CHAPTER

21

AIR CONDITIONING

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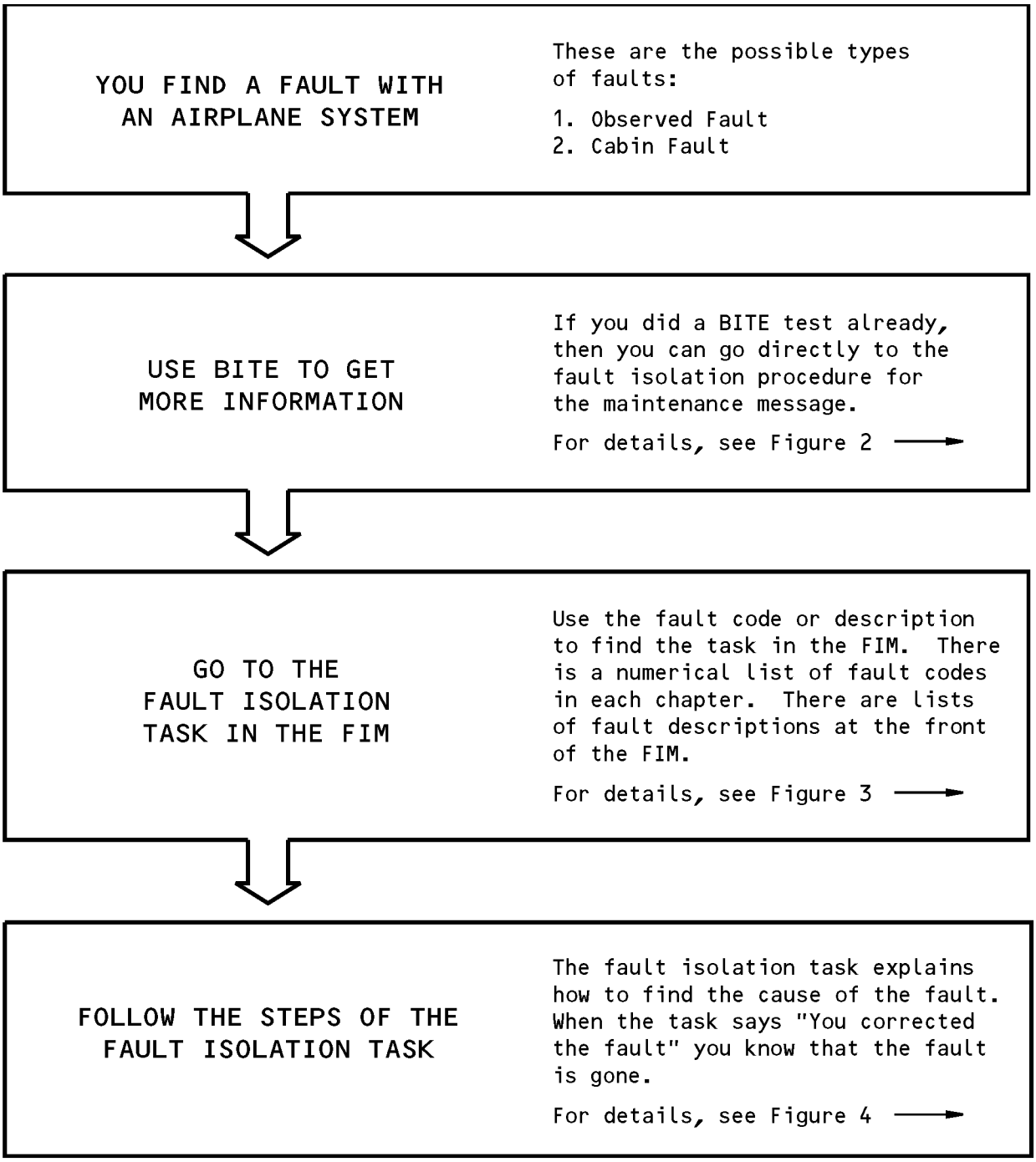

Basic Fault Isolation Process
Figure 1

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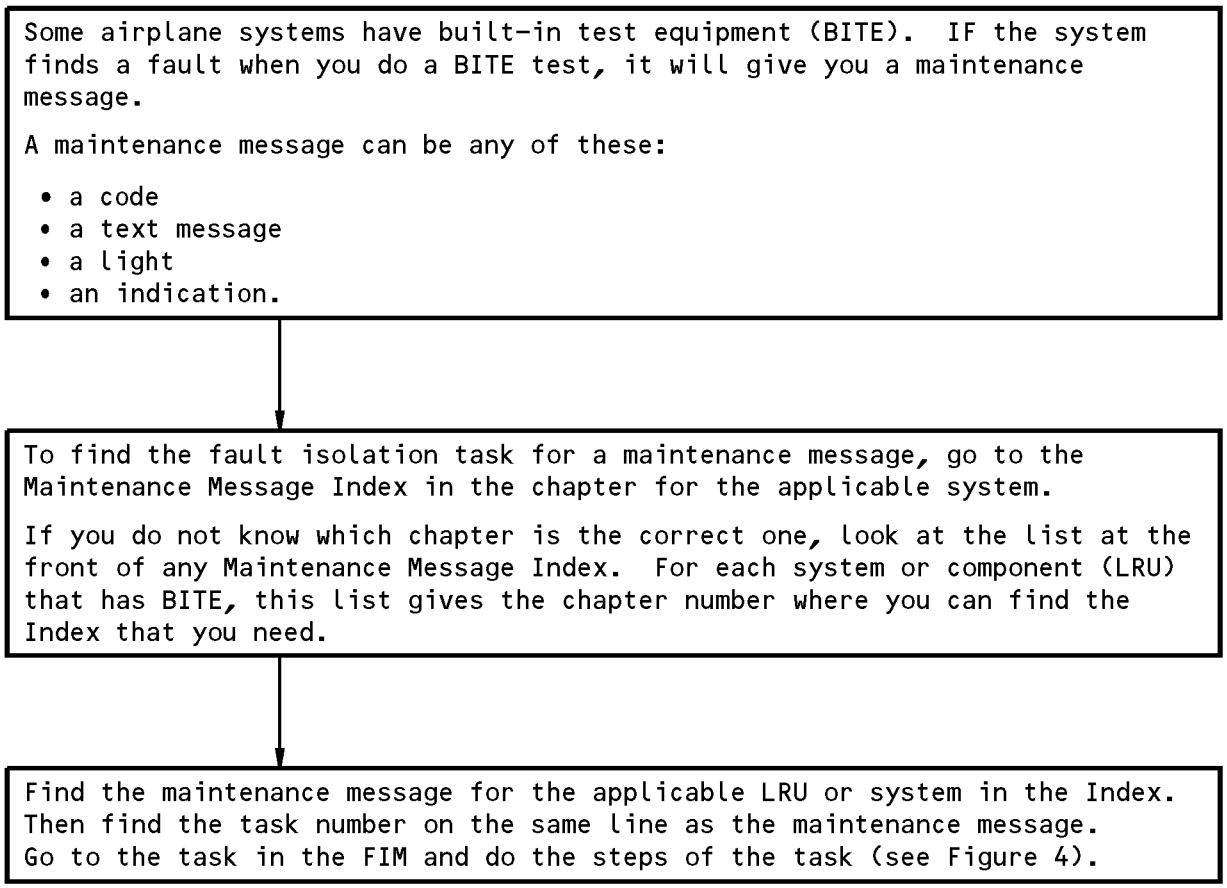

Getting Fault Information from BITE
Figure 2

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IF YOU HAVE:	THEN DO THIS TO FIND THE TASK IN THE FIM:
FAULT CODE	1. The first two digits of the fault code are the FIM chapter that you need. Go to the Fault Code Index in that chapter and find the fault code. If the fault code starts with a letter, then go to the Cabin Fault Code Index at the front of the FIM. 2. Find the task number on the same line as the fault code. Go to the task in the FIM and do the steps in the task (see Figure 4).
OBSERVED FAULT DESCRIPTION	1. Go to the Observed Fault List at the front of the FIM and find the best description for the fault. 2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).
CABIN FAULT DESCRIPTION	1. Go to the Cabin Fault List at the front of the FIM and find the best description for the fault. 2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).
MAINTENANCE MESSAGE (FROM BITE)	1. Go to the Maintenance Message Index in the chapter for the LRU (the front of each Index gives you the chapter number for all LRUs). Find the maintenance message in the Index. 2. Find the task number on the same line as the maintenance message. Go to the task in the FIM and do the steps in the task (see Figure 4).

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

- Do the steps of the task in the specified order. The "If ... then" statements that you see will guide you along the correct path.
- When you are at the endpoint of the path, the step says "...you corrected the fault." Complete the step and exit the procedure.

Doing the Fault Isolation Task
Figure 4

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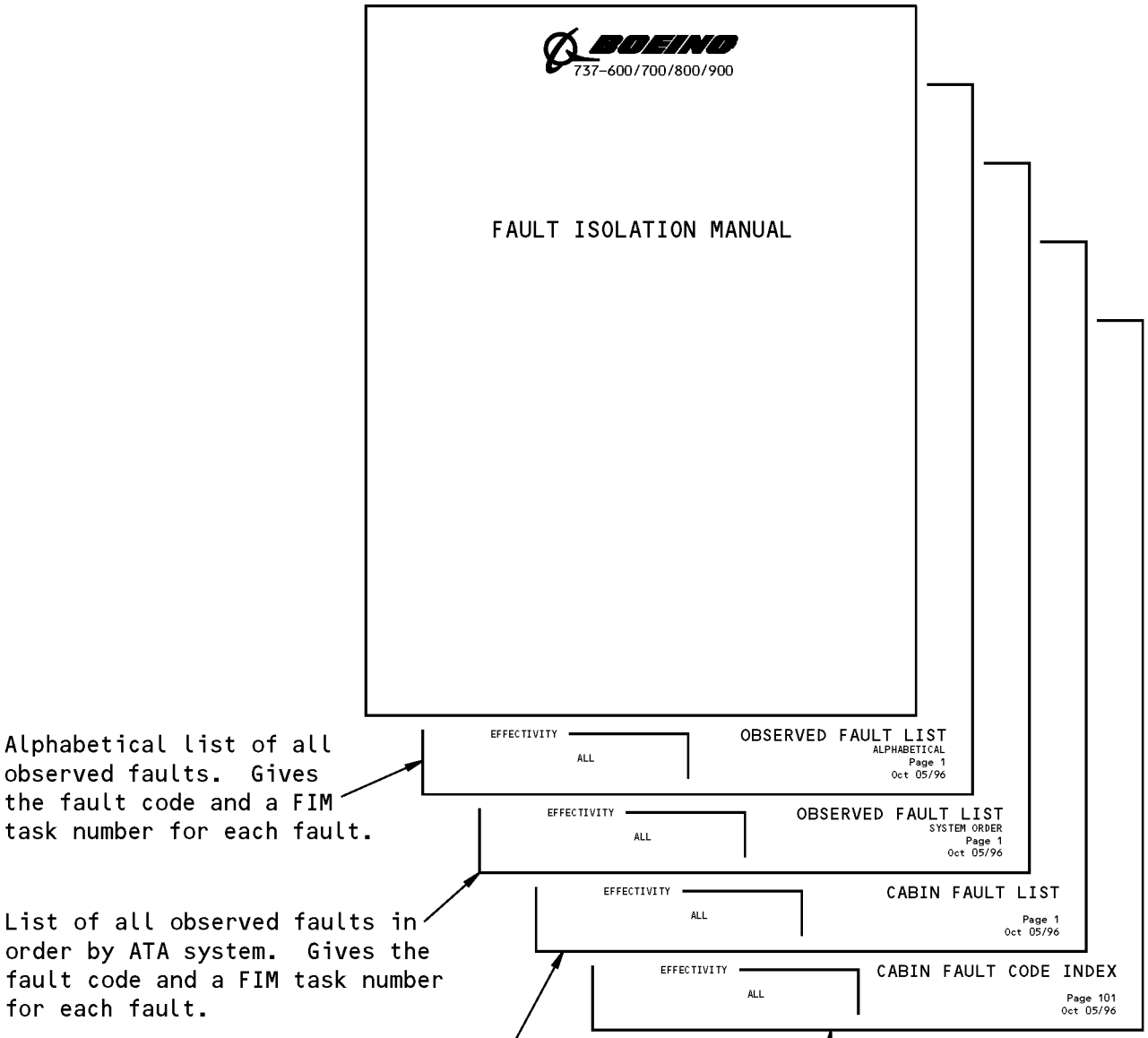

Subjects at Front of FIM
Figure 5

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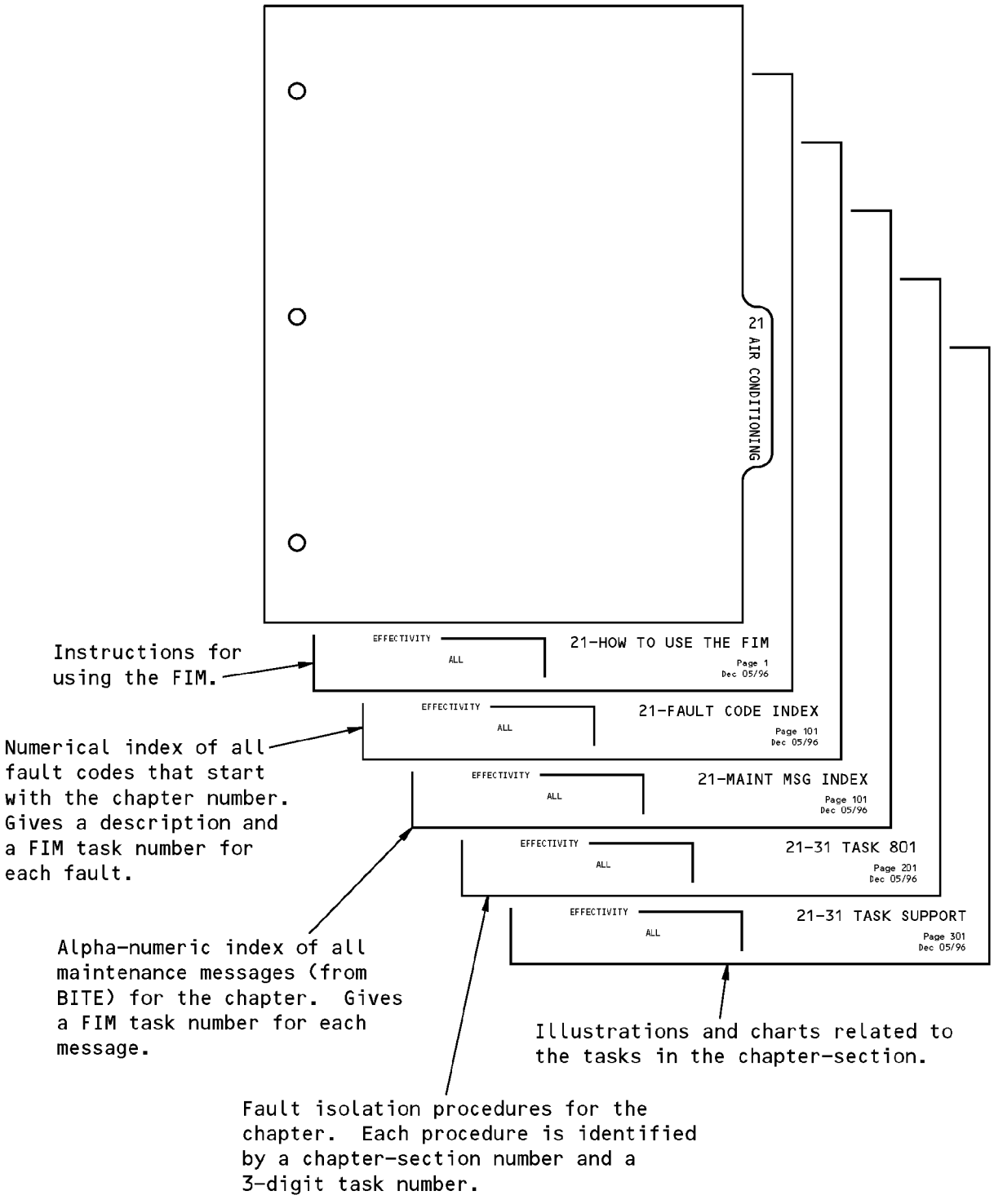

Subjects in Each FIM Chapter
Figure 6

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
210 020 00	Smoke: stops with recirculation fan(s) off, isolation valve closed, and right pack switch at off - flight compartment and passenger cabin.	21-00 TASK 801
210 030 00	Smoke: stops with recirculation fan(s) off, isolation valve closed, and right pack switch at off - passenger cabin.	21-00 TASK 801
210 040 00	Smoke: stops with recirculation fan(s) off, isolation valve closed, right pack switch in auto, and left pack switch off - flight compartment.	21-00 TASK 802
210 050 00	Smoke: stops with recirculation fan(s) off, isolation valve closed, right pack switch in auto, and left pack switch off - flight compartment and passenger cabin.	21-00 TASK 802
210 060 00	Smoke: stops with recirculation fan(s) off, isolation valve closed, right pack switch in auto, and left pack switch off - passenger cabin.	21-00 TASK 802
210 070 00	Smoke: does not stop with recirculation fans off, isolation valve closed, and both pack switches at off - flight compartment.	21-00 TASK 803
210 080 00	Smoke: does not stop with recirculation fans off, isolation valve closed, and both pack switches at off - flight compartment and passenger cabin.	21-00 TASK 803
210 090 00	Smoke: does not stop with recirculation fans off, isolation valve closed, and both pack switches at off - passenger cabin.	21-00 TASK 803
210 671 00	Smoke or fumes in cabin: source unknown.	21-00 TASK 806
212 010 31	Windshield: air outlet does not operate - captain's.	21-22 TASK 801
212 010 32	Windshield: air outlet does not operate - first officer's.	21-22 TASK 801
212 020 31	Foot air outlet: does not operate - captain's.	21-22 TASK 801
212 020 32	Foot air outlet: does not operate - first officer's.	21-22 TASK 801
212 040 00	Recirculation fan (single-fan system): does not operate.	21-25 TASK 801
212 040 41	Recirculation fan (dual-fan system): does not operate - left.	21-25 TASK 802
212 040 42	Recirculation fan (dual-fan system): does not operate - right.	21-25 TASK 802
212 050 00	Smoke: stops with recirculation fan(s) off - flight compartment.	21-00 TASK 804
212 060 00	Smoke: stops with recirculation fan(s) off - flight compartment and passenger cabin.	21-00 TASK 804
212 070 00	Smoke: stops with recirculation fan(s) off - passenger cabin.	21-00 TASK 804
212 080 00	EQUIP COOLING EXHAUST OFF light: light on with switch at ALTERNATE.	21-27 TASK 805
212 090 00	EQUIP COOLING EXHAUST OFF light: light on with switch at NORMAL.	21-27 TASK 806
212 100 00	EQUIP COOLING SUPPLY OFF light: light on with switch at ALTERNATE.	21-27 TASK 807

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
212 110 00	EQUIP COOLING SUPPLY OFF light: light on with switch at NORMAL.	21-27 TASK 808
213 010 00	AUTO FAIL light: light on and ALTN light on, AUTO FAIL light goes off when pressurization mode selector switch is at ALTN.	21-31 TASK 801
213 020 00	AUTO FAIL light: light on, ALTN light not on.	21-31 TASK 801
213 030 00	Manual mode control of aft outflow valve: does not operate.	21-31 TASK 811
213 040 00	CABIN ALT indication: fluctuates.	21-31 TASK 801
213 050 00	Pressurization: cannot keep the correct cabin pressure.	21-31 TASK 801
213 060 00	Cabin altitude warning system: does not operate.	21-33 TASK 801
213 080 00	CABIN CLIMB indicator: does not operate, pointer does not move.	21-33 TASK 802
213 090 00	FLT ALT display: indication blank.	21-31 TASK 813
213 100 00	LAND ALT display: indication blank.	21-31 TASK 814
213 110 00	MANUAL VALVE indicator: does not operate, pointer does not move.	21-31 TASK 812
213 121 00	Cabin altitude and differential pressure gauge: indicates high cabin pressure differential and low cabin altitude.	21-33 TASK 803
215 010 00	Fog, high humidity, or ice in cabin.	21-51 TASK 801
215 015 00	Noise, pounding heard through air distribution system.	21-51 TASK 802
215 020 41	PACK TRIP OFF light: light on at cruise, light stays off after reset - left.	21-52 TASK 824
215 020 42	PACK TRIP OFF light: light on at cruise, light stays off after reset - right.	21-52 TASK 825
215 030 41	PACK TRIP OFF light: light on at cruise, light comes on again after reset - left.	21-52 TASK 830
215 030 42	PACK TRIP OFF light: light on at cruise, light comes on again after reset - right.	21-52 TASK 831
215 040 41	PACK TRIP OFF light: light on, cannot reset - left.	21-52 TASK 816
215 040 42	PACK TRIP OFF light: light on, cannot reset - right.	21-52 TASK 817
215 050 41	PACK TRIP OFF light: light on during approach, light stays off after reset - left.	21-52 TASK 822
215 050 42	PACK TRIP OFF light: light on during approach, light stays off after reset - right.	21-52 TASK 823
215 060 00	Temperature indication not correct - air temperature selector at PACK L.	21-61 TASK 854
215 060 41	PACK TRIP OFF light: light on during approach, light comes on again after reset - left.	21-52 TASK 832

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
215 060 42	PACK TRIP OFF light: light on during approach, light comes on again after reset - right.	21-52 TASK 833
215 070 00	Temperature indication not correct - air temperature selector at PACK R.	21-61 TASK 855
215 080 41	PACK TRIP OFF light: light on during climb, light stays off after reset - left.	21-52 TASK 820
215 080 42	PACK TRIP OFF light: light on during climb, light stays off after reset - right.	21-52 TASK 821
215 090 41	PACK TRIP OFF light: light on during climb, light comes on again after reset - left.	21-52 TASK 834
215 090 42	PACK TRIP OFF light: light on during climb, light comes on again after reset - right.	21-52 TASK 835
215 110 41	PACK TRIP OFF light: light on on ground, light stays off after reset - left.	21-52 TASK 818
215 110 42	PACK TRIP OFF light: light on on ground, light stays off after reset - right.	21-52 TASK 819
215 120 41	PACK TRIP OFF light: light on on ground, light comes on again after reset - left.	21-52 TASK 828
215 120 42	PACK TRIP OFF light: light on on ground, light comes on again after reset - right.	21-52 TASK 829
215 140 00	RAM DOOR FULL OPEN light: light is not on, airplane on the ground.	21-51 TASK 804
215 160 00	RAM DOOR FULL OPEN light: light stays on, airplane in the air.	21-51 TASK 803
215 220 41	PACK light: light on at cruise, light stays off after reset - left.	21-53 TASK 809
215 220 42	PACK light: light on at cruise, light stays off after reset - right.	21-53 TASK 810
215 230 41	PACK light: light on at cruise, light comes on again after reset - left.	21-53 TASK 813
215 230 42	PACK light: light on at cruise, light comes on again after reset - right.	21-53 TASK 814
215 240 41	PACK light: light on, cannot reset - left.	21-53 TASK 801
215 240 42	PACK light: light on, cannot reset - right.	21-53 TASK 802
215 250 41	PACK light: light on during approach, light stays off after reset - left.	21-53 TASK 807
215 250 42	PACK light: light on during approach, light stays off after reset - right.	21-53 TASK 808
215 260 41	PACK light: light on during approach, light comes on again after reset - left.	21-53 TASK 815
215 260 42	PACK light: light on during approach, light comes on again after reset - right.	21-53 TASK 816

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
215 280 41	PACK light: light on during climb, light stays off after reset - left.	21-53 TASK 805
215 280 42	PACK light: light on during climb, light stays off after reset - right.	21-53 TASK 806
215 290 41	PACK light: light on during climb, light comes on again after reset - left.	21-53 TASK 817
215 290 42	PACK light: light on during climb, light comes on again after reset - right.	21-53 TASK 818
215 310 41	PACK light: light on on ground, light stays off after reset - left.	21-53 TASK 803
215 310 42	PACK light: light on on ground, light stays off after reset - right.	21-53 TASK 804
215 320 41	PACK light: light on on ground, light comes on again after reset - left.	21-53 TASK 811
215 320 42	PACK light: light on on ground, light comes on again after reset - right.	21-53 TASK 812
215 350 00	Pack airflow/temperature diagnostics tool: tool shows pack airflow is too low or too high.	21-52 TASK 857
215 351 00	Pack airflow/temperature diagnostics tool: tool shows pack outlet temperature is too cold or too hot.	21-52 TASK 856
216 010 00	Air mix valve indicator: does not operate, pointer does not move, temperature is OK - CONT CABIN.	21-61 TASK 841
216 020 00	Air mix valve indicator: does not operate, pointer does not move, temperature is OK - PASS CABIN.	21-61 TASK 841
216 040 00	AUTO temperature control: does not operate - CONT CAB.	21-61 TASK 861
216 050 00	AUTO temperature control: does not operate - AFT CAB.	21-61 TASK 863
216 060 00	AUTO temperature control: does not operate - FWD CAB.	21-61 TASK 864
216 070 00	AUTO temperature control: does not operate - PASS CABIN.	21-61 TASK 862
216 080 00	DUCT OVERHEAT light: light on, stays off after reset - CONT CABIN.	21-61 TASK 839
216 085 00	DUCT OVERHEAT light: light on, stays off after reset - PASS CABIN.	21-61 TASK 840
216 090 00	DUCT OVERHEAT light: light on, comes on again after reset - CONT CABIN.	21-61 TASK 848
216 095 00	DUCT OVERHEAT light: light on, comes on again after reset - PASS CABIN.	21-61 TASK 849
216 100 00	DUCT OVERHEAT light: light on, cannot reset - CONT CABIN.	21-61 TASK 837
216 105 00	DUCT OVERHEAT light: light on, cannot reset - PASS CABIN.	21-61 TASK 838
216 120 00	Temperature indication not correct - air temperature selector at AFT ZONE CABIN.	21-61 TASK 857

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
216 130 00	Temperature indication not correct - air temperature selector at FWD ZONE CABIN.	21-61 TASK 856
216 140 00	Temperature indication not correct - air temperature selector at CONT CAB SUPPLY DUCT.	21-61 TASK 858
216 160 00	Temperature indication not correct - air temperature selector at SUPPLY DUCT.	21-61 TASK 842
216 170 00	Temperature indication not correct - air temperature selector at AFT SUPPLY DUCT.	21-61 TASK 860
216 180 00	Temperature indication not correct - air temperature selector at FWD SUPPLY DUCT.	21-61 TASK 859
216 190 00	Temperature indication not correct - air temperature selector at PASS CABIN.	21-61 TASK 843
216 201 00	ZONE TEMP light: light on, stays off after reset - aft cabin.	21-62 TASK 844
216 202 00	ZONE TEMP light: light on, cannot reset - aft cabin.	21-62 TASK 841
216 203 00	ZONE TEMP light: light on, comes on again after reset - aft cabin.	21-62 TASK 847
216 211 00	ZONE TEMP light: light on, stays off after reset - control cabin.	21-62 TASK 842
216 212 00	ZONE TEMP light: light on, cannot reset - control cabin.	21-62 TASK 839
216 213 00	ZONE TEMP light: light on, comes on again after reset - control cabin.	21-62 TASK 845
216 221 00	ZONE TEMP light: light on, stays off after reset - forward cabin.	21-62 TASK 843
216 222 00	ZONE TEMP light: light on, cannot reset - forward cabin.	21-62 TASK 840
216 223 00	ZONE TEMP light: light on, comes on again after reset - forward cabin.	21-62 TASK 846
216 224 00	ZONE TEMP light: comes on unexpectedly during master caution recall.	21-62 TASK 848
216 310 00	Trim air valve does not operate.	21-62 TASK 838
216 400 00	Temperature: too hot, cannot make cooler in AUTO mode, OK in MANUAL mode - CONT CABIN.	21-61 TASK 801
216 410 00	Temperature: too hot, cannot make cooler in AUTO mode, OK in MANUAL mode - PASS CABIN.	21-61 TASK 801
216 420 00	Temperature: too cold, cannot make warmer in AUTO mode, OK in MANUAL mode - CONT CABIN.	21-61 TASK 801
216 430 00	Temperature: too cold, cannot make warmer in AUTO mode, OK in MANUAL mode - PASS CABIN.	21-61 TASK 801
216 440 00	Temperature: too hot, cannot make cooler in AUTO and MANUAL mode, air mix valve does not move to COLD - CONT CABIN.	21-61 TASK 844

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FAULT CODE	FAULT DESCRIPTION	GO TO FIM TASK
216 450 00	Temperature: too hot, cannot make cooler in AUTO and MANUAL mode, air mix valve does not move to COLD - PASS CABIN.	21-61 TASK 846
216 460 00	Temperature: too cold, cannot make warmer in AUTO and MANUAL mode, air mix valve does not move to HOT - CONT CABIN.	21-61 TASK 845
216 470 00	Temperature: too cold, cannot make warmer in AUTO and MANUAL mode, air mix valve does not move to HOT - PASS CABIN.	21-61 TASK 847
216 510 00	Temperature control: cannot cool cabins, all temperature selectors set to full cold.	21-62 TASK 849

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LRU/SYSTEM	SHORT NAME	CHAPTER
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
Automatic Direction Finder Receiver - 1	ADF RECVR - 1	34
Autothrottle System	A/T	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
Cabin Temperature Controller	CAB TEMP CONT	21
Cargo Electronic Unit - Forward	CEU - FWD	26
Cargo Electronic Unit - Lower	CEU - LOWER	26
Cargo Electronic Unit - Main Aft	CEU - MAIN AFT	26
Cargo Electronic Unit - Main Forward	CEU - MAIN FWD	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
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Emergency Locator Transmitter	ELT	23
Engine Accessory Unit	ENG ACCY UNIT	78
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Flight Data Acquisition Unit	FDAU	31
Flight Management Computer System	FMCS	34
Fuel Quantity Indicating System	FQIS	28
Generator Control Unit - 1	GCU - 1	24
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Ground Proximity Computer	GROUND PROX	34
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LRU/SYSTEM	SHORT NAME	CHAPTER
High Frequency Transceiver	HF XCVR	23
Low Limit (35 Degree F) Controller - Left	35 DEG CONT L	21
Low Limit (35 Degree F) Controller - Right	35 DEG CONT R	21
Multi-Mode Receiver	MMR	34
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Pack/Zone Temperature Controller - Right	PACK/ZN CON - R	21
Proximity Switch Electronics Unit	PSEU	32
Radio Altimeter Receiver/Transmitter	RADIO ALTIMTR	34
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

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
35 DEG CONT L	POSN 1 - NO GO	21-52 TASK 802
35 DEG CONT L	POSN 2 - GO, 35F CONTROL VALVE NOT OPEN	21-52 TASK 812
35 DEG CONT L	POSN 2 - NO GO	21-52 TASK 804
35 DEG CONT L	POSN 3 - NO GO	21-52 TASK 806
35 DEG CONT L	POSN 4 - GO, 35F CONTROL VALVE NOT CLOSED	21-52 TASK 813
35 DEG CONT L	POSN 4 - NO GO	21-52 TASK 808
35 DEG CONT L	POSN 5 - NO GO	21-52 TASK 810
35 DEG CONT R	POSN 1 - NO GO	21-52 TASK 803
35 DEG CONT R	POSN 2 - GO, 35F CONTROL VALVE NOT OPEN	21-52 TASK 814
35 DEG CONT R	POSN 2 - NO GO	21-52 TASK 805
35 DEG CONT R	POSN 3 - NO GO	21-52 TASK 807
35 DEG CONT R	POSN 4 - GO, 35F CONTROL VALVE NOT CLOSED	21-52 TASK 815
35 DEG CONT R	POSN 4 - NO GO	21-52 TASK 809
35 DEG CONT R	POSN 5 - NO GO	21-52 TASK 811
CAB PRESS CON	ACFT RATE HI	21-31 TASK 815
CAB PRESS CON	AUTO/MAN ERROR	21-31 TASK 821
CAB PRESS CON	CAB DIFF PRESS HI	21-31 TASK 816
CAB PRESS CON	CAB PRESS SW ACTIV	21-31 TASK 820
CAB PRESS CON	CAB RATE HI	21-31 TASK 818
CAB PRESS CON	CONTRLR LRU FAIL	21-31 TASK 801
CAB PRESS CON	DADC #1 INVALID	21-31 TASK 806
CAB PRESS CON	DADC #2 INVALID	21-31 TASK 807
CAB PRESS CON	DRV ENBL ERROR	21-31 TASK 819
CAB PRESS CON	HI CAB ALT	21-31 TASK 817
CAB PRESS CON	LDG GEAR DISAGREE	21-31 TASK 822
CAB PRESS CON	LO INFL/HI LEAKG	21-31 TASK 823
CAB PRESS CON	N1/N2 LOWRU FAIL	21-31 TASK 810
CAB PRESS CON	OFV LRU FAIL	21-31 TASK 802

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CAB PRESS CON	OFV OR WIRING	21-31 TASK 805
CAB PRESS CON	SEL PNL LRU FAIL	21-31 TASK 803
CAB PRESS CON	SMC #1 INVALID	21-31 TASK 808
CAB PRESS CON	SMC #2 INVALID	21-31 TASK 809
CAB PRESS CON	SYSTEM WIRING	21-31 TASK 804
CAB TEMP CONT	ANTICIPATOR SENSOR - LEFT PACK - NO GO	21-61 TASK 831
CAB TEMP CONT	ANTICIPATOR SENSOR - RIGHT PACK - NO GO	21-61 TASK 832
CAB TEMP CONT	CABIN SENSOR - LEFT PACK - NO GO	21-61 TASK 833
CAB TEMP CONT	CABIN SENSOR - RIGHT PACK - NO GO	21-61 TASK 834
CAB TEMP CONT	DUCT LIMIT SENSOR - LEFT PACK - NO GO	21-61 TASK 829
CAB TEMP CONT	DUCT LIMIT SENSOR - RIGHT PACK - NO GO	21-61 TASK 830
CAB TEMP CONT	TEMP SELECTOR - LEFT PACK - NO GO	21-61 TASK 835
CAB TEMP CONT	TEMP SELECTOR - RIGHT PACK - NO GO	21-61 TASK 836
PACK/ZN CON - L	BKUP ZONE CABIN SENSOR	21-62 TASK 815
PACK/ZN CON - L	BKUP ZONE SELECTOR	21-62 TASK 809
PACK/ZN CON - L	CONTROLLER FAULT - PACK/ZONE	21-62 TASK 802
PACK/ZN CON - L	CONTROLLER FAULT - RAM AIR	21-62 TASK 802
PACK/ZN CON - L	CONTROLLER FAULT - STANDBY	21-62 TASK 802
PACK/ZN CON - L	FLT DECK CABIN SENSOR	21-62 TASK 811
PACK/ZN CON - L	FLT DECK DUCT SENSOR	21-62 TASK 813
PACK/ZN CON - L	FLT DECK SELECTOR	21-62 TASK 805
PACK/ZN CON - L	FLT DECK TRIM VALVE	21-62 TASK 833
PACK/ZN CON - L	RAM AIR ACT	21-62 TASK 837
PACK/ZN CON - L	RAM AIR SNSR	21-62 TASK 821
PACK/ZN CON - L	STBY OTHER PACK - PACK SNSR	21-62 TASK 824
PACK/ZN CON - L	STBY OTHER PACK - TCV	21-62 TASK 829
PACK/ZN CON - L	THIS PACK - MIX MANF SENSOR	21-62 TASK 827
PACK/ZN CON - L	THIS PACK - PACK SNSR	21-62 TASK 825

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PACK/ZN CON - L	THIS PACK - TCV	21-62 TASK 830
PACK/ZN CON - L	ZONE CABIN SENSOR	21-62 TASK 817
PACK/ZN CON - L	ZONE DUCT SENSOR	21-62 TASK 819
PACK/ZN CON - L	ZONE SELECTOR	21-62 TASK 808
PACK/ZN CON - L	ZONE TRIM VALVE	21-62 TASK 835
PACK/ZN CON - R	BKUP ZONE CABIN SENSOR	21-62 TASK 816
PACK/ZN CON - R	BKUP ZONE SELECTOR	21-62 TASK 807
PACK/ZN CON - R	CONTROLLER FAULT - PACK/ZONE	21-62 TASK 803
PACK/ZN CON - R	CONTROLLER FAULT - RAM AIR	21-62 TASK 803
PACK/ZN CON - R	CONTROLLER FAULT - STANDBY	21-62 TASK 803
PACK/ZN CON - R	FLT DECK CABIN SENSOR	21-62 TASK 810
PACK/ZN CON - R	FLT DECK DUCT SENSOR	21-62 TASK 812
PACK/ZN CON - R	FLT DECK SELECTOR	21-62 TASK 804
PACK/ZN CON - R	FLT DECK TRIM VALVE	21-62 TASK 832
PACK/ZN CON - R	RAM AIR ACT	21-62 TASK 836
PACK/ZN CON - R	RAM AIR SNSR	21-62 TASK 820
PACK/ZN CON - R	STBY OTHER PACK - PACK SNSR	21-62 TASK 823
PACK/ZN CON - R	STBY OTHER PACK - TCV	21-62 TASK 828
PACK/ZN CON - R	THIS PACK - MIX MANF SENSOR	21-62 TASK 826
PACK/ZN CON - R	THIS PACK - PACK SNSR	21-62 TASK 822
PACK/ZN CON - R	THIS PACK - TCV	21-62 TASK 831
PACK/ZN CON - R	ZONE CABIN SENSOR	21-62 TASK 814
PACK/ZN CON - R	ZONE DUCT SENSOR	21-62 TASK 818
PACK/ZN CON - R	ZONE SELECTOR	21-62 TASK 806
PACK/ZN CON - R	ZONE TRIM VALVE	21-62 TASK 834

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801. Smoke or Fumes in the Passenger Cabin or Flight Compartment, Reported During Flight, Smoke Stops With Isolation Valve Closed, Right Pack Switch Off - Fault Isolation

A. Description

(1) Smoke or fumes flow into the passenger cabin or the flight compartment through the air distribution system during flight. This problem is usually caused by contamination of the air by oil, glycol, fuel, or hydraulic fluid. In flight, contamination can be caused by leakage of these fluids in one of the engines. Smoke or fumes can also be caused by oil, glycol, hydraulic fluid, fuel fumes or exhaust fumes being ingested into the inlet of one of the engines. From the inlet, the contaminant can go into the pneumatic and/or the air conditioning system and vaporize at higher temperatures. Fumes can also be caused by the use of petroleum jelly during maintenance of the pneumatic ducts or air distribution ducts.

HAP 101-999

(2) Make sure the fault report shows the smoke or fumes were stopped with the isolation valve closed, the right pack switch off, and the recirculation fan off. This means that the No. 1 engine, the pneumatic air supply from the No. 1 engine, the left pack, and the related air distribution ducts were not the source of the smoke or fumes. The Fault Isolation procedure below tells you how to find the cause of smoke in the No. 2 engine, the pneumatic air supply from the No. 2 engine, the right pack, the recirculation system, and the related air distribution ducts.

HAP 001-013, 015-026, 028-054

(3) Make sure the fault report shows the smoke or fumes were stopped with the isolation valve closed, the right pack switch off, and the two recirculation fans off. This means that the No. 1 engine, the pneumatic air supply from the No. 1 engine, the left pack, and the related air distribution ducts were not the source of the smoke or fumes. The Fault Isolation procedure below tells you how to find the cause of smoke in the No. 2 engine, the pneumatic air supply from the No. 2 engine, the right pack, the recirculation system, and the related air distribution ducts.

HAP ALL

(4) Do not do this procedure with the passengers or the crew on the airplane since it can cause smoke or fumes in the passenger cabin.

(5) (SDS SUBJECT 21-20-00)

(6) (SDS SUBJECT 36-00-00)

B. Possible Causes

(1) Contamination in the Engine No. 2 pneumatic system

(2) Hydraulic fluid leakage

(3) Contamination in the air distribution system

(4) Overheating of recirculation fan

C. Related Data

(1) (SSM 21-25-11)

(2) (WDM 21-25-11)

D. Fault Isolation Procedure

(1) Do these checks of the air recirculation system:

NOTE: Check the air recirculation fans and filters only if there is smoke or fumes in the passenger compartment.

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(a) Do this task: Recirculation Air Filter Removal, AMM TASK 21-25-01-000-801.

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(b) Examine the air recirculation filters for the following:

1) Contaminants: dust, dirt, lint, and oil.
2) Rips in the filter.
3) Breaks in the filter frame.

(c) If necessary, install new air recirculation filters. To do this, do this task: AMM TASK 21-25-01-400-801

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(d) Examine the air recirculation filter for the following:

1) Contaminants: dust, dirt, lint, and oil.
2) Rips in the filter.
3) Breaks in the filter frame.

(e) If it is necessary, install a new air recirculation filter. To do this, do this task: Recirculation Air Filter Removal, AMM TASK 21-25-01-000-801.

(f) Do a check to see if the air recirculation fan or the related wiring generates smoke while it operates. To do this, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

1) If there is smoke from the air recirculation fan or the related wiring, then do the applicable steps below:
   a) Replace the air recirculation fan.
      These are the tasks:
      Recirculation Fan Removal, AMM TASK 21-25-02-000-801,
      Recirculation Fan Installation, AMM TASK 21-25-02-400-801.
   b) Repair the applicable wiring.
   c) Do the Repair Confirmation at the end of this task.
2) If there is no smoke or fumes from the air recirculation fan or the related wiring, and the operational test is satisfactory, then continue.

HAP 001-013, 015-026, 028-054

(g) Do a check to see if the air recirculation fans or the related wiring make smoke while they operate. To do this, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

1) If there is smoke from an air recirculation fan or the related wiring, then do the applicable steps below:
   a) Replace the air recirculation fan.
      These are the tasks:
      Recirculation Fan Removal, AMM TASK 21-25-02-000-801,
      Recirculation Fan Installation, AMM TASK 21-25-02-400-801.
   b) Repair the applicable wiring.
   c) Do the Repair Confirmation at the end of this task.
2) If there is no smoke or fumes from the air recirculation fan or the related wiring, and the operational test is satisfactory, then continue.

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HAP ALL

(2) Do these checks for contamination in the Engine No. 2 pneumatic sytem:

(a) Look for leakage of oil in Engine No. 2. To do this, do this task: External Oil System Inspection, AMM TASK 79-00-00-200-802-F00.

(b) Do an inspection of the vents and drains for indications of leakage of oil, hydraulic fluid, or fuel in Engine No. 2. To do this, do this task: Engine Vents and Drains Inspection, AMM TASK 71-71-00-200-801-F00.

NOTE: It is not necessary to do this task again if you did it during the external oil system inspection.

(c) If you find indications of leakage in Engine No. 2, then do these steps:

1) Do the corrective action shown in the inspection procedures or repair the leakage problems that you find.

2) Do the Repair Confirmation at the end of this task.

(d) If you do not find indications of leakage, then look for indications of oil leakage internal to the engine. To do this, do this task: Internal Oil System Inspection, AMM TASK 79-00-00-200-803-F00.

1) If you find indications of leakage, then do these steps:

a) Repair the leakage.

b) Do the Repair Confirmation at the end of this task.

2) If you do not find indications of leakage, then continue:

(3) Do this check for hydraulic fluid leakage:

(a) Do this task: Hydraulic Fluid Leakage Problem - Fault Isolation, 29-10 TASK 812.

(b) If you find hydraulic fluid leakage, then do the corrective action indicated in the procedure.

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

(c) If you do not find hydraulic fluid leakage, then continue.

(4) Do this check for contamination in the air distribution system:

(a) Do the oil contamination removal procedure with engine No. 2 and the right pack on until smoke or fumes appear in the cabin. To do this, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

(b) If smoke or fumes appear, then do these steps:

1) Do a check of these areas in the air distribution system for the source of the contamination:

a) Each of the components of the right pack.

b) The main distribution manifold

c) The air distribution ducts where the smoke first appears

2) Replace the component or clean the duct that is the source of the smoke.

3) Do the Repair Confirmation at the end of this task.

(c) If smoke or fumes do not appear, then do the full oil contamination removal procedure with the two engines, the APU, and the two packs on. To do this, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

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(d) If smoke or fumes appear, then do these steps:

1) Do a check of these areas in the air distribution system for the source of the contamination:

a) Each of the components of the pack

b) The main distribution manifold

c) The air distribution ducts where the smoke or fumes first appear

2) Replace the component or clean the duct that is the source of the smoke.

3) Do the Repair Confirmation at the end of this task.

(e) If smoke or fumes do not appear, and if the problem does not occur on the subsequent flight, then there was an intermittent fault.

E. Repair Confirmation

(1) Do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

(a) If the oil contamination removal procedure is done until there is no smoke or fumes, and if the problem does not occur on the subsequent flight, then you corrected the fault.

———————— END OF TASK ————————

802. Smoke or Fumes in the Passenger Cabin or Flight Compartment, Reported During Flight, Smoke Stops With Isolation Valve Closed, Left Pack Switch Off - Fault Isolation

A. Description

(1) Smoke or fumes flow into the passenger cabin or the flight compartment through the air distribution system during flight. This problem is usually caused by contamination of the air by oil, glycol, fuel, or hydraulic fluid. In flight, contamination can be caused by leakage of these fluids in one of the engines. Smoke or fumes can also be caused by oil, glycol, hydraulic fluid, fuel fumes or exhaust fumes being ingested into the inlet of one of the engines. From the inlet, the contaminant can go into the pneumatic and/or the air conditioning system and vaporize at higher temperatures. Fumes can also be caused by the use of petroleum jelly during maintenance of the pneumatic ducts or air distribution ducts.

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(2) Make sure the fault report shows the smoke or fumes were stopped with the isolation valve closed, the left pack switch off, and the recirculation fan off. This means that the No. 2 engine, the pneumatic air supply from the No. 2 engine, the right pack, and the related air distribution ducts were not the source of the smoke or fumes. The Fault Isolation procedure below tells you how to find the cause of smoke in the No. 1 engine, the APU pneumatic system, the pneumatic air supply from the No. 1 engine, the left pack, the recirculation system, and the related air distribution ducts.

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(3) Make sure the fault report shows the smoke or fumes were stopped with the isolation valve closed, the left pack switch off, and the two recirculation fans off. This means that the No. 2 engine, the pneumatic air supply from the No. 2 engine, the right pack, and the related air distribution ducts were not the source of the smoke or fumes. The Fault Isolation procedure below tells you how to find the cause of smoke in the No. 1 engine, the pneumatic air supply from the No. 1 engine, the APU pneumatic system, the left pack, the recirculation system, and the related air distribution ducts.

HAP ALL

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(4) Do not do this procedure with the passengers or the crew on the airplane since it can cause smoke or fumes in the passenger cabin.

(5) (SDS SUBJECT 21-20-00)

(6) (SDS SUBJECT 36-00-00)

B. Possible Causes

(1) Contamination in the Engine No. 1 pneumatic system

(2) Contamination in the APU pneumatic system.

(3) Hydraulic fluid leakage

(4) Contamination in the air distribution system

(5) Overheating of recirculation fan

C. Related Data

(1) (SSM 21-25-11)

(2) (WDM 21-25-11)

D. Fault Isolation Procedure

(1) Do these checks of the air recirculation system:

NOTE: Check the air recirculation fans and filters only if there is smoke or fumes in the passenger compartment.

(a) Do this task: Recirculation Air Filter Removal, AMM TASK 21-25-01-000-801.

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(b) Examine the air recirculation filter for the following:

1) Contaminants: dust, dirt, lint, and oil.

2) Rips in the filter.

3) Breaks in the filter frame.

(c) If necessary, install a new air recirculation filter. To do this, do this task: AMM TASK 21-25-01-400-801

HAP 001-013, 015-026, 028-054

(d) Examine the air recirculation filters for the following:

1) Contaminants: dust, dirt, lint, and oil.

2) Rips in the filter.

3) Breaks in the filter frame.

(e) If necessary, install new air recirculation filters. To do this, do this task: AMM TASK 21-25-01-400-801

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(f) Do a check to see if the air recirculation fan or the related wiring generates smoke while it operates. To do this, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

1) If there is smoke from the air recirculation fan or the related wiring, then do the applicable steps below:

a) Replace the air recirculation fan.

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HAP 101-999 (Continued)

These are the tasks:

Recirculation Fan Removal, AMM TASK 21-25-02-000-801,

Recirculation Fan Installation, AMM TASK 21-25-02-400-801.

b) Repair the applicable wiring.

c) Do the Repair Confirmation at the end of this task.

2) If there is no smoke or fumes from the air recirculation fan or the related wiring, and the operational test is satisfactory, then continue.

HAP 001-013, 015-026, 028-054

(g) Do a check to see if the air recirculation fans or the related wiring makes smoke while they operate. To do this, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

1) If there is smoke from an air recirculation fan or the related wiring, then do the applicable steps below:

a) Replace the air recirculation fan.

These are the tasks:

Recirculation Fan Removal, AMM TASK 21-25-02-000-801,

Recirculation Fan Installation, AMM TASK 21-25-02-400-801.

b) Repair the applicable wiring.

c) Do the Repair Confirmation at the end of this task.

2) If there is no smoke or fumes from the air recirculation fans or the related wiring, and the operational test is satisfactory, then continue.

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(2) Do these checks for contamination in the APU pneumatic system:

(a) To do a check for contamination in the APU pneumatic system, do this task:Fumes or Smoke in Cabin During APU Operation - Fault Isolation, 49-55 TASK 802

(b) If you do not find any indication of contamination, then continue.

(3) Do these checks for contamination in the Engine No. 1 pneumatic sytem:

(a) Look for leakage of oil in Engine No. 1. To do this, do this task: External Oil System Inspection, AMM TASK 79-00-00-200-802-F00.

(b) Do an inspection of the vents and drains for indications of leakage of oil, hydraulic fluid, or fuel in Engine No. 1. To do this, do this task: Engine Vents and Drains Inspection, AMM TASK 71-71-00-200-801-F00.

NOTE: It is not necessary to do this task again if you did it during the external oil system inspection.

(c) If you find indications of leakage in Engine No. 1, then do these steps:

1) Do the corrective action shown in the inspection procedures or repair the leakage problems that you find.

2) Do the Repair Confirmation at the end of this task.

(d) If you do not find indications of leakage, then look for indications of oil leakage internal to the engine. To do this, do this task: Internal Oil System Inspection, AMM TASK 79-00-00-200-803-F00.

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1) If you find indications of leakage, then do these steps:
   a) Repair the leakage.
   b) Do the Repair Confirmation at the end of this task.
2) If you do not find indications of leakage, then continue.

(4) Do this check for hydraulic fluid leakage:
   (a) Do this task: Hydraulic Fluid Leakage Problem - Fault Isolation, 29-10 TASK 812.
   (b) If you find hydraulic fluid leakage, then do the corrective action indicated in the procedure.
      1) Do the Repair Confirmation procedure at the end of this task.
   (c) If you do not find hydraulic fluid leakage, then continue.

(5) Do this check for contamination in the air distribution system:
   (a) Do the oil contamination removal procedure with engine No. 1 and the left pack on until smoke or fumes appear in the cabin. To do this, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.
   (b) If smoke or fumes appear, then do these steps:
      1) Do a check of these areas in the air distribution system for the source of the contamination:
         a) Each of the components of the left pack.
         b) The main distribution manifold
         c) The air distribution ducts where the smoke first appears
      2) Replace the component or clean the duct that is the source of the smoke.
      3) Do the Repair Confirmation at the end of this task.
   (c) If smoke or fumes do not appear, then do the full oil contamination removal procedure with the two engines, the APU, and the two packs on. To do this, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.
   (d) If smoke or fumes appear, then do these steps:
      1) Do a check of these areas in the air distribution system for the source of the contamination:
         a) Each of the components of the pack
         b) The main distribution manifold
         c) The air distribution ducts where the smoke or fumes first appear
      2) Replace the component or clean the duct that is the source of the smoke.
      3) Do the Repair Confirmation at the end of this task.
   (e) If smoke or fumes do not appear, and if the problem does not occur on the subsequent flight, then there was an intermittent fault.

E. Repair Confirmation

(1) Do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.
   (a) If the oil contamination removal procedure is done until there is no smoke or fumes, and if the problem does not occur on the subsequent flight, then you corrected the fault.

——————— END OF TASK ———————

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803. Smoke or Fumes in the Passenger Cabin or Flight Compartment, Reported During Flight, Smoke Does Not Stop With Isolation Valve Closed, Each of the Two Pack Switches Off (In Turn) - Fault Isolation

A. Description

(1) Smoke or fumes flow into the passenger cabin or the flight compartment through the air distribution system during flight. This problem is usually caused by contamination of the air by oil, glycol, fuel, or hydraulic fluid. Fumes can also be caused by the use of petroleum jelly during maintenance of the pneumatic ducts or air distribution ducts.

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(2) Make sure the fault report shows the smoke or fumes were not stopped with the isolation valve closed, the recirculation fan off, the right pack switch set at OFF and then the left pack switch at OFF. Usually during the flight operations procedure, the right pack switch and the left pack switch are turned off in sequence, not at the same time. This usually means that the source of the smoke or fumes is the main air distribution manifold or the air duct system downstream. It is unlikely to be in the pneumatic air supply or the engine since each pack and each engine was used independently with the isolation valve closed. Thus, the source of the smoke or fumes must be in the main air distribution manifold or the air duct system downstream.

HAP 001-013, 015-026, 028-054

(3) Make sure the fault report shows the smoke or fumes were not stopped with the isolation valve closed, the two recirculation fans off, the right pack switch set at OFF and then the left pack switch at OFF. Usually during the flight operations procedure, the right pack switch and the left pack switch are turned off in sequence, not at the same time. This usually means that the source of the smoke or fumes is the main air distribution manifold or the air duct system downstream. It is unlikely to be in the pneumatic air supply or the engine since each pack and each engine was used independently with the isolation valve closed. Thus, the source of the smoke or fumes must be in the main air distribution manifold or the air duct system downstream.

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(4) Do not do this procedure with the passengers or the crew on the airplane since it can cause smoke or fumes in the passenger cabin.

(5) (SDS SUBJECT 21-20-00)

(6) (SDS SUBJECT 36-00-00)

B. Possible Causes

(1) Hydraulic fluid leakage

(2) Contamination in the air distribution system

C. Fault Isolation Procedure

(1) Do this check for hydraulic fluid leakage:

(a) Do this task: Hydraulic Fluid Leakage Problem - Fault Isolation, 29-10 TASK 812.

(b) If you find hydraulic fluid leakage, then do the corrective action indicated in the procedure.

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

(c) If you do not find hydraulic fluid leakage, then continue.

(2) Do this check of the air distribution system:

(a) Do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

(b) If smoke or fumes appear, then do these steps:

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1) Do a check of these areas in the air distribution system for the source of the contamination:
   a) The main distribution manifold
   b) The air distribution ducts where the smoke first appears
2) Replace the component or clean the duct that is the source of the smoke.
3) Do the Repair Confirmation at the end of this task.

(c) If smoke or fumes do not appear, then there was an intermittent fault.

D. Repair Confirmation

(1) Do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

(a) If the oil contamination removal procedure is done until there is no smoke or fumes, and if the problem does not occur on the subsequent flight, then you corrected the fault.

———————— END OF TASK ————————

804. Smoke or Fumes in the Passenger Cabin - Stops With Recirculation Fan Off - Fault Isolation

A. Description

(1) Smoke or fumes flow into the passenger cabin or the flight compartment through the air distribution system. This problem is usually caused by contamination of the air by oil, glycol, fuel, or hydraulic fluid. If you think the problem is caused by one of these types of contamination, then do the applicable fault isolation procedure below:.

(a) Do this task: Smoke or Fumes in the Passenger Cabin or Flight Compartment, Reported During Flight, Smoke Stops With Isolation Valve Closed, Right Pack Switch Off - Fault Isolation, 21-00 TASK 801.

(b) Do this task: Smoke or Fumes in the Passenger Cabin or Flight Compartment, Reported During Flight, Smoke Stops With Isolation Valve Closed, Left Pack Switch Off - Fault Isolation, 21-00 TASK 802.

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(2) But if the problem was corrected when the recirculation fan was turned off and the air conditioning system was in its normal configuration with the two packs in operation and the isolation valve open, then the only possible cause is the air recirculation system. Make sure the fault report shows the smoke or fumes were stopped with the recirculation fan off. If this was the only measure taken to stop the smoke and the smoke was stopped, this means that the recirculation system was the cause of the smoke or fumes.

HAP 001-013, 015-026, 028-054

(3) But if the problem was corrected when either one or both of the recirculation fans were turned off and the air conditioning system was in its normal configuration with the two packs in operation and the isolation valve open, then the only possible cause is the air recirculation system. Make sure the fault report shows the smoke or fumes were stopped with the recirculation fans off. If this was the only measure taken to stop the smoke and the smoke was stopped, this means that the recirculation system was the cause of the smoke or fumes.

HAP ALL

(4) Do not do this procedure with the passengers or the crew on the airplane since it can cause smoke or fumes in the passenger cabin.

(5) (SDS SUBJECT 21-20-00)

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(6) (SDS SUBJECT 36-00-00)

B. Possible Causes

(1) Overheating of recirculation fan or the related wiring

C. Related Data

(1) (SSM 21-25-11)

(2) (WDM 21-25-11)

D. Fault Isolation Procedure

(1) Do these checks of the air recirculation system:

(a) Do this task: Recirculation Air Filter Removal, AMM TASK 21-25-01-000-801.

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(b) Examine the air recirculation filter for the following:

1) Contaminants: dust, dirt, lint, and oil.

2) Rips in the filter.

3) Breaks in the filter frame.

(c) If necessary, install a new air recirculation filter. To do this, do this task: AMM TASK 21-25-01-400-801

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(d) Examine the air recirculation filters for the following:

1) Contaminants: dust, dirt, lint, and oil.

2) Rips in the filter.

3) Breaks in the filter frame.

(e) If necessary, install new air recirculation filters. To do this, do this task: AMM TASK 21-25-01-400-801.

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(f) Do a check to see if the air recirculation fan or the related wiring generates smoke while it operates. To do this, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

1) If there is smoke from the air recirculation fan or the related wiring, then do the applicable steps below:

a) Replace the air recirculation fan.

These are the tasks:

Recirculation Fan Removal, AMM TASK 21-25-02-000-801,

Recirculation Fan Installation, AMM TASK 21-25-02-400-801.

b) Repair the applicable wiring.

c) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

d) If the operational test is satisfactory and the problem does not occur on the subsequent flight, then you corrected the fault.

2) If there is no smoke or fumes from the air recirculation fan or the related wiring, and the operational test is satisfactory, then there was an intermittent fault.

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(g) Do a check to see if the air recirculation fans or the related wiring generates smoke while they operate. To do this, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

1) If there is smoke from an air recirculation fan or the related wiring, then do the applicable steps below:

a) Replace the air recirculation fan.

These are the tasks:

Recirculation Fan Removal, AMM TASK 21-25-02-000-801,

Recirculation Fan Installation, AMM TASK 21-25-02-400-801.

b) Repair the applicable wiring.

c) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

d) If the operational test is satisfactory and the problem does not occur on the subsequent flight, then you corrected the fault.

2) If there is no smoke or fumes from the air recirculation fans or the related wiring, and the operational test is satisfactory, then there was an intermittent fault.

HAP ALL

——————— END OF TASK ———————

806. Smoke or Fumes in the Cabin, Source Unknown - Fault Isolation

A. General

CAUTION: DO NOT REPLACE PARTS UNTIL YOU IDENTIFY, AND REMOVE THE SOURCE OF THE FUMES. THE FUMES CAN CAUSE THE CONTAMINATION OF A NEW PART. THEN THE NEW PART WILL BE THE SOURCE OF THE FUMES.

(1) To troubleshoot for cabin fumes or smoke, look for obvious sources inside the cabin and then work to the outside. Start with newly leaking fluids from the engine cowling, APU compressors, and APU drain masts.

(2) Smoke or fumes can be caused by an internal APU/engine failures which can release oil into the pneumatic and/or air conditioning systems. Another source of smoke or fumes is oil, glycol or hydraulic fluid being ingested into the inlet of the APU or engines. Contamination that is ingested by the APU or engines can enter the pneumatic and/or air conditioning systems.

(3) Additional sources of smoke or fumes can be the recirculation fans, gasper fans (if installed), equipment cooling fans, cabin temperature sensor fan, IFE Equipment (if installed), materials in the cargo compartments, ground carts, fuel leaks that have entered the ducts of the air conditioning system, and hydraulic fluid from the reservoir pressurization module tubing.

(4) Odors in the cabin after an engine has been overhauled or the compressor has been washed are not uncommon. These conditions are not considered a fault. Put the airplane "on watch" as necessary.

(5) Odors in the cabin can occur again after the correction of a problem with a bleed air source (APU, engines). Additional flights or the replacement of ozone converters (if installed), trim air mufflers, heat exchangers, or cooling pack components may be necessary to remove all the contamination.

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(6) Faults in different systems make fumes with different smells. The table that follows has descriptions of the fumes from different systems to help you isolate the fault.

FUMES	DESCRIPTION	FAULT ISOLATION TASK(S)
OIL	SWEAT, LOCKER ROOM, DIRTY SOCK, RANCID CHEESE, WET DOG, BURNING RUBBER, SOUR MILK, (FRESH OIL) SWEET, MILD IRRITATION TO EYES	Check the APU, Left and Right Engine for Oil Contamination, Check the Cooling Packs for Oil Contamination, Check the Ozone Converter for odor, If present, work upstream to find the source of the contamination
HYDRAULIC FLUID	STRONG IRRITATION TO EYES, PUNGENT, ACRID	Check the Hydraulic Reservoir Pressurization Module tubing and Check Valves for Hydraulic Oil Residue
FUEL	(BURNED FUEL) KEROSENE, (UNBURNED FUEL) ACRID, BITTER	Check the engines as cause of Oil/Fuel Fumes/Smoke in Cabin (FIM 71-05)
ELECTRICAL FAULTS	ACRID, BURNING RUBBER, SULFUR	Check the Cabin Equipment, Check Recirculation Fans and Cargo Compartments, Check Light Ballasts and Galley Equipment
OTHER	COOKED CHICKEN (BIRD STRIKE), BURNING RESIN, ACRID ODOR THAT IRRITATES NOSE AND THROAT, HOT MUSTY SMELL, HAZE IN FLIGHT WITH NO SMELL	Check the Engines for evidence of Bird Strike, Check Trim Valve operation for zone that is source of complaint. Check under Aft Cargo Floor for dripped fluids or dust around the APU Bleed Duct, Check that fumes are not being ingested into bleed air from an external source. Check cargo floors above and below and behind cargo sidewalls for dust or lint and for unwanted materials spilled or left behind

(7) Do not do this procedure with the crew or passengers on the airplane. This procedure can generate smoke in the airplane.

B. Initial Evaluation

(1) Do a check of the low pressure ground connector.

(a) Make sure the check is done less than an hour after the engines are stopped.

(b) To get access to the ground air check valve for the cooling packs, open the ECS low pressure connection door, 191E, do this task: Finding an Access Door or Panel on the Lower Half of the Fuselage, AMM TASK 06-41-00-800-801.

(c) Hold the low pressure flapper valve open.

(d) Use a mirror to look inside the low pressure ground connector for signs of oil contamination.

(e) Feel the surfaces inside the low pressure ground connector to see if fresh oil is present.

(f) If oil contamination is found, the probable source is the left/right engine or APU. The pack must be cleaned. This would rule out E/E cooling and recirculation.

(2) Do a visual inspection of the drain mast.

(a) If nothing is found, then follow the detailed instructions.

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(3) Check for existing faults for the cabin and IFE equipment.

NOTE: Faults for the cabin and IFE equipment may be related to fumes in the cabin or flight deck.

(4) Start the APU. To start the APU, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-801.

(5) Start the left and right engines. To start the engines, do this task: Start the Engine Procedure (Selection), AMM TASK 71-00-00-800-807-F00.

WARNING: OBSERVE PROPER SAFETY PRECAUTIONS AROUND RUNNING ENGINE. WEAR EAR PROTECTORS AND STAY CLEAR OF ENGINE HAZARD AREAS. SEE "ENGINE GROUND SAFETY PRECAUTIONS" FOR ENGINE HAZARD DESCRIPTION.

(6) Make sure that you obey all safety precautions when you are near an engine that is in operation. To obey the safety precautions, comply with the directions in this task:Engine Ground Safety Precautions, AMM TASK 71-00-00-800-805-F00.

(7) On the BLEED AIR module of the Overhead Panel, P5, set switches that follow to the indicated positions:

(a) Put the ISOLATION VALVE switch to the OPEN position.

(b) Put the ENGINE 1, and ENGINE 2 switches to the ON position.

(c) Put the APU switch to the ON position.

(8) Make sure the hydraulic reservoirs are pressurized. To pressurize the hydraulic reservoirs, do this task: Hydraulic Reservoirs Pressurization, AMM TASK 29-11-01-860-801 or Hydraulic Reservoirs Pressurization, AMM TASK 29-09-00-860-801.

(9) Supply conditioned air with the left and right cooling packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(10) Make sure the switches that follow are set to the indicated positions:

(a) On the P5-10 air conditioning panel:

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1) RECIRC FAN switch is set to OFF.

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2) L RECIRC FAN and R RECIRC FAN switches are set to OFF.

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(b) On the P5-11 thermal anti-ice panel:

1) WING, ENGINE 1, and ENGINE 2, ANTI-ICE switches are set to OFF.

(11) Operate the cooling packs, APU and engines in each of the configurations shown in the table below.

(a) Operate the cooling packs with the trim air ON and the cabin temperatures selected to full Warm (W).

(b) Repeat the steps with the trim air OFF and the cabin temperatures selected to full Cold (C).

(c) Use the REFERENCE NUMBER table to find the applicable fault isolation procedure to perform when fumes are present.

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APU	L ENG	R ENG	L PACK	R PACK	FUMES	REFERENCE NUMBER(S)
ON	OFF	OFF	ON	OFF	YES	4,1
ON	OFF	OFF	OFF	ON	YES	4,1
OFF	ON	OFF	ON	OFF	YES	4,2
OFF	OFF	ON	OFF	ON	YES	4,3

REFERENCE NUMBER	FAULT ISOLATION TASK TITLE
1	Check the APU Bleed Air for Oil Contamination
2	Check the Left Engine Bleed Air for Oil Contamination
3	Check the Right Engine Bleed Air for Oil Contamination
4	Check the Cooling Packs for Oil Contamination

(12) If no fumes or smoke appear, then there was an intermittent fault.

NOTE: Occurrences of smoke or fumes in flight are not always repeatable on the ground.

(a) If no fumes or smoke appear, you may be able to determine the source of the smoke occurrence from the description of the smell and its location from the crew members on the flight.

(b) If a description of the smell of the fumes is available use the fumes description table in the General section to determine which fault isolation procedure may be applicable.

(c) If the type of fumes can not be identified, then do the Fault Isolation task from the beginning.

(13) Stop the cooling packs, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(14) Stop the left and right engines. To stop the engines, do this task: Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00.

(15) Stop the APU. To stop the APU, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-802.

C. Fault Isolation Procedure - Check the APU Bleed Air for Oil Contamination

(1) Do the steps that follow to check the APU for the correct quantity of oil:

(a) To get access to the APU oil level sight gage:

Open this access panel:

Number	Name/Location
315A	APU Cowl Door

1) To open the APU access doors, do these steps:

a) Open the three latches.

b) Open the APU cowl door.

c) Remove the retainer pin from the rod end of the forward hold-open rod on the APU cowl door.

d) Remove the retainer pin from the spring clip on the aft hold-open rod.

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e) Disconnect the two hold-open rods from the two spring clips.

f) Connect the two rod ends of the two hold-open rods to the two brackets in the APU compartment.

g) Install the two retainer pins in the two rod ends.

(b) Make sure the APU oil level sight gage shows the correct quantity of oil.

(c) If the APU oil level is less than FULL, do a check of the maintenance records to see if there is a change in oil consumption averages. do this task: APU Oil Level Inspection, AMM TASK 12-13-31-200-801.

NOTE: The oil consumption for a new or newly overhauled APU is 0.008 quarts (8 cc) per hour. Oil consumption more than this rate does not necessarily indicate a problem with the APU. If the oil consumption increases rapidly, then there could be a problem with the APU.

(2) Check the APU magnetic chip detectors for debris:

(a) Do this task: Magnetic Drain Plug Inspection, AMM TASK 49-91-81-200-801

NOTE: Debris in the oil can cause damage to bearings and seals. Damage to seals can cause oil loss and contamination of the pneumatic system. Oil contamination of the pneumatic system can cause smoke and fumes.

(3) Inspect the APU inlet area and inlet duct:

(a) Inspect the fuselage exterior near the APU inlet door, and the inside of the APU inlet duct for signs that fluid went into the APU inlet.

1) If fluid went into the APU inlet, find the cause of the fluid and correct the problem before you continue.

(4) Do the steps that follow to check the APU:

(a) Remove the APU bleed air valve. To remove the valve, do this task: Bleed Air Valve Removal, AMM TASK 49-52-11-000-801.

(b) Remove the APU surge control valve. To remove the valve, do this task: Surge Control Valve Removal, AMM TASK 49-52-41-000-801.

(c) Examine the APU bleed air valve and the upstream APU bleed duct for wet oil.

(d) Examine the APU surge control valve and the upstream duct for wet oil.

(e) Re-install the APU bleed air valve. To install the valve, do this task: Bleed Air Valve Installation, AMM TASK 49-52-11-400-801.

(f) Re-install the APU surge control valve. To install the valve, do this task: Surge Control Valve Installation, AMM TASK 49-52-41-400-801.

(g) Inspect the APU load compressor for damage. do this task: APU Engine Inspection, AMM TASK 49-21-00-200-801.

(h) Inspect the APU power section compressor for damage. do this task: APU Engine Inspection, AMM TASK 49-21-00-200-801.

(5) Supply electrical power with a ground cart. To supply electrical power, do this task: Supply External Power, AMM TASK 24-22-00-860-813.

NOTE: Do not operate the APU or the engines to supply electrical power to the airplane.

(6) To get access to the cooling packs, open these access panels, in this sequence:

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Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

WARNING: PUT ON GLOVES FOR PROTECTION FROM HOT SURFACES WHEN YOU CONNECT OR DISCONNECT PNEUMATIC FITTINGS. PACK OPERATION CAN MAKE THE GROUND AIR CONNECTOR VERY HOT. A HOT GROUND AIR CONNECTOR WILL BURN YOUR BARE HANDS.

(7) Install the deactivator, COM-2462, in the ground air connector as follows:

(a) Put the deactivator, COM-2462, in the ground air connector so that the check valve flappers are open.

(b) Install the coupling on the supply hose from the ground air cart onto the nipple of the ground air connector check valve assembly so that the deactivator, COM-2462 is held in place.

NOTE: The supply hose should not be connected to the ground cart as the exhaust from the hose should be vented to ambient.

(8) Make sure these switches on the P5 overhead panel, are set to the indicated positions:

(a) On the P5-10 air conditioning panel:

1) L PACK and R PACK switches are set to OFF.

HAP 101-999

2) RECIRC FAN switch is set to OFF.

HAP 001-013, 015-026, 028-054

3) L RECIRC FAN and R RECIRC FAN switches are set to OFF.

4) TRIM AIR switch is set to OFF.

HAP ALL

(b) On the P5-11 thermal anti-ice panel:

1) WING, ENGINE 1, and ENGINE 2, ANTI-ICE switches are set to OFF.

WARNING: DO NOT PUT YOUR HAND OR BODY IN THE AIR THAT COMES OUT OF THE PNEUMATIC GROUND CONNECTOR. THE HOT AIR WILL CAUSE INJURIES.

(9) Do the steps which follow to do a check for oil contamination from the APU:

NOTE: The APU bleed air will go out through the check valve in the pneumatic ground air connector.

(a) Start the APU and let the APU operation become stable. To start and operate the APU, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-804.

(b) Make sure the ISOLATION VALVE switch on the P5-10 air conditioning panel is set to OPEN.

(c) Make sure the APU BLEED switch, on the P5-10 air conditioning panel, is set to ON.

(d) Operate the APU for 5 minutes.

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WARNING: DO NOT PUT YOUR HAND OR BODY IN THE AIR THAT COMES OUT OF THE PNEUMATIC GROUND CONNECTOR. THE HOT AIR WILL CAUSE INJURIES.

(e) Stand near the pneumatic ground air connector and smell if there is contaminated air.

NOTE: You can do a smell check of the bleed air from a different APU if it is necessary to compare the bleed air fumes.

(f) Look for smoke in the APU bleed air.

(g) If there is contaminated bleed air from the APU, do the steps that follow:

1) Replace the APU. To replace the APU,

These are the tasks:

(APU Power Plant Removal, AMM TASK 49-11-00-000-801, APU Power Plant Removal, AMM TASK 49-11-00-000-801, APU Power Plant Removal (Fishpole Hoist Procedure), AMM TASK 49-11-00-000-802, APU Power Plant Removal (Hydraulic Jack Procedure), AMM TASK 49-11-00-000-803).

(APU Power Plant Installation, AMM TASK 49-11-00-400-801, APU Power Plant Installation (Fishpole Hoist Procedure), AMM TASK 49-11-00-400-802, APU Power Plant Installation (Hydraulic Jack Procedure), AMM TASK 49-11-00-400-803).

2) Do the oil contamination removal task, To remove the oil contamination, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

3) If the oil contamination removal task does not remove the fumes it may be necessary to replace components of the affected cooling pack. To replace the components, do the tasks that follow.

a) Replace the heat exchanger for the oil contaminated cooling pack. To replace the heat exchanger,

These are the tasks:

Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-802-001 or Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-805-002,

Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-801-001 or Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-804-002.

HAP 001-013, 015-026, 028-054

b) Replace the condenser for the oil contaminated cooling pack. To replace the condenser,

These are the tasks:

Condenser Removal, AMM TASK 21-51-12-000-801,

Condenser Installation, AMM TASK 21-51-12-400-802.

c) Replace the reheater for the oil contaminated cooling pack. To replace the reheater,

These are the tasks:

Reheater Removal, AMM TASK 21-51-13-000-801,

Reheater Installation, AMM TASK 21-51-13-400-801.

HAP ALL

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d) If there is smoke or fumes from the left cooling pack replace the flight deck mufflers. To replace the flight deck mufflers,

These are the tasks:

Flight Deck Air Distribution System Muffler/Duct Assembly Removal, AMM TASK 21-22-05-000-801,

Flight Deck Air Distribution System Muffler/Duct Assembly Installation, AMM TASK 21-22-05-400-801.

4) Do the Repair Confirmation at the end of this task.

(h) If there is not contaminated bleed air from the APU, then continue.

(i) Set the ISOLATION VALVE switch on the P5-10 air conditioning panel to CLOSE.

(j) Stop the operation of the APU, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-802.

WARNING: PUT ON GLOVES FOR PROTECTION FROM HOT SURFACES WHEN YOU CONNECT OR DISCONNECT PNEUMATIC FITTINGS. PACK OPERATION CAN MAKE THE GROUND AIR CONNECTOR VERY HOT. A HOT GROUND AIR CONNECTOR WILL BURN YOUR BARE HANDS.

(10) Remove the ground cart supply hose and deactivator, COM-2462, from the pneumatic ground connector.

(11) Close these access panels in this sequence:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

D. Fault Isolation Procedure - Check the Left Engine Bleed Air for Oil Contamination

(1) Do the steps that follow to check the left engine for the correct quantity of oil:

(a) Do the applicable steps from this task:

Replenish the Engine Oil, AMM TASK 12-13-11-600-801

(b) Make sure the engine has the correct quantity of oil.

(c) If the oil level is near or over the top of the sight glass, correct the oil level before you continue. Do the task to drain the engine oil (Drain the Engine Oil, AMM TASK 12-13-11-600-803).

NOTE: Too much oil in the engine(s) can cause smoke or fumes in the pneumatic system.

(d) If the oil level is less than FULL, do a check of the maintenance records to see if there is a change in oil consumption averages.

NOTE: An increase in oil consumption can be an indication of oil loss and possible contamination of the pneumatic system. This can cause smoke or fumes in the pneumatic system.

(2) Do the steps that follow to do a check of the left engine for damage:

(a) Examine the area behind the fan blades for large oil stains or puddles of oil.

(b) Examine the area behind the fan blades for signs of a bird strike.

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(3) Supply electrical power with a ground cart. To supply electrical power, do this task: Supply External Power, AMM TASK 24-22-00-860-813.

NOTE: Do not operate the APU or the engines to supply electrical power to the airplane.

(4) Make sure these switches on the P5 overhead panel, are set to the indicated positions:

(a) On the P5-10 air conditioning panel:

1) APU, ENGINE 1, and ENGINE 2 switches are set to OFF

2) ISOLATION VALVE switch is set to CLOSE

3) L PACK and R PACK switches are set to OFF.

HAP 101-999

4) RECIRC FAN switch is set to OFF.

HAP 001-013, 015-026, 028-054

5) L RECIRC FAN and R RECIRC FAN switches are set to OFF.

6) TRIM AIR switch is set to OFF.

HAP ALL

(b) On the P5-11 thermal anti-ice panel:

(c) WING, ENGINE 1, and ENGINE 2, ANTI-ICE switches are set to OFF.

(5) To get access to the cooling packs, open these access panels, in this sequence:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

WARNING: PUT ON GLOVES FOR PROTECTION FROM HOT SURFACES WHEN YOU CONNECT OR DISCONNECT PNEUMATIC FITTINGS. PACK OPERATION CAN MAKE THE GROUND AIR CONNECTOR VERY HOT. A HOT GROUND AIR CONNECTOR WILL BURN YOUR BARE HANDS.

(6) Install the deactivator, COM-2462, in the ground air connector as follows:

(a) Put the deactivator, COM-2462, in the ground air connector so that the check valve flappers are open.

(b) Install the coupling on the supply hose from the ground air cart onto the nipple of the ground air connector check valve assembly so that the deactivator, COM-2462 is held in place.

