower Removable Panel
 - b) Disconnect connector D30062 and jumper pins 6 and 8.
 - c) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - <1> If the maintenance message shows, do "Fault Isolation Procedure A" below.
 - <2> If the maintenance message does not show, do "Fault Isolation Procedure B" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a faulty detector or wiring, replace the defective detector or repair the wiring.
 - 1) Do the Repair Confirmation at the end of this task.

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- (b) If you do not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
- Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
- 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure A

- (1) Get access to Overheat Detectors:



KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Fully extend the Leading Edge Slats. This is the task: Leading Edge Flaps and Slats Extension, AMM TASK 27-81-00-860-803.

- (b) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
191FL	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HL	Ram Air Inlet Lip Panel - Forward
192CL	ECS Access Door
521AB	Outboard Leading Edge Blowout Door - Slat Station 20.04

- (2) Examine the Overheat Sensors and Wiring as follows:

- (a) Disconnect the Wire Bundle at lug A and B of the Left Aft Strut Cavity Overheat Detector, M1762 and jumper the two ends of the ship-side wiring.
- (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
- a) Replace the Left Aft Strut Cavity Overheat Detector, M1762. These are the tasks:
- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Remove the jumper and reconnect connector D30062.
- c) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, do these steps:
- a) Remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Left Aft Strut Cavity Overheat Detector, M1762, then continue.
- (c) Disconnect the Left Wing Outboard Overheat Detector, M268 from the Left Wing Inboard Overheat Detector, M370.

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- (d) Disconnect connector D834 from the Left Wing Outboard Overheat Detector, M268 and jumper pin 1 of connector D834 to the Left Wing Inboard Overheat Detector, M370, connector.
- (e) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Left Wing Outboard Overheat Detector, M268. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumper and reconnect connector D30062.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connector D834 and the Left Wing Inboard Overheat Detector, M370.
 - b) Reconnect connector D834 to the Left Wing Outboard Overheat Detector, M268, then continue.
- (f) Disconnect connector D832 from the Left Wing Inboard Overheat Detector, M370 and jumper pin 1 of connector D832 to the connector of the Left Wing Outboard Overheat Detector, M268.
- (g) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Left Wing Inboard Overheat Detector, M370. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumper and reconnect connector D30062.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connector D832 and Left Wing Outboard Overheat Detector, M268.
 - b) Reconnect connector D832 to the Left Wing Inboard Overheat Detector, M370.
 - c) Reconnect the Left Wing Outboard Overheat Detector, M268 to the Left Wing Inboard Overheat Detector, M370, then continue.
- (h) Remove the jumper from connector D30062.
- (i) Disconnect connector D39903.
- (j) Measure the Resistance between pin 1 of connector D39903 and pin 6 of connector D30062.

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- 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D39903 and D30062.
 - b) Reconnect connector D39903.
 - c) Reconnect connector D30062.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, reconnect connector D39903, then continue.
- (k) Disconnect connector D39901.
- (l) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
- (m) Measure the Resistance between pin 1 of connector D39901 and pin 12 of connector D742.
- 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D39901 and D742.
 - b) Reconnect connector D39901.
 - c) Reconnect connector D30062.
 - d) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - e) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, reconnect connector D39901, then continue.
- (n) Disconnect connector D832 from the Left Wing Inboard Overheat Detector, M370.
- (o) Measure the Resistance between pin 1 of connector D832 and pin 4 of connector D742.
- 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair wire and/or connector that causes the open circuit between connectors D832 and D742.
 - b) Reconnect connector D832 to the Left Wing Inboard Overheat Detector, M370.
 - c) Reconnect connector D30062.
 - d) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - e) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps:
 - a) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.

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- b) Reconnect connector D832 to the Left Wing Inboard Overheat Detector, M370, then continue.
 - (p) Disconnect connector D834 from the Left Wing Outboard Overheat Detector, M268.
 - (q) Measure the Resistance between pin 1 of connector D834 and pin 8 of connector D30062.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair wire and/or connector that causes the open circuit between connectors D834 and D30062.
 - b) Reconnect connector D834.
 - c) Reconnect connector D30062.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms, and there is no open circuit, do these steps and then continue:
 - a) Reconnect connector D834 to the Left Wing Outboard Overheat Detector, M628.
 - b) Reconnect connector D30062.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

H. Fault Isolation Procedure B

- (1) Get access to the Overheat Detectors:
 - (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
431BT	Forward Strut Fairing, Pressure Relief Door, Strut 1
- (2) Examine the Overheat Sensors and Wiring as follows:
 - (a) Remove the jumper and reconnect connector D30062.
 - (b) Disconnect the Wire Bundle from the two lug ends A and B of the Left Forward Strut Cavity Overheat Detector, M1761 and jumper the two ends of the detector, M1761.
 - (c) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

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- 1) If the maintenance message does not show, do these steps:
 - a) Replace the Left Forward Strut Cavity Overheat Detector, M1761. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Left Forward Strut Cavity Overheat Detector, M1761, then continue.
- (d) Disconnect connector D30064.
- (e) Measure the Resistance between pins 36 and 37 of connector D30064.
- 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between pins 36 and 37 of connector D30064.
 - b) Reconnect connector D30064.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, reconnect connector D30064, then continue.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
- (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
- Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
- (a) Do the Repair Confirmation at the end of this task.

I. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 2) If you did Fault Isolation Procedure A, also do these steps:

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- a) Close access to the Overheat Detectors:

Close these access panels:

<u>Number</u>	<u>Name/Location</u>
191FL	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HL	Ram Air Inlet Lip Panel - Forward
192CL	ECS Access Door
511AB	Inboard Leading Edge, Lower Removable Panel
521AB	Outboard Leading Edge Blowout Door - Slat Station 20.04



WARNING

KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- b) Fully retract the Leading Edge Slats. This is the task: Leading Edge Flaps and Slats Retraction, AMM TASK 27-81-00-860-804.
- 3) If you did Fault Isolation Procedure B, also close access to the Overheat Detectors:
- Close these access panels:

<u>Number</u>	<u>Name/Location</u>
431BT	Forward Strut Fairing, Pressure Relief Door, Strut 1
511AB	Inboard Leading Edge, Lower Removable Panel

- (b) If the maintenance message still shows, continue the Fault Isolation Procedure at the subsequent step.

————— END OF TASK —————

806. Left Wing Leading Edge Overheat Detectors - Overheat - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) L WING OVHT
- 1) When this message shows, the 2GND Indicator flashes between "LOW" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Left Wing Outboard Overheat Detector, M268
- (2) Left Wing Inboard Overheat Detector, M370
- (3) Left Forward Strut Cavity Overheat Detector, M1761
- (4) Left Aft Strut Cavity Overheat Detector, M1762
- (5) Compartment Overheat Detector Control Unit, M237
- (6) Duct Leakage

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(7) Wiring

C. Circuit Breakers

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

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

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<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Put the airplane in this configuration and allow the airplane to cool to Ambient Temperature.
 - (a) Engines OFF (Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00)
 - (b) APU OFF (APU Usual Shutdown, AMM TASK 49-11-00-860-802)
 - (c) PACK OFF (Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804)
- (2) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows, this indicates a short condition. Do this task: Left Wing Leading Edge Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 804
NOTE: When you do the Left Wing Leading Edge Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 804, look for the "OVHT" Message instead of the "SHRT" Message.
 - (b) If the maintenance message does not show, then do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available Method" below.

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F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a faulty detector or wiring, replace the defective detector or repair the wiring.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available

- (1) Put the airplane in this configuration:
 - (a) Left Engine Idle (Start the Engine Procedure (Normal Start), AMM TASK 71-00-00-800-808-F00)
 - (b) Left Bleed ON
 - (c) Left Pack ON (Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803)
 - (d) APU Bleed OFF
 - (e) ISOLATION VALVE closed
- (2) Make sure that the L WING-BODY OVHT, MASTER CAUTION and AIR COND Lights in the flight deck are ON.
- (3) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault or an overheat condition.
 - 1) Do the MEMORY CLEAR part of the Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801, to erase the maintenance message from the memory.
 - (b) If the maintenance message shows, do these steps:
 - 1) Do a check for these conditions at the areas around the Left Wing Leading Edge and Strut Overheat Detectors, M370, M268, M1761 and M1762:
 - Bleed Air leaks through duct cracks and joint
 - Detectors located too close to the Bleed Duct surfaces
 - Degraded gold surface coating on the Bleed Ducts
 - 2) Repair the ducts or sensor locations as necessary.
 - 3) Do the Repair Confirmation at the end of this task.

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H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

807. Left A/C Pack Bay Overheat Detectors - Short Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) L PACK BAY SHRT
 - 1) When this message shows, the 2GND Indicator flashes between "LOW" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Left Forward A/C Pack Bay Overheat Detector, M355
- (2) Left Mid A/C Pack Overheat Detector, M1909
- (3) Left Aft A/C Pack Overheat Detector, M1911
- (4) Compartment Overheat Detector Control Unit, M237
- (5) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

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D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message shows, do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a defective detector or wiring, replace the detector or repair the wiring as necessary.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a defective detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available Method

- (1) Get access to Overheat Detectors:
 - (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
192CL	ECS Access Door
- (2) Examine the Overheat Sensors and Wiring as follows:
 - (a) Disconnect the Wire Bundle at lug A and B of the Left Aft A/C Pack Overheat Detector, M1911 and jumper the two ends of the ship-side wiring.
 - (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:

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- a) Replace the Left Aft A/C Pack Overheat Detector, M1911. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, remove the jumper and reconnect the connector to the two lug ends A and B of the Left Aft A/C Pack Overheat Detector, M1911, then continue.
- (c) Disconnect the Wire Bundle from lug ends A and B of the Left Mid A/C Pack Overheat Detector, M1909 and jumper the two ends of the ship-side wiring.
- (d) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Left Mid A/C Pack Overheat Detector, M1909. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Left Mid A/C Pack Overheat Detector, M1909, then continue.
 - a)
- (e) Disconnect connectors D858 and D856 from the Left Forward A/C Pack Overheat Detector, M355 and jumper pin 1 of connector D858 to pin 1 of connector D856.
- (f) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Left Forward A/C Pack Overheat Detector, M355. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - <1> Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connectors D858 and D856.
 - b) Reconnect connectors D858 and D856 to the Left Forward A/C Pack Overheat Detector, M355, then continue.
- (g) Disconnect connector D856 from the Left Forward A/C Pack Overheat Detector, M355.

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- (h) Measure the Resistance between pin 1 of connector D856 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D856 and D41500.
 - b) Reconnect connector D856.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D856, then continue.
- (i) Disconnect connector D41502.
- (j) Measure the Resistance between pin P of connector D41502 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D41502 and D742.
 - b) Reconnect connector D41502.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D41502, then continue.
- (k) Disconnect connector D858 from the Left Forward A/C Pack Overheat Detector, M355.
- (l) Measure the Resistance between pin 1 of connector D858 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D858 and D742.
 - b) Reconnect connector D858.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D858, then continue.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

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H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 2) Close access to the Overheat Detectors:
Close this access panel:

<u>Number</u>	<u>Name/Location</u>
192CL	ECS Access Door
 - (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

808. Left A/C Pack Bay Overheat Detectors - Open Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) L PACK BAY OPEN
 - 1) When this message shows, the LOOP Indicator flashes between "OPEN" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Left Forward A/C Pack Bay Overheat Detector, M355
- (2) Left Mid A/C Pack Overheat Detector, M1909
- (3) Left Aft A/C Pack Overheat Detector, M1911
- (4) Compartment Overheat Detector Control Unit, M237
- (5) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

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F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message shows, do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, then do these steps:
 - (a) Do a check of the compartment overheat detection system. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - 1) If you found a faulty detector or wiring, replace the defective detector or repair the wiring.
 - a) Do the Repair Confirmation at the end of this task.
 - 2) If you did not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - a) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available Method

- (1) Get access to Overheat Detectors:

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- (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
192CL	ECS Access Door

- (2) Examine the Overheat Sensors and Wiring as follows:

- (a) Disconnect the Wire Bundle at lug A and B of the Left Aft A/C Pack Overheat Detector, M1911 and jumper the two lug ends A and B of the detector.
- (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
- a) Replace the Left Aft A/C Pack Overheat Detector, M1911. These are the tasks:
- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, remove the jumper from the two lug ends A and B of the Left Aft A/C Pack Overheat Detector, M1911, then continue.
- (c) Disconnect the Wire Bundle at lug A and B of the Left Mid A/C Pack Overheat Detector, M1909 and jumper the two lug ends A and B of the detector.
- (d) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
- a) Replace the Left Mid A/C Pack Overheat Detector, M1909. These are the tasks:
- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, remove the jumper from the two lug ends A and B of the Left Mid A/C Pack Overheat Detector, M1909, then continue.
- (e) Disconnect connectors D858 and D856 from the Left Forward A/C Pack Overheat Detector, M355 and jumper pin 1 of connector D858 to pin 1 of connector D856.
- (f) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
- a) Replace the Left Forward A/C Pack Overheat Detector, M355. These are the tasks:
- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801

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- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801

<1> Do the Repair Confirmation at the end of this task.

- 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connectors D858 and D856.
 - b) Reconnect connectors D858 and D856 to the Left Forward A/C Pack Overheat Detector, M355, then continue.
- (g) Disconnect connector D856 from the Left Forward A/C Pack Overheat Detector, M355.
- (h) Disconnect connector D41500.
- (i) Measure the Resistance between pin 1 of connector D856 and pin P of connector D41500.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D856 and D41500.
 - b) Reconnect connector D856.
 - c) Reconnect connector D41500.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps:
 - a) Reconnect connector D856.
 - b) Reconnect connector D41500, then continue.
- (j) Disconnect connector D41502.
- (k) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
- (l) Measure the Resistance between pin P of connector D41502 and pin 8 of connector D742.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D41502 and D742.
 - b) Reconnect connector D41502.
 - c) Reinstall the Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, reconnect connector D41502, then continue.
- (m) Disconnect connector D858 from the Left Forward A/C Pack Overheat Detector, M355.
- (n) Measure the Resistance between pin 1 of connector D858 and pin 2 of connector D742.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open between connectors D858 and D742.

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- b) Reconnect connector D858.
 - c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps, and then continue:
 - a) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - b) Reconnect connector D858.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 2) Close access to the Overheat Detectors:
Close this access panel:

<u>Number</u>	<u>Name/Location</u>
192CL	ECS Access Door
 - (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

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809. Left A/C Pack Bay Overheat Detectors - Overheat - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) L PACK BAY OVHT
 - 1) When this message shows, the 2GND Indicator flashes between "LOW" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Left forward A/C Pack Bay Overheat Detector, M355
- (2) Left Mid A/C Pack Overheat Detector, M1909
- (3) Left Aft A/C Pack Overheat Detector, M1911
- (4) Compartment Overheat Detector Control Unit, M237
- (5) Duct Leakage
- (6) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Put the airplane in this configuration and allow the airplane to cool to Ambient Temperature.
 - (a) Engines OFF (Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00)
 - (b) APU OFF (APU Usual Shutdown, AMM TASK 49-11-00-860-802)

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- (c) PACK OFF (Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804)
- (2) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows, this indicates a short condition. Do this task: Left A/C Pack Bay Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 807
NOTE: When you do the Left A/C Pack Bay Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 807, look for the "OVHT" Message instead of the "SHRT" Message.
 - (b) If the maintenance message does not show, then do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available Method" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a faulty detector or wiring, replace the defective detector or repair the wiring.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available Method

- (1) Put the airplane in this configuration:
 - (a) Left Pack ON (Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803)
 - (b) APU Bleed ON
 - (c) ISOLATION VALVE closed
- (2) Make sure that the L WING-BODY OVHT, MASTER CAUTION and AIR COND Lights in the flight deck are ON.
- (3) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the MEMORY CLEAR part of the Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801, to erase the maintenance message from the memory.
 - (b) If the maintenance message shows, do these steps:

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- 1) Do a check for these conditions at the areas around the Left A/C Pack Overheat Detectors, M355, M1909, and M1911:
 - Bleed Air leaks through duct cracks and joint
 - Detectors located too close to the Bleed Duct surfaces
 - Degraded gold surface coating on the Bleed Ducts
- 2) Repair the ducts or sensor locations as necessary.
- 3) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

END OF TASK

810. Keelbeam Overheat Detectors - Short Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) KEELBEAM SHRT
 - 1) When this message shows, the 2GND Indicator flashes between "LOW" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Forward Keelbeam Overheat Detector, M272
- (2) Aft Keelbeam Overheat Detector, M273
- (3) Compartment Overheat Detector Control Unit, M237
- (4) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

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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

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message shows, do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a defective detector or wiring, replace the detector or repair the wiring as necessary.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a defective detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available Method

- (1) Get access to Overheat Detectors:

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- (a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
192E	ECS Under Keel Panel - Forward
194AL	Aft Wing To Body Fairing Panel
194AR	Aft Wing To Body Fairing Panel

- (2) Examine the Overheat Sensors and Wiring as follows:

- (a) Disconnect connectors D854 and D852 from the Aft Keelbeam Overheat Detector, M273 and jumper pin 1 of connector D854 to pin 1 of connector D852.
- (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
- a) Replace the Aft Keelbeam Overheat Detector, M273. These are the tasks:
- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, do these steps:
- a) Remove the jumper between connectors D854 and D852.
- b) Reconnect connectors D854 and D852 to the Aft Keelbeam Overheat Detector, M273, then continue.
- (c) Disconnect connectors D850 and D848 from the Forward Keelbeam Overheat Detector, M272 and jumper pin 1 of connector D850 to pin 1 of connector D852.
- (d) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
- a) Replace the Forward Keelbeam Overheat Detector, M272. These are the tasks:
- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, do these steps:
- a) Remove the jumper between connectors D850 and D848.
- b) Reconnect connectors D850 and D848 to the Forward Keelbeam Overheat Detector, M272, then continue.
- (e) Disconnect connector D854 from the Aft Keelbeam Overheat Detector, M273.
- (f) Measure the Resistance between pin 1 of connector D854 and Ground.
- 1) If the Resistance is less than 3 Ohms, do these steps:

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- a) Examine and repair the wire and/or connector that causes the short between connectors D854 and D742.
 - b) Reconnect connector D854.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the resistance is more than 3 Ohms and there is no short, reconnect connector D854, then continue.
- (g) Disconnect connector D852 from the Aft Keelbeam Overheat Detector, M273.
- (h) Measure the Resistance between pin 1 of connector D852 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D852 and D850.
 - b) Reconnect connector D852.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D852, then continue.
- (i) Disconnect connector D848 from the Forward Keelbeam Overheat Detector, M272.
- (j) Measure the Resistance between pin 1 of connector D848 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D848 and D742.
 - b) Reconnect connector D848.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D848, then continue.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.

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- 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 2) Close access to the Overheat Detectors:

Close these access panels:

<u>Number</u>	<u>Name/Location</u>
192CL	ECS Access Door
194AL	Aft Wing To Body Fairing Panel
194AR	Aft Wing To Body Fairing Panel

- (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

811. Keelbeam Overheat Detectors - Open Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) KEELBEAM OPEN
 - 1) When this message shows, the LOOP Indicator flashes between "OPEN" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Forward Keelbeam Overheat Detector, M272
- (2) Aft Keelbeam Overheat Detector, M273
- (3) Compartment Overheat Detector Control Unit, M237
- (4) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

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D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message shows, do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a defective detector or wiring, replace the detector or repair the wiring as necessary.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a defective detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available Method

- (1) Get access to Overheat Detectors:
 - (a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
192E	ECS Under Keel Panel - Forward
194AL	Aft Wing To Body Fairing Panel
194AR	Aft Wing To Body Fairing Panel
- (2) Examine the Overheat Sensors and Wiring as follows:
 - (a) Disconnect connectors D854 and D852 from the Aft Keelbeam Overheat Detector, M273 and jumper pin 1 of connector D854 to pin 1 of connector D852.