NOTE: The supply hose should not be connected to the ground cart as the exhaust from the hose should be vented to ambient.

WARNING: DO NOT PUT YOUR HAND OR BODY IN THE AIR THAT COMES OUT OF THE PNEUMATIC GROUND CONNECTOR. THE HOT AIR WILL CAUSE INJURIES.

(7) Do these steps which follow to check for oil contamination from the left engine:

NOTE: The left engine bleed air will go out through the pneumatic ground air connector duct opening.

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(a) Start the left engine and let the engine operate at ground idle speed. To start and operate the left engine, do this task: Start the Engine Procedure (Selection), AMM TASK 71-00-00-800-807-F00.

1) Use the APU to start the engine as it is still in operation.

2) Set the APU BLEED switch, on the P5-10 air conditioning panel, to OFF.

3) Set the ISOLATION VALVE switch on the P5-10 air conditioning panel to OPEN.

(b) Set the engine pneumatic BLEED 1 switch, on the P5-10 air conditioning panel, to ON.

WARNING: OBSERVE PROPER SAFETY PRECAUTIONS AROUND RUNNING ENGINE. WEAR EAR PROTECTORS AND STAY CLEAR OF ENGINE HAZARD AREAS. SEE "ENGINE GROUND SAFETY PRECAUTIONS" FOR ENGINE HAZARD DESCRIPTION.

(c) Make sure that you obey all safety precautions when you are near an engine that is in operation. To obey the safety precautions, comply with the directions in this task:Engine Ground Safety Precautions, AMM TASK 71-00-00-800-805-F00.

(d) Let the engine operate for 2 minutes.

WARNING: DO NOT PUT YOUR HAND OR BODY IN THE AIR THAT COMES OUT OF THE PNEUMATIC GROUND CONNECTOR. THE HOT AIR WILL CAUSE INJURIES.

(e) Stand near the pneumatic ground air connector and smell if there is contaminated air.

NOTE: You can do a smell check of the bleed air from the right engine if it is necessary to compare the bleed air fumes.

(f) If there is contaminated bleed air from the left engine, do the steps that follow:

1) Check the left engine as cause of oil/fuel fumes/smoke in the cabin Fumes or Smoke in Cabin, Pneumatic Power Supplied by Engine - Fault Isolation, 71-05 TASK 807.

2) Do the oil contamination removal task, To remove the oil contamination, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

3) If the oil contamination removal task does not remove the fumes it may be necessary to replace components of the affected cooling pack. To replace the components, do the tasks that follow.

a) Replace the heat exchanger for the oil contaminated cooling pack. To replace the heat exchanger,

These are the tasks:

Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-802-001 or Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-805-002,

Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-801-001 or Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-804-002.

HAP 001-013, 015-026, 028-054

b) Replace the condenser for the oil contaminated cooling pack. To replace the condenser,

These are the tasks:

Condenser Removal, AMM TASK 21-51-12-000-801,

Condenser Installation, AMM TASK 21-51-12-400-802.

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c) Replace the reheater for the oil contaminated cooling pack. To replace the reheater,

These are the tasks:

Reheater Removal, AMM TASK 21-51-13-000-801,

Reheater Installation, AMM TASK 21-51-13-400-801.

HAP ALL

d) If there is smoke or fumes from the left cooling pack replace the flight deck mufflers. To replace the flight deck mufflers,

These are the tasks:

Flight Deck Air Distribution System Muffler/Duct Assembly Removal, AMM TASK 21-22-05-000-801,

Flight Deck Air Distribution System Muffler/Duct Assembly Installation, AMM TASK 21-22-05-400-801.

4) Do the Repair Confirmation at the end of this task.

(g) If there is not contaminated bleed air from the left engine, then continue.

(h) Set the engine pneumatic BLEED 1 switch to OFF.

(i) Stop the operation of the left engine, do this task: Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00.

WARNING: PUT ON GLOVES FOR PROTECTION FROM HOT SURFACES WHEN YOU CONNECT OR DISCONNECT PNEUMATIC FITTINGS. PACK OPERATION CAN MAKE THE GROUND AIR CONNECTOR VERY HOT. A HOT GROUND AIR CONNECTOR WILL BURN YOUR BARE HANDS.

(8) Remove the ground cart supply hose and deactivator, COM-2462, from the pneumatic ground connector.

(9) Close these access panels in this sequence:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

E. Fault Isolation Procedure - Check the Right Engine Bleed Air for Oil Contamination

(1) Do the steps that follow to check the right engine for the correct quantity of oil:

(a) Do this task:

Replenish the Engine Oil, AMM TASK 12-13-11-600-801.

(b) Make sure the engine has the correct quantity of oil.

(c) If the oil level is near or over the top of the sight glass, correct the oil level before you continue. Do the task to drain the engine oil (Drain the Engine Oil, AMM TASK 12-13-11-600-803).

NOTE: Too much oil in the engine(s) can cause smoke or fumes in the pneumatic system.

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(d) If the oil level is less than FULL, do a check of the maintenance records to see if there is a change in oil consumption averages.

NOTE: An increase in oil consumption can be an indication of oil loss and possible contamination of the pneumatic system. This can cause smoke or fumes in the pneumatic system.

(2) Do the steps that follow to do a check of the right engine for damage:

(a) Examine the area behind the fan blades for large oil stains or puddles of oil.

(b) Examine the area behind the fan blades for signs of a bird strike.

(3) Supply electrical power with a ground cart. To supply electrical power, do this task: Supply External Power, AMM TASK 24-22-00-860-813.

NOTE: Do not operate the APU or the engines to supply electrical power to the airplane.

(4) Make sure these switches on the P5 overhead panel, are set to the indicated positions:

(a) On the P5-10 air conditioning panel:

1) APU, ENGINE 1, and ENGINE 2 switches are set to OFF

2) ISOLATION VALVE switch is set to CLOSE

3) L PACK and R PACK switches are set to OFF.

HAP 101-999

4) RECIRC FAN switch is set to OFF.

HAP 001-013, 015-026, 028-054

5) L RECIRC FAN and R RECIRC FAN switches are set to OFF.

6) TRIM AIR switch is set to OFF.

HAP ALL

(b) On the P5-11 thermal anti-ice panel:

(c) WING, ENGINE 1, and ENGINE 2, ANTI-ICE switches are set to OFF.

(5) To get access to the cooling packs, open these access panels, in this sequence:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

WARNING: PUT ON GLOVES FOR PROTECTION FROM HOT SURFACES WHEN YOU CONNECT OR DISCONNECT PNEUMATIC FITTINGS. PACK OPERATION CAN MAKE THE GROUND AIR CONNECTOR VERY HOT. A HOT GROUND AIR CONNECTOR WILL BURN YOUR BARE HANDS.

(6) Install the deactivator, COM-2462, in the ground air connector as follows:

(a) Put the deactivator, COM-2462, in the ground air connector so that the check valve flappers are open.

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(b) Install the coupling on the supply hose from the ground air cart onto the nipple of the ground air connector check valve assembly so that the deactivator, COM-2462 is held in place.

NOTE: The supply hose should not be connected to the ground cart as the exhaust from the hose should be vented to ambient.

WARNING: DO NOT PUT YOUR HAND OR BODY IN THE AIR THAT COMES OUT OF THE PNEUMATIC GROUND CONNECTOR. THE HOT AIR WILL CAUSE INJURIES.

(7) Do the steps which follow to check for oil contamination from the right engine:

NOTE: The right engine bleed air will go out through the pneumatic ground air connector duct opening.

(a) Start the right engine and let the engine operate at ground idle speed. To start and operate the right engine, do this task: Start the Engine Procedure (Selection), AMM TASK 71-00-00-800-807-F00.

1) Use the APU to start the engine as it is still in operation.

2) Set the APU BLEED switch, on the P5-10 air conditioning panel, to OFF.

3) Set the ISOLATION VALVE switch on the P5-10 air conditioning panel to OPEN.

(b) Set the engine pneumatic BLEED 1 switch, on the P5-10 air conditioning panel, to ON.

WARNING: OBSERVE PROPER SAFETY PRECAUTIONS AROUND RUNNING ENGINE. WEAR EAR PROTECTORS AND STAY CLEAR OF ENGINE HAZARD AREAS. SEE "ENGINE GROUND SAFETY PRECAUTIONS" FOR ENGINE HAZARD DESCRIPTION.

(c) Make sure that you obey all safety precautions when you are near an engine that is in operation. To obey the safety precautions, comply with the directions in this task: Engine Ground Safety Precautions, AMM TASK 71-00-00-800-805-F00.

(d) Let the engine operate for 2 minutes.

WARNING: DO NOT PUT YOUR HAND OR BODY IN THE AIR THAT COMES OUT OF THE PNEUMATIC GROUND CONNECTOR. THE HOT AIR WILL CAUSE INJURIES.

(e) Stand near the pneumatic ground air connector and smell if there is contaminated air.

NOTE: You can do a smell check of the bleed air from the left engine if it is necessary to compare the bleed air fumes.

(f) If there is contaminated bleed air from the right engine, do the steps that follow:

1) Check the right engine as cause of oil/fuel fumes/smoke in the cabin Fumes or Smoke in Cabin, Pneumatic Power Supplied by Engine - Fault Isolation, 71-05 TASK 807.

2) Do the oil contamination removal task, To remove the oil contamination, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

3) If the oil contamination removal task does not remove the fumes it may be necessary to replace components of the affected cooling pack. To replace the components, do the tasks that follow.

a) Replace the heat exchanger for the oil contaminated cooling pack. To replace the heat exchanger,

These are the tasks:

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Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-802-001 or Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-805-002,

Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-801-001 or Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-804-002.

HAP 001-013, 015-026, 028-054

b) Replace the condenser for the oil contaminated cooling pack. To replace the condenser,

These are the tasks:

Condenser Removal, AMM TASK 21-51-12-000-801,

Condenser Installation, AMM TASK 21-51-12-400-802.

c) Replace the reheater for the oil contaminated cooling pack. To replace the reheater,

These are the tasks:

Reheater Removal, AMM TASK 21-51-13-000-801,

Reheater Installation, AMM TASK 21-51-13-400-801.

HAP ALL

d) If there is smoke or fumes from the left cooling pack replace the flight deck mufflers. To replace the flight deck mufflers,

These are the tasks:

Flight Deck Air Distribution System Muffler/Duct Assembly Removal, AMM TASK 21-22-05-000-801,

Flight Deck Air Distribution System Muffler/Duct Assembly Installation, AMM TASK 21-22-05-400-801.

4) Do the Repair Confirmation at the end of this task.

(g) If there is not contaminated bleed air from the right engine, then continue.

(h) Set the engine pneumatic BLEED 1 switch to OFF.

(i) Stop the operation of the right engine, do this task: Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00.

WARNING: PUT ON GLOVES FOR PROTECTION FROM HOT SURFACES WHEN YOU CONNECT OR DISCONNECT PNEUMATIC FITTINGS. PACK OPERATION CAN MAKE THE GROUND AIR CONNECTOR VERY HOT. A HOT GROUND AIR CONNECTOR WILL BURN YOUR BARE HANDS.

(8) Remove the ground cart supply hose and deactivator, COM-2462, from the pneumatic ground connector.

(9) Close these access panels in this sequence:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

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F. Fault Isolation Procedure - Check the Cooling Packs for Oil Contamination

(1) Do these steps to check for oil contamination from the conditioned air supplied by the left and right cooling packs:

(a) Supply pressure to the pneumatic system. To do this, do this task: Supply Pressure to the Pneumatic System (Selection), AMM TASK 36-00-00-860-801.

NOTE: Do not use a contaminated source to pressurize the pneumatic system.

(b) Supply conditioned air with the left and right cooling packs. To do this, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

NOTE: Operate the left or right cooling pack independently of the other to find which pack has the contamination.

HAP 101-999

(c) Turn the CONT CABIN and PASS CABIN temperature selectors, on the P5-17 cabin temperature control panel, to MANUAL WARM.

HAP 001-013, 015-026, 028-054

(d) Put the TRIM AIR switch to the ON position.

(e) Turn the CONT CAB, FWD CAB, AND AFT CAB temperature selectors, on the P5-17 cabin temperature control panel, to the full WARM position.

HAP ALL

(f) Let the packs operate and smell the air that goes into the control cabin and the passenger cabin for contaminated air.

NOTE: You can do a smell check of the conditioned air from a different airplane if it is necessary to compare the conditioned air fumes.

(g) If you smell contaminated air from a cooling pack, then do the steps that follow to the applicable pack:

1) Do the oil contamination removal task, To remove the oil contamination, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

2) If the oil contamination removal task does not remove the fumes do the steps that follow:

a) Replace the heat exchanger for the oil contaminated cooling pack. To replace the heat exchanger,

These are the tasks:

Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-802-001 or Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-805-002,

Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-801-001 or Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-804-002.

HAP 001-013, 015-026, 028-054

b) Replace the condenser for the oil contaminated cooling pack. To replace the condenser,

These are the tasks:

Condenser Removal, AMM TASK 21-51-12-000-801,

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HAP 001-013, 015-026, 028-054 (Continued)

Condenser Installation, AMM TASK 21-51-12-400-802.

c) Replace the reheater for the oil contaminated cooling pack. To replace the reheater,

These are the tasks:

Reheater Removal, AMM TASK 21-51-13-000-801,

Reheater Installation, AMM TASK 21-51-13-400-801.

HAP ALL

d) If there is smoke or fumes from the left cooling pack replace the flight deck mufflers. To replace the flight deck mufflers,

These are the tasks:

Flight Deck Air Distribution System Muffler/Duct Assembly Removal, AMM TASK 21-22-05-000-801,

Flight Deck Air Distribution System Muffler/Duct Assembly Installation, AMM TASK 21-22-05-400-801.

3) Do the Repair Confirmation at the end of this task.

(h) If you do not smell contaminated air from a cooling pack, then do the step that follows and continue.

1) Shut down the cooling packs. To shut down the cooling packs, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(i) Remove pressure from the pneumatic system. To do this, do this task: Remove Pressure from the Pneumatic System, AMM TASK 36-00-00-860-806.

HAP 001-013, 015-026, 028-030 PRE SB 737-29-1106

G. Fault Isolation Procedure - Check the Hydraulic Reservoir Pressurization Modules

(1) Make sure that system A and B hydraulic reservoirs are depressurized. To depressurize the hydraulic reservoirs, do this task: Hydraulic Reservoirs Depressurization, AMM TASK 29-11-01-860-802.

(2) Get access to the flight deck or passenger compartment to smell the conditioned air for contamination.

(3) Do these steps to make sure the hydraulic reservoir pressurization module is not the source of the smoke or fumes:

(a) Start the APU and let the APU operation become stable. To start and operate the APU, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-801.

(b) Supply conditioned air to the airplane with the left and right cooling packs, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(c) Pressurize the hydraulic system reservoir. To pressurize the hydraulic reservoir, do this task: Hydraulic Reservoirs Pressurization, AMM TASK 29-11-01-860-801

(d) Operate the APU and cooling packs for 5 minutes.

(e) Stop the cooling packs, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(f) Set the APU BLEED switch, on the P5-10 air conditioning panel, to OFF.

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1) Wait for approximately 5 minutes.

NOTE: This will permit hydraulic fluid to leak past the check valve if there is a failure.

(g) Set the APU BLEED switch, on the P5-10 air conditioning panel, to ON.

(h) Supply conditioned air to the airplane with the left and right cooling packs, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(i) If the fumes are present, then there is a problem with the hydraulic reservoir pressurization module. To replace the hydraulic reservoir pressurization module,

These are the tasks:

Hydraulic Reservoir Pressurization Module Removal, AMM TASK 29-11-02-000-801,

Hydraulic Reservoir Pressurization Module Installation, AMM TASK 29-11-02-400-801.

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

(j) If no fumes are present, then continue.

HAP ALL

H. Fault Isolation Procedure - Check the Cabin Equipment

(1) Do these steps to make sure the cabin equipment is not the source of the smoke or fumes:

(a) Operate the cabin equipment, galley equipment, IFE equipment, and light ballasts.

(b) If there is smoke or fumes from the equipment, then do the steps below:

1) Replace the applicable equipment.

(c) Operate the applicable equipment for approximately 3 minutes.

(d) If the fumes go away, then you corrected the fault.

I. Fault Isolation Procedure - Check Recirculation Fans

(1) Do these checks of the air recirculation system:

NOTE: Check the air recirculation fans and filters only if there is smoke or fumes in the passenger compartment.

(a) Do this task: Recirculation Air Filter Removal, AMM TASK 21-25-01-000-801.

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(b) Examine the air recirculation filter for the following:

1) Contaminants: dust, dirt, lint, and oil.

2) Rips in the filter.

3) Breaks in the filter frame.

(c) If it is necessary, install a new air recirculation filter. To do this, do this task: Recirculation Air Filter Installation, AMM TASK 21-25-01-400-801.

HAP 001-013, 015-026, 028-054

(d) Examine the air recirculation filters for the following:

1) Contaminants: dust, dirt, lint, and oil.

2) Rips in the filter.

3) Breaks in the filter frame.

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(e) If necessary, install new air recirculation filters. To do this, do this task: Recirculation Air Filter Installation, AMM TASK 21-25-01-400-801.

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(f) Do a check to see if the air recirculation fan or the related wiring generates smoke while it operates. To do this, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

1) If there is smoke from the air recirculation fan or the related wiring, then do the applicable steps below:

a) Replace the air recirculation fan.

These are the tasks:

Recirculation Fan Removal, AMM TASK 21-25-02-000-801,

Recirculation Fan Installation, AMM TASK 21-25-02-400-801.

b) Repair the applicable wiring.

c) Do the Repair Confirmation at the end of this task.

2) If there is no smoke or fumes from the air recirculation fan or the related wiring, and the operational test is satisfactory, then continue.

HAP 001-013, 015-026, 028-054

(g) Do a check to see if the air recirculation fans or the related wiring make smoke while they operate. To do this, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

1) If there is smoke from an air recirculation fan or the related wiring, then do the applicable steps below:

a) Replace the air recirculation fan.

These are the tasks:

Recirculation Fan Removal, AMM TASK 21-25-02-000-801,

Recirculation Fan Installation, AMM TASK 21-25-02-400-801.

b) Repair the applicable wiring.

c) Do the Repair Confirmation at the end of this task.

2) If there is no smoke or fumes from the air recirculation fan or the related wiring, and the operational test is satisfactory, then continue.

HAP ALL

J. Repair Confirmation

(1) Start the left and right engines. To start the engines, do this task: Start the Engine Procedure (Selection), AMM TASK 71-00-00-800-807-F00.

WARNING: OBSERVE PROPER SAFETY PRECAUTIONS AROUND RUNNING ENGINE. WEAR EAR PROTECTORS AND STAY CLEAR OF ENGINE HAZARD AREAS. SEE "ENGINE GROUND SAFETY PRECAUTIONS" FOR ENGINE HAZARD DESCRIPTION.

(2) Make sure that you obey all safety precautions when you are near an engine that is in operation. To obey the safety precautions, comply with the directions in this task:Engine Ground Safety Precautions, AMM TASK 71-00-00-800-805-F00.

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(3) Start the APU. To start the APU, do this task: APU Starting and Operation, AMM TASK 49-11-00-860-801.

(4) Set the BLEED AIR switches, on the P5 panel, to the positions shown:

(a) APU, ENGINE 1, and ENGINE 2 switches are set to ON

(b) Put the ISOLATION VALVE switch to the OPEN position.

(5) Make sure the hydraulic reservoirs are pressurized. To pressurize the hydraulic reservoirs, do this task: Hydraulic Reservoirs Pressurization, AMM TASK 29-11-01-860-801 or Hydraulic Reservoirs Pressurization, AMM TASK 29-09-00-860-801.

HAP 101-999

(6) Set the RECIRC FAN switch to the applicable position as follows:

(a) If the fault is electrical, set the RECIRC FAN switch to the AUTO position.

(b) If the fault is oil, fuel or hydraulic fluid, set the RECIRC FAN switch to the OFF position.

HAP 001-013, 015-026, 028-054

(7) Set the L RECIRC FAN and R RECIRC FAN switches to the applicable position as follows:

(a) If the fault is electrical, set the L RECIRC FAN and R RECIRC FAN switches to the AUTO position.

(b) If the fault is oil, fuel or hydraulic fluid, set the L RECIRC FAN and R RECIRC FAN switches to the OFF position.

HAP ALL

(8) Supply conditioned air with the applicable left or right cooling packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(9) Let the systems operate for approximately 5 minutes.

(a) If no fumes or smoke appear, then you have corrected the fault.

K. Put the airplane back to its usual condition:

(1) Stop the operation of the left and right cooling packs, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

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(2) Set the RECIRC FAN switch to the AUTO position.

HAP 001-013, 015-026, 028-054

(3) Set the L RECIRC FAN and R RECIRC FAN switches to the AUTO position.

HAP ALL

(4) Stop the operation of the left and right engines, do this task: Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00.

(5) Stop the operation of the APU, do this task: APU Usual Shutdown, AMM TASK 49-11-00-860-802.

(6) Remove electrical power, if it is not necessary, do this task: Remove External Power, AMM TASK 24-22-00-860-814.

———————— END OF TASK ————————

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807. Airplane Cannot Maintain Cabin Pressure On a Single Pack Within Specified Limits - Fault Isolation

A. Description

Pressurization requires proper operation of the pneumatic (engine bleed) system, the air conditioning packs, and the cabin pressure control system. The pneumatic system supplies air to the air conditioning packs. The air conditioning packs regulate the air flow into the fuselage. The cabin pressure control system regulates air escaping from the fuselage to control cabin pressure. Air leaking from the fuselage must be within specified limits in order for the packs to operate efficiently.

Unusual pressurization occurrences are typically associated with low air inflow, high fuselage leakage, or a combination of the two. Examples of theses occurrences are:

- Cabin altitude is above the pressurization schedule during cruise
- Cabin altitude climbs during cruise
- Cabin altitude climbs during initial descent

The inflow of air depends on the bleed air source (engines, APU) and air conditioning pack flow. Bleed air pressure is one method for determining if sufficient air is available to the packs. Low bleed pressures may indicate poor bleed performance even if the pressures are not zero.

NOTE: Bleed air pressure must exceed cabin pressure by at least 10 psi to ensure air flow into the cabin through an air conditioning pack.

Airplanes have controlled air leakage from the fuselage. Air exits the fuselage from galley ventilation and drains, aft outflow valves, forward outflow valves (where applicable), and certain bulkhead penetrations such as control cables. Air also leaks from the fuselage in uncontrolled ways. These paths can include worn door seals, bilge drain valves, bulkhead penetrations, and APU bleed air duct bulkhead seals.

NOTE: Fault Code 30 on the Cabin Pressure Controller indicates low inflow or high fuselage leakage and not a problem with the Cabin Pressure Controller.

The fault isolation procedure below will help determine if the inability of the airplane to maintain cabin pressure within the specified limits is caused by problems with the bleed system, the air conditioning packs, a leaky fuselage, or a combination of the three.

B. Possible Causes

(1) Air conditioning packs cannot pressurize the airplane to specification.
   (a) Water separator
   (b) 35° system
   (c) Secondary heat exchanger

(2) Fuselage leaks excessively.
   (a) Air leaking around cabin doors and over-wing hatches.
   (b) Air leaking around service door seals.
   (c) Air leaking from bilge drains (they should close at about 2.0 psid).
   (d) Air leaking from APU duct to fuselage seals at station 540, station 727 and station 1016.
   (e) Air leaking from nose gear view port
   (f) Air leaking from forward outflow valve/EE cooling overboard vent

(3) Bleed system does not supply enough pressure to the packs to allow the packs to operate efficiently.
   (a) Precooler control valve not modulating correctly or stuck closed
   (b) Precooler control valve sensor (390 F sensor) is out-of-tolerance, stuck closed or plugged
   (c) Pressure regulator and shutoff valve (PRSOV) has a butterfly valve that is sticking

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(d) 450° F thermostat has failed open

(e) Bleed air regulator (M1180) regulates control pressure too low

(f) High stage valve has a butterfly valve that is sticking

(g) High stage regulator not regulating properly

(h) Sense lines have pressure leaks

(i) Sense lines are obstructed

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	6	C01470	AIR CONDITIONING BLEED AIR XDCR LEFT
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES LEFT
B	5	C00077	AIR CONDITIONING BLEED AIR PRESS IND
B	6	C01469	AIR CONDITIONING BLEED AIR XDCR RIGHT
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES RIGHT

D. Related Data

(1) Cabin Pressure Leak Test, AMM TASK 05-51-91-790-801

(2) Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801

(3) Equipment Cooling Overboard Exhaust Valve Removal, AMM TASK 21-27-05-000-801 Equipment Cooling Overboard Exhaust Valve Installation, AMM TASK 21-27-05-400-801

(4) Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801 Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801

(5) Cabin Pressure Control Module Removal, AMM TASK 21-31-02-000-801 Cabin Pressure Control Module Installation, AMM TASK 21-31-02-400-801

(6) Aft Outflow Valve Assembly Removal, AMM TASK 21-31-03-000-801 Aft Outflow Valve Assembly Installation, AMM TASK 21-31-03-400-801

(7) Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-802-001 or Heat Exchanger and Plenum/Diffuser Assembly Removal, AMM TASK 21-51-03-000-805-002 Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-801-001 or Heat Exchanger and Plenum/Diffuser Installation, AMM TASK 21-51-03-400-804-002

(8) Engine Bleed Air System Leak Check Using the APU, AMM TASK 36-11-00-700-802

(9) Engine Bleed Air Crossover Operational Test, AMM TASK 36-11-00-710-801

(10) 737–SL-36–013

(11) 737–SL-21-045

(12) 737–SL-36–068

(13) 737–SL-36–073

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(14) Low Limit (35 Degree F) Controller Removal, AMM TASK 21-51-31-000-801 Low Limit (35 Degree F) Controller Installation, AMM TASK 21-51-31-400-801

(15) Water Separator Removal, AMM TASK 21-51-05-000-801 Water Separator Installation, AMM TASK 21-51-05-400-802

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(16) Low Limit (35 Degree Fahrenheit) Temperature Sensor Removal, AMM TASK 21-51-32-000-801 Low Limit (35 Degree Fahrenheit) Temperature Sensor Installation, AMM TASK 21-51-32-400-801

HAP ALL

E. Initial Evaluation of the Packs Ability to Pressurize the Cabin

(1) Do this task to supply electrical power to the airplane: AMM TASK 24-22-00-860-811

(2) Install the downlock pins to lock the landing gear by doing this task: AMM TASK 32-00-01-480-801

(3) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(4) Open this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(5) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(6) Do these steps on the Flight Management Computer (FMC) to display the FMCS ANALOG page 1/4:

(a) Press the INIT REF function key on the CDU front panel.

(b) Push the LSK adjacent to <INDEX (LSK 6L) to show the INIT REF INDEX 1/1 page.

(c) Push the LSK adjacent to MAINT> (LSK 6R) to show the MAINT BITE INDEX page.

(d) Push the LSK adjacent to <FMCS (LSK 1L) to show the FMCS BITE 1/1 page.

(e) Push the LSK adjacent to <DISCRETES (LSK 4L) to show the FMCS ANALOG DISC 1/4 page.

(f) Use the ECS PACK H/L (high flow, low flow) line entry on the ANALOG DISC 1/4 page.

(g) The following information can be displayed on the FMC:

	LEFT	RIGHT
ECS PACK	ON	OFF
ECS PACK H/L	LO	HI
ISOLATION VALVE	OPEN	OPEN

NOTE: ECS PACK indicates if the left or right pack is on or off. ECS PACK H/L indicates the pack is in the low flow mode or if it has been commanded to the high flow mode. A pack can be commanded to the high flow mode even if it is off. ISOLATION VALVE indicates if the valve is open or closed.

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(7) Set the RECIRC FAN switch on the air conditioning panel to AUTO.

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(8) Set the L and R RECIRC FAN switches on the air conditioning panel to AUTO.

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(9) Position the ISOLATION VALVE switch to OPEN.

(10) Set the BLEED 1 and BLEED 2 switches on the P5-10 air conditioning panel to the ON position.

(11) Follow this task to start the right engine: AMM TASK 71-00-00-800-810-F00

(12) Pressurize the airplane to 4.0 psid with the right engine at ground idle, the right pack in AUTO mode, and the APU running the left pack as follows:

(a) Set the ISOLATION VALVE to CLOSE.

(b) Set the L PACK switch to ON.

(c) Set the BLEED 2 switch to ON.

(d) Set the BLEED 1 switch to OFF.

(e) Set the APU BLEED switch to ON.

(f) Set the R PACK and L PACK switches to AUTO (low flow).

(g) Make sure the pressurization mode selector is set to MAN.

1) Manually operate the aft outflow valve with the CLOSED/OPEN toggle switch to maintain 4.0 psid on the DIFF PRESS gauge.

(h) If a differential pressure of 4.0 psid cannot be maintained, either a pack supply or airplane leakage problem exists. Do the applicable fault isolation tasks.

(13) Do this task to check the right pack's capability to pressurize the cabin in the HIGH mode (high flow).

(a) Set the L PACK switch is in the OFF position.

(b) Make sure the cabin pressure is maintained at 4.0 psid by adjusting the outflow valve.

(c) Make sure the APU BLEED switch is in the OFF position.

(d) Slowly move the right engine throttle until N2% increases to 72% (+0%, -2%), which is flight idle.

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(e) Set the RECIRC FAN switch on the air conditioning panel to AUTO.

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(f) Set the R RECIRC FAN switch on the air conditioning panel to AUTO.

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(g) Make sure the ISOLATION VALVE switch is in the CLOSED position.

(h) Make sure the BLEED 1 switch is in the OFF position.

(i) Set the R Pack switch to HIGH.

(j) Make sure the ECS PACK H/L indication on the FMC DISCRETE page shows HI for the right pack. The result will be a cabin rate-of-climb of -500 feet/min.

(k) If a differential pressure of 4.0 psid cannot be maintained, either a pack supply or airplane leakage problem exists. Do the applicable fault isolation tasks.

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(l) Return the R PACK switch to AUTO.

(14) Use the APU bleed to start the left engine (Start the Engine Procedure (Normal Start), AMM TASK 71-00-00-800-808-F00).

(15) Follow this task to shut down the right engine: AMM TASK 71-00-00-700-819-F00.

NOTE: Cabin pressure will fluctuate during the switch over to Bleed 1, L PACK.

(16) Pressurize the airplane to 4.0 psid with the left engine at ground idle and the left pack in AUTO mode as follows:

(a) Set the BLEED 1 switch to ON.

(b) Set the L PACK switch to AUTO.

(c) Set the R PACK switch to OFF.

(d) Set the BLEED 2 switch to OFF.

(e) Make sure the ISOLATION VALVE switch is in the CLOSE position.

(f) Make sure the APU BLEED switch is in the OFF position.

(g) Make sure the pressurization mode selector is set to MAN.

1) Manually operate the aft outflow valve with the CLOSED/OPEN toggle switch to maintain 4.0 psid on the DIFF PRESS gauge.

(h) If a differential pressure of 4.0 psid cannot be maintained, either a pack supply or airplane leakage problem exists. Do the applicable fault isolation tasks.

(17) Do this task to check the left pack's capability to pressurize the cabin in the HIGH mode (high flow).

(a) Slowly move the right engine throttle until N2% increases to 72% (+0%, -2%), which is flight idle.

(b) Set the RECIRC FAN switch on the air conditioning panel to AUTO.

(c) Make sure the ISOLATION VALVE switch is in the CLOSE position.

(d) Make sure the R PACK switch is in the OFF position.

(e) Make sure the BLEED 1 switch is in the ON position.

(f) Make sure the BLEED 2 switch is in the OFF position.

(g) Make sure the APU BLEED switch is in the OFF position.

(h) Set the L PACK switch to HIGH.

(i) Make sure the ECS PACK H/L indication on the FMC DISCRETE page shows HI for the left pack. The result will be a cabin rate-of-climb of -500 feet/min.

(j) If a differential pressure of 4.0 psid cannot be maintained, either a pack supply or airplane leakage problem exists. Do the applicable fault isolation tasks.

(k) Return the LPACK switch to AUTO.

F. Dispatchability Troubleshooting Table

(1) The following is a Cabin Pressurization Confidence Dispatch Guide. Print out the table and use it as a quick reference guide when determining the dispatchability of an airplane.

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Cabin Pressurization Confidence Dispatch Guide

SYSTEM	MINIMUM REQUIREMENT	REQUIREMENT SATISFIED	
		Yes	No
Single Pack Low Flow Mode	Able to maintain cabin differential pressure of 3.9 - 4.1 psid and cabin rate of change is no more than ± 100 feet per minute.	Confidence is high that airplane will maintain pressure with single pack in high flow mode while at cruise.	Confidence is low that airplane will maintain pressure on single pack at cruise. Emphasis needs to be placed on the following: Outflow: Was airplane leak down less than 100 seconds? If so, check for cabin leaks and run Phase III test again. Inflow: If the cabin leak down rate was acceptable, then the pack performance needs to be investigated. Perform various pack system health checks per AMM 21-51-00/500 series pages.
Single Pack High Flow Mode	Cabin rate of change is - 500 feet per minute or greater.	Confidence is high that airplane will maintain pressure with single pack in high flow mode while at cruise	Confidence is low that airplane will maintain pressure on single pack at cruise. Emphasis needs to be placed on the following: Outflow: Was airplane leak down less than 100 seconds? If so, check for cabin leaks and run Phase III test again. Inflow: If the cabin leak down rate was acceptable, then the pack performance needs to be investigated. Perform various pack system health checks per AMM 21-51-00/500 series pages.

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(Continued)

SYSTEM	MINIMUM REQUIREMENT	REQUIREMENT SATISFIED	
		Yes	No
Airplane/Structure Air Leakage	Leak down rate from 4.0 to 2.5 psid is greater than or equal to a MINIMUM of 100 seconds (110 to 120 seconds is the target).	Cabin leakage is acceptable. Operators should consider conducting AMM 05-51-91 leakage test on C-check basis and monitor performance.	Inspect and repair any air leaks. Specifically: Doors and hatches - missing or torn seals, poor contact between door seals and airplane due to dirt, etc., inspect sealing compound areas and repair door seals per AMM 52-09-10. Aft outflow valve - Test per AMM 21-31-00/501. Bilge drains - Should close at approximately 2.0 psid. Cabin pressure safety relief valve, outflow valve seal, negative pressure relief valve seal, water service panel, flight deck windows, pressure bulkhead penetrations should all have minimal leakage. Significant leaks should be resolved as required.
Engine Bleed Duct Pressure - Ground Idle	With N1 at approximately 20%, duct pressure should be 15 to 20 psi. Reference AMM 36-11-00, page 516.	Continue to maintain bleed system components on 1C-check intervals as specified in MPD Section 1.1.	Consider accomplishing the engine bleed air distribution system adjustment/test AMM 36-11-00, 500 series pages to help improve system performance.
Engine Bleed Duct Pressure - Flight Idle	With N1 at approximately 33%, duct pressure should be 26 to 38 psi. Reference AMM 36-11-00, page 516.	Continue to maintain bleed system components on 1C-check intervals as specified in MPD Section 1.1.	Consider accomplishing the engine bleed air distribution system adjustment/test AMM 36-11-00, 500 series pages to help improve system performance.
Cabin Pressurization Control System	Successful completion of the Phase I, II and III tests and cabin pressure can be maintained.	Confidence is high that cabin pressure can be maintained.	Consider accomplishing pressurization control system adjustment/test per AMM 21-31-00, 500 series pages.

G. Fault Isolation of Low Pack Air Flow

HAP 101-999

(1) Contaminants mixed with moisture and ice in the water separator can cause low air flow.

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(2) Do the following to check the coalescer bag pressure indicator: Coalescer Bag Pressure Indicator Inspection, AMM TASK 21-51-05-400-803.

(3) If the pressure indicator is red, do the following to clean the coalescer bag in the water separator.

(a) Remove the water separator by doing the following: Water Separator Removal, AMM TASK 21-51-05-000-801

(b) Remove the coalescer bag by doing the following: Coalescer Bag Removal, AMM TASK 21-51-05-020-801

(c) Clean the coalescer bag by doing the following: Coalescer Bag Cleaning, AMM TASK 21-51-05-100-801

(d) Install the coalescer bag after cleaning by doing the following: Coalescer Bag Installation, AMM TASK 21-51-05-400-801

(e) Install the water separator by doing the following: Water Separator Installation, AMM TASK 21-51-05-400-802

(4) The 35° system can cause ice to form in the water separator when not working properly. The BITE procedure monitors faults within the controller and also malfunctions caused by a defective 35° sensor and valve of the same subsystem. The cover of the 35° controller has a chart describing the BITE instructions and the GO/NO GO criteria. The BITE procedure checks the following:

NOTE: The FLIGHT position of the BITE switch is the default position.

BITE CHECKS	
SWITCH S1 POSITION	OPERATION CHECKED
1	POWER: 15.0 AND ±1.5 VDC
2	FULL-ON HEAT - OPEN DRIVE
3	DEADBAND
4	FULL-ON COOL - CLOSE DRIVE
5	SENSOR OPEN OR SHORT

(a) Perform the 35° controller BITE test.

(b) Replace faulty components determined by the BITE test.

HAP ALL

(5) Over a period of time, moisture mixed with contaminants in the air can form sludge in the secondary heat exchanger. This can cause low air flow.

(a) Perform the following procedure to clean the secondary heat exchanger: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801

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(6) If you have an air pack - air flow and temperature diagnostic, SPL-6191 tool, follow the procedure after the fuselage leak check to evaluate the pack flow.

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H. Repair Confirmation for Low Pack Air Flow

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(1) Perform the procedure to evaluate the packs again to see if the problem has been solved. If the water separator, coalescer bag, and 35° system are not causing low pack air flow, evaluate the leakage in the fuselage and the bleed air pressure to determine if sufficient air is available to the packs. Low bleed pressures may indicate poor bleed performance even if the pressures are not zero.

HAP 001-013, 015-026, 028-054

(2) Perform the procedure to evaluate the packs again to see if the problem has been solved. If pressurization problems still exist, evaluate the leakage in the fuselage and the bleed air pressure to determine if sufficient air is available to the packs. Low bleed pressures may indicate poor bleed performance even if the pressures are not zero.

HAP ALL

I. Fault Isolation of Fuselage Leakage

(1) Check the airplane for sources of leakage in the fuselage (Figure 301).
   (a) Pressurize the airplane with the APU by following this task: AMM TASK 36-00-00-860-803.
   (b) Examine these areas from inside the airplane:
      1) Main cabin doors

         NOTE: There should not be any significant areas where the air jets out the door seals.
      2) Over-wing hatches
   (c) Examine these areas from outside the airplane:
      1) Cargo door seals
      2) Bilge drains

         NOTE: Bilge drains should close at about 2.0 psid. All bilge drains open create the equivalent of a 4.75 diameter hole (approx.). As few as four or five open drains can cause a noticeable increase in leakage.
      3) E/E bay doors
      4) Main cabin doors
      5) Over-wing hatches
      6) APU duct to fuselage seal at station 661.34 (Open access panel 192K forward of the MLG forward bulkhead.)
      7) APU duct to fuselage seal at station 727 (Open the access panel at the aft end of the keel beam to access the APU duct at station 727.)
      8) APU duct to fuselage seal at station 1016 (Open the door into the tail of the airplane and look at the aft pressure bulkhead for APU duct at station 1016.)
      9) Nose gear view port (Feel for air flow from the site glass window.) (Reference IPC 56-41-31-01).
      10) Forward outflow valve/E/E cooling overboard vent

(2) Repair all pressure leaks that are found. Perform the airplane leak down check in the Repair Confirmation section to make sure the pressure leakage is within acceptable limits.

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J. Repair Confirmation for Fuselage Leakage

(1) Perform the following airplane Leak Down Check to confirm the airplane can maintain pressure within acceptable limits.

(a) Pressurize the airplane with the APU by following this task:
AMM PAGEBLOCK 05-51-91/201.

(b) When 4.0 psid on the DIF PRESS gauge has been achieved and stabilized, fully close (manually) the aft outflow valve.

1) Make sure that the indication on the gauge above the CLOSED/OPEN switch on the P5-17 pressurization control panel shows that the valve is fully closed.

(c) Set the L and R PACK switches to OFF.

(d) Set the BLEED 1 and 2 switches to OFF.

(e) Continue to operate the APU.

NOTE: The APU is kept running in the event a bleed source is needed in case of a very high rapid cabin depressurization below 2.5 psi and for electrical power if a ground source is not used.

(f) Start the check at 4.0 psid (time zero).

(g) Make a record of the pressure differential indications on the Figure 302 at 10 second intervals until the cabin pressure reduces to 2.5 psi.

NOTE: After completing the bleed down check, a pack may be switched ON to reduce cabin rate of depressurization.

(h) Continue to depressurize the airplane and put it back to its unpressurized condition.

(i) Shut down the APU per APU Usual Shutdown, AMM TASK 49-11-00-860-802

(2) Best performance of the air conditioning packs and airplane structure is as follows:

Table 201 Best Performance Data

SYSTEM	BEST PERFORMANCE
Single Pack - Low Flow Mode	Able to maintain or increase cabin differential at 4.0 PSID and cabin rate of change of 0 or negative value (cabin pressurizing).
Single Pack - High Flow Mode	Able to maintain or increase cabin differential at 4.0 PSID and cabin rate of change of -500 feet/minute or greater (cabin pressurizing).
Cabin Leakage Rate from 4.0 to 2.5 psi	Greater than 110 seconds is excellent; 100 -110 seconds is good; less than 100 seconds is unacceptable and requires service..

(3) If the test data agrees with the best performance data for the packs (inflow) and the airplane structure (outflow), you can be very sure that cabin pressure can be maintained at cruise (FL250) on a single pack.

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K. Fault Isolation Procedure - Diagnostic Check of 737-600s and 737-700s Air Conditioning Packs Using an Air Flow and Temperature Diagnostic Tool

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NOTE: This procedure requires the use of the specially designed air pack - air flow and temperature diagnostic, SPL-6191 tool to measure the performance level of the air conditioning packs on 737-600s and 737-700s. Skip this procedure if you do not have an air flow and temperature diagnostic tool or have 737-600s and 737-700s in your fleet.

(1) The air pack - air flow and temperature diagnostic, SPL-6191 is designed to measure the temperature and flow coming out of the air conditioning packs in various modes of operation on 737-600s and 737-700s. The data collected can be used to isolate problems with the pack flow control valve, 35° system, coalescer bag, and heat exchangers.

(2) Supply electrical power to the airplane (Supply Electrical Power, AMM TASK 24-22-00-860-811).

(3) Open these access panels:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door

(4) Remove the center panel on the aft bulkhead in the forward cargo compartment.

(5) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
C	11	C01275	MASTER CAUTION ANNUNCIATOR CONT 1
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2
C	13	C01277	MASTER CAUTION ANNUNCIATOR CONT 3
C	14	C01278	MASTER CAUTION ANNUNCIATOR CONT 4
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY
D	17	C01027	LANDING GEAR NOSE GEAR STEER

(6) Put the LIGHTS switch on the P2-1 Panel to TEST and make sure that these lights come on and then go off:

(a) MASTER CAUTION and AIR COND annunciator lights on the P7 Panel

(b) PACK TRIP OFF lights on the P5-10 Panel

(7) Do these steps on the Flight Management Computer (FMC) to display the FMCS ANALOG page 1/4.

(a) Press the INIT REF function key on the CDU front panel.

(b) Push the LSK adjacent to <INDEX (LSK 6L) to show the INIT REF INDEX 1/1 page.

(c) Push the LSK adjacent to MAINT> (LSK 6R) to show the MAINT BITE INDEX page.

(d) Push the LSK adjacent to <FMCS (LSK 1L) to show the FMCS BITE 1/1 page.

(e) Push the LSK adjacent to either Left or Right Prompts.

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(f) Push the LSK adjacent to < DISCRETES (LSK 4L) to show the FMCS ANALOG DISC 1/4 page.

(g) Use the ECS PACK H/L (high flow, low flow) line entry on the ANALOG DISC 1/4 page.

(h) The following information can be displayed on the FMC:

LEFT RIGHT

ECS PACK ON OFF

ECS PACK H/L LO HI

ISOLATION VALVE OPEN (CLOSED)

(8) Set the positions of these switches on the P5-10 Panel.

(a) Set the engine BLEED 1 switch to OFF.

(b) Set the engine BLEED 2 switch to OFF.

(c) Set the APU BLEED switch to OFF.

(d) Set the L PACK and R PACK switches to OFF.

(e) Set the ISOLATION VALVE switch to CLOSE.

(f) Set the RECIRC FAN switch to OFF.

(9) Remove the right cold-air check valve (Conditioned Air Check Valve Removal, AMM TASK 21-51-07-000-801-001).

(a) Loosen the clamps that secure the check valve to the ducts.

(b) Move the clamps away from the check valve.

(c) Remove the check valve.

(d) Install the air pack - air flow and temperature diagnostic, SPL-6191.

(e) Install clamps onto the air pack - air flow and temperature diagnostic, SPL-6191.

(f) Tighten clamps to 50 pounds-inches (5.65 Newton-meters).

(10) Start the APU (APU Starting and Operation, AMM TASK 49-11-00-860-801).

NOTE: The electrical load should be less than 25 amperes.

(a) Record the outside ambient temperature and dew point on the Figure 303.

(b) Set the positions of these switches on the P5-10 Panel:

1) Set the ISOLATION VALVE switch to AUTO.

2) Set the APU BLEED switch to ON.

(c) Allow the duct pressure to stabilize and record the right duct pressure (psi) _____.

(d) Record the flow and temperature from the measuring tool:

FLOW_____ lbs/min, TEMP_____ °F

NOTE: This step checks that solenoid ''C'' is energized. Airflow is expected to be zero.

(11) Set the positions of these switches on the P5-10 panel for high flow as follows:

(a) Set the R PACK switch to AUTO.

(b) Make sure the right pack temperature selector is set to MANUAL FULL COOL.

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HAP 101-999 (Continued)

(12) Check the flow measuring tool connections for leaks and correct any that are found.

(13) Measure and record the right pack flow and temperature for HIGH FLOW.

(a) Verify correct configuration with aircraft FMC and allow readings to stabilize on the air pack - air flow and temperature diagnostic, SPL-6191.

(b) Place the AIR TEMP selector on the P5-10 panel, to SUPPLY DUCT position. When the supply duct temperature is stable, record the supply duct pressure and temperature on the data collection sheet.

(c) Record HIGH FLOW right pack flow and temperature from measuring tool on the data collection sheet.

(d) Record the position of the following component indicators on the data collection sheet.

1) the 35°F control valve
2) the flow control valve
3) the mix valve
4) the water separator pressure indicator

(14) Perform the following and record the RIGHT Pack Readings for AUTO FLOW.

(a) Place R PACK switch to AUTO.

(b) Set either the BLEED 1 or BLEED 2 switch to ON.

(c) Verify the correct configuration with the aircraft FMC and allow readings to stabilize on the flow measuring tool.

(d) Place the AIR TEMP selector on the P5-10 panel to the SUPPLY DUCT position.

(e) When the supply duct temperature is stable, record the supply duct pressure and temperature on the data collection sheet.

(f) Record from the measuring tool the AUTO FLOW RIGHT pack flow and temperature on the data collection sheet.

(g) Record the position of the following component indicators on the data collection sheet.

1) the 35°F control valve
2) the flow control valve
3) the mix valve
4) the water separator pressure indicator

(15) Perform the following and record Right Pack Readings for APU HIGH FLOW

(a) Place R PACK switch to HIGH

(b) Place the BLEED 1 and 2 switches to OFF

(c) Verify configuration with aircraft FMC and allow readings to stabilize on the flow measuring tool.

(d) Place the AIR TEMP selector on the P5-10 panel the to SUPPLY DUCT position.

(e) When the supply duct temperature is stable, record the supply duct pressure and temperature on the data collection sheet.

(f) Record from measuring tool APU HIGH FLOW RIGHT pack flow and temperature on the data collection sheet.

(g) Record the position of the following component indicators on the data collection sheet.

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HAP 101-999 (Continued)

1) the 35°F control valve
2) the flow control valve
3) the mix valve
4) the water separator pressure indicator

(16) Set these switches on the P5-10 Panel:
(a) Set the R PACK switch is OFF
(b) Set the APU BLEED switch to OFF.
(c) Make sure the BLEED 1 and 2 switches are OFF.
(d) Make sure the Right Pack indicated duct pressure is zero.
(e) Confirm the PACK configuration on FMC.

(17) Remove flow measuring tool and reinstall right cold-air check valve.

NOTE: Make sure the orientation of the valve is correct before tightening the clamps.

(18) Torque the clamps to 50 pound-inches (5.65 Newton-meters).

(19) Remove the left cold-air check valve (Conditioned Air Check Valve Removal, AMM TASK 21-51-07-000-801-001).
(a) Loosen the clamps that secure the check valve to the ducts.
(b) Move the clamps away from the check valve.
(c) Remove the check valve.
(d) Install the air pack - air flow and temperature diagnostic, SPL-6191.
(e) Install clamps onto the air pack - air flow and temperature diagnostic, SPL-6191.
(f) Torque clamps to 50 pounds-inches (5.65 Newton-meters).

(20) Set the positions of these switches on the P5-10 panel:
(a) Set the ISOLATION VALVE switch to CLOSED.
(b) Set the APU BLEED switch to ON.
(c) Allow the duct pressure to stabilize and record the left duct pressure (psi) _____.
(d) Record the flow and temperature from the measuring tool:

FLOW_____ lbs/min, TEMP_____ °F

NOTE: This step checks that solenoid ''C'' is energized. Airflow is expected to be zero.

(21) Set the positions of these switches on the P5-10 panel for high flow as follows:
(a) Set the L PACK switch to AUTO.
(b) Make sure the left pack temperature selector is set to MANUAL FULL COOL.

(22) Measure and record the left pack flow and temperature for HIGH FLOW:
(a) Verify correct configuration with aircraft FMC and allow readings to stabilize on the air pack - air flow and temperature diagnostic, SPL-6191.

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(b) Place the AIR TEMP selector on the P5-10 panel, to SUPPLY DUCT position. When the supply duct temperature is stable, record the supply duct pressure and temperature on the data collection sheet.

(c) Record HIGH FLOW left pack flow and temperature from measuring tool on the data collection sheet.

(d) Record the position of the following component indicators on the data collection sheet.

1) the 35°F control valve
2) the flow control valve
3) the mix valve
4) the water separator pressure indicator

(23) Set the positions of these switches on the P5-10 panel for AUTO FLOW as follows:

(a) Make sure the L PACK switch is in AUTO.

(b) Set either the BLEED 1 or BLEED 2 switch to ON.

(c) Verify the correct configuration with the aircraft FMC and allow readings to stabilize on the flow measuring tool.

(d) Place the AIR TEMP selector on the P5-10 panel to the SUPPLY DUCT position.

(e) When the supply duct temperature is stable, record the supply duct pressure and temperature on the data collection sheet.

(f) Record from the measuring tool the AUTO FLOW left pack flow and temperature on the data collection sheet.

(g) Record the position of the following component indicators on the data collection sheet.

1) the 35°F control valve
2) the flow control valve
3) the mix valve
4) the water separator pressure indicator

(24) Set the positions of these switches on the P5-10 panel for APU HIGH FLOW as follows:

(a) Set the L PACK switch to HIGH.

(b) Set the ENGINE BLEED switch to OFF.

(c) Place the AIR TEMP selector on the P5-10 panel the to SUPPLY DUCT position.

(d) When the supply duct temperature is stable, record the supply duct pressure and temperature on the data collection sheet.

(e) Record from measuring tool APU HIGH FLOW LEFT pack flow and temperature on the data collection sheet.

(f) Record the position of the following component indicators on the data collection sheet.

1) the 35°F control valve
2) the flow control valve
3) the mix valve
4) the water separator pressure indicator

(25) Set the positions of these switches on the P5-10 Panel:

(a) Set the L PACK switch to OFF.

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HAP 101-999 (Continued)

(b) Set the APU BLEED switch to OFF.

(c) Make sure the left pack indicated duct pressure is zero.

(d) Confirm PACK configuration on FMC.

(26) Remove flow measuring tool and reinstall left cold-air check valve.

NOTE: Make sure the orientation of the valve is correct before tightening the clamps.

(27) Tighten the clamps to 50 pound-inches (5.65 Newton-meters).

(28) Set the ISOLATION VALVE switch to OPEN.

(29) Set the APU BLEED switch to ON.

(30) Check the right cold-air check valve for leaks and correct as necessary.

(31) Move the ISOLATION VALVE switch to CLOSED.

(32) Check the left cold-air check valve for leaks and correct as necessary.

(33) Set the APU BLEED switch to OFF.

(34) Shut down the APU (APU Usual Shutdown, AMM TASK 49-11-00-860-802).

(35) Compare the values in the Figure 303 with the flow curves in Figure 304. Refer to theFigure 305 to troubleshoot the system if the values collected do not fall within the parameters of the flow curves.

L. Repair Confirmation After Using the Air Flow and Temperature Diagnostic Tool

(1) Perform the procedure to evaluate the packs again to see if the problem has been solved. Continue to evaluate the leakage in the fuselage and the bleed air pressure to determine if sufficient air is available to the packs. Low bleed pressures may indicate poor bleed performance even if the pressures are not zero.

HAP ALL

M. Initial Evaluation of Engine Bleed System Performance

NOTE: This procedure is given for Engine #1. Engine #2 is similar unless otherwise stated.

(1) Make sure the applicable engine start lever is in the CUTOFF position.

(a) Install a DO-NOT-OPERATE tag on the engine start lever.

(2) Make sure the L and R PACK switches on the P5-10 panel are in the OFF position.

(3) Make sure the APU BLEED switch on the P5-10 panel is in the OFF position.

(4) Make sure the ISOLATION VALVE switch on the P5-10 panel is in the CLOSE position.

NOTE: For the #2 engine, the ISOLATION VALVE switch should be in the OPEN position.

(5) Supply electrical power to the airplane. Do this task.

(a) Supply Electrical Power, AMM TASK 24-22-00-860-811.

(6) Open the thrust reverser. Do this task:

(a) Open the Thrust Reverser (Selection), AMM TASK 78-31-00-010-801-F00

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(7) Use a dental mirror, STD-3907 to look at the Position Indicator/Manual Override Nut [5] on the Precooler Control Valve [4] to make sure it is in the OPEN position (Figure 306).

(a) Use a 3/4-inch wrench on the Manual Override Nut [5] to close the Precooler Control Valve [4] to make sure it moves smoothly.

(b) Remove the wrench and allow the valve to return to the OPEN position by spring force only.

(c) If the Precooler Control Valve [4] does not close smoothly or return to the OPEN position, replace the valve by following these procedures:

Precooler Control Valve Removal, AMM TASK 36-12-02-000-801

Precooler Control Valve Installation, AMM TASK 36-12-02-400-801

(8) Look at the Position Indicator/Manual Override Nut [2] on the PRSOV [1] to make sure it is in the CLOSED position (Figure 306).

(a) Use a 3/8-inch wrench on the Manual Override Nut [2] to open the PRSOV [1] to make sure it moves smoothly.

(b) Remove the wrench and allow the valve to return to the CLOSED position by spring force only.

(c) If the PRSOV [1] does not open smoothly or return to the CLOSED position, replace the valve by following these procedures:

PRSOV Removal, AMM TASK 36-11-04-000-801

PRSOV Installation, AMM TASK 36-11-04-400-801

(9) Look at the Position Indicator/Manual Override Nut [10] on the High Stage Valve [9] to make sure it is in the CLOSED position (Figure 306).

(a) Use a 3/8-inch wrench on the Manual Override Nut [10] to open the High Stage Valve [9] to make sure it moves smoothly.

(b) Remove the wrench and allow the valve to return to the CLOSED position by spring force only.

(c) If the High Stage Valve does not open smoothly or return to the CLOSED position, replace the valve by following these procedures:

High Stage Valve Removal, AMM TASK 36-11-06-000-801

High Stage Valve Installation, AMM TASK 36-11-06-400-801

N. Fault Isolation Procedure - Do the Bleed Air System Leak Check

(1) Use the APU to pressurize the Bleed Air System. Do this task.

(a) Supply Pressure to the Pneumatic System with the APU, AMM TASK 36-00-00-860-803.

NOTE: The PRSOV [1] should be closed when pressurizing the Bleed Air System.

(2) Put the applicable engine BLEED switch in the ON position.

WARNING: USE A RATCHET-TYPE WRENCH TO OPEN THE PRSOV. PRESSURE IN THE SYSTEM CAN CAUSE THE PRSOV TO OPEN QUICKLY. THIS CAN PULL THE WRENCH FROM YOUR HANDS. INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT CAN OCCUR.

(3) Use a 3/8-inch socket on a ratchet-type wrench to turn the Manual Override Nut [2] on the PRSOV [1]. Once you begin turning the Manual Override Nut [2], the air pressure should move the PRSOV to the fully open position.

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WARNING: REMOVE THE PRESSURE FROM THE PNEUMATIC DUCTS BEFORE YOU REMOVE A PNEUMATIC SYSTEM COMPONENT. HOT HIGH PRESSURE AIR CAN CAUSE INJURIES TO PERSONNEL OR DAMAGE TO EQUIPMENT.

(4) If the PRSOV did not move fully open, test the Relief Valve Assembly [6] on the Bleed Air Regulator [3] for major air leakage.

NOTE: A small amount of air leakage from the Relief Valve Assembly [6] is normal.

(a) Press down on the top of the Relief Valve Assembly [6] to stop the air flow.

(b) If the PRSOV [1] moves fully open when the air flow stops, there is too much leakage from the Relief Valve Assembly [6]. Replace the Bleed Air Regulator [3] by doing these tasks.

1) Bleed Air Regulator Removal, AMM TASK 36-11-03-000-801

2) Bleed Air Regulator Installation, AMM TASK 36-11-03-400-801

(5) Apply leak detector, G50135 to the sense lines and fittings to determine if air leakage exists.

(a) Replace leaking sense lines and fittings as necessary.

NOTE: Apply Never-Seez NSBT-8N compound, D00006 to all male threads before connecting the pneumatic sense lines.

(6) Replace the PRSOV [1] if it does not go fully open when the system is pressurized and there is no major leakage from the Relief Valve Assembly [6] on the Bleed Air Regulator [3] or leaks in the sense lines. Do these tasks:

(a) PRSOV Removal, AMM TASK 36-11-04-000-801

(b) PRSOV Installation, AMM TASK 36-11-04-400-801

(7) Make sure the Precooler Control Valve [4] moves fully closed when the PRSOV is fully open.

(8) If the Precooler Control Valve [4] does not move fully closed, inspect for air leaks by doing the following.

(a) Apply leak detector, G50135 to the supply and control pressure sense lines, fittings, and the 390° sensor.

(b) Replace leaking sense lines, fittings, and the 390° sensor as necessary.

NOTE: Apply Never-Seez NSBT-8N compound, D00006 to all male threads before connecting the pneumatic sense lines.

(9) If the Precooler Control Valve [4] does not move fully closed and no air leaks were found, do the following.

(a) Remove the test cap [12] on the control pressure sense line from the Precooler Control Valve [4] to the 390° sensor and make sure air flows out of the test port.

(b) If air does not flow out of the test port, do the following.

1) Reconnect the test cap [12].

2) Disconnect the sense line from the Precooler Control Valve [4] to make sure there is air flow out of the valve's control pressure port.

3) If air does not flow out of the control pressure port, replace the Precooler Control Valve [4].

a) Precooler Control Valve Removal, AMM TASK 36-12-02-000-801

b) Precooler Control Valve Installation, AMM TASK 36-12-02-400-801

4) If there is air flow out of the control pressure port on the Precooler Control Valve [4], there is blockage in the sense line between the test port and the valve.

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a) Replace the sense line.

(c) If air flows out of the test port when the test cap is removed, do the following.

1) Reconnect the test cap [12].

2) Disconnect the sense line at the 390° sensor to make sure there is no blockage in the sense line between the test port and the sensor.

3) Replace the sense line if there is no air flow out of the end.

(10) Listen for air leakage in the engine.

NOTE: Air leakage in the engine is an indication that the High Stage Valve [9] is allowing air to backflow into the engine.

(a) Replace the High Stage Valve [9] if air can be heard in the engine when the system is pressurized. Do these tasks:

1) High Stage Valve Removal, AMM TASK 36-11-06-000-801

2) High Stage Valve Installation, AMM TASK 36-11-06-400-801

(11) Disconnect the Supply Pressure Sense Line [8] from the High Stage Regulator [7].

(12) Do a check for air leakage at the supply pressure inlet on the High Stage Regulator [7].

NOTE: Air leaking from the supply pressure inlet when the Bleed Air System is pressurized with the APU indicates the reverse flow diaphragm inside the High Stage Regulator [7] is damaged.

(a) Replace the High Stage Regulator [7] if air leakage is detected from the supply pressure inlet. Do these tasks.

1) High Stage Regulator Removal, AMM TASK 36-11-07-000-801

2) High Stage Regulator Installation, AMM TASK 36-11-07-400-801

(b) If no air leakage is detected, reconnect the Supply Pressure Sense Line [8] to the High Stage Regulator [7].

NOTE: Apply Never-Seez NSBT-8N compound, D00006 to all male threads before connecting the pneumatic sense lines.

O. Put the Airplane Back To Its Usual Condition

(1) Remove pneumatic pressure from the Bleed Air System. Do this task:

(a) Remove Pressure from the Pneumatic System, AMM TASK 36-00-00-860-806

(2) Put the ISOLATION VALVE switch on the P5-10 Air Conditioning Module in the AUTO position.

(3) Put the L and R BLEED switches on the P5-10 panel in the OFF position.

(4) Close the thrust reverser. Do this task:

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

(5) Remove the electrical power from the airplane. Do this task:

(a) Remove Electrical Power, AMM TASK 24-22-00-860-812.

P. Engine Bleed System Troubleshooting Table

(1) The following is an Engine Bleed System Quick Reference Troubleshooting Table. Print out the table and use it as a quick reference troubleshooting guide along with Figure 307 when working on the bleed system of an airplane.

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Engine Bleed System Quick Reference Troubleshooting Table

STEP	737-600/700/800/900	TROUBLESHOOTING STEP	EXPECTATION - NORMAL 0PERATION	REMEDY FOR ABNORMAL OPERATION
1	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.F.(6) FIM 36-10-804, F.(6)	Open the thrust reverser.		
2.A	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.F.(7) FIM 36-10-804, F.(7)	Look at the position indicator on the precooler control valve.	Should be open.	
2.B	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.F.(7)(a),(b) FIM 36-10-804, F.(7)(a), (b)	Manually wrench CLOSED the precooler control valve and allow it to move OPEN by spring force only.	Should move smoothly to the CLOSED position and return to the OPEN position by spring force only.	If the valve does not move smoothly and return to OPEN, replace per the R/I in AMM 36-12-02/400 series pages.
3.A	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.F.(8) FIM 36-10-804, F.(9)	Look at the position indicator on the pressure regulating shutoff valve (PRSOV).	Should be CLOSED.	
3.B	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.F.(8)(a), (b) FIM 36–10–804, F.(9)(a), (b)	Manually wrench OPEN the PRSOV and allow it to move CLOSED by spring force only.	Should move smoothly to the OPEN position and return to the CLOSED position by spring force only.	If the valve does not move smoothly and return to CLOSED, replace per the R/I in AMM 36-11-04/400 series pages.
4.A	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.F.(9) FIM 36-10-804, F.(10)	Look at the position indicator on the high stage valve.	Should be CLOSED.	
4.B	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.F.(9)(a), (b) FIM 36-10-804, F.(10)(a), (b)	Manually wrench OPEN the high stage valve and allow it to move CLOSED by spring force only.	Should move smoothly to the OPEN position and return to the CLOSED position by spring force only.	If the valve does not move smoothly and return to CLOSED, replace per the R/I in AMM 36-11-06/400 series pages.
5A	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.G.(1)(a) FIM 36-10-804, F.(11)	Supply pneumatic pressure from the APU or ground supply (pressure should be less than 40 psig).		

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(Continued)

STEP	737-600/700/800/900	TROUBLESHOOTING STEP	EXPECTATION - NORMAL 0PERATION	REMEDY FOR ABNORMAL OPERATION
5.B	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.G.(3), (4) FIM 36-10-804, F.(13)	Manually OPEN the PRSOV with a wrench if it does not OPEN when the APU bleed is selected ON. WARNING: Use a ratchet-type wrench when opening the PRSOV to avoid injury.	PRSOV will move to and stay in the FULL OPEN position. Low control pressure from the BAR or leaking control pressure lines can result in low duct pressure when the PRSOV is regulating the pneumatic pressure. Check for leaking relief valve on the bleed air regulator, leaking flex line to the PRSOV, leaking control pressure line from the PRSOV to the 450° F sensor, excessive venting of the 450° F sensor.	Check for leaks on: 1. the supply and control pressure lines. 2. relief valve on the regulator. If the relief valve is leaking, replace the bleed air regulator per the R/I in AMM 36-11-03/400 series pages.
5.C	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.G.(7) FIM 36-10-804, F.(20)	When the PRSOV moves OPEN, the precooler control valve should move CLOSED.	The precooler control valve moves to the CLOSED position.	If the valve does not move CLOSED, check for leaks on the supply and control pressure lines. If no leaks are found, replace the precooler control valve per the R/I in AMM 36-12-02/400 series pages.
5.D	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.G.(9) FIM 36-10-804, F.(21)(a)	Disconnect the test cap on the precooler control valve control pressure line.	The precooler control valve should move to the OPEN position.	If the valve does not move OPEN; check for blockage in the sense line.
5.E	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.G.(10)	Listen for air leakage in the engine.	Air leakage in the engine indicates the high stage valve is allowing air to backflow into the engine.	If you can hear air leakage in the engine, replace the high stage valve per the R/I in the AMM: 36–11–06/400 series pages.

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(Continued)

STEP	737-600/700/800/900	TROUBLESHOOTING STEP	EXPECTATION - NORMAL 0PERATION	REMEDY FOR ABNORMAL OPERATION
5.F	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.H.(11), (12) FIM 36-10-804, F.(15)	Disconnect the supply line connection from the high stage regulator port.	No air should flow from the supply port.	If air flows from the supply port, the reverse flow diaphragm is ruptured. Replace the high stage regulator per the R/I in AMM 36-11-07/400 series pages
6.A	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.H.(1)-(3)	Return pneumatic system to normal configuration.		
6.B	AMM 36-11-00/500 Task 36-11-00-700-802 Para 6.H.(4), (5)	Return airplane to normal configuration.		

Q. Repair Confirmation

(1) Do this task: Start the Engine Procedure (Selection), AMM TASK 71-00-00-800-807-F00

(2) Put these switches, on the P5-10 panel, to the positions that follow:

(a) ISOLATION VALVE - CLOSED

(b) ISOLATION VALVE - CLOSED

(c) 2 BLEED - OFF

(d) APU BLEED - OFF

(e) L PACK - OFF

(f) R PACK - OFF

(3) Examine the dual duct pressure indicator on the P5-10 panel.

NOTE: Ignore the fluctuation in the dual duct pressure indicator with these conditions: you move the BLEED switch, the isolation valve is closed, or the PACK switch is in the OFF position.

(a) Make sure the dual duct pressure indicator shows 10.0 psig or less.

(4) Make sure that engine is at idle.

(5) Put the engine 1 BLEED switch to the ON position.

(a) Permit the pressure in the pneumatic ducts to become stable.

(b) Make sure the dual duct pressure indicator shows 10.0 - 25.0 psig.

NOTE: Pneumatic duct pressure must be a minimum of 18 psig to supply sufficient air for cabin pressurization.

(6) Put the L PACK switch to the AUTO position.

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(7) Slowly increase the engine power in 10% increments when following these steps and log the pressure values in the DUCT PRESSURE VALUES AS N1% INCREASES table below.

NOTE: The duct pressures should follow the graphs in Figure 308. The minimum serviceable pneumatic duct pressure under in-flight airplane configuration and operating conditions are shown in Figure 309.

(a) As N1 increases, make sure the duct pressure is at 32 ± 6 psig and becomes stable when N1 is at 40%.

(b) Continue to slowly increase the engine power to 80% N1.

(c) Make sure the duct pressure goes to 42 ± 8 psig and becomes stable.

INCREASE N1%

N1%	IDLE	20%	30%	40%
LEFT ENGINE				
RIGHT ENGINE				
PSIG RANGE	18–20	18–20	26–38	26–38

INCREASE N1%

N1%	50%	60%	70%	80%
LEFT ENGINE				
RIGHT ENGINE				
PSIG RANGE	26–38	34–50	34–50	34–50

DUCT PRESSURE VALUES AS N1% INCREASES

(8) Slowly decrease the engine power.

(a) Log the pressure values at every 10% N1 interval in the DUCT PRESSURE VALUES AS N1% DECREASES table below.

(b) Make sure the duct pressure goes to 32 ± 6 psig and becomes stable as shown in the graphs in Figure 308.

NOTE: When the engine bleed system goes from the 5th-stage bleed to the 9th-stage bleed, the duct pressure can decrease to approximately 20.0 psig. This can occur before the high- stage valve opens and regulates the bleed air.

DECREASE N1%

N1%	80%	70%	60%	50%
LEFT ENGINE				
RIGHT ENGINE				
PSIG RANGE	34–50	34–50	34–50	26–38

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DECREASE N1%

N1%	40%	30%	20%	IDLE
LEFT ENGINE				
RIGHT ENGINE				
PSIG RANGE	26–38	26–38	18–20	18–20

DUCT PRESSURE VALUES AS N1% DECREASES

(9) Put the engine 1 BLEED switch to the OFF position.

(10) Put the L PACK switch to the OFF position.

(11) After the duct pressure is stable.

(a) Make sure the duct pressure is at 10.0 psig or less.

(12) To stop the engine, do this task: Stop the Engine Procedure (Usual Engine Stop), AMM TASK 71-00-00-700-819-F00

(13) Do this procedure again for the engine 2 bleed system, if it is necessary.

END OF TASK

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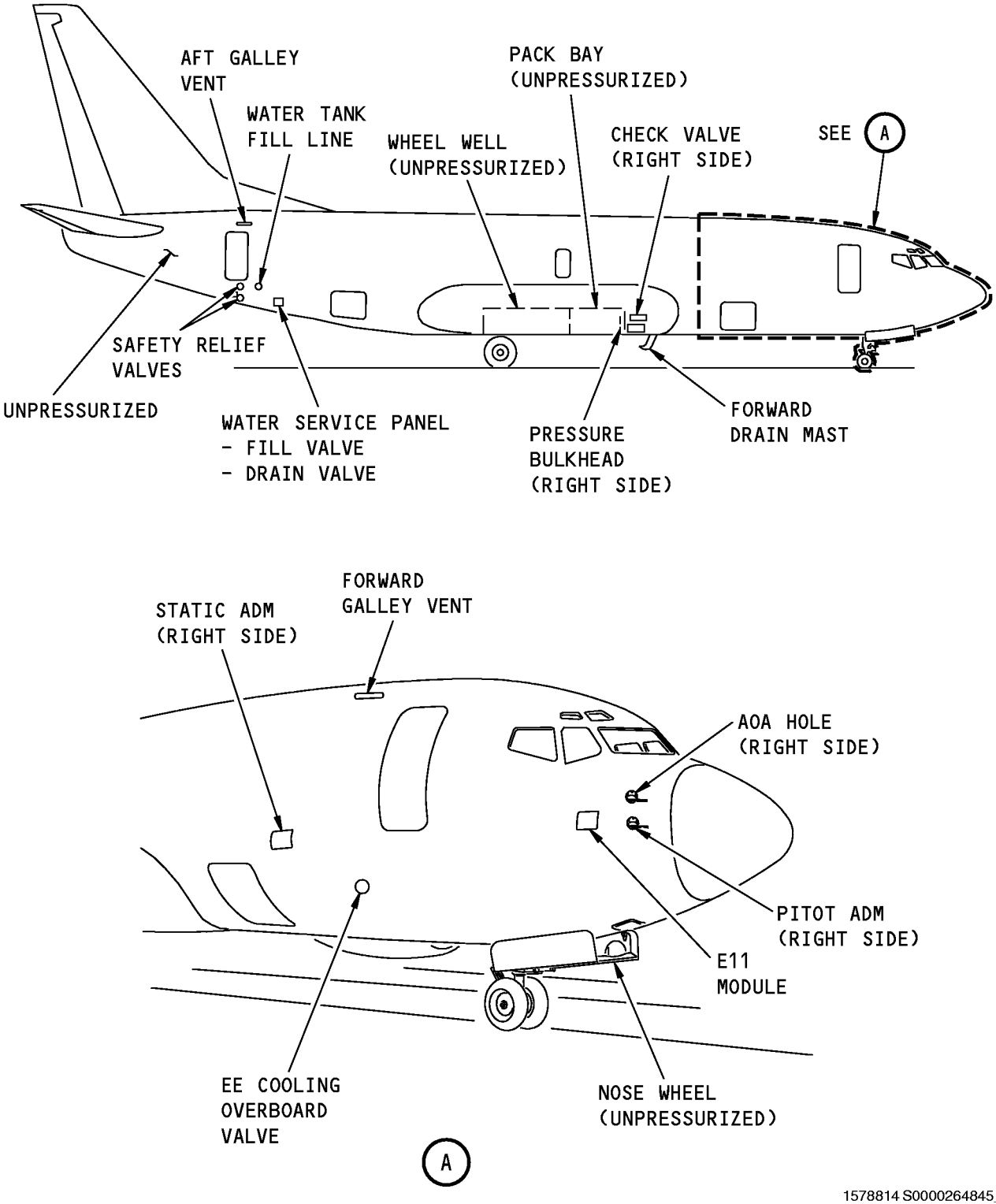

Fuselage Leakage Sources
Figure 301 / 21-00-00-990-810

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AIRPLANE _____ HOURS _____ CYCLES _____ DATE _____

INITIAL CABIN PRESSURIZATION (0.0 TO 4.0 PSID)

CONDITION OF CARGO AND MAIN ENTRY DOOR SEALS _____

FLOW CONTROL VALVE INDICATOR MODULATION LEFT VALVE _____ RIGHT VALVE _____

ANY OBVIOUS AIR LEAK NOISE FROM INSIDE CABIN _____

ANY OBVIOUS LEAKS OUTSIDE AIRPLANE _____

ESTIMATED TIME TO PRESSURIZE FROM 0.0 TO 4.0 PSID _____

BLEED SOURCE(S) USED TO ACHIEVE 4.0 PSID LEFT ENGINE RIGHT ENGINE APU

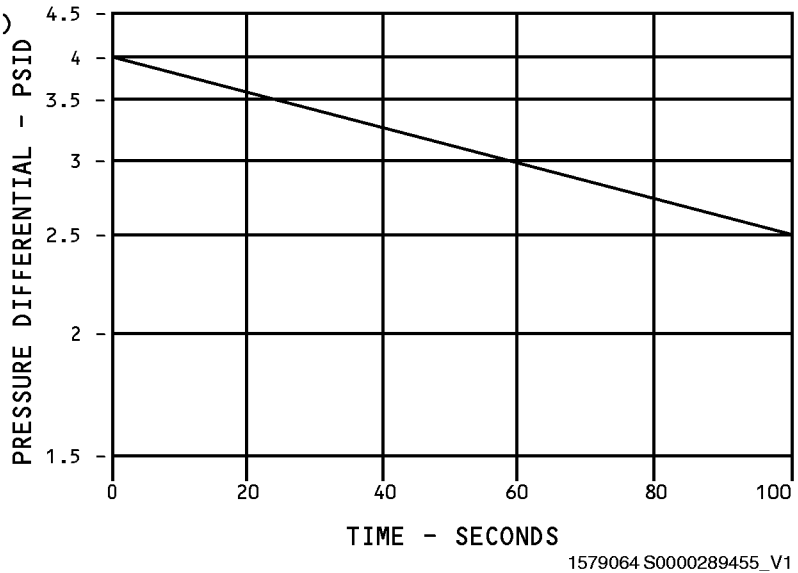
SINGLE PACK ABILITY TO PRESSURIZE THE CABIN (LOW AND HIGH FLOW MODE)

	CABIN RATE OF CHANGE	BLEED SOURCE & DUCT PRESSURE	ENGINE N2 %
LEFT PACK LOW FLOW MODE	_____	_____	_____
LEFT PACK HIGH FLOW MODE	_____	_____	_____
RIGHT PACK LOW FLOW MODE	_____	_____	_____
RIGHT PACK HIGH FLOW MODE	_____	_____	_____

AIRPLANE LEAK DOWN (NO PACK OPERATION)

CABIN TEMPERATURE _____

TIME (SECONDS)	CABIN (PSID)	CABIN (RATE OF CHANGE)
10	_____	_____
20	_____	_____
30	_____	_____
40	_____	_____
50	_____	_____
60	_____	_____
70	_____	_____
80	_____	_____
90	_____	_____
100	_____	_____
110	_____	_____
120	_____	_____



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Single Pack Operation Troubleshooting Data Sheet
Figure 302 / 21-00-00-990-811

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DATA COLLECTION SHEET

Airplane _____ Pack: Left or Right Date: _____

Ambient Temperature: _____ °C or °F Dew Point: _____

Flow Mode: HIGH

Pack Flow: _____ lbs/min Pack Temperature: _____ °F

Duct Pressure _____ PSI Duct Temperature: _____ °C or F

35 °F Valve Position: Circle one Full Close Half Closed _____ %Closed

Flow Control Valve: Indicate percent open _____ % Open

Water Separator Indicator Position: Red Black

Flow Mode: AUTO

Pack Flow: _____ lbs/min Pack Temperature: _____ °F

Duct Pressure _____ PSI Duct Temperature: _____ °C or F

35 °F Valve Position: Circle one Full Close Half Closed _____ %Closed

Flow Control Valve: Indicate percent open _____ % Open

Water Separator Indicator Position: Red Black

Flow Mode: APU HIGH

Pack Flow: _____ lbs/min Pack Temperature: _____ °F

Duct Pressure _____ PSI Duct Temperature: _____ °C or F

35 °F Valve Position: Circle one Full Close Half Closed _____ %Closed

Flow Control Valve: Indicate percent open _____ % Open

Water Separator Indicator Position: Red Black

Any other observations:

_____

_____

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Pack Flow Control and Pack Cooling System Data Collection Sheet
Figure 303 / 21-00-00-990-812

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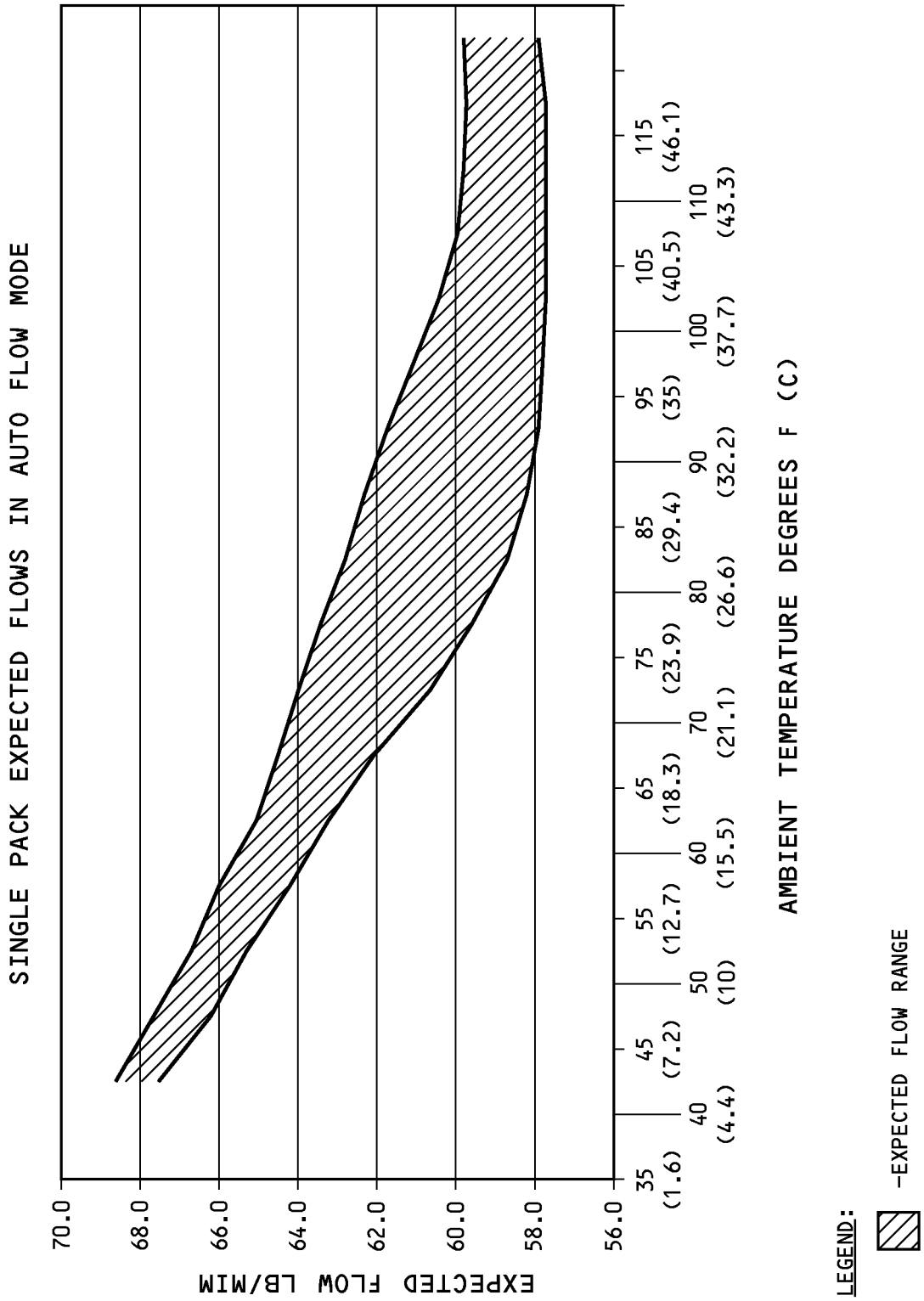

Single Pack Expected Flows
Figure 304 (Sheet 1 of 3)/ 21-00-00-990-813

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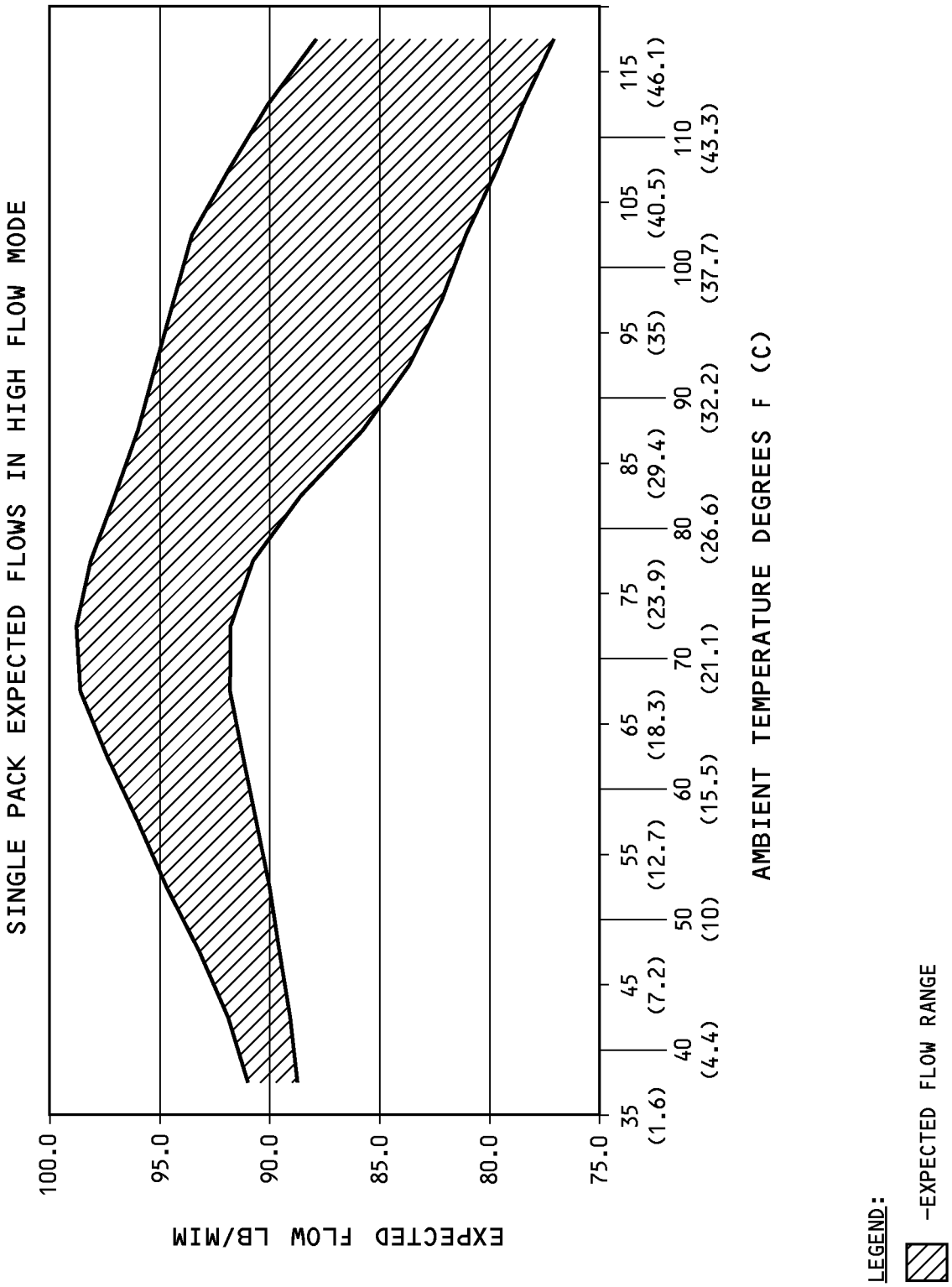

Single Pack Expected Flows
Figure 304 (Sheet 2 of 3)/ 21-00-00-990-813

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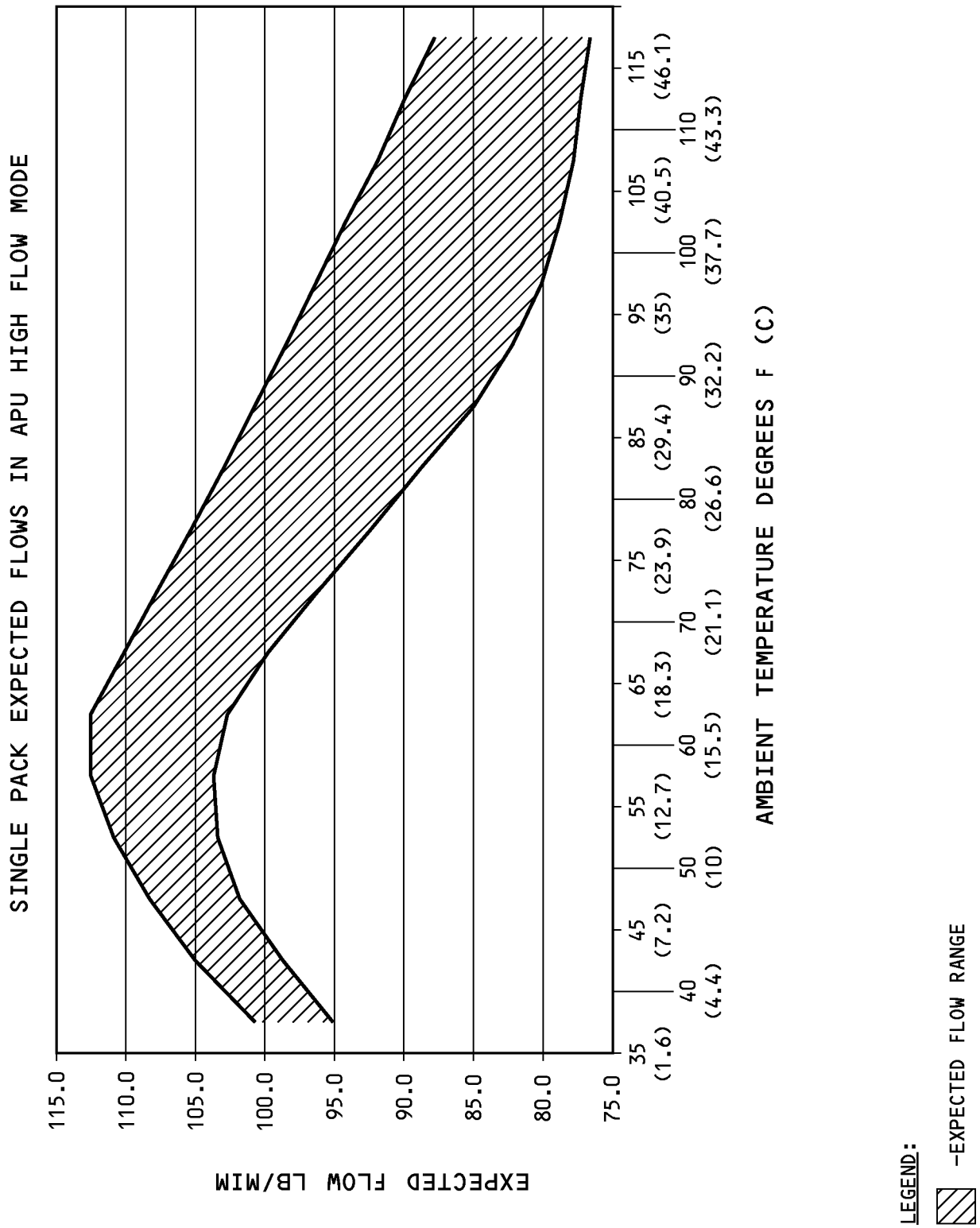

Single Pack Expected Flows
Figure 304 (Sheet 3 of 3)/ 21-00-00-990-813

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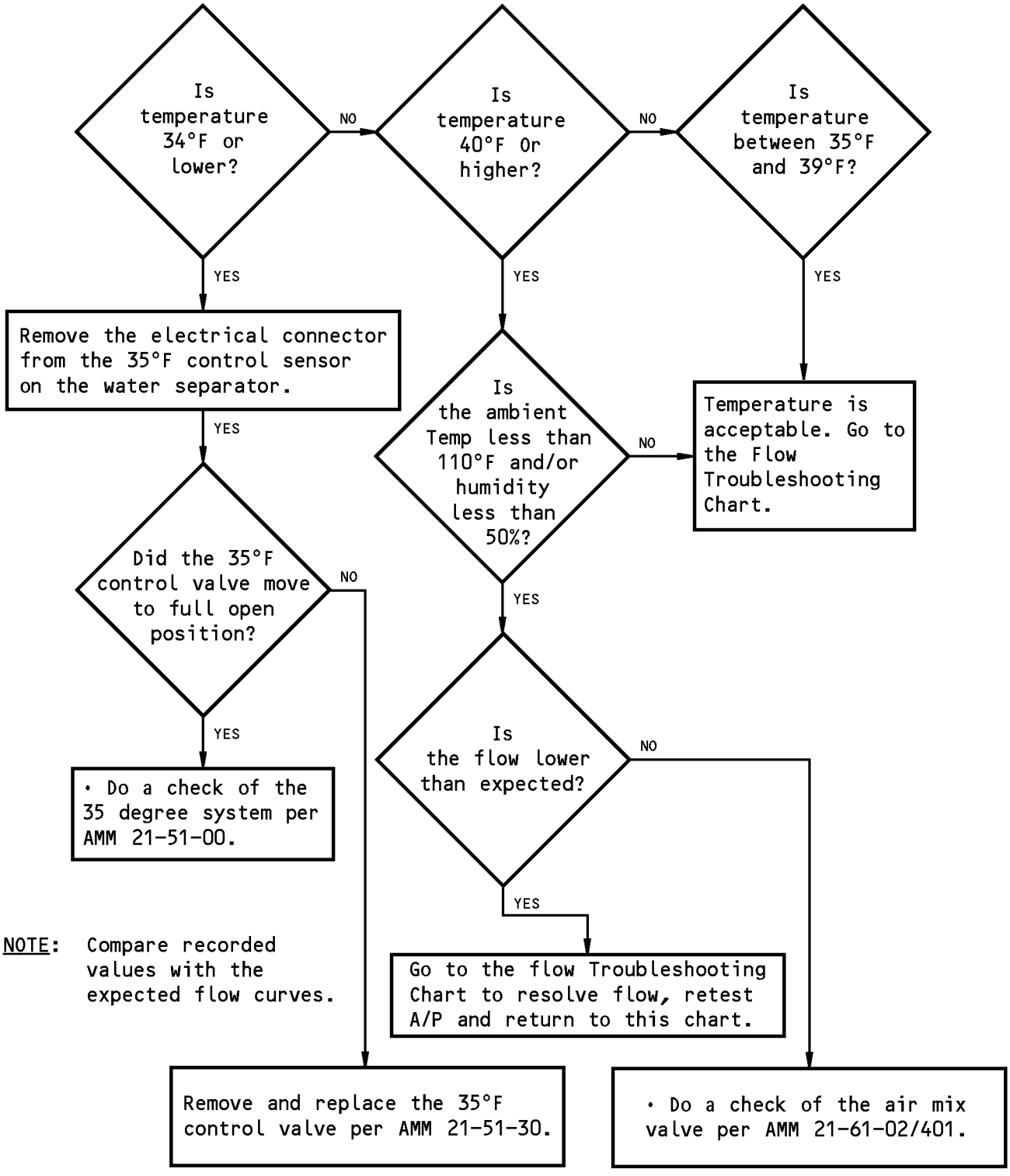

Troubleshooting Charts
Figure 305 (Sheet 1 of 2)/ 21-00-00-990-814

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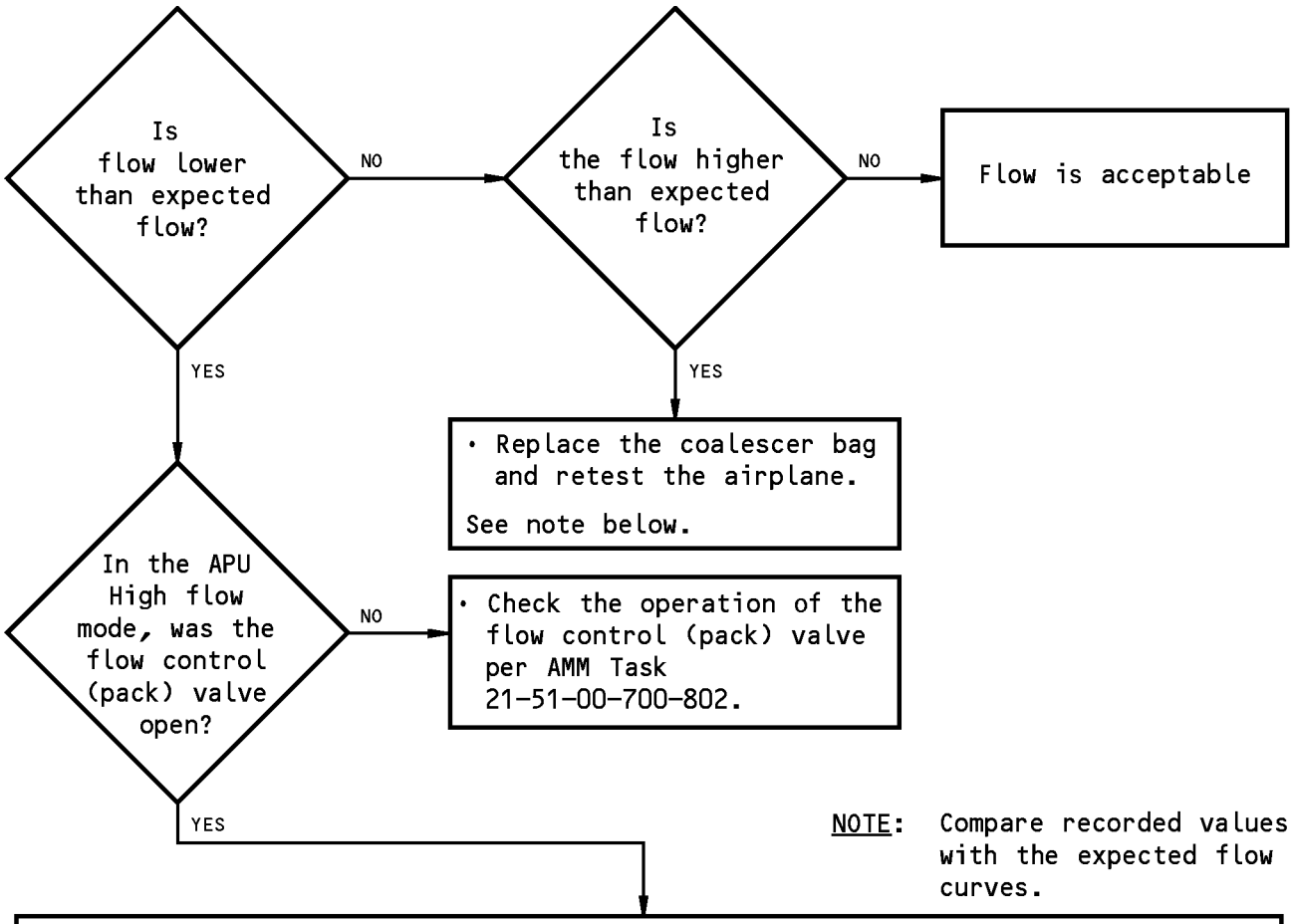

NOTE: High flow readings are an indication of water droplets in the pack flow which causes the FCI tool to indicate high flow readings. Water droplets are an indication that the coalescer bag is not adequately removing moisture.

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Troubleshooting Charts
Figure 305 (Sheet 2 of 2)/ 21-00-00-990-814

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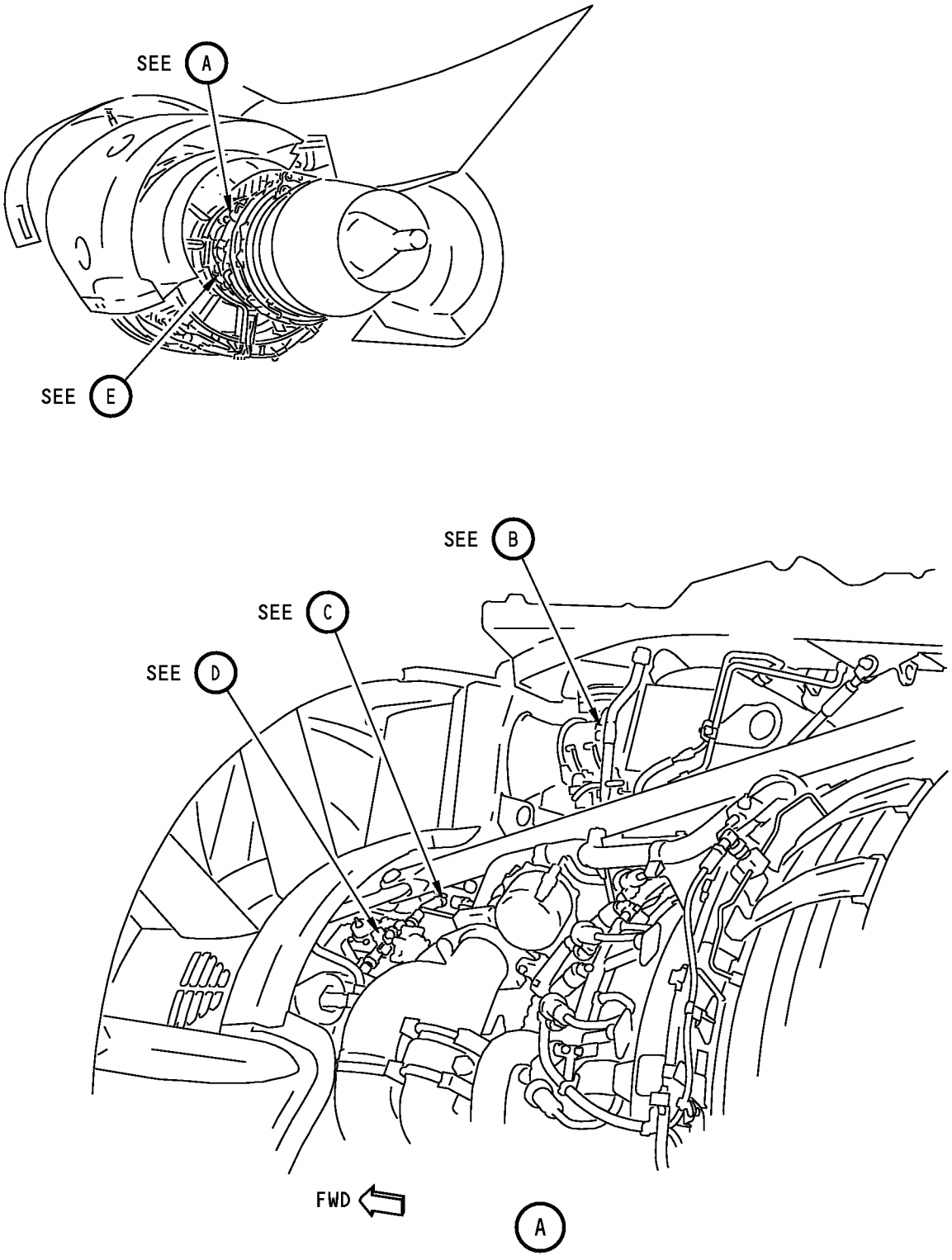

Engine Bleed Air System Leakage Check
Figure 306 (Sheet 1 of 6)/ 21-00-00-990-815

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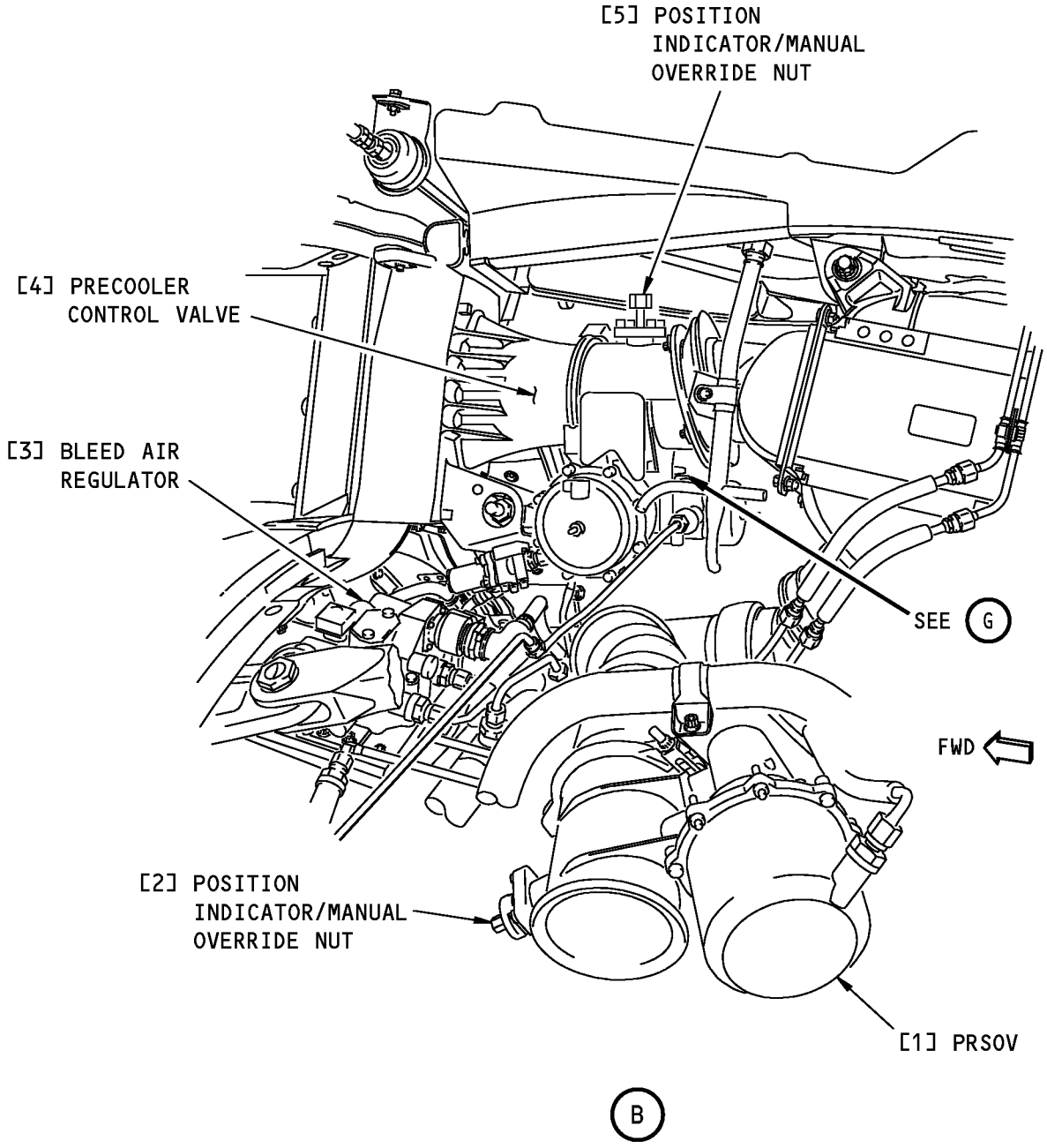

Engine Bleed Air System Leakage Check
Figure 306 (Sheet 2 of 6)/ 21-00-00-990-815

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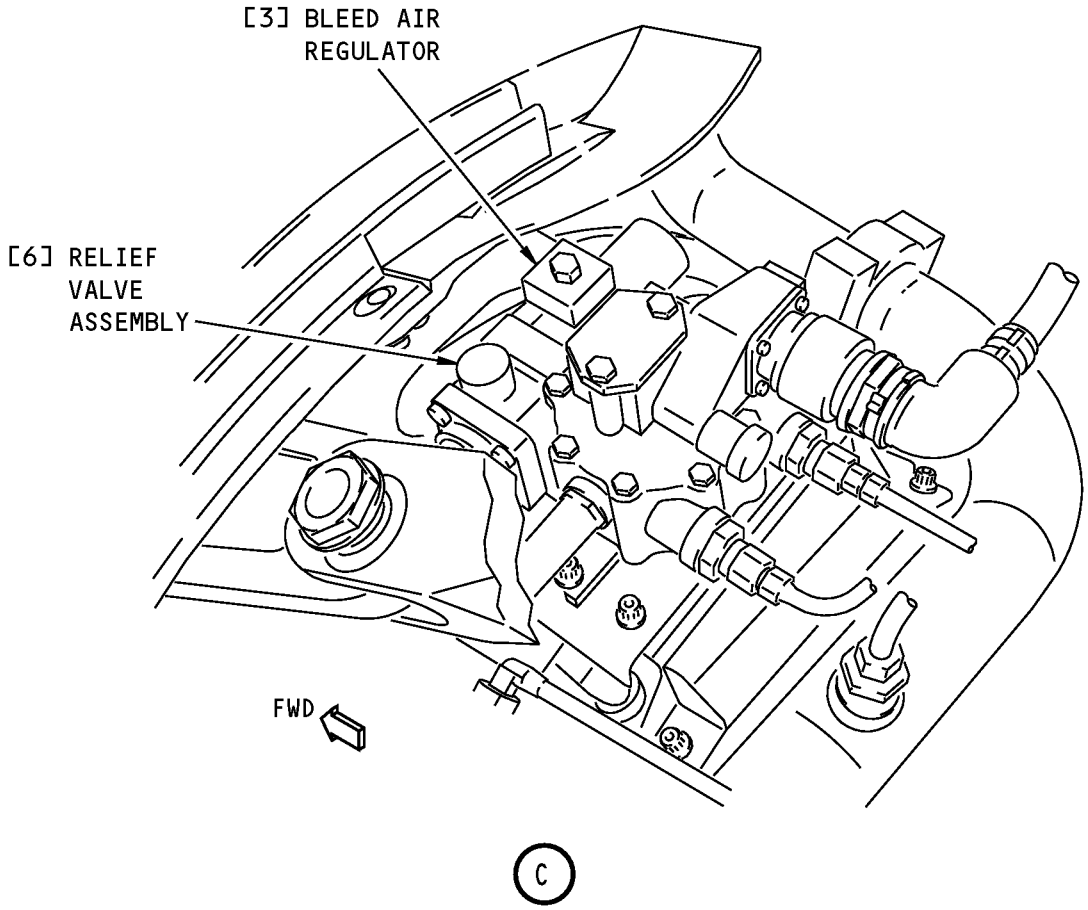

Engine Bleed Air System Leakage Check
Figure 306 (Sheet 3 of 6)/ 21-00-00-990-815

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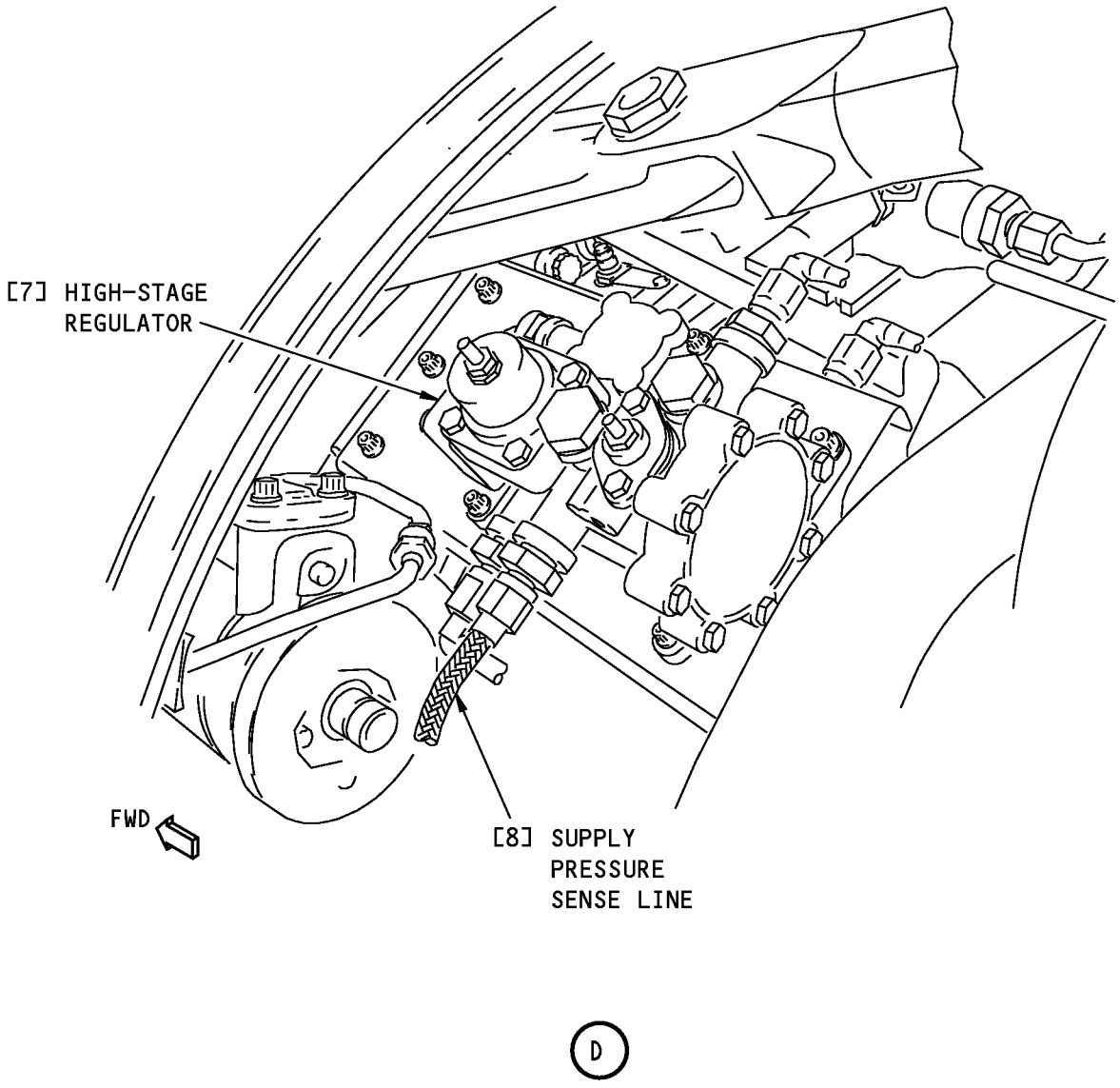

Engine Bleed Air System Leakage Check
Figure 306 (Sheet 4 of 6)/ 21-00-00-990-815

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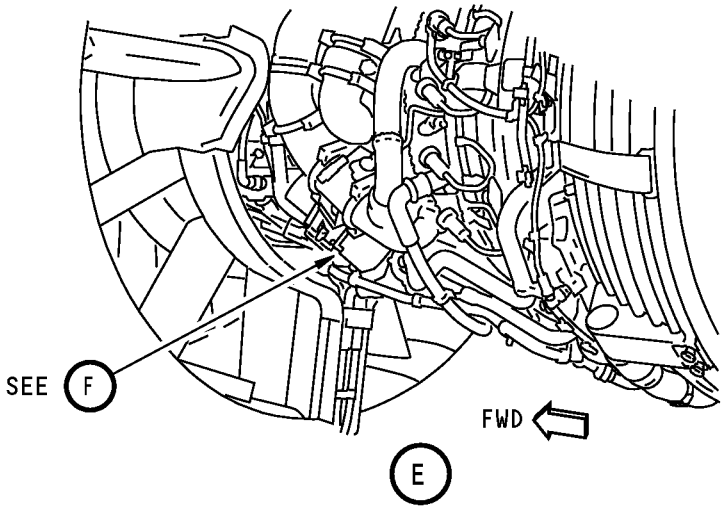

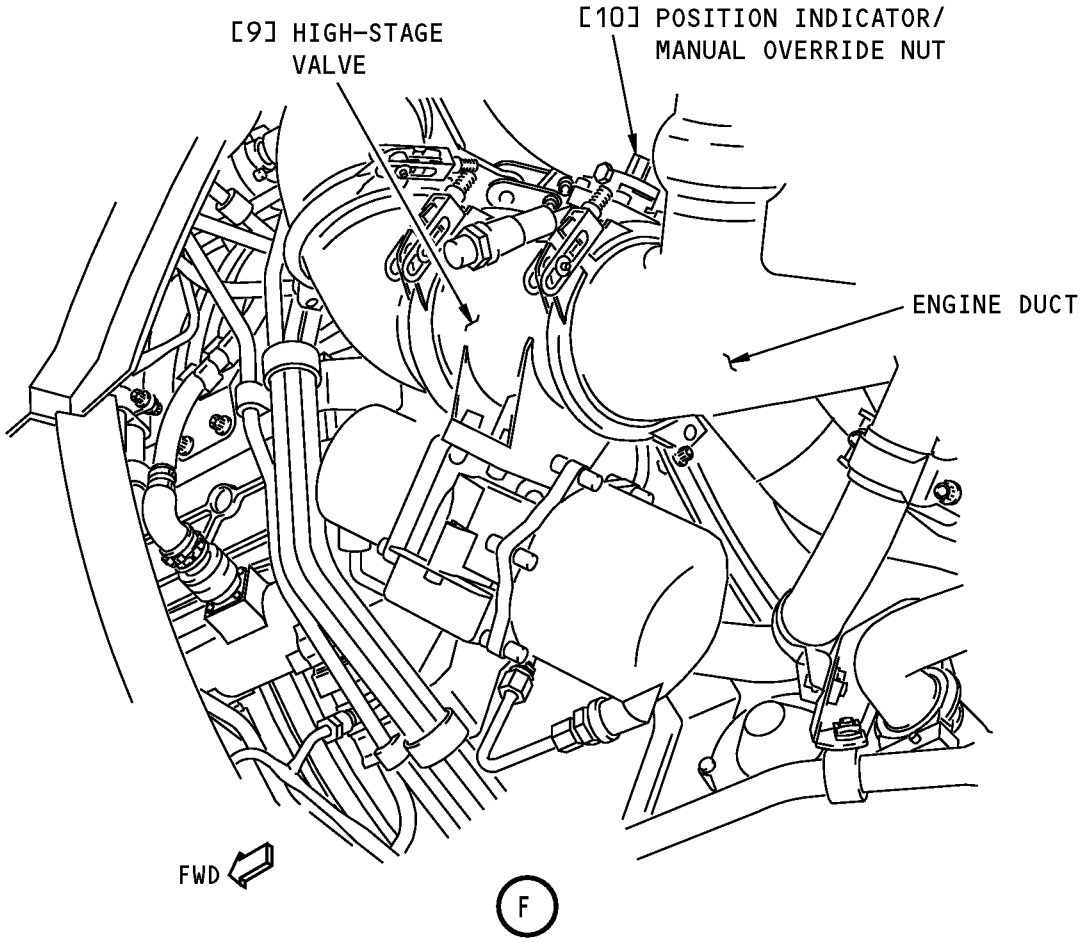

Engine Bleed Air System Leakage Check
Figure 306 (Sheet 5 of 6)/ 21-00-00-990-815

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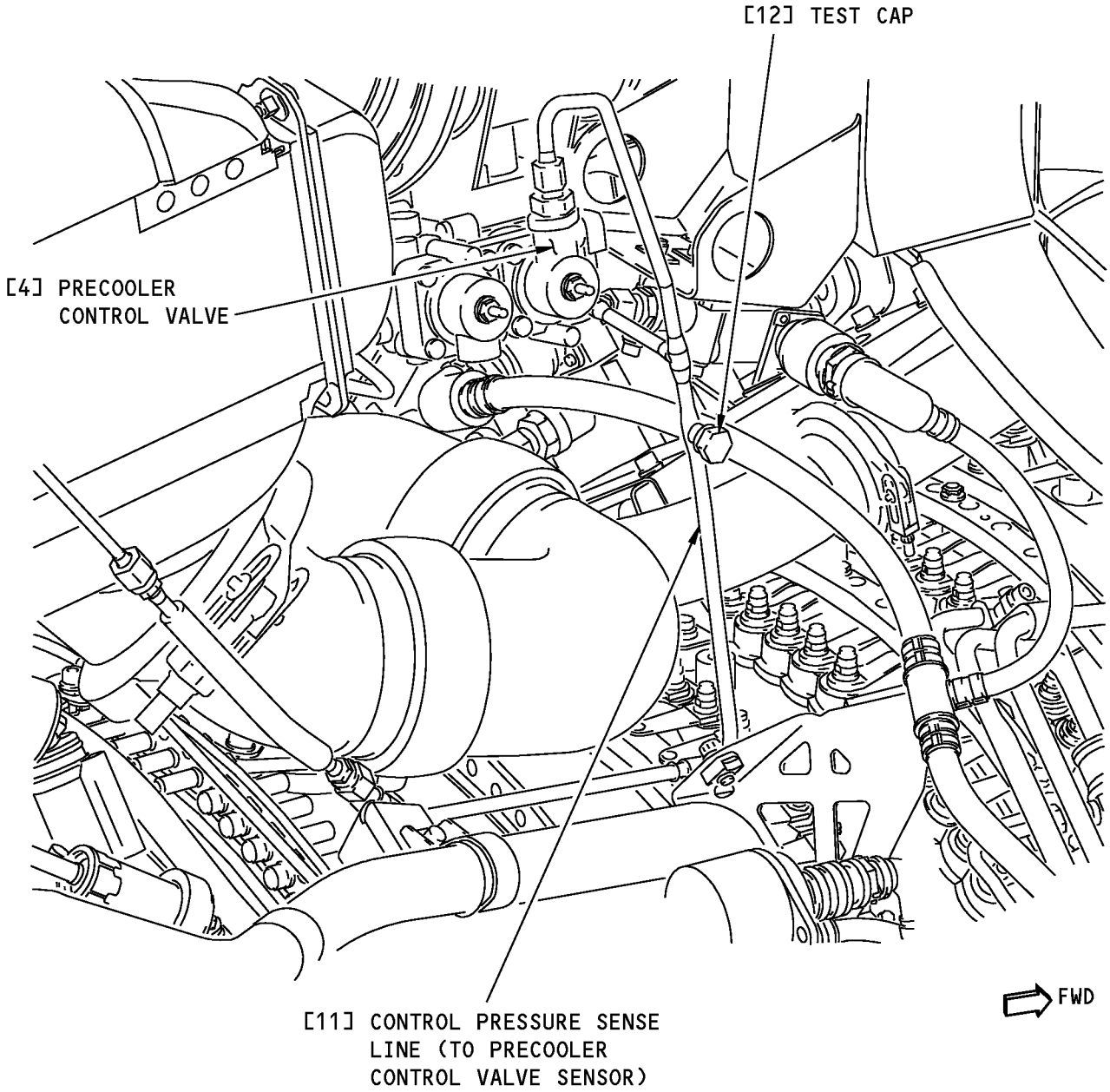

Engine Bleed Air System Leakage Check
Figure 306 (Sheet 6 of 6)/ 21-00-00-990-815

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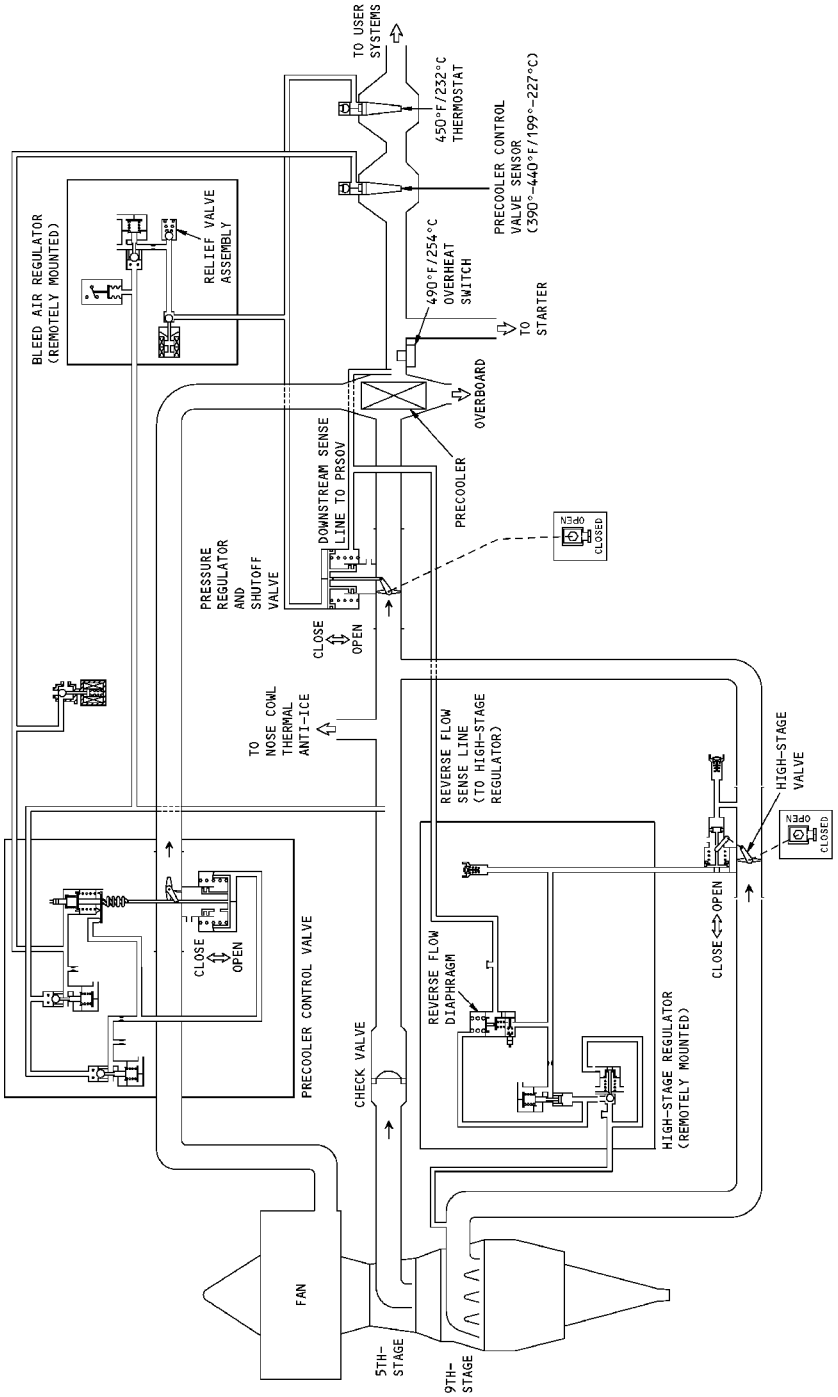

Engine Bleed Air Distribution System Control Schematic
Figure 307 / 21-00-00-990-816

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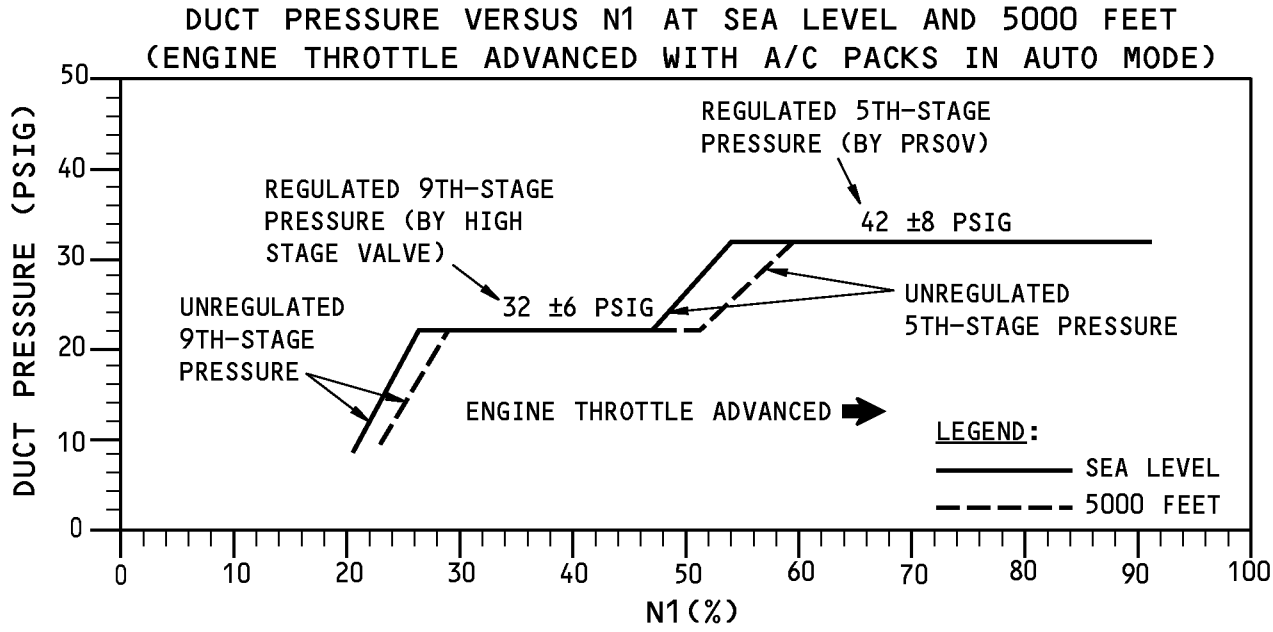

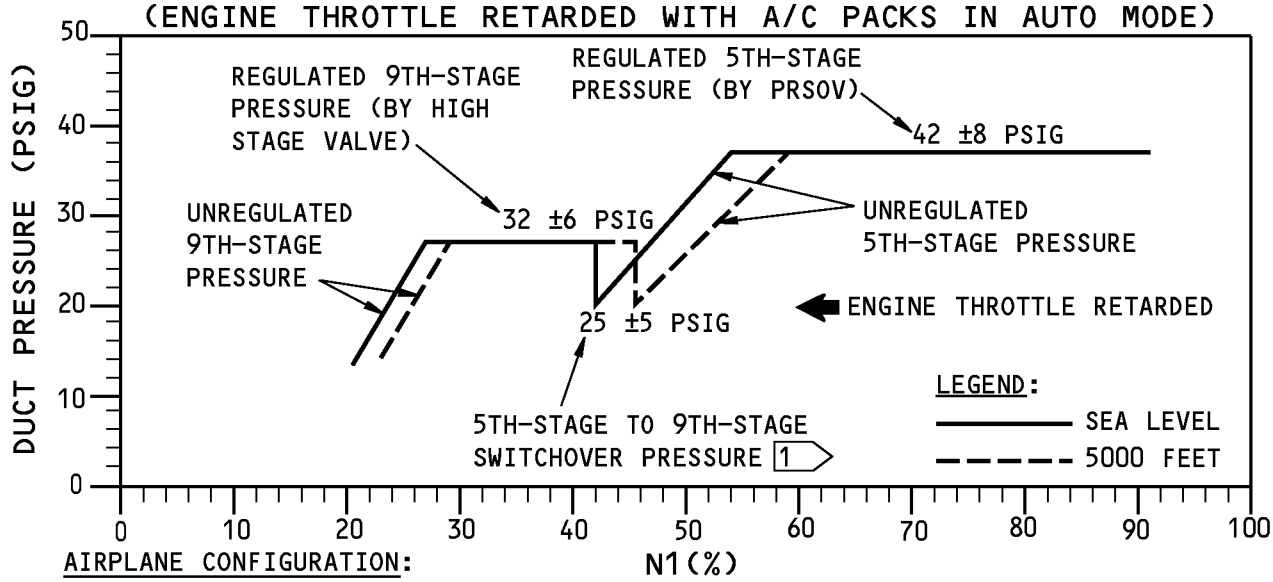

AIRPLANE CONFIGURATION:
ASSOCIATED PACK: AUTO
ASSOCIATED BLEED: ON
ASSOCIATED CTAI: OFF
ISOLATION VALVE: CLOSED
WTAI: OFF

1 WHEN THE ENGINE THROTTLE IS RETARDED AND THE ENGINE BLEED SYSTEM SWITCHOVER OCCUR FROM 5TH-STAGE PRESSURE TO 9TH-STAGE PRESSURE, DUCT PRESSURE CAN DECAY TO AS LOW AS 20 PSIG BEFORE THE HIGH STAGE VALVE OPENS AND REGULATES THE DUCT PRESSURE TO NOMINAL 32 PSIG.

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Duct Pressure Versus N1 at Sea Level and 5000 Feet
Figure 308 / 21-00-00-990-817

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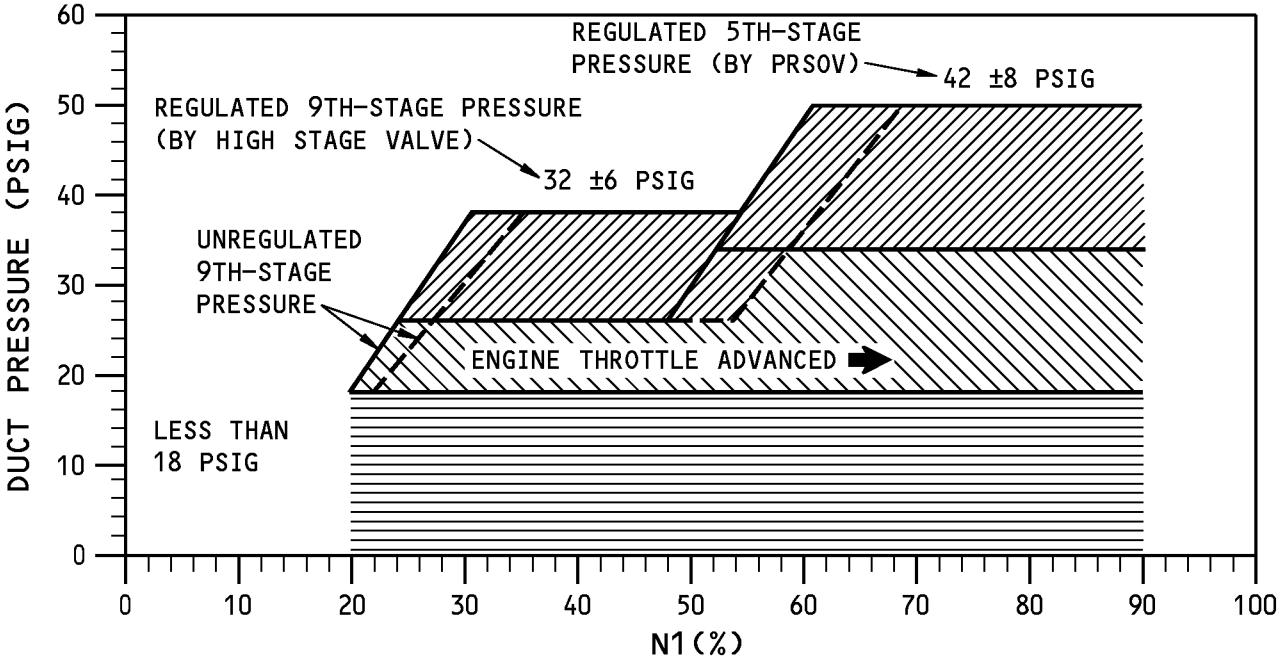
MINIMUM SERVICEABLE PNEUMATIC DUCT PRESSURE

UNDER IN-FLIGHT AIRPLANE CONFIGURATION AND OPERATING CONDITIONS



NOTE: MINIMUM POWER IN FLIGHT IS GREATER THAN MINIMUM POWER ON THE GROUND.

LEGEND:

—— SEA LEVEL

– – 5000 FEET

//// BLEED SYSTEM OPERATING NORMALLY.

\\\\ BLEED SYSTEM PERFORMANCE DRIFTING. AIRPLANE CAN BE OPERATED NORMALLY BUT ACTION TO RESTORE BLEED SYSTEM TO OPTIMUM OPERATION SHOULD BE TAKEN AT A CONVENIENT OPPORTUNITY.

=== BLEED SYSTEM INOPERATIVE. RESTORE TO NORMAL OPERATION BEFORE FLIGHT OR IMPOSE THE MEL RESTRICTION FOR CONTINUED OPERATION.

1418175 S0000255925_V2

Minimum Serviceable Pneumatic Duct Pressure
Figure 309 / 21-00-00-990-818

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801. Windshield or Foot Air Outlet Does Not Operate - Fault Isolation

A. Description

(1) The captain's or the first officer's windshield or foot air outlet has no air flow or less air flow than expected.

(2) (SDS SUBJECT 21-22-00)

B. Possible Causes

(1) Windshield and foot air outlet valve

(2) The cables for the windshield and foot air outlet valve

(3) The air distribution ducts for the flight compartment

(4) Defective muffler/duct assembly

C. Initial Evaluation

(1) Supply conditioned air to the flight compartment with the left air conditioning pack. To do this, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) Make sure the left air conditioning pack is on.

(3) Pull the applicable knob on the P1 panel (captain's instrument panel) or the P3 panel (first officer's instrument panel) for the applicable outlet (FOOT AIR or WINDSHIELD AIR).

(4) If the air flow from the applicable air outlet is satisfactory, then there was an intermittent fault.

(5) If the air flow from the applicable air outlet is not satisfactory, then do the Fault Isolation Procedure below.

D. Fault Isolation Procedure

(1) Do these steps to do a check of the other air distribution outlets in the flight compartment:

(a) Examine all of the other air distribution outlets in the flight compartment for satisfactory airflow:

(b) If you find that all of the other air distribution outlets in the flight compartment do not have satisfactory air flow, then do this task: Low Conditioned Air Flow to the Flight Deck - Fault Isolation, 21-22 TASK 802.

(c) If all of the other air distribution outlets in the flight compartment have satisfactory air flow, then continue.

(2) Do these steps to do a check of the cables for the applicable windshield and foot air outlet valve:

(a) To get access to the captain's windshield and foot air outlet valve and cables, remove the display units on the captain's instrument panel (P1). To do this, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

(b) To get access to the first officer's windshield and foot air outlet valve and cables, remove the display units on the first officer's instrument panel (P3). To do this, do this task: Display Unit Removal, AMM TASK 31-62-11-000-801.

(c) Do a check to see if the cables for the applicable air outlet are connected and correctly adjusted. To do this, do this task: Air Outlet Valve Control Cables Adjustment, AMM TASK 21-22-02-820-801.

1) If there is a problem with the cables, then do these steps:

a) If it is necessary, adjust the cables. To do this, do this task: Air Outlet Valve Control Cables Adjustment, AMM TASK 21-22-02-820-801.

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b) If it is necessary, replace the cables. To do this,

These are the tasks:

Air Outlet Valve Control Cables Removal, AMM TASK 21-22-02-000-801,

Air Outlet Valve Control Cables Installation, AMM TASK 21-22-02-400-801.

c) Do the Repair Confirmation at the end of this task.

2) If the cables for the applicable air outlet are connected and correctly adjusted, then continue.

(3) Do these steps to do a check of the applicable windshield and foot air outlet valve:

(a) Remove the applicable windshield and foot air outlet valve. To do this, do this task: Windshield and Foot Air Outlet Valve Removal, AMM TASK 21-22-01-000-801.

(b) Do a check to see if the air flow from the open air distribution duct where you removed the valve is satisfactory.

1) If the air flow from the duct is satisfactory, then do these steps:

a) Replace the windshield and foot air outlet valve with a new valve. To do this, do this task: Windshield and Foot Air Outlet Installation, AMM TASK 21-22-01-400-801.

b) Do the Repair Confirmation at the end of this task.

2) If the air flow from the duct is not satisfactory, then continue.

(4) Examine the air distribution ducts for the applicable outlet.

(a) Look for leakage or blockage in the air distribution ducts between the connection to the valve and applicable air outlet.

(b) Repair the air distribution ducts or remove the blockage.

(c) Install the applicable windshield and foot air outlet valve. To do this, do this task: Air Outlet Valve Control Cables Installation, AMM TASK 21-22-02-400-801.

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

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

E. Repair Confirmation

(1) Do these steps to make sure you corrected the fault:

(a) If conditioned air is not supplied to the flight compartment, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) Make sure the left air conditioning pack is on.

(c) Pull the applicable FOOT AIR or WINDSHIELD AIR knob on the P1 or P3 panel to open to applicable valve.

(d) If the air flow at the applicable outlet is satisfactory, then you corrected the fault.

(2) Do these steps to put the airplane back to its usual condition:

(a) Make sure the applicable knobs on the P1 and P3 panel, WINDSHIELD AIR and FOOT AIR are pushed in to the closed position.

(b) Do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

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802. Low Conditioned Air Flow to the Flight Deck - Fault Isolation

A. Description

(1) The flow of conditioned air from the flight deck conditioned air outlets is low and seems to be decreasing with continued use.

(2) (SDS 21-22-00)

B. Possible Causes

(1) Disconnected, crushed or leaking flight deck distribution duct

(2) Defective muffler/duct assembly - collapsed lining material in the muffler

HAP 001-013, 015-026, 028-054

(3) Duct assembly with blocked wire mesh screen

NOTE: This duct assembly is roughly shaped like a ''Y''.

HAP ALL

C. Initial Evaluation

(1) Supply conditioned air to the flight compartment with the left air conditioning pack. To supply the conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(a) Make sure that the L PACK switch on the P5 air conditioning module is set to ON.

(2) Open or operate the conditioned air outlets in the flight compartment.

(3) If the air flow from the air outlets appears to be satisfactory, then there was an intermittent fault.

(4) If the conditioned air flow from all the air outlets listed below appears to be unsatisfactory, then do the Fault Isolation Procedure.

(a) Overhead outlets and gasper

(b) Underseat diffusers

(c) Foot air diffusers

(d) Windshield air diffusers

(e) Sidewall outlets (shoulder warmers)

(f) Individual panel gaspers.

D. Fault Isolation Procedure

(1) Make sure that conditioned air is supplied to the flight compartment.

(a) Examine the left flow control and shutoff valve to make sure that it is open.

(2) Do these steps to do a check of the flight compartment air distribution ducts:

(a) Do a check of the air distribution ducts between the mix manifold outlet and the flight compartment outlets for air leakage or blockage.

NOTE: The air distribution ducts between the mix manifold outlet and the flight compartment outlets are located on the left side of the forward cargo compartment and the Electronics/Equipment bay.

(b) If you find air leakage, damaged ducts or blocked ducts, then do these steps:

1) Repair the leaking or damaged/blocked duct.

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a) If you determine that the blockage is at the muffler/duct assembly in the mix bay, then replace the muffler/duct assembly.

These are the tasks:

Flight Deck Air Distribution System Muffler/Duct Assembly Removal, AMM TASK 21-22-05-000-801,

Flight Deck Air Distribution System Muffler/Duct Assembly Installation, AMM TASK 21-22-05-400-801.

2) Do the Repair Confirmation at the end of this task.

HAP 001-013, 015-026, 028-054

3) If the conditioned airflow from the outlets in the flight compartment is not satisfactory, then clean the flight deck duct assembly with the screen. To clean the duct assembly, do this task: AMM TASK 21-22-07-100-801.

NOTE: Muffler debris can build up on the wire mesh screen located inside of the ''Y'' duct assembly and reduce the airflow.

4) Do the Repair Confirmation at the end of this task.

HAP ALL

E. Repair Confirmation

(1) Do these steps to make sure you corrected the fault.

(a) If conditioned air is not supplied to the flight compartment, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) Make sure that the L PACK switch on the P5-10 air conditioning panel is set to ON.

(c) Make sure there is satisfactory airflow from these outlets:

1) Overhead outlets and gasper

2) Underseat diffusers

3) Foot air diffusers

4) Windshield air diffusers

5) Sidewall outlets (shoulder warmers)

6) Individual panel gaspers.

(d) If the conditioned air flow from the outlets is satisfactory, then you corrected the fault.

(2) Do these steps to put the airplane back to its usual condition:

(a) Do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

END OF TASK

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801. Recirculation Fan Does Not Operate - Fault Isolation

A. Description

(1) You set the RECIRC FAN switch on the air conditioning panel to AUTO and the recirculation fan does not come on as shown in the table below.

Table 201

L PACK Switch Position	R PACK Switch Position	Fan Condition
OFF	OFF	ON
OFF	AUTO	ON
OFF	HIGH	ON
AUTO	OFF	ON
AUTO	AUTO	ON
AUTO	HIGH	OFF
HIGH	OFF	ON
HIGH	AUTO	OFF
HIGH	HIGH	OFF

B. Possible Causes

(1) Recirculation fan, M1148

(2) Cabin air recirculation fan relay, R331

(3) Air conditioning accessory unit, M324

(4) Switch for the recirculation fan, S3

(5) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
E	1	C01015	AIR CONDITIONING RECIRC FAN CONT
E	4	C00884	AIR CONDITIONING RECIRC RIGHT FAN CABIN AIR

D. Related Data

(1) (SSM 21-25-11)

(2) (WDM 21-25-11)

E. Initial Evaluation

(1) AIRPLANES WITH CAB/UTIL SWITCH ON THE P5-13 PANEL;
Make sure that the CAB/UTIL switch on the P5-13 panel is set to the ON position.

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(2) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

(3) If the operational test shows that the recirculation fan does not operate with any setting of the L PACK switch or the R PACK switch, then do the Fault Isolation Procedure - Recirculation Fan Does Not Come On At Any Setting of L PACK and R PACK Switches.

(4) If the operational test shows that the recirculation fan operates but does not come on as specified in the operational test, then do the Fault Isolation Procedure - Recirculation Fan Does Not Come On as Specified With the L PACK and R PACK Switches.

(5) If the operational test does not show a problem, then there was an intermittent fault.

F. Fault Isolation Procedure - Recirculation Fan Does Not Come On At Any Setting of L PACK and R PACK Switches

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

NOTE: This procedure isolates the fault to one of these possible causes:

- recirculation fan, M1148
- recirculation fan relay, R331
- recirculation fan switch, S3
- wiring
- air conditioning accessory unit, M324

(1) Do this check of the recirculation fan, M1148:

(a) Make sure the RECIRC FAN switch on the P5-10 air conditioning panel is in the AUTO position.

(b) Disconnect connector D3020 from the recirculation fan, M1148.

(c) Do a continuity check between these pins of the recirculation fan, M1148:

1) Pin 5 and pin 6
2) Pin 2 and pin 3
3) Pin 3 and pin 4
4) Pin 2 and pin 4.

(d) If there is an open circuit between any pair of pins, then do these steps:

1) Replace the recirculation fan, M1148.

These are the tasks:

Recirculation Fan Removal, AMM TASK 21-25-02-000-801,

Recirculation Fan Installation, AMM TASK 21-25-02-400-801.

2) If you did not do it as part of the replacement procedure, then, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001

3) If the operational test is satisfactory, then you corrected the fault.

(e) If there is continuity between each pair of pins, then continue.

(2) Do these checks of the recirculation fan circuit:

(a) Do a check for an open circuit between pin 5 of connector D3020 and structure ground.

(b) If there is an open circuit, then do these steps:

1) Repair the wiring between pin 5 of D3020 and structure ground.

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2) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

3) If the operational test is satisfactory, then you corrected the fault.

(c) If there is continuity between pin 5 of connector D3020 and structure ground, then continue.

(d) Do these checks for the correct voltage at connector D3020:

1) Do a check for 28 VDC between pins 6 and 5 (ground) of connector D3020.

2) Install a jumper wire between pins 5 and 6 of connector D3020.

3) Do a check for 3-phase 115 VAC from pins 2, 3, and 4 of connector D3020 and structure ground.

4) If there is not 3-phase 115 VAC at pins 2, 3, 4, or 28 VDC at pin 6 of connector D3020, then do these steps:

a) Replace the recirculation fan relay, R331.

b) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

c) If the operational test is satisfactory, then you corrected the fault.

d) If the operational test is not satisfactory, then continue.

e) Repair the wiring between these pins of connector D3020 and the P6-4 circuit breaker (P6-4E4 C884):

D3020		C884
pin 2	- - - - - - - - - - - - - - - - -	term A1
pin 3	- - - - - - - - - - - - - - - - -	term B1
pin 4	- - - - - - - - - - - - - - - - -	term C1

f) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

g) If the operational test is satisfactory, then you corrected the fault.

5) If there is 3-phase 115 VAC at pins 2, 3, 4 and 28 VDC at pin 6, then continue.

(3) Replace the RECIRC FAN switch, S3 on the air conditioning panel.

(a) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

(b) If the operational test is satisfactory, then you corrected the fault.

(c) If the operational test is not satisfactory, then continue.

(4) Replace the air conditioning accessory unit, M324.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) If you did not do it after installation, then, do this task: Air Conditioning Accessory Unit - Operational Test, AMM TASK 21-51-02-710-801-001.

(b) If the operational test of the air conditioning accessory unit, M324 is satisfactory, then you corrected the fault.

(c) If the operational test of the air conditioning accessory unit, M324 is not satisfactory, then continue.

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(5) Do this check of the wiring:

(a) Do a check for an open circuit between these pins of connector D458A on the air conditioning accessory unit and the circuit breaker panel (P6-4E1, C1015):

D458A		C1015
pin 1	- - - - - - - - - - - - - - - - - -	term L

(b) Do a check for an open circuit between these pins of connector D458B on the air conditioning accessory unit and the circuit breaker panel (P6-4E1, C1015):

D458B		C1015
pin 2	- - - - - - - - - - - - - - - - - -	term L

(c) Do a check for an open circuit between these pins on connector D3020 for the recirculation fan and connector D458B at the air conditioning relay module, M324:

D3020		D458B
pin 6	- - - - - - - - - - - - - - - - - -	pin 1
pin 6	- - - - - - - - - - - - - - - - - -	pin 2

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

1) Repair the wiring.

2) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-801-001.

3) If the operational test is satisfactory, then you corrected the fault.

G. Fault Isolation Procedure - Recirculation Fan Does Not Come On As Specified With the L PACK and R PACK Switches

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

NOTE: This procedure isolates the fault to this cause:

- air conditioning accessory unit, M324

(1) Do these steps to replace the air conditioning accessory unit, M324 and make sure you corrected the fault:

(a) Replace the air conditioning accessory unit, M324.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(b) If you did not do it after installation, do this task: Air Conditioning Accessory Unit - Operational Test, AMM TASK 21-51-02-710-801-001

(c) If the operational test of the air conditioning accessory unit, M324 is satisfactory, then you corrected the fault.

END OF TASK

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HAP 001-013, 015-026, 028-054

802. Left or Right Recirculation Fan Does Not Operate - Fault Isolation

A. Description

(1) You set the L and R RECIRC FAN switches on the air conditioning panel to AUTO and the recirculation fans do not come on as shown in the table below.

Table 202

L PACK Switch Position	R PACK Switch Position	L Fan Condition	R Fan Condition
OFF	OFF	ON	ON
OFF	AUTO	ON	ON
OFF	HIGH	ON	ON
AUTO	OFF	ON	ON
AUTO	AUTO	ON	ON
AUTO	HIGH	ON	ON
HIGH	OFF	ON	ON
HIGH	AUTO	ON	ON
HIGH	HIGH	OFF	ON

B. Possible Causes

(1) Left recirculation fan, M1440

(2) Right recirculation fan, M1441

(3) Left cabin air recirculation fan relay, R429

(4) Right cabin air recirculation fan relay, R331

(5) Left air conditioning accessory unit, M324

(6) Right air conditioning accessory unit, M1455

(7) Switch for the left recirculation fan, S11

(8) Switch for the right recirculation fan, S3

(9) 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
E	7	C00911	A/C RECIRC FAN LEFT CABIN AIR
E	9	C01156	A/C RECIRC FAN LEFT CONT

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F/O Electrical System Panel, P6-4

Row	Col	Number	Name
E	2	C01023	AIR CONDITIONING RECIRC FAN RIGHT CONT
E	4	C00884	AIR CONDITIONING RECIRC RIGHT FAN CABIN AIR

D. Related Data

(1) (SSM 21-25-11)

(2) (WDM 21-25-11)

E. Initial Evaluation

(1) AIRPLANES WITH CAB/UTIL SWITCH ON THE P5-13 PANEL;

Make sure that the CAB/UTIL switch on the P5-13 panel is set to the ON position.

(2) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

(3) If the operational test shows that the left recirculation fan does not operate with any setting of the L PACK switch or the R PACK switch, then do the Fault Isolation Procedure - Left Recirculation Fan Does Not Come On At Any Setting of L PACK and R PACK Switches.

(4) If the operational test shows that the right recirculation fan does not operate with any setting of the L PACK switch or the R PACK switch, then do the Fault Isolation Procedure - Right Recirculation Fan Does Not Come On At Any Setting of L PACK and R PACK Switches.

(5) If the operational test shows that the left or right recirculation fan operates but does not come on as specified in the operational test, then do the Fault Isolation Procedure - Left or Right Recirculation Fan Does Not Come On as Specified With the L PACK and R PACK Switches.

(6) If the operational test does not show a problem, then there was an intermittent fault.

F. Fault Isolation Procedure - Right Recirculation Fan Does Not Come On At Any Setting of L PACK and R PACK Switches

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

NOTE: This procedure isolates the fault to one of these possible causes:

- recirculation fan, M1441
- recirculation fan relay, R331
- recirculation fan switch, S3
- wiring

(1) Do this check of the right recirculation fan, M1441:

(a) Disconnect connector D3854 from the right recirculation fan.

(b) Do a continuity check between these pins of the connector on the recirculation fan:

FAN CONNECTOR		FAN CONNECTOR
pin 5	- - - - - - - - - - - - - - - - - -	pin 6
pin 2	- - - - - - - - - - - - - - - - - -	pin 3
pin 3	- - - - - - - - - - - - - - - - - -	pin 4

(c) If there is not continuity between a pair of pins, then do these steps:

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1) Replace the right recirculation fan, M1441.

These are the tasks:

Recirculation Fan Removal, AMM TASK 21-25-02-000-801,

Recirculation Fan Installation, AMM TASK 21-25-02-400-801.

2) If you did not do it as part of the replacement procedure, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002

3) If the operational test is satisfactory, then you corrected the fault.

(d) If there is continuity between all the pairs of pins, then continue.

(2) Do this check for a path to ground for the right recirculation fan:

(a) Do a continuity check between pin 5 of the connector D3854 and structure ground.

(b) If there is not continuity between pin 5 and the structure ground, then do these steps:

1) Repair the wiring.

2) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

3) If the operational test is satisfactory, then you corrected the fault.

(c) If there is continuity between pin 5 and the structure ground, then continue.

(3) Do this voltage check at the right recirculation fan, M1441:

(a) Make sure the R RECIRC FAN switch on the P5-10 air conditioning panel is in the AUTO position.

(b) Disconnect connector D3854 from the recirculation fan, M1441.

(c) Do a check for 28 VDC between pin 6 of connector D3854 and structure ground.

(d) If there is not 28 VDC at pin 6 of D3854, then do these steps:

1) Do a check for 28 VDC between terminal X2 of right cabin air recirculation fan relay, R331 and structure ground.

2) If there is not 28 VDC at terminal X2, then replace right cabin air recirculation fan relay, R331.

a) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

b) If the operational test is satisfactory, then you corrected the fault.

c) If the operational test is not satisfactory, then continue.

d) Do a check of the wiring between these pins of circuit breaker C1023 on the P6-4 panel and relay R331 behind the P6 panel:

C1023		R331
term L	- - - - - - - - - - - - - - - -	term X1

e) Repair the wiring.

f) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

g) If the operational test is satisfactory, then you corrected the fault.

3) If there is 28 VDC at terminal X2 of recirculation fan relay, R331, then replace right recirculation fan switch, S3.

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a) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

b) If the operational test is satisfactory, then you corrected the fault.

c) If the operational test is not satisfactory, then continue.

d) Do a check for an open circuit between these pins of the R331 relay and D680 connector on the P5-10 panel:

R331		D680
term X2	- - - - - - - - - - - - - - -	pin 46

e) Do a check for an open circuit between these pins of the D680 connector on the P5-10 panel and the D40562P connector on the E4-1 electronic equipment rack:

D680		D40562P
pin 47	- - - - - - - - - - - - - - - - -	pin A13

f) Do a check for an open circuit between these pins of the D40562P connector on the E4-1 electronic equipment rack and connector D3854 for the recirculation fan:

D40330P		D3854
pin 3	- - - - - - - - - - - - - - - - -	pin 6

g) If you find an open circuit, then repair the wiring.

h) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

i) If the operational test is satisfactory, then you corrected the fault.

(e) If there is 28 VDC at pin 6 of D3854, then do these steps:

1) Install a jumper wire between pin 5 and pin 6 of connector D3854.

2) Do a check for 200 VAC 3-phase power between pins 2, 3, and 4 of connector D3854.

3) If there is not 200 VAC 3-phase power between pins 2, 3, and 4 of connector D3854, then replace right recirculation fan relay, R331.

a) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

b) If the operational test is satisfactory, then you corrected the fault.

c) If the operational test is not satisfactory, then continue.

d) Do a check of the wiring between these pins of circuit breaker C884 on the P6-4 panel and connector D3854 for the right recirculation fan:

C884		D3854
term A1	- - - - - - - - - - - - - - -	pin 2
term B1	- - - - - - - - - - - - - - -	pin 3
term C1	- - - - - - - - - - - - - - -	pin 4

e) If you find a problem with the wiring, then repair the wiring.

f) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

g) If the operational test is satisfactory, then you corrected the fault.

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G. Fault Isolation Procedure - Left Recirculation Fan Does Not Come On At Any Setting of L PACK and R PACK Switches

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

NOTE: This procedure isolates the fault to one of these possible causes:

- recirculation fan, M1440
- recirculation fan relay, R429
- recirculation fan switch, S11
- wiring

(1) Do this check of the left recirculation fan, M1440:

(a) Disconnect connector D3856 from the left recirculation fan, M1440.

(b) Do a continuity check between these pins on the connector of the fan:

FAN		CONNECTOR
pin 5	- - - - - - - - - - - - - - - - - -	pin 6
pin 2	- - - - - - - - - - - - - - - - - -	pin 3
pin 3	- - - - - - - - - - - - - - - - - -	pin 4

(c) If there is not continuity between a pair of pins, then do these steps:

1) Replace the left recirculation fan, M1440.

These are the tasks:

Recirculation Fan Removal, AMM TASK 21-25-02-000-801,

Recirculation Fan Installation, AMM TASK 21-25-02-400-801.