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- (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
 - a) Replace the Aft Keelbeam Overheat Detector, M273. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connectors D854 and D852.
 - b) Reconnect connectors D854 and D852 to the Aft Keelbeam Overheat Detector, M273, then continue.
- (c) Disconnect connectors D850 and D848 from the Forward Keelbeam Overheat Detector, M272 and jumper pin 1 of connector D850 to pin 1 of connector D852.
- (d) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
 - a) Replace the Forward Keelbeam Overheat Detector, M272. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connectors D850 and D848.
 - b) Reconnect connectors D850 and D848 to the Forward Keelbeam Overheat Detector, M272, then continue.
- (e) Disconnect connector D852 from the Aft Keelbeam Overheat Detector, M273.
- (f) Disconnect connector D850 from the Forward Keelbeam Overheat Detector, M272.
- (g) Measure the Resistance between pin 1 of connector D852 and pin 1 of connector D850.
- 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D852 and D850.
 - b) Reconnect connector D852.
 - c) Reconnect connector D850.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps, then continue:

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- a) Reconnect connector D852.
 - b) Reconnect connector D850.
 - (h) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (i) Disconnect connector D848 from the Forward Keelbeam Overheat Detector, M272.
 - (j) Measure the Resistance between pin 1 of connector D848 and pin 29 of connector D742.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D848 and D742.
 - b) Reconnect connector D848.
 - c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps, and then continue:
 - a) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - b) Reconnect connector D848.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 2) Close access to the Overheat Detectors:

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Close these access panels:

<u>Number</u>	<u>Name/Location</u>
192CL	ECS Access Door
194AL	Aft Wing To Body Fairing Panel
194AR	Aft Wing To Body Fairing Panel

- (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

END OF TASK

812. Keelbeam Overheat Detectors - Overheat - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) KEELBEAM OVHT
- 1) When this message shows, the 2GND Indicator flashes between "LOW" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Forward Keelbeam Overheat Detector, M272
- (2) Aft Keelbeam Overheat Detector, M273
- (3) Compartment Overheat Detector Control Unit, M237
- (4) Duct Leakage
- (5) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11

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- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Put the airplane in this configuration and allow the airplane to cool to Ambient Temperature.
 - (a) Engines OFF (Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00)
 - (b) APU OFF (APU Usual Shutdown, AMM TASK 49-11-00-860-802)
 - (c) PACK OFF (Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804)
- (2) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows, this indicates a short condition. Do this task: Keelbeam Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 810
NOTE: When you do the Keelbeam Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 810, look for the "OVHT" Message instead of the "SHRT" Message.
 - (b) If the maintenance message does not show, then do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available Method" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a faulty detector or wiring, replace the defective detector or repair the wiring.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available Method

- (1) Put the airplane in this configuration:
 - (a) Left Pack ON (Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803)
 - (b) APU Bleed ON
 - (c) ISOLATION VALVE closed
- (2) Make sure that the L WING-BODY OVHT, MASTER CAUTION and AIR COND Lights in the flight deck are ON.

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- (3) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault or an overheat condition.
 - 1) Do the MEMORY CLEAR part of the Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801, to erase the maintenance message from the memory.
 - (b) If the maintenance message shows, do these steps:
 - 1) Do a check for these conditions at the areas around the Keelbeam Overheat Detectors, M272 and M273:
 - Bleed Air leaks through duct cracks and joint
 - Detectors located too close to the Bleed Duct surfaces
 - Degraded gold surface coating on the Bleed Ducts
 - 2) Repair the ducts or sensor locations as necessary.
 - 3) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

813. Aft Body Overheat Detectors - Short Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) AFT BODY APU SHRT
 - 1) When this message shows, the 2GND Indicator flashes between "LOW" and a Resistance value.
- (2) The Compartment Overheat Detection Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Section 48 Aft Overheat Detector, M276
- (2) Section 47 Aft Overheat Detector, M275
- (3) Aft Overheat Detector, M347

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- (4) Aft Overheat Detector, M1147

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- (5) Section 46 Aft Overheat Detector, M348
(6) Compartment Overheat Detection Control Unit, M237
(7) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
(2) WDM 26-12-11
(3) SSM 26-00-05
(4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- (a) If the maintenance message does not show, then there was an intermittent fault.
- 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- (b) If the maintenance message shows, then do these steps:
- 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, then do the "Fault Isolation Procedure - Loop Controller Method" below.
- 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, then do the "Fault Isolation Procedure - Loop Controller Not Available" below.

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F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a defective detector or wiring, replace the detector or repair the wiring as necessary.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a defective detector or wiring, replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available Method

- (1) Get access to Overheat Detectors:
 - (a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
194AL	Aft Wing To Body Fairing Panel
194AR	Aft Wing To Body Fairing Panel
- (2) Examine the Overheat Sensors and Wiring as follows (WDM 26-12-11):
 - (a) Disconnect connectors D864 and D866 from the Section 48 Aft Overheat Detector, M276 and jumper pin 1 of connector D864 to pin 1 of connector D866.
 - (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, then do these steps:
 - a) Replace the Section 48 Aft Overheat Detector, M276. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, then do these steps and continue:
 - a) Remove the jumper between connectors D864 and D866.
 - b) Re-connect connectors D864 and D866 to the Section 48 Aft Overheat Detector, M276.
 - (c) Disconnect the Section 47 Aft Overheat Detector, M275 from the Aft Overheat Detector, M347.
 - (d) Disconnect connector D862 from the Section 47 Aft Overheat Detector, M275 and jumper from pin 1 of connector D862 to connector of the Aft Overheat Detector, M347.
 - (e) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

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- 1) If the maintenance message does not show, then do these steps:
 - a) Replace the Section 47 Aft Overheat Detector, M275. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, then do these steps and continue:
 - a) Remove the jumper between connector D862 and the Aft Overheat Detector, M347.
 - b) Re-connect connector D862 to the Section 47 Aft Overheat Detector, M275.

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- (f) Disconnect the Aft Overheat Detector, M347 from the Aft Overheat Detector, M1147 and jumper from connector of the Aft Overheat Detector, M1147 to connector of the Section 47 Aft Overheat Detector, M275.

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- (g) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, then do these steps:
 - a) Replace the Aft Overheat Detector, M347. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, then do these steps and continue:

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- a) Remove the jumper between the Aft Overheat Detector, M1147 and Section 47 Aft Overheat Detector, M275.

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- b) Re-connect the Aft Overheat Detector, M347 to the Section 47 Aft Overheat Detector, M275.

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- (h) Disconnect the Aft Overheat Detector, M1147 from the Section 46 Aft Overheat Detector, M348 and jumper from connector of the Section 46 Aft Overheat Detector, M348 to connector of the Aft Overheat Detector, M347.
- (i) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, then do these steps:
 - a) Replace the Aft Overheat Detector, M1147. These are the tasks:

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- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, then do these steps and continue:
 - a) Remove the jumper between the Section 46 Aft Overheat Detector, M348 and Aft Overheat Detector, M347.
 - b) Re-connect the Aft Overheat Detector, M1147 to the Aft Overheat Detector, M347.
- (j) Disconnect connector D1070 from the Section 46 Aft Overheat Detector, M348 and jumper pin 1 of connector D1070 to connector of the Aft Overheat Detector, M1147.

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- (k) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, then do these steps:
 - a) Replace the Section 46 Aft Overheat Detector, M348. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, then do these steps and continue:

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- a) Remove the jumper between connector D1070 and the Aft Overheat Detector, M1147.

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- b) Re-connect connector D1070 to the Section 46 Aft Overheat Detector, M348.

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- c) Re-connect the Aft Overheat Detector, M1147 to the Section 46 Aft Overheat Detector, M348.

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- (l) Disconnect connector D864 from the Section 48 Overheat Detector, M276.
- (m) Measure the Resistance between pin 1 of connector D864 and Structure Ground.
 - 1) If the Resistance is less than 3 Ohms, then do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D864 and D862.
 - b) Re-connect connector D864.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, then re-connect connector D864 and continue.
- (n) Disconnect connector D866 from the Section 48 Aft Overheat Detector, M276.

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- (o) Measure the Resistance between pin 1 of connector D866 and Structure Ground.
 - 1) If the Resistance is less than 3 Ohms, then do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D866 and D742.
 - b) Re-connect connector D866.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, then re-connect connector D866 and continue.
- (p) Disconnect connector D1070 from the Section 46 Aft Overheat Detector, M348.
- (q) Measure the Resistance between pin 1 of connector D1070 and Structure Ground.
 - 1) If the Resistance is less than 3 Ohms, then do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D1070 and D742.
 - b) Re-connect connector D1070.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, then re-connect connector D1070 and continue.
- (3) Examine the Compartment Overheat Detection Control Unit connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean connectors.
 - (c) Re-install the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, then you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 2) Close access to the Overheat Detectors:
Close these access panels:

<u>Number</u>	<u>Name/Location</u>
194AL	Aft Wing To Body Fairing Panel

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<u>Number</u>	<u>Name/Location</u>
194AR	Aft Wing To Body Fairing Panel

- (b) If the maintenance message still shows, then continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

814. Aft Body Overheat Detectors - Open Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) AFT BODY APU OPEN
- 1) When this message shows, the LOOP Indicator flashes between “OPEN” and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Section 48 Aft Overheat Detector, M276
- (2) Section 47 Aft Overheat Detector, M275
- (3) Aft Overheat Detector, M347

SIA ALL

- (4) Aft Overheat Detector, M1147

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- (5) Section 46 Aft Overheat Detector, M348
- (6) Compartment Overheat Detector Control Unit, M237
- (7) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

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D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message shows, do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, then do these steps:
 - (a) Do a check of the compartment overheat detection system. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - 1) If you found a faulty detector or wiring, replace the defective detector or repair the wiring.
 - a) Do the Repair Confirmation at the end of this task.
 - 2) If you did not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - a) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available

- (1) Get access to Overheat Detectors:
 - (a) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
194AL	Aft Wing To Body Fairing Panel
194AR	Aft Wing To Body Fairing Panel
- (2) Examine the Overheat Sensors and Wiring as follows:

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- (a) Disconnect connectors D864 and D866 from the Section 48 Aft Overheat Detector, M276 and jumper pin 1 of connector D864 to pin 1 of connector D866.
- (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Section 48 Aft Overheat Detector, M276. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connectors D864 and D866.
 - b) Re-connect connectors D864 and D866 to the Section 48 Aft Overheat Detector, M276, then continue.
- (c) Disconnect the Section 47 Aft Overheat Detector, M275 from the Aft Overheat Detector, M347.
- (d) Disconnect connector D862 from the Section 47 Aft Overheat Detector, M275 and jumper pin 1 of from connector D862 to the connector of the Aft Overheat Detector, M347.
- (e) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Section 47 Aft Overheat Detector, M275. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper between connector D862 and Aft Overheat Detector, M347.
 - b) Re-connect connector D862 to the Section 47 Aft Overheat Detector, M275, then continue.

SIA ALL

- (f) Disconnect the Aft Overheat Detector, M347 from the Aft Overheat Detector, M1147, and jumper from the Aft Overheat Detector, M1147 to the connector of the Section 47 Aft Overheat Detector, M275.

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- (g) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:

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- a) Replace the Aft Overheat Detector, M347. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, do these steps, then continue:

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- a) Remove the jumper between Aft Overheat Detector, M1147 and Section 47 Aft Overheat Detector, M275.

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- b) Re-connect Aft Overheat Detector, M347 to the Section 47 Aft Overheat Detector, M275.

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- (h) Disconnect the Aft Overheat Detector, M1147 from the Section 46 Aft Overheat Detector, M348, and jumper from the connector of the Section 46 Aft Overheat Detector, M348 to the connector of the Aft Overheat Detector, M347.
- (i) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Aft Overheat Detector, M1147. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps, then continue:
 - a) Remove the jumper between the Section 46 Aft Overheat Detector, M348 to the Aft Overheat Detector, M347.
 - b) Re-connect the Aft Overheat Detector, M1147 to the Aft Overheat Detector, M347.
- (j) Disconnect connector D1070 from Section 46 Aft Overheat Detector, M348 and jumper pin 1 of connector D1070 to the connector of the Aft Overheat Detector, M1147.

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- (k) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Section 46 Aft Overheat Detector, M348. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801

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- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, do these steps, then continue:

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- a) Remove the jumper between connector D1070 and Aft Overheat Detector, M1147.

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- b) Re-connect connector D1070 to the Section 46 Aft Overheat Detector, M348.

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- c) Re-connect the Aft Overheat Detector, M1147 to the Section 46 Aft Overheat Detector, M348.

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- (l) Disconnect connector D864 from the Section 48 Aft Overheat Detector, M276.
- (m) Disconnect connector D862 from the Section 47 Aft Overheat Detector, M275.
- (n) Measure the Resistance between pin 1 of connector D864 and pin 1 of connector D862.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D864 and D862.
 - b) Re-connect connector D864.
 - c) Re-connect connector D862.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps, and then continue:
 - a) Re-connect connector D862.
 - b) Re-connect connector D864, then continue.
- (o) Disconnect connector D866 from the Section 48 Aft Overheat Detector, M276.
- (p) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
- (q) Measure the Resistance between pin 1 of connector D866 and pin 13 of connector D742.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D866 and D742.
 - b) Re-connect connector D866.
 - c) Re-install the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, re-connect connector D866, then continue.

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- (r) Disconnect connector D1070 from the Section 46 Aft Overheat Detector, M348.
- (s) Measure the Resistance between pin 1 of connector D1070 and pin 27 of connector D742.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D1070 and D742.
 - b) Re-connect connector D1070.
 - c) Re-install the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps, and then continue:
 - a) Re-install the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - b) Re-connect connector D1070.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Re-install the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 2) Close access to the Overheat Detectors:
Close these access panels:

<u>Number</u>	<u>Name/Location</u>
194AL	Aft Wing To Body Fairing Panel

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(Continued)

<u>Number</u>	<u>Name/Location</u>
194AR	Aft Wing To Body Fairing Panel

- (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

815. Aft Body Overheat Detectors - Overheat - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) AFT BODY APU OVHT
- 1) When this message shows, the 2GND Indicator flashes between “LOW” and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Section 47 Aft Overheat Detector, M275
- (2) Section 48 Aft Overheat Detector, M276
- (3) Aft Overheat Detector, M347
- (4) Section 46 Aft Overheat Detector, M348
- (5) Aft Overheat Detector, M1147
- (6) Compartment Overheat Detector Control Unit, M237
- (7) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

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D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Put the airplane in this configuration and allow the airplane to cool to Ambient Temperature.
 - (a) Engines OFF (Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00)
 - (b) APU OFF (APU Usual Shutdown, AMM TASK 49-11-00-860-802)
 - (c) PACK OFF (Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804)
- (2) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows, this indicates a short condition. Do this task: Aft Body Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 813.

NOTE: When you do the Aft Body Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 813, look for the "OVHT" Message instead of the "SHRT" Message.
 - (b) If the maintenance message does not show, then do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available Method" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a faulty detector or wiring, replace the defective detector or repair the wiring.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure - Loop Controller Not Available Method

- (1) Put the airplane in this configuration:
 - (a) Left Pack ON (Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803)
 - (b) APU Bleed ON

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- (c) ISOLATION VALVE closed
- (2) Make sure that the L WING-BODY OVHT, MASTER CAUTION and AIR COND Lights in the flight deck are ON.
- (3) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the MEMORY CLEAR part of the Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801, to erase the maintenance message from the memory.
 - (b) If the maintenance message shows, do these steps:
 - 1) Do a check for these conditions at the areas around the Aft Body Overheat Detectors, M275, M276, M347, M348 and M1147
 - Bleed Air leaks through duct cracks and joint
 - Detectors located too close to the Bleed Duct surfaces
 - Degraded gold surface coating on the Bleed Ducts
 - 2) Repair the ducts or sensor locations as necessary.
 - 3) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

816. Right Wing Leading Edge and A/C Pack Bay Overheat Detectors - Short Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) R SIDE SHRT
 - 1) When this message shows, the 2GND Indicator flashes between "LOW" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Right Wing Outboard Overheat Detector, M269
- (2) Right Forward A/C Pack Overheat Detector, M356
- (3) Right Wing Inboard Overheat Detector, M371
- (4) Right Forward Strut Cavity Overheat Detector, M1763

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- (5) Right Aft Strut Cavity Overheat Detector, M1764
- (6) Right Mid A/C Pack Overheat Detector, M1910
- (7) Right Aft A/C Pack Overheat Detector, M1912
- (8) Compartment Overheat Detector Control Unit, M237
- (9) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message shows, do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, then do these steps:
 - a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
192CR	ECS Access Door

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- b) Disconnect connector D4582P and jumper pins 1 and 2.
- c) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - <1> If the maintenance message does not show, do "Fault Isolation Procedure C" below.
 - <2> If the maintenance message shows, continue.
- 3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
611AB	Inboard Leading Edge, Lower Removable Access Panel
- 4) Disconnect connector D30162 and jumper pins 6 and 8.
- 5) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - a) If the maintenance message shows, do "Fault Isolation Procedure A" below.
 - b) If the maintenance message does not show, do "Fault Isolation Procedure B" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a faulty detector or wiring, replace the defective detector or repair the wiring.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure A

- (1) Get access to Overheat Detectors:



WARNING

KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Fully extend the Leading Edge Slats. This is the task: Leading Edge Flaps and Slats Extension, AMM TASK 27-81-00-860-803.
- (b) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
191FR	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HR	Ram Air Inlet Lip Panel - Forward

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SIA ALL; AIRPLANES WITH CODM P/N 475928-01 (Continued)

(Continued)

Number	Name/Location
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621AB	Outboard Leading Edge Blowout Door - Slat Station 20.04
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- (2) Examine the Overheat Sensors and Wiring as follows:
- (a) Disconnect the Wire Bundle from the two lug ends A and B of the Right Mid A/C Pack Overheat Detector, M1910, and jumper the two ends of the ship-side wiring.
 - (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Mid A/C Pack Overheat Detector, M1910. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumpers and reconnect connectors D4582P and D30162.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Right Mid A/C Pack Overheat Detector, M1910, then continue.
 - a) .
 - (c) Disconnect connectors D844 and D846 from the Right Forward A/C Pack Overheat Detector, M356 and jumper pin 1 of connector D846 to pin 1 of connector D844.
 - (d) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Forward A/C Pack Overheat Detector, M356. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumpers and reconnect connectors D4582P and D30162.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, remove the jumper and reconnect connectors D846 and D844 to the Right Forward A/C Pack Overheat Detector, M356, then continue
 - (e) Disconnect the Right Wing Inboard Overheat Detector, M371 from the Right Wing Outboard Overheat Detector, M269.
 - (f) Disconnect connector D836 from the Right Wing Inboard Overheat Detector, M371 and jumper pin 1 of connector D836 to the connector of the Right Wing Outboard Overheat Detector, M269.