2) If you did not do it as part of the replacement procedure, then, do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002

3) If the operational test is satisfactory, then you corrected the fault.

(d) If there is continuity between all the pairs of pins, then continue.

(2) Do this check for a path to ground for the left recirculation fan:

(a) Do a continuity check between pin 5 of the connector D3856 and structure ground.

(b) If there is not continuity between pin 5 and structure ground, then do these steps:

1) Repair the wiring.

2) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

3) If the operational test is satisfactory, then you corrected the fault.

(c) If there is continuity between pin 5 and structure ground, then continue.

(3) Do this check for 28 VDC at the left recirculation fan, M1440:

(a) Make sure the L RECIRC FAN switch on the P5-10 air conditioning panel is in the AUTO position.

(b) Disconnect connector D3856 from the recirculation fan, M1440.

(c) Do a check for 28 VDC between pin 6 of connector D3856 and structure ground.

(d) If there is not 28 VDC at pin 6 of connector D3856, then do these steps:

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1) Do a check for 28 VDC between terminal X2 of left cabin air recirculation fan relay, R429 and structure ground.
2) If there is not 28 VDC at terminal X2, then replace left cabin air recirculation fan relay, R429.
   a) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.
   b) If the operational test is satisfactory, then you corrected the fault.
   c) If the operational test is not satisfactory, then continue.
   d) Do a check of the wiring between these pins of circuit breaker C1156 on the P18-3 panel and relay R429 of the J22 junction box (located in left side of the nose wheel well):

C1156		R429
term L	- - - - - - - - - - - - - - - -	term X1

   e) Repair the wiring.
   f) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.
   g) If the operational test is satisfactory, then you corrected the fault.
3) If there is 28 VDC at terminal X2 of recirculation fan relay, R429, then replace left recirculation fan switch, S11.
   a) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.
   b) If the operational test is satisfactory, then you corrected the fault.
   c) If the operational test is not satisfactory, then continue.
   d) Do a check for an open circuit between these pins of relay R429 in the J22 junction box and connector D646 on the P5-10 air conditioning panel:

R429		D646
term X2	- - - - - - - - - - - - - - -	pin 53

   e) Do a check for an open circuit between these pins of connector D646 on the P5-10 panel and connector D40554P on the E4-1 electronic equipment rack:

D646		D40554P
pin 54	- - - - - - - - - - - - - - - - -	pin B12

   f) Do a check for an open circuit between these pins of connector D40554P on the E4-1 rack and connector D3856 for recirculation fan:

D40244P		D3856
pin B4	- - - - - - - - - - - - - - - -	pin 6

   g) If you find a problem with the wiring, then repair the wiring.
   h) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.
   i) If the operational test is satisfactory, then you corrected the fault.

(e) If there is 28 VDC at pin 6 of connector D3856, then do these steps:
   1) Install a jumper wire between pin 5 and pin 6 of connector D3856.

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2) Do a check for 200 VAC 3-phase power between pins 2, 3, and 4 of connector D3856.

3) If there is not 200 VAC 3-phase power between pins 2, 3, and 4 of connector D3856, then replace right recirculation fan relay, R429.

a) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

b) If the operational test is satisfactory, then you corrected the fault.

c) If the operational test is not satisfactory, then continue.

d) Do a check of the wiring between these pins of circuit breaker C911 on the P18-3 panel and connector D3856 for the recirculation fan:

C911		D3856
term A1	- - - - - - - - - - - - - - -	pin 2
term B1	- - - - - - - - - - - - - - -	pin 3
term C1	- - - - - - - - - - - - - - -	pin 4

e) If you find a problem with the wiring, then repair the wiring.

f) Do this task: Recirculation System - Operational Test, AMM TASK 21-25-00-710-802-002.

g) If the operational test is satisfactory, then you corrected the fault.

H. Fault Isolation Procedure - Left or Right Recirculation Fan Does Not Come On As Specified With the L PACK and R PACK Switches

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

NOTE: This procedure isolates the fault to this cause:

- air conditioning accessory unit, M324
- air conditioning accessory unit, M1455

(1) Replace the two air conditioning accessory units, M324 and M1455.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) If you did not do it after installation, then, do this task: Air Conditioning Accessory Unit - Operational Test, AMM TASK 21-51-02-710-802-002.

(b) If the operational test of the air conditioning accessory units, M324 and M1455 is satisfactory, then you corrected the fault.

——————— END OF TASK ———————

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805. EQUIP COOLING EXHAUST OFF Light On With the Switch at ALTERNATE - Fault Isolation

A. Description

(1) The EQUIP COOLING EXHAUST OFF light on the equipment cooling panel is on with the EQUIP COOLING EXHAUST switch at ALTERNATE.

(2) The EQUIP COOLING EXHAUST OFF light comes on when the alternate exhaust fan does not pull enough cooling air through the equipment cooling ducts. The monitoring circuit in the exhaust low flow detector then detects an inadequate air flow condition and provides a ground to allow the light to come on.

B. Possible Causes

(1) Alternate exhaust fan, M99

(2) Low flow detector, M100

(3) Alternate exhaust fan control relay, R30

(4) Equipment cooling switch, S59

(5) Wiring problem

(6) Duct blockage or leakage

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	18	C01434	EQUIPMENT COOLING LOW FLOW DETECT EXHAUST

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	14	C01435	EQUIPMENT COOLING EXHAUST FAN CONTROL NORMAL
C	15	C01436	EQUIPMENT COOLING EXHAUST FAN CONTROL ALTN

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
E	1	C00836	EQPT CLG EXH FAN PWR-NORM

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	10	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP 037-054, 101-999			
D	12	C00837	EQPT CLG EXH FAN PWR-ALTN

HAP ALL

D. Related Data

(1) (SSM 21-27-21)

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(2) (WDM 21-27-21)

E. Initial Evaluation

(1) Put the EQUIP COOLING EXHAUST switch to ALTERNATE.

(a) If the EQUIP COOLING EXHAUST OFF light is off or goes off within approximately 20 seconds, then there was an intermittent fault.

(b) If the EQUIP COOLING EXHAUST OFF light is on, then continue.

(2) Put the EQUIP COOLING EXHAUST switch to NORMAL.

(a) If the EQUIP COOLING EXHAUST OFF light goes off within 20 seconds, then do the Fault Isolation Procedure - Fan Circuit Problem below.

(b) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then do the Fault Isolation Procedure - Airflow or Indication Circuit Problem below.

F. Fault Isolation Procedure - Fan Circuit Problem

(1) Do these steps check the alternate exhaust fan:

(a) Do these steps to get access to the alternate exhaust fan, M99:

1) Open this access panel to enter the EE compartment:

Number	Name/Location
117A	Electronic Equipment Access Door

2) Remove the access panel on the top of the raised platform that is just aft and outboard of this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Disconnect connector D162 from the alternate exhaust fan.

NOTE: The alternate exhaust fan is the more aft of the two exhaust fans.

(c) Do a continuity check between these pins on the connector of the fan:

FAN CONNECTOR		FAN CONNECTOR
pin 5	- - - - - - - - - - - - - - - - - -	pin 6
pin 1	- - - - - - - - - - - - - - - - - -	pin 2
pin 2	- - - - - - - - - - - - - - - - - -	pin 3
pin 1	- - - - - - - - - - - - - - - - - -	pin 3

(d) If there is not continuity between any two pins, then do these steps:

1) Replace the alternate exhaust fan, M99.

These are the tasks:

Equipment Cooling Exhaust Fan Removal, AMM TASK 21-27-04-000-801,

Equipment Cooling Exhaust Fan Installation, AMM TASK 21-27-04-400-801.

2) Make sure the alternate exhaust fan operates.

3) If the EQUIP COOLING EXHAUST OFF light goes off you corrected the fault.

(e) If there is continuity between all the pins, then continue.

(2) Do this check for a path to ground for the alternate exhaust fan:

(a) Put the EQUIP COOLING EXHAUST switch to ALTERNATE.

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(b) Do a continuity check between pin 6 of connector D162 and the structure ground.

(c) If there is not continuity check between pin 6 of connector D162 and the structure ground, do these steps:

1) Lower the P5 forward overhead panel to get access to the electrical connections on the equipment cooling switch, S59.

2) Do a continuity check between terminals 4 and 5 of the equipment cooling switch, S59.

3) If there is not continuity between terminals 4 and 5, then do these steps:

a) Replace the equipment cooling switch.

NOTE: Put the switch in the ALTERNATE position.

b) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	15	C01436	EQUIPMENT COOLING EXHAUST FAN CONTROL ALTN

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	10	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP 037-054, 101-999			
D	12	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP ALL			

c) Re-install connector D162 to the alternate exhaust fan M99.

d) If the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.

e) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then continue.

4) If there is continuity between terminals 4 and 5, then do these steps:

a) Repair the wiring between pin 6 of connector D162 and the structure ground.

b) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	15	C01436	EQUIPMENT COOLING EXHAUST FAN CONTROL ALTN

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	10	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP 037-054, 101-999			
D	12	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP ALL			

c) Re-install connector D162 to the alternate exhaust fan M99.

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d) If the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.

e) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then continue.

(d) If there is continuity check between pin 6 of connector D162 and the structure ground, then continue.

(3) Do this check for power to the alternate exhaust fan:

(a) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	15	C01436	EQUIPMENT COOLING EXHAUST FAN CONTROL ALTN

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	10	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP 037-054, 101-999			
D	12	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP ALL			

(b) Put the EQUIP COOLING EXHAUST switch to ALTERNATE.

(c) Check for 28VDC at pin 5 of connector D162.

(d) If there is not 28VDC at pin 5, do these steps:

1) Check for 28VDC at pin X1 of connector D1626 of the alternate exhaust fan control relay R30.

2) If there is 28VDC at pin X1 of connector D1626, then replace the alternate exhaust fan control relay R30.

3) If there is not 28VDC at pin X1 of connector D1626, then repair the wiring between the pins:

C1436		**D162**
term L	- - - - - - - - - - - - - - - - -	pin 5

4) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	15	C01436	EQUIPMENT COOLING EXHAUST FAN CONTROL ALTN

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	10	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP 037-054, 101-999			
D	12	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP ALL			

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5) Install connector D162 on the alternate exhaust fan.

6) Make sure the alternate exhaust fan operates.

7) If the EQUIP COOLING EXHAUST OFF light goes off you corrected the fault.

(e) If there is 28VDC at pin 5, then continue.

(f) Install a jumper wire between pin 5 and pin 6 on D162.

(g) Do a check for 3-phase 115 VAC from pins 1, 2 and 3 of connector D162.

(h) If there is not 115 VAC from pins 1, 2 and 3 of D162, then do these steps:

1) Repair the wiring between these connectors:

C837		D162
term A	- - - - - - - - - - - - - - - - -	pin 1
term B	- - - - - - - - - - - - - - - - -	pin 2
term C	- - - - - - - - - - - - - - - - -	pin 3

2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	15	C01436	EQUIPMENT COOLING EXHAUST FAN CONTROL ALTN

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	10	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP 037-054, 101-999			
D	12	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP ALL			

3) Remove the jumper wire from connector D162.

4) Install connector D162 on the alternate exhaust fan.

5) If the alternate exhaust fan operates and the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.

G. Fault Isolation Procedure - Airflow or Indication Circuit Problem

(1) Replace the equipment cooling exhaust low flow detector, M100.

These are the tasks:

Equipment Cooling Low Flow Sensors Removal, AMM TASK 21-27-03-000-802,

Equipment Cooling Low Flow Sensors Installation, AMM TASK 21-27-03-400-802.

(a) Put the EQUIP COOLING EXHAUST switch to ALTERNATE.

(b) If the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.

(c) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then continue.

(2) Do this check of the wiring:

(a) Disconnect connector D164 from the exhaust low flow detector, M100.

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(b) Disconnect connector D11418 from the P91 power distribution panel No. 1 in the EE compartment.

(c) Lower the P5 forward overhead panel to get access to the electrical connections on the EQUIP COOLING EXHAUST OFF light, L47.

(d) Do a check of the wiring between these pins of connector D164 and circuit breaker C1434:

D164		C1434
pin 1	- - - - - - - - - - - - - - - - - -	term L

(e) Do a check of the wiring between these pins of connector D164 and connector D11418:

D164		D11418
pin 9	- - - - - - - - - - - - - - - - - -	pin 11

(f) Do a check of the wiring between these pins of connector D164 and L47:

D164		L47
pin 9	- - - - - - - - - - - - - - - - - -	term 2

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

1) Repair the wiring.
2) Re-install the P5 forward overhead panel.
3) Re-connect connector D11418 to the P91 Power Distribution Panel No. 1 in the EE compartment.
4) Re-connect connector D164 to the Exhaust Low Flow Detector, M100.
5) If the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.
6) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then continue.

(3) Examine all of the ducts of the equipment cooling exhaust system for blockage or leakage.

(a) Repair the blockage or leakage.

(b) If the EQUIP COOLING EXHAUST OFF LIGHT goes off within 20 seconds, then you corrected the fault.

———————— END OF TASK ————————

806. EQUIP COOLING EXHAUST OFF Light On With the Switch at NORMAL - Fault Isolation

A. Description

(1) The EQUIP COOLING EXHAUST OFF light on the equipment cooling panel is on with the EQUIP COOLING EXHAUST switch on NORMAL.

(2) The EQUIP COOLING EXHAUST OFF light comes on when the normal exhaust fan does not pull enough cooling air through the equipment cooling ducts. The monitoring circuit in the exhaust low flow detector then detects an inadequate air flow condition and provides a ground to allow the light to come on.

B. Possible Causes

(1) Normal exhaust fan, M98

(2) Low flow detector, M100

(3) Normal exhaust fan control relay, R29

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(4) Equipment cooling switch, S59

(5) Wiring problem

(6) Duct blockage or leakage

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	18	C01434	EQUIPMENT COOLING LOW FLOW DETECT EXHAUST

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	14	C01435	EQUIPMENT COOLING EXHAUST FAN CONTROL NORMAL
C	15	C01436	EQUIPMENT COOLING EXHAUST FAN CONTROL ALTN

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
E	1	C00836	EQPT CLG EXH FAN PWR-NORM

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	10	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP 037-054, 101-999			
D	12	C00837	EQPT CLG EXH FAN PWR-ALTN

HAP ALL

D. Related Data

(1) (SSM 21-27-21)

(2) (WDM 21-27-21)

E. Initial Evaluation

(1) Put the EQUIP COOLING EXHAUST switch to NORMAL.

(a) If the EQUIP COOLING EXHAUST OFF light is off or goes off within approximately 20 seconds, then there was an intermittent fault.

(b) If the EQUIP COOLING EXHAUST OFF light is on, then continue.

(2) Put the EQUIP COOLING EXHAUST switch to ALTERNATE.

(a) If the EQUIP COOLING EXHAUST OFF light goes off within 20 seconds, then do the Fault Isolation Procedure - Fan Circuit Problem below.

(b) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then do the Fault Isolation Procedure - Airflow or Indication Circuit Problem below.

F. Fault Isolation Procedure - Fan Circuit Problem

(1) Do these steps to do a check of the normal exhaust fan:

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(a) Do these steps to get access to the normal exhaust fan, M98:

1) Open this access panel to enter the EE compartment:

Number	Name/Location
117A	Electronic Equipment Access Door

2) Remove the access panel on the top of the raised platform that is just aft and right of this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Disconnect connector D160 from the normal exhaust fan.

NOTE: The normal exhaust fan is the more forward of the two exhaust fans.

(c) Do a continuity check between these pins on the connector of the fan:

FAN CONNECTOR		FAN CONNECTOR
pin 5	- - - - - - - - - - - - - - - - - -	pin 6
pin 1	- - - - - - - - - - - - - - - - - -	pin 2
pin 2	- - - - - - - - - - - - - - - - - -	pin 3
pin 1	- - - - - - - - - - - - - - - - - -	pin 3

(d) If there is not continuity between any two pins, then do these steps:

1) Replace the normal exhaust fan, M98.

These are the tasks:

Equipment Cooling Exhaust Fan Removal, AMM TASK 21-27-04-000-801,

Equipment Cooling Exhaust Fan Installation, AMM TASK 21-27-04-400-801.

2) Make sure the normal exhaust fan operates.

3) If the EQUIP COOLING EXHAUST OFF light goes off you corrected the fault.

(e) If there is continuity between all the pins, then continue.

(2) Do this check for a path to ground for the normal exhaust fan:

(a) Put the EQUIP COOLING EXHAUST switch to NORMAL.

(b) Do a continuity check between pin 6 of connector D160 and the structure ground.

(c) If there is not continuity check between pin 6 of connector D160 and the structure ground, do these steps:

1) Lower the P5 forward overhead panel to get access to the electrical connections on the equipment cooling switch, S59.

2) Do a continuity check between terminals 2 and 3 of the equipment cooling switch, S59.

3) If there is not continuity between terminals 2 and 3, then do these steps:

a) Replace the equipment cooling switch.

NOTE: Put the switch in the NORMAL position.

b) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	14	C01435	EQUIPMENT COOLING EXHAUST FAN CONTROL NORMAL

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Power Distribution Panel Number 1, P91

Row	Col	Number	Name
E	1	C00836	EQPT CLG EXH FAN PWR-NORM

c) Re-install connector D160 on the normal exhaust fan, M98.

d) If the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.

e) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then continue.

4) If there is continuity between terminals 2 and 3, then do these steps:

a) Repair the wiring between pin 6 of connector D160 and the structure ground.

b) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	14	C01435	EQUIPMENT COOLING EXHAUST FAN CONTROL NORMAL

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
E	1	C00836	EQPT CLG EXH FAN PWR-NORM

c) Re-install connector D160 on the normal exhaust fan, M98.

d) If the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.

e) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then continue.

(d) If there is continuity check between pin 6 of connector D160 and the structure ground, then continue.

(3) Do this check for power to the normal exhaust fan:

(a) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	14	C01435	EQUIPMENT COOLING EXHAUST FAN CONTROL NORMAL

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
E	1	C00836	EQPT CLG EXH FAN PWR-NORM

(b) Put the EQUIP COOLING EXHAUST switch to NORMAL.

(c) Check for 28VDC at pin 5 of connector D160.

(d) If there is not 28VDC at pin 5, do these steps:

1) Check for 28VDC at pin X1 of connector D1624 of the normal exhaust fan control relay R29.

2) If there is 28VDC at pin X1 of connector D1624, then replace the normal exhaust fan control relay R29.

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3) If there is not 28VDC at pin X1 of connector D1624, then repair the wiring between the pins:

C1435		D160
term L	- - - - - - - - - - - - - - - - -	pin 5

4) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	15	C01436	EQUIPMENT COOLING EXHAUST FAN CONTROL ALTN

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	10	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP 037-054, 101-999			
D	12	C00837	EQPT CLG EXH FAN PWR-ALTN
HAP ALL			

5) Re-connect connector D160 to the normal exhaust fan.

6) Make sure the normal exhaust fan operates.

7) If the EQUIP COOLING EXHAUST OFF light goes off you corrected the fault.

(e) If there is 28VDC at pin 5, then continue.

(f) Install a jumper wire between pin 5 and pin 6 on D160.

(g) Do a check for 3-phase 115 VAC from pins 1, 2 and 3 of connector D160.

(h) If there is not 115 VAC from pins 1, 2 and 3 of D160, then do these steps:

1) Repair the wiring between these connectors:

C836		D160
term A	- - - - - - - - - - - - - - - - -	pin 1
term B	- - - - - - - - - - - - - - - - -	pin 2
term C	- - - - - - - - - - - - - - - - -	pin 3

2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	14	C01435	EQUIPMENT COOLING EXHAUST FAN CONTROL NORMAL

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
E	1	C00836	EQPT CLG EXH FAN PWR-NORM

3) Remove the jumper wire from connector D160.

4) Re-connect connector D160 to the normal exhaust fan.

5) If the normal exhaust fan operates and the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.

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G. Fault Isolation Procedure - Airflow or Indication Circuit Problem

(1) Replace the equipment cooling exhaust low flow detector, M100.

These are the tasks:

Equipment Cooling Low Flow Sensors Removal, AMM TASK 21-27-03-000-802,

Equipment Cooling Low Flow Sensors Installation, AMM TASK 21-27-03-400-802.

(a) Put the EQUIP COOLING EXHAUST switch to NORMAL.

(b) If the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.

(c) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then continue.

(2) Do this check of the wiring:

(a) Disconnect connector D164 from the exhaust low flow detector, M100.

(b) Disconnect connector D11418 from the P91 power distribution panel No. 1 in the EE compartment.

(c) Lower the P5 forward overhead panel to get access to the electrical connections on the EQUIP COOLING EXHAUST OFF light, L47.

(d) Do a check of the wiring between these pins of connector D164 and circuit breaker C1434:

D164		**C1434**
pin 1	- - - - - - - - - - - - - - - - - -	term L

(e) Do a check of the wiring between these pins of connector D164 and connector D11418:

D164		**D11418**
pin 9	- - - - - - - - - - - - - - - - - -	pin 11

(f) Do a check of the wiring between these pins of connector D164 and L47:

D164		**L47**
pin 9	- - - - - - - - - - - - - - - - - -	term 2

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

1) Repair the wiring.

2) Re-install the P5 forward overhead panel.

3) Re-connect connector D11418 to the P91 Power Distribution Panel No. 1 in the EE compartment.

4) Re-connect connector D164 to the Exhaust Low Flow Detector, M100.

5) If the EQUIP COOLING EXHAUST OFF light is off or goes off within 20 seconds, then you corrected the fault.

6) If the EQUIP COOLING EXHAUST OFF light does not go off within 20 seconds, then continue.

(3) Examine all of the ducts of the equipment cooling exhaust system for blockage or leakage.

(a) Repair the blockage or leakage.

(b) If the EQUIP COOLING EXHAUST OFF LIGHT goes off within 20 seconds, then you corrected the fault.

——————— END OF TASK ———————

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807. EQUIP COOLING SUPPLY OFF Light On With the Switch at ALTERNATE - Fault Isolation

A. Description

(1) The EQUIP COOLING SUPPLY OFF light on the equipment cooling panel is on with the EQUIP COOLING SUPPLY switch on ALTERNATE.

(2) The EQUIP COOLING SUPPLY OFF light comes on when the alternate supply fan does not blow enough cooling air through the equipment cooling duct. The monitoring circuit in the supply low flow detector then detects an inadequate air flow condition and provides a ground to allow the light to come on.

B. Possible Causes

(1) Alternate supply fan, M1323

(2) Supply low flow detector, M1915

(3) Alternate supply fan control relay, R373

(4) EQUIP COOLING SUPPLY switch, S870

(5) Equipment cooling air filter

(6) Wiring problem

(7) Duct blockage or leakage

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	17	C01433	EQUIPMENT COOLING LOW FLOW DETECT SUPPLY

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	12	C01116	EQUIPMENT COOLING SUPPLY FAN CONTROL NORMAL
C	13	C01117	EQUIPMENT COOLING SUPPLY FAN CONTROL ALTN

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
A	8	C00935	EQPT CLG SPLY FAN PWR-ALTN

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	8	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP 037-054, 101-999			
D	10	C00934	EQPT CLG SPLY FAN PWR-NORM

HAP ALL

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D. Related Data

(1) (SSM 21-27-31)

(2) (WDM 21-27-31)

E. Initial Evaluation

(1) Put the EQUIP COOLING SUPPLY switch to ALTERNATE.

(a) If the EQUIP COOLING SUPPLY light is off or goes off within 20 seconds, then there was an intermittent fault.

(b) If the EQUIP COOLING SUPPLY light is on, then continue.

(2) Put the EQUIP COOLING SUPPLY switch to NORMAL.

(a) If the EQUIP COOLING SUPPLY light goes off within 20 seconds, then do the Fault Isolation Procedure - Fan Circuit Problem below.

(b) If the EQUIP COOLING SUPPLY light does not go off within 20 seconds, then do the Fault Isolation Procedure - Airflow or Indication Circuit Problem below.

F. Fault Isolation Procedure - Fan Circuit Problem

(1) Do these steps check the alternate supply fan:

(a) Open this access panel to enter the EE compartment:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Disconnect connector D3472 from the alternate supply fan.

NOTE: The alternate supply fan is the lower of the two supply fans.

(c) Do a continuity check between these pins on the connector of the fan:

FAN CONNECTOR		FAN CONNECTOR
pin 5	- - - - - - - - - - - - - - - - - -	pin 6
pin 1	- - - - - - - - - - - - - - - - - -	pin 2
pin 2	- - - - - - - - - - - - - - - - - -	pin 3
pin 1	- - - - - - - - - - - - - - - - - -	pin 3

(d) If there is not continuity between any two pins, then do these steps:

1) Replace the alternate supply fan, M1323.

These are the tasks:

Equipment Cooling Supply Fan Removal, AMM TASK 21-27-02-000-801,

Equipment Cooling Supply Fan Installation, AMM TASK 21-27-02-400-801.

2) Make sure the alternate supply fan operates.

3) If the EQUIP COOLING SUPPLY OFF light goes off you corrected the fault.

(e) If there is continuity between all the pins, then continue.

(2) Do this check for a path to ground for the alternate supply fan:

(a) Put the EQUIP COOLING SUPPLY switch to ALTERNATE.

(b) Do a continuity check between pin 6 of connector D3472 and the structure ground.

(c) If there is not continuity check between pin 6 of connector D3472 and the structure ground, do these steps:

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1) Lower the P5 forward overhead panel to get access to the electrical connections on the equipment cooling switch, S870.
2) Do a continuity check between terminals 4 and 5 of the equipment cooling supply switch, S870.
3) If there is not continuity between terminals 4 and 5, then do these steps:
   a) Replace the equipment cooling supply switch, S870.

      NOTE: Put the switch in the ALTERNATE position.

   b) Make sure that these circuit breakers are closed:

      F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	13	C01117	EQUIPMENT COOLING SUPPLY FAN CONTROL ALTN

      Power Distribution Panel Number 1, P91

Row	Col	Number	Name
A	8	C00935	EQPT CLG SPLY FAN PWR-ALTN

   c) Re-install connector D3472 to the alternate supply fan, M1323.
   d) If the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.
   e) If the EQUIP COOLING SUPPLY OFF light does not go off within 20 seconds, then continue.
4) If there is continuity between terminals 4 and 5, then do these steps:
   a) Repair the wiring between pin 6 of connector D3472 and the structure ground.
   b) Make sure that these circuit breakers are closed:

      F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	13	C01117	EQUIPMENT COOLING SUPPLY FAN CONTROL ALTN

      Power Distribution Panel Number 1, P91

Row	Col	Number	Name
A	8	C00935	EQPT CLG SPLY FAN PWR-ALTN

   c) Re-install connector D3472 on the alternate supply fan, M1323.
   d) If the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.
   e) If the EQUIP COOLING SUPPLY OFF light does not go off within 20 seconds, then continue.

(d) If there is continuity check between pin 6 of connector D3472 and the structure ground, then continue.

(3) Do this check for power to the alternate supply fan:

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(a) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	14	C01435	EQUIPMENT COOLING EXHAUST FAN CONTROL NORMAL

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
E	1	C00836	EQPT CLG EXH FAN PWR-NORM

(b) Put the EQUIP COOLING SUPPLY switch to ALTERNATE.

(c) Check for 28VDC at pin 5 of connector D3472.

(d) If there is not 28VDC at pin 5, do these steps:

1) Check for 28VDC at pin X1 of connector D3468 of the alternate supply fan control relay R373.

2) If there is 28VDC at pin X1 of connector D3468, then replace the alternate exhaust fan control relay R373.

3) If there is not 28VDC at pin X1 of connector D3468, then repair the wiring between the pins:

C935		**D3472**
term L	- - - - - - - - - - - - - - - - -	pin 5

4) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	13	C01117	EQUIPMENT COOLING SUPPLY FAN CONTROL ALTN

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
A	8	C00935	EQPT CLG SPLY FAN PWR-ALTN

5) Re-connect connector D3472 to the alternate supply fan.

6) Make sure the alternate supply fan operates.

7) If the EQUIP COOLING SUPPLY OFF light goes off you corrected the fault.

(e) If there is 28VDC at pin 5, then continue.

(f) Install a jumper wire between pin 5 and pin 6 on D3472.

(g) Do a check for 3-phase 115 VAC from pins 1, 2 and 3 of connector D3472.

(h) If there is not 115 VAC from pins 1, 2 and 3 of D3472, then do these steps:

1) Repair the wiring between these connectors:

C935		**D3472**
term A	- - - - - - - - - - - - - - - - -	pin 1
term B	- - - - - - - - - - - - - - - - -	pin 2
term C	- - - - - - - - - - - - - - - - -	pin 3

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2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	13	C01117	EQUIPMENT COOLING SUPPLY FAN CONTROL ALTN

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
A	8	C00935	EQPT CLG SPLY FAN PWR-ALTN

3) Remove the jumper wire from connector D3472.

4) Re-connect connector D3472 to the alternate supply fan.

5) If the alternate supply fan operates and the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.

G. Fault Isolation Procedure - Airflow or Indication Circuit Problem

(1) Replace the equipment cooling air filter.

These are the tasks:

Equipment Cooling Air Filter Removal, AMM TASK 21-27-01-000-801,

Equipment Cooling Air Filter Installation, AMM TASK 21-27-01-400-801.

(a) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

(b) If the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.

(c) If the EQUIP COOLING SUPPLY OFF light does not go off within 20 seconds, then continue.

(2) Replace the equipment cooling supply low flow detector, M1915.

These are the tasks:

Equipment Cooling Low Flow Sensors Removal, AMM TASK 21-27-03-000-802,

Equipment Cooling Low Flow Sensors Installation, AMM TASK 21-27-03-400-802.

(a) Put the EQUIP COOLING SUPPLY switch to ALTERNATE.

(b) If the EQUIP COOLING SUPPLY OFF light is off or goes off with 20 seconds, then you corrected the fault.

(c) If the EQUIP COOLING SUPPLY OFF light does not go off within 20 seconds, then continue.

(3) Do this check of the wiring:

(a) Disconnect connector D3464 from the supply low flow detector, M1915.

(b) Disconnect connector D11452 from the P92 power distribution panel No. 2.

(c) Lower the P5 forward overhead panel to get access to the electrical connections on the EQUIP COOLING SUPPLY OFF light, L1141.

(d) Do a check of the wiring between these pins of connector D3464 and connector D11452.

D3464		**D11452**
pin 9	- - - - - - - - - - - - - - - - - -	pin 7

(e) Do a check of the wiring between these pins of connector D3464 and L1141:

D3464		**L1141**
pin 9	- - - - - - - - - - - - - - - - - -	term 2

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

1) Repair the wiring.
2) Raise the P5 forward overhead panel to the closed position.
3) Re-connect connector D11452 to the P92 power distribution panel No. 2.
4) Re-connect connector D3464 to the supply low flow connector, M1915.
5) If the EQUIP COOLING SUPPLY OFF goes off within 20 seconds, then you corrected the fault.

(g) If you do not find a problem with the wiring, then do these steps and continue:

1) Raise the P5 forward overhead panel to closed position.
2) Re-connect connector D11452 to the P92 power distribution panel No. 2 in the EE compartment.
3) Re-connect connector D3464 to the supply low flow detector, M1915.

(4) Examine all of the ducts of the equipment cooling supply system for leakage or blockage.

(a) Repair the leakage or blockage.

(b) If the EQUIP COOLING SUPPLY OFF goes off within 20 seconds, then you corrected the fault.

——————— END OF TASK ———————

808. EQUIP COOLING SUPPLY OFF Light On With the Switch at NORMAL - Fault Isolation

A. Description

(1) The EQUIP COOLING SUPPLY OFF light on the equipment cooling panel is on with the EQUIP COOLING SUPPLY switch on NORMAL.

(2) The EQUIP COOLING SUPPLY OFF light comes on when the normal supply fan does not blow enough cooling air through the equipment cooling duct. The monitoring circuit in the supply low flow detector then detects an inadequate air flow condition and provides a ground to allow the light to come on.

B. Possible Causes

(1) Normal supply fan, M1322

(2) Supply low flow detector, M1915

(3) Normal supply fan control relay, R347

(4) EQUIP COOLING SUPPLY switch, S870

(5) Equipment cooling air filter

(6) Wiring problem

(7) Duct blockage or leakage

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
A	17	C01433	EQUIPMENT COOLING LOW FLOW DETECT SUPPLY

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F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	12	C01116	EQUIPMENT COOLING SUPPLY FAN CONTROL NORMAL
C	13	C01117	EQUIPMENT COOLING SUPPLY FAN CONTROL ALTN

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
A	8	C00935	EQPT CLG SPLY FAN PWR-ALTN

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	8	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP 037-054, 101-999			
D	10	C00934	EQPT CLG SPLY FAN PWR-NORM

HAP ALL

D. Related Data

(1) (SSM 21-27-31)

(2) (WDM 21-27-31)

E. Initial Evaluation

(1) Put the EQUIP COOLING SUPPLY switch to NORMAL.

(a) If the EQUIP COOLING SUPPLY light is off or goes off within 20 seconds, then there was an intermittent fault.

(b) If the EQUIP COOLING SUPPLY light is on, then continue.

(2) Put the EQUIP COOLING SUPPLY switch to ALTERNATE.

(a) If the EQUIP COOLING SUPPLY light goes off within 20 seconds, then do the Fault Isolation Procedure - Fan Circuit Problem below.

(b) If the EQUIP COOLING SUPPLY light does not go off within 20 seconds, then do the Fault Isolation Procedure - Airflow or Indication Circuit Problem below.

F. Fault Isolation Procedure - Fan Circuit Problem

(1) Do these steps check the normal supply fan:

(a) Open this access panel to enter the EE compartment:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Disconnect connector D3470 from the normal supply fan.

NOTE: The normal supply fan is the higher of the two supply fans on the right side of the EE compartment.

(c) Do a continuity check between these pins on the connector of the fan:

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FAN CONNECTOR		FAN CONNECTOR
pin 5	- - - - - - - - - - - - - - - - - -	pin 6
pin 1	- - - - - - - - - - - - - - - - - -	pin 2
pin 2	- - - - - - - - - - - - - - - - - -	pin 3
pin 1	- - - - - - - - - - - - - - - - - -	pin 3

(d) If there is not continuity between any two pins, then do these steps:

1) Replace the normal supply fan, M1322.

These are the tasks:

Equipment Cooling Supply Fan Removal, AMM TASK 21-27-02-000-801,

Equipment Cooling Supply Fan Installation, AMM TASK 21-27-02-400-801.

2) Make sure the normal supply fan operates.

3) If the EQUIP COOLING SUPPLY OFF light goes off you corrected the fault.

(e) If there is continuity between all the pins, then continue.

(2) Do this check for a path to ground for the normal supply fan:

(a) Put the EQUIP COOLING SUPPLY switch to NORMAL.

(b) Do a continuity check between pin 6 of connector D3470 and the structure ground.

(c) If there is not continuity check between pin 6 of connector D3470 and the structure ground, do these steps:

1) Lower the P5 forward overhead panel to get access to the electrical connections on the equipment cooling switch, S870.

2) Do a continuity check between terminals 2 and 3 of the equipment cooling supply switch, S870.

3) If there is not continuity between terminals 2 and 3, then do these steps:

a) Replace the equipment cooling supply switch, S870.

NOTE: Put the switch in the NORMAL position.

b) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	12	C01116	EQUIPMENT COOLING SUPPLY FAN CONTROL NORMAL

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	8	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP 037-054, 101-999			
D	10	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP ALL			

c) Re-install connector D3470 to the normal supply fan, M1322.

d) If the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.

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e) If the EQUIP COOLING SUPPLY OFF light does not go off within 20 seconds, then continue.

4) If there is continuity between terminals 2 and 3, then do these steps:

a) Repair the wiring between pin 6 of connector D3470 and the structure ground.

b) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	12	C01116	EQUIPMENT COOLING SUPPLY FAN CONTROL NORMAL

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	8	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP 037-054, 101-999			
D	10	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP ALL			

c) Re-install connector D3470 on the normal supply fan, M1322.

d) If the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.

e) If the EQUIP COOLING SUPPLY OFF light does not go off within 20 seconds, then continue.

(d) If there is continuity check between pin 6 of connector D3470 and the structure ground, then continue.

(3) Do this check for power to the normal supply fan:

(a) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	14	C01435	EQUIPMENT COOLING EXHAUST FAN CONTROL NORMAL

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
E	1	C00836	EQPT CLG EXH FAN PWR-NORM

(b) Put the EQUIP COOLING SUPPLY switch to NORMAL.

(c) Check for 28VDC at pin 5 of connector D3470.

(d) If there is not 28VDC at pin 5, do these steps:

1) Check for 28VDC at pin X1 of connector D3466 of the normal supply fan control relay R347.

2) If there is 28VDC at pin X1 of connector D3466, then replace the normal exhaust fan control relay R347.

3) If there is not 28VDC at pin X1 of connector D3466, then repair the wiring between the pins:

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C934		D3470
term L	- - - - - - - - - - - - - - - - -	pin 5

4) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	12	C01116	EQUIPMENT COOLING SUPPLY FAN CONTROL NORMAL

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	8	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP 037-054, 101-999			
D	10	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP ALL			

5) Re-connect connector D3470 to the normal supply fan.

6) Make sure the normal supply fan operates.

7) If the EQUIP COOLING SUPPLY OFF light goes off you corrected the fault.

(e) If there is 28VDC at pin 5, then continue.

(f) Install a jumper wire between pin 5 and pin 6 on D3470.

(g) Do a check for 3-phase 115 VAC from pins 1, 2 and 3 of connector D3470.

(h) If there is not 115 VAC from pins 1, 2 and 3 of D3470, then do these steps:

1) Repair the wiring between these connectors:

C934		D3470
term A	- - - - - - - - - - - - - - - - -	pin 1
term B	- - - - - - - - - - - - - - - - -	pin 2
term C	- - - - - - - - - - - - - - - - -	pin 3

2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	12	C01116	EQUIPMENT COOLING SUPPLY FAN CONTROL NORMAL

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	8	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP 037-054, 101-999			
D	10	C00934	EQPT CLG SPLY FAN PWR-NORM
HAP ALL			

3) Remove the jumper wire from connector D3470.

4) Re-connect connector D3470 to the normal supply fan.

5) If the normal supply fan operates and the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.

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G. Fault Isolation Procedure - Airflow or Indication Circuit Problem

(1) Clean the equipment cooling supply low flow detector, M1915.

These are the tasks:

Equipment Cooling Low Flow Sensors Removal, AMM TASK 21-27-03-000-802,

Equipment Cooling Low Flow Sensors Cleaning, AMM TASK 21-27-03-400-803,

Equipment Cooling Low Flow Sensors Installation, AMM TASK 21-27-03-400-802.

(a) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-811, if necessary.

(b) Put the EQUIP COOLING SUPPLY switch to NORMAL.

(c) If the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.

(d) If the EQUIP COOLING SUPPLY OFF light does not go off within 20 seconds, then continue.

(2) Replace the equipment cooling air filter.

These are the tasks:

Equipment Cooling Air Filter Removal, AMM TASK 21-27-01-000-801,

Equipment Cooling Air Filter Installation, AMM TASK 21-27-01-400-801.

(a) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-811.

(b) If the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.

(c) If the EQUIP COOLING SUPPLY OFF light does not go off within 20 seconds, then continue.

(3) Replace the equipment cooling supply low flow detector, M1915.

These are the tasks:

Equipment Cooling Low Flow Sensors Removal, AMM TASK 21-27-03-000-802,

Equipment Cooling Low Flow Sensors Installation, AMM TASK 21-27-03-400-802.

(a) Put the EQUIP COOLING SUPPLY switch to NORMAL.

(b) If the EQUIP COOLING SUPPLY OFF light is off or goes off within 20 seconds, then you corrected the fault.

(c) If the EQUIP COOLING SUPPLY OFF light does not go off within 20 seconds, then continue.

(4) Do this check of the wiring:

(a) Disconnect connector D3464 from the supply low flow detector, M1915.

(b) Disconnect connector D11452 from the P92 power distribution panel No. 2.

(c) Lower the P5 forward overhead panel to get access to the electrical connections on the EQUIP COOLING SUPPLY OFF light, L1141.

(d) Do a check of the wiring between these pins of connector D3464 and connector D11452.

D3464		D11452
pin 9	- - - - - - - - - - - - - - - - - -	pin 7

(e) Do a check of the wiring between these pins of connector D3464 and L1141:

D3464		L1141
pin 9	- - - - - - - - - - - - - - - - - -	term 2

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

1) Repair the wiring.

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2) Raise the P5 forward overhead panel to the closed position.
3) Re-connect connector D11452 to the P92 power distribution panel No. 2.
4) Re-connect connector D3464 to the supply low flow connector, M1915.
5) If the EQUIP COOLING SUPPLY OFF goes off within 20 seconds, then you corrected the fault.

(g) If you do not find a problem with the wiring, then do these steps and continue:
1) Raise the P5 forward overhead panel to closed position.
2) Re-connect connector D11452 to the P92 power distribution panel No. 2 in the EE compartment.
3) Re-connect connector D3464 to the supply low flow detector, M1915.

(5) Examine all of the ducts of the equipment cooling supply system for leakage or blockage.
(a) Repair the leakage or blockage.
(b) If the EQUIP COOLING SUPPLY OFF goes off within 20 seconds, then you corrected the fault.

———————— END OF TASK ————————

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801. Digital Cabin Pressure Controller (DCPC) BITE Procedure (Figure 201, Figure 202)

A. General

(1) There are certain conditions that a pilot report might address that do not require fault isolation. For example, if the cabin pressure climbs briefly and then stabilizes because of lavatory usage, it is not necessary to do a BITE procedure for such a condition. Other conditions such as aircraft operation beyond the capability of the pressurization control system also do not require fault operation. For example, aircraft descent at a rate such that the pressurization control system can not adjust quickly enough can result in the observation that the CABIN CLIMB gage indicates an unusually high rate.

(2) There are two identical digital cabin pressure controllers (DCPC).

(a) DCPC No. 1 is on the E2-2 shelf in the electronic equipment bay.

HAP 001-013, 015-026, 028-030

(b) DCPC No. 2 is on the E4-1 shelf in the electronic equipment bay.

HAP 031-054, 101-999

(c) DCPC No. 2 is on the E1-1 shelf in the electronic equipment bay.

HAP ALL

(3) If the DCPC shows "FAULT" on the front panel display, there is a fault currently being detected by the DCPC. There may also be faults recorded in the fault history of the DCPC.

(a) The cabin pressure controller should not be replaced unless additional fault isolation indicates that replacement is required.

(4) This BITE procedure must be done on both pressure controllers. Shortly after aircraft touchdown, the controller in charge of control status will switch to the standby controller in the last flight leg.

(5) If the DCPC front panel display is blank, there may be faults currently being detected or faults recorded in fault history or both current faults and recorded faults may exist.

(a) The complete BITE procedure must be completed to determine if maintenance needs to be done on the digital cabin pressurization control system components, the air conditioning pack, the pneumatic system, air leakage problems, or wiring.

(6) The steps that follow provide a summary of the DCPC button functions.

(a) ON/OFF button

1) The ON/OFF button will activate or de-activate the BITE functions in the DCPC.

(b) MENU button

1) The MENU button is used to display the BITE menus in the DCPC. If you push the MENU button, it will take you up one level in the BITE menus.

(c) YES button

1) Used to respond YES to questions on the DCPC.

(d) NO button

1) Used to respond NO to questions on the DCPC.

(e) Up arrow button

1) Used to scroll up through the menu or the results of a BITE test.

(f) Down arrow button

1) Used to scroll down through the menu or the results of a BITE test.

(7) The steps that follow provide a summary of the main menu selections:

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(a) EXISTING FAULTS

1) The EXISTING FAULTS main menu selection provides a list of all faults that are currently detected by the DCPC.

NOTE: Subsequent maintenance action is needed to resolve those maintenance message(s) that show in the EXISTING FAULTS.

(b) FAULT HISTORY

1) The FAULT HISTORY main menu selection provides a list of previous flight legs for which faults have been recorded. It also provides a list of faults for the present flight leg. Each flight leg is numbered. The present flight leg is numbered 00. The previous flight leg is 01. Each previous flight leg is numbered successively higher.

2) If a fault was active during a flight leg and subsequently became inactive, it will be recorded in FAULT HISTORY. It may not be in EXISTING FAULTS.

3) FAULT HISTORY can be cleared when you run a SYSTEM TEST from the GROUND TESTS main menu.

NOTE: Maintenance message(s) that show in the FAULT HISTORY are for reference only and do not require maintenance action.

(c) GROUND TESTS

1) The GROUND TESTS main menu selection provides the test selections that follow:

a) A DISPLAY test selection that tests the LED display on the front panel of the DCPC.

b) A SYSTEM test selection that is used to perform a system test of the DCPC and the associated components.

NOTE: During the SYSTEM test when the DCPC shows "SYS TEST AND CLR?", and you press the YES button, all faults from all flight legs will be cleared from FAULT HISTORY.

(d) SYSTEM STATUS

1) The SYSTEM STATUS main menu selection has the selections that follow:

a) A PRESENT STATUS selection that shows the current input parameters to the DCPC such as air conditioning pack state (for example, L PACK ON or OFF).

b) A SYSTEM CONFIG selection that shows system configuration information such as LRU elapsed time and program pin states.

(e) SYSTEM TEST AND CLEAR

1) The SYSTEM TEST AND CLEAR main menu selection is used to prepare the digital cabin pressurization control system for a system test and to clear the FAULT HISTORY.

NOTE: When the test is complete, all faults from all flight legs will be cleared from FAULT HISTORY.

(8) There are two types of faults identified by the BITE:

(a) Maintenance messages

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1) Maintenance messages are listed in the BITE Message Index at the end of this task and are found when you examine for faults from the EXISTING FAULTS and FAULT HISTORY main menu selections. There are nineteen maintenance messages. An example of the text displayed for a maintenance message is "OFV LRU FAIL". Each of the maintenance messages has a specified FIM task associated with it. From the main menu EXISTING FAULTS selection, the maintenance message is displayed when you press the YES button. From the main menu FAULT HISTORY selection, the maintenance message is displayed after you push the YES button to select the flight leg you want, and then push the YES button again to examine faults for that particular flight leg.

(b) Fault details or fault numbers

1) Fault details or fault numbers are listed and described in the DCPCS Fault Number List (Table 201). They are found when you push the YES button when a maintenance message is displayed. Some maintenance messages can have different fault details (or fault numbers), depending on the type of fault that occurred. There are approximately 112 fault numbers. An example of the text displayed for a fault detail or fault number is "FAULT: 088".

NOTE: The DCPCS Fault Number List is to be used for reference only. It is not intended to be a trouble shooting guide. Its' purpose is to list information that may provide insight into a solution of cabin pressurization system problems.

2) All fault code numbers except numbers 001, 009, 010 and 052 are RESET recoverable.

3) Fault details or fault numbers should be recorded on your maintenance records. This information could be used later to help identify faults that are difficult to trouble shoot.

B. Initial Evaluation

(1) If FAULT shows on the DCPC front panel display, then do these steps:

NOTE: If FAULT shows on the DCPC front panel display, there are existing faults in the digital cabin pressurization control system.

(a) Push the ON/OFF button on the DCPC front panel.

(b) If the airplane is not in the ground mode, "A/P NOT IN GND" will show for two seconds; then "BITE ABORTED" will show for two seconds.

1) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(c) Reset the cabin pressure controller for any reset recoverable faults as follows:

1) Set the mode selector on the cabin pressure control module on the P5-6 panel to MAN for 10 seconds.

2) Set the mode selector on the cabin pressure control module to AUTO.

(d) Do the BITE procedure for EXISTING FAULTS (step C.) below.

(2) If the DCPC front panel display is blank, then do these steps:

(a) Push the ON/OFF button on the DCPC front panel.

(b) If the airplane is not in the ground mode, "A/P NOT IN GND" will show for two seconds; then "BITE ABORTED" will show for two seconds.

1) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

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(c) If the DCPC front panel display shows "SYSTEM OK", then do these steps:

NOTE: If SYSTEM OK is shown, there are no existing faults or faults in FAULT HISTORY present.

1) Push the MENU button.
2) Make sure that the DCPC front panel display shows EXISTING FAULTS.
3) Push the down arrow button until the DCPC front panel display shows GROUND TEST.
4) Do the GROUND TEST BITE procedure (step E.) below.

(d) If the DCPC front panel display shows nn EXIST FAULTS for two seconds, then nn PREV FAULTS for two seconds, and then EXISTING FAULTS, do the BITE procedure for EXISTING FAULTS (step C.) below.

NOTE: The nn is the number of faults.

(e) If the DCPC front panel display shows nn PREV FAULTS for two seconds, then FAULT HISTORY, do the BITE procedure for FAULT HISTORY (step D.) below.

NOTE: The nn is the number of faults.

C. BITE Procedure for EXISTING FAULTS

(1) Make sure that the DCPC front panel display shows EXISTING FAULTS.

(2) Push the YES button on the DCPC front panel.

(3) The DCPC front panel display shows the first fault (maintenance message) in the existing fault list.

NOTE: The text of the fault will be the same as one of the maintenance messages listed in the BITE Message Index at the end of this task. These existing faults are referred to as maintenance messages.

(4) Find and record the existing faults as follows:

(a) Make a record of the existing fault (maintenance message).

(b) Push the YES button on the DCPC front panel to see the fault details (fault numbers) for the maintenance message.

NOTE: The fault details for a maintenance message will be the same as one or more of the fault numbers that are listed in the DCPCS Fault Number List (Table 201). The number of fault details (fault numbers) varies with each maintenance message.

(c) Make a record of the fault detail (fault number) for the maintenance message.

(d) Push the down arrow button on the DCPC front panel to look for the next fault detail (fault number).

(e) Make a record of this fault detail (fault number) also.

(f) Do the above two steps again until the DCPC front panel display shows BOTTOM OF LIST for two seconds, then shows the maintenance message again.

(g) Push the MENU button on the DCPC front panel to go back to see the maintenance message in the existing fault list.

(h) Push the down arrow button on the DCPC front panel to see the next maintenance message in the EXISTING FAULTS list.

NOTE: If there are no more faults, the display will show "BOTTOM OF LIST" for two seconds, then the previous maintenance message will show.

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(i) Do the eight steps above until the DCPC front panel display shows BOTTOM OF LIST for two seconds so that all maintenance messages and associated fault numbers have been recorded.

(5) Push the MENU button on the DCPC front panel.

(6) Refer to the BITE Message Index at the end of this task to find the fault isolation task for the applicable maintenance message.

(7) Push the down arrow button on the DCPC front panel until FAULT HISTORY shows and do the BITE procedure for FAULT HISTORY below.

D. BITE Procedure for FAULT HISTORY

(1) Make sure that the DCPC front panel display shows FAULT HISTORY.

(2) Push the YES button on the DCPC front panel.

(3) The DCPC front panel display shows FLIGHT LEG XX.

NOTE: XX is the last flight leg that faults were recorded in history.

(4) If there are no FLIGHT LEGS displayed on the DCPC front panel, go to step D.(11).

NOTE: This indicates that there are no faults recorded in FAULT HISTORY.

(5) Push the YES button on the DCPC front panel.

(6) The DCPC front panel display shows the first fault (maintenance message) in the flight leg fault list.

NOTE: The text of the fault will be the same as one of the maintenance messages listed in the BITE Message Index at the end of this task. These faults are referred to as maintenance messages.

(7) Find and record the faults in the flight leg fault list as follows:

(a) Make a record of the fault (maintenance message).

(b) Push the YES button on the DCPC front panel to see the fault details (fault numbers) for the maintenance message.

NOTE: The fault details for a maintenance message will be the same as one or more of the fault numbers that are listed in the DCPCS Fault Number List (Table 201). The number of fault details (fault numbers) varies with each maintenance message.

(c) Make a record of the fault detail (fault number) for the maintenance message.

(d) Push the down arrow button on the DCPC front panel to look for the next fault detail (fault number) for the maintenance message.

(e) Make a record of this fault detail (fault number) also.

(f) Do the above two steps again until the DCPC front panel display shows BOTTOM OF LIST for two seconds, then returns to the maintenance message in the fight leg fault list.

(g) Push the down arrow button on the DCPC front panel to look for the next fault (maintenance message) for the flight leg.

(h) Do the seven steps above until all fault entries in the flight leg fault list have been examined and recorded for the flight leg.

(8) Push the MENU button on the DCPC front panel until the display shows FLIGHT LEG XX.

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(9) Push the down arrow button on the DCPC front panel to look for the next flight leg that recorded faults in fault history.

(10) Do above steps D.(6) through D.(8) until all flight legs with faults in fault history have been examined and recorded.

(11) Refer to the BITE Message Index at the end of this task to find the fault isolation task for the applicable maintenance message to find which FIM task(s) to use to fault isolate the maintenance message(s) that was recorded.

(12) If the DCPC front panel display is not at a main menu selection, push the MENU button until you are in the main menu.

E. GROUND TEST BITE Procedure

(1) Push the up or down arrow as necessary until the DCPC front panel display shows GROUND TEST.

(2) Do the GROUND TEST as follows:

CAUTION: MAKE SURE ONE OF THE EXTERNAL DOORS OR WINDOWS IS OPEN BEFORE YOU CONTINUE WITH THE TEST. UNCONTROLLED PRESSURIZATION OF THE CABIN CAN OCCUR WHEN THE OUTFLOW VALVE IS CLOSED. THIS CAN CAUSE DAMAGE TO EQUIPMENT.

(a) Make sure at least one external door or window is open or that the L and R PACK switches on the P5-10 air conditioning panel are OFF.

(b) Push the YES button on the DCPC front panel.

(c) Make sure the DCPC front panel display shows DISPLAY TEST.

(d) Push the down arrow button on the DCPC front panel until the display shows SYSTEM TEST.

(e) Push the YES button on the DCPC front panel to start the system test.

(f) Make sure the DCPC front panel display shows "DOORS OPEN?".

(g) Make sure that at least one external airplane door is open.

(h) Push the YES button on the DCPC front panel.

(i) Make sure the DCPC front panel display shows "DADC ON?".

(j) Make sure that both ADIRU L and R are on.

(k) Push the YES button on the DCPC front panel.

(l) Make sure the DCPC front panel display shows "SMC ON?".

(m) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	5	C01204	SMYD-1 CMPTR DC
E	6	C01205	SMYD-1 SNSR EXC AC

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
B	4	C01207	SMYD-2 SNSR EXC AC
B	5	C01206	SMYD-2 CMPTR DC

(n) Push the YES button on the DCPC front panel.

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(o) Make sure the DCPC front panel display shows "OFV CLEAR?".

(p) Do these steps in less than one minute or the test will fail.

NOTE: You will try to do a system test on pressure controller No. 2 while the test for pressure controller No. 1 is in progress. The system test cannot be done on the two controllers at the same time. This step makes sure that if you try to do the system test on pressure controller No. 2 when the test is in progress on pressure controller No. 1, that the test on pressure controller No. 2 will be aborted.

WARNING: DO NOT PUT YOUR HANDS OR TOOLS IN THE OUTLET OF THE OUTFLOW VALVE. THE VALVE IS MOTOR-OPERATED. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

1) Push the YES button on the DCPC No. 1 front panel after you make sure the outflow valve is not blocked.

(q) Make sure the DCPC front panel display on pressure controller No. 1 shows TESTING.

NOTE: Eight digits will come on below the word "TESTING" at intervals of approximately 12 seconds. If faults are detected during this testing, the DCPC front panel display will show nn EXIST FAULTS for two seconds, then the main menu selection EXISTING FAULTS will show.

(r) If this function finds faults, the DCPC front panel display will show nn EXIST FAULTS for two seconds, then show main menu item EXISTING FAULTS.

1) Do the procedure for existing faults in step C.

(s) Do these steps on the DCPC front panel on pressure controller No. 2:

1) Push the ON/OFF button on the DCPC front panel.
2) Push the MENU button on the DCPC front panel.
3) Continue to push the down arrow button until the DCPC front panel display shows GROUND TEST.
4) Push the YES button on the DCPC front panel.
5) Make sure the DCPC front panel display shows DISPLAY TEST.
6) Continue to push the down arrow button until the DCPC front panel display shows SYSTEM TEST.
7) Push the YES button on the DCPC front panel to start the system test.
8) Make sure the DCPC front panel display shows these messages:

NOTE: The messages will show one after the other with a two second delay between the first and the second messages. This shows that the test on pressure controller No. 2 is aborted.

a) BOTH SYS IN IBIT
b) IBIT ABORTED

9) Push the ON/OFF button on the DCPC front panel on pressure controller No. 2.

(t) Make sure that all of the eight digits are on for pressure controller No. 1.

(u) Make sure the display on the DCPC front panel on pressure controller No. 1 shows these messages:

NOTE: The messages will show one after the other with a two second delay between the first and the second messages.

1) SYSTEM OK

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2) SYSTEM TEST & CLEAR

NOTE: This clears all faults in EXISTING FAULTS and all flight leg faults from FAULT HISTORY.

(v) Push the YES button on the DCPC front panel on pressure controller No. 1.

(w) Push the ON/OFF button on the DCPC No. 1 front panel.

(3) Do the DCPC BITE procedure for the other pressure controller.

Table 201 DCPCS Fault Number List

BCM FAULT NUMBER	FAULT DISPLAYED	AUTO FAIL *[1]	FAULT DESCRIPTION	REFER TO FIM TASK
001	SYSTEM WIRING	X	A communication fail (no bus activity, parity error, short/long word, faulty data) is detected by the CTR and the ARINC wraparound of the CTR and the PNL is passed.	804
001	SYSTEM WIRING	X	A communication fail (no bus activity, parity error, short/long word, faulty data) is detected by the CTR and the ARINC wraparound of the CTR and the PNL is passed.	804
002	SYSTEM WIRING	X	No RS422 activity is detected by the CTR and the fault is isolated to the interconnect (CTR RS422 wrap around passed and CONNECT_ACT_CTR_IN = false).	
003	HI CAB ALT	X	Cabin pressure lower than 8 psi and the OFV position is still above 5 degrees after 1 second.	817
004	CAB DIFF PRESS HI	X	Cabin differential pressure exceeded 8.3 psi (P/N 7121-19971-01BA: differential pressure greater than 9.39 psi) with an OFV position of less than 20 degrees after 5 seconds.	
005	CAB RATE HI	X	Cabin pressure rate greater than ±2000 SLFPM and the OFV position is still above (below) 5 degrees after 5 seconds.	818
006	SYSTEM WIRING	X	OFV cannot follow the state of the CTR and the failure is not isolated to the PNLs sever switch or the CTRs HSS switch. Interconnect failure in the DRIVE_ENABLE_CTR_PNL line, the DRIVE_ENABLE_PNL_ACT line or MNL_MODE_PNL_CTR line.	804
007	OFV LRU FAIL	X	OFV cannot follow the CTR position command (OFV_LOOP_CLOSURE_STATUS is set to TRUE) and the OFV position is below 20 degrees.	802
008	AUTO/MAN ERROR	-	More than one or none of the AUTO, ALTN or MANUAL indications are received by the CTR.	821

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(Continued)

BCM FAULT NUMBER	FAULT DISPLAYED	AUTO FAIL *[1]	FAULT DESCRIPTION	REFER TO FIM TASK
009	OFV LRU FAIL	X	OFV does not reach the mechanical stop within time or the calibration constant is out of range. (IBIT only.) Mechanical blockage/restriction of the OFV or OFV failure.	802
010	OFV LRU FAIL	X	OFV is not able to drive fully open to fully closed or vice versa within the given time constrains. (IBIT only.)	802
011	OFV LRU FAIL	X	OFV is not able to move from fully open to 105 degrees and back within the given time constrains. (SCBIT only.)	802
012	CONTRLR BBJ PIN [2]	X	BBJ_SEL_IN is not tied to Ground. May be caused by a wire failure or connection failure outside of the CTR (Fault Detail msg CONTRLR BBJ PIN).	804
012	[3]		Unused	
013	SYSTEM WIRING	X	CTR MASTER/SLAVE pin programming is contradictory. May be caused by a wire failure or connection failure outside of the CTR.	804
014	SYSTEM WIRING	X	CTR receives consecutively for 5 minutes an indication that the other CTR performs IBIT while in flight.	804
015	OFV OR WIRING	X	CTR cannot detect OFV RS422 activity and the CTR RS422 wraparound is passed and the CONNECT_ACT_CTR_IN is true.	805
016	SEL PNL LRU FAIL		The CTR detects that the PNL was unable to open the sever switch. The test is performed if a switch from AUTO to MANUAL or from ALTN to MANUAL is detected (CTRs opmode switched to MANUAL). This test cannot be rerun during IBIT.	803
017			Unused	
018			Unused	
019	OFV LRU FAIL	X	The CTR receives faulty data from the OFV for longer than 3 seconds. This failure may be caused by an ELACT hardware or software failure.	802
020	SYSTEM WIRING	-	A mismatch between the discrete OK_PNL_CTR signal and the PNL health information on the PNL fault word is detected.	
021	SYSTEM WIRING	-	A failure of the discrete CONNECT_ACT _CTR line is detected (RS422 activity is present and CONNECT_ACT_CTR = false).	804

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(Continued)

BCM FAULT NUMBER	FAULT DISPLAYED	AUTO FAIL *[1]	FAULT DESCRIPTION	REFER TO FIM TASK
022	DADC#1 INVALID	-	Computed Airspeed (CAS) received from DADC #1 is invalid or not updated.	806
023	DADC#2 INVALID	-	CAS received from DADC #2 is invalid or not updated.	807
024	DADC#1 INVALID	X	No bus activity of DADC1 is detected, pressure altitude or baro-corrected pressure altitude are not received or invalid for longer than 2 seconds. Auto channel fail will be set if DADC2 FAIL is set too. Auto channel fail will not be set if true air speed only is missing or faulty for longer than 2 seconds.	806
025	DADC#2 INVALID	X	No bus activity of DADC2 is detected, pressure altitude or baro-corrected pressure altitude are not received or invalid for longer than 2 seconds. Auto channel fail will be set if DADC1 FAIL is set too. Auto channel fail will not be set if true air speed only is missing or faulty for longer than 2 seconds.	807
026	SMC #1 INVALID	-	No bus activity of SMC1 is detected, or N1 value or N2 value is not received or invalid for longer than 2 seconds. Auto channel fail will be set if SMC2 FAIL is set too. Auto channel fail will only be set as long as the mode is GR or TO.	808
027	SMC #2 INVALID	-	No bus activity of SMC2 is detected, or N1 value or N2 value is not received or invalid for longer than 2 seconds. Auto channel fail will be set if SMC1 FAIL is set too. Auto channel fail will only be set as long as the mode is GR or TO.	809
028	LDG/ GEAR DISAGREE	-	A mode switch GR to CI or TO to CI occurs due to ambiguous landing gears using the condition for true air speed. May be caused by a failure of the LEFT_WHEELS_ON_GND or RIGHT_ WHEELS_ON_GND signals outside of the CTR.	822
029	N1/N2 LOW	-	A mode switch GR to CI occurred due to no valid N1 or N2 value available or a valid N1 or N2 value below the value required for the mode switch. May be caused by a lower throttle lever setting during take off run or a SMC fail.	810
030	LO INFL/HI LEAKG	-	The OFV position was below 3 degrees for longer than 5 seconds. This is no failure of the DCPCS. May be caused by a low inflow situation or a high leakage.	823

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(Continued)

BCM FAULT NUMBER	FAULT DISPLAYED	AUTO FAIL *[1]	FAULT DESCRIPTION	REFER TO FIM TASK
031	ACFT RATE HI	-	Cabin pressure rate is above the allowed selected hard limit for more than 5 seconds caused by a high a/c rate in conjunction with maximum dp (7.95 psi) or negative dp (-0.05 psi).	815
032	CONTRLR LRU FAIL	X	The CPC97 gate array tests detected a failure in the CPC97 gate array.	824
033	CONTRLR LRU FAIL	X	The non destructive RAM test detected a failure in the internal RAM of the 8097μP.	824
034	CONTRLR LRU FAIL	X	The non destructive RAM test detected a failure in the external CTR RAM.	824
035	CONTRLR LRU FAIL	X	The Cyclic Redundancy Check detected a failure of the CTR EPROMs. It has to be assumed that the software contained in the PROMs is not in an operative condition.	824
036	CONTRLR LRU FAIL	X [4]	The arithmetic test of the μP detected a failure.	824
036		[3]	Unused	
037	CONTRLR LRU FAIL	X	The + 15V DC and -15V DC from the power supply are continuously monitored at an analog input port of the A/D converter. The fail flag is set if the difference of both power lines is out of the range required to drive the ARINC transmitters.	824
038	CONTRLR LRU FAIL	X	The A/D converter is continuously tested against + 5V dc via an analog input. If the measured value differs more than 4% from the nominal value, the fail flag is set.	824
039	CONTRLR LRU FAIL	X	No RS422 transmitter interrupt activity is detected.	824
040	CONTRLR LRU FAIL	X	The wraparound of the CTR RS422 interface fails.	824
041	CONTRLR LRU FAIL	X	No ARINC transmitter interrupt activity is detected.	824
042	CONTRLR LRU FAIL	X	The CTR watchdog was not correctly served by the software. May be caused by a software anomaly.	824
043	CONTRLR LRU FAIL	X	The ARINC wraparound of ARINC transmitter circuit 1, MUX1 and ARINC receiver 1 fails.	824
044	CONTRLR LRU FAIL	X	The ARINC wraparound of ARINC transmitter circuit 2, MUX2 and ARINC receiver 2 fails.	824

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(Continued)

BCM FAULT NUMBER	FAULT DISPLAYED	AUTO FAIL *[1]	FAULT DESCRIPTION	REFER TO FIM TASK
045	CONTRLR LRU FAIL	X	The ARINC wraparound of ARINC transmitter circuit 3, MUX3 and ARINC receiver 3 fails.	824
046	CONTRLR LRU FAIL	X	A write to the NVM cannot be performed correctly.	824
046	[3]	X	Unused	
047	CONTRLR LRU FAIL	X	The data read out of the NVM flight buffer or NVM power down buffer after POR or pilot reset not within the valid range.	824
048	CONTRLR LRU FAIL	X	The checksum test of the sensor EEPROM data fails.	824
049	CONTRLR LRU FAIL	X	The sensed pressure of the sensor is above 26 psi or below 2.471 psi.	824
050	CONTRLR LRU FAIL	X	The pressure value is not refreshed by the pressure sensor within the valid time frame.	824
051	CONTRLR LRU FAIL	X	The temperature value is not refreshed by the temperature sensor within the valid time frame.	824
052	CONTRLR LRU FAIL	X	The PC differs from the PA value more than 0.2 psi absolute. This test is part of the IBIT and the SCBIT only.	824
053			Unused	
054			Unused	
055			Unused	
056	CONTRLR LRU FAIL	X	The DRIVE_ENABLE_CTR_PNL_OUT line is powered while the HSS should be open.	824
057	CONTRLR LRU FAIL	X	The DRIVE_ENABLE_CTR_PNL_OUT line is unpowered while the HSS should be closed.	824
058 [4]			Unused	
058 [3]			Reserved	
059	CONTRLR LRU FAIL	X	The wraparound of the OSD_CTR_OUT line fails.	824
060	CONTRLR LRU FAIL	X	The wraparound of the AUTO_UNDER_TEST _CTR_CTR_OUT line fails.	824
061	CONTRLR LRU FAIL	X	The wraparound of the series discrete output AUTO_FAIL_CTR_OUT failed.	824
062			Unused	

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(Continued)

BCM FAULT NUMBER	FAULT DISPLAYED	AUTO FAIL *[1]	FAULT DESCRIPTION	REFER TO FIM TASK
063	-	-	The self test of the BCM fails.	-
064	OFV LRU FAIL	X	The non destructive test of the OFV μP RAM fails during CBIT.	802
065	OFV LRU FAIL	X	The non destructive test of the OFV μP external RAM fails during CBIT.	802
066	OFV LRU FAIL	X	The non destructive test of the OFV μP RAM fails during PUBIT.	802
067	OFV LRU FAIL	X	The non destructive test of the OFV μP external RAM fails during PUBIT.	802
068	OFV LRU FAIL	X	The current limitation for the auto- matic motor fails.	802
069	OFV LRU FAIL	X	The + 15V dc of the ELACT feed into an A/D converter input is not in range.	802
070			Unused	
071			Unused	
072	OFV LRU FAIL	X	The cyclic redundancy check of the ELACT EPROMs fails.	802
073	OFV LRU FAIL	X	The wraparound of the ELACT RS422 interface fails.	802
074	OFV OR WIRING	X	The ELACT does not detect RS422 activity of the CTR and the CTR RS422 wraparound is passed.	805
075	OFV LRU FAIL	X	No ELACT RS422 transmitter interrupt activity is detected by the ELACT.	802
076	OFV LRU FAIL	X	The wraparound of the discrete input MUX in the ELACT failed.	802
077	OFV LRU FAIL	X	The ELACT internal discrete wraparound fails.	802
078	OFV LRU FAIL	X	The RVT reference voltage for the position feedback is detected out of range.	802
079	OFV LRU FAIL	X	OFV connector J4 internal pin programming is not set to B737 mode.	802
080	OFV LRU FAIL	X	The A/D conversion is not performed within the defined time frame.	802
081 [4]	-	-	This status fail flag will be set on the OFV fault word by the ELACT and evaluated by the CTR. If the additional conditions are fulfilled the CTR sets as result fail flag 007 on the system fault word.	-

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(Continued)

BCM FAULT NUMBER	FAULT DISPLAYED	AUTO FAIL *[1]	FAULT DESCRIPTION	REFER TO FIM TASK
081 [3]			Unused	
082			Unused	
083	OFV LRU FAIL	X	The arithmetic operation tests of the ALU of the ELACT fails.	802
084			Unused	
085			Unused	
086			Unused	
087	OFV LRU FAIL	X	The -15V dc feed into the A/D con- verter is out of range. May be caused by a power supply or A/D converter fail.	802
088	OFV LRU FAIL	X	The hall sensor signals are detected in incorrect combinations.	802
089			Unused	
090	CAB PRES SW ACTIV	-	This status flag will be set as long as the cabin pressure switch of the ELACT is active.	-
091 [4]	CONTRLR LRU FAIL	X	The ELACT receives invalid P messages from the CTR for longer than 3 seconds.	824
091 [3]			Unused	
092	OFV LRU FAIL	X	ELACT internal pin programming shows a forbidden combination.	802
093			Unused	
094			Unused	
095			Unused	
096	SEL PNL LRU FAIL	-	The cyclic redundancy check of the PNL PROMs fails.	803
097			Unused	
098	SEL PNL LRU FAIL	-	The test of the PNL RAM fails.	803
099	SEL PNL LRU FAIL	-	The PNL μP arithmetic operation test fails.	803
100	SEL PNL LRU FAIL	-	The PNL detects a wraparound fail of the ARINC interface to the master CTR.	803
101	SEL PNL LRU FAIL	-	The PNL detects a wraparound fail of the ARINC interface to the slave CTR.	803

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(Continued)

BCM FAULT NUMBER	FAULT DISPLAYED	AUTO FAIL *[1]	FAULT DESCRIPTION	REFER TO FIM TASK
102	SEL PNL LRU FAIL	-	The PNL A/D converter test fails.	803
103	SEL PNL LRU FAIL	-	Wraparound of the discrete output AUTO_FAIL_PNL_OUT fails.	803
104	SEL PNL LRU FAIL	-	The PNL resets 3 times without detected reason within 6 minutes.	803
105	SEL PNL LRU FAIL	-	The PNL watchdog timer expires.	803
106	SEL PNL LRU FAIL	-	One discrete input value is out of range.	803
107	SEL PNL LRU FAIL	X	The CTR state is SB and the OFV state is OP while the CTRs opmode is not MANUAL and the PNL indicates a high voltage drop from either sever switch relay.	803
108	SYSTEM WIRING	X	The PNL detects no ARINC activity or receives faulty data from the CTR1 and no wraparound failure of the PNL and the CTR ARINC interface is detected.	804
109	DRV ENBL ERROR	X	The PNL detects both CTRs are operational at the same time.	819
110	SYSTEM WIRING	X	The PNL detects no ARINC activity or receives faulty data from the CTR2 and no wraparound failure of the PNL and the CTR ARINC interface is detected.	804
111	-	-	A PNL internal fail (fail flags 96 to 106) is detected.	-

*[1] X in column indicates "AUTO FAIL" comes on.

[2] Pressure controller P/N 7121-19971-01BA

[3] Pressure controllers P/N 21933-01AA, 21933-01AB, 21933-01AC

[4] Pressure controllers P/N 7121-19971-01AA, 7121-19971-01AB, 7121-19971-01AC, 7121-19971-01BA

F. SYSTEM STATUS Bite Procedure

(1) If the DCPC front panel display is not at a main menu selection, push the MENU button until you are in the main menu.

(2) Push the ↑ or ↓ button as necessary until the DCPC front panel display shows SYSTEM STATUS.

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(3) Close these circuit breakers:

CAPT Electrical System Panel, P18-1

Row	Col	Number	Name
E	5	C01009	ADIRU LEFT DC
E	7	C01007	ADIRU LEFT AC

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
E	5	C01204	SMYD-1 CMPTR DC
E	6	C01205	SMYD-1 SNSR EXC AC

F/O Electrical System Panel, P6-1

Row	Col	Number	Name
B	4	C01207	SMYD-2 SNSR EXC AC
B	5	C01206	SMYD-2 CMPTR DC
C	14	C01008	ADIRU RIGHT AC
C	17	C01010	ADIRU RIGHT DC

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	15	C01401	LANDING GEAR AIR/GND RELAY

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT
D	1	C01444	AIR CONDITIONING OVERBOARD EXHAUST VALVE CONT
D	2	C01445	AIR CONDITIONING OVERBOARD EXHAUST VALVE RECONFIG CONT
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2

(4) Set the pressurization mode selector switch on the P5-6 panel to AUTO.

NOTE: The AUTO FAIL light may momentarily flash when AUTO is selected.

(5) Open this circuit breaker:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	5	C01271	PRESSURIZATION CONTROL AUTO 2

(6) Continue after a minimum of one second.

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(7) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	5	C01271	PRESSURIZATION CONTROL AUTO 2

(8) Set 33,000 feet in the FLT ALT window of the P5-6 pressurization control panel.

(9) Set 500 feet in the LAND ALT window of the P5-6 pressurization control panel.

HAP 101-999

(10) Set the RECIRC FAN switch on the P5-10 air conditioning panel to OFF.

HAP 001-013, 015-026, 028-054

(11) Set the R RECIRC FAN switch on the P5-10 air conditoning panel to OFF.

HAP ALL

(12) Set the L PACK and R PACK switches on the P5-10 air conditioning panel to OFF.

(13) Push the ON/OFF button on the front of the pressure controller No.1 (M1653) on the E2-2 shelf of the E/E compartment.

(14) Push the MENU button.

(15) Continue to push the ↓ button until the display shows SYSTEM STATUS.

(16) Push the YES button.

(17) Make sure the display shows PRESENT STATUS after two seconds.

(18) Push the YES button.

(19) Make sure the display shows FLT ALT +33000FT.

(20) Push the ↓ button.

(21) Make sure the display shows LAND ALT +500FT.

(22) Push the ↓ button.

(23) Make sure the display shows AUTO IN CTRL.

(24) Push the ↓ button.

(25) Make sure the display is between OFV + 100 and OFV + 122 DEG OPEN DEG OPEN.

(26) Push the ↓ button.

(27) Make sure the display shows NO AUTO FAIL.

(28) Push the ↓ button.

(29) Make sure the display is between CAB PRES and CAB PRES 13.70 PSI 15.70 PSI.

(30) Push the ↓ button.

(31) Make sure the display shows CARGO HT VALVE CL.

(32) Push the ↓ button.

(33) Make sure the display shows LFT PACK FLOW OFF.

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(34) Push the ↓ button.

(35) Make sure the display shows RT PACK FLOW OFF.

(36) Push the ↓ button.

(37) Make sure the display is BOTTOM OF LIST.

(38) Push the menu button.

(39) Push the ↓ button continuously until the display shows SYSTEM CONFIG.

(40) Push the YES button.

(41) Push the ↓ button continuously until the display shows this message:

NOTE: While you push the button, the display will show CONTRLR XXX HRS and PNL TIME XXX HRS. XXX is the number of hours.

(a) ROC SEL LOW

(42) Push the ↓ button.

(43) Make sure the display shows this message:

(a) ROD SEL2 LOW

(44) Push the ↓ button.

(45) Make sure the display shows MASTERID LOW.

(46) Push the ↓ button.

(47) Make sure the display shows this message:

(a) ROD SEL1 LOW

(48) Push the ↓ button.

(49) Make sure the display shows QFE SEL HIGH

(50) Push the ↓ button.

(51) Make sure the display shows SLAVE ID HIGH.

(52) Push the ↓ button.

(53) Make sure the display shows OFV CONN LOW.

(54) Push the ↓ button.

(55) Make sure the display shows IBIT IN HIGH.

(56) Push the ↓ button.

(57) Make sure the display shows CARGO HT VLV LOW.

(58) Push the ↓ button.

(59) Make sure the display shows MANUAL IN HIGH.

(60) Push the ↓ button.

(61) Make sure the display shows LEFT A/G LOW.

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(62) Push the ↓ button.

(63) Make sure the display shows RT A/G LOW.

(64) Push the ↓ button.

(65) Make sure the display shows SHOP MODE HIGH.

(66) Push the ↓ button.

(67) Make sure the display shows L PACK VLV LOW.

(68) Push the ↓ button.

(69) Make sure the display shows R PACK VLV LOW.

(70) Push the ↓ button.

(71) Make sure the display shows 41K SEL LOW.

(72) Push the ↓ button.

(73) Make sure the display shows AUTO CTL IN LOW.

(74) Push the ↓ button.

(75) Make sure the display shows PNL OK HIGH.

(76) Push the ↓ button.

(77) Make sure the display shows BBJ SEL HIGH.

(78) Push the ↓ button.

(79) Make sure the display shows HIGH LFE HIGH.

(80) Push the ↓ button.

(81) Make sure the display shows BOTTOM OF LIST.

(82) Push the ON/OFF button

(83) Do the SYSTEM STATUS Bite procedure for the other pressure controller (M1654).

——————— END OF TASK ———————

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CAB PRESS CON	ACFT RATE HI	21-31 TASK 815
CAB PRESS CON	AUTO/MAN ERROR	21-31 TASK 821
CAB PRESS CON	CAB DIFF PRESS HI	21-31 TASK 816
CAB PRESS CON	CAB PRESS SW ACTIV	21-31 TASK 820
CAB PRESS CON	CAB RATE HI	21-31 TASK 818
CAB PRESS CON	CONTRLR LRU FAIL	21-31 TASK 801
CAB PRESS CON	DADC #1 INVALID	21-31 TASK 806

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CAB PRESS CON	DADC #2 INVALID	21-31 TASK 807
CAB PRESS CON	DRV ENBL ERROR	21-31 TASK 819
CAB PRESS CON	HI CAB ALT	21-31 TASK 817
CAB PRESS CON	LDG GEAR DISAGREE	21-31 TASK 822
CAB PRESS CON	LO INFL/HI LEAKG	21-31 TASK 823
CAB PRESS CON	N1/N2 LOWRU FAIL	21-31 TASK 810
CAB PRESS CON	OFV LRU FAIL	21-31 TASK 802
CAB PRESS CON	OFV OR WIRING	21-31 TASK 805
CAB PRESS CON	SEL PNL LRU FAIL	21-31 TASK 803
CAB PRESS CON	SMC #1 INVALID	21-31 TASK 808
CAB PRESS CON	SMC #2 INVALID	21-31 TASK 809
CAB PRESS CON	SYSTEM WIRING	21-31 TASK 804

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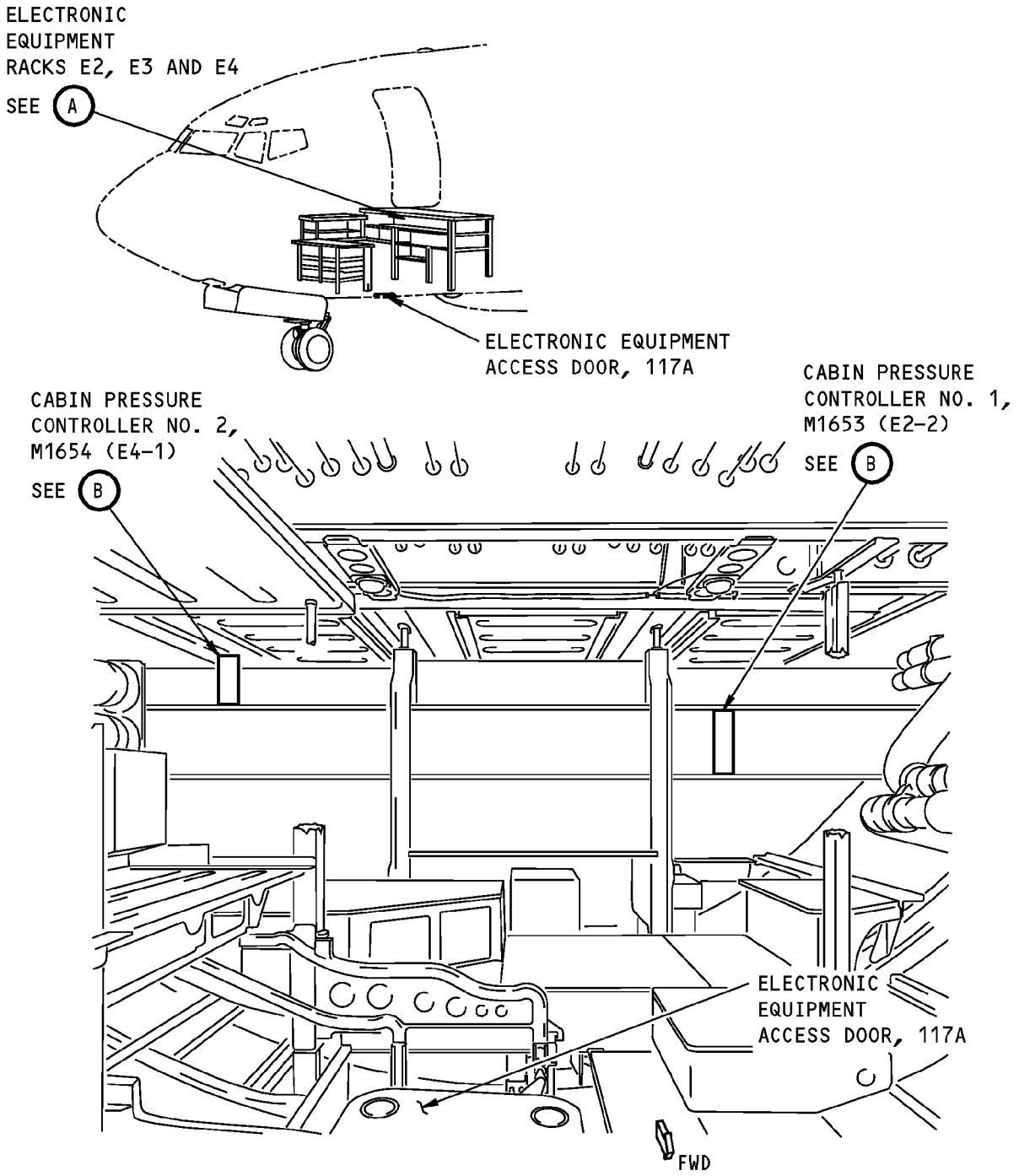

Cabin Pressure Control System BITE Test
Figure 201 (Sheet 1 of 2)/ 21-31-00-990-807

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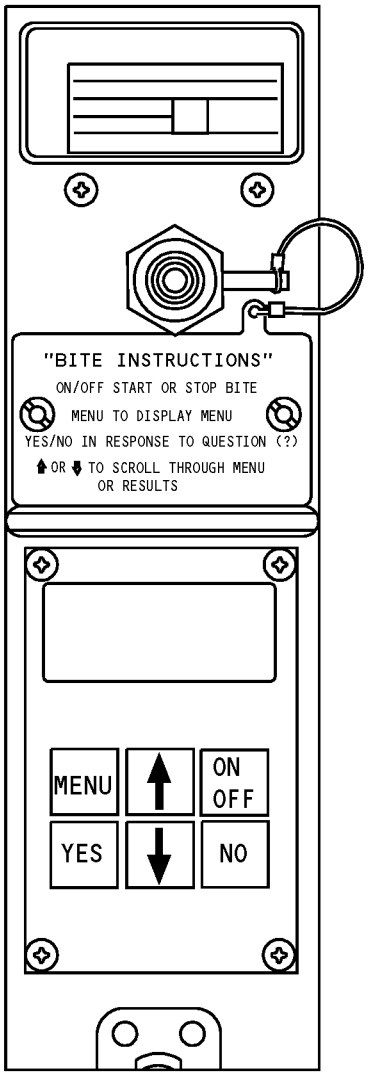

CABIN PRESSURE CONTROLLER

B

Cabin Pressure Control System BITE Test
Figure 201 (Sheet 2 of 2)/ 21-31-00-990-807

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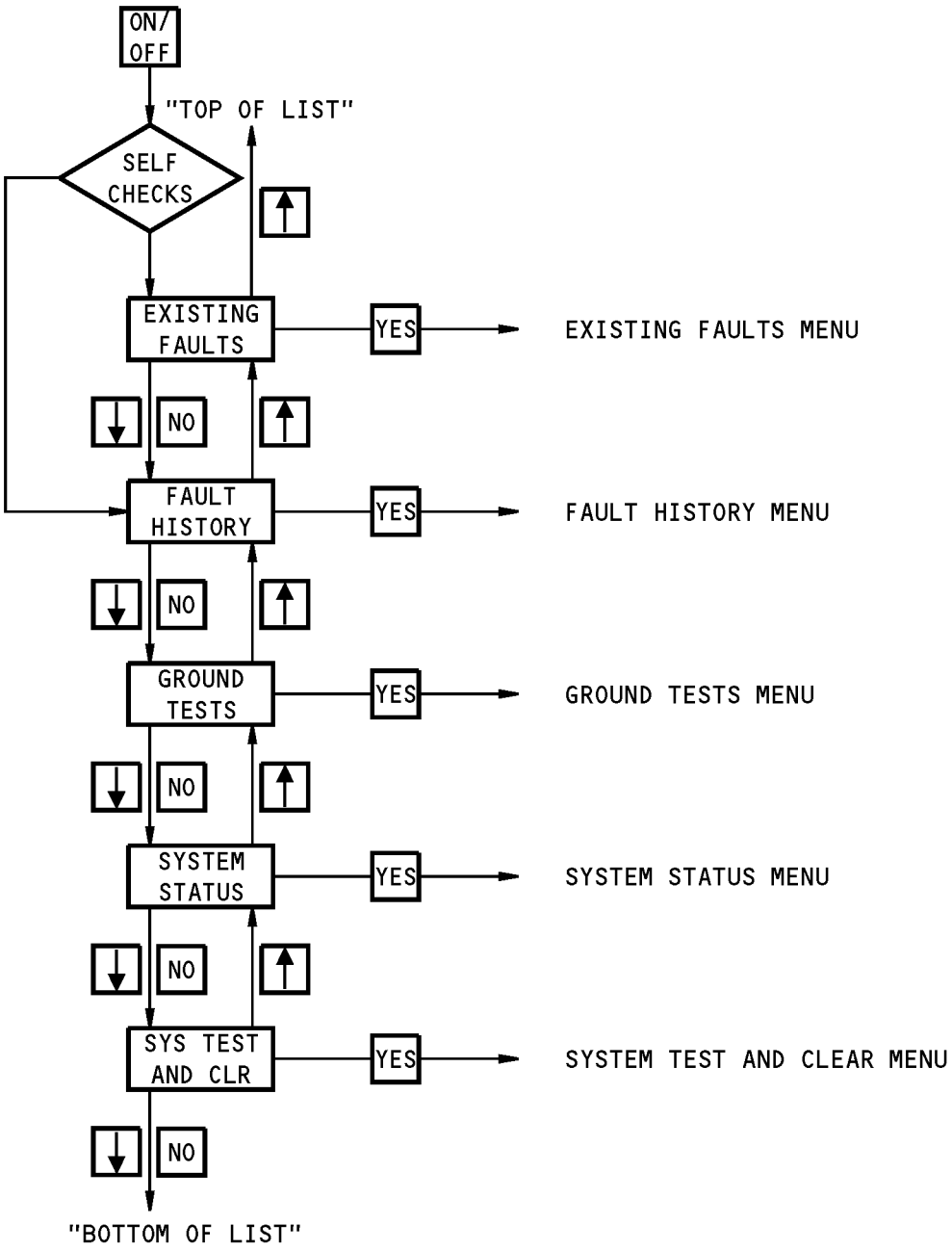

DCPC BITE MAIN MENUS

Cabin Pressure Control System BITE Procedure
Figure 202 (Sheet 1 of 8)/ 21-31-00-990-808

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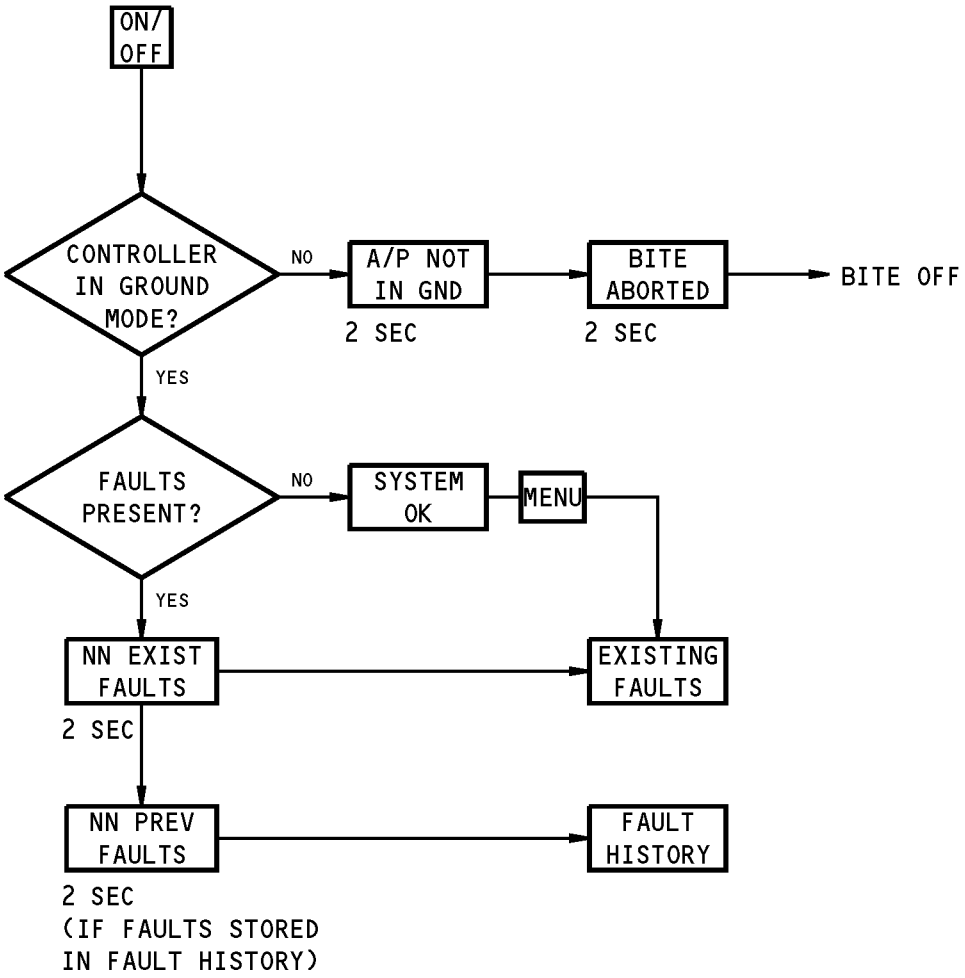

BITE ACCESS

Cabin Pressure Control System BITE Procedure
Figure 202 (Sheet 2 of 8)/ 21-31-00-990-808

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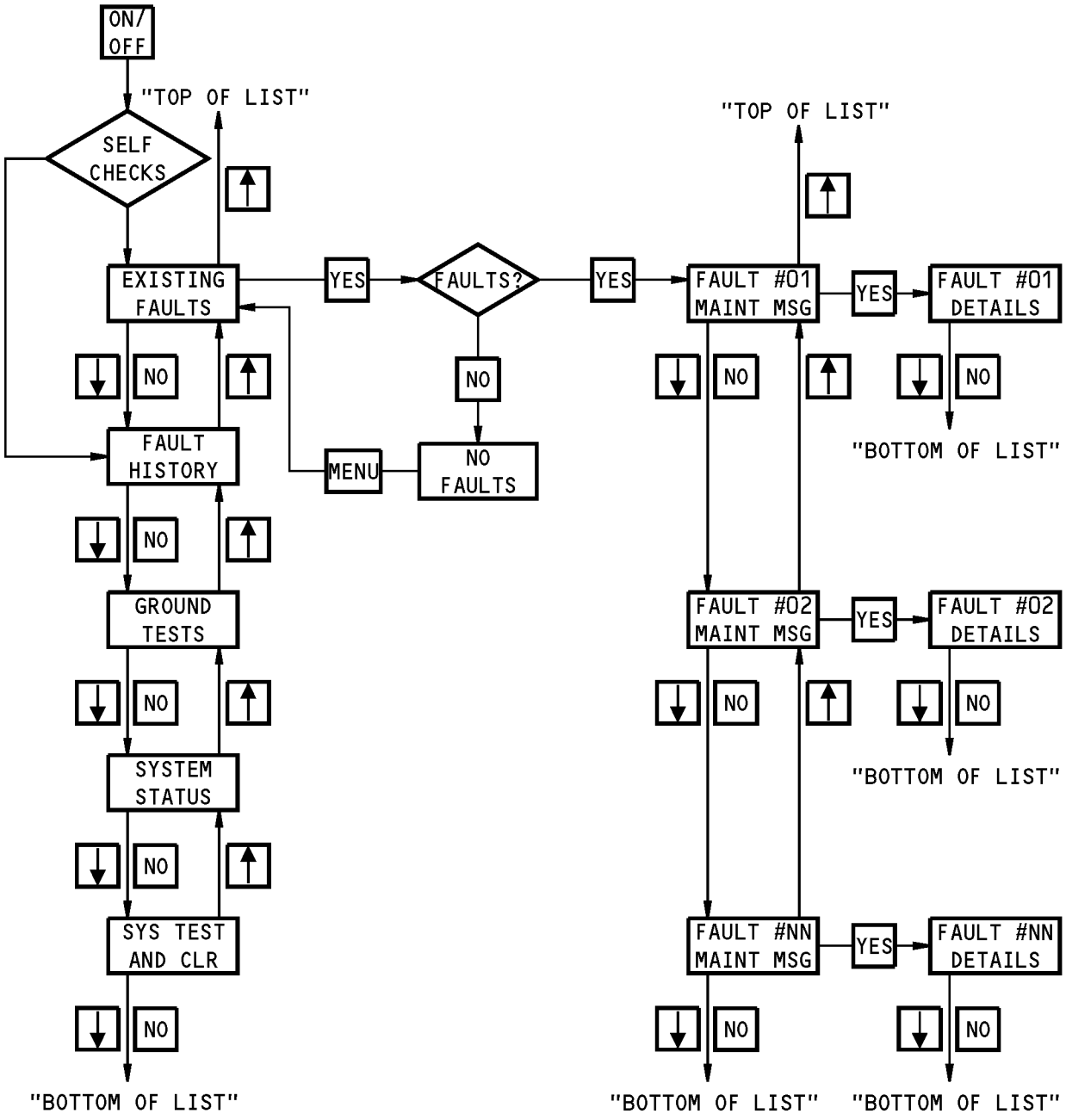

EXISTING FAULTS MENU

Cabin Pressure Control System BITE Procedure
Figure 202 (Sheet 3 of 8)/ 21-31-00-990-808

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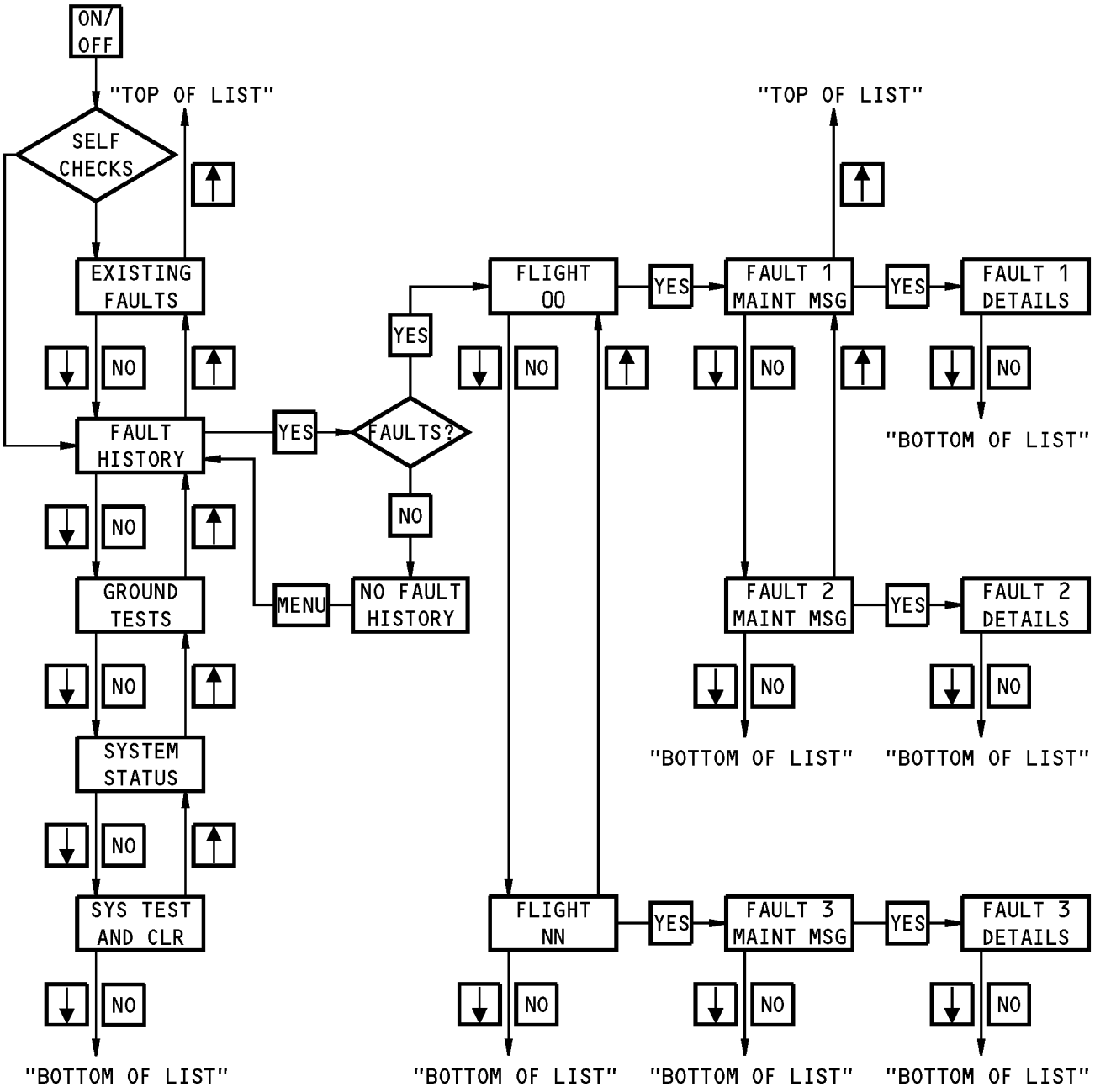

FAULT HISTORY MENU

Cabin Pressure Control System BITE Procedure
Figure 202 (Sheet 4 of 8)/ 21-31-00-990-808

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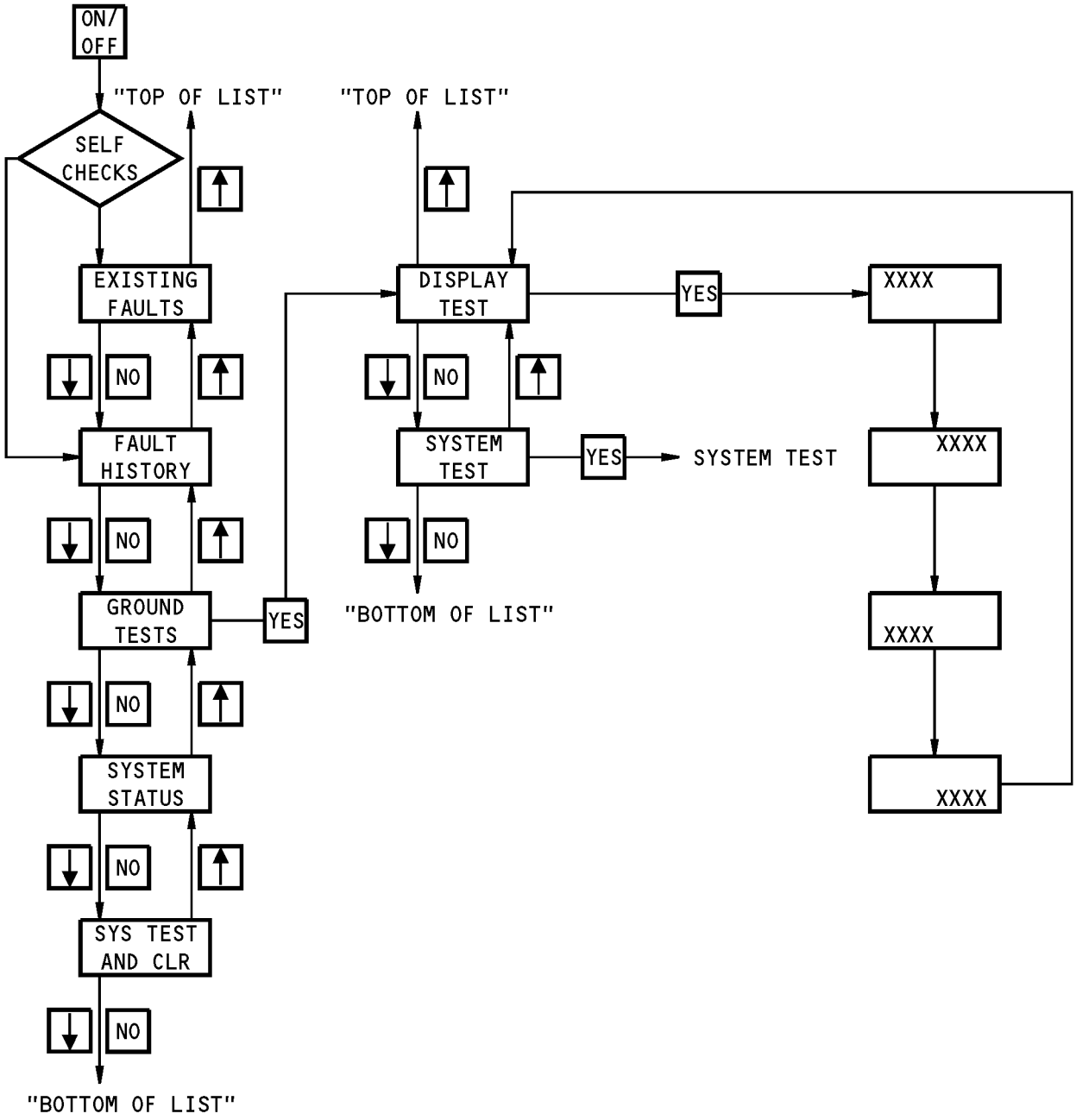

GROUND TESTS MENUS – DISPLAYS

Cabin Pressure Control System BITE Procedure
Figure 202 (Sheet 5 of 8)/ 21-31-00-990-808

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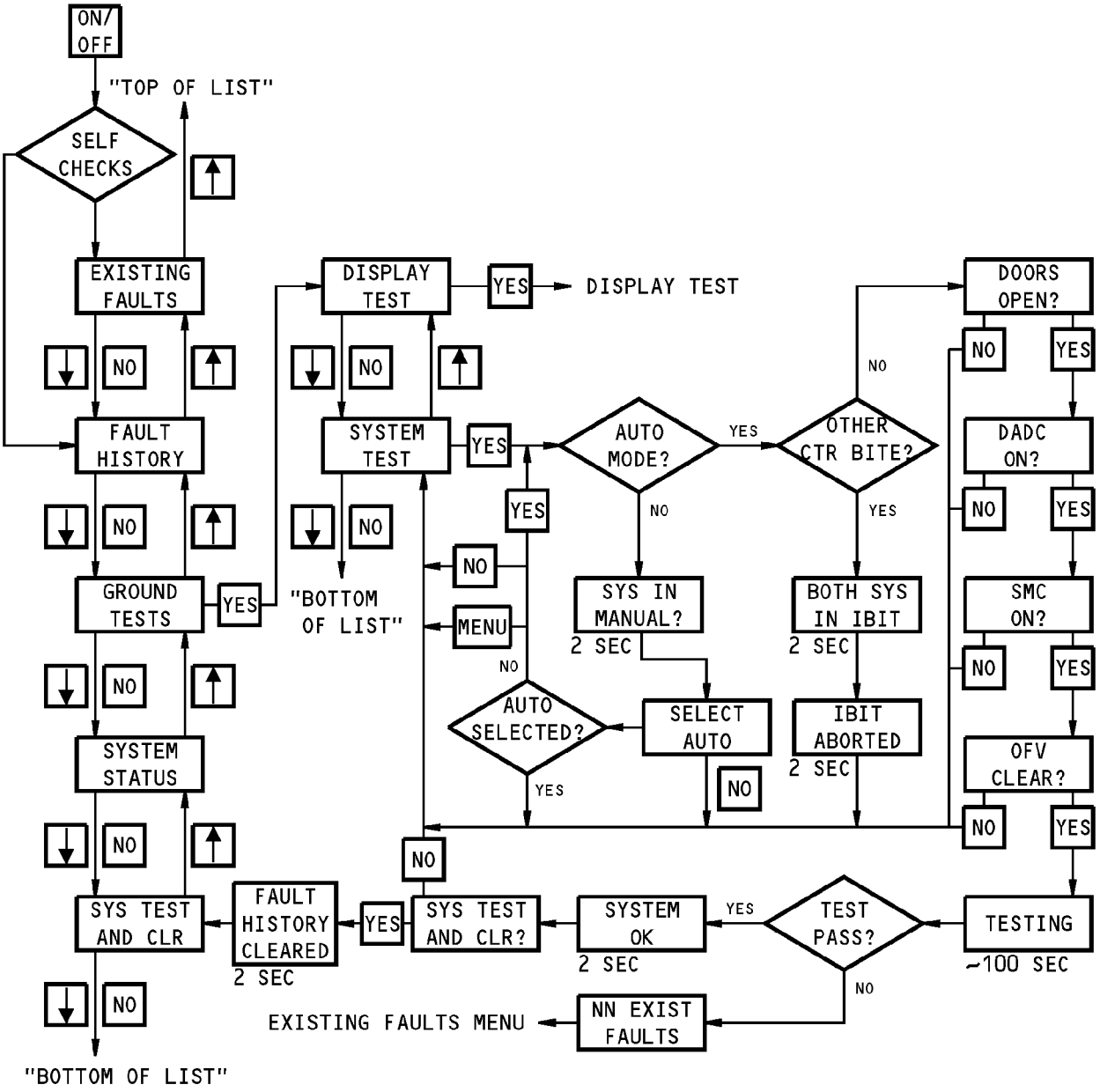

GROUND TESTS MENUS – SYSTEMS TEST

Cabin Pressure Control System BITE Procedure
Figure 202 (Sheet 6 of 8)/ 21-31-00-990-808

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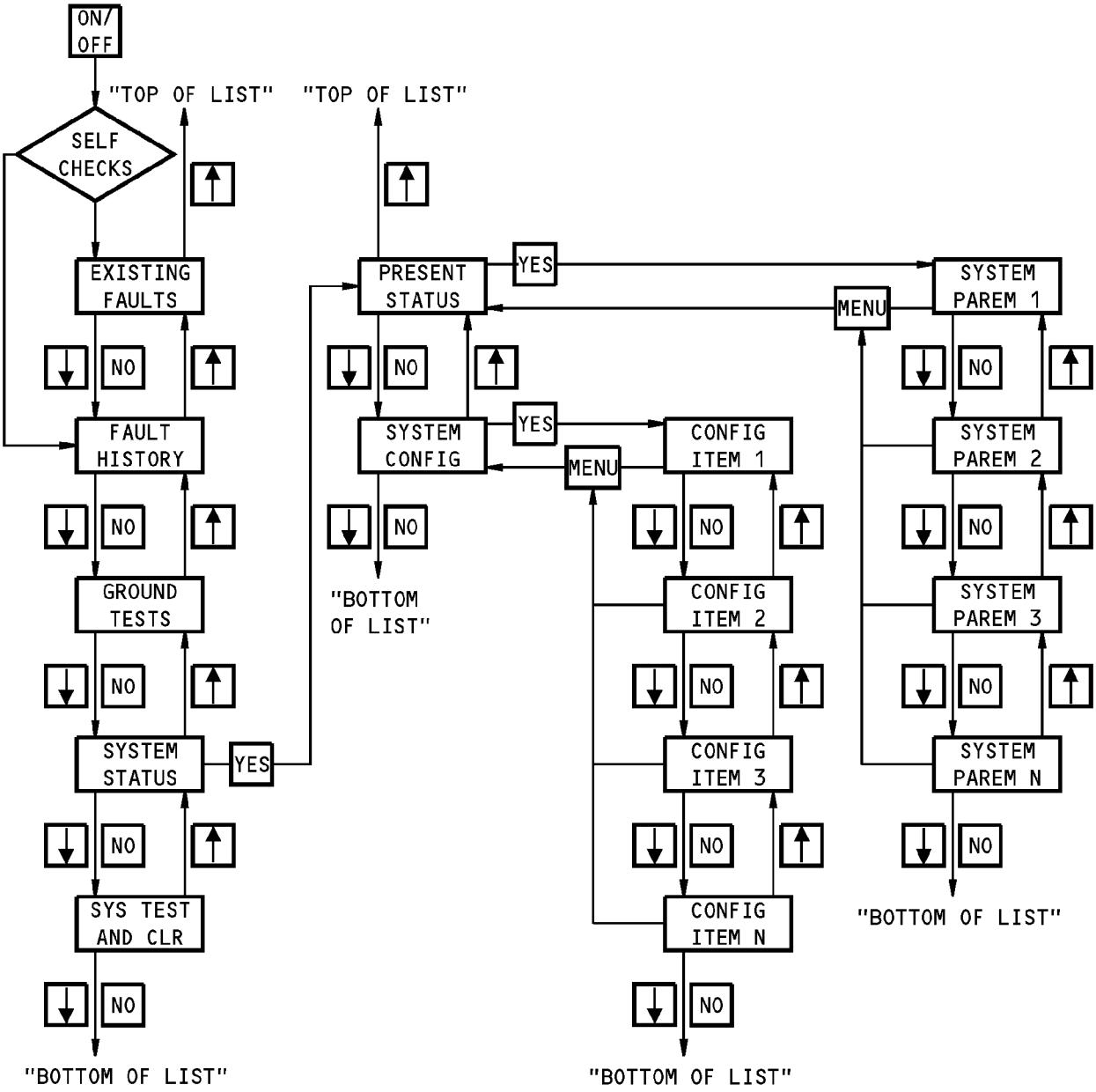

SYSTEM STATUS MENUS

Cabin Pressure Control System BITE Procedure
Figure 202 (Sheet 7 of 8)/ 21-31-00-990-808

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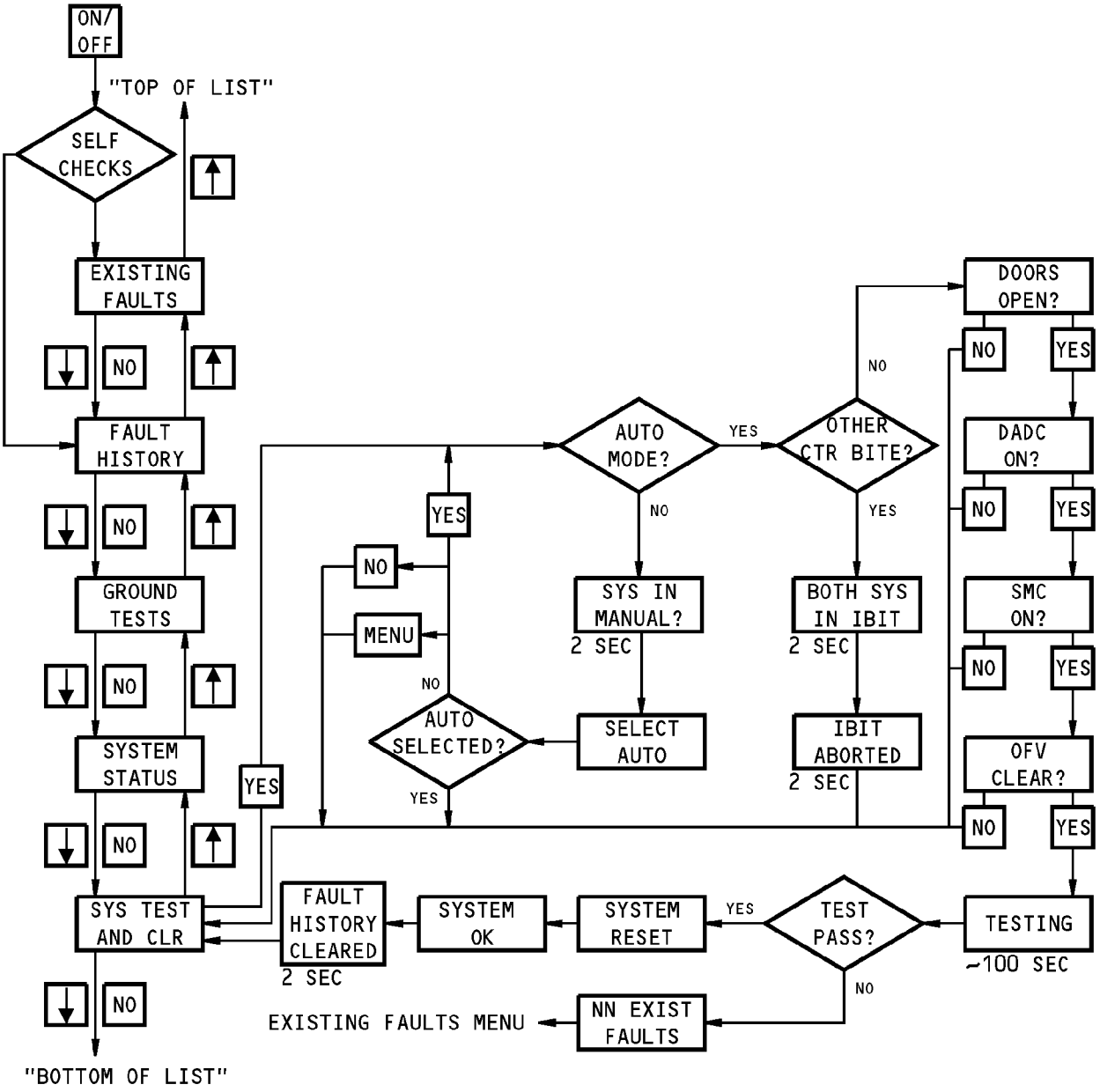

SYSTEM TEST & CLEAR MENUS

Cabin Pressure Control System BITE Procedure
Figure 202 (Sheet 8 of 8)/ 21-31-00-990-808

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802. Cabin Pressure Outflow Valve Fail - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) OFV LRU FAIL

B. Possible Causes

(1) Cabin pressure outflow valve, V48

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-22

(2) SSM 21-31-23

(3) WDM 21-31-22

(4) WDM 21-31-23

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the cabin pressure outflow valve.

These are the tasks:

Aft Outflow Valve Assembly Removal, AMM TASK 21-31-03-000-801,

Aft Outflow Valve Assembly Installation, AMM TASK 21-31-03-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

———————— END OF TASK ————————

803. Cabin Pressure Control Module Fail - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) SEL PNL LRU FAIL

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B. Possible Causes

(1) Cabin pressure control module, P5-6

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-11

(2) WDM 21-31-11

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the cabin pressure control module.
These are the tasks:
Cabin Pressure Control Module Removal, AMM TASK 21-31-02-000-801,
Cabin Pressure Control Module Installation, AMM TASK 21-31-02-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

———————— END OF TASK ————————

804. System Wiring Failure - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) SYSTEM WIRING

B. Possible Causes

(1) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1

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Row	Col	Number	Name
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-11

(2) SSM 21-31-22

(3) SSM 21-31-23

(4) SSM 21-31-24

(5) WDM 21-31-11

(6) WDM 21-31-22

(7) WDM 21-31-23

(8) WDM 21-31-24

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do these steps for the fault detail CPC-PNL WIRING on Cabin Pressure Controller 1:

(a) Do this check of the wiring between cabin pressure controller 1, M1653 in the electronic equipment bay and the cabin pressure control module, P5-6 in the control compartment:

1) Remove cabin pressure controller 1. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

2) Lower the overhead P5 panel.

3) Disconnect connector D10724 from the cabin pressure control module.

4) Do a wiring check between these pins of connector D10724 of the cabin pressure control module and connectors D10738B and D10738A of cabin pressure controller 1:

D10724	**D10738B**
pin 20	pin A7
pin 21	pin A8
pin 1	pin B3
pin 4	pin B7

D10724	**D10738A**
pin 9	pin A1
pin 22	pin A2
pin 26	pin D15

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

a) Repair the wiring.

b) Re-connect connector D10724 to the cabin pressure control module.

c) Lift (close) the overhead P5 panel.

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d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

g) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(2) Do these steps for the fault detail CPC-PNL WIRING on Cabin Pressure Controller 2:

(a) Do this check of the wiring between cabin pressure controller 2, M1654 in the electronic equipment bay and the cabin pressure control module, P5-6 in the control compartment:

1) Remove cabin pressure controller 2. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

2) Lower the overhead P5 panel.

3) Disconnect connector D10724 from the cabin pressure control module.

4) Do a wiring check between these pins of connector D10726 of the cabin pressure control module and the connector D10740B and D10740A of cabin pressure controller 2:

D10726	**D10740B**
pin 28	pin A7
pin 29	pin A8
pin 8	pin B3
pin 9	pin B7

D10726	**D10740A**
pin 16	pin A1
pin 17	pin A2
pin 19	pin D15

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

a) Repair the wiring.

b) Re-connect connector D10726 to the cabin pressure control module.

c) Lift (close) the overhead P5 panel.

d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

g) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(3) Do these steps for the fault detail CPC/OFV WIRING on Cabin Pressure Controller 1:

(a) Do this check of the wiring between cabin pressure controller 1, M1653 in the electronic equipment bay and the cabin pressure outflow valve, V48:

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1) Remove cabin pressure controller 1. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

3) Disconnect connector D10732 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

4) Do a wiring check between these pins of connector D10738A of cabin pressure controller 1 and connector D10732 of the cabin pressure outflow valve:

D10738A		D10732
pin A7	- - - - - - - - - - - - - - - - -	pin R
pin A8	- - - - - - - - - - - - - - - - -	pin P
pin A9	- - - - - - - - - - - - - - - - -	pin N
pin A10	- - - - - - - - - - - - - - - - -	pin M

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

a) Repair the wiring.

b) Re-connect connector D10732 to the cabin pressure outflow valve.

c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

g) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(4) Do these steps for the fault detail CPC/OFV WIRING on Cabin Pressure Controller 2:

(a) Do this check of the wiring between cabin pressure controller 2, M1654 in the electronic equipment bay and the cabin pressure outflow valve, V48:

1) Remove cabin pressure controller 2. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

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2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

3) Disconnect connector D10734 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

4) Do a wiring check between these pins of connector D10740A of cabin pressure controller 2 and connector D10734 of the cabin pressure outflow valve:

D10740A		D10734
pin A7	- - - - - - - - - - - - - - - - -	pin R
pin A8	- - - - - - - - - - - - - - - - -	pin P
pin A9	- - - - - - - - - - - - - - - - -	pin N
pin A10	- - - - - - - - - - - - - - - - -	pin M

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

a) Repair the wiring.

b) Re-connect connector D10734 to the cabin pressure outflow valve.

c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

g) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(5) Do these steps for the fault detail CPC-OFV on Cabin Pressure Controller 1:

(a) Do this check of the wiring between cabin pressure controller 1, M1653 in the electronic equipment bay and the cabin pressure outflow valve, V48:

1) Remove cabin pressure controller 1. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2

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Row	Col	Number	Name
F	6	C01269	PRESSURIZATION CONTROL MANUAL

3) Disconnect connector D10732 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

4) Do a wiring check between these pins of connector D10738B of cabin pressure controller 1 and connector D10732 of the cabin pressure outflow valve:

D10738B		D10732
pin B5	- - - - - - - - - - - - - - - - -	pin C

5) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-connect connector D10732 to the cabin pressure outflow valve.
   c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

   d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.
   e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.
   f) If the maintenance message does not show, then you corrected the fault.
   g) Close this access panel:

Number	Name/Location
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(6) Do these steps for the fault detail CPC-OFV on Cabin Pressure Controller 2:
   (a) Do this check of the wiring between cabin pressure controller 1, M1654 in the electronic equipment bay and the cabin pressure outflow valve, V48:
      1) Remove cabin pressure controller 2. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.
      2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

      3) Disconnect connector D10734 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

      4) Do a wiring check between these pins of connector D10740B of cabin pressure controller 2 and connector D10734 of the cabin pressure outflow valve:

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D10740B		D10734
pin B5	- - - - - - - - - - - - - - - - -	pin C

5) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-connect connector D10734 to the cabin pressure outflow valve.
   c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

   d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.
   e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.
   f) If the maintenance message does not show, then you corrected the fault.
   g) Close this access panel:

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(7) Do these steps for the fault detail CONTRLR PROG PIN on Cabin Pressure Controller 1 or 2:
   (a) Do this check of the wiring between cabin pressure controller 1, M1653, and cabin pressure controller 2, M1654, in the electronic equipment bay:
      1) Remove cabin pressure controller 1 and 2. To remove the controllers, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.
      2) Do a wiring check between these pins of connector D10738B and D10738A of cabin pressure controller 1 and connector D10740A and D10740B of cabin pressure controller 2:

D10738B		D10740A
pin B6	- - - - - - - - - - - - - - - - -	pin A15

D10738A		D10740B
pin A15	- - - - - - - - - - - - - - - - -	pin B6

      3) If you find a problem with the wiring, then do these steps:
         a) Repair the wiring.
         b) Re-install cabin pressure controller 1 and 2. To install the controllers, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.
         c) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.
         d) If the maintenance message does not show, then you corrected the fault.
         e) Close this access panel:

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(8) Do these steps for the fault detail CPC-CPC WIRING on Cabin Pressure Controller 1 or 2:

(a) Do this check of the wiring between cabin pressure controller 1, M1653, and cabin pressure controller 2, M1654, in the electronic equipment bay:

1) Remove cabin pressure controller 1 and 2. To remove the controllers, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

2) Do a wiring check between these pins of connector D10738B and D10738A of cabin pressure controller 1 and connector D10740A and D10740B of cabin pressure controller 2:

D10738B		**D10740A**
pin B2	- - - - - - - - - - - - - - - - -	pin D3

D10738A		**D10740B**
pin D3	- - - - - - - - - - - - - - - - -	pin B2

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

a) Repair the wiring.

b) Re-install cabin pressure controller 1 and 2. To install the controllers, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

c) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

e) Close this access panel:

Number	Name/Location
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(9) Do these steps for the fault detail CPC-OFV WIRING on Cabin Pressure Controller 1:

(a) Do this check of the wiring between cabin pressure controller 1, M1653 in the electronic equipment bay and the cabin pressure outflow valve, V48:

1) Remove cabin pressure controller 1. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

3) Disconnect connector D10732 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

4) Do a wiring check between these pins of connector D10738A of cabin pressure controller 1 and connector D10732 of the cabin pressure outflow valve:

D10738B		**D10732**
pin B5	- - - - - - - - - - - - - - - - -	pin C

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

a) Repair the wiring.

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b) Re-connect connector D10732 to the cabin pressure outflow valve.

c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

g) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(10) Do these steps for the fault detail CPC-OFV WIRING on Cabin Pressure Controller 2:

(a) Do this check of the wiring between cabin pressure controller 2, M1654 in the electronic equipment bay and the cabin pressure outflow valve, V48:

1) Remove cabin pressure controller 2. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

3) Disconnect connector D10734 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

4) Do a wiring check between these pins of connector D10740B of cabin pressure controller 2 and connector D10734 of the cabin pressure outflow valve:

D10740B		**D10734**
pin B5	- - - - - - - - - - - - - - - - -	pin C

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

a) Repair the wiring.

b) Re-connect connector D10734 to the cabin pressure outflow valve.

c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

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d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

g) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

END OF TASK

805. Cabin Pressure Outflow Valve or Wiring - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) OFV OR WIRING

B. Possible Causes

(1) Cabin pressure outflow valve, V48

(2) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-22

(2) SSM 21-31-23

(3) WDM 21-31-22

(4) WDM 21-31-23

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the cabin pressure outflow valve.
These are the tasks:

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Aft Outflow Valve Assembly Removal, AMM TASK 21-31-03-000-801,

Aft Outflow Valve Assembly Installation, AMM TASK 21-31-03-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do these steps if the maintenance message shows on Cabin Pressure Controller 1:

(a) Do this check of the wiring between cabin pressure controller 1, M1653 in the electronic equipment bay and the cabin pressure outflow valve, V48:

1) Remove cabin pressure controller 1. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

3) Disconnect connector D10732 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

4) Do a wiring check between these pins of connector D10738A of cabin pressure controller 1 and connector D10732 of the cabin pressure outflow valve:

D10738A		D10732
pin A7	- - - - - - - - - - - - - - - - -	pin R
pin A8	- - - - - - - - - - - - - - - - -	pin P
pin A9	- - - - - - - - - - - - - - - - -	pin N
pin A10	- - - - - - - - - - - - - - - - -	pin M

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

a) Repair the wiring.

b) Re-connect connector D10732 to the cabin pressure outflow valve.

c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

g) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

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(3) Do these steps if the maintenance message shows on Cabin Pressure Controller 2:

(a) Do this check of the wiring between cabin pressure controller 2, M1654 in the electronic equipment bay and the cabin pressure outflow valve, V48:

1) Remove cabin pressure controller 2. To remove the controller, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

3) Disconnect connector D10734 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

4) Do a wiring check between these pins of connector D10740A of cabin pressure controller 2 and connector D10734 of the cabin pressure outflow valve:

D10740A		D10734
pin A7	- - - - - - - - - - - - - - - - -	pin R
pin A8	- - - - - - - - - - - - - - - - -	pin P
pin A9	- - - - - - - - - - - - - - - - -	pin N
pin A10	- - - - - - - - - - - - - - - - -	pin M

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

a) Repair the wiring.

b) Re-connect connector D10734 to the cabin pressure outflow valve.

c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

d) Re-install the cabin pressure controller. To install the controller, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

e) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

g) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——————— END OF TASK ———————

806. Air Data Inertial Reference Unit 1 Input Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

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(a) DADC #1 INVALID

B. Possible Causes

(1) Air data inertial reference unit (ADIRU) 1, M1749

(2) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-24

(2) WDM 21-31-24

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do the BITE test on air data inertial reference unit (ADIRU) 1, M1749. To do the BITE test, do this task: ADIRS BITE Procedure, 34-21 TASK 801.

(a) If the BITE test shows any maintenance messages, then do the corrective action for the message.

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

(b) If the BITE test does not show any maintenance messages, then continue.

(2) Do this check of the wiring between the cabin pressure controllers and ADIRU 1:

(a) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Remove cabin pressure controllers 1 and 2. To remove the controllers, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

(c) Remove ADIRU 1. To remove ADIRU 1, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.

(d) Do a wiring check between these pins of connectors D10738B and D10740B of cabin pressure controllers 1 and 2 and connector D3687A of ADIRU 1:

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D10738B		D3687A
pin A3	- - - - - - - - - - - - - - - - - -	pin A9
pin A4	- - - - - - - - - - - - - - - - - -	pin B9

D10740B		D3687A
pin A3	- - - - - - - - - - - - - - - - - -	pin A9
pin A4	- - - - - - - - - - - - - - - - - -	pin B9

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

1) Repair the wiring.

2) Re-install ADIRU 1. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.

3) Re-install the cabin pressure controllers. To install the controllers, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

4) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

6) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——————— END OF TASK ———————

807. Air Data Inertial Reference Unit 2 Input Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) DADC #2 INVALID

B. Possible Causes

(1) Air data inertial reference unit (ADIRU) 2, M1752

(2) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-24

(2) WDM 21-31-24

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E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do the BITE test on air data inertial reference unit (ADIRU) 2, M1752. To do the BITE test, do this task: ADIRS BITE Procedure, 34-21 TASK 801.

(a) If the BITE test shows any maintenance messages, then do the corrective action for the message.

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

(b) If the BITE test does not show any maintenance messages, then continue.

(2) Do this check of the wiring between the cabin pressure controllers and ADIRU 2:

(a) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Remove cabin pressure controllers 1 and 2. To remove the controllers, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

(c) Remove ADIRU 2. To remove ADIRU 2, do this task: Air Data Inertial Reference Unit Removal, AMM TASK 34-21-01-000-801.

(d) Do a wiring check between these pins of connectors D10738B and D10740B of cabin pressure controllers 1 and 2 and connector D3693A of ADIRU 2:

D10738B		**D3693A**
pin A9	- - - - - - - - - - - - - - - - - -	pin A9
pin A10	- - - - - - - - - - - - - - - - - -	pin B9

D10740B		**D3693A**
pin A9	- - - - - - - - - - - - - - - - - -	pin A9
pin A10	- - - - - - - - - - - - - - - - - -	pin B9

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

1) Repair the wiring.

2) Re-install ADIRU 2. To install it, do this task: Air Data Inertial Reference Unit Installation, AMM TASK 34-21-01-400-801.

3) Re-install the cabin pressure controllers. To install the controllers, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

4) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

6) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

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—————— END OF TASK ——————

808. Stall Management Yaw Damper Computer 1 Input Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) SMC #1 INVALID

B. Possible Causes

(1) Stall management yaw damper computer (SMYD) 1, M1747

(2) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-24

(2) WDM 21-31-24

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do the BITE test for stall management yaw damper computer (SMYD) 1, M1747. To do the BITE test, do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.

(a) If the BITE test shows any maintenance messages, then do the corrective action for the message.

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

(b) If the BITE test does not show any maintenance messages, then continue.

(2) Do this check of the wiring between the cabin pressure controllers and SMYD 1:

(a) Remove cabin pressure controllers 1 and 2. To remove the controllers, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

(b) Remove SMYD 1. To remove SMYD 1, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.

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(c) Do a wiring check between these pins of connectors D10738B and D10740B of cabin pressure controllers 1 and 2 and connector D3683A of SMYD 1:

D10738B		D3683A
pin A5	- - - - - - - - - - - - - - - - - -	pin 95
pin A6	- - - - - - - - - - - - - - - - - -	pin 94

D10740B		D3683A
pin A5	- - - - - - - - - - - - - - - - - -	pin 95
pin A6	- - - - - - - - - - - - - - - - - -	pin 94

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

1) Repair the wiring.
2) Re-install SMYD 1. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
3) Re-install the cabin pressure controllers. To install the controllers, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.
4) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.
5) If the maintenance message does not show, then you corrected the fault.
6) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——————— END OF TASK ———————

809. Stall Management Yaw Damper Computer 2 Input Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:
(a) SMC #2 INVALID

B. Possible Causes

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

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-24
(2) WDM 21-31-24

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E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do the BITE test for stall management yaw damper computer (SMYD) 2, M1748. To do the BITE test, do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.

(a) If the BITE test shows any maintenance messages, then do the corrective action for the message.

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

(b) If the BITE test does not show any maintenance messages, then continue.

(2) Do this check of the wiring between the cabin pressure controllers and SMYD 2:

(a) Remove cabin pressure controllers 1 and 2. To remove the controllers, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

(b) Remove SMYD 2. To remove SMYD 2, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.

(c) Do a wiring check between these pins of connectors D10738B and D10740B of cabin pressure controllers 1 and 2 and connector D3685A of SMYD 2:

D10738B		**D3685A**
pin A13	- - - - - - - - - - - - - - - - -	pin 95
pin A14	- - - - - - - - - - - - - - - - -	pin 94

D10740B		**D3685A**
pin A13	- - - - - - - - - - - - - - - - -	pin 95
pin A14	- - - - - - - - - - - - - - - - -	pin 94

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

1) Repair the wiring.

2) Re-install SMYD 2. To install it, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.

3) Re-install the cabin pressure controllers. To install the controllers, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

4) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

6) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——————— END OF TASK ———————

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810. Engine Speed Input Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) N1/N2 LOWRU FAIL

B. Possible Causes

(1) Stall management yaw damper computer (SMYD), M1747 (SMYD-1) or M1748 (SMYD-2)

(2) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-24

(2) WDM 21-31-24

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do the BITE test on stall management yaw damper computers (SMYD) 1 and 2, M1747 and M1748. To do the BITE test, do this task: Stall Management Yaw Damper BITE Procedure, 27-32 TASK 801.

(a) If the BITE test shows any maintenance messages, then do the corrective action for the message.

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

(b) If the BITE test does not show any maintenance messages, then continue.

(2) Do this check of the wiring between the cabin pressure controllers and SMYD 1 and 2:

(a) Remove cabin pressure controllers 1 and 2. To remove the controllers, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

(b) Remove SMYD 1 and 2. To remove SMYD 1 and 2, do this task: Stall Management Yaw Damper (SMYD) Removal, AMM TASK 27-32-42-000-801.

(c) Do a wiring check between these pins of connectors D10738B and D10740B of cabin pressure controllers 1 and 2 and connector D3683A of SMYD 1:

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D10738B		D3683A
pin A5	- - - - - - - - - - - - - - - - - -	pin 95
pin A6	- - - - - - - - - - - - - - - - - -	pin 94

D10740B		D3683A
pin A5	- - - - - - - - - - - - - - - - - -	pin 95
pin A6	- - - - - - - - - - - - - - - - - -	pin 94

(d) Do a wiring check between these pins of connectors D10738B and D10740B of cabin pressure controllers 1 and 2 and connector D3685A of SMYD 2:

D10738B		D3685A
pin A13	- - - - - - - - - - - - - - - - - -	pin 95
pin A14	- - - - - - - - - - - - - - - - - -	pin 94

D10740B		D3685A
pin A13	- - - - - - - - - - - - - - - - - -	pin 95
pin A14	- - - - - - - - - - - - - - - - - -	pin 94

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

1) Repair the wiring.
2) Re-install SMYD 1 and 2. To install them, do this task: Stall Management Yaw Damper (SMYD) Installation, AMM TASK 27-32-42-400-801.
3) Re-install the cabin pressure controllers. To install the controllers, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.
4) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.
5) If the maintenance message does not show, then you corrected the fault.
6) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——————— END OF TASK ———————

811. Manual Mode Control of Aft Outflow Valve Does Not Operate - Fault Isolation

A. Description

(1) The aft outflow valve can not be moved towards open or closed using the manual toggle switch and with the cabin pressure mode select switch in MAN.

B. Possible Causes

(1) Cabin pressure outflow valve, V48

(2) Cabin pressure control module, P5-6

(3) 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, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-11)

(2) (WDM 21-31-11)

E. Initial Evaluation

(1) Put the cabin pressure mode select switch on the pressure control module to MAN.

WARNING: MAKE SURE PERSONNEL ARE CLEAR OF THE AFT OUTFLOW VALVE WHEN YOU MOVE IT. IF PERSONNEL ARE NOT CLEAR OF THE OUTFLOW VALVE WHEN IT MOVES INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Push and hold the manual control toggle switch to CLOSE.

NOTE: Look at the VALVE indicator on the pressure control module to see if the valve moves.

(3) If the outflow valve moves towards the closed position, then there was an intermittent fault.

(a) Make sure the mode selector switch on the cabin pressurization control panel, P5-6, is returned to the AUTO position.

(4) If the outflow valve does not move towards the closed position, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the cabin pressure outflow valve.

These are the tasks:

Aft Outflow Valve Assembly Removal, AMM TASK 21-31-03-000-801,

Aft Outflow Valve Assembly Installation, AMM TASK 21-31-03-400-801.

(a) Put the cabin pressure mode select switch on the pressure control module to MAN.

WARNING: MAKE SURE PERSONNEL ARE CLEAR OF THE AFT OUTFLOW VALVE WHEN YOU MOVE IT. IF PERSONNEL ARE NOT CLEAR OF THE OUTFLOW VALVE WHEN IT MOVES INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(b) Push and hold the manual control toggle switch to CLOSE.

NOTE: Look at the VALVE indicator on the pressure control module to see if the valve moves.

1) If the outflow valve moves towards the closed position, then you corrected the fault.

a) Make sure the mode selector switch on the cabin pressurization control panel, P5-6, is returned to the AUTO position.

2) If the outflow valve does not move towards the closed position, then continue.

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(2) Replace the cabin pressure control module.

These are the tasks:

Cabin Pressure Control Module Removal, AMM TASK 21-31-02-000-801,

Cabin Pressure Control Module Installation, AMM TASK 21-31-02-400-801.

(a) Put the cabin pressure mode select switch on the pressure control module to MAN.

WARNING: MAKE SURE PERSONNEL ARE CLEAR OF THE AFT OUTFLOW VALVE WHEN YOU MOVE IT. IF PERSONNEL ARE NOT CLEAR OF THE OUTFLOW VALVE WHEN IT MOVES INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(b) Push and hold the manual control toggle switch to CLOSE.

NOTE: Look at the VALVE indicator on the pressure control module to see if the valve moves.

1) If the outflow valve moves towards the closed position, then you corrected the fault.

a) Make sure the mode selector switch on the cabin pressurization control panel, P5-6, is returned to the AUTO position.

2) If the outflow valve does not move towards the closed position, then continue.

(3) Do this check of the wiring between the cabin pressure control module and the cabin pressure outflow valve:

(a) Lower the overhead P5 panel.

(b) Disconnect connector D10724 from the cabin pressure control module.

(c) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

(d) Disconnect connector D10730 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

(e) Do a wiring check between these pins of connector D10724 of the cabin pressure control module and connector D10730 of the cabin pressure outflow valve:

D10724		D10730
pin 25	- - - - - - - - - - - - - - - - - -	pin A
pin 24	- - - - - - - - - - - - - - - - - -	pin B

(f) Do a continuity check between pin D of connector D10730 of the cabin pressure outflow valve and structure ground.

(g) Repair any problems that you find with the wiring.

(h) Re-connect connector D10724 to the cabin pressure control module.

(i) Close (lift) the overhead P5 panel.

(j) Re-connect connector D10730 to the cabin pressure outflow valve.

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(k) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

(l) Put the cabin pressure mode select switch on the pressure control module to MAN.

WARNING: MAKE SURE PERSONNEL ARE CLEAR OF THE AFT OUTFLOW VALVE WHEN YOU MOVE IT. IF PERSONNEL ARE NOT CLEAR OF THE OUTFLOW VALVE WHEN IT MOVES INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(m) Push and hold the manual control toggle switch to CLOSE.

NOTE: Look at the VALVE indicator on the pressure control module to see if the valve moves.

1) If the outflow valve moves towards the closed position, then you corrected the fault.

a) Make sure the mode selector switch on the cabin pressurization control panel, P5-6, is returned to the AUTO position.

———————— END OF TASK ————————

812. MANUAL VALVE Indicator on the Cabin Pressure Control Module Does Not Operate - Fault Isolation

A. Description

(1) The aft outflow MANUAL VALVE indicator on the cabin pressure control module does not operate.

B. Possible Causes

(1) Cabin pressure control module, P5-6

(2) Cabin pressure outflow valve, V48

(3) Wiring problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-11)

(2) (WDM 21-31-11)

E. Initial Evaluation

(1) Put the cabin pressure mode select switch on the pressure control module to MAN.

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WARNING: MAKE SURE PERSONNEL ARE CLEAR OF THE AFT OUTFLOW VALVE WHEN YOU MOVE IT. IF PERSONNEL ARE NOT CLEAR OF THE OUTFLOW VALVE WHEN IT MOVES INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Push and hold the manual control toggle switch to CLOSE.

(3) If the outflow VALVE indicator on the cabin pressure control module moves towards the closed position, then there was an intermittent fault.

(a) Make sure the mode selector switch on the cabin pressurization control panel, P5-6, is returned to the AUTO position.

(4) If the outflow VALVE indicator on the cabin pressure control module moves does not move towards the closed position, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the cabin pressure control module.

These are the tasks:

Cabin Pressure Control Module Removal, AMM TASK 21-31-02-000-801,

Cabin Pressure Control Module Installation, AMM TASK 21-31-02-400-801.

(a) Put the cabin pressure mode select switch on the pressure control module to MAN.

WARNING: MAKE SURE PERSONNEL ARE CLEAR OF THE AFT OUTFLOW VALVE WHEN YOU MOVE IT. IF PERSONNEL ARE NOT CLEAR OF THE OUTFLOW VALVE WHEN IT MOVES INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(b) Push and hold the manual control toggle switch to CLOSE.

(c) If the outflow VALVE indicator on the cabin pressure control module moves towards the closed position, then you corrected the fault.

1) Make sure the mode selector switch on the cabin pressurization control panel, P5-6, is returned to the AUTO position.

(d) If the outflow VALVE indicator on the cabin pressure control module moves does not move towards the closed position, then continue.

(2) Replace the cabin pressure outflow valve.

These are the tasks:

Aft Outflow Valve Assembly Removal, AMM TASK 21-31-03-000-801,

Aft Outflow Valve Assembly Installation, AMM TASK 21-31-03-400-801.

(a) Put the cabin pressure mode select switch on the pressure control module to MAN.

WARNING: MAKE SURE PERSONNEL ARE CLEAR OF THE AFT OUTFLOW VALVE WHEN YOU MOVE IT. IF PERSONNEL ARE NOT CLEAR OF THE OUTFLOW VALVE WHEN IT MOVES INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(b) Push and hold the manual control toggle switch to CLOSE.

(c) If the outflow VALVE indicator on the cabin pressure control module moves towards the closed position, then you corrected the fault.

1) Make sure the mode selector switch on the cabin pressurization control panel, P5-6, is returned to the AUTO position.

(d) If the outflow VALVE indicator on the cabin pressure control module moves does not move towards the closed position, then continue.

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(3) Do this check of the wiring between the cabin pressure control module and the cabin pressure outflow valve:

(a) Lower the overhead P5 panel.

(b) Disconnect connector D10724 from the cabin pressure control module.

(c) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

(d) Disconnect connector D10728 from the cabin pressure outflow valve.

NOTE: Reach through the open valve gates to get access to the connector.

(e) Do a wiring check between these pins of connector D10724 of the cabin pressure control module and connector D10728 of the cabin pressure outflow valve:

D10724		D10728
pin 18	- - - - - - - - - - - - - - - - - -	pin F
pin 30	- - - - - - - - - - - - - - - - - -	pin H
pin 31	- - - - - - - - - - - - - - - - - -	pin G

(f) Repair any problems that you find with the wiring.

(g) Re-connect connector D10724 to the cabin pressure control module.

(h) Close (lift) the overhead P5 panel.

(i) Re-connect connector D10728 to the cabin pressure outflow valve.

(j) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL

(k) Put the cabin pressure mode select switch on the pressure control module to MAN.

WARNING: MAKE SURE PERSONNEL ARE CLEAR OF THE AFT OUTFLOW VALVE WHEN YOU MOVE IT. IF PERSONNEL ARE NOT CLEAR OF THE OUTFLOW VALVE WHEN IT MOVES INJURY TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(l) Push and hold the manual control toggle switch to CLOSE.

1) If the outflow VALVE indicator on the cabin pressure control module moves towards the closed position, then you corrected the fault.

a) Make sure the mode selector switch on the cabin pressurization control panel, P5-6, is returned to the AUTO position.

——————— END OF TASK ———————

813. FLT ALT Display on the Cabin Pressure Control Module is Blank - Fault Isolation

A. Description

(1) The FLT ALT display on the cabin pressure control module is blank.

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B. Possible Causes

(1) Cabin pressure control module, P5-6

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-25)

(2) (WDM 21-31-25)

E. Initial Evaluation

(1) Look at the FLT ALT display on the cabin pressure control module.

(2) If the display is blank, then do the Fault Isolation Procedure below.

(3) If the display is not blank, then there was an intermittent problem.

F. Fault Isolation Procedure

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

(a) If there are any maintenance messages, then do the corrective action for the maintenance message shown.

(b) If there are no maintenance messages then continue.

(2) Replace the cabin pressure control module.

These are the tasks:

Cabin Pressure Control Module Removal, AMM TASK 21-31-02-000-801,

Cabin Pressure Control Module Installation, AMM TASK 21-31-02-400-801.

(a) Look at the FLT ALT display on the cabin pressure control module.

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

——————— END OF TASK ———————

814. LAND ALT Display on the Cabin Pressure Control Module is Blank - Fault Isolation

A. Description

(1) The LAND ALT display on the cabin pressure control module is blank.

B. Possible Causes

(1) Cabin pressure control module, P5-6

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-25)

(2) (WDM 21-31-25)

E. Initial Evaluation

(1) Look at the LAND ALT display on the cabin pressure control module.

(2) If the display is blank, then do the Fault Isolation Procedure below.

(3) If the display is not blank, then there was an intermittent problem.

F. Fault Isolation Procedure

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

(a) If there are any maintenance messages, then do the corrective action for the maintenance message shown.

(b) If there are no maintenance messages then continue.

(2) Replace the cabin pressure control module.

These are the tasks:

Cabin Pressure Control Module Removal, AMM TASK 21-31-02-000-801,

Cabin Pressure Control Module Installation, AMM TASK 21-31-02-400-801.

(a) Look at the LAND ALT display on the cabin pressure control module.

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

———————— END OF TASK ————————

815. Aircraft Rate Too High - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ACFT RATE HI

B. Possible Causes

(1) The aircraft rate of climb or descent was too high.

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-22)

(2) (WDM 21-31-22)

(3) Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801

(4) Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

(a) If there are no maintenance messages then there was an intermittent fault.

(b) If there are any maintenance messages, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) The problem was due to the aircraft making a climb or descent at too high a rate and is not a fault of the cabin pressure control system.

(a) Do these steps to clear the fault:

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

NOTE: Do the System Test and Clear in the BITE test.

(2) If the Digital Cabin Pressure Controller shows a Fault Code 30 in the history when performing the BITE check or if pilots report cabin altitude is above pressurization schedule during cruise, cabin altitude climbs during cruise, or cabin altitude climbs during initial descent, do the following.

(a) Verify the performance of the engine bleed system (Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801).

(b) Check the air conditioning pack air flow and the fuselage leakage rate (Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801).

(c) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

END OF TASK

816. Hi Cabin Differential Pressure - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) CAB DIFF PRESS HI

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B. Possible Causes

(1) Cabin pressure outflow valve, V48

(2) Cabin pressure controller, M1653 (No. 1) or M1654 (No. 2)

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-22)

(2) (SSM 21-31-23)

(3) (WDM 21-31-22)

(4) (WDM 21-31-23)

(5) Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801

(6) Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

(2) If there are no maintenance messages, then there was an intermittent fault.

(3) If the Digital Cabin Pressure Controller shows a Fault Code 30 in the history when performing the BITE check or if pilots report cabin altitude is above pressurization schedule during cruise, cabin altitude climbs during cruise, or cabin altitude climbs during initial descent, do the following.

(a) Verify the performance of the engine bleed system (Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801).

(b) Check the air conditioning pack air flow and the fuselage leakage rate (Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801).

(c) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

(4) If the maintenance message shows, and there is an additional maintenance message, then do the Fault Isolation Procedure for the other maintenance message.

(5) If the maintenance message shows, and it is the only maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the cabin pressure outflow valve.

These are the tasks:

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Aft Outflow Valve Assembly Removal, AMM TASK 21-31-03-000-801,

Aft Outflow Valve Assembly Installation, AMM TASK 21-31-03-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Replace the cabin pressure controller that has the maintenance message.

These are the tasks:

Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801,

Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

——————— END OF TASK ———————

817. Hi Cabin Altitude - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) HI CAB ALT

B. Possible Causes

(1) Cabin pressure outflow valve, V48

(2) Cabin pressure controller, M1653 (No. 1) or M1654 (No. 2)

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-22)

(2) (SSM 21-31-23)

(3) (WDM 21-31-22)

(4) (WDM 21-31-23)

(5) Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801

(6) Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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(2) If there are no maintenance messages, then there was an intermittent fault.

(3) If the Digital Cabin Pressure Controller shows a Fault Code 30 in the history when performing the BITE check or if pilots report cabin altitude is above pressurization schedule during cruise, cabin altitude climbs during cruise, or cabin altitude climbs during initial descent, do the following.

(a) Verify the performance of the engine bleed system (Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801).

(b) Check the air conditioning pack air flow and the fuselage leakage rate (Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801).

(c) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

(4) If the maintenance message shows, and there is an additional maintenance message, then do the Fault Isolation Procedure for the other maintenance message.

(5) If the maintenance message shows, and it is the only maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the cabin pressure outflow valve.

These are the tasks:

Aft Outflow Valve Assembly Removal, AMM TASK 21-31-03-000-801,

Aft Outflow Valve Assembly Installation, AMM TASK 21-31-03-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Replace the cabin pressure controller that has the maintenance message.

These are the tasks:

Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801,

Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

—————— END OF TASK ——————

818. Hi Cabin Altitude Rate Change - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) CAB RATE HI

B. Possible Causes

(1) Cabin pressure outflow valve, V48

(2) Cabin pressure controller, M1653 (No. 1) or M1654 (No. 2)

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-22)

(2) (SSM 21-31-23)

(3) (WDM 21-31-22)

(4) (WDM 21-31-23)

(5) Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801

(6) Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

(2) If there are no maintenance messages, then there was an intermittent fault.

(3) If the Digital Cabin Pressure Controller shows a Fault Code 30 in the history when performing the BITE check or if pilots report cabin altitude is above pressurization schedule during cruise, cabin altitude climbs during cruise, or cabin altitude climbs during initial descent, do the following.

(a) Verify the performance of the engine bleed system (Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801).

(b) Check the air conditioning pack air flow and the fuselage leakage rate (Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801).

(c) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

(4) If the maintenance message shows, and there is an additional maintenance message, then do the Fault Isolation Procedure for the other maintenance message.

(5) If the maintenance message shows, and it is the only maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the cabin pressure outflow valve.

These are the tasks:

Aft Outflow Valve Assembly Removal, AMM TASK 21-31-03-000-801,

Aft Outflow Valve Assembly Installation, AMM TASK 21-31-03-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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2) If the maintenance message shows, then continue.

(2) Replace the cabin pressure controller that has the maintenance message.
These are the tasks:
Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801,
Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

——————— END OF TASK ———————

819. Drive Enable Signal Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) DRV ENBL ERROR

B. Possible Causes

(1) Cabin pressure controller, M1653 (No. 1) or M1654 (No. 2)

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-22)

(2) (WDM 21-31-22)

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

NOTE: Do the BITE test on both cabin pressure controllers.

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

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

F. Fault Isolation Procedure

(1) Replace the cabin pressure controller in the aft EE bay the shows a controller fault.
These are the tasks:
Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801,
Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

NOTE: Do the BITE test on both controllers.

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

—————— END OF TASK ——————

820. Cabin Pressure Outflow Valve Altitude Switch Activity - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) CAB PRESS SW ACTIV

B. Possible Causes

(1) Cabin pressure outflow valve, V48

(2) Cabin pressure controller, M1653 (No. 1) or M1654 (No. 2)

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-22)

(2) (SSM 21-31-23)

(3) (WDM 21-31-22)

(4) (WDM 21-31-23)

(5) Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801

(6) Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

(2) If there are no maintenance messages, then there was an intermittent fault.

(3) If the Digital Cabin Pressure Controller shows a Fault Code 30 in the history when performing the BITE check or if pilots report cabin altitude is above pressurization schedule during cruise, cabin altitude climbs during cruise, or cabin altitude climbs during initial descent, do the following.

(a) Verify the performance of the engine bleed system (Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801).

(b) Check the air conditioning pack air flow and the fuselage leakage rate (Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801).

(c) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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(4) If the maintenance message shows, and there is an additional maintenance message, then do the Fault Isolation Procedure for the other maintenance message.

(5) If the maintenance message shows, and it is the only maintenance message, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Replace the cabin pressure outflow valve.

These are the tasks:

Aft Outflow Valve Assembly Removal, AMM TASK 21-31-03-000-801,

Aft Outflow Valve Assembly Installation, AMM TASK 21-31-03-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Replace the cabin pressure controller that has the maintenance message.

These are the tasks:

Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801,

Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

——————— END OF TASK ———————

821. Auto Manual Input to Controller Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) AUTO/MAN ERROR

B. Possible Causes

(1) Cabin pressure control module, P5-6

(2) Wiring problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-11)

(2) (WDM 21-31-11)

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E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the cabin pressure control module.

These are the tasks:

Cabin Pressure Control Module Removal, AMM TASK 21-31-02-000-801,

Cabin Pressure Control Module Installation, AMM TASK 21-31-02-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between cabin pressure controllers 1 and 2, M1653 and M1654, in the electronic equipment bay and the cabin pressure control module, P5-6 in the control compartment:

(a) Remove cabin pressure controller 1 and 2. To remove the controllers, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

(b) Lower the overhead P5 panel.

(c) Disconnect connector D10724 and D10726 from the cabin pressure control module.

(d) Do a wiring check between these pins of connector D10724 of the cabin pressure control module and connectors D10738B and D10740B of cabin pressure controllers 1 and 2:

D10724		**D10738B**
pin 1	- - - - - - - - - - - - - - - - - - -	pin B3
D10726		**D10740B**
pin 8	- - - - - - - - - - - - - - - - - - -	pin B3

(e) Repair the problem that you find.

(f) Re-connect connector D10724 and D10726 to the cabin pressure control module.

(g) Lift (close) the overhead P5 panel.

(h) Re-install cabin pressure controllers 1 and 2. To install the controllers, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

(i) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

2) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

END OF TASK

822. Wheels On Ground Disagreement Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

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(a) LDG GEAR DISAGREE

B. Possible Causes

(1) Proximity switch electronics unit (PSEU), M2061

(2) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-31-24)

(2) (WDM 21-31-24)

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do the BITE test for the proximity switch electronics unit (PSEU), M2061. To do the BITE test, do this task: Proximity Switch Electronics Unit (PSEU) BITE Procedure, 32-09 TASK 801.

(a) If the PSEU BITE test shows any maintenance messages, then do the corrective action for the message.

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

(b) If the PSEU BITE test does not show any maintenance messages, then continue.

(2) Do this check of the wiring between cabin pressure controllers 1 and 2 and the PSEU:

(a) Remove cabin pressure controllers 1 and 2. To remove the controllers, do this task: Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801.

(b) Open this access panel:

Number	Name/Location
112A	Forward Access Door

(c) Do a wiring check between these pins of connectors D10738B and D10740B of cabin pressure controllers 1 and 2 and connectors D11138 and D10988 of the PSEU:

D10738B		**D11138**
pin B1	- - - - - - - - - - - - - - - - - -	pin 12

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D10738B		**D10988**
pin B4	- - - - - - - - - - - - - - - - - -	pin 12
D10740B		**D11138**
pin B1	- - - - - - - - - - - - - - - - - -	pin 12
D10740B		**D10988**
pin B4	- - - - - - - - - - - - - - - - - -	pin 12

(d) Repair the problem with the wiring that you find.

(e) Close this access panel:

Number	Name/Location
112A	Forward Access Door

(f) Re-install the cabin pressure controllers. To install the controllers, do this task: Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

(g) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

———————— END OF TASK ————————

823. Low Pack Air Inflow Or Airplane Cabin Leak Problem - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) LO INFL/HI LEAKG

B. Possible Causes

(1) Low pneumatic pressure

HAP 101-999

(2) Dirty water separator coalescer bag.