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- (g) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Wing Inboard Overheat Detector, M371. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumpers and reconnect connectors D4582P and D30162.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps, then continue:
 - a) Remove the jumper between connector D836 and Right Wing Inboard Overheat Detector, M371.
 - b) Reconnect connector D836 to the Right Wing Inboard Overheat Detector, M371.
- (h) Disconnect connector D838 from the Right Wing Outboard Overheat Detector, M269 and jumper pin 1 of connector D838 to the connector of the Right Wing Inboard Overheat Detector, M371.
- (i) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Wing Outboard Overheat Detector, M269. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumpers and reconnect connectors D4582P and D30162.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps, then continue:
 - a) Remove the jumper between connector D838 and Right Wing Inboard Overheat Detector, M371.
 - b) Reconnect connector D838 to the Right Wing Outboard Overheat Detector, M269.
 - c) Reconnect the Right Wing Inboard Overheat Detector, M371 to the Right Wing Outboard Overheat Detector, M269.
- (j) Disconnect the Wire Bundle from the two lug ends A and B of the Right Aft Strut Cavity Overheat Detector, M1764 and jumper the two ends of the ship-side wiring.
- (k) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:

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- a) Replace the Right Aft Strut Cavity Overheat Detector, M1764. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Remove the jumpers and reconnect connector D4582P and D30162.
- c) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, remove the jumper and reconnect the wire bundle to the two lug ends A and B of the Right Aft Strut Cavity Overheat Detector, M1764, then continue
 - (l) Remove the jumper from connector D30162.
 - (m) Disconnect connector D39904.
 - (n) Measure the Resistance between pin 1 of connector D39904 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D39904 and D30162.
 - b) Reconnect connector D39904.
 - c) Reconnect connector D30162.
 - d) Remove the jumper and reconnect connector D4582P.
 - e) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D39904, then continue.
 - (o) Disconnect connector D838 from the Right Wing Outboard Overheat Detector, M269.
 - (p) Measure the Resistance between pin 1 of connector D838 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D838 and D30162.
 - b) Reconnect connector D838.
 - c) Reconnect connector D30162.
 - d) Remove the jumper and reconnect connector D4582P.
 - e) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, do these steps and then continue:
 - a) Reconnect connector D30162.
 - b) Reconnect connector D838 to the Right Wing Outboard Overheat Detector, M269.
 - (q) Disconnect connector D836 from the Right Wing Inboard Overheat Detector, M371.
 - (r) Measure the Resistance between pin 1 of connector D836 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:

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- a) Examine and repair the wire and/or connector that causes the short between connectors D836 and D844.
- b) Reconnect connector D836.
- c) Remove the jumper and reconnect connector D4582P.
- d) Do the Repair Confirmation at the end of this task.
- 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D836, then continue.
- (s) Disconnect connector D846 from the Right Forward A/C Pack Overheat Detector, M356.
- (t) Measure the Resistance between pin 1 of connector D846 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D846 and D41600.
 - b) Reconnect connector D846.
 - c) Remove the jumper and reconnect connector D4582P.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D846, then continue.
- (u) Remove the jumper from connector D4562P.
- (v) Disconnect connector D41602.
- (w) Measure the Resistance between pin J of connector D41602 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D41602 and D4562P.
 - b) Reconnect connector D41602.
 - c) Reconnect connector D4562P.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D41602, then continue.
- (x) Measure the Resistance between pin 2 of connector D4562P and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D4562P and D742.
 - b) Reconnect connector D4562P.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D4562P, then continue.
- (y) Disconnect connector D39902.
- (z) Measure the Resistance between pin 1 of connector D39902 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:

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- a) Examine and repair the wire and/or connector that causes the short between connectors D39902 and D742.
 - b) Reconnect connector D39902.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D39902, then continue.
- (aa) Disconnect connector D39902.
- (ab) Measure the Resistance between pin 1 of connector D39902 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between connectors D39902 and D742.
 - b) Reconnect connector D39902.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D39902, then continue.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

H. Fault Isolation Procedure B

- (1) Get access to Overheat Detectors:
 - (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
441BT	Forward Strut Fairing, Pressure Relief Door, Strut 2
- (2) Examine the Overheat Sensors and Wiring as follows:
 - (a) Remove the jumper and reconnect connector D4582P.
 - (b) Remove the jumper and reconnect connector D30162.
 - (c) Disconnect the Wire Bundle from the two lug ends A and B of the Right Forward Strut Cavity Overheat Detector, M1763 and jumper the two ends of the ship-side wiring.
 - (d) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:

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- a) Replace the Right Forward Strut Cavity Overheat Detector, M1763. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Right Forward Strut Cavity Overheat Detector, M1763, then continue
- (e) Disconnect connector D30164.
- (f) Measure the Resistance between pin 6 of connector D30164 and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between pins 6 and 8 of connector D30164.
 - b) Reconnect connector D30164.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D30164, then continue.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

I. Fault Isolation Procedure C

- (1) Examine the Overheat Sensors and Wiring as follows:
 - (a) Remove the jumper and reconnect connector D4582P.
 - (b) Disconnect the Wire Bundle from the two lug ends A and B of the Right Aft A/C Pack Overheat Detector, M1912 and jumper the two ends of the ship-side wiring.
 - (c) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Aft A/C Pack Overheat Detector, M1912. These are the tasks:

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- Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Right Aft A/C Pack Overheat Detector, M1912, then continue.
 - (d) Disconnect connector D4582P.
 - (e) Measure the Resistance between pin 1 of connector D4582J and Ground.
 - 1) If the Resistance is less than 3 Ohms, do these steps:
 - a) Examine and repair the wire and/or connector that causes the short between pins 1 and 2 connector D4582J.
 - b) Reconnect connector D4582P.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is more than 3 Ohms and there is no short, reconnect connector D4582P, then continue.
 - (2) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
 - (3) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

J. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 2) If you did Fault Isolation Procedure A, also do these steps:
 - a) Close access to the Overheat Detectors:
Close these access panels:

<u>Number</u>	<u>Name/Location</u>
191FR	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet

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<u>Number</u>	<u>Name/Location</u>
191HR	Ram Air Inlet Lip Panel - Forward
192CR	ECS Access Door
611AB	Inboard Leading Edge, Lower Removable Access Panel
621AB	Outboard Leading Edge Blowout Door - Slat Station 20.04



WARNING

KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- b) Fully retract the Leading Edge Slats. This is the task: Leading Edge Flaps and Slats Retraction, AMM TASK 27-81-00-860-804.
- 3) If you did Fault Isolation Procedure B, also close access to the Overheat Detectors:
Close these access panels:

<u>Number</u>	<u>Name/Location</u>
192CR	ECS Access Door
441BT	Forward Strut Fairing, Pressure Relief Door, Strut 2
611AB	Inboard Leading Edge, Lower Removable Access Panel

- 4) If you did Fault Isolation Procedure C, also close access to the Overheat Detectors:
Close this access panel:

<u>Number</u>	<u>Name/Location</u>
192CR	ECS Access Door

- (b) If the maintenance message still shows, continue the Fault Isolation Procedure at the subsequent step.

END OF TASK

817. Right Wing Leading Edge and A/C Pack Bay Overheat Detectors - Open Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) R SIDE OPEN
- 1) When this message shows, the LOOP Indicator flashes between "OPEN" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Right Wing Outboard Overheat Detector, M269
- (2) Right Forward A/C Pack Overheat Detector, M356
- (3) Right Wing Inboard Overheat Detector, M371
- (4) Right Forward Strut Cavity Overheat Detector, M1763

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- (5) Right Aft Strut Cavity Overheat Detector, M1764
- (6) Right Mid A/C Pack Overheat Detector, M1910
- (7) Right Aft A/C Pack Overheat Detector, M1912
- (8) Compartment Overheat Detector Control Unit, M237
- (9) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) WDM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message shows, do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, then do these steps:
 - a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
192CR	ECS Access Door

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- b) Disconnect connector D4582P and jumper pins 1 and 2.
- c) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - <1> If the maintenance message does not show, do "Fault Isolation Procedure C" below.
 - <2> If the maintenance message shows, continue.
- 3) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
611AB	Inboard Leading Edge, Lower Removable Access Panel
- 4) Disconnect connector D30162 and jumper pins 6 and 8.
- 5) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - a) If the maintenance message shows, do "Fault Isolation Procedure A" below.
 - b) If the maintenance message does not show, do "Fault Isolation Procedure B" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a faulty detector or wiring, then replace the defective detector or repair the wiring.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - 1) Do the Repair Confirmation at the end of this task.

G. Fault Isolation Procedure A

- (1) Get access to Overheat Detectors:



WARNING

KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (a) Fully extend the Leading Edge Slats. This is the task: Leading Edge Flaps and Slats Extension, AMM TASK 27-81-00-860-803.
- (b) Open these access panels:

<u>Number</u>	<u>Name/Location</u>
191FR	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet

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SIA ALL; AIRPLANES WITH CODM P/N 475928-01 (Continued)

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<u>Number</u>	<u>Name/Location</u>
191HR	Ram Air Inlet Lip Panel - Forward
621AB	Outboard Leading Edge Blowout Door - Slat Station 20.04

- (2) Examine the Overheat Sensors and Wiring as follows:
- (a) Disconnect the Wire Bundle from the two lug ends A and B of the Right Mid A/C Pack Overheat Detector, M1910, and jumper the two ends of the ship-side wiring.
 - (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Mid A/C Pack Overheat Detector, M1910. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumpers and reconnect connectors D4582P and D30162.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps:
 - a) Remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Right Mid A/C Pack Overheat Detector, M1910, then continue.
 - (c) Disconnect connectors D846 and D844 from the Right Forward A/C Pack Overheat Detector, M356 and jumper pin 1 of connector D846 to pin 1 of connector D844.
 - (d) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Forward A/C Pack Overheat Detector, M356. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumpers and reconnect connectors D4582P and D30162.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, remove the jumper and reconnect connectors D846 and D844 to the Right Forward A/C Pack Overheat Detector, M356, then continue
 - (e) Disconnect the Right Wing Inboard Overheat Detector, M371 from the Right Wing Outboard Overheat Detector, M269.
 - (f) Disconnect connector D836 from the Right Wing Inboard Overheat Detector, M371 and jumper pin 1 of connector D836 to the connector of the Right Wing Outboard Overheat Detector, M269.

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- (g) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Wing Inboard Overheat Detector, M371. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumpers and reconnect connectors D4582P and D30162.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps, then continue:
 - a) Remove the jumper between connector D836 and Right Wing Inboard Overheat Detector, M371.
 - b) Reconnect connector D836 to the Right Wing Inboard Overheat Detector, M371.
- (h) Disconnect connector D838 from the Right Wing Outboard Overheat Detector, M269 and jumper pin 1 of connector D838 to the connector of the Right Wing Inboard Overheat Detector, M371.
- (i) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Wing Outboard Overheat Detector, M269. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Remove the jumpers and reconnect connectors D4582P and D30162.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, do these steps, then continue:
 - a) Remove the jumper between connector D838 and Right Wing Inboard Overheat Detector, M371.
 - b) Reconnect connector D838 to the Right Wing Outboard Overheat Detector, M269.
 - c) Reconnect the Right Wing Inboard Overheat Detector, M371 to the Right Wing Outboard Overheat Detector, M269.
- (j) Disconnect the Wire Bundle from the two lug ends A and B of the Right Aft Strut Cavity Overheat Detector, M1764 and jumper the two ends of the ship-side wiring.
- (k) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- 1) If the maintenance message does not show, do these steps:

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- a) Replace the Right Aft Strut Cavity Overheat Detector, M1764. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
- b) Remove the jumpers and reconnect connector D4582P and D30162.
- c) Do the Repair Confirmation at the end of this task.
- 2) If the maintenance message shows, remove the jumper and reconnect the wire bundle to the two lug ends A and B of the Right Aft Strut Cavity Overheat Detector, M1764, then continue
 - (l) Remove the jumper from connector D30162.
 - (m) Disconnect connector D39904.
 - (n) Measure the Resistance between pin 1 of connector D39904 and pin 6 of connector D30162.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D39904 and D30162.
 - b) Reconnect connector D39904.
 - c) Reconnect connector D30162.
 - d) Remove the jumper and reconnect connector D4582P.
 - e) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, reconnect connector D39904, then continue.
 - (o) Disconnect connector D838 from the Right Wing Outboard Overheat Detector, M269.
 - (p) Measure the Resistance between pin 1 of connector D838 and pin 8 of connector D30162.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D838 and D30162.
 - b) Reconnect connector D838.
 - c) Reconnect connector D30162.
 - d) Remove the jumper and reconnect connector D4582P.
 - e) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps and then continue:
 - a) Reconnect connector D30162.
 - b) Reconnect connector D838 to the Right Wing Outboard Overheat Detector, M269.

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- (q) Disconnect connector D836 from the Right Wing Inboard Overheat Detector, M371.
- (r) Disconnect connector D844 from the Right Forward A/C Pack Overheat Detector, M356.
- (s) Measure the Resistance between pin 1 of connector D836 and pin 1 of connector D844.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D836 and D844.
 - b) Reconnect connector D836.
 - c) Reconnect connector D844.
 - d) Remove the jumper and reconnect connector D4582P.
 - e) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps and then continue:
 - a) Reconnect connector D844.
 - b) Reconnect connector D836.
- (t) Disconnect connector D846 from the Right Forward A/C Pack Overheat Detector, M356.
- (u) Disconnect connector D41600.
- (v) Measure the Resistance between pin 1 of connector D846 and pin J of connector D41600.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D846 and D41600.
 - b) Reconnect connector D846.
 - c) Reconnect connector D41600.
 - d) Remove the jumper and reconnect connector D4582P.
 - e) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps and then continue:
 - a) Reconnect connector D41600.
 - b) Reconnect connector D846.
- (w) Remove the jumper from connector D4562P.
- (x) Disconnect connector D41602.
- (y) Measure the Resistance between pin J of connector D41602 and pin 1 of connector D4562P.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D41602 and D4562P.
 - b) Reconnect connector D41602.

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- c) Reconnect connector D4562P.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, reconnect connector D41602, then continue.
- (z) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
- (aa) Measure the Resistance between pin 2 of connector D4562P and pin 11 of connector D742.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D4562P and D742.
 - b) Reconnect connector D4562P.
 - c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, reconnect connector D4562P, then continue
- (ab) Disconnect connector D39902.
- (ac) Measure the Resistance between pin 1 of connector D39902 and pin 10 of connector D742.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between connectors D39902 and D742.
 - b) Reconnect connector D39902.
 - c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the Resistance is less than 20 Ohms and there is no open circuit, do these steps and then continue:
 - a) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - b) Reconnect connector D39902.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.

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- (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
- (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
- (a) Do the Repair Confirmation at the end of this task.

H. Fault Isolation Procedure B

- (1) Get access to Overheat Detectors:
 - (a) Open this access panel:

<u>Number</u>	<u>Name/Location</u>
441BT	Forward Strut Fairing, Pressure Relief Door, Strut 2
- (2) Examine the Overheat Sensors and Wiring as follows:
 - (a) Remove the jumper and reconnect connector D4582P.
 - (b) Remove the jumper and reconnect connector D30162.
 - (c) Disconnect the Wire Bundle from the two lug ends A and B of the Right Forward Strut Cavity Overheat Detector, M1763 and jumper the two ends of the ship-side wiring.
 - (d) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Forward Strut Cavity Overheat Detector, M1763. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, remove the jumper and reconnect the Wire Bundle to the two lug ends A and B of the Right Forward Strut Cavity Overheat Detector, M1763, then continue.
 - (e) Disconnect connector D30164.
 - (f) Measure the Resistance between pins 6 and 8 of connector D30164.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between pins 6 and 8 of connector D30164.
 - b) Reconnect connector D30164.
 - c) Do the Repair Confirmation at the end of this task.

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- 2) If the Resistance is less than 20 Ohms and there is no open circuit, reconnect connector D30164, then continue.
- (3) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (4) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

I. Fault Isolation Procedure C

- (1) Examine the Overheat Sensors and Wiring as follows:
 - (a) Remove the jumper and reconnect connector D4582P.
 - (b) Disconnect the Wire Bundle from the two lug ends A and B of the Right Aft A/C Pack Overheat Detector, M1912 and jumper the two ends of the ship-side wiring.
 - (c) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not show, do these steps:
 - a) Replace the Right Aft A/C Pack Overheat Detector, M1912. These are the tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message shows, remove the jumper from Remove the jumper from the two lug ends A and B of the Right Aft A/C Pack Overheat Detector, M1912, then continue.
 - (d) Disconnect connector D4582P.
 - (e) Measure the Resistance between pins 1 and 2 of connector D4582J.
 - 1) If the Resistance is more than 20 Ohms or an open circuit is detected, do these steps:
 - a) Examine and repair the wire and/or connector that causes the open circuit between pins 1 and 2 connector D4582J.
 - b) Reconnect connector D4582P.
 - c) Do the Repair Confirmation at the end of this task.

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- 2) If the Resistance is less than 20 Ohms and there is no open circuit, reconnect connector D4582P, then continue.
- (2) Examine the Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) If necessary, examine and clean the connectors.
 - (c) Reinstall the Compartment Overheat Detection Control Unit, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (3) Replace the Compartment Overheat Detection Control Unit, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
 - (a) Do the Repair Confirmation at the end of this task.

J. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 2) If you did Fault Isolation Procedure A, also do these steps:
 - a) Close access to the Overheat Detectors:

Close these access panels:

<u>Number</u>	<u>Name/Location</u>
191FR	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HR	Ram Air Inlet Lip Panel - Forward
192CR	ECS Access Door
611AB	Inboard Leading Edge, Lower Removable Access Panel
621AB	Outboard Leading Edge Blowout Door - Slat Station 20.04



WARNING

KEEP ALL PERSONS AND EQUIPMENT AWAY FROM THE FLIGHT CONTROL SURFACES AND THE FLIGHT CONTROL DRIVE MECHANISMS. THESE COMPONENTS WILL MOVE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- b) Fully retract the Leading Edge Slats. This is the task: Leading Edge Flaps and Slats Retraction, AMM TASK 27-81-00-860-804.
- 3) If you did Fault Isolation Procedure B, also close access to the Overheat Detectors:

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Close these access panels:

<u>Number</u>	<u>Name/Location</u>
192CR	ECS Access Door
441BT	Forward Strut Fairing, Pressure Relief Door, Strut 2
611AB	Inboard Leading Edge, Lower Removable Access Panel

- 4) If you did Fault Isolation Procedure C, also close access to the Overheat Detectors:

Close this access panel:

<u>Number</u>	<u>Name/Location</u>
192CR	ECS Access Door

- (b) If the maintenance message still shows, continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

818. Right Wing Leading Edge and A/C Pack Bay Overheat Detectors - Overheat - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
- (a) R SIDE OVHT
- 1) When this message shows, the 2GND Indicator flashes between "LOW" and a Resistance value.
- (2) The Compartment Overheat Detector Control Unit, M237 detects a problem with a detector, or the wiring between a detector and the Control Unit.

B. Possible Causes

- (1) Right Wing Outboard Overheat Detector, M269
- (2) Right Forward A/C Pack Overheat Detector, M356
- (3) Right Wing Inboard Overheat Detector, M371
- (4) Right Forward Strut Cavity Overheat Detector, M1763
- (5) Right Aft Strut Cavity Overheat Detector, M1764
- (6) Right Mid A/C Pack Overheat Detector, M1910
- (7) Right Aft A/C Pack Overheat Detector, M1912
- (8) Compartment Overheat Detector Control Unit, M237
- (9) Duct Leakage
- (10) Wiring

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

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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

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Put the airplane in this configuration and allow the airplane to cool to Ambient Temperature.
 - (a) Engines OFF (Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00)
 - (b) APU OFF (APU Usual Shutdown, AMM TASK 49-11-00-860-802)
 - (c) PACK OFF (Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804)
- (2) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows, this indicates a short condition. Do this task: Right Wing Leading Edge and A/C Pack Bay Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 816.

NOTE: When you do the Right Wing Leading Edge and A/C Pack Bay Overheat Detectors - Short Loop - Fault Isolation, 26-18 TASK 816, look for the "OVHT" Message instead of the "SHRT" Message.
 - (b) If the maintenance message does not show, then do these steps:
 - 1) If the loop controller, COM-17158 or loop controller, COM-17417 tool is available, do the "Fault Isolation Procedure - Loop Controller Method" below.
 - 2) If the loop controller, COM-17158 or loop controller, COM-17417 tool is not available, do the "Fault Isolation Procedure - Loop Controller Not Available Method" below.

F. Fault Isolation Procedure - Loop Controller Method

- (1) Do a check of the Compartment Overheat Detection System. This is the task: Overheat Detection Test Using Handheld LCRZ Meter, AMM TASK 26-10-00-700-801.
 - (a) If you find a faulty detector or wiring, replace the defective detector or repair the wiring.
 - 1) Do the Repair Confirmation at the end of this task.
 - (b) If you do not find a faulty detector or wiring, replace the Overheat Detector Control Unit, M237. These are the tasks:

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- Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
- Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801

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

G. Fault Isolation Procedure - Loop Controller Not Available Method

- (1) Place the airplane in the following configuration:
 - (a) Right Engine Idle (Start the Engine Procedure (Normal Start), AMM TASK 71-00-00-800-808-F00)
 - (b) Right Bleed ON
 - (c) Right PACK ON (Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803)
 - (d) APU Bleed OFF
 - (e) ISOLATION VALVE closed
- (2) Make sure that the R WING-BODY OVHT, MASTER CAUTION and AIR COND Lights in the flight deck are ON.
- (3) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, this indicates an intermittent fault or an overheat condition.
 - 1) Do the MEMORY CLEAR part of the Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801, to erase the maintenance message from the memory.
 - (b) If the maintenance message shows, do these steps:
 - 1) Do a check for these conditions at the areas around the Right Wing Leading Edge, Strut and A/C Pack Overheat Detectors, M1764, M1763, M269, M371, M356, M1910, M1912
 - Bleed Air leaks through duct cracks and joint
 - Detectors located too close to the Bleed Duct surfaces
 - Degraded gold surface coating on the Bleed Ducts
 - 2) Repair the ducts or sensor locations as necessary.
 - 3) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not show, you corrected the problem.
 - 1) Do the "MEMORY CLEAR" part of this task to clear the maintenance message from the memory: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message still shows, continue the applicable Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

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819. Main Wheel Well Fire Detector - Short Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) MWW LOOP A SHRT
 - 1) When the message is present, the 2GND indicator will flash between "LOW" and a resistance value.
- (2) This fault occurs when the control module, M237 detects a fault with a detector, or the wiring between a detector and the control module.

B. Possible Causes

- (1) Main wheel well fire detector, M270
- (2) Control module, M237
- (3) Wiring problems.

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, this indicates an intermittent fault. Do the following:
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

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- (b) If the maintenance message appears, perform the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Check of overheat sensors and wiring:
 - (a) Disconnect the wire bundle from both lug ends A and B of the main wheel well fire detector, M270 and jumper both ends of the shipside wiring.
 - (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not appear, do the following:
 - a) Replace the main wheel well fire detector, M270. Do these tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801
 - b) Do the Repair Confirmation at the end of this task.
 - 2) If the maintenance message appears, do the following:
 - a) Remove the jumper and reconnect the wire bundle to both lug ends A and B of the main wheel well fire detector, M270, then continue to the next step.
 - (c) Disconnect connector D46042P.
 - (d) Measure the resistance between pin 9 of connector D46042P and ground.
 - 1) If the resistance is less than 3 ohms, do the following:
 - a) Inspect and repair wire and/or connector causing the short between connector D46042P and D46030P.
 - b) Reconnect connector D46042P.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the resistance is greater than 3 ohms and no short is found, then continue to the next step.
 - (e) Measure the resistance between pin 9 of connector D46042J and ground.
 - 1) If the resistance is less than 3 ohms, do the following:
 - a) Inspect and repair wire and/or connector causing the short between connector D46042J and connector D742.
 - b) Reconnect connector D46042P.
 - c) Do the Repair Confirmation at the end of this task.
 - 2) If the resistance is greater than 3 ohms and no short is found, do the following:
 - a) Reconnect connector D46042P, then continue to the next step.
 - (f) Disconnect connector D46030P.
 - (g) Measure the resistance between pin 8 of connector D36030J and ground.
 - 1) If the resistance is less than 3 ohms, do the following:
 - a) Inspect and repair wire and/or connector causing the short between connector D36030J and connector D742.
 - b) Reconnect connector D46030P.

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- c) Do the Repair Confirmation at the end of this task.
 - 2) If the resistance is greater than 3 ohms and no short is found, do the following:
 - a) Reconnect connector D46030P, then continue to the next step.
- (2) Check Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task:
Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Inspect and clean the connectors, if necessary.
 - (c) Reinstall the compartment overheat detection control unit, M237. Do this task:
Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (3) Replace the compartment overheat detection control unit, M237. Do these tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
- (4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, the fault has been corrected.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, continue with the fault isolation procedure.

————— **END OF TASK** —————

821. Main Wheel Well Fire Detector - Open Loop - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) MWW LOOP A OPEN
 - 1) When the message is present, the LOOP indicator will flash between "OPEN" and a resistance value.
- (2) This fault occurs when the control module, M237 detects a fault with a detector, or the wiring between a detector and the control module.

B. Possible Causes

- (1) Main wheel well fire detector, M270
- (2) Control module, M237
- (3) Wiring problems.

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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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, this indicates an intermittent fault. Do the following:
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Check of overheat sensors and wiring:
 - (a) Jumper between both lug ends A and B of the main wheel well fire detector, M270.
 - (b) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - 1) If the maintenance message does not appear, do the following:
 - a) Replace the main wheel well fire detector, M270. Do these tasks:
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal, AMM TASK 26-18-02-000-801.
 - Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation, AMM TASK 26-18-02-400-801.
 - b) Do the Repair Confirmation at the end of this task.

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- 2) If the maintenance message appears, do the following:
 - a) Remove the jumper from both lug ends A and B of the main wheel well fire detector, M270, then continue to the next step.
- (c) Disconnect connector D46042P.
- (d) Disconnect connector D46030P.
- (e) Measure the resistance between pin 9 of connector D46042P and pin 8 of connector D46030P.
 - 1) If the resistance is greater than 20 ohms or an open circuit is detected, do the following:
 - a) Inspect and repair wire and/or connector causing the open between connector D46042P and connector D46030P.
 - b) Reconnect connector D46042P.
 - c) Reconnect connector D46030P.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the resistance is less than 20 ohms and no open is found, do the following:
 - a) Reconnect connector D46030P, then continue to the next step.
- (f) Remove the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
- (g) Measure the resistance between pin 9 of connector D46042J and pin 21 of connector D742.
 - 1) If the resistance is greater than 20 ohms or an open circuit is detected, do the following:
 - a) Inspect and repair wire and/or connector causing the open between connector D46042J and connector D742.
 - b) Reconnect connector D46042P.
 - c) Reinstall the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the resistance is less than 20 ohms and no open is found, do the following:
 - a) Reconnect connector D46042P, then continue to the next step.
- (h) Disconnect connector D46030P.
- (i) Measure the resistance between pin 8 of connector D36030J and pin 24 of connector D742.
 - 1) If the resistance is greater than 20 ohms or an open circuit is detected, do the following:
 - a) Inspect and repair wire and/or connector causing the open between connector D36030J and connector D742.
 - b) Reconnect connector D46030P.

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- c) Reinstall the compartment overheat detection control unit, M237. Do this task:
Compartment Overheat Detection Control Unit Installation, AMM
TASK 26-18-01-400-801.
 - d) Do the Repair Confirmation at the end of this task.
 - 2) If the resistance is less than 20 ohms and no open is found, do the following:
 - a) Reinstall the compartment overheat detection control unit, M237. Do this task:
Compartment Overheat Detection Control Unit Installation, AMM
TASK 26-18-01-400-801.
 - b) Reconnect connector D46030P, then continue to the next step.
- (2) Check Compartment Overheat Detection Control Unit Connectors:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task:
Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Inspect and clean the connectors, if necessary.
 - (c) Reinstall the compartment overheat detection control unit, M237. Do this task:
Compartment Overheat Detection Control Unit Installation, AMM
TASK 26-18-01-400-801.
 - (d) Do the Repair Confirmation at the end of this task.
- (3) Replace the compartment overheat detection control unit, M237. Do these tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801
- (4) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, the fault has been corrected.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, continue with the fault isolation procedure.

———— **END OF TASK** ————

823. Main Wheel Well Fire Detector - Fire - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) MWW LOOP A FIRE
 - 1) When the message is present, the 2GND indicator will flash between "LOW" and a resistance value.
- (2) This fault occurs when the control module, M237 detects a fault with a detector, or the wiring between a detector and the control module.

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B. Possible Causes

- (1) Main wheel well fire detector, M270
- (2) Control module, M237
- (3) Wiring problems.

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) Component Location (26-18 TASK SUPPORT Figure 301)
- (2) WDM 26-12-11
- (3) SSM 26-00-05
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Place the airplane in the following configuration and allow the airplane to cool to ambient temperature.
 - (a) Engines OFF (Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00)
 - (b) APU OFF (APU Usual Shutdown, AMM TASK 49-11-00-860-802)
 - (c) Pack OFF (Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804)
- (2) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows on the display, this indicates a short condition. Do this fault isolation task: Main Wheel Well Fire Detector - Short Loop - Fault Isolation, 26-18 TASK 819

NOTE: When performing 26-18 TASK 819, inspect for the "OVHT" message instead of the "SHRT" message.
 - (b) If the maintenance message does not show, then do the Fault Isolation Procedure below.

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F. Fault Isolation Procedure

- (1) Place the airplane in the following configuration:
 - (a) Pack OFF (Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804)
 - (b) APU Bleed OFF
- (2) Verify that the WHEEL WELL FIRE and FIRE WARNING lights in the flight deck illuminate.
- (3) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, this indicates an intermittent fault or overheat condition. Do the following:
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, do the following:
 - 1) Check for these conditions at the areas around the main wheel well fire detector, M270:
 - Detector located too close to the wheel locations
 - 2) Make any necessary repairs to the sensor location.
 - 3) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, the fault has been corrected.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, reperform the checks and repairs identified in this procedure.

————— **END OF TASK** —————

825. Invalid Overheat Detection Control Module Configuration - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) CONFIG INVALID 1
 - (b) CONFIG INVALID 2
 - (c) CONFIG INVALID 4
 - (d) CONFIG INVALID 7
 - (e) CONFIG NEXTGEN2
 - (f) CONFIG MAX1
 - (g) CONFIG MAX2

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B. Possible Causes

- (1) Control module, M237
- (2) Wiring problem.

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

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

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) WDM 26-12-11
- (2) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows on the display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show, then there was an intermittent fault.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

F. Fault Isolation Procedure

- (1) Do a detailed visual inspection of the compartment overheat detection control unit, M237 and its wiring harness and connectors.
 - (a) Look for contamination, wear, broken, missing or bent pins.
 - (b) Do the Repair Confirmation at the end of this task.
 - (c) If you do not find a problem during the inspection, then continue.
- (2) Do this check of the program pins of the compartment overheat detection control unit, M237:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.

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- (b) Make sure that the program pins 48, 49 and 50 of connector D742 are connected as specified .

NOTE: For 737NG airplanes, all three pins are to be open.

- (c) If the program pins are not connected correctly, then do these steps:

- 1) Connect the program pins as specified (WDM 26-12-11)

NOTE: For 737NG airplanes, all three pins are to be open.

- 2) Re-install the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.

- (d) If the program pins are connected correctly, then continue.

- (3) Install a new compartment overheat detection control unit, M237. To install it, do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.

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

G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801

- (a) If the maintenance message does not appear, the fault has been corrected.

- 1) Do this step to clear the maintenance message from the memory:

- a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

- (b) If the maintenance message appears, continue with the fault isolation procedure.

————— END OF TASK —————

826. Pin 3 Fault - Fault Isolation

A. Description

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

- (a) PIN 3 FAULT

B. Possible Causes

- (1) Control module, M237.
(2) Wiring problem.

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

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F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) WDM 26-12-11
- (2) WDM 31-31-15
- (3) SSM 26-12-11
- (4) SSM 31-31-15

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows on the display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show, then there was an intermittent fault.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

F. Fault Isolation Procedure

- (1) Do a detailed visual inspection of the compartment overheat detection control unit, M237 and its wiring harness and connectors.
 - (a) Look for contamination, wear, broken, missing or bent pins.
 - (b) Do the Repair Confirmation at the end of this task.
 - (c) If you do not find a problem during the inspection, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Disconnect connector D1078 from the engines/APU fire control panel, P8-1.
 - (c) Do a wiring check between this pin of connector D742 at the E1-4 rack and this pin of connector D1078 at the engines/APU fire control panel (WDM 26-12-11):

D742	D1078
pin 3	pin 20

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - 3) Re-connect connector D1078 to the engines/APU fire control panel, P8-1.
 - 4) Do the Repair Confirmation at the end of this task.

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- (e) If you do not find a problem with the wiring, then continue.
- (f) Re-connect connector D1078 to the engines/APU fire control panel, P8-1.
- (3) Do this check of the wiring:
 - (a) Remove the DFDAU, M675. Do this task: Digital Flight Data Acquisition Unit (DFDAU) Removal, AMM TASK 31-31-22-000-801
 - (b) Do a wiring check between this pin of connector D742 at the E1-4 rack and this pin of connector D2295D at the E3-2 rack (WDM 26-12-11, WDM 31-31-15):

D742	D2295D
pin 3	pin E3
- (c) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - 3) Re-install the DFDAU, M675. Do this 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.
- (d) If you do not find a problem with the wiring, then continue.
- (e) Re-install the DFDAU, M675. Do this task: Digital Flight Data Acquisition Unit (DFDAU) Installation, AMM TASK 31-31-22-400-801.
- (4) Install a new compartment overheat detection control unit, M237. To install it, do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, the fault has been corrected.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, continue with the fault isolation procedure.

————— **END OF TASK** —————

827. Pin 16 Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) PIN 16 FAULT

B. Possible Causes

- (1) Control module, M237.
- (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, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) WDM 26-11-21
- (2) WDM 26-12-11
- (3) SSM 26-11-21
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows on the display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show, then there was an intermittent fault.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

F. Fault Isolation Procedure

- (1) Do a detailed visual inspection of the compartment overheat detection control unit, M237 and its wiring harness and connectors.
 - (a) Look for contamination, wear, broken, missing or bent pins.
 - (b) Do the Repair Confirmation at the end of this task.
 - (c) If you do not find a problem during the inspection, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Disconnect connector D940 from the aural warning module, M315.
 - (c) Do a wiring check between this pin of connector D742 at the E1-4 rack and this pin of connector D940 at the aural warning module (WDM 26-11-21, WDM 26-12-11):

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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

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) WDM 26-12-11
- (2) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows on the display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show, then there was an intermittent fault.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

F. Fault Isolation Procedure

- (1) Do a detailed visual inspection of the compartment overheat detection control unit, M237 and its wiring harness and connectors.
 - (a) Look for contamination, wear, broken, missing or bent pins.
 - (b) Do the Repair Confirmation at the end of this task.
 - (c) If you do not find a problem during the inspection, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Disconnect connector D680 from the air conditioning panel, P5-10.
 - (c) Do a wiring check between this pin of connector D742 at the E1-4 rack and this pin of connector D680 at the air conditioning panel (WDM 26-12-11):

D742	D680
pin 18	pin 21

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - 3) Re-connect connector D680 to the air conditioning panel, P5-10.

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- 4) Do the Repair Confirmation at the end of this task.
- (e) If you do not find a problem with the wiring, then continue.
- (f) Re-connect connector D680 to the air conditioning panel, P5-10.
- (3) Install a new compartment overheat detection control unit, M237. To install it, do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
- (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- (a) If the maintenance message does not appear, the fault has been corrected.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- (b) If the maintenance message appears, continue with the fault isolation procedure.

———— **END OF TASK** ————

829. Pin 19 Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) PIN 19 FAULT

B. Possible Causes

- (1) Control module, M237.
- (2) Wiring problem.

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

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D. Related Data

- (1) WDM 26-12-11
- (2) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows on the display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show, then there was an intermittent fault.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

F. Fault Isolation Procedure

- (1) Do a detailed visual inspection of the compartment overheat detection control unit, M237 and its wiring harness and connectors.
 - (a) Look for contamination, wear, broken, missing or bent pins.
 - (b) Do the Repair Confirmation at the end of this task.
 - (c) If you do not find a problem during the inspection, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Disconnect connector D646 from the air conditioning panel, P5-10.
 - (c) Do a wiring check between this pin of connector D742 at the E1-4 rack and this pin of connector D646 at the air conditioning panel (WDM 26-12-11):

D742	D646
pin 19	pin 8
- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - 3) Re-connect connector D646 to the air conditioning panel, P5-10.
 - 4) Do the Repair Confirmation at the end of this task.
- (e) If you do not find a problem with the wiring, then continue.
- (f) Re-connect connector D646 to the air conditioning panel, P5-10.
- (3) Install a new compartment overheat detection control unit, M237. To install it, do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (a) Do the Repair Confirmation at the end of this task.

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G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, the fault has been corrected.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, continue with the fault isolation procedure.

———— **END OF TASK** ————

830. Pin 22 Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) PIN 22 FAULT

B. Possible Causes

- (1) Control module, M237.
- (2) Wiring problem.

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) WDM 26-12-11
- (2) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows on the display, then do the Fault Isolation Procedure below.

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- (b) If the maintenance message does not show, then there was an intermittent fault.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the “memory clear” part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

F. Fault Isolation Procedure

- (1) Do a detailed visual inspection of the compartment overheat detection control unit, M237 and its wiring harness and connectors.
 - (a) Look for contamination, wear, broken, missing or bent pins.
 - (b) Do the Repair Confirmation at the end of this task.
 - (c) If you do not find a problem during the inspection, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Disconnect connector D680 from the air conditioning panel, P5-10.
 - (c) Do a wiring check between this pin of connector D742 at the E1-4 rack and this pin of connector D680 at the air conditioning panel (WDM 26-12-11):

D742	D680
pin 22	pin 34

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - 3) Re-connect connector D680 to the air conditioning panel, P5-10.
 - 4) Do the Repair Confirmation at the end of this task.
 - (e) If you do not find a problem with the wiring, then continue.
 - (f) Re-connect connector D680 to the air conditioning panel, P5-10.
 - (3) Install a new compartment overheat detection control unit, M237. To install it, do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, the fault has been corrected.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the “memory clear” part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, continue with the fault isolation procedure.

———— **END OF TASK** ————

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831. Pin 23 Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) PIN 23 FAULT

B. Possible Causes

- (1) Control module, M237.
- (2) Wiring problem.

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) WDM 26-12-11
- (2) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows on the display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show, then there was an intermittent fault.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

F. Fault Isolation Procedure

- (1) Do a detailed visual inspection of the compartment overheat detection control unit, M237 and its wiring harness and connectors.
 - (a) Look for contamination, wear, broken, missing or bent pins.
 - (b) Do the Repair Confirmation at the end of this task.