HAP ALL

(3) Pack flow control and shutoff valve, V18 (L) or V19 (R)

(4) Low limit temperature (35°F) sensor

(5) Air Cycle Machine

(6) Airplane cabin leak

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG

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Row	Col	Number	Name
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) (SSM 21-51-11)

(2) (WDM 21-51-11)

(3) Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801

(4) Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

(3) If the Digital Cabin Pressure Controller shows a Fault Code 30 in the history when performing the BITE check or if pilots report cabin altitude is above pressurization schedule during cruise, cabin altitude climbs during cruise, or cabin altitude climbs during initial descent, do the following.

(a) Verify the performance of the engine bleed system (Engine Bleed Air System Health Check, AMM TASK 36-11-00-700-801).

(b) Check the air conditioning pack air flow and the fuselage leakage rate (Airplane Dispatch with Single Pack Operation - Confidence Check, AMM TASK 21-00-05-780-801).

(c) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

F. Fault Isolation Procedure

(1) Check to see if there was a report of low duct pressure.

(a) If there was a report of low duct pressure, do this task: Duct Pressure Low, the Engine is the Bleed Source - Fault Isolation, 36-10 TASK 804.

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

NOTE: Do this step to clear the fault.

(b) If there was not a report of low duct pressure, then continue.

HAP 101-999

(2) Do an inspection of the left pack and right pack coalescer bags. To check the coalescer bags, do this task: Coalescer Bag Pressure Indicator Inspection, AMM TASK 21-51-05-400-803.

(a) If the indicator disk on the pressure indicator assembly is in the red area, clean the coalescer bag. To clean the bag, do this task: Coalescer Bag Cleaning, AMM TASK 21-51-05-100-801.

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

NOTE: Do this step to clear the fault.

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(b) If the indicator disk on the pressure indicator assembly is in the black area, then continue.

(3) If a air pack - air flow and temperature diagnostic, SPL-6191, is available, do the check of the Pack Flow Control and Pack Cooling System:l

(a) To do the check, do this task: AMM TASK 21-51-00-943-801.

(b) If the temperature of the pack outlet air is 34F or lower, then do this task: Pack Outlet Temperature Too Hot or Too Cold - Fault Isolation, 21-52 TASK 856.

(c) If the pack air flow was too low, then do the applicable procedure of this task: Pack Air Flow Is Too Low or Too High - Fault Isolation, 21-52 TASK 857.

HAP ALL

(4) Do a check of the air conditioning packs for proper flow. To check the packs, do this task: Pack Flow Control Valve - Operational Test, AMM TASK 21-51-00-700-802.

(a) If a pack flow control and shutoff valve does not operate correctly, replace the valve.

These are the tasks:

Flow Control and Shutoff Valve Removal, AMM TASK 21-51-01-000-801-001 or Left Flow Control and Shutoff Valve Removal, AMM TASK 21-51-01-000-802-002 or Right Flow Control and Shutoff Valve Removal, AMM TASK 21-51-01-000-805-002,

Flow Control and Shutoff Valve Installation, AMM TASK 21-51-01-400-801-001 or Left Flow Control and Shutoff Valve Installation, AMM TASK 21-51-01-400-805-002 or Right Flow Control and Shutoff Valve Installation, AMM TASK 21-51-01-400-802-002.

(b) Make sure that air flows from the ram air exhaust outlets when the packs are in operation.

1) If air does not flow from the ram air exhaust outlet for a pack, then replace the air cycle machine.

a) These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-801-001 or Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001 or Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

2) If air flows from the ram air exhaust outlet, then continue.

3) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

NOTE: Do this step to clear the fault.

(c) If the pack flow control and shutoff valves operate correctly, then continue.

(5) Do a check of the airplane cabin for leaks. To check the airplane cabin, do this task: Cabin Pressure Leak Test, AMM TASK 05-51-91-790-801.

(a) Repair the source of the leak that you find.

1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

NOTE: Do this step to clear the fault.

——————— END OF TASK ———————

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824. Cabin Pressure Controller Fail - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) CONTRLR LRU FAIL

B. Possible Causes

(1) Cabin pressure controller, M1653 (No. 1) or M1654 (No. 2)

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
F	1	C01273	PRESSURIZATION CONTROL LCD LTG
F	3	C01270	PRESSURIZATION CONTROL AUTO 1
F	5	C01271	PRESSURIZATION CONTROL AUTO 2
F	6	C01269	PRESSURIZATION CONTROL MANUAL
F	7	C01272	PRESSURIZATION CONTROL IND

D. Related Data

(1) SSM 21-31-24

(2) WDM 21-31-24

E. Initial Evaluation

(1) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the cabin pressure controller in the aft EE bay.

These are the tasks:

Cabin Pressure Controller (CPC) Removal, AMM TASK 21-31-01-000-801,

Cabin Pressure Controller (CPC) Installation, AMM TASK 21-31-01-400-801.

(a) Do this task: Digital Cabin Pressure Controller (DCPC) BITE Procedure, 21-31 TASK 801.

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

——————— END OF TASK ———————

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801. Cabin Altitude Warning System Does Not Operate - Fault Isolation

A. General

HAP 044-047, 054, 102-106

(1) The CABIN ALTITUDE indicator lights on the captain's instrument panel P1-3 and the first officer's instrument panel P3-1 have been placarded inoperative. However, if the LIGHTS switch on the captain's instrument panel P1-3 is set to the TEST position the CABIN ALTITUDE indicator lights will come on.

HAP ALL

B. Description

(1) The aural warning does not operate as expected when the cabin altitude is more than 10,000 feet (3048 meters).

HAP 048-053, 107-999

(2) The CABIN ALTITUDE indicators on the captains's instrument panel P1-3 and the first officers's instrument panel P3-1 do not come on when the cabin altitude is more than 10,000 feet (3048 meters).

HAP ALL

(3) SDS 21–33–00

C. Possible Causes

(1) Cabin altitude warning switch, S128

HAP 048-053, 107-999

(2) Cabin altitude warning switch, S1153

HAP ALL

(3) Warning cutout relay, K1, on the P5-16 panel

(4) Altitude horn cutout switch, S1, on the P5-16 panel

HAP 048-053, 107-999

(5) CABIN ALTITUDE indicator(s) located on panels P1-3 and P3-1

HAP ALL

(6) Wiring.

D. Circuit Breakers

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

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	17	C00129	LANDING GEAR LATCH & PRESS WARN

E. Related Data

(1) (SSM 21-33-11)

(2) (WDM 21-33-11)

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F. Initial Evaluation

(1) Do an operational test of the cabin altitude warning system. To do this, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.

(a) If the operational test is not satisfactory, then do the Fault Isolation Procedure below.

(b) If the operational test is satisfactory, then there was an intermittent fault.

G. Aural Warning Fault Isolation Procedure

(1) Replace the cabin altitude warning switch, S128.

These are the tasks:

Cabin Altitude Warning Switch Removal, AMM TASK 21-33-04-000-801,

Cabin Altitude Warning Switch Installation, AMM TASK 21-33-04-400-801.

(a) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.

(b) If the operational test is satisfactory, then you corrected the fault.

(c) If the operational test is not satisfactory, then continue.

HAP 048-053, 107-999

(2) Replace the cabin altitude warning switch, S1153.

These are the tasks:

Cabin Altitude Warning Switch Removal, AMM TASK 21-33-04-000-801,

Cabin Altitude Warning Switch Installation, AMM TASK 21-33-04-400-801.

(a) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.

(b) If the operational test is satisfactory, then you corrected the fault.

(c) If the operational test is not satisfactory, then continue.

HAP ALL

(3) Replace the warning cutout relay, K1.

(a) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.

(b) If the operational test is satisfactory, then you corrected the fault.

(c) If the operational test is not satisfactory, then continue.

(4) Replace the altitude horn cutout switch, S1.

(a) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801, .

(b) If the operational test is satisfactory, then you corrected the fault.

(c) If the operational test is not satisfactory, then continue.

(5) Do these checks of the wiring for a fault with the aural warning:

(a) Lower the P5 overhead panel to get access to the electrical connector on the back of the P5-16 panel.

(b) Disconnect the electrical connector, D654, from the P5-16, cabin altitude and rate of climb module.

(c) Do a check for 28 VDC at connector D654 from pin 8 to structure ground.

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(d) If there is not 28 VDC from pin 8 to structure ground on connector D654, then do these steps:

1) Repair the wiring from pin 8 on connector D654 to circuit breaker C129, LANDING GEAR LATCH & PRESS WARN.
2) Re-connect electrical connector D654 on the P5-16 panel.
3) Close the P5 overhead panel.
4) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.
5) If the operational test is satisfactory, then you corrected the fault.

(e) If there is 28 VDC from pin 8 on connector D654 to structure ground, then continue.

(f) Do a check for 28 VDC at connector D654 from pin 6 to structure ground.

(g) If there is not 28 VDC from pin 6 to structure ground on connector D654, then do these steps:

1) Repair the wiring from pin 6 on connector D654 to the aural warning module, M315.
2) Re-connect electrical connector D654 on the P5-16 panel.
3) Close the P5 overhead panel.
4) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.
5) If the operational test is satisfactory, then you corrected the fault.

(h) If there is 28 VDC from pin 6 on connector D654 to structure ground, then continue.

(i) Disconnect connector D776 from the cabin altitude warning switch, S128.

HAP 048-053, 107-999

(j) Disconnect connector D14284 from the cabin altitude warning switch, S1153.

HAP ALL

(k) Do a continuity check between this pin of connector D654 at the P5-16 panel, and this pin of connector D776 at the cabin altitude warning switch, S128:

D654		D776
pin 7	- - - - - - - - - - - - - - - - - - -	pin A

HAP 048-053, 107-999

(l) Do a continuity check between this pin of connector D654 at the P5-16 panel, and this pin of connector D14284 at the cabin altitude warning switch, S1153:

D654		D14284
7	- -	A

HAP ALL

(m) If there is not continuity from pin 7 on connector D654 to pin A on connector D776, then do these steps:

1) Repair the wiring.
2) Re-connect electrical connector D776 on the cabin altitude warning switch, S128.
3) Re-connect electrical connector D654 on the P5-16 panel.
4) Close the P5 Overhead Panel.
5) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.
6) If the operational test is satisfactory, then you corrected the fault.

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HAP 048-053, 107-999

(n) If there is not continuity from pin 7 on connector D654 to pin A on connector D14284, then do these steps:

1) Repair the wiring.
2) Re-connect electrical connector D14284 on the cabin altitude warning switch, S1153.
3) Re-connect electrical connector D654 on the P5-16 panel.
4) Close the P5 Overhead Panel.
5) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.
6) If the operational test is satisfactory, then you corrected the fault.

HAP ALL

(o) If there is continuity from pin 7 on connector D654 to pin A on connector D776, then continue.

HAP 048-053, 107-999

(p) If there is continuity from pin 7 on connector D654 to pin A on connector D14284, then continue.

HAP ALL

(q) Do a continuity check between pin B of connector D776 at the cabin altitude warning switch, S128 and structure ground.

HAP 048-053, 107-999

(r) Do a continuity check between pin B of connector D14284 at the cabin altitude warning switch S1153 and structure ground.

HAP ALL

(s) If there is not continuity from pin B on connector D776 to structure ground on connector D776, then do these steps:

1) Repair the wiring.
2) Re-connect electrical connector D776 on the cabin altitude warning switch, S128.
3) Re-connect electrical connector D654 on the P5-16 panel.
4) Close the P5 Overhead Panel.
5) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.
6) If the operational test is satisfactory, then you corrected the fault.

HAP 048-053, 107-999

(t) If there is not continuity from pin B on connector D14284 to structure ground, then do these steps:

1) Repair the wiring.
2) Re-connect electrical connector D14284 on the cabin altitude warning switch, S1153.
3) Re-connect electrical connector D654 on the P5-16 panel.
4) Close the P5 Overhead Panel.
5) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.
6) If the operational test is satisfactory, then you corrected the fault.

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HAP 048-053, 107-999 (Continued)

HAP ALL

(u) If there is continuity from pin B on connector D776 to structure ground on connector D776, then continue:

1) Replace the cabin altimeter and rate of climb module, P5-16.
2) Re-connect electrical connector D776 on the cabin altitude warning switch, S128.
3) Re-connect electrical connector D654 on the P5-16 panel.
4) Close the P5 Overhead Panel.
5) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.
6) If the operational test is satisfactory, then you corrected the fault.

HAP 048-053, 107-999

(v) If there is continuity from pin B on connector D14284 to structure ground, then continue:

1) Replace the cabin altimeter and rate of climb module, P5-16.
2) Re-connect electrical connector D14284 on the cabin altitude switch, S1153.
3) Re-connect electrical connector D654 on the P5-16 panel.
4) Close the P5 Overhead Panel.
5) Do the operational test of the cabin altitude warning system. To do this test, do this task: Cabin Altitude Warning Switch Functional Test, AMM TASK 21-33-00-000-801.
6) If the operational test is satisfactory, then you corrected the fault.

(w) Re-connect electrical connector D14284 on the cabin altitude warning switch S1153.

(6) Do these checks of the wiring for a fault with the CABIN ALTITUDE indicators:

(a) Make sure these circuit breakers are closed:

(a) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
E	12	C00314	INDICATOR MASTER DIM SECT 2
F	12	C00318	INDICATOR MASTER DIM SECT 6

(b) Set the LIGHTS switch on the captain's instrument panel P1-3 to the TEST position.

(c) Make sure that the red CABIN ALTITUDE indicators on the captain's instrument panel P1-3 and the first officer's instrument panel P3-1 come on.

(d) If a CABIN ALTITUDE indicator lamp does not come on, do the applicable portion of this fault isolation task:

1) Flight Compartment Lighting Problem - Fault Isolation, 33-10 TASK 801

NOTE: This fault isolation task does a check of the MASTER DIM & TEST system and makes sure that 28 VDC is at the indicator.

2) Do the Repair Confirmation at the end of this procedure.

(e) If the CABIN ALTITUDE indicators came on, then do these steps:

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1) Get access to the back of the captain's instrument panel P1-3 or the back of the first officer's instrument panel P3-1, as applicable.
2) Disconnect electrical connector D3999 from the P3-1 panel or electrical connector D895 from the P1-3 panel, as applicable.

(f) Get access to the cabin pressure switch, S128, on the ceiling in the lower compartment forward of the nose landing gear.

(g) Disconnect electrical connector D776 from the cabin pressure switch.

(h) If the faulty indicator is on the P1-3 panel, do a check of the wiring between electrical connector D895, pin 13 and connector D776, pin A.
1) Repair any wiring problems that you find.

(i) If the faulty indicator is on the P3-1 panel, do a check of the wiring between connector D3999, pin 17 and connector D776, pin A .
1) Repair any wiring problems that you find.

(j) Connect all connectors that were disconnected.

(k) Do the Repair Confirmation at the end of this procedure.

HAP ALL

——————— END OF TASK ———————

802. CABIN CLIMB Indicator Problem - Fault Isolation

A. Description

(1) The cabin climb indicator should respond to changes in altitude ascent or descent in rate of change (feet per minute).

B. Possible Causes

(1) Cabin rate of climb indicator, N55

C. Fault Isolation Procedure

(1) Replace the cabin climb indicator.

These are the tasks:

Cabin Rate of Climb Indicator Removal, AMM TASK 21-33-01-000-801,

Cabin Rate of Climb Indicator Installation, AMM TASK 21-33-01-400-801.

——————— END OF TASK ———————

803. Cabin Altitude and Differential Pressure Indicator Indicates High Cabin Pressure Differential and Low Cabin Altitude - Fault Isolation

A. Description

(1) The gauges do not indicate as normally expected. For example, see below:

(a) The cabin altitude gauge indicates 6000 feet while at cruise altitude of FL 370.

NOTE: Expected cabin altitude at cruise would be about 8000 feet.

(b) The cabin differential pressure gauge indicates in the amber arc and does not decrease as the cabin altitude decreases.

(c) Both gauges do not indicate as expected for the altitude.

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B. Possible Causes

(1) Cabin Altitude and Differential Pressure Indicator

C. Initial Evaluation

(1) Open one the main entry doors to make sure the airplane is not pressurized.

(2) Do this check of the cabin altimeter gauge on the P5-16 cabin pressure control panel:

(a) Set the barometric pressure for the pilot's altimeter to 29.92 inches of Hg.

(b) Observe the altitude on the pilot's altimeter.

(c) Compare the altitude on the pilot's altimeter to the altitude on the cabin altimeter.

(d) If the cabin altitude is within 1000 feet of the pilot's altimeter, the cabin altimeter is satisfactory.

(e) If the cabin altitude is not within 1000 feet of the pilot's altimeter, go to the Fault Isolation procedure.

(3) Do this check of the cabin differential pressure gauge on the P5-16 cabin pressure control panel:

(a) Observe the differential pressure on the DIFF PRESS gauge.

(b) If the differential pressure is 0 (+/- 0.2) psid, the indicator is satisfactory.

(c) If the differential pressure is greater than 0 (+/- 0.2) psid, go to the Fault Isolation procedure..

D. Fault Isolation Procedure

(1) If the cabin altitude is not within 1000 feet of the pilot's altimeter, replace the cabin altitude and differential pressure indicator. To replace the indicator, do these tasks: Cabin Altitude and Differential Pressure Indicator Removal, AMM TASK 21-33-02-000-801 and Cabin Altitude and Differential Pressure Indicator Installation, AMM TASK 21-33-02-400-801.

(2) If the differential pressure is greater than 0 (+/- 0.2) psid, replace the cabin altitude and differential pressure indicator. To replace the indicator, do these tasks: Cabin Altitude and Differential Pressure Indicator Removal, AMM TASK 21-33-02-000-801 and Cabin Altitude and Differential Pressure Indicator Installation, AMM TASK 21-33-02-400-801.

END OF TASK

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801. Door Area Heater Does Not Operate - Fault Isolation

A. Description

(1) One of the door area heaters does not operate as expected.

(2) (SDS SUBJECT 21-45-00)

B. Possible Causes

(1) Door area heater, M1708 (forward) or M1681 (aft)

(2) Door area heater power relay, R560

(3) Wiring

(4) Sys 1 air/gnd relay, R593

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	11	C01274	AIR CONDITIONING DOOR AREA HEAT CONT

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	14	C01279	DOOR AREA HTR-AFT
A	16	C01280	DOOR AREA HTR-FWD
HAP 037-054, 101-999			
D	7	C01279	DOOR AREA HTR-AFT
D	9	C01280	DOOR AREA HTR-FWD

HAP ALL

D. Related Data

(1) (SSM 21-42-11)

(2) (WDM 21-42-11)

E. Initial Evaluation

(1) AIRPLANES WITH CAB/UTIL SWITCH ON THE P5-13 PANEL;

Make sure that the CAB/UTIL switch on the P5-13 panel is set to the ON position.

(2) Do an operational test of the two door area heaters. To do this, do this task: Door Area Heater Operational Test, AMM TASK 21-45-00-700-802.

(a) If the operational test is not satisfactory for one of the door area heaters, then do the Fault Isolation Procedure - One Door Area Heater Does Not Operate.

(b) If the operational test is not satisfactory for the two door area heaters, then do the Fault Isolation Procedure - Both Door Area Heaters Do Not Operate.

(c) If the operational test is satisfactory, then there was an intermittent fault.

F. Fault Isolation Procedure - One Door Area Heater Does Not Operate

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

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NOTE: This procedure isolates the fault to one of these possible causes:

- forward or aft door area heater
- door area heater power relay
- wiring

(1) Replace the applicable door area heater, M1708 (forward) or M1681 (aft).

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

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

(2) Replace the door area heater power relay, R560:

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

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

(3) Do these checks of the wiring:

(a) Make sure conditioned air is supplied through one of the packs. To do this, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) Make sure the airplane is in air mode. To do this, do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(c) FOR A FAULT WITH THE FORWARD DOOR AREA HEATER, M1708, do these steps:

1) Remove the door area heater power relay, R560.

2) Do a check for 200 VAC (phase-to-phase) on connector D10882 from pin A2 to pin B2.

3) Do a continuity check between these pins of connector D10882 in the P91 panel and these pins of connector D10884 on the forward door area heater:

D10882		D10884
pin A1	- - - - - - - - - - - - - - - - -	pin 1
pin B1	- - - - - - - - - - - - - - - - -	pin 3

(d) FOR A FAULT WITH THE AFT DOOR AREA HEATER, M1681, do these steps:

1) Remove the door area heater power relay, R560.

2) Do a check for 200 VAC (phase-to-phase) on connector D10882 from pin C2 to pin D2.

3) Do a continuity check between these pins of connector D10882 in the P91 panel and these pins of connector D10770 on the aft door area heater:

D10882		D10770
pin C1	- - - - - - - - - - - - - - - - -	pin 2
pin C1	- - - - - - - - - - - - - - - - -	pin 3
pin D1	- - - - - - - - - - - - - - - - -	pin 1

(e) Repair the wiring.

(f) Re-install the door area heater power relay, R560.

(g) Re-connect connector D10884 or D10770.

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

G. Fault Isolation Procedure - Both Door Area Heaters Do Not Operate

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

NOTE: This procedure isolates the fault to one of these possible causes:

- door area heater power relay
- wiring

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- air/gnd relay

(1) Replace the door area heater power relay, R560.

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

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

(2) Do these checks of the wiring and the air/gnd relay, R593:

(a) Make sure conditioned air is supplied through one of the packs. To do this, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) Make sure the airplane is in air mode. To do this, do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(c) Remove the door area heater power relay, R560.

(d) Do a check for 28 VDC on connector D10882 from pin X1 to structure ground.

(e) If there is not 28 VDC from pin X1 on connector D10882 to structure ground, then do these steps:

1) Repair the wiring from pin X1 on connector D10882 to circuit breaker C1274, AIR CONDITIONING DOOR AREA HEAT CONTROL.

2) Re-install the door area heater power relay, R560.

3) Do the Repair Confirmation at the end of this task.

(f) If there is 28 VDC from pin X1 on connector D10882 to structure ground, then continue.

(g) Do a continuity check from pin X2 on connector D10882 to structure ground.

(h) If there is not continuity from pin X2 on connector D10882 to structure ground, then do these steps:

1) Replace SYS 1 AIR/GND RELAY, R593.

2) Re-install the door area heater power relay, R560.

3) Do the Repair Confirmation at the end of this task.

4) If the Repair Confirmation is not satisfactory, then repair the wiring from pin X2 on connector D10882 to terminal block, TB22Y.

(i) Re-install the door area heater power relay, R560.

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

H. Repair Confirmation

(1) Do an operational test of the two door area heaters. To do this, do this task: Door Area Heater Operational Test, AMM TASK 21-45-00-700-802.

(a) If the operational test is satisfactory, then you corrected the fault.

——————— END OF TASK ———————

802. Emergency Exit Door Area Too Cold - Fault Isolation

A. Description

(1) The area around the emergency exit door (EED) is too cold when the airplane is in flight.

NOTE: The emergency exit door will be referred to as the EED during this procedure.

(2) (SDS SUBJECT 21-45-00)

B. Possible Causes

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HAP 101-999

(1) Left EED lining heater, M2202 (fwd) or M2203 (aft)

(2) Right EED lining heater, M2205 (fwd) or M2206 (aft)

(3) Emergency exit door closeout panel heater, M2177 (left EED) or M2175 (right EED)

(4) Left EED door surround panel heater, M2176 (fwd) or M2204 (aft)

(5) Right EED door surround panel heater, M2174 (fwd) or M2201 (aft)

HAP 001-013, 015-026, 028-054

(6) Emergency exit door lining heater:
   (a) Left forward EED, M2214 (fwd) or M2215 (aft)
   (b) Left aft EED, M2217 (fwd) or M2218 (aft)
   (c) Right forward EED, M2208 (fwd) or M2209 (aft)
   (d) Right aft EED, M2211 (fwd) or M2212 (aft)

(7) Emergency exit door closeout panel heater:
   (a) M2183, left forward EED
   (b) M2185, left aft EED
   (c) M2179, right forward EED
   (d) M2181, right aft EED

(8) Emergency exit door surround panel heater:
   (a) Left forward EED, M2182 (fwd) or M2213 (aft)
   (b) Left aft EED, M2184 (fwd) or M2216 (aft)
   (c) Right forward EED, M2178 (fwd) or M2207 (aft)
   (d) Right aft EED, M2180 (fwd) or M2210 (aft)

HAP ALL

(9) Door area heater power relay, R560

(10) Wiring

(11) Sys 1 air/gnd relay, R593

C. Circuit Breakers

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

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	11	C01274	AIR CONDITIONING DOOR AREA HEAT CONT

Power Distribution Panel Number 1, P91

Row	Col	Number	Name
HAP 001-013, 015-026, 028-036			
A	14	C01279	DOOR AREA HTR-AFT
A	16	C01280	DOOR AREA HTR-FWD
HAP 037-054, 101-999			
D	7	C01279	DOOR AREA HTR-AFT

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Row	Col	Number	Name
D	9	C01280	DOOR AREA HTR-FWD

HAP ALL

D. Related Data

(1) (SSM 21-42-11)

(2) (WDM 21-42-11)

E. Initial Evaluation

(1) Do this task: Door Area Heater Operational Test, AMM TASK 21-45-00-700-802.

(a) If the forward door area heater does not operate, then it must be repaired before you do this task, do this task: Door Area Heater Does Not Operate - Fault Isolation, 21-45 TASK 801.

NOTE: The emergency exit door heaters use the same source of power as the forward door area heater. If there is a problem with the wire bundle for the forward door area heater it can be the source of problems with the EED heaters.

(b) If the two door area heaters operate, then you must do a test of each EED heater and its wire bundle. There are five heaters installed for each door. To test the EED heaters do the Fault Isolation Procedure - Emergency Exit Door Area Heater Does Not Operate below. This procedure isolates the fault to one of these possible causes:

1) individual heaters of the emergency exit doors

2) wiring

(c) If the two door area heaters do not operate, then do the Fault Isolation Procedure - All Emergency Exit Door Area Heaters Do Not Operate below. This procedure isolates the fault to one of these possible causes:

1) door area heater power relay, R560

2) wiring

3) air/gnd relay, R593

HAP 101-999

F. Fault Isolation Procedure - Emergency Exit Door Area Heater Does Not Operate

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

(1) To do a test for failure of an EED lining heater (M2202, M2203, M2205 and M2206), do these steps:

CAUTION: DO NOT APPLY TENSION TO THE WIRING BEHIND THE LINING. YOU MAY DAMAGE THE WIRING.

(a) Remove the lining for each door. To remove the lining, do this task: Emergency Exit Door Lining Removal, AMM TASK 52-22-51-000-801.

(b) Disconnect the two electrical connectors for each heater blanket.

(c) Do a resistance check between pins J1 and P1 of each heater blanket.

(d) If the resistance is not 650-830 ohms, then do these steps:

1) Replace the applicable EED lining heater.

These are the tasks:

Emergency Exit Door Heater Blanket Removal, AMM TASK 21-45-02-000-801,

Emergency Exit Door Heater Blanket Installation, AMM TASK 21-45-02-400-801.

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(e) If the resistance is 650-830 ohms, then continue.

(2) To do a test for failure of an EED door surround panel heater (M2176, M2204, M2174 and M2201), do these steps:

CAUTION: DO NOT APPLY TENSION TO THE WIRING BEHIND THE LINING. YOU MAY DAMAGE THE WIRING.

(a) Remove the two door surround panels for each door. To remove the panels, do this task: Emergency Exit Doorway Lining Removal, AMM TASK 25-21-20-000-801.

(b) Disconnect the two electrical connectors from each heater blanket.

(c) Do a resistance check between pins J1 and P1 of each heater.

(d) If the resistance is not 650-830 ohms, then do these steps:

1) Replace the applicable EED door surround panel heater. To replace the heater,

These are the tasks:

Emergency Exit Doorway Lining Removal, AMM TASK 25-21-20-000-801,

Emergency Exit Doorway Lining Installation, AMM TASK 25-21-20-400-801.

(e) If the resistance is 650-830 ohms, then continue.

(3) To do a test for failure of an EED closeout panel heater (M2175 and M2177), do these steps:

(a) Open each emergency exit door.

(b) Push the prop on the support assembly to release the closeout panel.

(c) Hold the closeout panel in the vertical position.

(d) Disconnect the electrical connectors from the heater.

(e) Use a ohmmeter, STD-1045 to do a resistance check between pins J1 and P1 of the heater.

(f) If the resistance is not 1050-1430 ohms, then do these steps:

1) Replace the applicable EED closeout panel heater. To replace the heater,

These are the tasks:

Emergency Exit Door Closeout Panel Heater Blanket Removal, AMM TASK 21-45-02-000-803,

Emergency Exit Door Closeout Panel Heater Blanket Installation, AMM TASK 21-45-02-400-803.

(g) If the resistance is 1050-1430 ohms, then continue.

(4) Do these checks of the wiring:

(a) Make sure you supply conditioned air through one of the packs. To supply it, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) Put the airplane in air mode. To do this, do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(c) Remove the door area heater power relay, R560.

(d) Do a check for 200 VAC (phase-to-phase) on connector D10882 from pin A2 to pin B2.

(e) Do these steps for the heater blankets on the left side of the airplane:

1) Do a continuity check between these pins of connector D10882 in the P91 panel and these connectors on the EED heaters:

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		HEATER	
	R560 RELAY CONNECTOR		HEATER CONNECTOR
L DOOR LINING FORWARD	D10882		D12760
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L DOOR LINING AFT	D10882		D12672
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L DOOR - DOOR SURROUND PANEL FORWARD	D10882		D12554
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L DOOR - DOOR SURROUND PANEL AFT	D10882		D12666
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L DOOR CLOSEOUT PANEL	D10882		WHT/BLU
	pin A1	- - - - - - - - - - - - - - - - -	pin 1

(f) Do these steps for heater blankets on the right side of the airplane:

1) Do a continuity check between these pins of connector D10882 in the P91 panel and these connectors on the EED heaters:

		HEATER	
	R560 RELAY CONNECTOR		HEATER CONNECTOR
R DOOR LINING FORWARD	D10882		D12656
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R DOOR LINING AFT	D10882		D12660
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R DOOR FORWARD DOOR SURROUND PANEL	D10882		D12544
	pin B1	- - - - - - - - - - - - - - - - -	pin 1

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HAP 101-999 (Continued)

R DOOR AFT DOOR SURROUND PANEL	**D10882**		**D12652**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R DOOR CLOSEOUT PANEL	**D10882**		**WHT/BLU**
	pin D1	- - - - - - - - - - - - - - - - -	pin 1

(g) Repair the wiring.

(h) Install the door area heater power relay, R560.

(i) Install the EED door surround panels, do this task: Emergency Exit Doorway Lining Installation, AMM TASK 25-21-20-400-801.

(j) Install the EED lining, do this task: Emergency Exit Door Lining Installation, AMM TASK 52-22-51-400-801.

(k) Close the emergency exit door.

HAP 001-013, 015-026, 028-054

G. Fault Isolation Procedure - Emergency Exit Door Area Heater Does Not Operate

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

(1) To do a test for failure of an EED lining heater (M2208, M2209, M2211, M2212, M2214, M2215, M2217 and M2218), do these steps:

CAUTION: DO NOT APPLY TENSION TO THE WIRING BEHIND THE LINING. YOU MAY DAMAGE THE WIRING.

(a) Remove the lining for each door. To remove the lining, do this task: Emergency Exit Door Lining Removal, AMM TASK 52-22-51-000-801.

(b) Disconnect the two electrical connectors for each heater blanket.

(c) Do a resistance check between pins J1 and P1 of each heater blanket.

(d) If the resistance is not 650-830 ohms, then do these steps:

1) Replace the applicable EED lining heater.

These are the tasks:

Emergency Exit Door Heater Blanket Removal, AMM TASK 21-45-02-000-801,

Emergency Exit Door Heater Blanket Installation, AMM TASK 21-45-02-400-801.

(e) If the resistance is 650-830 ohms, then continue.

(2) To do a test for failure of an EED door surround panel heater (M2207, M2210, M2213, M2216, M2178, M2180, M2182 and M2184), do these steps:

CAUTION: DO NOT APPLY TENSION TO THE WIRING BEHIND THE LINING. YOU MAY DAMAGE THE WIRING.

(a) Remove the two door surround panels for each door. To remove the panels, do this task: Emergency Exit Doorway Lining Removal, AMM TASK 25-21-20-000-801.

(b) Disconnect the two electrical connectors from each heater blanket.

(c) Do a resistance check between pins J1 and P1 of each heater.

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(d) If the resistance is not 650-830 ohms, then do these steps:

1) Replace the applicable EED door surround panel heater. To replace the heater,

These are the tasks:

Emergency Exit Doorway Lining Removal, AMM TASK 25-21-20-000-801,

Emergency Exit Doorway Lining Installation, AMM TASK 25-21-20-400-801.

(e) If the resistance is 650-830 ohms, then continue.

(3) To do a test for failure of an EED closeout panel heater (M2179, M2181, M2183 and M2185), do these steps:

(a) Open each emergency exit door.

(b) Push the prop on the support assembly to release the closeout panel.

(c) Hold the closeout panel in the vertical position.

(d) Disconnect the electrical connectors from the heater.

(e) Use a ohmmeter, STD-1045 to do a resistance check between pins J1 and P1 of the heater.

(f) If the resistance is not 1050-1430 ohms, then do these steps:

1) Replace the applicable EED closeout panel heater. To replace the heater,

These are the tasks:

Emergency Exit Door Closeout Panel Heater Blanket Removal, AMM TASK 21-45-02-000-803,

Emergency Exit Door Closeout Panel Heater Blanket Installation, AMM TASK 21-45-02-400-803.

(g) If the resistance is 1050-1430 ohms, then continue.

(4) Do these checks of the wiring:

(a) Make sure you supply conditioned air through one of the packs. To supply it, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) Put the airplane in air mode. To do this, do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(c) Remove the door area heater power relay, R560.

(d) Do a check for 200 VAC (phase-to-phase) on connector D10882 from pin A2 to pin B2.

(e) Do these steps for the heater blankets on the left side of the airplane:

1) Do a continuity check between these pins of connector D10882 in the P91 panel and these connectors on the EED heaters:

		HEATER	
	R560 RELAY CONNECTOR		**HEATER CONNECTOR**
L FWD DOOR - LINING FORWARD	**D10882**		**D12704**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1

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L FWD DOOR - LINING AFT	**D10882**		**D12708**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L FWD DOOR - FORWARD DOOR SURROUND PANEL	**D10882**		**D12756**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L FWD DOOR - AFT DOOR SURROUND PANEL	**D10882**		**D12700**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L FWD DOOR - CLOSEOUT PANEL	**D10882**		**WHT/BLU**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1

HEATER

	R560 RELAY CONNECTOR		**HEATER CONNECTOR**
L AFT DOOR - LINING FORWARD	**D10882**		**D12716**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L AFT DOOR - LINING AFT	**D10882**		**D12720**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L AFT DOOR - FORWARD DOOR SURROUND PANEL	**D10882**		**D12584**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L AFT DOOR - AFT DOOR SURROUND PANEL	**D10882**		**D12712**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1
L AFT DOOR - CLOSEOUT PANEL	**D10882**		**WHT/BLU**
	pin A1	- - - - - - - - - - - - - - - - -	pin 1

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(f) Do these steps for heater blankets on the right side of the airplane:

1) Do a continuity check between these pins of connector D10882 in the P91 panel and these connectors on the EED heaters:

		HEATER	
	R560 RELAY CONNECTOR		**HEATER CONNECTOR**
R FWD DOOR - LINING FORWARD	**D10882**		**D12680**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R FWD DOOR - LINING AFT	**D10882**		**D12684**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R FWD DOOR - FORWARD DOOR SURROUND PANEL	**D10882**		**D12560**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R FWD DOOR - AFT DOOR SURROUND PANEL	**D10882**		**D12676**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R FWD DOOR - CLOSEOUT PANEL	**D10882**		**WHT/BLU**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1

		HEATER	
	R560 RELAY CONNECTOR		**HEATER CONNECTOR**
R AFT DOOR - LINING FORWARD	**D10882**		**D12692**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R AFT DOOR - LINING AFT	**D10882**		**D12696**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1

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R AFT DOOR - FORWARD DOOR SURROUND PANEL	**D10882**		**D12568**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R AFT DOOR - AFT DOOR SURROUND PANEL	**D10882**		**D12688**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1
R AFT DOOR - CLOSEOUT PANEL	**D10882**		**WHT/BLU**
	pin B1	- - - - - - - - - - - - - - - - -	pin 1

(g) Repair the wiring.

(h) Install the door area heater power relay, R560.

(i) Install the EED door surround panels, do this task: Emergency Exit Doorway Lining Installation, AMM TASK 25-21-20-400-801.

(j) Install the EED lining, do this task: Emergency Exit Door Lining Installation, AMM TASK 52-22-51-400-801.

(k) Close the emergency exit door.

HAP ALL

H. Fault Isolation Procedure - All Emergency Exit Door Area Heaters Do Not Operate

NOTE: You must do the steps in the Initial Evaluation before you do these steps.

NOTE: This procedure isolates the fault to one of these possible causes:

- door area heater power relay
- wiring
- air/gnd relay

(1) Replace the door area heater power relay, R560. The door area heater power relay is located on the P91 panel in the electrical and electronics compartment.

(a) Do an operational test of the door area heaters. To do a test, do this task: Emergency Exit Hatch Heaters Operational Test, AMM TASK 21-45-00-700-801.

1) If the operational test is satisfactory, then you corrected the fault.

2) If the operational test is not satisfactory, then continue.

(2) Do these checks of the wiring and the air/gnd relay, R593:

(a) Make sure you supply conditioned air through one of the packs. To supply it, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) Make sure the airplane is in air mode. To do this, do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(c) Remove the door area heater power relay, R560.

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(d) Do a check for 28 VDC on connector D10882 from pin X1 to structure ground.

(e) If there is not 28 VDC from pin X1 on connector D10882 to structure ground, then do these steps:

1) Repair the wiring from pin X1 on connector D10882 to circuit breaker C1274, AIR CONDITIONING DOOR AREA HEAT CONTROL.

2) Re-install the door area heater power relay, R560.

3) Do an operational test of the door area heaters. To do a test, do this task: Emergency Exit Hatch Heaters Operational Test, AMM TASK 21-45-00-700-801.

a) If the operational test is satisfactory, then you corrected the fault.

(f) If there is 28 VDC from pin X1 on connector D10882 to structure ground, then continue.

(g) Do a continuity check from pin X2 on connector D10882 to structure ground.

(h) If there is not continuity from pin X2 on connector D10882 to structure ground, then do these steps:

1) Replace SYS 1 AIR/GND RELAY, R593.

2) Re-install the door area heater power relay, R560.

3) Do an operational test of the door area heaters. To do a test, do this task: Emergency Exit Hatch Heaters Operational Test, AMM TASK 21-45-00-700-801.

a) If the operational test is satisfactory, then you corrected the fault.

b) If the operational test is not satisfactory, then repair the wiring from pin X2 on connector D10882 to terminal block, TB22Y.

(i) Re-install the door area heater power relay, R560.

(j) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——————— END OF TASK ———————

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801. Fog, High Humidity or Ice in Cabin - Fault Isolation

A. Description

(1) There is fog, unusually high humidity, or ice in the passenger cabin or the flight compartment. Conditioned air for the flight compartment is usually supplied by the left pack. Conditioned air for the passenger cabin is usually supplied by the right pack.

HAP 101-999

B. Possible Causes

(1) Water separator

(2) 35 degree F control valve, V27 (left) or V28 (right)

(3) 35 degree F sensor, T430 (left) or T431 (right)

(4) 35 degree F control module, M223 (left) or M224 (right)

HAP 001-013, 015-026, 028-054

C. Possible Causes

(1) Pack temperature control system

(2) Water separator

(3) Water spray nozzle

HAP 101-999

D. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

HAP 001-013, 015-026, 028-054

E. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C01157	AIR CONDITIONING TEMP CONT VALVE CLOSE LEFT
B	1	C01160	AIR CONDITIONING TEMP CONT VALVE CLOSE RIGHT

HAP 101-999

F. Related Data

(1) (SSM 21-51-16)

(2) (SSM 21-51-26)

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HAP 101-999 (Continued)

(3) (WDM 21-51-16)

(4) (WDM 21-51-26)

HAP 001-013, 015-026, 028-054

G. Related Data

(1) (SSM 21-51-12)

(2) (SSM 21-51-22)

(3) (WDM 21-51-12)

(4) (WDM 21-51-22)

HAP 101-999

H. Fault Isolation Procedure

(1) Do this check of the 35 degree F sensor, control valve, and control module for the applicable pack:

NOTE: Conditioned air for the flight compartment is supplied by the left pack. Conditioned air for the passenger cabin is supplied by the right pack.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(b) If the BITE test shows a fault, then do the Fault Isolation Procedure for the applicable maintenance message.

1) If the problem does not occur on the subsequent flight, then you corrected the fault.

(c) If the BITE test does not show a fault, then continue.

(2) Do this check of the applicable water separator:

(a) For the coalescer bag on the applicable water separator, do this task: Coalescer Bag Pressure Indicator Inspection, AMM TASK 21-51-05-400-803.

(b) If the indicator disk on the pressure indicator assembly for the coalescer bag is in the red area, then do these steps:

1) Replace the coalescer bag.

These are the tasks:

Coalescer Bag Removal, AMM TASK 21-51-05-020-801,

Coalescer Bag Installation, AMM TASK 21-51-05-400-801.

2) If the problem does not occur on the subsequent flight, then you corrected the fault.

3) If the problem occurs on the subsequent flight, then replace the applicable water separator.

These are the tasks:

Water Separator Removal, AMM TASK 21-51-05-000-801,

Water Separator Installation, AMM TASK 21-51-05-400-802.

(c) If the indicator disc for the coalescer bag is in the white area, then do these steps:

1) Replace the applicable water separator.

These are the tasks:

Water Separator Removal, AMM TASK 21-51-05-000-801,

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HAP 101-999 (Continued)

Water Separator Installation, AMM TASK 21-51-05-400-802.

2) If the problem does not occur on the subsequent flight, then you corrected the fault.

HAP 001-013, 015-026, 028-054

I. Fault Isolation Procedure

(1) Do the BITE test on the pack/zone temperature controller (M1442 left or M1443 right) for the applicable pack:

NOTE: Conditioned air for the flight compartment is supplied by the left pack. Conditioned air for the passenger cabin is supplied by the right pack.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(b) If the BITE test shows a fault, then do the Fault Isolation Procedure for the applicable maintenance message.

1) If the problem does not occur on the subsequent flight, then you corrected the fault.

(c) If the BITE test does not show a fault, then continue.

(2) Do this check of the water spray nozzle:

(a) Remove the applicable

Number	Name/Location
192BL	ECS Ram Air Inlet Mixing Duct Panel - Forward

or open this access panel:

Number	Name/Location
192BR	ECS Ram Air Inlet Mixing Duct Panel - Forward

to get access to the water spray nozzle.

(b) Remove the access panel on the ram air inlet duct (AMM TASK 21-51-03-000-801).

(c) Operate the applicable air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(d) Make sure a spray of water flows from the water spray nozzle.

(e) If water does not flow from the water spray nozzle, do these steps:

1) Stop the air conditioning pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

2) Replace the water spray nozzle.

These are the tasks:

Water Spray Nozzle Removal, AMM TASK 21-51-16-000-801,

Water Spray Nozzle Installation, AMM TASK 21-51-16-400-801.

3) Operate the applicable air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

4) Make sure a spray of water flows from the water spray nozzle.

5) If the problem does not occur on the subsequent flight, then you corrected the fault.

(f) If water does flow from the water spray nozzle, then continue:

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HAP 001-013, 015-026, 028-054 (Continued)

1) Stop the air conditioning pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.
2) Remove the access panel on the ram air inlet duct.
3) Install the applicable access panel:

Number	Name/Location
192BL	ECS Ram Air Inlet Mixing Duct Panel - Forward

or close this access panel:

Number	Name/Location
192BR	ECS Ram Air Inlet Mixing Duct Panel - Forward

(3) Replace the water extractors on the applicable pack.
These are the tasks:
Water Extractor Removal, AMM TASK 21-51-14-000-801,
Water Extractor Installation, AMM TASK 21-51-14-400-801.
(a) If the problem does not occur on the subsequent flight, then you corrected the fault.
(b) If the problem occurs on the subsequent flight, then replace the applicable water separator.
These are the tasks:
High Pressure Water Separator Removal, AMM TASK 21-51-08-000-802,
High Pressure Water Separator Installation, AMM TASK 21-51-08-400-802.

HAP ALL

——————— END OF TASK ———————

802. Noise or Pounding Heard Through the Air Distribution System - Fault Isolation

A. Description

HAP 101-999

(1) An unusual noise is heard in the air distribution system. This can be caused by ice formation in the duct system. Ice formation is usually caused by a problem with the low limit (35F) control system. Noises in the air distribution system can also be caused by leakage in the air ducts, air ducts which are loose or completely disconnected, or by blockage in the air ducts.

HAP 001-013, 015-026, 028-054

(2) An unusual noise is heard in the air distribution system. This can be caused by ice formation in the duct system. Ice formation is usually caused by a problem with the pack temperature control system. Noises in the air distribution system can also be caused by leakage in the air ducts, air ducts which are loose or completely disconnected, or by blockage in the air ducts.

HAP 101-999

B. Possible Causes

(1) 35 degree F control valve, V27 (left) or V28 (right)

(2) 35 degree F sensor, T430 (left) or T431 (right)

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HAP 101-999 (Continued)

(3) 35 degree F control module, M223 (left) or M224 (right)

(4) Air distribution ducts

HAP 001-013, 015-026, 028-054

C. Possible Causes

(1) Pack temperature control system

(2) Air distribution ducts

HAP 101-999

D. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

HAP 001-013, 015-026, 028-054

E. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C01157	AIR CONDITIONING TEMP CONT VALVE CLOSE LEFT
B	1	C01160	AIR CONDITIONING TEMP CONT VALVE CLOSE RIGHT

HAP 101-999

F. Related Data

(1) (SSM 21-51-16)

(2) (SSM 21-51-26)

(3) (WDM 21-51-16)

(4) (WDM 21-51-26)

HAP 001-013, 015-026, 028-054

G. Related Data

(1) (SSM 21-51-12)

(2) (SSM 21-51-22)

(3) (WDM 21-51-12)

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(4) (WDM 21-51-22)

HAP 101-999

H. Fault Isolation Procedure

(1) Do this check of the 35 degree F sensor, control valve, and control module for each pack:

NOTE: Conditioned air for the flight compartment is supplied by the left pack. Conditioned air for the passenger cabin is supplied by the right pack.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(b) If the BITE test shows a fault, then do the do the Fault Isolation Procedure for the applicable maintenance message.

1) If the problem does not occur on the subsequent flight, then you corrected the fault.

(c) If the BITE test does not show a fault, then continue.

(2) Do this check for leakage or blockage in the air distribution ducts:

(a) Supply conditioned air from the left and the right pack. To do this, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) Find the source of the noise in the problem report.

(c) Get access to the air distribution duct in that location.

(d) Look for indications of leakage or a loose connection in that location.

(e) If you find indications of leakage or a loose connection, then repair the air distribution duct.

(f) If you do not find indications of leakage or a loose connection, then disassemble the ducts in that location and look for indications of blockage or unwanted material inside the ducts.

(g) If the problem does not occur on the subsequent flight, then you corrected the fault.

HAP 001-013, 015-026, 028-054

I. Fault Isolation Procedure

(1) Do the BITE test on the pack/zone temperature controller (M1442 left or M1443 right) for the applicable pack:

NOTE: Conditioned air for the flight compartment is supplied by the left pack. Conditioned air for the passenger cabin is supplied by the right pack.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(b) If the BITE test shows a fault, then do the Fault Isolation Procedure for the applicable maintenance message.

1) If the problem does not occur on the subsequent flight, then you corrected the fault.

(c) If the BITE test does not show a fault, then continue.

(2) Do this check for leakage or blockage in the air distribution ducts:

(a) Supply conditioned air from the left and the right pack. To do this, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) Find the source of the noise in the problem report.

(c) Get access to the air distribution duct in that location.

(d) Look for indications of leakage or a loose connection in that location.

(e) If you find indications of leakage or a loose connection, then repair the air distribution duct.

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(f) If you do not find indications of leakage or a loose connection, then disassemble the ducts in that location and look for indications of blockage or unwanted material inside the ducts.

(g) If the problem does not occur on the subsequent flight, then you corrected the fault.

HAP ALL

——————— END OF TASK ———————

803. RAM DOOR FULL OPEN Light Stays On, Airplane in the Air - Fault Isolation

A. Description

(1) The RAM DOOR FULL OPEN light on the P5-10 air conditioning panel should go off when the airplane is in the air with the trailing edge flaps fully retracted.

(2) There are two RAM DOOR FULL OPEN lights, one for the left ram air inlet modulation doors and one for the right ram air inlet modulation doors.

(3) Unwanted material such as paper that blocks the flow of air through the heat exchangers could prevent the modulation doors from closing and allowing the RAM DOOR FULL OPEN light to go off.

HAP 101-999

B. Possible Causes

(1) Ram air actuator, M326 (left) or M327 (right)

(2) Air conditioning accessory unit, M324

(3) Trailing edge flaps up switch, S1051 (left side)

(4) Flap/slat electronics unit, M1746 (right)

(5) Ram air sensor, T438 (left) or T439 (right)

(6) Ram air controller, M328 (left) or M329 (right)

(7) Wiring problem

HAP 001-013, 015-026, 028-054

C. Possible Causes

(1) Ram air actuator, M326 (left) or M327 (right)

(2) Air conditioning accessory unit, M324 (left) or M1455 (right)

(3) Trailing edge flaps up switch, S1051 (left side)

(4) Flap/slat electronics unit, M1746 (right)

(5) Ram air sensor, T481 (left) or T482 (right)

(6) Pack/zone temperature controller, M1442 (No. 1) or M1443 (No. 2)

(7) Wiring problem

(8) Unwanted material or blockage of the heat exchangers

HAP 101-999

D. Circuit Breakers

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HAP 101-999 (Continued)

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT

HAP 001-013, 015-026, 028-054

E. Circuit Breakers

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

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	11	C00313	INDICATOR MASTER DIM SECT 1

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT

HAP ALL

F. Related Data

(1) (SSM 21-51-14)

(2) (WDM 21-51-14)

(3) (SSM 21-51-24)

(4) (WDM 21-51-24)

G. Initial Evaluation

(1) Make sure that the left and right RAM DOOR FULL OPEN lights are on.

(2) Make sure that the deflector doors for the left and right ram air inlets are extended.

(3) Extend the trailing edge flaps to FLAPS 1 position. To extend the trailing edge flaps, do this task: Extend the Trailing Edge Flaps, AMM TASK 27-51-00-860-803.

(4) Put the airplane in the air mode. To put the airplane in the air mode, do this task: Put the Airplane in the Air Mode, AMM TASK 32-09-00-860-801.

(5) Make sure that these results occur:

(a) Make sure that the ram air inlet deflector doors retract fully.

(b) Make sure that the ram air inlet modulation panels move toward the closed position.

(c) If the above results occur, continue with the initial evaluation.

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(d) If the above results do not occur, then do the Fault Isolation Procedure - Deflector Door Does Not Retract.

(6) Retract the trailing edge flaps to the full up position. To retract the trailing edge flaps, do this task: Retract the Trailing Edge Flaps, AMM TASK 27-51-00-860-804.

(7) Make sure that these results occur:

(a) Make sure that the ram air inlet modulation panels move toward the closed position.

(b) Make sure that the RAM DOOR FULL OPEN lights go off.

(c) If the above results do not occur, then do the Fault Isolation Procedure - Modulation Panels Do Not Move to Cruise Position Problem.

(d) If the RAM DOOR FULL OPEN light goes off, then there was an intermittent fault.

(8) If the RAM DOOR FULL OPEN light does not go off but the modulation panels moved toward closed, then do the Fault Isolation Procedure - Indication Circuit Problem.

(9) If no faults are found, but the problem occurs on subsequent flights, then do these steps:

(a) Open the access panel to the heat exchangers.

(b) Remove the inspection panel in the inlet duct to the heat exchangers.

(c) Examine the ram air duct for unwanted material that may decrease the flow of air to the heat exchangers.

(d) If no unwanted material is found, then clean the heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

HAP 101-999

H. Fault Isolation Procedure - Deflector Door Does Not Retract Problem

(1) Do this check for 115 VAC at the ram air actuator:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(b) For the left ram air inlet system, open this panel to get access to the actuator:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

(c) For the right ram air inlet system, open this panel to get access to the actuator:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

(d) Disconnect connector D966 (left) or D968 (right) from the ram air actuator.

(e) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

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(f) Do a check for 115 VAC from pin 5 to pin 11 (ground) of D966 (left) or D968 (right).

(g) If there is 115 VAC from pin 5 to pin 11, then do these steps:

1) Replace the ram air actuator, M326 (left) or M327 (right).

These are the tasks:

Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

2) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault. Do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(h) If there is not 115 VAC from pin 5 to pin 11, then continue.

(2) Do this check of the ram air actuator ground circuit wiring:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(b) Do a check of the wiring between connector D966 (left) or D968 (right), pin 11 and the ground GD68-AC (left) or GD72-AC (right).

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

1) Repair the wiring.

2) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

3) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

4) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault. Do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If you do not find a problem with the wiring, then do these steps and continue:

1) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

2) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(3) Do this check of the air/ground logic circuit for the air conditioning accessory unit (ACAU), M324:

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(a) Remove the ACAU. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) For the left system, do a continuity check from pin 44 of connector D458B to a structural ground.

(c) For the right system, do a continuity check from pin 7 of connector D458A to a structural ground.

(d) If there is continuity, then do these steps:

1) Do this task: Air/Ground Relay Fault - Fault Isolation, 32-09 TASK 804.

2) Do the corrective action for any fault found.

3) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

4) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault. Do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(e) If there is no continuity, then continue.

(4) Do this check of the wiring from the ACAU to the ram air actuator, M326 (left) or M327 (right):

(a) Disconnect connector D966 (left) or D968 (right) from the ram air actuator.

(b) Do a check for an open circuit between these pins:

RAM AIR SYSTEM

	ACAU CONNECTOR D458B	RAM AIR ACTUATOR CONNECTOR D966
LEFT	pin 34	pin 5
	pin 34	pin 6

RAM AIR SYSTEM

	ACAU CONNECTOR D458A	RAM AIR ACTUATOR CONNECTOR D968
RIGHT	pin 34	pin 5
	pin 34	pin 6

(c) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

4) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault. Do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

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HAP 101-999 (Continued)

(d) If there is continuity, then do this step and continue.

1) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

(5) For a problem in the left ram air inlet system, do this check of the ground circuit from the ACAU to the trailing edge flaps up switch, S1051:

(a) Do a continuity test between pin 28 of connector D458B and structure ground.

NOTE: There should be continuity through a grounded trailing edge flaps up switch, S1051.

(b) If there is no continuity, then do these steps:

1) Disconnect connector D46040J in the main wheel well.

2) Do a check for an open circuit between these pins of connector D458B and connector D46040J:

D458B		D46040J
pin 28	- - - - - - - - - - - - - - - - - -	pin 14

3) If there is an open circuit, then do these steps:

a) Repair the wiring.

b) Re-connect connector D46040J.

c) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

d) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

4) If there is continuity, then do these steps:

a) Replace the trailing edge flaps up switch, S1051.

These are the tasks:

Flap Limit Switch Removal, AMM TASK 27-51-63-000-801,

Flap Limit Switch Installation, AMM TASK 27-51-63-400-801.

b) Re-connect connector D46040J.

c) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

d) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

5) If you corrected the fault, then do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(c) If there is continuity, then continue.

(6) For a problem in the right ram air inlet system, do this check of the ground circuit from the ACAU to the flap/slat electronics unit, M1746:

(a) Do a continuity test from pin 28 of connector D458A to structure ground.

NOTE: There should be continuity through a grounded flap/slat electronics unit, M1746.

(b) If there is no continuity, then do these steps:

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1) Remove the flap slat electronic module, M1746. To remove the module, do this task: Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801.
2) Do a check for an open circuit between these pins of connector D458A and connector D728A:

D458A		D728A
pin 28	- - - - - - - - - - - - - - - - - -	pin C11

3) If there is an open circuit, then do these steps:
   a) Repair the wiring.
   b) Re-install the flap slat electronic unit, M1746. To install it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
   c) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
   d) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.
4) If there is continuity, then do these steps:
   a) Replace the flap/ slat electronic unit, M1746.

      These are the tasks:

      Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801,

      Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.
   b) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
   c) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.
5) If you corrected the fault, then do this step to complete the task:
   a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task:AMM TASK 32-09-00-860-802 .

(c) If there is continuity, then continue.

(7) Do this check for 115 VAC to the ACAU:
   (a) Remove the ACAU. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.
   (b) Do a check for 115 VAC between pin 15 of connector D458B (left) or pin 11 of connector D458A (right) and structure ground.
   (c) If there is 115 VAC, then do these steps:
      1) Install a new air conditioning accessory unit, M324. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
      2) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.
      3) Do this step to complete the task:
         a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: AMM TASK 32-09-00-860-802.
   (d) If there is not 115 VAC, then continue:

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HAP 101-999 (Continued)

(8) Do this check for 115 VAC at the circuit breaker:

(a) Make sure there is 115 VAC at the load side of circuit breaker C399 (left) or C400 (right) on the P6-4 panel.

1) If there is 115 VAC, then do these steps:

a) Repair the wiring between the applicable circuit breaker and the connector for the ACAU:

RAM AIR SYSTEM

	CIRCUIT BREAKER		ACAU CONNECTOR
LEFT	**C00399**		**D458B**
	term 2	- - - - - - - - - - - - - - - -	pin 15

RAM AIR SYSTEM

	CIRCUIT BREAKER		ACAU CONNECTOR
RIGHT	**C00400**		**D458A**
	term 2	- - - - - - - - - - - - - - - -	pin 11

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

2) If there is not 115 VAC, then do these steps:

a) Do this task: DIST/BUS FAULT For GCU 1 - Fault Isolation, 24-21 TASK 815.

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

3) Do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

HAP 001-013, 015-026, 028-054

I. Fault Isolation Procedure - Deflector Door Does Not Retract Problem

(1) Do this check for 115 VAC at the ram air actuator:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(b) For the left ram air inlet system, open this panel to get access to the actuator:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

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(c) For the right ram air inlet system, open this panel to get access to the actuator:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

(d) Disconnect connector D966 (left) or D968 (right) from the ram air actuator.

(e) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(f) Do a check for 115 VAC from pin 5 to pin 11 (ground) of D966 (left) or D968 (right).

(g) If there is 115 VAC from pin 5 to pin 11, then do these steps:

1) Replace the ram air actuator, M326 (left) or M327 (right).

These are the tasks:

Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

2) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault. Do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(h) If there is not 115 VAC from pin 5 to pin 11, then continue.

(2) Do this check of the ram air actuator ground circuit wiring:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(b) Do a check of the wiring between connector D966 (left) or D968 (right), pin 11 and the ground GD68-AC (left) or GD72-AC (right).

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

1) Repair the wiring.

2) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

3) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

4) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault. Do this step to complete the task:

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a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If you do not find a problem with the wiring, then do these steps and continue:

1) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

2) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(3) Do this check of the air/ground logic circuit for the air conditioning accessory unit (ACAU), M324:

(a) Remove ACAU No. 1 (left) or ACAU No. 2 (right). To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) For the left system, do a continuity check from pin 35 of connector D458A to a structural ground.

(c) For the right system, do a continuity check from pin 35 of connector D10002A to a structural ground.

(d) If there is continuity, then do these steps:

1) Do this task: Air/Ground Relay Fault - Fault Isolation, 32-09 TASK 804.

2) Do the corrective action for any fault found.

3) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

4) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault. Do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(e) If there is no continuity, then continue.

(4) Do this check of the wiring from ACAU No. 1 (left) or ACAU No. 2 (right) to the ram air actuator, M326 (left) or M327 (right):

(a) Disconnect connector D966 (left) or D968 (right) from the ram air actuator.

(b) Do a check for an open circuit between these pins:

RAM AIR SYSTEM

	ACAU CONNECTOR	RAM AIR ACTUATOR CONNECTOR
LEFT	**D458A**	**D966**
	pin 24 - - - - - - - - - - - - - - - - - -	pin 5
	pin 24 - - - - - - - - - - - - - - - - - -	pin 6

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RAM AIR SYSTEM

	ACAU CONNECTOR D10002A		RAM AIR ACTUATOR CONNECTOR D968
RIGHT	pin 24	- - - - - - - - - -	pin 5
	pin 24	- - - - - - - - - -	pin 6

(c) If there is an open circuit, then do these steps:

1) Repair the wiring.
2) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
3) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.
4) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault. Do this step to complete the task:
   a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If there is continuity, then do this step and continue.

1) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

(5) For a problem in the left ram air inlet system, do this check of the ground circuit from ACAU No. 1 to the trailing edge flaps up switch, S1051:

(a) Do a continuity test between pin 33 of connector D458B and structure ground.

NOTE: There should be continuity through a grounded trailing edge flaps up switch, S1051.

(b) If there is no continuity, then do these steps:

1) Disconnect connector D46040J in the main wheel well.
2) Do a check for an open circuit between these pins of connector D458B and connector D46040J:

D458B		D46040J
pin 33	- - - - - - - - - -	pin 14

3) If there is an open circuit, then do these steps:
   a) Repair the wiring.
   b) Re-connect connector D46040J.
   c) Re-install ACAU No. 1. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
   d) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.
4) If there is continuity, then do these steps:
   a) Replace the trailing edge flaps up switch, S1051.

   These are the tasks:

   Flap Limit Switch Removal, AMM TASK 27-51-63-000-801,

   Flap Limit Switch Installation, AMM TASK 27-51-63-400-801.

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b) Re-connect connector D46040J.

c) Re-install ACAU No 1. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

d) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

5) If you corrected the fault, then do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(c) If there is continuity, then continue.

(6) For a problem in the right ram air inlet system, do this check of the ground circuit from ACAU No. 2 to the flap/slat electronics unit, M1746:

(a) Do a continuity test from pin 35 of connector D10002A to structure ground.

NOTE: There should be continuity through a grounded flap/slat electronics unit, M1746.

(b) If there is no continuity, then do these steps:

1) Remove the flap slat electronic module, M1746. To remove the module, do this task: Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801.

2) Do a check for an open circuit between these pins of connector D10002A and connector D728A:

D10002A		D728A
pin 35	- - - - - - - - - - - - - - - - - -	pin C11

3) If there is an open circuit, then do these steps:

a) Repair the wiring.

b) Re-install the flap slat electronic unit, M1746. To install it, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.

c) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

d) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

4) If there is continuity, then do these steps:

a) Replace the flap/ slat electronic unit, M1746.

These are the tasks:

Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801,

Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.

b) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

5) If you corrected the fault, then do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(c) If there is continuity, then continue.

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(7) Do this check for 115 VAC to the ACAU No. 1 (left) or ACAU No. 2 (right):

(a) Remove ACAU No. 1 or ACAU No. 2. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for 115 VAC between pin 49 of connector D458A (left) or pin 49 of connector D10002A (right) and structure ground.

(c) If there is 115 VAC, then do these steps:

1) Install a new air conditioning accessory unit, M1442 (No. 1) or M1443 (No. 2). To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

2) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

3) Do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If there is not 115 VAC, then continue:

(8) Do this check for 115 VAC at the circuit breaker:

(a) Make sure that there is 115 VAC at the load side of the follwing circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

1) If there is 115 VAC, then do these steps:

a) Repair the wiring between the applicable circuit breaker and the connector for the ACAU:

RAM AIR SYSTEM

	CIRCUIT BREAKER	ACAU CONNECTOR
LEFT	**C00399**	**D458A**
	term 2 - - - - - - - - - - - - - - - -	pin 49

RAM AIR SYSTEM

	CIRCUIT BREAKER	ACAU CONNECTOR
RIGHT	**C00400**	**D10002A**
	term 2 - - - - - - - - - - - - - - - -	pin 49

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

2) If there is not 115 VAC, then do these steps:

a) Do this task: DIST/BUS FAULT For GCU 1 - Fault Isolation, 24-21 TASK 815.

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b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the ram air inlet deflector door moves to the fully retracted position, then you corrected the fault.

3) Do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

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J. Fault Isolation Procedure - Modulation Panels Do Not Move to Cruise Position

(1) Do this check of the ram air temperature sensor:

(a) Open these access panels:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

(b) Disconnect the connector D1288 (left) or D1290 (right) from the ram air temperature sensor, T438 (left) or T439 (right).

(c) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then do these steps:

1) Replace the ram air temperature sensor, T438 (left) or T439 (right).

These are the tasks:

Ram Air Control Temperature Sensor Removal, AMM TASK 21-51-50-000-801,

Ram Air Control Temperature Sensor Installation, AMM TASK 21-51-50-400-801.

2) If the RAM DOOR FULL OPEN light stays off, then you corrected the fault. Do these steps to complete the task:

a) Close the applicable access panel:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

3) If the RAM DOOR FULL OPEN light does not stay off, then continue.

(d) If the RAM DOOR FULL OPEN light stays on and the inlet modulation doors close, then do these steps:

1) Re-connect the connector D1288 (left) or D1290 (right) to the ram air temperature sensor, T438 (left) or T439 (right).

2) Replace the ram air actuator, M326 (left) or M327 (right).

These are the tasks:

Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

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Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

3) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:

a) Close the applicable access panel:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

4) If the RAM DOOR FULL OPEN light does not go off and the modulation panels do not close, then continue.

(e) If the RAM DOOR FULL OPEN light stays on and the modulation panels do not close, then do this step and continue:

1) Re-connect the connector D1288 (left) or D1290 (right) to the ram air temperature sensor.

(2) Do this check for 115 VAC at the ram air actuator:

(a) Disconnect connector D966 (left) or D968 (right) from the ram air actuator, M326 (left) or M327 (right).

(b) Do a check for 115 VAC between pins 10 and 11 (ground) of connector D966 (left) or D968 (right).

(c) If there is 115 VAC at pin 10, then do these steps:

1) Replace the ram air actuator, M326 (left) or M327 (right).

These are the tasks:

Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

2) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:

a) Close the applicable access panel:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If there is not 115 VAC, then do this step and continue:

1) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

(3) Do this check for 115 VAC at the ram air controller:

(a) Disconnect connector D970 (left) or D972 (right) from the ram air controller M328 (left) or M329 (right).

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(b) Do a check for 115 VAC between pins 4 and 5 (ground) of connector D970 (left) or D972 (right).

(c) If there is 115 VAC at pin 4, then do these steps:

1) Replace the ram air controller, M328 (left) or M329 (right).

These are the tasks:

Ram Air Inlet Controller Removal, AMM TASK 21-51-20-000-801,

Ram Air Inlet Controller Installation, AMM TASK 21-51-20-400-801.

2) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:

a) Close the applicable access panel:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If there is not 115 VAC at pin 4, then continue.

(4) Do this check of the ground circuit wiring for the ram air controller:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(b) Do a check of the wiring between connector D970 (left) or D972 (right), pin 5 and the ground GD12-AC (left) or GD16-AC (right).

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

1) Repair the wiring.

2) Re-connect connector D970 (left) or D972 (right) to the ram air controller M328 (left) or M329 (right).

3) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

4) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:

a) Close the applicable access panel:

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Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If you do not find a problem with the ground wiring, then continue:

(5) Do this check of the wiring between the ACAU and the ram air controller:

(a) Remove the ACAU. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for an open circuit between these pins:

RAM AIR SYSTEM

	ACAU CONNECTOR		RAM AIR CONTROLLER CONNECTOR
LEFT	**D458B**		**D970**
	pin 6	- - - - - - - - - - - - - - - - - -	pin 4

RAM AIR SYSTEM

	ACAU CONNECTOR		RAM AIR CONTROLLER CONNECTOR
RIGHT	**D458A**		**D972**
	pin 14	- - - - - - - - - - - - - - - - - -	pin 4

(c) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Re-connect connector D970 (left) or D972 (right) to the ram air controller.

4) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:

a) Close the applicable access panel:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If there is continuity, then do this step and continue:

1) Re-connect connector D970 (left) or D972 (right) to the ram air controller.

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(6) For a problem in the left ram air inlet system, do this check of the circuit from the ACAU to the trailing edge flaps up switch, S1051:

(a) Do a continuity check of the wiring between pin 28 of connector D458B and a structural ground.

(b) If there is continuity, then do these steps:

1) Disconnect connector D46040J in the main wheel well.

2) Do a continuity check between pin 14 of connector D46040P and a structural ground.

3) If there is continuity, then do these steps:

a) Replace the trailing edge flaps up switch, S1051.

These are the tasks:

Flap Limit Switch Removal, AMM TASK 27-51-63-000-801,

Flap Limit Switch Installation, AMM TASK 27-51-63-400-801.

b) Re-connect connector D46040.

c) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

d) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

4) If there is no continuity, then do these steps:

a) Repair the wiring between pin 28 of connector D458B and connector D46040J.

b) Re-connect connector D46040.

c) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

d) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

5) If you corrected the fault, then do these steps to complete the task:

a) Close the applicable access panel:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(c) If there is no continuity, then continue.

(7) For a problem in the right ram air inlet system, do this check of the circuit from the ACAU to the flap/slat electronics unit, M1746:

(a) Do a continuity check of the wiring between pin 28 of connector D458A and a structural ground.

(b) If there is continuity, then do these steps:

1) Remove the flap/slat electronics unit, M1746. To remove the unit, do this task: Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801.

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2) Do a check of the wiring between pin 28 of connector D458A and pin C11 of connector D728A.

3) If the wiring check indicates a short to ground, then do these steps:

a) Repair the wiring.

b) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801

c) Re-install the flap/slat electronics unit, M1746. To install the unit, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.

d) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

4) If the wiring check does not indicate a problem, then do these steps:

a) Replace the flat/slat electronics unit, M1746.

These are the tasks:

Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801,

Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.

b) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

5) If you corrected the fault, then do these steps to complete the task:

a) Close the applicable access panel:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(c) If there is no continuity, then continue.

(8) Replace the ACAU, M324.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

1) Do these steps to complete the task:

a) Close the applicable access panel:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

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b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

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K. Fault Isolation Procedure - Modulation Panels Do Not Move to Cruise Position

(1) Do this check of the ram air temperature sensor:

(a) Open these access panels:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

(b) Disconnect the connector D3916 (left) or D3918 (right) from the ram air temperature sensor, T481 (left) or T482 (right).

(c) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then do these steps:

1) Replace the ram air temperature sensor, T481 (left) or T482 (right). To replace it,

These are the tasks:

Ram Air Control Temperature Sensor Removal, AMM TASK 21-51-50-000-801,

Ram Air Control Temperature Sensor Installation, AMM TASK 21-51-50-400-801.

(d) Do the BITE test on the left pack/zone temperature controller M1442 if you replaced the sensor for the aft passenger compartment zone.

1) If the RAM DOOR FULL OPEN light stays off, then you corrected the fault. Do these steps to complete the task:

a) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

or close these access panels:

Number	Name/Location
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

2) If the RAM DOOR FULL OPEN light does not stay off, then continue.

(e) If the RAM DOOR FULL OPEN light stays on and the inlet modulation doors close, then do these steps:

1) Re-connect the connector D3916 (left) or D3918 (right) to the ram air temperature sensor, T481 (left) or T482 (right).

2) Replace the ram air actuator, M326 (left) or M327 (right).

These are the tasks:

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Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

3) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:
   a) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

or close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

   b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.
4) If the RAM DOOR FULL OPEN light does not go off and the modulation panels do not close, then continue.

(f) If the RAM DOOR FULL OPEN light stays on and the modulation panels do not close, then do this step and continue:
   1) Re-connect the connector D3916 (left) or D3918 (right) to the ram air temperature sensor.

(2) Do this check for 115 VAC at the ram air actuator:
   (a) Disconnect connector D966 (left) or D968 (right) from the ram air actuator, M326 (left) or M327 (right).
   (b) Do a check for 115 VAC between pins 10 and 11 (ground) of connector D966 (left) or D968 (right).
   (c) If there is 115 VAC at pin 10, then do these steps:
      1) Replace the ram air actuator, M326 (left) or M327 (right).

         These are the tasks:

         Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

         Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.
      2) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:
         a) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

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Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

or close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If there is not 115 VAC, then do this step and continue:

1) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

(3) Do this check for 115 VAC at the pack/zone temperature controller:

(a) Remove the Pack/zone temperature controller No. 1, M1442 or No. 2, M1443. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a check for 115 VAC between pins B15 and A15 (ground) of connector D3858B (No. 1) or D3860B (No. 2).

(c) If there is 115 VAC at pin B15, then do these steps:

1) Install a new pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

2) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:

a) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

or close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If there is not 115 VAC at pin B15, then continue.

(4) Do this check of the ground circuit wiring for the pack/zone temperature controller:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(b) Do a check of the wiring between connector D3858B (No. 1) or D3860B (No. 2), pin A15 and the ground GD3303-AC (No. 1) or GD3304-AC (No. 2).

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

1) Repair the wiring.

2) Re-install the pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

3) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

4) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:

a) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

or close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(d) If you do not find a problem with the ground wiring, then continue:

(5) Do this check of the wiring between ACAU No. 1 (left) or ACAU No. 2 (right) and the pack/zone temperature controller 1, M1442 or the pack/zone temperature controller 2, M1443:

(a) Remove ACAU No 1 or No 2, M324 or M1445. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Remove the Pack/zone temperature controller No. 1, M1442 or No. 2, M1443. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

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(c) Do a check for an open circuit between these pins:

	RAM AIR SYSTEM ACAU CONNECTOR	RAM AIR SYSTEM PACK/ZONE CONTROLLER CONNECTOR
LEFT	D458A	D3858B
	pin 12	pin A13
	pin 13	pin A12

	RAM AIR SYSTEM ACAU CONNECTOR	RAM AIR SYSTEM PACK/ZONE CONTROLLER CONNECTOR
RIGHT	D10002A	D3860B
	pin 12	pin A13
	pin 13	pin A12

(d) If there is an open circuit, then do these steps:

1) Repair the wiring.
2) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
3) Re-install the pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.
4) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault. Do these steps to complete the task:
   a) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

or close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

   b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(e) If there is continuity, then do this step and continue:

1) Re-install the pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(6) For a problem in the left ram air inlet system, do this check of the circuit from the ACAU No. 1 to the trailing edge flaps up switch, S1051:

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(a) Do a continuity check of the wiring between pin 33 of connector D458B and a structural ground.

(b) If there is continuity, then do these steps:

1) Disconnect connector D46040J in the main wheel well.

2) Do a continuity check between pin 14 of connector D46040P and a structural ground.

3) If there is continuity, then do these steps:

a) Replace the trailing edge flaps up switch, S1051.

These are the tasks:

Flap Limit Switch Removal, AMM TASK 27-51-63-000-801,

Flap Limit Switch Installation, AMM TASK 27-51-63-400-801.

b) Re-connect connector D46040.

c) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

d) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

4) If there is no continuity, then do these steps:

a) Repair the wiring between pin 33 of connector D458B and connector D46040J.

b) Re-connect connector D46040.

c) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

d) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

5) If you corrected the fault, then do these steps to complete the task:

a) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

or close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(c) If there is no continuity, then continue.

(7) For a problem in the right ram air inlet system, do this check of the circuit from the ACAU No. 2 to the flap/slat electronics unit, M1746:

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(a) Do a continuity check of the wiring between pin 33 of connector D10002B and a structural ground.

(b) If there is continuity, then do these steps:

1) Remove the flap/slat electronics unit, M1746. To remove the unit, do this task: Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801.

2) Do a check of the wiring between pin 33 of connector D10002B and pin C11 of connector D728A.

3) If the wiring check indicates a short to ground, then do these steps:

a) Repair the wiring.

b) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801

c) Re-install the flap/slat electronics unit, M1746. To install the unit, do this task: Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.

d) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

4) If the wiring check does not indicate a problem, then do these steps:

a) Replace the flat/slat electronics unit, M1746.

These are the tasks:

Flap/Slat Electronics Unit Removal, AMM TASK 27-51-01-000-801,

Flap/Slat Electronics Unit Installation, AMM TASK 27-51-01-400-801.

b) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

5) If you corrected the fault, then do these steps to complete the task:

a) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

or close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

(c) If there is no continuity, then continue.

(8) Replace ACAU No. 1, M324, or ACAU No. 2, M1455. To replace the ACAU,

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These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) If the RAM DOOR FULL OPEN light goes off and the modulation panels close, then you corrected the fault.

1) Do these steps to complete the task:

a) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

or close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

b) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

HAP 101-999

L. Fault Isolation Procedure - Indication Circuit Problem

(1) Do a check of the wiring between the RAM DOOR FULL OPEN light and the ram air actuator:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT

(b) Open this panel to get access to the actuator for the left ram air inlet system:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

(c) Open this panel to get access to the actuator for the right ram air inlet system:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

(d) Disconnect connector D966 (left) or D968 (right) from the ram air actuator.

(e) Lower the P5 forward overhead panel to get access to the electrical connector on the RAM DOOR FULL OPEN light, L12 (left) or L13 (right).

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(f) Disconnect connector D646 (left) or D680 (right) from the RAM DOOR FULL OPEN light, L12 (left) or L13 (right).