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- (c) If you do not find a problem during the inspection, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Disconnect connector D680 from the air conditioning panel, P5-10.
 - (c) Do a wiring check between this pin of connector D742 at the E1-4 rack and this pin of connector D680 at the air conditioning panel (WDM 26-12-11):

D742	D680
pin 23	pin 33

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - 3) Re-connect connector D680 to the air conditioning panel, P5-10.
 - 4) Do the Repair Confirmation at the end of this task.
- (e) If you do not find a problem with the wiring, then continue.
- (f) Re-connect connector D680 to the air conditioning panel, P5-10.
- (3) Install a new compartment overheat detection control unit, M237. To install it, do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, the fault has been corrected.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, continue with the fault isolation procedure.

———— **END OF TASK** ————

832. Pin 25 Fault - Fault Isolation

A. Description

- (1) This task is for this maintenance message:
 - (a) PIN 25 FAULT

B. Possible Causes

- (1) Control module, M237.
- (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, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3

F/O Electrical System Panel, P6-4

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R

D. Related Data

- (1) WDM 26-11-21
- (2) WDM 26-12-11
- (3) SSM 26-11-21
- (4) SSM 26-12-11

E. Initial Evaluation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message shows on the display, then do the Fault Isolation Procedure below.
 - (b) If the maintenance message does not show, then there was an intermittent fault.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the "memory clear" part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.

F. Fault Isolation Procedure

- (1) Do a detailed visual inspection of the compartment overheat detection control unit, M237 and its wiring harness and connectors.
 - (a) Look for contamination, wear, broken, missing or bent pins.
 - (b) Do the Repair Confirmation at the end of this task.
 - (c) If you do not find a problem during the inspection, then continue.
- (2) Do this check of the wiring:
 - (a) Remove the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Disconnect connector D1344 from the dimming/annunciation module, M469.
 - (c) Do a wiring check between this pin of connector D742 at the E1-4 rack and this pin of connector D1344 at the dimming/annunciation module (WDM 26-11-21, WDM 26-12-11):

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D742 **D1344**
pin 25 pin 3

- (d) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the compartment overheat detection control unit, M237. Do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - 3) Re-connect connector D1344 to the dimming/annunciation module, M469.
 - 4) Do the Repair Confirmation at the end of this task.
 - (e) If you do not find a problem with the wiring, then continue.
 - (f) Re-connect connector D1344 to the dimming/annunciation module, M469.
- (3) Install a new compartment overheat detection control unit, M237. To install it, do this task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
- (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If the maintenance message does not appear, the fault has been corrected.
 - 1) Do this step to clear the maintenance message from the memory:
 - a) Do the “memory clear” part of this task: Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (b) If the maintenance message appears, continue with the fault isolation procedure.

SIA ALL

- END OF TASK

833. Wheel Well and Lower Aft Body Overheat Detection System - TEST Switch at OVHT/FIRE Position - Fault Isolation

A. Description

- (1) The Wheel Well and Lower Aft Body Overhead Detection system test is unsatisfactory with the TEST switch at OVHT/FIRE position.

B. Possible Causes

- (1) Wiring
- (2) Engine and APU fire control panel, P8-1
- (3) Compartment Overheat Detection Control Unit (CODCU), M237

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

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(Continued)

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
A	22	C00407	FIRE PROTECTION DETECTION ENG 2

D. Related Data

- (1) SSM 26-11-21
- (2) SSM 26-12-11
- (3) WDM 26-11-21
- (4) WDM 26-12-11

E. Initial Evaluation

- (1) Set and hold the TEST switch on the engine and APU fire control panel, P8-1, to the OVHT/FIRE position.
 - (a) Make sure that the WHEEL WELL light on the engine and APU fire control panel, P8-1, comes on.
 - (b) Make sure that the Captain and First Officer (F/O) FIRE WARN lights on the Pilots Glareshield, P7, come on.
 - (c) Make sure that the fire bell aural warning is heard in the flight deck.
- (2) Release the TEST switch on the engine and APU fire control panel, P8-1.
 - (a) Make sure that the WHEEL WELL light on the engine and APU fire control panel, P8-1 goes off.
 - (b) Make sure that the Captain and F/O FIRE WARN lights on the Pilots Glareshield, P7, go off.
 - (c) Make sure that the fire bell aural warning is not heard in the flight deck.
- (3) If these indications did not occur, then do the Fault Isolation Procedure below.
- (4) If these indications occurred, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Do the Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
 - (a) If related maintenance messages are shown, then do these steps:
 - 1) Do the applicable FIM Procedure for each related maintenance message.
 - 2) Do the Repair Confirmation at the end of this task.
 - (b) If related maintenance messages are not shown, then continue.
- (2) Do a check of the wiring:
 - (a) Remove the CODCU, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.
 - (b) Disconnect connector D1078 from the engine and APU fire control panel, P8-1.
 - (c) Do a check of the wiring between connector D742 and connector D1078 (WDM 26-11-21, WDM 26-12-11):

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D742	D1078
pin 20	pin 29
pin 3	pin 20

- (d) If there is a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Connect connector D1078 to the engine and APU fire control panel, P8-1.
 - 3) Install the CODCU, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
 - 4) Do the Repair Confirmation at the end of this task.
- (e) If there is not a problem with the wiring, then do this step:
 - 1) Install the CODCU, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
- (3) Replace the engine and APU fire control panel, P8-1. These are the tasks:
 - Engine and APU Fire Control Panel Removal, AMM TASK 26-00-01-000-801
 - Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.
- (a) Do the Repair Confirmation at the end of this task.
- (4) Replace the CODCU, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
- (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Set and hold the TEST switch on the engine and APU fire control panel, P8-1, to the OVHT/FIRE position.
 - (a) Make sure that the WHEEL WELL light on the engine and APU fire control panel, P8-1, comes on.
 - (b) Make sure that the Captain and F/O FIRE WARN lights on the Pilots Glareshield, P7, come on.
 - (c) Make sure that the fire bell aural warning is heard in the flight deck.
- (2) Release the TEST switch on the engine and APU fire control panel, P8-1.
 - (a) Make sure that the WHEEL WELL light on the engine and APU fire control panel, P8-1 goes off.
 - (b) Make sure that the Captain and F/O FIRE WARN lights on the Pilots Glareshield, P7, go off.
 - (c) Make sure that the fire bell aural warning is not heard in the flight deck.
- (3) If these indications did not occur, then continue the Fault Isolation Procedure at the next step.
- (4) If these indications occurred, then the fault has been corrected.

———— **END OF TASK** ————

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834. Wing and Lower Aft Body Overheat Detection System - OVHT TEST Switch - Fault Isolation

A. Description

- (1) The Wing and Lower Aft Body Overheat Detection system test is unsatisfactory with the OVHT TEST button on the air conditioning panel, P5-10.

B. Possible Causes

- (1) Wiring
- (2) Air conditioning panel, P5-10
- (3) Compartment Overheat Detection Control Unit (CODCU), M237

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	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
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>
E	11	C00313	INDICATOR MASTER DIM SECT 1

D. Related Data

- (1) SSM 26-12-11
- (2) SSM 31-52-51
- (3) WDM 26-12-11
- (4) WDM 31-52-51

E. Initial Evaluation

- (1) Push and hold the OVHT TEST switch on the air conditioning panel, P5-10, for at least five seconds.
 - (a) On the air conditioning panel, P5-10, make sure that these lights come on:
 - The left WING-BODY OVERHEAT light
 - The right WING-BODY OVERHEAT light.
 - (b) On the Pilots Glareshield, P7, make sure that these lights come on:
 - The AIR COND light
 - The Captain MASTER CAUTION light
 - The F/O MASTER CAUTION light.
- (2) Release the OVHT TEST switch on the air conditioning panel, P5-10.
 - (a) On the air conditioning panel, P5-10, make sure that these lights go off:
 - The left WING-BODY OVERHEAT light
 - The right WING-BODY OVERHEAT light.
- (3) Push the MASTER CAUTION light switch on the Pilots Glareshield, P7.
 - (a) On the Pilots Glareshield, P7, make sure that these lights go off:
 - The AIR COND light

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- The Captain MASTER CAUTION light
 - The F/O MASTER CAUTION light.
- (4) If these indications did not occur, then do the Fault Isolation Procedure below.
- (5) If these indications occurred, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Do the Wheel Well Fire, Wing and Body Overheat Detection Control Module - BITE Procedure, 26-18 TASK 801.
- (a) If related maintenance messages are shown, then do these steps:
- 1) Do the applicable FIM Procedure for each related maintenance message.
 - 2) Do the Repair Confirmation at the end of this task.
- (b) If related maintenance messages are not shown, then continue.
- (2) Do a check of the voltage at the air conditioning panel, P5-10:
- (a) Disconnect connector D680 from the air conditioning panel, P5-10.
- (b) Do a check for 28 VDC between pin 24 of connector D680 and ground (WDM 31-52-51).
- (c) If the voltage is not correct, then do a check of the voltage at the circuit breaker:

- 1) Get access to 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

- 2) Do a check for 28 VDC voltage between terminal =L of the circuit breaker and ground (WDM 31-52-51).
- 3) If the voltage is not correct, then do these steps:
- a) Connect connector D680 to the air conditioning panel, P5-10.
 - b) Replace 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

- c) Do the Repair Confirmation at the end of this task.
- 4) If the voltage is correct, then do a check of the wiring:
- a) Do a wiring check between connector D680 and circuit breaker C1277 (WDM 31-52-51):

D680	C1277
pin 24	term =L

- b) If there is a problem with the wiring, then do these steps:
- <1> Repair the wiring.
- <2> Connect connector D680 to the air conditioning panel, P5-10.

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<3> 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

<4> Do the Repair Confirmation at the end of this task.

(d) If the voltage is correct, then continue.

(3) Do a check of the wiring:

(a) Remove the CODCU, M237. This is the task: Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801.

(b) Do a wiring check between connector D742 and connector D680 (WDM 26-12-11):

D742	D680
pin 17	pin 23
pin 18	pin 21

(c) If there is a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Install the CODCU, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
- 3) Connect connector D680 to the air conditioning panel, P5-10.
- 4) Do the Repair Confirmation at the end of this task.

(d) If there is no problem with the wiring, then do this step:

- 1) Connect connector D680 to the air conditioning panel, P5-10.

(4) Do this check of the wiring:

(a) Disconnect connector D646 from the air conditioning panel, P5-10.

(b) Do a check of the wiring between connector D742 and connector D646 (WDM 26-12-11):

D742	D646
pin 19	pin 8

(c) If there is a problem with the wiring, then do these steps:

- 1) Repair the wiring.
- 2) Install the CODCU, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
- 3) Connect connector D646 to the air conditioning panel, P5-10.
- 4) Do the Repair Confirmation at the end of this task.

(d) If there is not a problem with the wiring, then do this step:

- 1) Install the CODCU, M237. This is the task: Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.

(5) Replace the air conditioning panel, P5-10. These are the tasks:

- Air Conditioning Module Removal, AMM TASK 21-51-65-000-801
- Air Conditioning Module Installation, AMM TASK 21-51-65-400-801.

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- (a) Do the Repair Confirmation at the end of this task.
- (6) Replace the CODCU, M237. These are the tasks:
 - Compartment Overheat Detection Control Unit Removal, AMM TASK 26-18-01-000-801
 - Compartment Overheat Detection Control Unit Installation, AMM TASK 26-18-01-400-801.
- (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Push and hold the OVHT TEST switch on the air conditioning panel, P5-10, for at least 5 seconds.
 - (a) On the air conditioning panel, P5-10, make sure that these lights come on:
 - The left WING-BODY OVERHEAT light
 - The right WING-BODY OVERHEAT light.
 - (b) On the Pilots Glareshield, P7, make sure that these lights come on:
 - The AIR COND light
 - The Captain MASTER CAUTION light
 - The F/O MASTER CAUTION light.
- (2) Release the OVHT TEST switch on the air conditioning panel, P5-10.
 - (a) On the air conditioning panel, P5-10, make sure that these lights go off:
 - The left WING-BODY OVERHEAT light
 - The right WING-BODY OVERHEAT light.
- (3) Push the MASTER CAUTION light switch on the Pilots Glareshield, P7.
 - (a) On the Pilots Glareshield, P7, make sure that these lights go off:
 - The AIR COND light
 - The Captain MASTER CAUTION light
 - The F/O MASTER CAUTION light.
- (4) If these indications did not occur, then continue the Fault Isolation Procedure at the next step.
- (5) If these indications occurred, then the fault has been corrected.

———— **END OF TASK** ————

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1. DUCT LEAK/OVERHEAT DETECTORS

Table 301 OVERHEAT DETECTOR ELEMENT RESISTANCE VALUES

EQUIPMENT NUMBER	VENDOR PART NUMBER	MINIMUM RESISTANCE CORE-TO CORE GROUND (MEGOHMS)	MAXIMUM RESISTANCE CORE-TO-CORE (MILLIOHMS)
M268	35599-2-255	1.010	738
M269	35599-2-255	1.010	738
M270	04-90010-110D	0.91	660
	35610-4-400	0.909	815
	35614-4-400	0.877	843
M272	35626-4-255	0.800	920
M273	35555-4-255	1.818	430
M275	35575-2-255	1.333	570
	35599-2-255	1.010	738
M276	35555-4-255	1.818	430
M347	35646-2-255	0.685	1067
M348	35658-4-255	0.633	1151
	35678-4-255	0.562	1291
	35626-4-255	0.793	927
M355	35594-4-255	1.064	703
M356	35594-4-255	1.064	703
M370	35574-4-255	1.351	563
M371	35574-4-255	1.351	563
M1147	35560-2-255	1.667	465
	35646-2-255	0.68	1067
	35675-2-255	0.571	1270
M1761	35712-79	1.6	820
M1762	35712-75	0.417	820
	35712-79	1.6	820
M1763	35712-79	1.6	820
M1764	35712-75	0.417	820
	35712-79	1.6	820
M1909	35712-80	0.833	885
M1910	35712-80	0.833	885
M1911	35712-80	0.833	885
M1912	35712-80	0.833	885

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Table 301 OVERHEAT DETECTOR ELEMENT RESISTANCE VALUES (Continued)

EQUIPMENT NUMBER	VENDOR PART NUMBER	MINIMUM RESISTANCE CORE-TO CORE GROUND (MEGOHMS)	MAXIMUM RESISTANCE CORE-TO-CORE (MILLIOHMS)
M2595	35599-2-255	1.01	738

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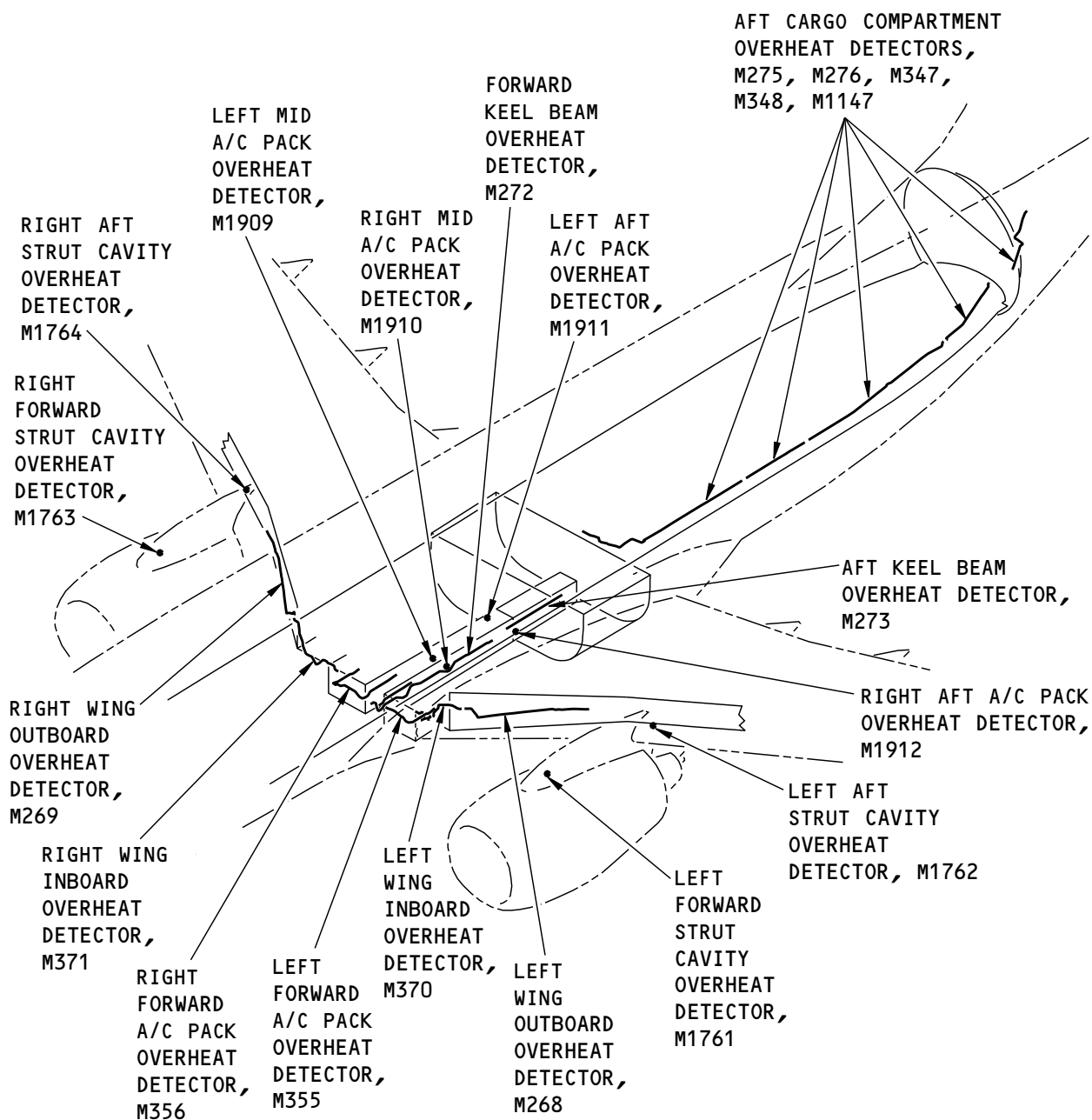
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G45305 S0006742368_V1

Fire/Overheat Detector Component Location
Figure 301/26-18-00-990-801 (Sheet 1 of 2)

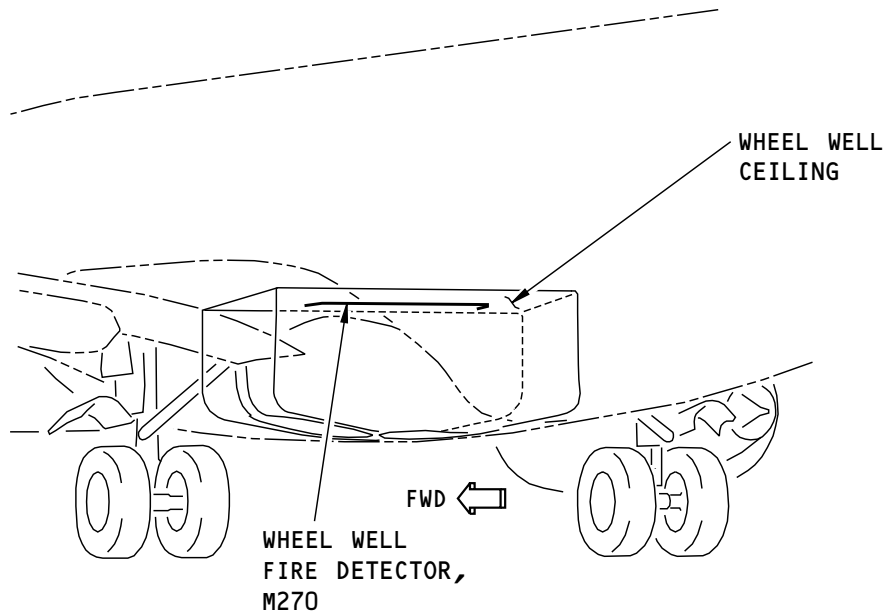
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G45668 S0006742369_V2

Fire/Overheat Detector Component Location
Figure 301/26-18-00-990-801 (Sheet 2 of 2)

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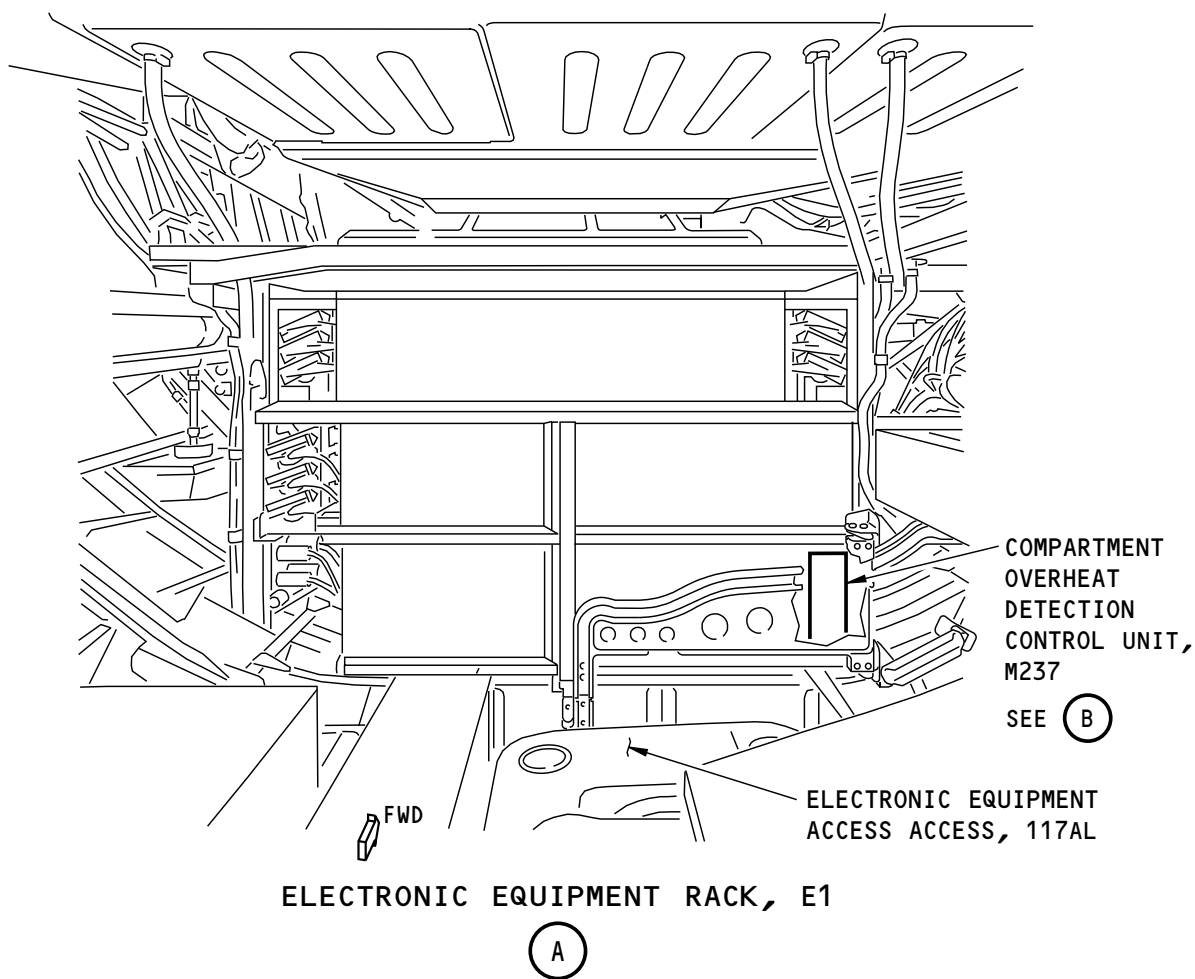
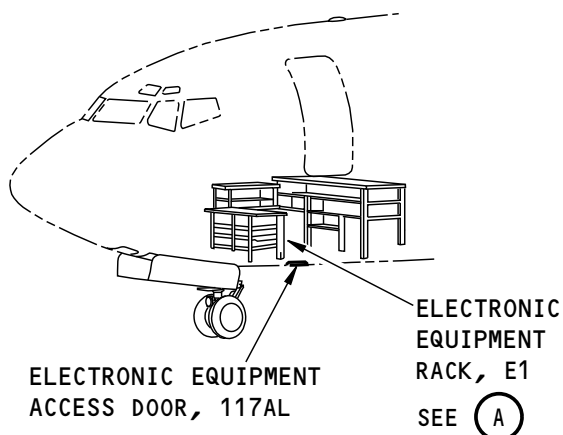
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2070239 S0000431684_V1

C26007 Test Equipment
Figure 302/26-18-00-990-804 (Sheet 1 of 2)

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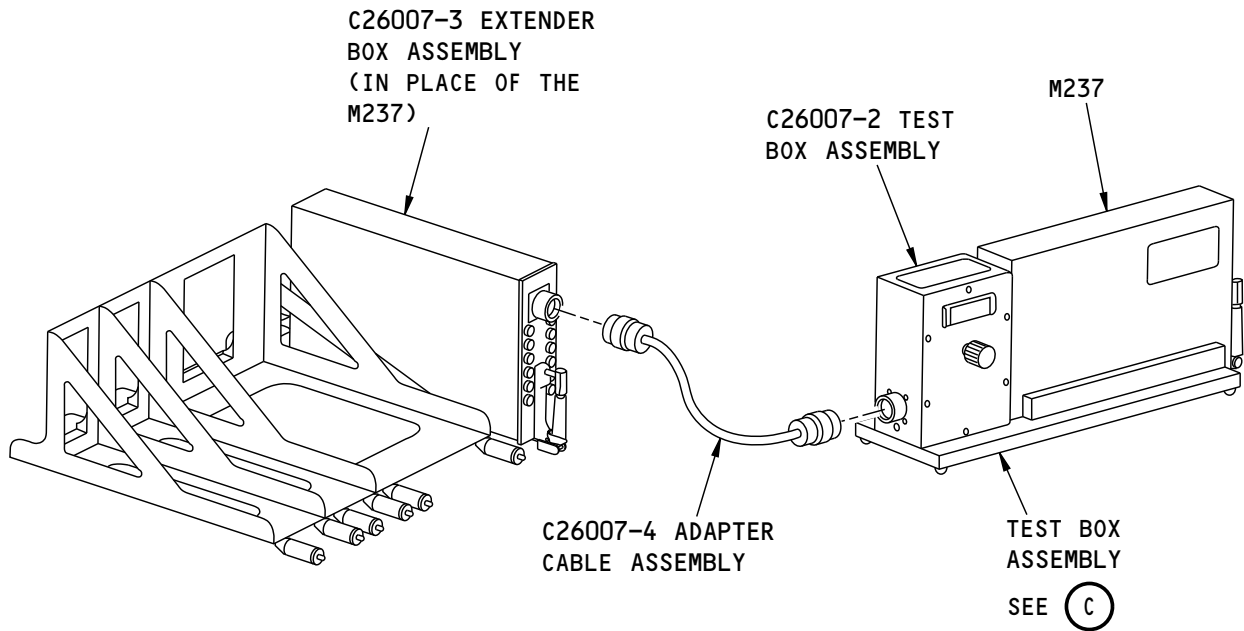
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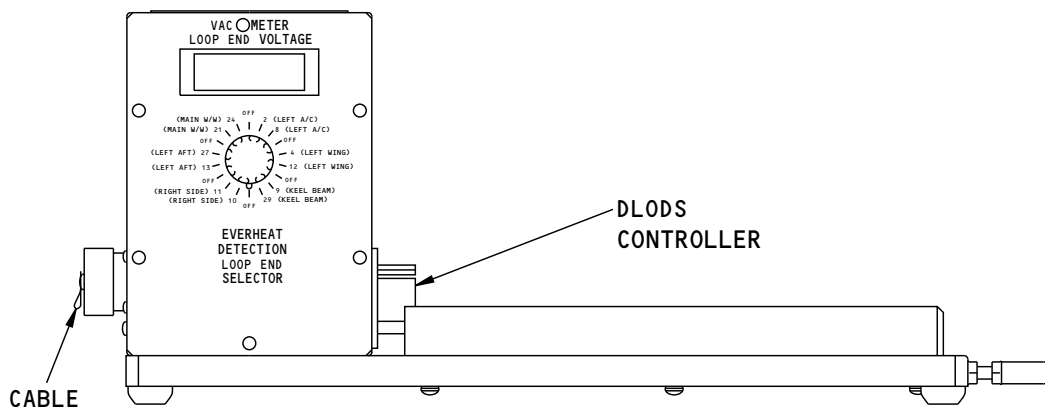


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COMPARTMENT OVERHEAT DETECTION CONTROL UNIT, M237

(B)



TEST BOX ASSEMBLY

(C)

2070244 S0000431685_V1

C26007 Test Equipment
Figure 302/26-18-00-990-804 (Sheet 2 of 2)

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801. Squib Test Light - Fault Isolation

A. Description

- (1) This task is for the EXT TEST lights on the fire control panel, P8-1.
- (2) The EXT TEST lights come on when the EXT TEST switch is moved to the 1 or 2 position to show there is continuity through the squibs.
 - (a) If the L or R light does not come on when the EXT TEST switch is moved to 1, squib 1 on the L or R bottle does not have continuity.
 - (b) Likewise, if the L or R light does not come on when the EXT TEST switch is moved to 2, squib 2 on the L or R bottle does not have continuity.
 - (c) The APU light should come on with the EXT TEST switch in either position.

B. Possible Causes

- (1) Squib
- (2) Fire control panel, P8-1
- (3) Wiring

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>
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

D. Related Data

- (1) (SSM 26-21-11)
- (2) (WDM 26-21-11)

E. Initial Evaluation

- (1) On the fire control panel, do this check of the squibs:
 - (a) Move the EXT TEST switch to 1.
 - 1) Make sure the L, R and APU lights come on.
 - (b) Move the EXT TEST switch to 2.
 - 1) Make sure the L, R and APU lights come on.
- (2) If the L or R light comes on with the EXT TEST switch in one position but not the other, do the Fault Isolation Procedure - L or R Light Does Not Come On below.
- (3) If the APU light comes on with the EXT TEST switch in one position but not the other, do the Fault Isolation Procedure - APU Light Does Not Come On below.
- (4) If one or more of the lights does not come on with the EXT TEST switch in either position, do the Fire Control Panel procedure, below.
- (5) If the steps above passed, then the fault was intermittent.

F. Fault Isolation Procedure - L or R Light Does Not Come On

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

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- (1) Replace the squib indicated by the light that did not come on.
These are the tasks:
Engine Fire Extinguisher Bottle Squib Removal, AMM TASK 26-21-02-000-801,
Engine Fire Extinguisher Bottle Squib - Installation, AMM TASK 26-21-02-400-801.
- (a) If the replacement test passed, then you corrected the fault.
(b) If the replacement test failed, then continue.
- (2) Do this check of the wiring.
- (a) Remove the squib connector from the applicable squib.
(b) Remove the applicable P8-1 connector from the fire control panel.
(c) Do a check for continuity between the squib connector and the P8-1 connector.
(d) Make sure pins 3 and 7 on the applicable squib connector go to ground.

Engine Fire Bottle Squib Wiring		
	SQUIB CONNECTOR	P8-1 CONNECTOR
BOTTLE L, SQUIB 1	D582	D1078
	pin 6	pin 22
	pin 4	pin 4
	D1322	D1078
	pin 6	pin 23
	pin 4	pin 30
	D584	D1080
	pin 6	pin 27
	pin 4	pin 11
	D1324	D1078
	pin 6	pin 26
	D1324	D1080
	pin 4	pin 30

- (e) If there is a problem with the wiring, then do these steps:
- 1) Repair the wiring.
2) Re-connect the squib connector to the squib.
3) Re-connect the P8-1 connector to the fire control panel.
4) Do the Repair Confirmation at the end of this task.
- (f) If there is no problem with the wiring, then continue.
- 1) Re-connect the squib connector to the squib.
2) Re-connect the P8-1 connector to the fire control panel.
- (3) Replace the fire control panel, P8-1

These are the tasks:

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Engine and APU Fire Control Panel Removal, AMM TASK 26-00-01-000-801,
Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.

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

G. Fault Isolation Procedure - APU Light Does Not Come On.

NOTE: Do the steps in the Initial Evaluation before you do these steps.

(1) Replace the squib indicated by the light that did not come on.

These are the tasks:

APU Fire Extinguishing Bottle Squib Removal, AMM TASK 26-22-02-000-801,

APU Fire Extinguishing Bottle Squib Installation, AMM TASK 26-22-02-400-801.

(a) If the replacement test passed, then you corrected the fault.

(b) If the replacement test failed, then continue.

(2) Do this check of the wiring.

(a) Disconnect the squib connector, D594 from the squib.

(b) Disconnect the P8-1 connector, D1080 from the fire control panel.

(c) Do a check for continuity between the squib connector, D594 and the P8-1 connector, D1080.

(d) Make sure pin 3 squib connector D594 goes to ground.

(e) If there is a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect the squib connector, D594 to the squib.

3) Re-connect the P8-1 connector, D1080 to the fire control panel.

4) Do the Repair Confirmation at the end of this task.

(f) If there is no problem with the wiring, then continue.

1) Re-connect the squib connector to the squib.

2) Re-connect the P8-1 connector to the fire control panel.

(3) Replace the fire control panel, P8-1

These are the tasks:

Engine and APU Fire Control Panel Removal, AMM TASK 26-00-01-000-801,

Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.

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

H. Fault Isolation Procedure - Fire Control Panel Problem.

NOTE: Do the steps in the Initial Evaluation before you do these steps.

(1) Replace the fire control panel, P8-1.

These are the tasks:

Engine and APU Fire Control Panel Removal, AMM TASK 26-00-01-000-801,

Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.

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



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I. Repair Confirmation

- (1) On the fire control panel, do this check of the squibs:
 - (a) Move the EXT TEST switch to 1.
 - 1) Make sure the L, R and APU lights come on.
 - (b) Move the EXT TEST switch to 2.
 - 1) Make sure the L, R and APU lights come on.
- (2) If all of the lights come on at both switch positions, then you corrected the fault.

————— **END OF TASK** —————

802. Engine/APU Bottle Discharged Light - Fault Isolation

A. Description

- (1) This task is for the BOTTLE DISCHARGED lights on the fire control panel, P8-1.
- (2) The BOTTLE DISCHARGED lights come on when low pressure is detected in a fire bottle.

B. Possible Causes

- (1) Fire bottle
- (2) Fire control panel, P8-1
- (3) Wiring

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>
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

D. Related Data

- (1) (SSM 26-21-11)
- (2) (WDM 26-21-11)

E. Initial Evaluation

- (1) On the fire control panel, make sure these lights are off:
 - (a) L BOTTLE DISCHARGED
 - (b) R BOTTLE DISCHARGED
 - (c) APU BOTTLE DISCHARGED
- (2) If one of the lights is on, then do the Fault Isolation Procedure below.
- (3) If none of the lights are not on, then there was an intermittent fault.

F. Fault Isolation Procedure

- (1) Remove the connector from the applicable pressure switch.
 - (a) If the light goes off, replace the fire bottle indicated by the light.
 - 1) For the L or R engine bottle light, these are the tasks:

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Engine Fire Extinguishing Bottle Removal, AMM TASK 26-21-01-000-801,
Engine Fire Extinguishing Bottle Installation, AMM TASK 26-21-01-400-801.

- 2) For the APU bottle light, these are the tasks:
APU Fire Extinguishing Bottle Removal, AMM TASK 26-22-01-000-801,
APU Fire Extinguishing Bottle Installation, AMM TASK 26-22-01-400-801.
 - a) If the BOTTLE DISCHARGED light goes off, then you corrected the fault.
 - b) If the BOTTLE DISCHARGED light did not go off, then continue.
- (b) If the light stays on, then continue.
- (2) Remove the applicable P8-1 connector from the fire control panel.
 - (a) If the light goes off, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-connect the connector to the pressure switch.
 - 3) Re-connect the P8-1 connector to the fire control panel.
 - 4) If the BOTTLE DISCHARGED light goes out, then you corrected the fault.
 - (b) If the light stays on, then continue.
- (3) Replace the fire control panel, P8-1.
These are the tasks:
Engine and APU Fire Control Panel Removal, AMM TASK 26-00-01-000-801,
Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.
 - (a) If the BOTTLE DISCHARGED light goes off, then you corrected the fault.

————— END OF TASK —————

803. Engine/APU Bottle Did Not Discharge When The Handle Was Turned - Fault Isolation

A. Description

- (1) This task is for the fire extinguishing system when the fire handle is turned, but there is no indication that the fire bottle discharged.
- (2) These are the situations that could cause this indication:
 - (a) The squib did not fire.
 - (b) The squib did fire but the bottle did not discharge.
 - (c) The bottle did discharge but there is no indication on the flight deck.

B. Possible Causes

- (1) Wiring
- (2) Squib
- (3) Fire bottle
- (4) Fire Control Panel, P8-1

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

D. Related Data

- (1) (SSM 26-21-11)
(2) (WDM 26-21-11)

E. Initial Evaluation

- (1) Examine the fire bottle.

SIA ALL; AIRPLANES WITH ENGINE AND APU FIRE BOTTLES WITH GAUGE

- (a) Make sure the pressure gauge shows approximately 800 psi.

SIA ALL; AIRPLANES WITH ENGINE AND APU FIRE BOTTLES WITHOUT GAUGE

- (b) Weigh the bottle.

NOTE: The purpose of weighing the bottle is to determine if the bottle is empty, or not. Therefore, the weight of the bottle can not vary more than 10% of the weight stamped on the bottle.

- 1) For engine bottles, these are the tasks:
Engine Fire Extinguishing Bottle Removal, AMM TASK 26-21-01-000-801,
Engine Fire Extinguishing Bottle Installation, AMM TASK 26-21-01-400-801.
- 2) For APU bottles, these are the tasks:
APU Fire Extinguishing Bottle Removal, AMM TASK 26-22-01-000-801,
APU Fire Extinguishing Bottle Installation, AMM TASK 26-22-01-400-801.

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- (c) If the bottle is full, then do the Fault Isolation Procedure - Bottle Did Not Discharge, below.
- (d) If the bottle is empty, then do the Fault Isolation Procedure - Bottle Discharged, below.