(g) Do a check of the wiring between these pins:

RAM AIR SYSTEM

	RAM DOOR FULL OPEN LIGHT CONN		RAM AIR ACTUATOR CONNECTOR
LEFT	**D646**		**D966**
	pin 28	- - - - - - - - - - - - - - - - - -	pin 7

RAM AIR SYSTEM

	RAM DOOR FULL OPEN LIGHT CONN		RAM AIR ACTUATOR CONNECTOR
RIGHT	**D680**		**D968**
	pin 3	- - - - - - - - - - - - - - - - - -	pin 7

1) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-connect connector D966 (left) or D968 (right) to the ram air actuator, M326 (left) or M327 (right).
   c) Re-connect connector D646 (left) or D680 (right) to the RAM DOOR FULL OPEN light, L12 (left) or the RAM DOOR FULL OPEN light, L13 on the back of the P5-10 Air Conditioning panel.
   d) Raise the P5 forward overhead panel into position and secure the fasteners.
   e) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT

   f) If the RAM DOOR FULL OPEN light goes out, then you corrected the problem.
   g) Close these access panels:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward
191GR	Ram Air Actuator Panel - Forward

2) If you do not find a problem with the wiring, then replace the ram air actuator.
   These are the tasks:
   Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,
   Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

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HAP 101-999 (Continued)

a) Re-connect connector D646 (left) or D680 (right) to the RAM DOOR FULL OPEN light, L12 (left) or the RAM DOOR FULL OPEN light, L13 on the back of the P5-10 Air Conditioning panel.

b) Raise the P5 forward overhead panel into position and secure the fasteners.

c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

d) If the RAM DOOR FULL OPEN light goes out, then you corrected the problem.

3) If you corrected the problem, then do this step to complete the task:

a) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: Return the Airplane to the Ground Mode, AMM TASK 32-09-00-860-802.

HAP 001-013, 015-026, 028-054

M. Fault Isolation Procedure - Indication Circuit Problem

(1) Do a check of the wiring between the RAM DOOR FULL OPEN light and the ram air actuator:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT

(b) Open this panel to get access to the actuator for the left ram air inlet system:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

(c) Open this panel to get access to the actuator for the right ram air inlet system:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

(d) Disconnect connector D966 (left) or D968 (right) from the ram air actuator.

(e) Lower the P5 forward overhead panel to get access to the electrical connector on the RAM DOOR FULL OPEN light, L12 (left) or L13 (right).

(f) Disconnect connector D646 (left) or D680 (right) from the RAM DOOR FULL OPEN light, L12 (left) or L13 (right).

(g) Do a check of the wiring between these pins:

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	RAM AIR SYSTEM		
	RAM DOOR FULL OPEN LIGHT CONN		RAM AIR ACTUATOR CONNECTOR
LEFT	D646		D966
	pin28	- - - - - - - - - - - - - - - - - -	pin 7

	RAM AIR SYSTEM		
	RAM DOOR FULL OPEN LIGHT CONN		RAM AIR ACTUATOR CONNECTOR
RIGHT	D680		D968
	pin 3	- - - - - - - - - - - - - - - - - -	pin 7

1) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-connect connector D966 (left) or D968 (right) to the ram air actuator, M326 (left) or M327 (right).
   c) Re-connect connector D646 (left) or D680 (right) to the RAM DOOR FULL OPEN light, L12 (left) or the RAM DOOR FULL OPEN light, L13 on the back of the P5-10 Air Conditioning panel.
   d) Raise the P5 forward overhead panel into position and secure the fasteners.
   e) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT

   f) If the RAM DOOR FULL OPEN light goes out, then you corrected the fault.
   g) Close these access panels:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward
191GR	Ram Air Actuator Panel - Forward

2) If you do not find a problem with the wiring, then replace the ram air actuator.

   These are the tasks:

   Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

   Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

   a) Re-connect connector D646 (left) or D680 (right) to the RAM DOOR FULL OPEN light, L12 (left) or the RAM DOOR FULL OPEN light, L13 on the back of the P5-10 Air Conditioning panel.
   b) Raise the P5 forward overhead panel into position and secure the fasteners.

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c) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT

d) If the RAM DOOR FULL OPEN light goes out, then you corrected the fault.

e) Do these steps to complete the task:

<1> Close these access panels:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward
191GR	Ram Air Actuator Panel - Forward

(h) Put the airplane in the ground mode. To put the airplane in the ground mode, do this task: AMM TASK 32-09-00-860-802.

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——————— END OF TASK ———————

804. RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation

A. Description

(1) The RAM DOOR FULL OPEN light on the P5-10 air conditioning panel should be on when the airplane is on the ground. In addition, the ram air inlet modulations panels should be fully open and the deflector door should be fully extended. This is the correct configuration for these components when the airplane is on the ground.

(2) The light normally will come on when the air/ground logic retracts the ram air actuator which closes a switch in the actuator to provide a ground for the light.

(3) If the master dim and test system does not provide 28 VDC to the light or if the light is burned out, the light will also fail to come on.

(4) There are two RAM DOOR FULL OPEN lights, one for the left ram air inlet modulation doors and one for the right ram air inlet modulation doors.

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B. Possible Causes

(1) RAM DOOR FULL OPEN light, L12 (left) or L13 (right)

(2) Ram air actuator, M326 (left) or M327 (right)

(3) Air conditioning accessory unit, M324

(4) Proximity switch electronics unit (PSEU), E11

(5) Wiring problem

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C. Possible Causes

(1) RAM DOOR FULL OPEN light, L12 (left) or L13 (right)

(2) Ram air actuator, M326 (left) or M327 (right)

(3) Air conditioning accessory unit, M324 (left) or M1455 (right)

(4) Proximity switch electronics unit (PSEU), M2061

(5) Wiring problem

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D. Circuit Breakers

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

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
E	11	C00313	INDICATOR MASTER DIM SECT 1

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT

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E. Circuit Breakers

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

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	11	C00313	INDICATOR MASTER DIM SECT 1

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT

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F. Related Data

(1) (SSM 21-51-14)

(2) (SSM 21-51-24)

(3) (SSM 33-18-11)

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(4) (SSM 33-18-36)

(5) (WDM 21-51-14)

(6) (WDM 21-51-24)

(7) (WDM 33-18-36)

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G. Related Data

(1) (SSM 21-51-14)

(2) (WDM 21-51-14)

(3) (SSM 21-51-24)

(4) (WDM 21-51-14)

(5) (SSM 33-18-36)

(6) (WDM 33-18-36)

HAP ALL

H. Initial Evaluation

(1) If the RAM DOOR FULL OPEN light is on, then there was an intermittent fault.

(2) If the RAM DOOR FULL OPEN light is not on, put the LIGHTS TEST/BRT/DIM switch on the P1-3 captain's instrument panel to TEST.

(a) If the RAM DOOR FULL OPEN light comes on, then do the Fault Isolation Procedure - Ram Air Actuator Circuit Problem below.

(b) If the RAM DOOR FULL OPEN light does not come on, then do the Fault Isolation Procedure - Indication Circuit Problem below.

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I. Fault Isolation Procedure - Ram Air Actuator Circuit Problem

(1) Do this check for 115 VAC to the ram air actuator:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT

(b) Open this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

to get access to the left ram air actuator.

(c) Open this access panel:

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Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

to get access to the right ram air actuator.

(d) Disconnect the connector D966 (left) or D968 (right) from the ram air actuator.

(e) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT

(f) Do a check for 115 VAC between pin 1 of connector D966 (left) or D968 (right) and structure ground.

(g) If there is 115 VAC between pin 1 and structure ground, then do to the Fault Isolation Procedure - Indication Circuit Problem.

(h) If there is not 115 VAC between pin 1 and structure ground, then continue.

(2) Do this check of the ram air actuator ground circuit wiring:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(b) Do a check of the wiring between pin 11 of connector D966 (left) or D968 (right) and the ground GD68-AC (left) or GD72-AC (right).

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

1) Repair the wiring.

2) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

3) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

4) If the RAM DOOR FULL OPEN light comes on, then you corrected the problem.

5) Close this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

or open this access panel:

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Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

as applicable.

(d) If you do not find a problem with the wiring, then continue.

(3) Do this check of the wiring from the ACAU to the ram air actuator, M326 (left) or M327 (right):

(a) Remove the ACAU. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for an open circuit between these pins:

	RAM AIR SYSTEM	
	ACAU CONNECTOR	**RAM AIR ACTUATOR CONNECTOR**
LEFT	**D458B**	**D966**
	pin 32 - - - - - - - - - - - - - - - - - -	pin 1

	RAM AIR SYSTEM	
	ACAU CONNECTOR	**RA AIR ACTUATOR CONNECTOR**
RIGHT	**D458A**	**D968**
	pin 32 - - - - - - - - - - - - - - - - - -	pin 1

(c) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

4) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault. Close

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

or open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

as applicable.

(d) If there is continuity, then do these steps and continue:

1) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

2) Close this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

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or open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

as applicable.

(4) Do this check of the air/ground logic circuit for the air conditioning accessory unit (ACAU), M324:

(a) For the left system, do a continuity check from pin 44 of connector D458B to a structural ground.

(b) For the right system, do a continuity check from pin 7 of connector D458A to a structural ground.

(c) If there is no continuity, then do these steps:

1) Do this task: Air/Ground Relay Fault - Fault Isolation, 32-09 TASK 804.

2) Do the corrective action for any fault found.

3) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

4) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(d) If there is continuity, then continue.

(5) Do this check for voltage to the air conditioning accessory unit (ACAU), M324:

(a) Do a check for 115 VAC between pin 15 of connector D458B (left) or pin 11 of connector D458A (right) and structure ground.

(b) Do a check for 28 VDC between pin 41 of connector D458B (left) or D458A (right) and structure ground.

(c) If there is voltage, then do these steps:

1) Install a new ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

2) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(d) If there is no voltage, then continue.

(6) Do this check for 115 VAC at the circuit breaker:

(a) Make sure there is 115 VAC at the load side of circuit breaker C399 (left) or C400 (right) on the P6-4 panel.

1) If there is 115 VAC, then do these steps:

a) Repair the wiring between the applicable circuit breaker and the connector for the ACAU:

	RAM AIR SYSTEM		
	CIRCUIT BREAKER		**ACAU CONNECTOR**
LEFT	**C00399**		**D458B**
	term 2	- - - - - - - - - - - - - - - -	pin 15

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RAM AIR SYSTEM		
	CIRCUIT BREAKER	**ACAU CONNECTOR**
RIGHT	**C00400**	**D458A**
	term 2 - - - - - - - - - - - - - - - -	pin 11

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

2) If there is not 115 VAC, then do these steps:

a) Do this task: DIST/BUS FAULT For GCU 1 - Fault Isolation, 24-21 TASK 815.

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(7) Do this check for 28 VDC at the circuit breaker:

(a) Make sure there is 28 VDC at the load side of circuit breaker C265 (left) or C266 (right) on the P6-4 panel.

1) If there is 28 VDC, then do these steps:

a) Repair the wiring between the applicable circuit breaker and the connector for the ACAU:

RAM AIR SYSTEM		
	CIRCUIT BREAKER	**ACAU CONNECTOR**
LEFT	**C00265**	**D458B**
	term L - - - - - - - - - - - - - - - -	pin 15

RAM AIR SYSTEM		
	CIRCUIT BREAKER	**ACAU CONNECTOR**
RIGHT	**C00266**	**D458A**
	term L - - - - - - - - - - - - - - - -	pin 11

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

2) If there is not 28 VDC, then do these steps:

a) Do this task: DIST/BUS FAULT For GCU 1 - Fault Isolation, 24-21 TASK 815.

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

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J. Fault Isolation Procedure - Ram Air Actuator Circuit Problem

(1) Do this check for 115 VAC to the ram air actuator:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT

(b) Open this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

to get access to the left ram air actuator.

(c) Open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

to get access to the right ram air actuator.

(d) Disconnect the connector D966 (left) or D968 (right) from the ram air actuator.

(e) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT

(f) Do a check for 115 VAC between pin 1 of connector D966 (left) or D968 (right) and structure ground.

(g) If there is 115 VAC between pin 1 and structure ground, then do to the Fault Isolation Procedure - Indication Circuit Problem.

(h) If there is not 115 VAC between pin 1 and structure ground, then continue.

(2) Do this check of the ram air actuator ground circuit wiring:

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

(b) Do a check of the wiring between pin 11 of connector D966 (left) or D968 (right) and the ground GD68-AC (left) or GD72-AC (right).

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

1) Repair the wiring.

2) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

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3) Close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT

4) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

5) Close this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

or open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

as applicable.

(d) If you do not find a problem with the wiring, then continue.

(3) Do this check of the wiring from the left or right ACAU, M324 (left) or M1455 (right) to the ram air actuator, M326 (left) or M327 (right):

(a) Remove the left or right ACAU. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for an open circuit between these pins:

	RAM AIR SYSTEM	
	ACAU CONNECTOR	**RAM AIR ACTUATOR CONNECTOR**
LEFT	**D458A**	**D966**
	pin 36 - - - - - - - - - - - - - - - - - -	pin 1

	RAM AIR SYSTEM	
	ACAU CONNECTOR	**RAM AIR ACTUATOR CONNECTOR**
RIGHT	**D10002A**	**D968**
	pin 36 - - - - - - - - - - - - - - - - - -	pin 1

(c) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.

4) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault. Close

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Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

or open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

as applicable.

(d) If there is continuity, then do these steps and continue:

1) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.
2) Close this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

or open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

as applicable.

(4) Do this check of the air/ground logic circuit for the air conditioning accessory unit (ACAU), M324 (left), or M1455 (right):

(a) For the left system, do a continuity check from pin 35 of connector D458A to a structural ground.

(b) For the right system, do a continuity check from pin 35 of connector D10002A to a structural ground.

(c) If there is no continuity, then do these steps:

1) Do this task: Air/Ground Relay Fault - Fault Isolation, 32-09 TASK 804.
2) Do the corrective action for any fault found.
3) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
4) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(d) If there is continuity, then continue.

(5) Do this check for 115 VAC to the air conditioning accessory unit (ACAU), M324 (left), or M1455 (right):

(a) Do a check for 115 VAC between pin 49 of connector D458A (left) or D10002A (right) and structure ground.

(b) If there is not 115 VAC at pin 49, then do these steps:

1) Do a check for 115 VAC at the load side of circuit breaker C399 (left) or C400 (right) on the P6-4 panel.
2) If there is 115 VAC, then do these steps:

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a) Repair the wiring between the applicable circuit breaker and the connector for the ACAU, M324 (left) or M1455 (right):

RAM AIR SYSTEM		
	CIRCUIT BREAKER	**ACAU CONNECTOR**
LEFT	**C00399**	**D458A**
	term L - - - - - - - - - - - - - - - -	pin 49

RAM AIR SYSTEM		
	CIRCUIT BREAKER	**ACAU CONNECTOR**
RIGHT	**C00400**	**D10002A**
	term L - - - - - - - - - - - - - - - -	pin 49

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

3) If there is not 115 VAC, then do these steps:

a) Do this task: DIST/BUS FAULT For GCU 1 - Fault Isolation, 24-21 TASK 815.

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(c) If there is 115 VAC at pin 49, then continue.

(6) Do this check for 28 VDC to the air conditioning accessory unit (ACAU), M324 (left), or M1455 (right):

(a) Do a check for 28 VDC between pin 59 of connector D458A (left) or D10002A (right) and structure ground.

(b) If there is not 28 VDC at pin 59, then do these steps:

1) Make sure there is 28 VDC at the load side of circuit breaker C555 (left) or C1178 (right) on the P6-4 panel.

2) If there is 28 VDC, then do these steps:

a) Repair the wiring between the applicable circuit breaker and the connector for the ACAU, M324 (left) or M1455 (right):

RAM AIR SYSTEM		
	CIRCUIT BREAKER	**ACAU CONNECTOR**
LEFT	**C00555**	**D458A**
	term L - - - - - - - - - - - - - - - -	pin 59

RAM AIR SYSTEM		
	CIRCUIT BREAKER	**ACAU CONNECTOR**
RIGHT	**C01178**	**D10002A**
	term L - - - - - - - - - - - - - - - -	pin 59

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b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

3) If there is not 28 VDC, then do these steps:

a) Do this task: DIST/BUS FAULT For GCU 1 - Fault Isolation, 24-21 TASK 815.

b) Re-install the ACAU. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

c) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(c) If there is 28 VDC at pin 59, then continue.

(7) Install a new ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

HAP 101-999

K. Fault Isolation Procedure - Indication Circuit Problem

(1) If both the left and right RAM DOOR FULL OPEN lights do not come on, then do this step:

(a) Replace the P5-10 air conditioning panel.

(b) If the RAM DOOR FULL OPEN lights come on, then you corrected the fault.

(c) If the RAM DOOR FULL OPEN lights do not come on, then continue.

(2) Do this check for 28 VDC to the RAM DOOR FULL OPEN light:

(a) Release the fasteners that hold the P5-10 forward overhead panel in position and let the panel swing down.

(b) Disconnect connector D646 from the P5-10 air conditioning panel.

(c) Do a check for 28 VDC between pin 5 of connector D646 and structure ground.

(d) If there is 28 VDC between pin 5 of connector D646 and ground, then do these steps:

1) Replace the P5-10 air conditioning panel.

2) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

3) If the RAM DOOR FULL OPEN light does not come on, then continue.

(e) If there is not 28 VDC between pin 5 of connector D646 and ground, then continue.

(3) Do this check for 28 VDC at the circuit breaker that supplies power to the RAM DOOR FULL OPEN light:

(a) Make sure there is 28 VDC at the load side of circuit breaker C313 on the P6-3 panel.

(b) If there is 28 VDC, then do these steps:

1) Repair the wiring between the load side of circuit breaker C313 on the P6-3 panel and pin 5 of connector D646 on the P5-10 air conditioning panel.

2) Re-connect connector D646 to the P5-10 air conditioning panel.

3) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

4) If the RAM DOOR FULL OPEN light does not come on, then continue.

(c) If there is not 28 VDC, then do these steps:

1) Do this task: DIST/BUS FAULT For GCU 1 - Fault Isolation, 24-21 TASK 815.

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2) Re-connect connector D646 to the P5-10 air conditioning panel.
3) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(4) Do this check of the wiring between the RAM DOOR FULL OPEN light and the ram air actuator:
(a) Disconnect connector D680 (right) from the P5-10 air conditioning panel.
(b) Open this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

to get access to the left ram air actuator.
(c) Open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

to get access to the right ram air actuator.
(d) Remove connector D966 (left) or D968 (right) from the ram air actuator.
(e) Do a check of the wiring between these pins:

	RAM AIR SYSTEM		
	P5-10 PANEL CONNECTOR		**RAM AIR ACTUATOR CONNECTOR**
LEFT	**D646**		**D966**
	pin 28	- - - - - - - - - - - - - - - - - -	pin 7

	RAM AIR SYSTEM		
	P5-10 PANEL CONNECTOR		**RAM AIR ACTUATOR CONNECTOR**
RIGHT	**D680**		**D968**
	pin 3	- - - - - - - - - - - - - - - - - -	pin 7

(f) If there is a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.
3) Re-connect connector D646 (left) or D680 (right) to the P5-10 air conditioning panel
4) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.
5) Do these steps to complete the task:
a) Close this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

or open this access panel:

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HAP 101-999 (Continued)

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

as applicable.

b) Raise the P5 forward overhead panel into position and tighten the fasteners that hold it there.

6) Raise the P5 forward overhead panel into its normal position and secure the fasteners that hold it in place.

7) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(g) If there is continuity, then do these steps and continue:

1) Re-connect connector D646 (left) or D680 (right).

2) Raise the P5 forward overhead panel into its normal position and secure the fasteners that hold it in place.

(5) Do this check of the actuator ground wiring for the RAM DOOR FULL OPEN light:

(a) Do a check of the wiring between pin 8 of connector D966 (left) or D968 (right) and the ground GD68-DC (left) or GD72-DC (right).

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

1) Repair the wiring.

2) Re-connect connector D966 (left) or D968 (right) to the actuator.

3) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

4) Close this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

or open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

(c) If you do not find a problem with the wiring, then continue.

(6) Replace the ram air actuator M326 or M327.

These are the tasks:

Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

(a) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

HAP 001-013, 015-026, 028-054

L. Fault Isolation Procedure - Indication Circuit Problem

(1) If both the left and right RAM DOOR FULL OPEN lights do not come on, then do this step:

(a) Replace the P5-10 air conditioning panel.

(b) If the RAM DOOR FULL OPEN lights come on, then you corrected the fault.

(c) If the RAM DOOR FULL OPEN lights do not come on, then continue.

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(2) Do this check for 28 VDC to the RAM DOOR FULL OPEN light:
   (a) Release the fasteners that hold the P5-10 forward overhead panel in position and let the panel swing down.
   (b) Disconnect connector D646 from the P5-10 air conditioning panel.
   (c) Do a check for 28 VDC between pin 5 of connector D646 and structure ground.
   (d) If there is 28 VDC between pin 5 of connector D646 and ground, then do these steps:
      1) Replace the P5-10 air conditioning panel.
      2) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.
      3) If the RAM DOOR FULL OPEN light does not come on, then continue.
   (e) If there is not 28 VDC between pin 5 of connector D646 and ground, then continue.

(3) Do this check for 28 VDC at the circuit breaker that supplies power to the RAM DOOR FULL OPEN light:
   (a) Make sure there is 28 VDC at the load side of circuit breaker C313 on the P6-3 panel.
   (b) If there is 28 VDC, then do these steps:
      1) Repair the wiring between the load side of circuit breaker C313 on the P6-3 panel and pin 5 of connector D646 on the P5-10 air conditioning panel.
      2) Re-connect connector D646 to the P5-10 air conditioning panel.
      3) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.
      4) If the RAM DOOR FULL OPEN light does not come on, then continue.
   (c) If there is not 28 VDC, then do these steps:
      1) Do this task: DIST/BUS FAULT For GCU 1 - Fault Isolation, 24-21 TASK 815.
      2) Re-connect connector D646 to the P5-10 air conditioning panel.
      3) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(4) Do this check of the wiring between the RAM DOOR FULL OPEN light and the ram air actuator:
   (a) Disconnect connector D680 (right) from the P5-10 air conditioning panel.
   (b) Open this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

   to get access to the left ram air actuator.
   (c) Open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

   to get access to the right ram air actuator.
   (d) Remove connector D966 (left) or D968 (right) from the ram air actuator.
   (e) Do a check of the wiring between these pins:

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	RAM AIR SYSTEM	
	P5-10 PANEL CONNECTOR	RAM AIR ACTUATOR CONNECTOR
LEFT	D646	D966
	pin 28 - - - - - - - - - - - - - - - - - -	pin 7

	RAM AIR SYSTEM	
	P5-10 PANEL CONNECTOR	RAM AIR ACTUATOR CONNECTOR
RIGHT	D680	D968
	pin 3 - - - - - - - - - - - - - - - - - -	pin 7

(f) If there is a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect connector D966 (left) or D968 (right) to the ram air actuator.
3) Re-connect connector D646 (left) or D680 (right) to the P5-10 air conditioning panel
4) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.
5) Do these steps to complete the task:
   a) Close this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

   or open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

   as applicable.
   b) Raise the P5 forward overhead panel into position and tighten the fasteners that hold it there.
6) Raise the P5 forward overhead panel into its normal position and secure the fasteners that hold it in place.
7) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

(g) If there is continuity, then do these steps and continue:

1) Re-connect connector D646 (left) or D680 (right).
2) Raise the P5 forward overhead panel into its normal position and secure the fasteners that hold it in place.

(5) Do this check of the actuator ground wiring for the RAM DOOR FULL OPEN light:

(a) Do a check of the wiring between pin 8 of connector D966 (left) or D968 (right) and the ground GD68-DC (left) or GD72-DC (right).

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

1) Repair the wiring.

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2) Re-connect connector D966 (left) or D968 (right) to the actuator.
3) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.
4) Close this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

or open this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

(c) If you do not find a problem with the wiring, then continue.

(6) Replace the ram air actuator M326 or M327.
These are the tasks:
Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,
Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.
(a) If the RAM DOOR FULL OPEN light comes on, then you corrected the fault.

——————— END OF TASK ———————

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801. Low Limit (35F) Controller BITE Procedure

A. General

(1) There are two identical 35F controllers, one for each pack. The controllers are located in the respective pack bay just outboard of the water separator.

(2) You do the 35F controller BITE using the rotary switch on the controller.

(3) The BITE test does an internal check of the 35F controller, and LRU interface checks for the 35F control valve and the 35F temperature sensor. A red NO GO light identifies a specific failure which is found by the 35F controller.

B. BITE Procedure

(1) Do the BITE procedure for the 35F controller: (Figure 201)

(a) Do these steps to do the BITE on the left 35F controller:

1) Put the L PACK or switch to the OFF position.

2) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(b) Do these steps to do the BITE on the right 35F controller:

1) Put the R PACK or switch to the OFF position.

2) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(c) Push the GO and the NO GO lights on the controller.

1) Make sure the lights come on when you push them.

(d) Rotate the TEST SWITCH to position 1.

1) Make sure the GO light comes on.

(e) Rotate the TEST SWITCH to position 2.

1) Make sure the GO light comes on.

2) Make sure the 35F control valve goes to the full open position.

(f) Rotate the TEST SWITCH to position 3.

1) Make sure the GO light comes on.

(g) Rotate the TEST SWITCH to position 4.

1) Make sure the GO light comes on.

2) Make sure the 35F control valve goes to the full closed position.

(h) Rotate the TEST SWITCH to position 5.

1) Make sure the GO light comes on.

(i) Rotate the TEST SWITCH to the FLIGHT position.

(j) If a NO GO light comes on, then refer to the table at the at the end of this task to find the fault isolation task for the applicable maintenance message.

——————— END OF TASK ———————

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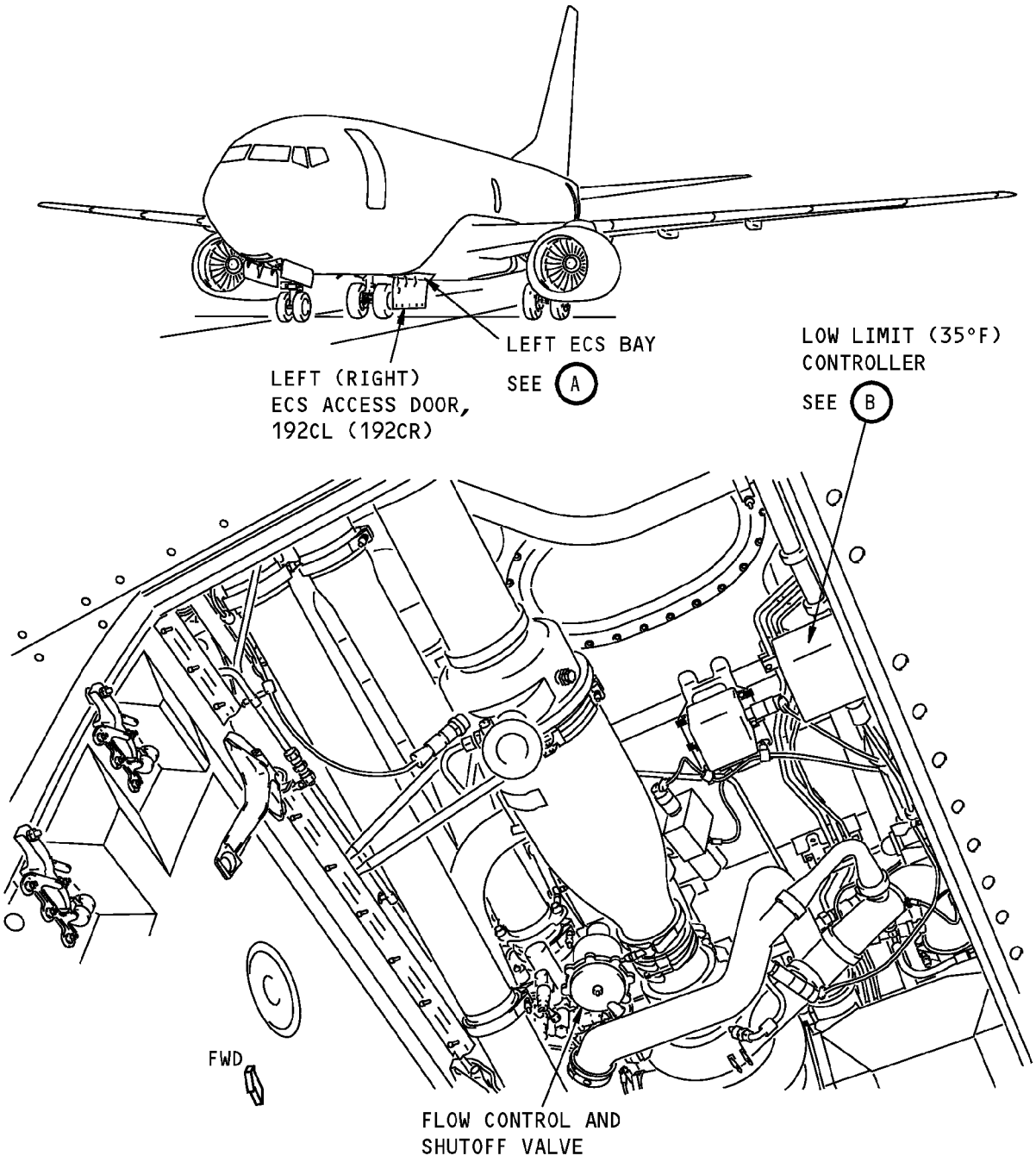

LEFT ECS BAY
(RIGHT ECS BAY IS OPPOSITE)

A

Low Limit 35 Degree Fahrenheit Controller BITE Test
Figure 201 (Sheet 1 of 2)/ 21-52-00-990-802

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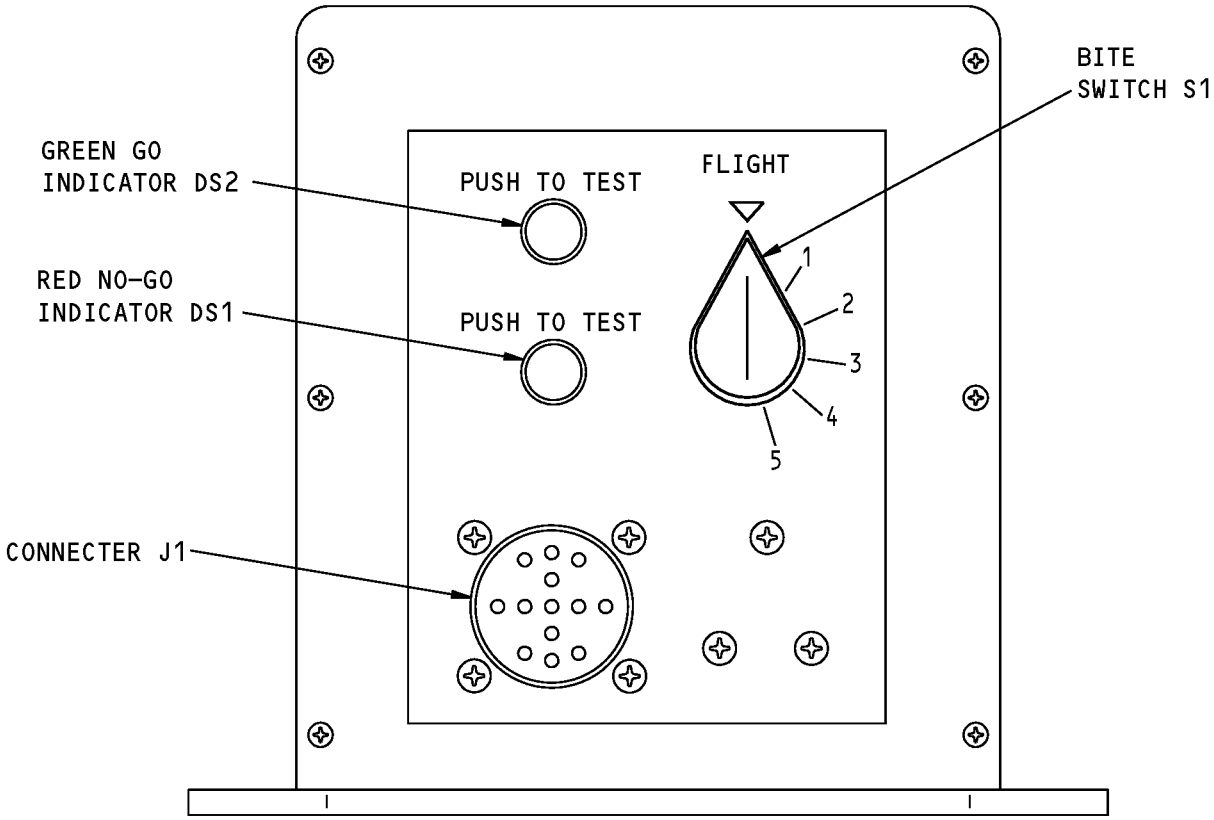

LOW LIMIT 35°F CONTROLLER

B

Low Limit 35 Degree Fahrenheit Controller BITE Test
Figure 201 (Sheet 2 of 2)/ 21-52-00-990-802

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
35 DEG CONT L	POSN 1 - NO GO	21-52 TASK 802
35 DEG CONT L	POSN 2 - GO, 35F CONTROL VALVE NOT OPEN	21-52 TASK 812
35 DEG CONT L	POSN 2 - NO GO	21-52 TASK 804
35 DEG CONT L	POSN 3 - NO GO	21-52 TASK 806
35 DEG CONT L	POSN 4 - GO, 35F CONTROL VALVE NOT CLOSED	21-52 TASK 813
35 DEG CONT L	POSN 4 - NO GO	21-52 TASK 808
35 DEG CONT L	POSN 5 - NO GO	21-52 TASK 810
35 DEG CONT R	POSN 1 - NO GO	21-52 TASK 803
35 DEG CONT R	POSN 2 - GO, 35F CONTROL VALVE NOT OPEN	21-52 TASK 814
35 DEG CONT R	POSN 2 - NO GO	21-52 TASK 805
35 DEG CONT R	POSN 3 - NO GO	21-52 TASK 807
35 DEG CONT R	POSN 4 - GO, 35F CONTROL VALVE NOT CLOSED	21-52 TASK 815
35 DEG CONT R	POSN 4 - NO GO	21-52 TASK 809
35 DEG CONT R	POSN 5 - NO GO	21-52 TASK 811

802. Left 35 degree F Controller Fail (Pos 1) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 1 - NO GO

B. Possible Causes

(1) Left 35 degree F controller, M223

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT

D. Related Data

(1) SSM 21-51-16

(2) WDM 21-51-16

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E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left 35 degree F controller in the left air conditioning equipment bay.
These are the tasks:
Low Limit (35 Degree F) Controller Removal, AMM TASK 21-51-31-000-801,
Low Limit (35 Degree F) Controller Installation, AMM TASK 21-51-31-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

———————— END OF TASK ————————

803. Right 35 degree F Controller Fail (Pos 1) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 1 - NO GO

B. Possible Causes

(1) Right 35 degree F controller, M224

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

D. Related Data

(1) SSM 21-51-26

(2) WDM 21-51-26

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right 35 degree F controller in the right air conditioning equipment bay.
These are the tasks:
Low Limit (35 Degree F) Controller Removal, AMM TASK 21-51-31-000-801,
Low Limit (35 Degree F) Controller Installation, AMM TASK 21-51-31-400-801.

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(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

——————— END OF TASK ———————

804. Left 35 degree F Controller Fail (Pos 2) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 2 - NO GO

B. Possible Causes

(1) Left 35 degree F controller, M223

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT

D. Related Data

(1) SSM 21-51-16

(2) WDM 21-51-16

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left 35 degree F controller in the left air conditioning equipment bay.
These are the tasks:
Low Limit (35 Degree F) Controller Removal, AMM TASK 21-51-31-000-801,
Low Limit (35 Degree F) Controller Installation, AMM TASK 21-51-31-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

——————— END OF TASK ———————

805. Right 35 degree F Controller Fail (Pos 2) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 2 - NO GO

B. Possible Causes

(1) Right 35 degree F controller, M224

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

D. Related Data

(1) SSM 21-51-26

(2) WDM 21-51-26

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right 35 degree F controller in the right air conditioning equipment bay.
These are the tasks:
Low Limit (35 Degree F) Controller Removal, AMM TASK 21-51-31-000-801,
Low Limit (35 Degree F) Controller Installation, AMM TASK 21-51-31-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

——————— END OF TASK ———————

806. Left 35 degree F Controller Fail (Pos 3) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 3 - NO GO

B. Possible Causes

(1) Left 35 degree F controller, M223

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT

D. Related Data

(1) SSM 21-51-16

(2) WDM 21-51-16

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E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left 35 degree F controller in the left air conditioning equipment bay.
These are the tasks:
Low Limit (35 Degree F) Controller Removal, AMM TASK 21-51-31-000-801,
Low Limit (35 Degree F) Controller Installation, AMM TASK 21-51-31-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

———————— END OF TASK ————————

807. Right 35 degree F Controller Fail (Pos 3) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 3 - NO GO

B. Possible Causes

(1) Right 35 degree F controller, M224

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

D. Related Data

(1) SSM 21-51-26

(2) WDM 21-51-26

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right 35 degree F controller in the right air conditioning equipment bay.
These are the tasks:
Low Limit (35 Degree F) Controller Removal, AMM TASK 21-51-31-000-801,
Low Limit (35 Degree F) Controller Installation, AMM TASK 21-51-31-400-801.

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(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

——————— END OF TASK ———————

808. Left 35 degree F Controller Fail (Pos 4) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 4 - NO GO

B. Possible Causes

(1) Left 35 degree F controller, M223

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT

D. Related Data

(1) SSM 21-51-16

(2) WDM 21-51-16

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left 35 degree F controller in the left air conditioning equipment bay. These are the tasks:
Low Limit (35 Degree F) Controller Removal, AMM TASK 21-51-31-000-801,
Low Limit (35 Degree F) Controller Installation, AMM TASK 21-51-31-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

——————— END OF TASK ———————

809. Right 35 degree F Controller Fail (Pos 4) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 4 - NO GO

B. Possible Causes

(1) Right 35 degree F controller, M224

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

D. Related Data

(1) SSM 21-51-26

(2) WDM 21-51-26

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right 35 degree F controller in the right air conditioning equipment bay.
These are the tasks:
Low Limit (35 Degree F) Controller Removal, AMM TASK 21-51-31-000-801,
Low Limit (35 Degree F) Controller Installation, AMM TASK 21-51-31-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

——————— END OF TASK ———————

810. Left 35 degree F Temp Sensor Failed - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 5 - NO GO

B. Possible Causes

(1) Left 35 degree F temp sensor, T430

(2) Wiring problem

(3) Left 35 degree F controller, M223

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT

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D. Related Data

(1) SSM 21-51-16

(2) WDM 21-51-16

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left 35 degree F sensor in the left air conditioning equipment bay.

These are the tasks:

Low Limit (35 Degree Fahrenheit) Temperature Sensor Removal, AMM TASK 21-51-32-000-801,

Low Limit (35 Degree Fahrenheit) Temperature Sensor Installation, AMM TASK 21-51-32-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between left 35 degree F controller and the left 35 degree F sensor:

(a) Disconnect connector D706 from the left 35 degree F controller.

(b) Disconnect connector D710 from the left 35 degree F sensor.

(c) Measure the resistance between these pairs of pins of connector D706 of the left 35 degree F controller and connector D710 of the left 35 degree F sensor:

D706		D710	RESISTANCE
pin 6	- - - - - - - - - - - - - - - - - -	pin 1	9.5-10.5K ohms
pin 7	- - - - - - - - - - - - - - - - - -	pin 1	1.7-1.9 K ohms
pin 6	- - - - - - - - - - - - - - - - - -	pin 2	0 ohms

(d) Do the steps that follow for each pair of pins in which the resistance is not in the range specified:

1) Pins 6 and 1

a) Replace the left 35 degree F control parallel resistor, R665 in the left ECS bay (WDM 21-51-16)

2) Pins 7 and 1

a) Replace the left 35 degree F control series resistor, R666 in the left ECS bay (WDM 21-51-16)

3) Pins 6 and 2

a) Repair the wiring.

4) Re-connect connector D706 to the left 35 degree F controller

5) Re-connect connector D710 to the left 35 degree F sensor.

6) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D710 to the left 35 degree F sensor.

(3) Install a new 35 degree F controller.

These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

——————— END OF TASK ———————

811. Right 35 degree F Temp Sensor Failed - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 5 - NO GO

B. Possible Causes

(1) Right 35 degree F temp sensor, T431

(2) Wiring problem

(3) Right 35 degree F controller, M224

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

D. Related Data

(1) SSM 21-51-26

(2) WDM 21-51-26

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right 35 degree F sensor in the right air conditioning equipment bay.

These are the tasks:

Low Limit (35 Degree Fahrenheit) Temperature Sensor Removal, AMM TASK 21-51-32-000-801,

Low Limit (35 Degree Fahrenheit) Temperature Sensor Installation, AMM TASK 21-51-32-400-801.

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(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between right 35 degree F controller and the right 35 degree F sensor:

(a) Disconnect connector D708 from the right 35 degree F controller.

(b) Disconnect connector D712 from the right 35 degree F sensor.

(c) Measure the resistance between these pairs of pins of connector D708 of the right 35F controller and connector D712 of the right 35F sensor:

D708		D712	RESISTANCE
pin 6	- - - - - - - - - - - - - - - - - -	pin 1	9.5-10.5K ohms
pin 7	- - - - - - - - - - - - - - - - - -	pin 1	1.7-1.9K ohms
pin 6	- - - - - - - - - - - - - - - - - -	pin 2	0 ohms

(d) Do the steps that follow for each pair of pins in which the resistance is not in the range specified:

1) Pins 6 and 1

a) Replace the right 35 degree F control parallel resistor, R667 in the right ECS bay (WDM 21-51-26).

2) Pins 7 and 1

a) Replace the right 35 degree F control series resistor, R668 in the right ECS bay (WDM 21-51-26).

3) Pins 6 and 2

a) Repair the wiring.

4) Re-connect connector D708 to the right 35 degree F controller.

5) Re-connect connector D712 to the right 35 degree F sensor.

6) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D712 to the right 35 degree F sensor.

(3) Install a new 35F controller.

These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

———————— END OF TASK ————————

812. Left 35 degree F Control Valve Failed (Not Open) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 2 - GO, 35F CONTROL VALVE NOT OPEN

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B. Possible Causes

(1) Left 35 degree F control valve, V27

(2) Wiring problem

(3) Left 35 degree F controller, M223

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT

D. Related Data

(1) SSM 21-51-16

(2) WDM 21-51-16

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left 35 degree F control valve in the left air conditioning equipment bay.

These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between left 35 degree F controller and the left 35 degree F control valve:

(a) Disconnect connector D706 from the left 35 degree F controller

(b) Disconnect connector D702 from the left 35 degree F control valve.

(c) Do a wiring check between these pins of connector D706 of the left 35 degree F controller and connector D702 of the left 35 degree F control valve:

D706		**D702**
pin 2	- - - - - - - - - - - - - - - - - -	pin 1
pin 3	- - - - - - - - - - - - - - - - - -	pin 2

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

1) Repair the wiring.

2) Re-connect connector D706 to the left 35 degree F controller

3) Re-connect connector D702 to the left 35 degree F control valve.

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4) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D702 to the left 35degree F control valve.

(3) Install a new 35 degree F controller.

These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

——————— END OF TASK ———————

813. Left 35 degree F Control Valve Failed (Not Closed) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 4 - GO, 35 F CONTROL VALVE NOT CLOSED

B. Possible Causes

(1) Left 35 degree F control valve, V27

(2) Wiring problem

(3) Left 35 degree F controller, M223

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT

D. Related Data

(1) SSM 21-51-16

(2) WDM 21-51-16

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left 35 degree F control valve in the left air conditioning equipment bay.

These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

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(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between left 35 degree F controller and the left 35 degree F control valve:

(a) Disconnect connector D706 from the left 35 degree F controller.

(b) Disconnect connector D702 from the left 35 degree F control valve.

(c) Do a wiring check between these pins of connector D706 of the left 35 degree F controller and connector D702 of the left 35 degree F control valve:

D706		D702
pin 2	- - - - - - - - - - - - - - - - - - -	pin 1
pin 3	- - - - - - - - - - - - - - - - - - -	pin 2

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

1) Repair the wiring.

2) Re-connect connector D706 to the left 35 degree F controller

3) Re-connect connector D702 to the left 35 degree F control valve.

4) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D702 to the left 35 degree F control valve.

(3) Install a new 35 degree F controller.

These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

———————— END OF TASK ————————

814. Right 35 degree F Control Valve Failed (Not Open) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 2 - GO, 35F CONTROL VALVE NOT OPEN

B. Possible Causes

(1) Right 35 degree F control valve, V28

(2) Wiring problem

(3) Left 35 degree F controller, M223

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

D. Related Data

(1) SSM 21-51-26

(2) WDM 21-51-26

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right 35 degree F control valve in the right air conditioning equipment bay.

These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between right 35 degree F controller and the right 35 degree F control valve:

(a) Disconnect connector D708 from the right 35 degree F controller.

(b) Disconnect connector D704 from the right 35 degree F control valve.

(c) Do a wiring check between these pins of connector D708 of the right 35 degree F controller and connector D704 of the right 35 degree F control valve:

D708		D704
pin 2	- - - - - - - - - - - - - - - - - -	pin 1
pin 3	- - - - - - - - - - - - - - - - - -	pin 2

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

1) Repair the wiring.

2) Re-connect connector D708 to the right 35 degree F controller

3) Re-connect connector D704 to the right 35 degree F control valve.

4) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D704 to the right 35 degree F control valve.

(3) Install a new 35 degree F controller.

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These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

——————— END OF TASK ———————

815. Right 35 degree F Control Valve Failed (Not Closed) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) POSN 4 - GO, 35F CONTROL VALVE NOT CLOSED

B. Possible Causes

(1) Right 35 degree F control valve, V28

(2) Wiring problem

(3) Left 35 degree F controller, M223

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

D. Related Data

(1) SSM 21-51-26

(2) WDM 21-51-26

E. Initial Evaluation

(1) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right 35 degree F control valve in the right air conditioning equipment bay.

These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between right 35 degree F controller and the right 35 degree F control valve:

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(a) Disconnect connector D708 from the right 35 degree F controller.

(b) Disconnect connector D704 from the right 35 degree F control valve.

(c) Do a wiring check between these pins of connector D708 of the right 35 degree F controller and connector D704 of the right 35 degree F control valve:

D708		D704
pin 2	- - - - - - - - - - - - - - - - - -	pin 1
pin 3	- - - - - - - - - - - - - - - - - -	pin 2

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

1) Repair the wiring.

2) Re-connect connector D708 to the right 35 degree F controller.

3) Re-connect connector D704 to the right 35 degree F control valve.

4) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D704 to the right 35 degree F control valve.

(3) Install a new 35 degree F controller.

These are the tasks:

Low Limit (35 Degree F) Valve Removal, AMM TASK 21-51-30-000-801,

Low Limit (35 Degree F) Valve Installation, AMM TASK 21-51-30-400-801.

(a) Do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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

———————— END OF TASK ————————

816. Left PACK TRIP OFF Light Illuminated and Will Not Reset - Fault Isolation

A. Description

(1) The left PACK TRIP OFF light on the P5-10 air conditioning module is on and will not reset.

B. Possible Causes

(1) Left compressor discharge overheat switch, S2

(2) Left turbine inlet overheat switch, S1

(3) Control cabin duct overheat switch, S3

(4) Wiring problem

(5) Air conditioning accessory unit (left pack overheat relay, K8), M324

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-15)

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(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Push the TRIP RESET switch on the air conditioning module on the P5 panel.

(2) If the PACK TRIP OFF light goes off, then there was an intermittent fault.

(3) If the PACK TRIP OFF light stays on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do these steps to do a check of the left compressor discharge overheat switch, S2:

(a) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(b) Disconnect connector D532 from the left compressor discharge overheat switch.

(c) Push the TRIP RESET switch.

(d) If the PACK TRIP OFF light goes out, then do these steps:

1) Replace the compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

2) Re-connect connector D532 to the left compressor discharge overheat switch, S2.

3) If the PACK TRIP OFF light is still off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(e) If the PACK TRIP OFF light is still on, then continue.

1) Re-connect connector D532 to the left compressor discharge overheat switch, S2.

(2) Do these steps to do a check of the left turbine inlet overheat switch, S1:

(a) Disconnect connector D530 from the left turbine inlet overheat switch, S1.

(b) Push the TRIP RESET switch.

(c) If the PACK TRIP OFF light goes out, then do these steps:

1) Replace the turbine inlet overheat switch, S1.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

2) Re-connect connector D530 to the left turbine inlet overheat switch, S1.

3) If the PACK TRIP OFF light is still off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

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Number	Name/Location
192CL	Air Conditioning Access Door

(d) If the PACK TRIP OFF light is still on, then continue.

1) Re-connect connector D530 to the left turbine inlet overheat switch, S1.

(3) Do these steps to do a check of the control cabin duct overheat switch, S3:

(a) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Disconnect connector D534 from the control cabin duct overheat switch, S3.

(c) Push the TRIP RESET switch.

(d) If the PACK TRIP OFF light goes out, then do these steps:

1) Replace the control cabin duct overheat switch, S3.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

2) Re-connect connector D534 to the control cabin duct overheat switch, S3.

3) If the PACK TRIP OFF light is still off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(e) If the PACK TRIP OFF light stays on, then continue.

1) Re-connect connector D534 to the control cabin duct overheat switch, S3.

(4) Do this check of the wiring:

(a) Do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for a short from pin 33 at connector D458B on the E4-1 shelf to structure ground (WDM 21-15-15).

(c) If there is a short to ground, then do these steps:

1) Examine and repair the wiring between the air conditioning accessory unit, M324, and the left pack and control cabin duct overheat switches, S1, S2, and S3 (WDM 21-15-15).

2) Install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801

3) Push the PACK RESET switch.

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4) If the PACK TRIP OFF light is off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(d) If there is not a short to ground, then continue.

(5) Install a new ACAU.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Push the TRIP RESET switch.

(b) If the PACK TRIP OFF light is off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

——————— END OF TASK ———————

817. Right PACK TRIP OFF Light Illuminated and Will Not Reset - Fault Isolation

A. Description

(1) The right PACK TRIP OFF light on the P5-10 air conditioning module is on and will not reset.

B. Possible Causes

(1) Right compressor discharge overheat switch, S5

(2) Right turbine inlet overheat switch, S4

(3) Passenger cabin duct overheat switch, S6

(4) Wiring problem

(5) Air conditioning accessory unit (right pack overheat relay, K3), M324

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

E. Initial Evaluation

(1) Push the TRIP RESET switch on the air conditioning module on the P5 panel.

(2) If the PACK TRIP OFF light goes off, then there was an intermittent fault.

(3) If the PACK TRIP OFF light stays on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do these steps to do a check of the right compressor discharge overheat switch, S5:

(a) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(b) Disconnect connector D538 from the right compressor discharge overheat switch.

(c) Push the TRIP RESET switch.

(d) If the PACK TRIP OFF light goes out, then do these steps:

1) Replace the compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

2) Re-connect connector D538 to the right compressor discharge overheat switch, S5.

3) If the PACK TRIP OFF light is still off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(e) If the PACK TRIP OFF light is still on, then continue.

1) Re-connect connector D538 to the right compressor discharge overheat switch, S5.

(2) Do these steps to do a check of the right turbine inlet overheat switch, S4:

(a) Disconnect connector D536 from the right turbine inlet overheat switch, S4.

(b) Push the TRIP RESET switch.

(c) If the PACK TRIP OFF light goes out, then do these steps:

1) Replace the turbine inlet overheat switch, S4.

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These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

2) Re-connect connector D536 to the right turbine inlet overheat switch, S4.

3) If the PACK TRIP OFF light is still off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(d) If the PACK TRIP OFF light is still on, then continue.

1) Re-connect connector D536 to the right turbine inlet overheat switch, S4.

(3) Do these steps to do a check of the passenger cabin duct overheat switch, S6:

(a) Remove the ceiling liner that is five windows forward of the overwing escape hatches.

To remove the liner, do this task: Sculptured Ceiling Panel Removal, AMM TASK 25-21-45-000-801.

(b) Disconnect connector D540 from the passenger cabin duct overheat switch, S6.

(c) Push the TRIP RESET switch.

(d) If the PACK TRIP OFF light goes out, then do these steps:

1) Replace the passenger cabin duct overheat switch, S6.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

2) Re-connect connector D540 to the passenger cabin duct overheat switch, S6.

3) If the PACK TRIP OFF light is still off, then you corrected the fault. Do these steps to complete the task:

a) Install the ceiling liner that is five windows forward of the overwing escape hatches.

To install the liner, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

b) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(e) If the PACK TRIP OFF light stays on, then continue.

1) Re-connect connector D540 to the passenger cabin duct overheat switch, S6.

(4) Do this check of the wiring:

(a) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

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(c) Do a check for a short from pin 33 at connector D458A on the E4-1 shelf to structure ground (WDM 21-15-25).

(d) If there is a short to ground, then do these steps:

1) Examine and repair the wiring between the air conditioning accessory unit, M324, and the right pack and passenger cabin duct overheat switches, S4, S5, and S6 (WDM 21-15-25).

2) Re-install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801

3) Push the PACK RESET switch.

4) If the PACK TRIP OFF light is off, then you corrected the fault. Do these steps to complete the task:

a) Install the ceiling liner that is five windows forward of the overwing escape hatches.

To install the liner, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

b) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

c) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(e) If there is not a short to ground, then continue.

1) Install the ceiling liner that is five windows forward of the overwing escape hatches.

To install the liner, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

2) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(5) Install a new ACAU.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Push the TRIP RESET switch.

(b) If the PACK TRIP OFF light is off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

END OF TASK

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818. Left PACK TRIP OFF Light On During Ground Operation and Stays OFF After Reset - Fault Isolation

A. Description

(1) The left PACK TRIP OFF light on the P5-10 air conditioning module comes on during ground operation and stays off after reset.

B. Possible Causes

(1) Fan bypass check valve door in the primary plenum/diffuser assembly - damaged or missing

(a) An indication of this fault would be little or no airflow from the ram air exhaust duct outlet.

(2) Dirty heat exchangers

(3) Left ram air door not fully open.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do this check of the fan bypass check valve in the primary plenum/diffuser assembly:

(a) Remove conditioned air from the airplane as follows:

1) Do this task: AMM TASK 21-00-00-800-802.

(b) Get access to the fan bypass check valve in the primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(c) Open the access panel on the bottom of the primary plenum/diffuser assembly.

(d) Make sure that the fan bypass check valve door is in place and that the door hinge is not damaged.

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(e) If the fan bypass check valve door is gone or damaged, do these tasks to replace the primary plenum/diffuser assembly:

1) AMM TASK 21-51-03-000-802-001

2) AMM TASK 21-51-03-400-801-001.

(f) Make sure that the access panel is installed on the bottom of the primary plenum/diffuser assembly.

(g) Operate the left air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

(h) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Remove conditioned air from the airplane as follows:

a) Do this task: AMM TASK 21-00-00-800-802.

(i) If the PACK TRIP OFF light comes on, then continue.

(2) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, do the applicable corrective action.

2) Operate the left air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(3) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

———————— END OF TASK ————————

819. Right PACK TRIP OFF Light On During Ground Operation and Stays OFF After Reset - Fault Isolation

A. Description

(1) The right PACK TRIP OFF light on the P5-10 air conditioning module comes on during ground operation and stays off after reset.

B. Possible Causes

(1) Fan bypass check valve door in the primary plenum/diffuser assembly - damaged or missing

(a) An indication of this condition would be little or no airflow from the ram air exhaust outlet.

(2) Dirty heat exchangers

(3) Right ram air door not fully open.

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do this check of the fan bypass check valve in the primary plenum/diffuser assembly:

(a) Remove conditioned air from the airplane as follows:

1) Do this task: AMM TASK 21-00-00-800-802.

(b) Get access to the fan bypass check valve in the primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(c) Open the access panel on the bottom of the primary plenum/diffuser assembly.

(d) Make sure that the fan bypass check valve door is in place and that the door hinge is not damaged.

(e) If the fan bypass check valve door is gone or damaged, do these tasks to replace the primary plenum/diffuser assembly:

1) AMM TASK 21-51-03-000-802-001

2) AMM TASK 21-51-03-400-801-001.

(f) Make sure that the access panel is installed on the bottom of the primary plenum/diffuser assembly.

(g) Operate the right air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

(h) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Remove conditioned air from the airplane as follows:

a) AMM TASK 21-00-00-800-802.

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(i) If the PACK TRIP OFF light comes on, then continue.

(2) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

2) Operate the right air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(3) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

820. Left PACK TRIP OFF Light On During Climb and Stays OFF After Reset - Fault Isolation

A. Description

(1) The left PACK TRIP OFF light on the P5-10 air conditioning module comes on during climb and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Left ram air door not fully open.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

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(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

2) Operate the left air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(2) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

821. Right PACK TRIP OFF Light On During Climb and Stays OFF After Reset - Fault Isolation

A. Description

(1) The right PACK TRIP OFF light on the P5-10 air conditioning module comes on during climb and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Left ram air door not fully open.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

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E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

2) Operate the right air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(2) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

822. Left PACK TRIP OFF Light On During Approach and Stays OFF After Reset - Fault Isolation

A. Description

(1) The left PACK TRIP OFF light on the P5-10 air conditioning module comes on during approach and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Left ram air door not fully open.

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(2) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

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823. Right PACK TRIP OFF Light On During Approach and Stays OFF After Reset - Fault Isolation

A. Description

(1) The right PACK TRIP OFF light on the P5-10 air conditioning module comes on during approach and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Left ram air door not fully open.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(2) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

824. Left PACK TRIP OFF Light On During Cruise and Stays OFF After Reset - Fault Isolation

A. Description

(1) The left PACK TRIP OFF light on the P5-10 air conditioning module comes on during cruise and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

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825. Right PACK TRIP OFF Light On During Cruise and Stays OFF After Reset - Fault Isolation

A. Description

(1) The right PACK TRIP OFF light on the P5-10 air conditioning module comes on during cruise and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

828. Left PACK TRIP OFF Light On On the Ground and Comes on Again After Reset - Fault Isolation

A. Description

(1) The left PACK TRIP OFF light on the P5-10 air conditioning module comes on during ground operation and comes on again after reset.

B. Possible Causes

(1) Fan bypass check valve door in the primary plenum/diffuser assembly - damaged or missing

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(2) Air cycle machine, high drag during start or seized.

(3) Dirty heat exchangers

(4) Blockage or unwanted material in the ram air ducting

(5) Ram air control system failure

(6) Pack overheat switches:

(a) Compressor discharge overheat switch, S2

(b) Turbine inlet overheat switch, S1

(c) Pack discharge duct overheat switch, S3

(7) Air mix valve, V22 stuck open.

(8) 35°F control system failure

(9) Bleed air too hot

(10) Cabin temperature control system failure

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
C	4	C00257	AIR CONDITIONING OVERHEAT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT

D. Related Data

(1) (SSM 21-51-14)

(2) (WDM 21-51-14)

(3) (SSM 21-51-15)

(4) (WDM 21-51-15)

(5) (SSM 21-51-16)

(6) (WDM 21-51-16)

(7) (SSM 21-61-21)

(8) (WDM 21-61-21)

E. Initial Evaluation

(1) Do these steps to make sure the operation of the air cycle machine is satisfactory:

NOTE: With the APU as the pneumatic source this check will make sure the ACM starts with the highest duct pressure available.

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(a) Set the BLEED 1 and BLEED 2 switches on the P5-10 air conditioning panel to OFF.

(b) Do this task: Supply Pressure to the Pneumatic System with the APU, AMM TASK 36-00-00-860-803.

(c) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(d) Do a check of the airflow at the exhaust duct outlet for the left ram air system.

1) If there is little or no airflow at the exhaust duct outlet, then do these steps:

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

b) Go to the Fault Isolation Procedure.

2) If the airflow at the exhaust duct outlet is satisfactory, then continue.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do this check of the fan bypass check valve in the primary plenum/diffuser assembly:

(a) Remove conditioned air from the airplane as follows:

1) Do this task: AMM TASK 21-00-00-800-802.

(b) Get access to the fan bypass check valve in the primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(c) Open the access panel on the bottom of the primary plenum/diffuser assembly.

(d) Make sure the fan bypass check valve door is in place and that the door hinge is not damaged.

(e) If the fan bypass check valve door is gone or damaged, do these tasks to replace the primary plenum/diffuser assembly:

1) AMM TASK 21-51-03-000-802-001

2) AMM TASK 21-51-03-400-801-001.

(f) Make sure that the access panel is installed on the bottom of primary plenum/diffuser assembly.

(g) Operate the left air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

(h) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Remove conditioned air from the airplane as follows:

a) Do this task: AMM TASK 21-00-00-800-802

(i) If the PACK TRIP OFF light comes on, then continue.

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(2) If there was little or no airflow at the exhaust duct outlet for the left ram air system when you performed the Initial Evaluation, then do this torque check of the left pack air cycle machine or replace the ACM.

Do this task:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-801-001.

(a) Put the air cycle machine in a horizontal position, similar to its installed position.

(b) Make sure that you can turn the rotating components of the ACM with 20 inch-pounds of torque applied on the axial nut just aft of the fan impeller.

(c) If more than 20 inch-pounds of torque is required to turn the ACM, then install a new air cycle machine and the pneumatic system should be checked for sources of contamination.

Do this task:

Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK TRIP OFF light does not come on, then you corrected the fault.

3) If the PACK TRIP OFF light comes on, then continue.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(d) If the ACM does rotate with 20 inch-pounds of torque, then do the steps that follow:

1) Do this task to install the air cycle machine: Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

(3) Examine the left pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(4) Do the BITE test of the left pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

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(5) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(6) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(7) Do these steps to do a check of the ram air modulation system:

(a) Look at the left pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK TRIP OFF light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(8) Check to see if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(9) Replace the left pack compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

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(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(10) Replace the left pack turbine inlet overheat switch, S1.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(11) Replace the left pack outlet duct overheat switch, S3.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(12) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the CONT CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, do these steps:

1) Replace the left pack air mix valve, V22.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

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829. Right PACK TRIP OFF Light On On the Ground and Comes on Again After Reset - Fault Isolation

A. Description

(1) The right PACK TRIP OFF light on the P5-10 air conditioning module comes on during ground operation and comes on again after reset.

B. Possible Causes

(1) Fan bypass check valve door in the primary plenum/diffuser assembly - damaged or missing

(2) Air cycle machine

(3) Dirty heat exchangers

(4) Blockage or unwanted material in the ram air ducting

(5) Ram air control system failure

(6) Pack overheat switches:

(a) Compressor discharge overheat switch, S5

(b) Turbine inlet overheat switch, S4

(c) Pack discharge duct overheat switch, S6

(7) Air mix valve, V23

(8) 35°F control system failure

(9) Bleed air too hot

(10) Cabin temperature control system failure

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT
C	4	C00257	AIR CONDITIONING OVERHEAT
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT

D. Related Data

(1) (SSM 21-51-24)

(2) (WDM 21-51-24)

(3) (SSM 21-51-25)

(4) (WDM 21-51-25)

(5) (SSM 21-51-26)

(6) (WDM 21-51-26)

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(7) (SSM 21-61-22)

(8) (WDM 21-61-22)

E. Initial Evaluation

(1) Do these steps to make sure the operation of the right air cycle machine is satisfactory:

(a) Set the BLEED 1 and BLEED 2 switches on the P5-10 air conditioning panel to OFF.

(b) Do this task: Supply Pressure to the Pneumatic System with the APU, AMM TASK 36-00-00-860-803.

(c) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(d) Do a check of the airflow at the exhaust duct outlet for the right ram air system:

1) If there is little or no airflow at the exhaust duct outlet, then do these steps:

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

b) Go to the Fault Isolation Procedure.

2) If the airflow at the exhaust duct outlet is satisfactory, then continue.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do this check of the fan bypass check valve in the primary plenum/diffuser assembly as follows:

(a) Remove conditioned air from the airplane as follows:

1) Do this task: AMM TASK 21-00-00-800-802.

(b) Get access to the fan bypass check valve in the primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(c) Open the access panel on the bottom of the primary plenum/diffuser assembly.

(d) Make sure that the fan bypass check valve door is in place and that the door hinge is not damaged.

(e) If the fan bypass check valve door is gone or damaged, do these tasks to replace the primary plenum/diffuser assembly:

1) AMM TASK 21-51-03-000-802-001

2) AMM TASK 21-51-03-400-801-001.

(f) Make sure that the access panel is installed on the bottom of the primary plenum/diffuser assembly.

(g) Operate the right air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

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(h) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Remove conditioned air from the airplane as follows:

a) Do this task: AMM TASK 21-00-00-800-802.

(i) If the PACK TRIP OFF light comes on, then continue.

(2) If there was little or no airflow at the exhaust duct outlet for the right ram air system when you performed the Initial Evaluation, then do this torque check of the right pack air cycle machine or replace the ACM.

Do this task:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-801-001.

(a) Put the air cycle machine in a horizontal position, similar to its installed position.

(b) Make sure that you can turn the rotating components of the ACM with 20 inch-pounds of torque applied on the axial nut just aft of the fan impeller.

(c) If more than 20 inch-pounds of torque is required to turn the ACM, then install a new air cycle machine and the pneumatic system should be checked for sources of contamination.

Do this task:

Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK TRIP OFF light does not come on, then you corrected the fault.

3) If the PACK TRIP OFF light comes on, then continue.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(d) If the ACM does rotate with 20 inch-pounds of torque, then do the steps that follow:

1) Do this task to install the air cycle machine: Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

(3) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(4) Do the BITE test of the right pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

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2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(5) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(6) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(7) Do these steps to do a check of the ram air modulation system:

(a) Look at the right pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK TRIP OFF light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(8) Check to see if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

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(b) If there was not a bleed trip off, then continue.

(9) Replace the right pack compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(10) Replace the right pack turbine inlet overheat switch, S4.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(11) Replace the right pack outlet duct overheat switch, S6.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(12) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the PASS CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, do these steps:

1) Replace the right pack air mix valve, V23.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

830. Left PACK TRIP OFF Light On at Cruise and Comes on Again After Reset - Fault Isolation

A. Description

(1) The left PACK TRIP OFF light on the P5-10 air conditioning module comes on during cruise and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Pack overheat switches:

(a) Compressor discharge overheat switch, S2

(b) Turbine inlet overheat switch, S1

(c) Pack discharge duct overheat switch, S3

(4) Air mix valve, V22

(5) 35°F control system failure

(6) Bleed air too hot

(7) Cabin temperature control system failure

(8) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
C	4	C00257	AIR CONDITIONING OVERHEAT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT

D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

(3) (SSM 21-51-16)

(4) (WDM 21-51-16)

(5) (SSM 21-61-21)

(6) (WDM 21-61-21)

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E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the left pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the left pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(3) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(4) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

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(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(5) Check to see if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Replace the left pack compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(7) Replace the left pack turbine inlet overheat switch, S1.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(8) Replace the left pack outlet duct overheat switch, S3.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(9) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the CONT CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, do these steps:

1) Replace the left pack air mix valve, V22.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the position indicator is in the full COLD position, then continue.

(10) Replace the left pack air cycle machine.

These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-801-001,

Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

831. Right PACK TRIP OFF Light On at Cruise and Comes on Again After Reset - Fault Isolation

A. Description

(1) The right PACK TRIP OFF light on the P5-10 air conditioning module comes on during cruise and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Pack overheat switches:

(a) Compressor discharge overheat switch, S5

(b) Turbine inlet overheat switch, S4

(c) Pack discharge duct overheat switch, S6

(4) Air mix valve, V23

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(5) 35°F control system failure

(6) Bleed air too hot

(7) Cabin temperature control system failure

(8) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT
C	4	C00257	AIR CONDITIONING OVERHEAT
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

(3) (SSM 21-51-26)

(4) (WDM 21-51-26)

(5) (SSM 21-61-22)

(6) (WDM 21-61-22)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

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(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the right pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(3) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(4) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(5) Check to see if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Replace the right pack compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

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Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(7) Replace the right pack turbine inlet overheat switch, S4.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(8) Replace the right pack outlet duct overheat switch, S6.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(9) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the PASS CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, do these steps:

1) Replace the right pack air mix valve, V23.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the position indicator is in the full COLD position, then continue.

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(10) Replace the right pack air cycle machine.

These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-801-001,

Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

———————— END OF TASK ————————

832. Left PACK TRIP OFF Light On During Approach and Comes on Again After Reset - Fault Isolation

A. Description

(1) The left PACK TRIP OFF light on the P5-10 air conditioning module comes on during approach and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Ram air control system failure

(4) Pack overheat switches:

(a) Compressor discharge overheat switch, S2

(b) Turbine inlet overheat switch, S1

(c) Pack discharge duct overheat switch, S3

(5) Air mix valve, V22

(6) 35°F control system failure

(7) Bleed air too hot

(8) Cabin temperature control system failure

(9) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
C	4	C00257	AIR CONDITIONING OVERHEAT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT

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D. Related Data

(1) (SSM 21-51-14)

(2) (WDM 21-51-14)

(3) (SSM 21-51-15)

(4) (WDM 21-51-15)

(5) (SSM 21-51-16)

(6) (WDM 21-51-16)

(7) (SSM 21-61-21)

(8) (WDM 21-61-21)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the left pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the left pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

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(3) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(4) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(5) Do these steps to do a check of the ram air modulation system:

(a) Look at the left pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK TRIP OFF light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(6) Check to see if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(7) Replace the left pack compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

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(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(8) Replace the left pack turbine inlet overheat switch, S1.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(9) Replace the left pack outlet duct overheat switch, S3.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(10) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the CONT CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, do these steps:

1) Replace the left pack air mix valve, V22.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the position indicator is in the full COLD position, then continue.

(11) Replace the left pack air cycle machine.

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These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-801-001,

Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

833. Right PACK TRIP OFF Light On During Approach and Comes on Again After Reset - Fault Isolation

A. Description

(1) The right PACK TRIP OFF light on the P5-10 air conditioning module comes on during approach and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Ram air control system failure

(4) Pack overheat switches:

(a) Compressor discharge overheat switch, S5

(b) Turbine inlet overheat switch, S4

(c) Pack discharge duct overheat switch, S6

(5) Air mix valve, V23

(6) 35°F control system failure

(7) Bleed air too hot

(8) Cabin temperature control system failure

(9) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT
C	4	C00257	AIR CONDITIONING OVERHEAT
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT

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D. Related Data

(1) (SSM 21-51-24)

(2) (WDM 21-51-24)

(3) (SSM 21-51-25)

(4) (WDM 21-51-25)

(5) (SSM 21-51-26)

(6) (WDM 21-51-26)

(7) (SSM 21-61-22)

(8) (WDM 21-61-22)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the right pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

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(3) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(4) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(5) Do these steps to do a check of the ram air modulation system:

(a) Look at the right pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK TRIP OFF light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(6) Check to see if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(7) Replace the right pack compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

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(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(8) Replace the right pack turbine inlet overheat switch, S4.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(9) Replace the right pack outlet duct overheat switch, S6.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(10) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the PASS CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, do these steps:

1) Replace the right pack air mix valve, V23.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the position indicator is in the full COLD position, then continue.

(11) Replace the right pack air cycle machine.

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These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-801-001,

Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

834. Left PACK TRIP OFF Light On During Climb and Comes on Again After Reset - Fault Isolation

A. Description

(1) The left PACK TRIP OFF light on the P5-10 air conditioning module comes on during climb and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Ram air control system failure

(4) Pack overheat switches:

(a) Compressor discharge overheat switch, S2

(b) Turbine inlet overheat switch, S1

(c) Pack discharge duct overheat switch, S3

(5) Air mix valve, V22

(6) 35°F control system failure

(7) Bleed air too hot

(8) Cabin temperature control system failure

(9) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
C	4	C00257	AIR CONDITIONING OVERHEAT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT

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D. Related Data

(1) (SSM 21-51-14)

(2) (WDM 21-51-14)

(3) (SSM 21-51-15)

(4) (WDM 21-51-15)

(5) (SSM 21-51-16)

(6) (WDM 21-51-16)

(7) (SSM 21-61-21)

(8) (WDM 21-61-21)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the left pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the left pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

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(3) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(4) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(5) Do these steps to do a check of the ram air modulation system:

(a) Look at the left pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK TRIP OFF light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(6) Check to see if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(7) Replace the left pack compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

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(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(8) Replace the left pack turbine inlet overheat switch, S1.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(9) Replace the left pack outlet duct overheat switch, S3.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(10) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the CONT CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, do these steps:

1) Replace the left pack air mix valve, V22.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the position indicator is in the full COLD position, then continue.

(11) Replace the left pack air cycle machine.

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These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-801-001,

Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

835. Right PACK TRIP OFF Light On During Climb and Comes on Again After Reset - Fault Isolation

A. Description

(1) The right PACK TRIP OFF light on the P5-10 air conditioning module comes on during climb and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Ram air control system failure

(4) Pack overheat switches:

(a) Compressor discharge overheat switch, S5

(b) Turbine inlet overheat switch, S4

(c) Pack discharge duct overheat switch, S6

(5) Air mix valve, V23

(6) 35°F control system failure

(7) Bleed air too hot

(8) Cabin temperature control system failure

(9) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT
C	4	C00257	AIR CONDITIONING OVERHEAT
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT

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D. Related Data

(1) (SSM 21-51-24)

(2) (WDM 21-51-24)

(3) (SSM 21-51-25)

(4) (WDM 21-51-25)

(5) (SSM 21-51-26)

(6) (WDM 21-51-26)

(7) (SSM 21-61-22)

(8) (WDM 21-61-22)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK TRIP OFF light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK TRIP OFF light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the right pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

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(3) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(4) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(5) Do these steps to do a check of the ram air modulation system:

(a) Look at the right pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK TRIP OFF light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(6) Check to see if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(7) Replace the right pack compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

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(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(8) Replace the right pack turbine inlet overheat switch, S4.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(9) Replace the right pack outlet duct overheat switch, S6.

These are the tasks:

Pack Discharge Duct Overheat Switch Removal, AMM TASK 21-51-42-000-804-001,

Pack Discharge Duct Overheat Switch Installation, AMM TASK 21-51-42-400-804-001.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK TRIP OFF light comes on, then continue.

(10) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the PASS CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, do these steps:

1) Replace the right pack air mix valve, V23.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK TRIP OFF light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the position indicator is in the full COLD position, then continue.

(11) Replace the right pack air cycle machine.

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These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-801-001,

Air Cycle Machine (ACM) Installation, AMM TASK 21-51-04-400-801-001.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK TRIP OFF light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

856. Pack Outlet Temperature Too Hot or Too Cold - Fault Isolation

A. Description

(1) This task is for fault code 215 350 00.

(2) This fault isolation procedure is used if the data obtained from the Pack Flow Control and Pack Cooling System Check (AMM TASK 21-51-00-943-801) indicates a problem with the temperature of the pack outlet air before it is conditioned for distribution to the airplane flight deck and passenger compartment.

B. Possible Causes

(1) 35°F control valve

(2) 35°F control module

(3) 35°F sensor

(4) Air mix valve V23 (V22).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT

D. Related Data

(1) SSM 21-51-16

(2) WDM 21-51-16

E. Initial Evaluation

(1) Evaluate the pack outlet temperature and flow for the AUTO, HIGH and APU HIGH pack flow modes. Do this task:

AMM TASK 21-51-00-943-801.

(2) If the temperature of the pack outlet air is within the range of 35°F to 39°F, then there was an intermittent fault.

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(3) If the temperature of the pack outlet air is too low (34°F or lower), then do the Pack Outlet Temperature Is 34°F or Lower - Fault Isolation procedure.

(4) If the temperature of the pack outlet air is too high (40°F or higher), then do the Pack Outlet Temperature is 40°F or Higher - Fault Isolation procedure.

F. Pack Outlet Temperature Is 34°F or Lower - Fault Isolation Procedure

(1) Supply electrical power. Do this task::

AMM TASK 24-22-00-860-811.

(2) Open the applicable air conditioning bay door:

(a) Open these access panels:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door

(3) Do the low limit (35°F) controller BITE procedure. Do this task:

Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

G. Pack Outlet Temperature Is 40°F or Higher - Fault Isolation Procedure

(1) If the ambient temperature is greater than 110°F and/or the humidity is greater than 50%, the outlet pack temperature is satisfactory.

(2) If the ambient air temperature is less than 110°F, the ambient humidity is less than 50% and the pack airflow output is lower than expected, then do this task:

Pack Air Flow Is Too Low or Too High - Fault Isolation, 21-52 TASK 857.

(3) If the ambient air temperature is less than 110°F, the ambient humidity is less than 50% and the pack airflow output is satisfactory, then do the steps for the Air Mix Valve Installation Test in this task:

AMM TASK 21-61-02-400-801.

H. Repair Confirmation

(1) Evaluate the pack outlet temperature and flow for the AUTO, HIGH and APU HIGH pack flow modes. Do this task::

AMM TASK 21-51-00-943-801.

(2) If the temperature of the air through the pack airflow/temperature diagnostics tool is within the range of 35°F to 39°F, then you corrected the fault.

———————— END OF TASK ————————

857. Pack Air Flow Is Too Low or Too High - Fault Isolation

A. Description

(1) This task is for fault code 215 351 00.

(2) Low air conditioning pack flow can contribute to pressurization problems.

(3) High air conditioning pack flow is an indication of water droplets in the pack outlet air. This condition is an indication that the performance of the water separator coalescer bag is not satisfactory.

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B. Possible Causes

(1) Coalescer bag

(2) Pack flow control and shutoff valve

(3) Blocked or contaminated heat exchangers.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT

D. Related Data

(1) 737-SL-21-075

E. Initial Evaluation

(1) Do the Pack Flow Control and Pack Cooling System Check:

AMM TASK 21-51-00-943-801.

(2) If the pack air flow was satisfactory for the three modes of pack operation, then there was an intermittent fault.

(3) If the pack air flow was too high or too low, then do the applicable Fault Isolation Procedure below.

F. Pack Air Flow is Too High - Fault Isolation Procedure

(1) If the pack flow is too high, then do this task clean the coalescer bag:

AMM TASK 21-51-05-100-801.

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

G. Pack Air Flow is Too Low - Fault Isolation Procedure.

(1) If the pack control and shutoff valve was open in the APU High Flow mode, then do the following steps:

(a) Inspect the coalescer bag.

1) Replace the bag if it is dirty.

(b) Clean the heat exchangers. To clean the heat exchangers, do this task:

AMM TASK 21-51-03-000-801.