F. Fault Isolation Procedure - Bottle Did Not Discharge

- (1) On the fire control panel, do this check of the squibs:
- (a) Move the EXT TEST switch to 1.
- (b) Make sure the L, R and APU lights come on.
- (c) Move the EXT TEST switch to 2.
- (d) Make sure the L, R and APU lights come on.
- (e) If the L, R and APU lights do not come on for both EXT TEST switch positions, then do the squib test light Fault Isolation Procedure, do this task: Squib Test Light - Fault Isolation, 26-20 TASK 801.

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- (f) If all the lights come on for both EXT TEST switch positions, then continue.
- (2) Do these checks for 28 VDC at the engine and APU fire control panel:
 - (a) Remove the engine and APU fire control panel, P8-1. To remove it, do this task: Engine and APU Fire Control Panel Removal, AMM TASK 26-00-01-000-801.
 - (b) Close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

- (c) Using multimeter, STD-1231, do a check for 28 VDC between pins 4, 8, 12, and 14 of connector D576 and structure ground.
- (d) Using multimeter, STD-1231, do a check for 28 VDC between pins 4, 8, 12 and 14 of connector D578 and structure ground.
- (e) Using multimeter, STD-1231, do a check for 28 VDC between pins 8 and 14 of connector D580 and structure ground.
 - 1) If there is not 28 VDC at all the pins above, then do these steps:
 - a) Repair the wiring between the applicable pin and circuit breaker.
 - b) Re-install the engine and APU fire control panel, P8-1. To install it, do this task: Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.
 - c) If the installation test for the engine and APU fire control panel are satisfactory, then you corrected the fault.
 - 2) If there was 28 VDC at all of the pins above, then continue.
- (3) Install a new engine and APU fire control panel, P8-1. To install it, do this task: Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.
 - (a) If the installation test for the engine and APU fire control panel is satisfactory, then you corrected the fault.

G. Fault Isolation Procedure - Bottle Did Discharge

- (1) Do this check of the pressure switch wiring.
 - (a) Remove the connector D586 (L bottle), D588 (R bottle), or D1176 (APU bottles) from the applicable pressure switch.
 - (b) Install a jumper between pins 1 and 2 on the pressure switch connector.
 - 1) If the corresponding BOTTLE DISCHARGE light on the fire control panel comes on, then remove the jumper and replace the fire bottle.
 - a) For engine bottles, these are the tasks:
Engine Fire Extinguishing Bottle Removal, AMM TASK 26-21-01-000-801,
Engine Fire Extinguishing Bottle Installation, AMM TASK 26-21-01-400-801.
 - b) For APU bottles, these are the tasks:
APU Fire Extinguishing Bottle Removal, AMM TASK 26-22-01-000-801,

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APU Fire Extinguishing Bottle Installation, AMM TASK 26-22-01-400-801.

- 2) If the corresponding BOTTLE DISCHARGE light on the fire control panel does not come on, then remove the jumper and continue.
- (2) Do this check of the wiring:
 - (a) Remove the engine and APU fire control panel, P8-1. To remove it, do this task: Engine and APU Fire Control Panel Removal, AMM TASK 26-00-01-000-801.
 - (b) Do a check for an open circuit between these pins the applicable pressure switch connector and the connector at the P8-1 panel:

	BOTTLE	
	PRESSURE SWITCH CONNECTOR	P8-1 CONNECTOR
L	D586 pin 2	D1078 pin 9
R	D588 pin 2	D1080 pin 3
APU	D1176 pin 2	D1080 pin 15

- (c) If there is an open circuit, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the engine and APU fire control panel, P8-1. To install it, do this task: Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.
 - 3) Install a jumper between pins 1 and 2 of the pressure switch connector.
 - a) If the BOTTLE DISCHARGED light on the fire control panel, P8-1 comes on, then you fixed the problem. Re-connect the connector to the pressure switch.
 - 4) If there is continuity, then continue.
- (3) Install a new engine and APU fire control panel, P8-1. To install it, do this task: Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.
 - (a) If the installation test for the engine and APU fire control panel is satisfactory, then you corrected the fault.

———— **END OF TASK** ————

804. APU Bottle Did Not Discharge When Activated At The Remote APU Fire Control Panel - Fault Isolation

A. Description

- (1) This task is for the fire extinguishing system when the fire bottle is activated, but there is no indication that the fire bottle discharged.
- (2) To activate the fire bottle from the remote APU fire control panel, pull down on the handle, then hold the discharge switch in the discharge position.
- (3) These are the conditions that can cause this fault:
 - (a) The squib did not operate.

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- (b) The squib did operate but the bottle did not discharge.
- (c) The bottle did discharge but there is no indication in the flight compartment.

B. Possible Causes

- (1) Wiring
- (2) Squib, M1146
- (3) Fire bottle
- (4) Remote APU fire control panel, P28

C. Circuit Breakers

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

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

D. Related Data

- (1) (SSM 26-21-11)
- (2) (WDM 26-21-11)

E. Initial Evaluation

- (1) Examine the fire bottle.

SIA ALL; AIRPLANES WITH ENGINE AND APU FIRE BOTTLES WITH GAUGE

- (a) Make sure the pressure gauge shows approximately 800 psi.
 - 1) These are the tasks:
 - APU Fire Extinguishing Bottle Removal, AMM TASK 26-22-01-000-801,
 - APU Fire Extinguishing Bottle Installation, AMM TASK 26-22-01-400-801.

SIA ALL; AIRPLANES WITH ENGINE AND APU FIRE BOTTLES WITHOUT GAUGE

- (b) Weigh the bottle.

NOTE: The purpose of weighing the bottle is to determine if the bottle is empty, or not. Therefore, the weight of the bottle can not vary more than 10% of the weight stamped on the bottle.

 - 1) These are the tasks:
 - APU Fire Extinguishing Bottle Removal, AMM TASK 26-22-01-000-801,
 - APU Fire Extinguishing Bottle Installation, AMM TASK 26-22-01-400-801.

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- (c) If the bottle is full, then do the Fault Isolation Procedure - Bottle Did Not Discharge, below.
- (d) If the bottle is empty, then do the Fault Isolation Procedure - Bottle Discharged, below.

F. Fault Isolation Procedure - Bottle Did Not Discharge

- (1) On the fire control panel, do this check of the squib:
 - (a) Move the EXT TEST switch to 1.
 - (b) Make sure the APU light comes on.

NOTE: The L, R lights also come on

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- (c) Move the EXT TEST switch to 2.
- (d) Make sure the APU light comes on.
NOTE: The L, R lights also come on
- (e) If the APU light does not come on for both EXT TEST switch positions, then do the squib test light Fault Isolation Procedure, do this task: Squib Test Light - Fault Isolation, 26-20 TASK 801.
- (f) If all the lights come on for both EXT TEST switch positions, then continue.
- (2) Do this check for 28 VDC at the remote APU fire control panel:
 - (a) Open this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

- (b) Remove connector D48080 from the remote APU fire control panel, P28.
- (c) Close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

- (d) Do a check for 28 VDC between pin 7 of connector D48080 and structure ground.
 - 1) If there is not 28 VDC at pin 7 of D48080, then do these steps:
 - a) Repair the wiring between the applicable pin and circuit breaker.
 - b) Re-install connector D48080 on the remote APU fire control panel, P28
 - c) Do this task: APU Fire Switch System Shutdown Test, AMM TASK 26-22-00-720-801.
 - d) Do this task: APU Fire Extinguishing Bottle Squib Circuit Test, AMM TASK 26-22-00-730-801.
 - e) If the tests for the remote APU fire control panel are satisfactory, then you corrected the fault.
 - 2) If there is 28 VDC at pin 7 of D48080, then continue.
- (3) These are the tasks:
Remote APU Control Panel Removal, AMM TASK 26-22-03-000-801,
Remote APU Control Panel Installation, AMM TASK 26-22-03-400-801.
 - (a) If the installation test for the remote APU fire control panel is satisfactory, then you corrected the fault.

G. Fault Isolation Procedure - Bottle Did Discharge

- (1) Do this check of the pressure switch wiring:
 - (a) Remove connector D1176 from the pressure switch.
 - (b) Install a jumper between pins 1 and 2 on connector D1176.
 - 1) If the corresponding APU BOTTLE DISCHARGE light on the fire control panel comes on, then do these steps:
 - a) Remove the jumper from connector D1176.

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- b) These are the tasks:
 - APU Fire Extinguishing Bottle Removal, AMM TASK 26-22-01-000-801,
 - APU Fire Extinguishing Bottle Installation, AMM TASK 26-22-01-400-801.
- 2) If the corresponding BOTTLE DISCHARGE light on the fire control panel does not come on, then remove the jumper from connector D1176 and continue.
- (2) Do this check of the wiring:
 - (a) Remove the engine and APU fire control panel, P8-1. To remove it, do this task: Engine and APU Fire Control Panel Removal, AMM TASK 26-00-01-000-801.
 - (b) Do a check for an open circuit between these pins of connector D1080, at the engine and APU fire control panel, and D1176 at the APU fire bottle pressure switch:

D1080	D1176
pin 15	pin 2
 - (c) If there is an open circuit, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the engine and APU fire control panel, P8-1. To install it, do this task: Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.
 - 3) Install a jumper between pins 1 and 2 of the pressure switch connector, D1176.
 - 4) If the BOTTLE DISCHARGED light on the fire control panel, P8-1 comes on, then you corrected the fault. Do these steps to complete this task:
 - a) Remove the jumper from connector D1176.
 - b) Re-connect connector D1176 to the pressure switch.
 - (d) If there is continuity, then re-connect connector D1176 to the pressure switch and continue.
- (3) Install a new engine and APU fire control panel, P8-1. To install it, do this task: Engine and APU Fire Control Panel Installation, AMM TASK 26-00-01-400-801.
 - (a) If the installation test for the engine and APU fire control panel is satisfactory, then you corrected the fault.

————— **END OF TASK** —————

805. APU Bottle Did Not Automatically Discharge Ten Seconds After APU Fire, But Did Discharge Manually - Fault Isolation

A. Description

- (1) This task is for the automatic Auxiliary Power Unit (APU) fire extinguishing system when the fire bottle does not discharge ten seconds after a fire is detected.
- (2) The automatic APU fire extinguishing system is only active when the airplane is on the ground, and both engines are shut off. If a fire is detected under these conditions, a signal is sent from the Engine and APU Fire Detection Control Module, M279, to a series of relays, which activate the APU fire bottle.
- (3) These are the conditions that can cause this fault:
 - (a) The Engine and APU Fire Detection Control Module, M279 did not send the auto shutdown signal.
 - (b) The relay circuit failed.

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B. Possible Causes

- (1) APU Fire Relay, R731
- (2) APU Bottle Auto Discharge Relay, R732
- (3) Engine 1 Running Relay, R564
- (4) Engine 2 Running Relay, R563
- (5) AIR/GND Relay Sys 1, R585
- (6) Engine and APU Fire Detection Control Module, M279
- (7) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

D. Related Data

- (1) SSM 26-21-11
- (2) WDM 26-21-11

E. Prepare for the Fault Isolation Procedure

- (1) Do these steps to prepare the APU for fault isolation:
 - (a) Make sure that the APU is not running. This is the task: APU Usual Shutdown, AMM TASK 49-11-00-860-802.
 - (b) Open this access panel to get access to the APU compartment:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door
 - (c) Connect the test box equipment, SPL-1655 to the terminal lug of the APU Lower Fire Detector, M1756, and structure ground.
 - 1) Make sure that all the toggle switches on the test box are in the NORMAL positions.
 - 2) Connect one alligator clip to the responder bracket or to a grounding lug.
 - 3) Connect the other alligator clip to the responder lug.

F. Fault Isolation Procedure

- (1) Do this check of the automatic APU Discharge System:
 - (a) Remove the APU Fire Relay, R731 from the Panel, J24.
NOTE: The Panel, J24 is at the aft end of the Forward Wheel Well.
 - (b) Make sure that there is less than 1 VDC between pins X1 and X2 on connector D12602.
 - (c) On the test box, move the APU LOOP FIRE Switches to the FIRE position.
 - (d) Make sure that there is at least 15 VDC between pins X1 and X2 on connector D12602.
 - (e) If there is not at least 15 VDC between pins X1 and X2 on connector D12602, then do these steps:
 - 1) Remove the Engine and APU Fire Detection Module, M279. This is the task: Engine and APU Fire Detection Module Removal, AMM TASK 26-10-01-000-801.

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- 2) Do a check for an open circuit between these pins of connector D12602 for the APU Fire Relay and connector D1000 for the Engine and APU Fire Detection Control Module, M279 as follows:

APU FIRE RLY	APU FIRE DETECTION MODULE
D12602	D1000
pin X1	pin 6

- a) If there is an open circuit between pin X1 of D12602 and pin 6 of D1000, then do these steps:
- <1> Repair the wiring.
 - <2> Re-install the Engine and APU Fire Detection Module, M279. This is the task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.
 - <3> Re-install the APU Fire Relay, R731 on the Panel, J24.
 - <4> Do the Repair Confirmation at the end of this task.
- b) If there is continuity between pin X1 of D12602 and pin 6 of D1000, then do these steps:
- <1> Re-install the APU Fire Relay, R731 on the Panel, J24.
 - <2> Install a new APU Fire Detection Module, M279. This is the task: Engine and APU Fire Detection Module Installation, AMM TASK 26-10-01-400-801.
 - <3> Do the Repair Confirmation at the end of this task.
- (f) If there is at least 15 VDC between pins X1 and X2 on connector D12602, then continue.
- (2) Replace the APU Fire Relay, R731 on the Panel, J24.
- (a) Do the Repair Confirmation at the end of this task.
- (3) Replace the APU Bottle Auto Discharge Relay, R732 on the Panel, J24.
- (a) Do the Repair Confirmation at the end of this task.
- (4) Replace the Engine 1 Running Relay, R564 on the Panel, J22.
- (a) Do the Repair Confirmation at the end of this task.
- (5) Replace the Engine 2 Running Relay, R563 on the Panel, J24.
- (a) Do the Repair Confirmation at the end of this task.
- (6) Replace the AIR/GND Relay Sys 2, R585 on the Panel, J24.
- (a) Do the Repair Confirmation at the end of this task.
- (7) Do this check of the wiring (WDM 26-21-11):
- (a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

- (b) Disconnect electrical connector D594 from the squib.

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- (c) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU



WARNING

PUT A PROTECTIVE COVER ON THE BOTTLE SQUIB. IF YOU DO NOT PUT A PROTECTIVE COVER ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (d) Install a protective cover on the squib.
- (e) Remove the APU Fire Relay, R731 and APU Bottle Auto Discharge Relay, R732 from the Panel, J24.
- (f) Do a check for an open circuit as follows:

APU SQUIB	APU FIRE RLY
D594	D12604
pin 4	pin A1

APU FIRE RLY	APU FIRE RLY
D12604	D12604
pin A2	pin X1

D12604	D12602
pin X2	pin A1

- 1) If you find a problem with the wiring, then do these steps:
- Repair the damaged wiring that you find.
 - Re-install the APU Fire Relay, R731 and APU Bottle Auto Discharge Relay, R732 on the Panel, J24.
 - Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) Do this check of the automatic firing circuit:

- (a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

- (b) Disconnect electrical connector D594 from the squib.
- (c) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

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WARNING

PUT A PROTECTIVE COVER ON THE BOTTLE SQUIB. IF YOU DO NOT PUT A PROTECTIVE COVER ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

- (d) Install a protective cover on the squib.
- (e) On the test box, move the APU LOOP FIRE Switches to the FIRE position.
- (f) After 10 seconds, make sure that there is at least 15 VDC between pins 4 and 3 on the connector.
 - 1) If there is at least 15 VDC between pins 4 and 3, then you corrected the problem.
 - 2) If there is not at least 15 VDC between pins 4 and 3, then continue the Fault Isolation Procedure at the subsequent step.
- (g) On the test box, move the APU LOOP FIRE Switches to the NORMAL position.
- (h) Remove the protective cover from the squibs.
- (i) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

- (j) Re-connect the electrical connector D594 to the squib.
- (k) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

- (2) Put the airplane back in its usual condition.
 - (a) On the test box, move the APU LOOP FIRE Switches to the NORMAL position.
 - (b) Disconnect the test box C26005-1 from the terminal lug of the APU Lower Fire Detector, M1756, and airplane ground.
 - (c) Close this access panel:

<u>Number</u>	<u>Name/Location</u>
311BL	Stabilizer Trim Access Door

————— **END OF TASK** —————

806. APU Squib Test Light Illuminates without input from EXT TEST or LIGHT TEST - Fault Isolation

A. Description

- (1) This task troubleshoots an uncommanded illumination of the APU squib test light, L11 (referred to as the APU Squib Light). The APU Squib Light is located on the Engine and APU Fire Control Module, P8-1 (referred to as the Fire Control Module).

NOTE: This Fault Isolation Procedure assumes that the APU Squib Light is the only flight indicator that comes on without input.

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B. Possible Causes

- (1) Squib
- (2) Engine and APU Fire control Module, P8-1
- (3) Wiring

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>
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

D. Related Data

- (1) (WDM 26-21-11)
- (2) (WDM 33-18-11 thru 33-18-99)

E. Initial Evaluation

- (1) Do the steps in the Initial Evaluation of this task: Squib Test Light - Fault Isolation, 26-20 TASK 801, before you do the procedure below.

F. Fault Isolation Procedure - APU Light Illuminates Without Input from EXT TEST or LIGHT TEST

- (1) Do these steps at the P1 Main Instrument Panel:
 - (a) Move the Master Dim and Test Switch to the TEST position.
 - 1) Make sure that the APU Squib Light becomes brighter and that all other flight station indicators come on.
 - (b) Move the Master Dim and Test Switch to the DIM position.
 - 1) Make sure that the intensity of the APU Squib Light dims.
 - (c) If there is no change in the intensity of the APU Squib Light, then do this task: Flight Compartment Lighting Problem - Fault Isolation, 33-10 TASK 801.
- (2) Do this check of the wiring:
 - (a) Disconnect the squib connector D594 from the squib M1146.
 - (b) Disconnect the connector D1080 from the Fire Control Module.
 - (c) Examine connectors D594 and D1080 for damage to the contacts and damage to the insulation material, and for FOD in the connectors.
 - (d) Examine all shield grounds for damage.
 - (e) Do a continuity check between the squib connector D594 and the connector D1080 on the Fire Control Module.
 - (f) Do a pin-to-pin and pin-to-ground check of squib connector D594.
 - 1) Make sure that there is not a short to ground on pin 4 of connector D594.
- (3) With no power applied to the airplane and the OFF/BAT/ON Battery switch on the Electrical Meter, Battery, and Galley Power Module, P5-13, set to the OFF position, do these steps:

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- (a) Measure the resistance from pin 10 of connector D1080 on the Fire Control Module to the aircraft ground.
NOTE: The correct resistance value should be more than 5 megohms.
- (b) If the resistance is more than 5 megohms, then do this task: Squib Test Light - Fault Isolation, 26-20 TASK 801.
- (c) If the resistance is 5 megohms or less, then continue.
- (4) Isolate the Master Dim and Test to do a test of the ground through the applicable flight station components as follows:
 - (a) Do a check on all components that are connected to pin 10 of connector D1080 on the Fire Control Module (WDM 33-18-11 thru 33-18-99).
NOTE: All components connected to pin 11 of connector D10046 on the M1456 AUX DIM/TEST Module through splices or terminal boards can affect the resistance at pin 10.
 - (b) Do a check of the resistance at the TEST GND pin to aircraft ground at each applicable wire harness connector.
 - 1) Disconnect each component and connect each component again before you continue to the next component.
 - (c) Record the resistance of each component.
 - (d) Look for a significant change in resistance value when you measure each resistance.
NOTE: An example of a significant change in resistance is 800 kilohms to 12 megohms
 - 1) If you find a significant change in resistance, the component that is disconnected can be bad.
- (5) Replace the bad component.
- (6) Do the steps above again starting with the step to measure the resistance of pin 10 of connector D1080 to the aircraft ground.
 - (a) If the APU Squib Light operates correctly, then you have corrected the fault.
 - (b) If the APU Squib Light continues to be on without input from the EXT TEST or LIGHT TEST, then continue.
- (7) Continue to isolate the circuit resistance until you find the source of a short or ground.
 - (a) If the resistance of the components, does not show the source then do these steps:
 - 1) Do a visual inspection of the applicable wire harnesses for chafing and damage.
 - 2) Examine the flight station indicator terminals for crossed or loose connections and shorts to ground.
 - 3) Examine the terminal boards for incorrectly installed pins and FOD.
- (8) Repair or replace bad components and connections until the resistance above is in the recommended value and the APU Squib Light does not come on.

G. Repair Confirmation

- (1) On the Fire Control Module, make sure that the APU Squib Light is off.

———— **END OF TASK** ————

807. Fire Handle Switch Light Problem - Fault Isolation

A. Description

- (1) This task is for a problem of the Engine (APU) Fire Handle Switch Light.

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B. Possible Causes

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- (1) Engine Start Lever Switch Lamp

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- (2) Engine Fire Switch Lamp

C. Related Data

- (1) SSM 26-11-11
- (2) SSM 26-11-21
- (3) WDM 26-11-11
- (4) WDM 26-11-21

D. Initial Evaluation

- (1) Do a test of the Engine (APU) Fire Handle Switch. This is the task: Engine Fire Switch System Shutdown Test, AMM TASK 26-21-00-720-802 or APU Fire Switch System Shutdown Test, AMM TASK 26-22-00-720-801.
- (2) Make sure that the Engine (APU) Fire Handle Switch light operates correctly.
 - (a) If the light operates correctly, then there was an intermittent fault.
 - (b) If the light does not operate correctly, then do the Fault Isolation Procedure below.

E. Fault Isolation Procedure

SIA 716-999

- (1) Replace the Engine Start Lever Lamps. These are the tasks:
 - Engine Start Lever Lamps Removal, AMM TASK 76-11-02-000-801-F00
 - Engine Start Lever Lamps Installation, AMM TASK 76-11-02-400-802-F00
 - (a) If the observed faults are gone, then you have corrected the fault.
 - (b) If the light does not operate correctly, then continue.

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- (2) Replace the Engine Fire Switch Lamp or the Engine Fire Switch module. These are the tasks:
 - Engine and APU Fire Shutoff Switch Assembly Removal, AMM TASK 26-00-01-000-802
 - Engine and APU Fire Shutoff Switch Assembly Installation, AMM TASK 26-00-01-400-802
 - (a) If the observed faults are gone, then you have corrected the fault.

F. Repair Confirmation

- (1) Do a test of the Engine (APU) Fire Handle Switch. This is the task: Engine Fire Switch System Shutdown Test, AMM TASK 26-21-00-720-802 or APU Fire Switch System Shutdown Test, AMM TASK 26-22-00-720-801.
- (2) Make sure that the Engine (APU) Fire Handle Switch light operates correctly.
 - (a) If the light operates correctly, then you have corrected the fault.
 - (b) If the light does not operate correctly, then continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

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801. Cargo Fire Control Panel BITE Procedure

A. General

- (1) The Cargo Fire Control Panel (CFCP) is an integral part of the Cargo Compartment Fire Protection System.
- (2) The Front Panel includes these Fire Warning Fault Lights:
 - DETECTOR FAULT
 - FWD EXT (Green)
 - AFT EX (Green)
 - ARM FWD (Red)
 - ARM AFT (Red)
 - Amber DISCH (Amber)

B. Procedure

- (1) Do these steps to do the BITE Procedure for the Front Panel Fault Lights:
 - (a) On the CARGO FIRE Control Panel, push the TEST Switch.
 - (b) Make sure that these Fault Lights come ON:

NOTE: At the same time, all Red Fault Lights on the applicable Cargo Electronic Unit (CEU)s come ON.

 - FWD EXT (Green)
 - AFT EXT (Green)
 - ARM FWD (Red)
 - ARM AFT (Red)
 - DISCH (Amber)
 - 1) If a Fault Light does not come ON when you push the TEST Switch, then refer to the table at the end of this task to find the applicable Fault Isolation Manual (FIM) Tasks for the indicated faults (Maintenance Messages).
- (c) Make sure that the DETECTOR FAULT Light does not come ON.
 - 1) If the DETECTOR FAULT Light comes ON, then there is a Fire Detector fault. Refer to Cargo Electronic Unit (CEU) BITE Procedure, 26-16 TASK 801 to identify the defective detector and troubleshoot the problem.

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CFCP	AFT EXT (Green Front Panel Light Not ON During Test)	26-23 TASK 812
CFCP	ARM AFT (Red Front Panel Fault Light Not ON During Test)	26-16 TASK 806
CFCP	ARM FWD (Red Front Panel Fault Light Not ON During Test)	26-16 TASK 806
CFCP	DETECTOR FAULT (Amber Front Panel Fault Light ON During Test)	26-16 TASK 804
CFCP	DISCH (Amber Front Panel Fault Light ON)	26-23 TASK 802
CFCP	FWD EXT (Green Front Panel Light Not ON During Test)	26-23 TASK 812

————— **END OF TASK** —————

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802. DISCH Fault Light ON - Fault Isolation

A. Description

- (1) This task is for the DISCH Fault Light on the Cargo Fire Control Panel.
- (2) During normal operation, the DISCH Light comes ON when Low Pressure is detected in a Fire Bottle.

B. Possible Causes

- (1) Fire Bottle 1, M2248
- (2) Fire Bottle 2, M2263
- (3) Cargo Fire Control Panel, P8-75
- (4) Mixing Bay Environmental Control System (ECS) duct leak
- (5) Wiring

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	16	C01528	CARGO FIRE EXT 2
B	17	C01526	CARGO FIRE EXT 1

D. Related Data

- (1) WDM 26-23-11
- (2) SSM 26-23-11

E. Initial Evaluation

- (1) On the CARGO FIRE Panel, make sure that the DISCH Fault Light is OFF.
 - (a) If the Fault Light is OFF, then there was an intermittent fault.
 - (b) If the Fault Light is ON, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

- (1) Do this check of the Fire Bottle:
 - (a) Disconnect connector from the applicable Pressure Switch on the Fire Bottle.
 - (b) If the DISCH Fault Light goes OFF, then replace the applicable Fire Bottle. These are the tasks:
 - Cargo Fire Extinguisher Bottle Removal, AMM TASK 26-23-01-000-801-001
 - Cargo Fire Extinguisher Bottle Installation, AMM TASK 26-23-01-400-802-001
 - 1) Do the Repair Confirmation at the end of this task.
 - (c) If the DISCH Light stays ON, then continue.
- (2) Do this check of the wiring (WDM 26-23-11):
 - (a) Remove the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801.
 - 1) Disconnect connector from the CARGO FIRE Control Panel.
 - (b) If the DISCH Light goes OFF, then do these steps:
 - 1) Examine the wiring between the Cargo Fire Control Panel and the applicable Fire Bottle Pressure Switch as follows:

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	CARGO FIRE CNTL PANEL, P8-75	FIRE BOTTLE
BOTTLE 1	D12760	D12792
	pin 28	pin 3
BOTTLE 2	D12760	D12816
	pin 28	pin 3

- 2) Repair the problems that you find.
 - 3) Re-connect the connectors to the applicable Fire Bottle Pressure Switch.
 - 4) Re-connect connector to the Cargo Fire Control Panel.
 - 5) Do the Repair Confirmation at the end of this task.
- (c) If the DISCH Fault Light stays ON, then continue.
- (3) Do this check of the mixing bay ECS duct:
- (a) Supply pneumatic pressure to the pneumatic system. This is the task: Supply Pressure to the Pneumatic System (Selection), AMM TASK 36-00-00-860-801.
 - (b) Set the L PACK and R PACK Switches on the Air Conditioning Panel, P5-10 to AUTO.
 - (c) Make sure that there are no leaks at any of the connections on the mix manifold and associated ducts:
 - 1) Repair any leaks that you find.
 - (d) Do the Repair Confirmation at the end of this task.
 - (e) If the DISCH Light stays ON, then continue.
- (4) Replace the Cargo Fire Control Panel. These are the tasks:
- Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801
 - Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801
- (a) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

- (1) On the CARGO FIRE Control Panel, push the TEST Switch.
 - (a) If the DISCH Fault Light comes ON, then you corrected the problem.
 - (b) If DISCH Fault Light does not come ON, then continue the Fault Isolation Procedure at the subsequent step.

————— **END OF TASK** —————

803. Cargo Fire Bottle Does Not Discharge When the DISCH Switch is Pushed - Fault Isolation

A. Description

- (1) The DISCH Switch on the CARGO FIRE Panel is pushed, but there is no indication that the Fire Bottle has discharged.
- (2) These are the situations that could cause this indication:
 - (a) The squib does not fire.
 - (b) The squib fires, but the Fire Bottle does not discharge.
 - (c) The Fire Bottle discharges, but there is no indication on the flight deck.

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B. Possible Causes

- (1) Bottle 1 FWD EXT Squib
- (2) Bottle 1 AFT EXT Squib
- (3) Bottle 2 FWD EXT Squib
- (4) Bottle 2 AFT EXT Squib
- (5) Fire Bottle 1, M2248
- (6) Fire Bottle 2, M2263
- (7) Cargo Fire Control Panel, P8-75
- (8) Wiring

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	16	C01528	CARGO FIRE EXT 2
B	17	C01526	CARGO FIRE EXT 1

D. Related Data

- (1) WDM 26-23-11
- (2) SSM 26-23-11

E. Initial Evaluation

- (1) Examine the Fire Bottle.
 - (a) Remove and weigh the Fire Bottle. These are the tasks:

NOTE: The purpose of weighing the bottle is to determine if the bottle is empty, or not. Therefore, the weight of the bottle can not vary more than 10% of the weight stamped on the Fire Bottle.

 - Cargo Fire Extinguisher Bottle Removal, AMM TASK 26-23-01-000-801-001
 - Cargo Fire Extinguisher Bottle Installation, AMM TASK 26-23-01-400-802-001
 - (b) If the Fire Bottle is full, then do the "Fault Isolation Procedure - Bottle Does Not Discharge" below.
 - (c) If the Fire Bottle is empty, then do the "Fault Isolation Procedure - Bottle Discharges" below.

F. Fault Isolation Procedure - Bottle Does Not Discharge

- (1) Do this check of the Squib Circuit:
 - (a) On the CARGO FIRE Control Panel, push the TEST Switch.
 - (b) Make sure that the EXT FWD and EXT AFT Fault Lights come ON.
 - (c) If the Fault Lights do not come ON when you push the TEST Switch, do this task: FWD (AFT) EXT Squib Fault Light Problem - Fault Isolation, 26-23 TASK 812.
 - (d) If the EXT FWD and EXT AFT Fault Lights come ON, then continue.
- (2) Replace the Cargo Fire Control Panel. These are the tasks:
 - Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801
 - Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801

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- (a) If the Installation Test for the Cargo Fire Control Pane is satisfactory, then you corrected the problem.

G. Fault Isolation Procedure - Bottle Discharges

- (1) Do this check of the Pressure Switch Wiring (WDM 26-23-11):
- (a) Disconnect connector D12792 from the Pressure Switch on Bottle 1.
- (b) Install a jumper between pins 2 and 3 on the Pressure Switch connector.
- 1) If the DISCH Light on the CARGO FIRE Panel comes ON, then do these steps:
- a) Remove the jumper.
- b) Replace Fire Bottle 1. These are the tasks:
- Cargo Fire Extinguisher Bottle Removal, AMM TASK 26-23-01-000-801-001
 - Cargo Fire Extinguisher Bottle Installation, AMM TASK 26-23-01-400-802-001
- c) If the Installation Test for the Fire Bottle is satisfactory, then you corrected the problem.
- 2) If the DISCH Light on the CARGO FIRE Control Panel does not come ON, then continue.
- (c) Disconnect connector D12816 from the Pressure Switch on Fire Bottle 2.
- (d) Install a jumper between pins 2 and 3 on the Pressure Switch connector.
- 1) If the DISCH Light on the CARGO FIRE Panel comes ON, then do these steps:
- a) Remove the jumper.
- b) Replace Fire Bottle 2. These are the tasks:
- Cargo Fire Extinguisher Bottle Removal, AMM TASK 26-23-01-000-801-001
 - Cargo Fire Extinguisher Bottle Installation, AMM TASK 26-23-01-400-802-001
- c) If the Installation Test for the Fire Bottle is satisfactory, then you corrected the problem.
- 2) If the DISCH Light on the CARGO FIRE Control Panel does not come ON, then remove the jumpers and continue.
- (2) Remove the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801.
- (3) Examine the wiring between the Cargo Fire Control Panel and the Cargo Fire EXT Discharge Pressure Switches as follows (WDM 26-23-11):

FIRE BOTTLE 1

CARGO FIRE
PNL, P8-75
D12760
pin 28

DISCH PRESS
SW EXT 1
D12792
pin 3

PRESS SW

BOTTLE 1

D12792
pin 2 GND

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FIRE BOTTLE 2

CARGO FIRE

PNL, P8-75

D12760

pin 28 pin 3

DISCH PRESS

SW EXT 2

D12816

pin 3

PRESS SW

BOTTLE 2

D12816

pin 2 GND

- (a) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Re-install the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801.
 - 3) Install a jumper between pins 2 and 3 of the Fire Bottle 1 and 2 Pressure Switch connectors.
 - 4) If the DISCH Light on the CARGO FIRE Panel, comes ON, then you corrected the problem.
 - a) Remove the jumpers and re-connect the connectors to the Pressure Switches.

END OF TASK

812. FWD (AFT) EXT Squib Fault Light Problem - Fault Isolation

A. Description

- (1) This task is for these CARGO FIRE Control Front Panel Fault Light Indication problems:
 - (a) The FWD EXT Fault Light does not come ON when the TEST Switch is pushed.
 - (b) The AFT EXT Fault Light does not come ON when the TEST Switch is pushed.
- (2) The FWD EXT and AFT EXT Lights normally come ON when the TEST Switch is pushed, to show there is continuity through the squibs.
 - (a) If the lights do not come ON, then there is a problem with the Discharge System.

B. Possible Causes

- (1) Bottle 1 FWD EXT Squib
- (2) Bottle 1 AFT EXT Squib
- (3) Bottle 2 FWD EXT Squib
- (4) Bottle 2 AFT EXT Squib
- (5) Cargo Fire Control Panel, P8-75
- (6) Wiring

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

<u>Row</u>	<u>Col</u>	<u>Number</u>	<u>Name</u>
B	16	C01528	CARGO FIRE EXT 2
B	17	C01526	CARGO FIRE EXT 1

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D. Related Data

- (1) WDM 26-23-11
- (2) SSM 26-23-11

E. Initial Evaluation

- (1) On the Captain's Instrument Panel, P1, put the DIM/BRT/TEST Switch to TEST.
 - (a) Make sure that these Fault Lights on the Cargo Fire Control Panel come ON:
 - FWD EXT
 - AFT EXT
 - ARM MAIN
 - ARM FWD
 - ARM AFT
 - DETECTOR FAULT
 - DISCH
 - 1) If a Fault Light does not come ON, then replace the defective light. This is the task: Lighted Pushbutton Switch - Lamp Replacement, AMM TASK 33-18-00-960-803.
- (2) On the Cargo Fire Control Panel, push the TEST Switch.
 - (a) If the FWD EXT and AFT EXT Fault Lights come ON, then there was an intermittent problem.
 - (b) If the FWD EXT and AFT EXT Fault Lights stay OFF, then do the "Fault Isolation Procedure - FWD EXT and AFT EXT Lights OFF".
 - (c) If only one of the FWD EXT and AFT EXT Fault Lights comes ON, then do the "Fault Isolation Procedure - FWD EXT or AFT EXT Light Does Not Come ON".

F. Fault Isolation Procedure - FWD EXT and AFT EXT Lights OFF

- (1) Replace the Cargo Fire Control Panel. These are the tasks:
 - Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801
 - Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801
- (a) On the Cargo Fire Control Panel, push the TEST Switch.
 - 1) If the FWD EXT and AFT EXT Lights come ON, then you corrected the problem.

G. Fault Isolation Procedure - FWD EXT or AFT EXT Light Does Not Come ON

- (1) Replace the Cargo Fire Squib indicated by the Fault Light that does not come ON. These are the tasks:
 - Cargo Fire Extinguisher Bottle Squib Removal, AMM TASK 26-23-02-000-801
 - Cargo Fire Extinguisher Bottle Squib Installation, AMM TASK 26-23-02-400-801
- (a) Do the Repair Confirmation at the end of this task.
- (2) Remove the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801.
- (3) Examine the wiring between the Cargo Fire Control Panel and the Air/Ground Relay, R594 as follows (WDM 26-23-11):

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**CARGO FIRE
CTRL PANEL
D12760**

pin 16 pin D1

**AIR/GND RLY
D11022**

**AIR/GND RLY
D11022**

pin D2 GD532-DC

- (a) If you find a problem with the wiring, then do these steps:
- 1) Repair the wiring.
 - 2) Install the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801.
 - 3) Do the Repair Confirmation at the end of this task.
- (b) If you do not find a problem with the wiring, then continue.
- (4) Examine the wiring between the Cargo Fire Control Panel and the applicable Fire Bottle Squib as follows (WDM 26-23-11):

	CARGO FIRE CTRL PANEL D12760	FIRE BOTTLE SQUIB D12794
BTL 1 FWD	pin 26	pin 1
BTL 1 AFT	D12760 pin 24	D12796 pin 1
BTL 2 FWD	D12760 pin 12	D12818 pin 1
BTL 2 AFT	D12760 pin 23	D12820 pin 1
FIRE BOTTLE 1		
FWD	EXT SQUIB D12794 pin 2	GD4840-DC
AFT	D12796 pin 2	GD4840-DC

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FIRE BOTTLE 2

FWD	EXT SQUIB
	D12816
	pin 2 GD5066-DC
AFT	D12820
	pin 2 GD5066-DC

- (a) If you find a problem with the wiring, then do these steps:
 - 1) Repair the wiring.
 - 2) Install the Cargo Fire Control Panel. This is the task: Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801.
 - 3) Do the Repair Confirmation at the end of this task.
- (b) If you do not find a problem with the wiring, then continue.
- (5) Replace the Cargo Fire Control Panel. These are the tasks:
 - Cargo Fire Control Panel Removal, AMM TASK 26-00-02-000-801
 - Cargo Fire Control Panel Installation, AMM TASK 26-00-02-400-801
- (a) Do the Repair Confirmation at the end of this task.

H. Repair Confirmation

- (1) On the Cargo Fire Control Panel, push the TEST Switch.
 - (a) If the FWD EXT and AFT EXT Fault Light comes ON, then you corrected the problem.
 - (b) If the FWD EXT and AFT EXT Fault Light do not come ON, then continue the Fault Isolation Procedure at the subsequent step.

———— **END OF TASK** ————

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801. Procedure by Airline Method - Fault Isolation

A. Initial Evaluation

NOTE: Use the standard method of your airline to correct this fault.

————— END OF TASK —————

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