(2) If the pack flow control and shutoff valve was not open in the APU High Flow mode, then do the Operational Test of the Pack Flow Control Valve:

AMM TASK 21-51-00-700-802.

(a) If the operational test of the pack flow control valve was not satisfactory, then replace the valve:

1) Do this task: AMM TASK 21-51-01-000-801-001.

2) Do this task: AMM TASK 21-51-01-400-801-001.

3) Do the Repair Confirmation at the end of this task.

4) If the Repair Confirmation is satisfactory, then you corrected the fault.

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

(b) If the operational test of the pack flow control was satisfactory, then continue.

(3) Visually inspect the coalescer bag.

(4) If the coalescer bag appears to be damaged or contaminated, then replace the bag:

(a) Do this task: AMM TASK 21-51-05-020-801.

(b) Do this task: AMM TASK 21-51-05-400-801.

(5) Do these steps to clean the heat exchangers off-wing:

(a) Remove the heat exchangers/plenum diffuser for the applicable pack: Do this task:

AMM TASK 21-51-03-000-802-001.

(b) Clean the heat exchangers in accordance with the manufacturer's instructions.

(c) Do a pressure flow test in accordance with the manufacturer's instructions to make sure that there is sufficient air flow through the cooling air side and the bleed air side of the heat exchanger.

(d) Do this task: AMM TASK 21-51-03-400-801-001.

(e) If time constraints do not allow for cleaning and testing the heat exchanger, then replace the heat exchangers with either new or serviceable units:

1) Do this task: AMM TASK 21-51-03-000-802-001.

2) Do this task: AMM TASK 21-51-03-400-801-001.

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

H. Repair Confirmation

(1) Do the Confidence Check of the Airplane Ability to Maintain Cabin Pressure in Flight on Single Pack Operation:

AMM TASK 21-00-05-780-801.

(2) If the confidence check is satisfactory, then you corrected the fault.

NOTE: If the confidence check is satisfactory, then the pack flow rate is acceptable.

—————— END OF TASK ——————

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801. Left PACK Light Illuminated and Will Not Reset - Fault Isolation

A. Description

(1) The left PACK light on the P5-10 air conditioning module is on and will not reset.

B. Possible Causes

(1) Left compressor discharge overheat switch, S2

(2) Left turbine inlet overheat switch, S938

(3) Left pack discharge duct overheat switch, S934

(4) Wiring problem

(5) Air conditioning accessory unit No. 1, M324

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Push the TRIP RESET switch on the air conditioning module on the P5 panel.

(2) If the PACK light goes off, then there was an intermittent fault.

(3) If the PACK light stays on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the left compressor discharge overheat switch, S2:

(a) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(b) Disconnect connector D532 from the left compressor discharge overheat switch.

(c) Push the TRIP RESET switch.

(d) If the PACK light goes out, then do these steps:

1) Replace the compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

2) Re-connect connector D532 to the left compressor discharge overheat switch, S2.

3) If the PACK TRIP OFF light is still off, then you corrected the fault. Do these steps to complete the task:

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Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(e) If the PACK light is still on, then continue.

1) Re-connect connector D532 to the left compressor discharge overheat switch, S2.

(2) Do this check of the left turbine inlet overheat switch, S938:

(a) Disconnect connector D10056 from the left turbine inlet overheat switch, S938.

(b) Push the TRIP RESET switch.

(c) If the PACK light goes out, then do these steps:

1) Replace the turbine inlet overheat switch, S938.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

2) Re-connect connector D10056 to the left turbine inlet overheat switch, S938.

3) If the PACK TRIP OFF light is still off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(d) If the PACK light is still on, then continue.

1) Re-connect connector D10056 to the left turbine inlet overheat switch, S938.

(3) Do this check of the left pack discharge duct overheat switch, S934:

(a) Open the forward cargo door.

(b) Remove the aft center bulkhead liner in the forward cargo compartment. To remove the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Removal, AMM TASK 25-52-17-000-801.

(c) Disconnect connector D3940 from the left pack discharge duct overheat switch.

(d) Push the TRIP RESET switch.

(e) If the PACK light goes out, then do these steps:

1) Replace the left pack discharge duct overheat switch.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

2) Re-connect connector D3940 to the left pack discharge duct overheat switch, S934.

3) If the PACK light is still off, then you corrected the fault. Do these steps to complete the task:

a) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

b) Close the forward cargo door.

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c) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(f) If the PACK light stays on, then continue.

1) Re-connect connector D3940 to the left pack discharge duct overheat switch.

(4) Do this check of the wiring:

(a) Remove the air conditioning accessory unit No. 1, M324. To remove the accessory unit, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for a short from pin 35 at connector D458B on the E4-1 shelf to structure ground (WDM 21-51-15).

(c) If there is a short to ground, then do these steps:

1) Examine and repair the wiring between the air conditioning accessory unit No 1, M324, and the left pack overheat switches, S2, S934, and S938 (WDM 21-51-15).

2) Install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801

3) Push the PACK RESET switch.

4) If the PACK light is off, then you corrected the fault. Do these steps to complete the task:

a) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

b) Close the forward cargo door.

c) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

d) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(d) If there is not a short to ground, then continue.

(5) Install a new ACAU No 1.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Push the TRIP RESET switch.

(b) If the PACK light is off, then you corrected the fault. Do these steps to complete the task:

1) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

2) Close the forward cargo door.

3) Close this access panel:

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Number	Name/Location
192CL	Air Conditioning Access Door

——————— END OF TASK ———————

802. Right PACK Light Illuminated and Will Not Reset - Fault Isolation

A. Description

(1) The right PACK light on the P5-10 air conditioning module is on and will not reset.

B. Possible Causes

(1) Right compressor discharge overheat switch, S5

(2) Right turbine inlet overheat switch, S939

(3) Right pack discharge duct overheat switch, S935

(4) Wiring problem

(5) Air conditioning accessory unit No. 2, M1455

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

E. Initial Evaluation

(1) Push the TRIP RESET switch on the air conditioning module on the P5 panel.

(2) If the PACK light goes off, then there was an intermittent fault.

(3) If the PACK light stays on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the right compressor discharge overheat switch, S5:

(a) Open this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(b) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(c) Disconnect connector D538 from the right compressor discharge overheat switch.

(d) Push the TRIP RESET switch.

(e) If the PACK light goes out, then do these steps:

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1) Replace the compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

2) Re-connect connector D538 to the right compressor discharge overheat switch, S5.

3) If the PACK light is still off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(f) If the PACK light is still on, then continue.

1) Re-connect connector D538 to the right compressor discharge overheat switch, S5.

(2) Do this check of the right turbine inlet overheat switch, S939:

(a) Disconnect connector D10058 from the right turbine inlet overheat switch, S939.

(b) Push the TRIP RESET switch.

(c) If the PACK light goes out, then do these steps:

1) Replace the turbine inlet overheat switch, S939.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

2) Re-connect connector D10058 to the right turbine inlet overheat switch, S939.

3) If the PACK light is still off, then you corrected the fault. Do these steps to complete the task:

Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(d) If the PACK light is still on, then continue.

1) Re-connect connector D10058 to the right turbine inlet overheat switch, S939.

(3) Do this check of the right pack discharge duct overheat switch, S935:

(a) Open the forward cargo door.

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(b) Remove the aft center bulkhead liner in the forward cargo compartment. To remove the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Removal, AMM TASK 25-52-17-000-801.

(c) Disconnect connector D3942 from the right pack discharge duct overheat switch.

(d) Push the TRIP RESET switch.

(e) If the PACK light goes out, then do these steps:

1) Replace the right pack discharge duct overheat switch.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

2) Re-connect connector D3942 to the right pack discharge duct overheat switch, S935.

3) If the PACK light is still off, then you corrected the fault. Do these steps to complete the task:

a) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

b) Close the forward cargo door.

c) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

d) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(f) If the PACK light stays on, then continue.

1) Re-connect connector D3942 to the right pack discharge duct overheat switch.

(4) Do this check of the wiring:

(a) Remove the air conditioning accessory unit No. 2, M1455. To remove the accessory unit, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for a short from pin 35 at connector D10002B on the E4-1 shelf to structure ground (WDM 21-51-25).

(c) If there is a short to ground, then do these steps:

1) Examine and repair the wiring between the air conditioning accessory unit No 2, M1455, and the right pack overheat switches, S5, S935, and S939 (WDM 21-51-25).

2) Install the ACAU. To install the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801

3) Push the PACK RESET switch.

4) If the PACK light is off, then you corrected the fault. Do these steps to complete the task:

a) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

b) Close the forward cargo door.

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c) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

d) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

e) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(d) If there is not a short to ground, then continue.

(5) Install a new ACAU No 2.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Push the TRIP RESET switch.

(b) If the PACK light is off, then you corrected the fault. Do these steps to complete the task:

1) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

2) Close the forward cargo door.

3) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

4) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

END OF TASK

803. Left PACK Light On During Ground Operation and Stays OFF After Reset - Fault Isolation

A. Description

(1) The left PACK light on the P5-10 air conditioning module comes on during ground operation and stays off after reset.

B. Possible Causes

(1) Fan bypass check valve door in the primary plenum/diffuser assembly - damaged or missing

(a) An indication of this condition would be little or no airflow from the ram air exhaust duct outlet.

(2) Dirty heat exchangers

(3) Left ram air door not fully open.

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do this check of the fan bypass check valve in the primary plenum/diffuser assembly:

(a) Remove conditioned air from the airplane as follows:

1) Do this task: AMM TASK 21-00-00-800-802.

(b) Get access to the fan bypass check valve in the primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(c) Open the access panel on the bottom of the primary plenum/diffuser assembly.

(d) Make sure that the fan bypass check valve door is in place and that the door hinge is not damaged.

(e) If the fan bypass check valve door is gone or damaged, do these tasks to replace the primary plenum/diffuser assembly:

1) AMM TASK 21-51-03-000-805-002

2) AMM TASK 21-51-03-400-804-002.

(f) Make sure that the access panel is installed on the bottom of the primary plenum/diffuser assembly.

(g) Operate the left air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

(h) If the PACK light does not come on, then you corrected the fault.

1) Remove conditioned air from the airplane as follows:

a) Do this task: AMM TASK 21-00-00-800-802.

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(i) If the PACK light comes on, then continue.

(2) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, do the applicable corrective action.

2) Operate the left air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(3) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

804. Right PACK Light On During Ground Operation and Stays OFF After Reset - Fault Isolation

A. Description

(1) The right PACK light on the P5-10 air conditioning module comes on during ground operation and stays off after reset.

B. Possible Causes

(1) Fan bypass check valve door in the primary plenum/diffuser assembly - damaged or missing

(2) Dirty heat exchangers

(3) Right ram air door not fully open.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do this check of the fan bypass check valve in the primary plenum/diffuser assembly:

(a) Remove conditioned air from the airplane as follows:

1) Do this task: AMM TASK 21-00-00-800-802.

(b) Get access to the fan bypass check valve in the primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(c) Open the access panel on the bottom of the primary plenum/diffuser assembly.

(d) Make sure that the fan bypass check valve door is in place and that the door hinge is not damaged.

(e) If the fan bypass check valve door is gone or damaged, do these tasks to replace the primary plenum/diffuser assembly:

1) AMM TASK 21-51-03-000-805-002

2) AMM TASK 21-51-03-400-804-002.

(f) Make sure that the access panel is installed on the bottom of the primary plenum/diffuser assembly.

(g) Operate the right air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

(h) If the PACK light does not come on, then you corrected the fault.

1) Remove conditioned air from the airplane as follows:

a) Do this task: AMM TASK 21-00-00-800-802.

(i) If the PACK light comes on, then continue.

(2) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

2) Operate the right air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

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(3) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

805. Left PACK Light On During Climb and Stays OFF After Reset - Fault Isolation

A. Description

(1) The left PACK light on the P5-10 air conditioning module comes on during climb and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Left ram air door not fully open.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

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2) Operate the left air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(2) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

806. Right PACK Light On During Climb and Stays OFF After Reset - Fault Isolation

A. Description

(1) The right PACK light on the P5-10 air conditioning module comes on during climb and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Right ram air door not fully open.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

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F. Fault Isolation Procedure

(1) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

2) Operate the right air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(2) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning Pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

807. Left PACK Light On During Approach and Stays OFF After Reset - Fault Isolation

A. Description

(1) The left PACK light on the P5-10 air conditioning module comes on during approach and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Left ram air door not fully open.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

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(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(2) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

808. Right PACK Light On During Approach and Stays OFF After Reset - Fault Isolation

A. Description

(1) The right PACK light on the P5-10 air conditioning module comes on during approach and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Left ram air door not fully open.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

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E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Look at the RAM DOOR FULL OPEN light on the P5-10 air conditioning panel.

(a) If the RAM DOOR FULL OPEN light is not on, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) If the task shows a problem with the ram air system, then do the applicable corrective action.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the RAM DOOR FULL OPEN light is on, then continue.

(2) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

809. Left PACK Light On During Cruise and Stays OFF After Reset - Fault Isolation

A. Description

(1) The left PACK light on the P5-10 air conditioning module comes on during cruise and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

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D. Related Data

(1) (SSM 21-51-15)

(2) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

810. Right PACK Light On During Cruise and Stays OFF After Reset - Fault Isolation

A. Description

(1) The right PACK light on the P5-10 air conditioning module comes on during cruise and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT

D. Related Data

(1) (SSM 21-51-25)

(2) (WDM 21-51-25)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

END OF TASK

811. Left PACK Light On On the Ground and Comes on Again After Reset - Fault Isolation

A. Description

(1) The left PACK light on the P5-10 air conditioning module comes on during ground operation and comes on again after reset.

B. Possible Causes

(1) Fan bypass check valve door in the primary plenum/diffuser assembly - damaged or missing

(2) Air cycle machine, drag during start or seized.

(3) Dirty heat exchangers

(4) Blockage or unwanted material in the ram air ducting

(5) Ram air system failure

(6) Pack overheat switches:

(a) Left compressor discharge overheat switch, S2

(b) Left turbine inlet overheat switch, S938

(c) Left pack discharge duct overheat switch, S934

(7) Left temperature control valve, V139 stuck open.

(8) Bleed air too hot

(9) Pack/zone temperature control system failure

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C01157	AIR CONDITIONING TEMP CONT VALVE CLOSE LEFT

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Row	Col	Number	Name
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

D. Related Data

(1) (SSM 21-51-12)

(2) (WDM 21-51-12)

(3) (SSM 21-51-14)

(4) (WDM 21-51-14)

(5) (SSM 21-51-15)

(6) (WDM 21-51-15)

E. Initial Evaluation

(1) Do these steps to make sure the operation of the air cycle machine is satisfactory:

NOTE: With the APU as the pneumatic source this check will make sure the ACM starts with the highest duct pressure available.

(a) Set the BLEED 1 and BLEED 2 switches on the P5-10 air conditioning panel to OFF.

(b) Set the TRIM AIR switch on the P5-17 temperature control panel to OFF.

(c) Do this task: Supply Pressure to the Pneumatic System with the APU, AMM TASK 36-00-00-860-803.

(d) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(e) Do a check of the airflow at the exhaust duct outlet for the left ram air system.

1) If there is little or no airflow at the exhaust duct outlet, then do these steps:

a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

b) Go to the Fault Isolation Procedure.

2) If the airflow at the exhaust duct outlet is satisfactory, then continue.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do this check of the fan bypass check valve in the primary plenum/diffuser assembly:

(a) Remove conditioned air from the airplane as follows:

1) Do this task: AMM TASK 21-00-00-800-802.

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(b) Get access to the fan bypass check valve in the primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(c) Open the access panel on the bottom of the primary plenum/diffuser assembly.

(d) Make sure that the fan bypass check valve door is in place and that the door hinge is not damaged.

(e) If the fan bypass check valve door is gone or damaged, do these tasks to replace the primary plenum/diffuser assembly:

1) AMM TASK 21-51-03-000-805-002

2) AMM TASK 21-51-03-400-804-002.

(f) Make sure that the access panel is installed on the bottom of the primary plenum/diffuser assembly.

(g) Operate the left air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

(h) If the PACK light does not come on, then you corrected the fault.

1) Remove conditioned air from the airplane as follows:

a) Do this task: AMM TASK 21-00-00-800-802.

(i) If the PACK light comes on, then continue.

(2) If there was little or no airflow at the exhaust duct outlet for the left ram air system when you performed the Initial Evaluation, then replace the left pack air cycle machine as follows:

(a) Remove the air cycle machine. To remove the air cycle machine, do this task: Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002.

(b) Examine the upstream duct to the air cycle machine for any evidence of oil contamination:

(c) If you find oil contamination present, do these steps:

1) Isolate the cause of the oil contamination and repair the problem.

2) Remove the oil contamination from the air conditioning and pneumatic systems. To remove the oil contamination, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

(d) Install a serviceable air cycle machine. To install an ACM, do this task: Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

(e) Operate the left air conditioning pack. To operate the pack, do this this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

1) If the PACK light does not come on, then you corrected the fault.

2) If the PACK light comes on, then continue.

3) Stop the operation of the pack. To stop the pack operation, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) Examine the left pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, do these steps:

1) Remove the blockage or unwanted materials.

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2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(4) Do the BITE test of the left pack/zone temperature controller, M1442. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(5) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(6) Do this check of the ram air modulation system:

(a) Look at the left pack ram air doors.

(b) If the ram air doors are not in the full open position, then, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(7) Look for a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

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(b) If there was not a bleed trip off, then continue.

(8) Replace the left pack compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(9) Replace the left pack turbine inlet overheat switch, S938.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(10) Replace the left pack discharge duct overheat switch, S934.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

812. Right PACK Light On On the Ground and Comes on Again After Reset - Fault Isolation

A. Description

(1) The right PACK light on the P5-10 air conditioning module comes on during ground operation and comes on again after reset.

B. Possible Causes

(1) Fan bypass check valve door in the primary plenum/diffuser assembly - damaged or missing

(2) Air cycle machine

(3) Dirty heat exchangers

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(4) Blockage or unwanted material in the ram air ducting

(5) Ram air system failure

(6) Pack overheat switches:

(a) Right compressor discharge overheat switch, S5

(b) Right turbine inlet overheat switch, S939

(c) Right pack discharge duct overheat switch, S935

(7) Right temperature control valve, V141

(8) Bleed air too hot

(9) Pack/zone temperature control system failure

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C01160	AIR CONDITIONING TEMP CONT VALVE CLOSE RIGHT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT

D. Related Data

(1) (SSM 21-51-22)

(2) (WDM 21-51-22)

(3) (SSM 21-51-24)

(4) (WDM 21-51-24)

(5) (SSM 21-51-25)

(6) (WDM 21-51-25)

E. Initial Evaluation

(1) Do these steps to make sure the operation of the right air cycle machine is satisfactory:

(a) Set the BLEED 1 and BLEED 2 switches on the P5-10 air conditioning panel to OFF.

(b) Set the TRIM AIR switch on the P5-17 temperature control panel to OFF.

(c) Do this task: Supply Pressure to the Pneumatic System with the APU, AMM TASK 36-00-00-860-803.

(d) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(e) Do a check of the airflow at the exhaust duct outlet for the right ram air system:

1) If there is little or no airflow at the exhaust duct outlet, then do these steps:

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a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

b) Go to the Fault Isolation Procedure.

2) If the airflow at the exhaust duct outlet is satisfactory, then continue.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do this check of the fan bypass check valve in the primary plenum/diffuser assembly:

(a) Remove conditioned air from the airplane as follows:

1) Do this task: AMM TASK 21-00-00-800-802.

(b) Get access to the fan bypass check valve in the primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(c) Open the access panel on the bottom of the primary plenum/diffuser assembly.

(d) Make sure that the fan bypass check valve door is in place and that the door hinge is not damaged.

(e) If the fan bypass check valve door is gone or damaged, do these tasks to replace the primary plenum/diffuser assembly:

1) AMM TASK 21-51-03-000-805-002

2) AMM TASK 21-51-03-400-804-002.

(f) Make sure that the access panel is installed on the bottom of the primary plenum/diffuser assembly.

(g) Operate the right air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

(h) If the PACK light does not come on, then you corrected the fault.

1) Remove conditioned air from the airplane as follows:

a) Do this task: AMM TASK 21-00-00-800-802.

(i) If the PACK light comes on, then continue.

(2) If there was little or no airflow at the exhaust duct outlet for the right ram air system when you performed the Initial Evaluation, then replace the right pack air cycle machine as follows:

(a) Remove the air cycle machine. To remove the air cycle machine, do this task: Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002.

(b) Examine the upstream duct to the air cycle machine for any evidence of oil contamination.

(c) If you find oil contamination present, do these steps:

1) Isolate the cause of the oil contamination and repair the problem.

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2) Remove the oil contamination from the air conditioning and pneumatic systems. To remove the oil contamination, do this task: Oil Contamination Removal from Air Conditioning and Pneumatic Systems, AMM TASK 21-00-01-100-801.

(d) Install a serviceable air cycle machine. To install an ACM, do this task: Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002

(e) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

1) If the PACK light does not come on, then you corrected the fault.

2) If the PACK light comes on, then continue.

3) Stop the operation of the pack. To stop the pack operation, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804..

(3) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(4) Do the BITE test of the right pack/zone temperature controller, M1443. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(5) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(6) Do this check of the ram air modulation system:

(a) Look at the right pack ram air doors.

(b) If the ram air doors are not in the full open position, then, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

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1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
2) If the PACK light does not come on, then you corrected the fault.
3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(7) Look for a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.
2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
3) If the PACK light does not come on, then you corrected the fault.
4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(8) Replace the right pack compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(9) Replace the right pack turbine inlet overheat switch, S939.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(10) Replace the right pack discharge duct overheat switch, S935.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

813. Left PACK Light On at Cruise and Comes on Again After Reset - Fault Isolation

A. Description

(1) The left PACK light on the P5-10 air conditioning module comes on during cruise and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Pack overheat switches:

(a) Left compressor discharge overheat switch, S2

(b) Left turbine inlet overheat switch, S938

(c) Left pack discharge duct overheat switch, S934

(4) Left temperature control valve, V139

(5) Bleed air too hot

(6) Pack/zone temperature control system failure

(7) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C01157	AIR CONDITIONING TEMP CONT VALVE CLOSE LEFT
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

D. Related Data

(1) (SSM 21-51-12)

(2) (WDM 21-51-12)

(3) (SSM 21-51-15)

(4) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

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(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the left pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the left pack/zone temperature controller, M1442. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(3) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(4) Look for a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

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(b) If there was not a bleed trip off, then continue.

(5) Replace the left pack compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(6) Replace the left pack turbine inlet overheat switch, S938.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(7) Replace the left pack discharge duct overheat switch, S934.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(8) Replace the left pack air cycle machine.

These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

END OF TASK

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814. Right PACK Light On at Cruise and Comes on Again After Reset - Fault Isolation

A. Description

(1) The right PACK light on the P5-10 air conditioning module comes on during cruise and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Pack overheat switches:

(a) Right compressor discharge overheat switch, S5

(b) Right turbine inlet overheat switch, S939

(c) Right pack discharge duct overheat switch, S935

(4) Right temperature control valve, V141

(5) Bleed air too hot

(6) Pack/zone temperature control system failure

(7) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C01160	AIR CONDITIONING TEMP CONT VALVE CLOSE RIGHT
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT

D. Related Data

(1) (SSM 21-51-22)

(2) (WDM 21-51-22)

(3) (SSM 21-51-25)

(4) (WDM 21-51-25)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

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(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) If there was low or no airflow from the right pack ram air exhaust duct outlet, then replace the right pack air cycle machine.

These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(2) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(3) Do the BITE test of the right pack/zone temperature controller, M1443. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(4) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(5) Look for a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

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1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.
2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
3) If the PACK light does not come on, then you corrected the fault.
4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Replace the right pack compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(7) Replace the right pack turbine inlet overheat switch, S939.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(8) Replace the right pack discharge duct overheat switch, S935.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

——————— END OF TASK ———————

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815. Left PACK Light On During Approach and Comes on Again After Reset - Fault Isolation

A. Description

(1) The left PACK light on the P5-10 air conditioning module comes on during approach and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Ram air system failure

(4) Pack overheat switches:

(a) Left compressor discharge overheat switch, S2

(b) Left turbine inlet overheat switch, S938

(c) Left pack discharge duct overheat switch, S934

(5) Left temperature control valve, V139

(6) Bleed air too hot

(7) Pack/zone temperature control system failure

(8) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C01157	AIR CONDITIONING TEMP CONT VALVE CLOSE LEFT
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

D. Related Data

(1) (SSM 21-51-12)

(2) (WDM 21-51-12)

(3) (SSM 21-51-14)

(4) (WDM 21-51-14)

(5) (SSM 21-51-15)

(6) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the left pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the left pack/zone temperature controller, M1442. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(3) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(4) Do this check of the ram air modulation system:

(a) Look at the left pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK light does not come on, then you corrected the fault.

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3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(5) Look for a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Replace the left pack compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(7) Replace the left pack turbine inlet overheat switch, S938.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(8) Replace the left pack discharge duct overheat switch, S934.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

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(c) If the PACK light comes on, then continue.

(9) Replace the left pack air cycle machine.

These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

816. Right PACK Light On During Approach and Comes on Again After Reset - Fault Isolation

A. Description

(1) The right PACK light on the P5-10 air conditioning module comes on during approach and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Ram air system failure

(4) Pack overheat switches:

(a) Right compressor discharge overheat switch, S5

(b) Right turbine inlet overheat switch, S939

(c) Right pack discharge duct overheat switch, S935

(5) Right temperature control valve, V141

(6) Bleed air too hot

(7) Pack/zone temperature control system failure

(8) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C01160	AIR CONDITIONING TEMP CONT VALVE CLOSE RIGHT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT

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D. Related Data

(1) (SSM 21-51-22)

(2) (WDM 21-51-22)

(3) (SSM 21-51-24)

(4) (WDM 21-51-24)

(5) (SSM 21-51-25)

(6) (WDM 21-51-25)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the right pack/zone temperature controller, M1443. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(3) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

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(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(4) Do this check of the ram air modulation system:

(a) Look at the right pack ram air doors.

(b) If the ram air doors are not in the full open position, then, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(5) Look for a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Replace the right pack compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(7) Replace the right pack turbine inlet overheat switch, S939.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(8) Replace the right pack discharge duct overheat switch, S935.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(9) Replace the right pack air cycle machine.

These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

817. Left PACK Light On During Climb and Comes on Again After Reset - Fault Isolation

A. Description

(1) The left PACK light on the P5-10 air conditioning module comes on during climb and comes on again after reset.

B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Ram air system failure

(4) Pack overheat switches:

(a) Left compressor discharge overheat switch, S2

(b) Left turbine inlet overheat switch, S938

(c) Left pack discharge duct overheat switch, S934

(5) Left temperature control valve, V139

(6) Bleed air too hot

(7) Pack/zone temperature control system failure

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(8) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C01157	AIR CONDITIONING TEMP CONT VALVE CLOSE LEFT
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

D. Related Data

(1) (SSM 21-51-12)

(2) (WDM 21-51-12)

(3) (SSM 21-51-14)

(4) (WDM 21-51-14)

(5) (SSM 21-51-15)

(6) (WDM 21-51-15)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the left pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

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(2) Do the BITE test of the left pack/zone temperature controller, M1442. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(3) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(4) Do this check of the ram air modulation system:

(a) Look at the left pack ram air doors.

(b) If the ram air doors are not in the full open position, then, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(5) Look for a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Replace the left pack compressor discharge overheat switch, S2.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

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(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(7) Replace the left pack turbine inlet overheat switch, S938.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(8) Replace the left pack discharge duct overheat switch, S934.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(9) Replace the left pack air cycle machine.

These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

818. Right PACK Light On During Climb and Comes on Again After Reset - Fault Isolation

A. Description

(1) The right PACK light on the P5-10 air conditioning module comes on during climb and comes on again after reset.

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B. Possible Causes

(1) Dirty heat exchangers

(2) Blockage or unwanted material in the ram air ducting

(3) Ram air system failure

(4) Pack overheat switches:

(a) Right compressor discharge overheat switch, S5

(b) Right turbine inlet overheat switch, S939

(c) Right pack discharge duct overheat switch, S935

(5) Right temperature control valve, V141

(6) Bleed air too hot

(7) Pack/zone temperature control system failure

(8) Air cycle machine

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	1	C01160	AIR CONDITIONING TEMP CONT VALVE CLOSE RIGHT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT

D. Related Data

(1) (SSM 21-51-22)

(2) (WDM 21-51-22)

(3) (SSM 21-51-24)

(4) (WDM 21-51-24)

(5) (SSM 21-51-25)

(6) (WDM 21-51-25)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PACK light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PACK light does not come on, then there was an intermittent fault.

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(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(2) Do the BITE test of the right pack/zone temperature controller, M1443. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PACK light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(3) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(4) Do this check of the ram air modulation system:

(a) Look at the right pack ram air doors.

(b) If the ram air doors are not in the full open position, then, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the PACK light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ram air doors are in the full open position, then continue.

(5) Look for a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

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1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.
2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
3) If the PACK light does not come on, then you corrected the fault.
4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Replace the right pack compressor discharge overheat switch, S5.

These are the tasks:

Compressor Discharge Overheat Switch Removal, AMM TASK 21-51-40-000-801,

Compressor Discharge Overheat Switch Installation, AMM TASK 21-51-40-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(7) Replace the right pack turbine inlet overheat switch, S939.

These are the tasks:

Turbine Inlet Overheat Switch Removal, AMM TASK 21-51-41-000-801,

Turbine Inlet Overheat Switch Installation, AMM TASK 21-51-41-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(8) Replace the right pack discharge duct overheat switch, S935.

These are the tasks:

Pack Discharge Overheat Switch Removal, AMM TASK 21-51-42-000-803-002,

Pack Discharge Overheat Switch Installation, AMM TASK 21-51-42-400-803-002.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PACK light comes on, then continue.

(9) Replace the right pack air cycle machine.

These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

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Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PACK light does not come on, then you corrected the fault.

(c) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

END OF TASK

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801. Cabin Temperature Controller BITE Procedure

A. General

HAP 101-999

(1) The cabin temperature controller is located on the top shelf of the E4 rack in the electronics equipment compartment.

(2) You do the cabin temperature controller BITE using the rotary switch on the front of the controller.

(3) The BITE test does an internal check of the cabin temperature controller, and LRU interface checks for the control cabin temperature sensor, control cabin duct limit sensor, control cabin duct anticipator, passenger cabin temperature sensor, passenger cabin duct limit sensor, passenger cabin duct anticipator, and the control and passenger cabin temperature selectors. A red NO GO light identifies a specific failure which is found by the cabin temperature controller.

HAP 001-013, 015-026, 028-054

(4) There is no Cabin Temperature Controller BITE procedure for 737-800 or 737-900 airplanes.

B. Procedure

(1) There is no Cabin Temperature Controller BITE procedure for 737-800 or 737-900 airplanes.

HAP 101-999

C. BITE Procedure

(1) Do the BITE procedure for the cabin temperature controller: (Figure 201)

(a) Put the BLEED 1 and BLEED 2 switches on the air conditioning module of the P5 overhead panel to the OFF positions

(b) Put the APU BLEED switch on the air conditioning module to the OFF position.

(c) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

(d) Put the CONT CABIN and PASS CABIN temperature selectors on the temperature control module on the P5 overhead panel to the AUTO (12 o'clock) position.

(e) Put the L PACK and R PACK switches on the temperature control module to AUTO.

(f) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(g) Get access to he cabin temperature controller located on the top shelf of the E4 rack in the electronics equipment compartment.

(h) Put the BITE switch on the controller to the START position.

(i) Push the GO and NO GO lights on the controller.

1) Make sure the lights come on when you push them.

(j) Push and rotate the BITE switch to each of the TEMP CONTROL BOX positions.

NOTE: Make sure you push the BITE switch.

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HAP 101-999 (Continued)

1) Make sure the green GO light comes on for each pack.

NOTE: The left pack light is for the control cabin sensors and the right pack is for the passenger cabin sensors.

(k) Push and rotate the BITE switch to the CABIN SENSOR position.

1) Make sure the green GO light comes on for each pack.

(l) Push and rotate the BITE switch to the ANTICIPATOR SENSOR position.

1) Make sure the green GO light comes on for each pack.

(m) Push and rotate the BITE switch to the DUCT LIMIT SENSOR position.

1) Make sure the green GO light comes on for each pack.

(n) Push and rotate the BITE switch to the TEMP SELECTOR position.

1) Make sure the green GO light comes on for each pack.

(o) But the BITE switch to the START position.

(p) If a NO GO light comes on, then refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message.

———————— END OF TASK ————————

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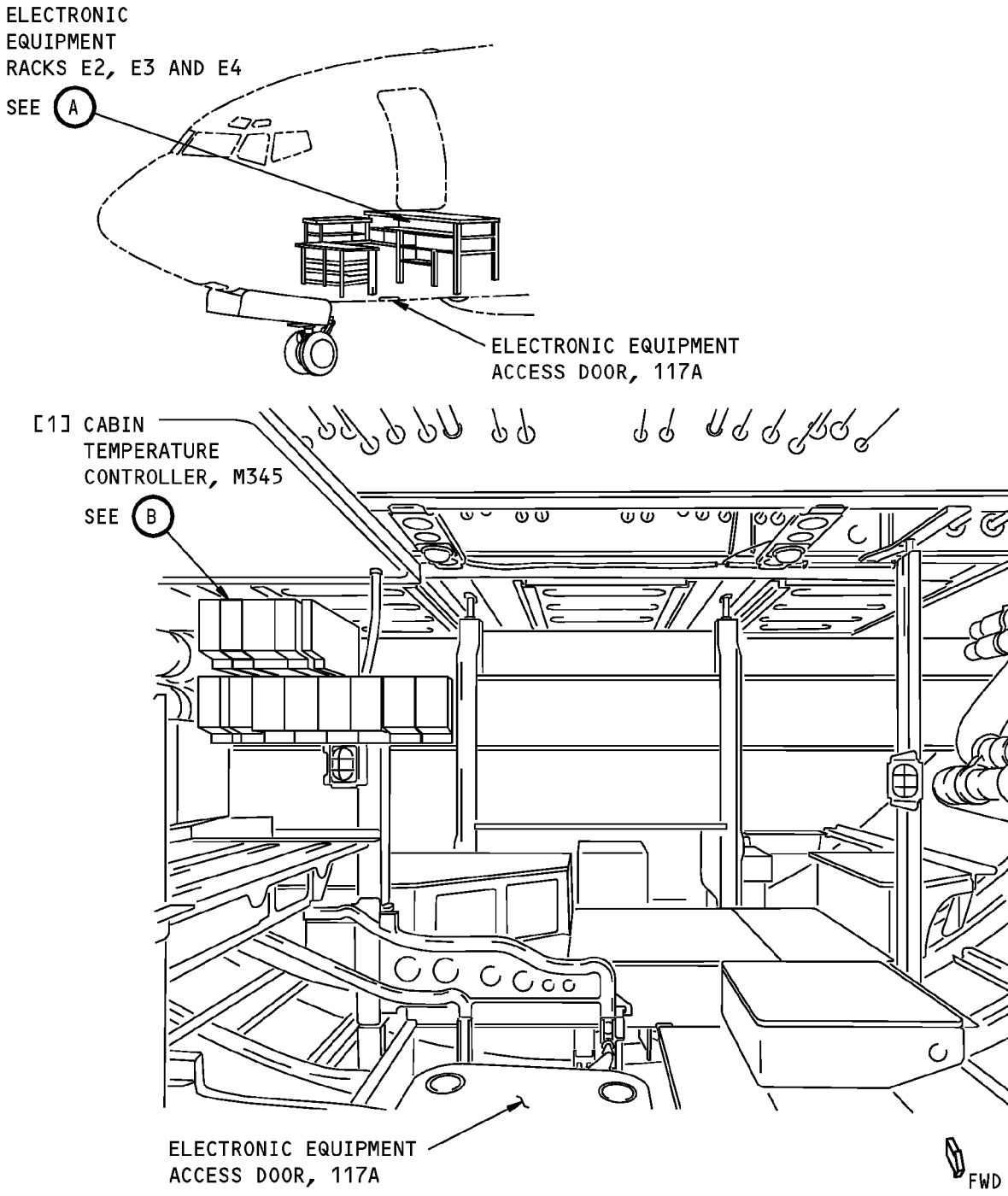

Cabin Temperature Controller BITE Test
Figure 201 (Sheet 1 of 2)/ 21-61-00-990-807

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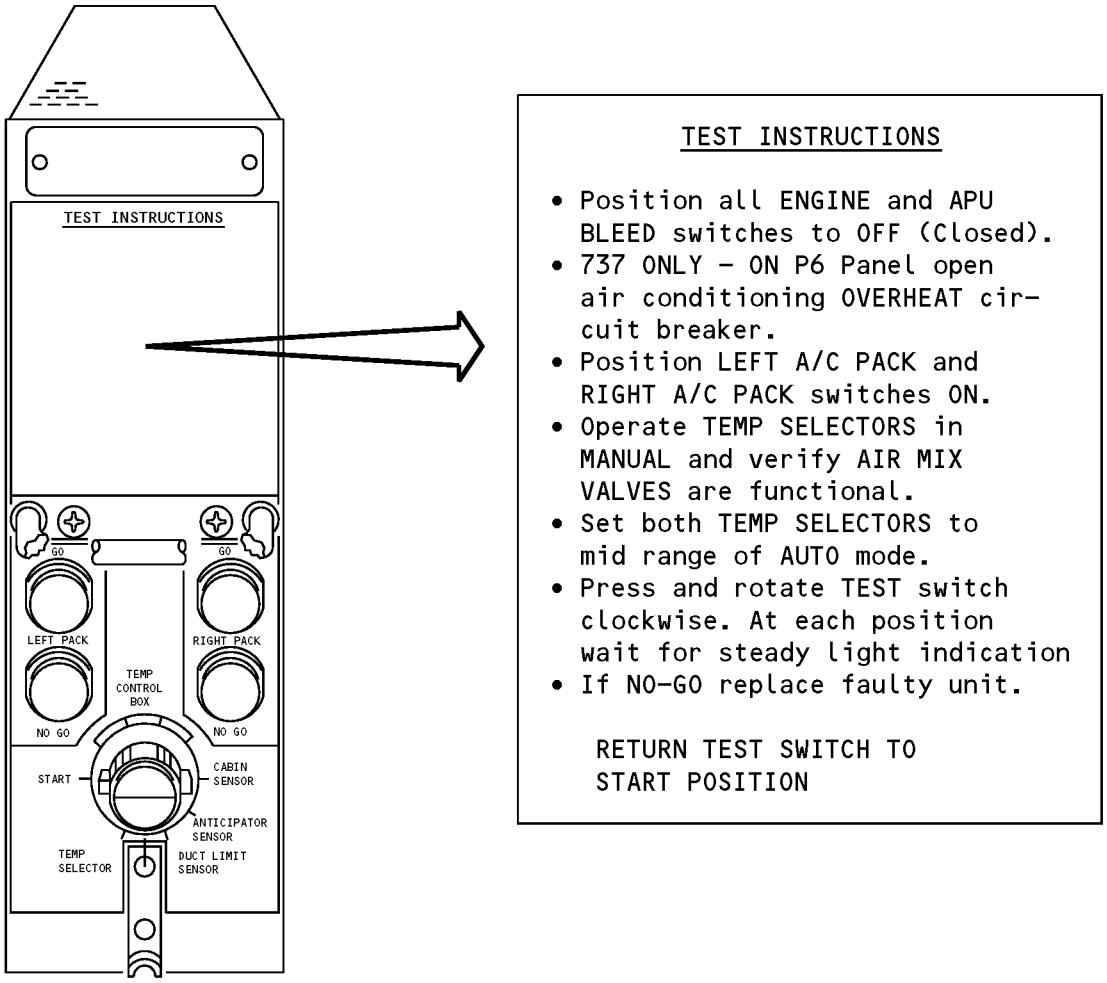

CABIN TEMPERATURE CONTROLLER

B

Cabin Temperature Controller BITE Test
Figure 201 (Sheet 2 of 2)/ 21-61-00-990-807

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
CAB TEMP CONT	ANTICIPATOR SENSOR - LEFT PACK - NO GO	21-61 TASK 831
CAB TEMP CONT	ANTICIPATOR SENSOR - RIGHT PACK - NO GO	21-61 TASK 832
CAB TEMP CONT	CABIN SENSOR - LEFT PACK - NO GO	21-61 TASK 833
CAB TEMP CONT	CABIN SENSOR - RIGHT PACK - NO GO	21-61 TASK 834
CAB TEMP CONT	DUCT LIMIT SENSOR - LEFT PACK - NO GO	21-61 TASK 829
CAB TEMP CONT	DUCT LIMIT SENSOR - RIGHT PACK - NO GO	21-61 TASK 830
CAB TEMP CONT	TEMP SELECTOR - LEFT PACK - NO GO	21-61 TASK 835
CAB TEMP CONT	TEMP SELECTOR - RIGHT PACK - NO GO	21-61 TASK 836

HAP 101-999

829. Flight Compartment Duct Limit Sensor Failed - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) DUCT LIMIT SENSOR - LEFT PACK - NO GO

B. Possible Causes

(1) Control cabin duct limit sensor, T419

(2) Cabin temperature controller, M345

(3) Wiring Problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT

D. Related Data

(1) SSM 21-61-21

(2) WDM 21-61-21

E. Initial Evaluation

(1) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

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

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F. Fault Isolation Procedure

(1) Replace the control cabin duct limit sensor T419 in the aft EE bay.

These are the tasks:

Duct Temperature Limit Sensor Removal, AMM TASK 21-61-04-000-802-001,

Duct Temperature Limit Sensor Installation, AMM TASK 21-61-04-400-802-001.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the control cabin duct limit sensor and the cabin temperature controller, M345 on the E4-1 shelf:

(a) Disconnect connector D512 from the control cabin duct limit sensor.

(b) Remove the cabin temperature controller. To remove the controller, do this task: Cabin Temperature Controller (CTC) Removal, AMM TASK 21-61-01-000-801.

(c) Do a wiring check between these pins of connector D512 of the control cabin duct limit sensor and the connector D454 of the cabin temperature controller:

D512		D454
pin 1	- - - - - - - - - - - - - - - - - -	pin 22
pin 3	- - - - - - - - - - - - - - - - - -	pin 21

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

1) Repair the wiring.

2) Re-connect connector D512 to the control cabin duct limit sensor.

3) Re-install the cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

4) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Reconnect connector D512 to the control cabin duct limit sensor.

(3) Install a new cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

——————— END OF TASK ———————

830. Passenger Cabin Duct Limit Sensor Failed - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) DUCT LIMIT SENSOR - RIGHT PACK - NO GO

B. Possible Causes

(1) Passenger cabin duct limit sensor, T416

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(2) Cabin temperature controller, M345

(3) Wiring Problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT

D. Related Data

(1) SSM 21-61-22

(2) WDM 21-61-22

E. Initial Evaluation

(1) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the passenger cabin duct limit sensor T416 in the overhead distribution duct.

These are the tasks:

Duct Temperature Limit Sensor Removal, AMM TASK 21-61-04-000-802-001,

Duct Temperature Limit Sensor Installation, AMM TASK 21-61-04-400-802-001.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the passenger cabin duct limit sensor and the cabin temperature controller, M345 on the E4-1 shelf:

(a) Disconnect connector D518 from the passenger cabin duct limit sensor.

(b) Remove the cabin temperature controller. To remove the controller, do this task: Cabin Temperature Controller (CTC) Removal, AMM TASK 21-61-01-000-801.

(c) Do a wiring check between these pins of connector D518 of the control cabin duct limit sensor and the connector D456 of the cabin temperature controller:

D518		**D456**
pin 1	- - - - - - - - - - - - - - - - - - -	pin 22
pin 3	- - - - - - - - - - - - - - - - - - -	pin 21

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

1) Repair the wiring.

2) Re-connect connector D518 to the passenger cabin duct limit sensor.

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3) Re-install the cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

4) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D518 to the passenger cabin duct limit sensor.

(3) Install a new cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

———————— END OF TASK ————————

831. Flight Compartment Duct Anticipator Sensor Failed - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ANTICIPATOR SENSOR - LEFT PACK - NO GO

B. Possible Causes

(1) Control cabin duct anticipator sensor, T420

(2) Cabin temperature controller, M345

(3) Wiring Problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT

D. Related Data

(1) SSM 21-61-21

(2) WDM 21-61-21

E. Initial Evaluation

(1) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the control cabin duct anticipator sensor T420 in the aft EE bay.
These are the tasks:

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Duct Temperature Anticipator Sensor Removal, AMM TASK 21-61-08-000-801,

Duct Temperature Anticipator Sensor Installation, AMM TASK 21-61-08-400-801.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the control cabin duct anticipator sensor and the cabin temperature controller, M345 on the E4-1 shelf:

(a) Disconnect connector D514 from the control cabin duct anticipator sensor.

(b) Remove the cabin temperature controller. To remove the controller, do this task: Cabin Temperature Controller (CTC) Removal, AMM TASK 21-61-01-000-801.

(c) Do a wiring check between these pins of connector D514 of the control cabin duct limit sensor and the connector D454 of the cabin temperature controller:

D514		D454
pin 1	- - - - - - - - - - - - - - - - - -	pin 14
pin 2	- - - - - - - - - - - - - - - - - -	pin 15
pin 3	- - - - - - - - - - - - - - - - - -	pin 16

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

1) Repair the wiring.

2) Re-connect connector D514 to the control cabin duct anticipator sensor.

3) Re-install the cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

4) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D514 to the control cabin duct anticipator sensor.

(3) Install a new cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

———————— END OF TASK ————————

832. Passenger Cabin Duct Anticipator Sensor Failed - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ANTICIPATOR SENSOR - RIGHT PACK - NO GO

B. Possible Causes

(1) Passenger cabin duct anticipator sensor, T417

(2) Cabin temperature controller, M345

(3) 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, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT

D. Related Data

(1) SSM 21-61-22

(2) WDM 21-61-22

E. Initial Evaluation

(1) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the passenger cabin duct anticipator sensor T417 in the overhead distribution duct.

These are the tasks:

Duct Temperature Anticipator Sensor Removal, AMM TASK 21-61-08-000-801,

Duct Temperature Anticipator Sensor Installation, AMM TASK 21-61-08-400-801.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the passenger cabin duct anticipator sensor and the cabin temperature controller, M345 on the E4-1 shelf:

(a) Disconnect connector D520 from the passenger cabin duct anticipator sensor.

(b) Remove the cabin temperature controller. To remove the controller, do this task: Cabin Temperature Controller (CTC) Removal, AMM TASK 21-61-01-000-801.

(c) Do a wiring check between these pins of connector D520 of the control cabin duct limit sensor and the connector D456 of the cabin temperature controller:

D520		D456
pin 1	- - - - - - - - - - - - - - - - - -	pin 14
pin 2	- - - - - - - - - - - - - - - - - -	pin 15
pin 3	- - - - - - - - - - - - - - - - - -	pin 16

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

1) Repair the wiring.

2) Re-connect connector D520 to the passenger cabin duct anticipator sensor.

3) Re-install the cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

4) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Reconnect connector D518 to the passenger cabin duct limit sensor.

(3) Install a new cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

——————— END OF TASK ———————

833. Flight Compartment Temperature Sensor Failed - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) CABIN SENSOR - LEFT PACK - NO GO

B. Possible Causes

(1) Control cabin temperature sensor, M1718

(2) Cabin temperature controller, M345

(3) Wiring Problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT

D. Related Data

(1) SSM 21-61-21

(2) WDM 21-61-21

E. Initial Evaluation

(1) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the control cabin temperature sensor in the M1718 module in the control cabin.
These are the tasks:
Cabin Temperature Sensor Removal, AMM TASK 21-61-10-000-802,
Cabin Temperature Sensor Installation, AMM TASK 21-61-10-400-802.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

(2) Do this check of the wiring between the control cabin temperature sensor and the cabin temperature controller, M345 on the E4-1 shelf:
(a) Disconnect connector D10958 from the control cabin temperature sensor.
(b) Remove the cabin temperature controller. To remove the controller, do this task: Cabin Temperature Controller (CTC) Removal, AMM TASK 21-61-01-000-801.
(c) Do a wiring check between these pins of connector D10958 of the control cabin temperature sensor and the connector D454 of the cabin temperature controller:

D10958		D454
pin 1	- - - - - - - - - - - - - - - - - -	pin 23
pin 3	- - - - - - - - - - - - - - - - - -	pin 24

(d) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect connector D10958 to the control cabin temperature sensor.
3) Re-install the cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.
4) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.
5) If the maintenance message does not show, then you corrected the fault.
(e) If you do not find a problem with the wiring, then continue:
1) Reconnect connector D10958 to the control cabin temperature sensor.

(3) Install a new cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.
(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.
(b) If the maintenance message does not show, then you corrected the fault.

——————— END OF TASK ———————

834. Passenger Cabin Temperature Sensor Failed - Fault Isolation

A. Description
(1) This task is for this maintenance message:
(a) CABIN SENSOR - RIGHT PACK - NO GO

B. Possible Causes
(1) Passenger cabin temperature sensor, M1719
(2) Cabin temperature controller, M345
(3) 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, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT

D. Related Data

(1) SSM 21-61-22

(2) WDM 21-61-22

E. Initial Evaluation

(1) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the passenger cabin temperature sensor in the M1719 module in the main passenger cabin.

These are the tasks:

Cabin Temperature Sensor Removal, AMM TASK 21-61-10-000-802,

Cabin Temperature Sensor Installation, AMM TASK 21-61-10-400-802.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the passenger cabin temperature sensor and the cabin temperature controller, M345 on the E4-1 shelf:

(a) Disconnect connector D10962 from the passenger cabin temperature sensor.

(b) Remove the cabin temperature controller. To remove the controller, do this task: Cabin Temperature Controller (CTC) Removal, AMM TASK 21-61-01-000-801.

(c) Do a wiring check between these pins of connector D10962 of the control cabin temperature sensor and the connector D456 of the cabin temperature controller:

D10962		**D456**
pin 1	- - - - - - - - - - - - - - - - - -	pin 23
pin 3	- - - - - - - - - - - - - - - - - -	pin 24

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

1) Repair the wiring.

2) Re-connect connector D10962 to the passenger cabin temperature sensor.

3) Re-install the cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

4) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D10962 to the passenger cabin temperature sensor.

(3) Install a new cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

——————— END OF TASK ———————

835. Flight Compartment Temperature Selector Failed - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) TEMP SELECTOR - LEFT PACK - NO GO

B. Possible Causes

(1) Control cabin temperature selector, M392

(2) Cabin temperature controller, M345

(3) Wiring Problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT

D. Related Data

(1) SSM 21-61-21

(2) WDM 21-61-21

E. Initial Evaluation

(1) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the control cabin temperature selector in the P5-17 panel.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-804-001,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-804-001.

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(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the control cabin temperature selector and the cabin temperature controller, M345 on the E4-1 shelf:

(a) Disconnect connector D618 from the control cabin temperature selector.

(b) Remove the cabin temperature controller. To remove the controller, do this task: Cabin Temperature Controller (CTC) Removal, AMM TASK 21-61-01-000-801.

(c) Do a wiring check between these pins of connector D618 of the control cabin temperature selector and the connector D454 of the cabin temperature controller:

D618		D454
pin 1	- - - - - - - - - - - - - - - - - -	pin 19
pin 2	- - - - - - - - - - - - - - - - - -	pin 20
pin 3	- - - - - - - - - - - - - - - - - -	pin 17
pin 4	- - - - - - - - - - - - - - - - - -	pin 10
pin 5	- - - - - - - - - - - - - - - - - -	pin 25

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

1) Repair the wiring.

2) Re-connect connector D618 to the control cabin temperature selector.

3) Re-install the cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

4) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D618 to the control cabin temperature sensor.

(3) Install a new cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

——————— END OF TASK ———————

836. Passenger Cabin Temperature Selector Failed - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) TEMP SELECTOR - RIGHT PACK - NO GO

B. Possible Causes

(1) passenger cabin temperature selector, M393

(2) Cabin temperature controller, M345

(3) 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, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT

D. Related Data

(1) SSM 21-61-22

(2) WDM 21-61-22

E. Initial Evaluation

(1) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the passenger cabin temperature selector in the P5-17 panel.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-804-001,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-804-001.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the passenger cabin temperature selector and the cabin temperature controller, M345 on the E4-1 shelf:

(a) Disconnect connector D620 from the passenger cabin temperature selector.

(b) Remove the cabin temperature controller. To remove the controller, do this task: Cabin Temperature Controller (CTC) Removal, AMM TASK 21-61-01-000-801.

(c) Do a wiring check between these pins of connector D620 of the control cabin temperature selector and the connector D454 of the cabin temperature controller:

D620		D454
pin 1	- - - - - - - - - - - - - - - - - -	pin 19
pin 2	- - - - - - - - - - - - - - - - - -	pin 20
pin 3	- - - - - - - - - - - - - - - - - -	pin 17
pin 4	- - - - - - - - - - - - - - - - - -	pin 10
pin 5	- - - - - - - - - - - - - - - - - -	pin 25

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

1) Repair the wiring.

2) Re-connect connector D620 to the passenger cabin temperature selector.

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3) Re-install the cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

4) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

(e) If you do not find a problem with the wiring, then continue.

1) Re-connect connector D620 to the passenger cabin temperature sensor.

(3) Install a new cabin temperature controller. To install the controller, do this task: Cabin Temperature Controller (CTC) Installation, AMM TASK 21-61-01-400-801.

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

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

——————— END OF TASK ———————

837. DUCT OVERHEAT Light On, Cannot Reset, CONT CABIN - Fault Isolation

A. Description

(1) The DUCT OVERHEAT light for the control cabin on the P5-17 cabin temperature control module is on and will not reset.

B. Possible Causes

(1) Control cabin duct overheat switch, S11

(2) Air conditioning accessory unit, M324

(3) Wiring problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

D. Related Data

(1) (SSM 21-61-21)

(2) (WDM 21-61-21)

E. Initial Evaluation

(1) Push the TRIP RESET switch on the air conditioning module on the P5 panel.

(2) If the DUCT OVERHEAT light goes off, then there was an intermittent fault.

(3) If the DUCT OVERHEAT light stays on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the control cabin duct overheat switch, S11:

(a) Open this access panel:

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Number	Name/Location
117A	Electronic Equipment Access Door

(b) Disconnect connector D11360 from the passenger cabin duct overheat switch, S11.

(c) Push the TRIP RESET switch.

(d) If the DUCT OVERHEAT light goes out, then do these steps:

1) Replace the control cabin duct overheat switch, S11.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

2) Re-connect connector D11360 to the passenger cabin duct overheat switch, S11.

3) If the DUCT OVERHEAT light is still off, then you corrected the fault.

4) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(e) If the DUCT OVERHEAT light comes on, then continue.

(2) Replace the air conditioning accessory unit, M324. To replace it,

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Push the TRIP RESET switch.

(b) If the DUCT OVERHEAT light goes out, then you corrected the fault. Do this step to complete the task:

Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(c) If the DUCT OVERHEAT light is still on, then continue.

(3) Do this check of the wiring between the ACAU and the control cabin duct temperature sensor:

(a) Do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for a short from pin 56 at connector D458B on the E4-1 shelf to structure ground, (WDM 21-61-21).

(c) If there is a short to ground, then do these steps:

1) Repair the wiring between the air conditioning accessory unit, M324, and control cabin duct overheat switch, S11, (WDM 21-61-21).

2) Re-install the ACAU, M324. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Push the TRIP RESET switch.

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4) If the DUCT OVERHEAT light is off, then you corrected the fault. Do this step to complete the task:

Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(d) If there is not a short to ground, then continue.

(4) Do this check of the wiring between the ACAU and the pilot's overhead panel, P5:

(a) Do a check for a short from pin 40 at connector D458B on the E4-1 shelf to structure ground, (WDM 21-61-22).

(b) If there is a short to ground, then do these steps:

1) Repair the wiring between the air conditioning accessory unit, M324, and the pilot's overhead panel, P5 (WDM 21-61-21).

2) Re-install the ACAU, M324. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Push the TRIP RESET switch.

4) If the DUCT OVERHEAT light is off, then you corrected the fault. Do this step to complete the task:

Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

END OF TASK

838. DUCT OVERHEAT Light On, Cannot Reset, PASS CABIN - Fault Isolation

A. Description

(1) The DUCT OVERHEAT light for the passenger cabin on the P5-10 air conditioning module is on and will not reset.

B. Possible Causes

(1) Passenger cabin duct overheat switch, S14

(2) Air conditioning accessory unit, M324

(3) Wiring problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

D. Related Data

(1) (SSM 21-61-22)

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(2) (WDM 21-61-22)

E. Initial Evaluation

(1) Push the TRIP RESET switch on the air conditioning module on the P5 panel.

(2) If the DUCT OVERHEAT light goes off, then there was an intermittent fault.

(3) If the DUCT OVERHEAT light stays on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do these steps to do a check of the passenger cabin duct overheat switch, S14:

(a) Remove the ceiling panel that is five windows forward of the overwing escape hatches.

To remove the panel, do this task: Sculptured Ceiling Panel Removal, AMM TASK 25-21-45-000-801.

(b) Disconnect connector D11362 from the passenger cabin duct overheat switch, S14.

(c) Push the TRIP RESET switch.

(d) If the DUCT OVERHEAT light goes out, then do these steps:

1) Replace the passenger cabin duct overheat switch, S14.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

2) Re-connect connector D11362 to the passenger cabin duct overheat switch, S14.

3) If the DUCT OVERHEAT light is still off, then you corrected the fault.

4) Install the ceiling liner.

To install the liner, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

(e) If the DUCT OVERHEAT light comes on, then continue.

(2) Replace the air conditioning accessory unit, M324. To replace it,

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Push the TRIP RESET switch.

(b) If the DUCT OVERHEAT light goes out, then you corrected the fault.

(c) If the DUCT OVERHEAT light is still on, then continue.

(3) Do this check of the wiring between the ACAU and the passenger cabin duct temperature sensor:

(a) Do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for a short from pin 56 at connector D458A on the E4-1 shelf to structure ground, (WDM 21-61-22).

(c) If there is a short to ground, then do these steps:

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1) Repair the wiring between the air conditioning accessory unit, M324, and passenger cabin duct overheat switch, S14, (WDM 21-61-22).
2) Re-install the ACAU, M324. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
3) Push the TRIP RESET switch.
4) If the DUCT OVERHEAT light is off, then you corrected the fault. Do these steps to complete the task:

   Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(d) If there is not a short to ground, then continue.

(4) Do this check of the wiring between the ACAU and the pilot's overhead panel, P5:
(a) Do a check for a short from pin 40 at connector D458A on the E4-1 shelf to structure ground, (WDM 21-61-22).
(b) If there is a short to ground, then do these steps:
1) Repair the wiring between the air conditioning accessory unit, M324, and the pilot's overhead panel, P5 (WDM 21-61-22).
2) Re-install the ACAU, M324. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
3) Push the TRIP RESET switch.
4) If the DUCT OVERHEAT light is off, then you corrected the fault. Do these steps to complete the task:
a) Install the ceiling liner.

   To install the liner, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.
b) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

———————— END OF TASK ————————

839. Control Cabin DUCT OVERHEAT Light On and Stays OFF After Reset - Fault Isolation

A. Description

(1) The control cabin DUCT OVERHEAT light on the P5-10 air conditioning module comes on and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-61-21)

(2) (WDM 21-61-21)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the DUCT OVERHEAT light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the DUCT OVERHEAT light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

NOTE: Make sure the heat exchangers are not blocked before you clean them.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the DUCT OVERHEAT light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

840. Passenger Cabin DUCT OVERHEAT Light On and Stays OFF After Reset - Fault Isolation

A. Description

(1) The passenger cabin DUCT OVERHEAT light on the P5-10 air conditioning module comes on and stays off after reset.

B. Possible Causes

(1) Dirty heat exchangers

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HAP 101-999 (Continued)

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C00257	AIR CONDITIONING OVERHEAT

D. Related Data

(1) (SSM 21-61-22)

(2) (WDM 21-61-22)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the DUCT OVERHEAT light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the DUCT OVERHEAT light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

NOTE: Make sure the heat exchangers are not blocked before you clean them.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the DUCT OVERHEAT light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

841. Air Mix Valve Indicator Does Not Operate, Pointer Does Not Move, Temperature Is OK - Fault Isolation

A. Description

(1) There are two air mix valves. The air mix valve for the flight compartment (control cabin) is found in the left ECS bay. The other air mix valve for the passenger cabin is found in the right ECS bay. One of the two air mix valve position indicators on the temperature control panel (P5-17) does not move when you change the setting of the applicable temperature selector on the temperature control panel. But the temperature in the flight compartment and the passenger cabin is still controlled. This indicates that the applicable air mix valve operates correctly and the problem is with the air mix valve position indication, not with the air mix valve.

(2) SDS 21–61–00

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B. Possible Causes

(1) Air mix valve position indicator, N1 (flight compartment) or N2 (passenger cabin)

(2) Air mix valve position transmitter, T406 (flight compartment) or T407 (passenger cabin)

(3) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

D. Related Data

(1) (SSM 21-61-21) (flight compartment)

(2) (SSM 21-61-22) (passenger cabin)

(3) (WDM 21-61-21) (flight compartment)

(4) (WDM 21-61-22) (passenger cabin)

E. Initial Evaluation

(1) Do this task: Supply Conditioned Air to the Airplane, AMM TASK 21-00-00-800-801.

(2) Put the L PACK and R PACK switches on the P5-10 panel in the AUTO position.

(3) For a problem with the flight compartment (control cabin) mix valve position indicator, N1, do these steps:

(a) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

(b) Turn the control cabin temperature selector on the P5-17 panel to the AUTO COOL position.

(c) Make sure that the control cabin AIR MIX VALVE indicator on the P5-17 panel shows COLD.

(d) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(e) Make sure that the position indicator on the left air mix valve is in the COLD position.

NOTE: Use an inspection mirror to see the mix valve position indicator.

1) If the position indicator on the left air mix valve is not in the COLD position, then do the Fault Isolation Procedure below.

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(f) Turn the control cabin temperature selector on the P5-17 panel to the AUTO WARM position.

(g) Make sure that the control cabin AIR MIX VALVE indicator on the P5-17 panel shows HOT.

(h) Make sure that the position indicator on the left air mix valve is in the HOT position.

NOTE: Use an inspection mirror to see the mix valve position indicator.

1) If the position indicator on the left air mix valve is not in the HOT position, then do the Fault Isolation Procedure below.

(i) If these items are true, then there was an intermittent fault:

1) The AIR MIX VALVE indicator on the P5-17 panel agrees with the position indicator on the air mix valve with the applicable temperature selector set to AUTO COOL.

2) The AIR MIX VALVE indicator on the P5-17 panel agrees with the position indicator on the air mix valve with the applicable temperature selector set to AUTO WARM.

(4) For a problem with the passenger cabin mix valve position indicator, N2, do these steps:

(a) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

(b) Turn the passenger cabin temperature selector on the P5-17 panel to the AUTO COOL position.

(c) Make sure that the passenger cabin AIR MIX VALVE indicator on the P5-17 panel shows COLD.

(d) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(e) Make sure that the position indicator on the right air mix valve is in the COLD position.

NOTE: Use an inspection mirror to see the mix valve position indicator.

1) If the position indicator on the right air mix valve is not in the COLD position, then do the Fault Isolation Procedure below.

(f) Turn the passenger cabin temperature selector on the P5-17 panel to the AUTO WARM position.

(g) Make sure that the passenger cabin AIR MIX VALVE indicator on the P5-17 panel shows HOT.

(h) Make sure that the position indicator on the right air mix valve is in the HOT position.

NOTE: Use an inspection mirror to see the mix valve position indicator.

1) If the position indicator on the right air mix valve is not in the HOT position, then do the Fault Isolation Procedure below.

(i) If these items are true, then there was an intermittent fault:

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1) The AIR MIX VALVE indicator on the P5-17 panel agrees with the position indicator on the air mix valve with the applicable temperature selector set to AUTO COOL.
2) The AIR MIX VALVE indicator on the P5-17 panel agrees with the position indicator on the air mix valve with the applicable temperature selector set to AUTO WARM.

F. Fault Isolation Procedure

(1) Do these steps to do a check of the air mix valve position indicator, N1 or N2:
(a) These are the tasks:
Air Mix Valve Position Indicator Removal, AMM TASK 21-61-33-000-801,
Air Mix Valve Position Indicator Installation, AMM TASK 21-61-33-400-801.
(b) Do the Repair Confirmation at the end of this task.
(c) If the Repair Confirmation is not satisfactory, then continue.

(2) Do these steps to do a check of the air mix valve position transmitter:
(a) Do this task: Air Mix Valve Position Transmitter Adjustment, AMM TASK 21-61-34-820-801.
(b) Do this task: Cabin Temperature Module Printed Circuit Assembly Adjustment, AMM TASK 21-61-34-820-802.
(c) If the adjustment does not repair the fault, then replace the air mix valve position transmitter.
(d) Do the Repair Confirmation at the end of this task.
(e) If the Repair Confirmation is not satisfactory, then continue.

(3) Do this check of the wiring:
(a) For a problem with the control cabin mix valve indication, do these steps:
1) Do a check for an open circuit from these pins on connector D172 on the mix valve position transmitter to these pins on connector D656 on the P5-17 cabin temperature panel:

D172		D656
pin 1	- - - - - - - - - - - - - - - - - -	pin 3
pin 2	- - - - - - - - - - - - - - - - - -	pin 4
pin 3	- - - - - - - - - - - - - - - - - -	pin 2

2) If you find a problem with the wiring, then do these steps:
a) Repair the wiring.
b) Do the Repair Confirmation at the end of this task.
(b) For a problem with the passenger cabin mix valve indication, do these steps:
1) Do a check for an open circuit from these pins on connector D170 on the mix valve position transmitter to these pins on connector D656 on the P5-17 cabin temperature panel:

D170		D656
pin 1	- - - - - - - - - - - - - - - - - -	pin 3
pin 2	- - - - - - - - - - - - - - - - - -	pin 4
pin 3	- - - - - - - - - - - - - - - - - -	pin 16

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

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a) Repair the wiring.

b) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this task: Supply Conditioned Air to the Airplane, AMM TASK 21-00-00-800-801.

(2) Put the L PACK and R PACK switches on the P5-10 panel in the AUTO position.

(3) For a problem with the flight compartment (control cabin) mix valve position indicator, do these steps:

(a) Turn the control cabin temperature selector on the P5-17 panel to the AUTO COOL position.

(b) Make sure that the control cabin AIR MIX VALVE indicator on the P5-17 panel shows COLD.

(c) Make sure that the position indicator on the left air mix valve is in the COLD position.

NOTE: Use an inspection mirror to see the mix valve position indicator.

(d) Turn the control cabin temperature selector on the P5-17 panel to the AUTO WARM position.

(e) Make sure that the control cabin AIR MIX VALVE indicator on the P5-17 panel shows HOT.

(f) Make sure that the position indicator on the left air mix valve is in the HOT position.

NOTE: Use an inspection mirror to see the mix valve position indicator.

(g) If these items are true, then you corrected the fault:

1) The AIR MIX VALVE indicator on the P5-17 panel agrees with the position indicator on the air mix valve with the applicable temperature selector set to AUTO COOL.

2) The AIR MIX VALVE indicator on the P5-17 panel agrees with the position indicator on the air mix valve with the applicable temperature selector set to AUTO WARM.

(4) For a problem with the passenger cabin mix valve position indicator, N2, do these steps:

(a) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

(b) Turn the passenger cabin temperature selector on the P5-17 panel to the AUTO COOL position.

(c) Make sure that the passenger cabin AIR MIX VALVE indicator on the P5-17 panel shows COLD.

(d) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(e) Make sure that the position indicator on the right air mix valve is in the COLD position.

NOTE: Use an inspection mirror to see the mix valve position indicator.

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(f) Turn the passenger cabin temperature selector on the P5-17 panel to the AUTO WARM position.

(g) Make sure that the passenger cabin AIR MIX VALVE indicator on the P5-17 panel shows HOT.

(h) Make sure that the position indicator on the right air mix valve is in the HOT position.

NOTE: Use an inspection mirror to see the mix valve position indicator.

(i) If these items are true, then there was an intermittent fault:

1) The AIR MIX VALVE indicator on the P5-17 panel agrees with the position indicator on the air mix valve with the applicable temperature selector set to AUTO COOL.

2) The AIR MIX VALVE indicator on the P5-17 panel agrees with the position indicator on the air mix valve with the applicable temperature selector set to AUTO WARM.

(5) If the control cabin mix valve position indicator was replaced, then do these steps:

(a) Put the control cabin temperature selector in the AUTO NORMAL position.

(b) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(6) If the passenger cabin mix valve position indicator was replaced, then do these steps:

(a) Put the passenger cabin temperature selector in the AUTO NORMAL position.

(b) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(7) Do this task: Remove Conditioned Air from the Airplane, AMM TASK 21-00-00-800-802.

——————— END OF TASK ———————

842. Supply Duct Temperature Indication Incorrect - Fault Isolation

A. Description

(1) The SUPPLY DUCT air temperature shown on the indicator of the P5-17 cabin temperature panel is incorrect.

NOTE: When the temperature indicating system operates normally, the SUPPLY DUCT temperature will be ±41° F (5° C) of the PASS CABIN temperature.

B. Possible Causes

(1) Passenger cabin supply duct temperature bulb, T402

(2) Air temperature indicator, N11

(3) Wiring

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

D. Related Data

(1) (SSM 21-61-51)

(2) (WDM 21-61-51)

E. Initial Evaluation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CABIN and PASS CABIN temperature selectors to the AUTO NORMAL position.

(3) Let the pack operate for two minutes to let the output temperature to become stable.

(4) Put the air temperature selector on the P5-17 cabin temperature panel to the SUPPLY DUCT position.

(5) Move the air temperature selector on the P5-17 Cabin Temperature Panel to the PASS CABIN position.

(6) If the temperature on the indicator is incorrect for the two positions, do the steps below to replace the indicator.

(7) If the temperature on the indicator is correct for the PASS CABIN position, but not the SUPPLY DUCT position, do the task below.

NOTE: When the temperature indicating system operates normally, the SUPPLY DUCT temperature will be ±41° F (5° C) of the PASS CABIN temperature.

F. Fault Isolation Procedure

(1) Replace the temperature bulb for the passenger cabin supply duct.

These are the tasks:

Duct Temperature Bulb Removal, AMM TASK 21-61-30-000-804-001,

Duct Temperature Bulb Installation, AMM TASK 21-61-30-400-804-001.

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

(b) If the temperature shown on the cabin temperature indicator is correct for the SUPPLY DUCT, then you corrected the fault.

(c) If the indicator shows an incorrect temperature, then continue.

(2) Replace the cabin temperature indicator.

These are the tasks:

Cabin Temperature Indicator Removal, AMM TASK 21-61-32-000-801,

Cabin Temperature Indicator Installation, AMM TASK 21-61-32-400-801.

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

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(b) If the temperature shown on the cabin temperature indicator is correct for the SUPPLY DUCT, then you corrected the fault.

(c) If the indicator shows an incorrect temperature, then continue.

(3) Do this check of the wiring for P5-17 cabin temperature panel and the temperature bulb for the passenger cabin supply duct:

(a) Lower the P5 overhead panel to get access to connectors D90 and D656.

(b) Disconnect connector D90 from the panel.

(c) Do a check for 28 VDC at pin 2 on connector D90.

(d) If there is not 28 VDC at pin 2, then do these steps:

1) Repair the wiring between this circuit breaker and connector D90:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

2) Re-connect connector D90 to the panel.

3) Close the P5 overhead panel.

4) Do the Repair Confirmation at the end of this task.

(e) If there is 28 VDC at pin 2, then do these steps:

1) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

2) Disconnect connector D94 from the temperature bulb.

3) Disconnect connectors D656 from the panel.

4) Do a wiring check between these pins:

D94 pin A	- - - - - - - - - - - - - - - - - -	**D90** pin 4
D94 pin B	- - - - - - - - - - - - - - - - - -	**D656** pin 9

5) Repair the wiring.

6) Re-connect connector D94 to the temperature bulb.

7) Re-connect connectors D90 and D656 to the panel.

8) Close the P5 overhead panel.

9) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

10) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(2) On the P5-17 cabin temperature panel, put the CONT CABIN and PASS CABIN temperature selectors to the AUTO NORMAL position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Put the air temperature selector on the P5-17 cabin temperature panel to the SUPPLY DUCT position.

(5) Make sure the temperature shown on the cabin temperature indicator is correct for the SUPPLY DUCT position.

END OF TASK

843. Passenger Cabin Temperature Indication Incorrect - Fault Isolation

A. Description

(1) The PASS CABIN air temperature shown on the indicator of the P5-17 Cabin Temperature Panel is incorrect.

B. Possible Causes

(1) Passenger cabin temperature sensor fan

(2) Passenger cabin temperature bulb, T401

(3) Air temperature indicator, N11

(4) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

D. Related Data

(1) (SSM 21-61-51)

(2) (WDM 21-61-51)

E. Initial Evaluation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 Cabin Temperature Panel, put the CONT CABIN and PASS CABIN temperature selectors to the AUTO NORMAL position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Use a thermometer, STD-1122 to determine the ambient air temperature in the control cabin and the passenger cabin.

(5) Put the air temperature selector on the P5-17 Cabin Temperature Panel to the SUPPLY DUCT position.

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(6) Move the air temperature selector on the P5-17 Cabin Temperature Panel to the PASS CABIN position.

(7) If the temperature on the indicator is incorrect for the two positions, do the steps below to replace the indicator.

(8) If the temperature on the indicator is correct for the SUPPLY DUCT position, but not the PASS CABIN position, do the task below.

F. Fault Isolation Procedure

(1) Do this test of the fan for the temperature sensor assembly:
  (a) Hold a 3 inch by 4 inch sheet of lightweight paper over the air inlet grille of the temperature sensor assembly.
  (b) Make sure that the fan holds the paper in its position.
  (c) If the vacuum from the fan will not hold the paper in its position, then do these steps:
    1) Inspect the temperature sensor assembly filter for blockage.
      a) If blockage is found, then clean the filter and do the Repair Confirmation.
      b) If no blockage is found, then continue.
    2) Inspect the duct from the filter to the temperature sensor for blockage:
      a) If blockage is found, then clean the duct.
      b) If no blockage is found then replace the fan.
        These are the tasks:
        Cabin Temperature Sensor Fan Removal, AMM TASK 21-61-11-000-801,
        Cabin Temperature Sensor Fan Installation, AMM TASK 21-61-11-400-801.
      c) Do the Repair Confirmation at the end of this task.
  (d) If the vacuum from the fan will hold the paper, remove the paper then continue.

(2) Replace the temperature bulb for the passenger cabin.
  These are the tasks:
  Cabin Temperature Bulb Removal, AMM TASK 21-61-31-000-801,
  Cabin Temperature Bulb Installation, AMM TASK 21-61-31-400-801.
  (a) Do the Repair Confirmation at the end of this task.
    1) If the temperature shown on the cabin temperature indicator is correct for the PASS CABIN, then you corrected the fault.
    2) If the indicator shows an incorrect temperature, then continue.

(3) Replace the cabin temperature indicator.
  These are the tasks:
  Cabin Temperature Indicator Removal, AMM TASK 21-61-32-000-801,
  Cabin Temperature Indicator Installation, AMM TASK 21-61-32-400-801.
  (a) Do the Repair Confirmation at the end of this task.
    1) If the temperature shown on the cabin temperature indicator is correct for the PASS CABIN, then you corrected the fault.

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2) If the indicator shows an incorrect temperature, then continue.

(4) Do this check of the wiring for P5-17 cabin temperature panel and the temperature bulb for the passenger cabin:

(a) Lower the P5 overhead panel to get access to connectors D90 and D656.

(b) Disconnect connector D90 from the panel.

(c) Do a check for 28 VDC at pin 2 on connector D90.

(d) If there is not 28 VDC at pin 2, then do these steps:

1) Repair the wiring between the following circuit breaker and connector D90:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

2) Re-connect connector D90 to the panel.

3) Close the P5 overhead panel.

4) Do the Repair Confirmation at the end of this task.

(e) If 28 VDC is found at pin 2, then do these steps:

1) Re-connect connector D90 to the panel.

2) Remove the bullnose cover to get access to the cabin temperature bulb. To remove the bullnose cover, do the applicable steps of this task: (Cabin Temperature Bulb Removal, AMM TASK 21-61-31-000-801).

3) Disconnect connector D10964 from the temperature bulb.

4) Disconnect connector D656 from the P5-17 cabin temperature panel.

5) Do a check for ground to structure of pin A for connector D10964.

6) Do a wiring check between these pins:

D10964		D656
pin B	- - - - - - - - - - - - - - - - - -	pin 10

7) Repair the wiring.

8) Re-connect connector D10964 to the temperature bulb.

9) Re-connect connector D656 to the panel.

10) Close the P5 overhead panel.

11) Install the bullnose cover that was removed to get access to the cabin temperature bulb. To install the bullnose cover, do the applicable steps of this task: (Cabin Temperature Bulb Installation, AMM TASK 21-61-31-400-801).

12) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CABIN and PASS CABIN temperature selectors to the AUTO NORMAL position.

(3) Operate the pack for two minutes to let output temperature to become stable.

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(4) Put the air temperature selector on the P5-17 cabin temperature panel to the PASS CABIN position.

(5) Make sure the temperature shown on the cabin temperature indicator is correct for the PASS CABIN position.

——————— END OF TASK ———————

844. Control Cabin Too Hot, No Temperature Control in AUTO or MANUAL - Fault Isolation

A. Description

(1) The temperature in the control cabin is too hot. Control cabin temperature can not be made colder with the temperature selector in the AUTO or the MANUAL mode. The air mix valve does not move to the COLD position.

B. Possible Causes

(1) Air mix valve, V23

(2) Control cabin temperature selector, M392

(3) Wiring

(4) Air conditioning accessory unit (ACAU), M324

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

D. Related Data

(1) SSM 21-61-21

(2) WDM 21-61-21

E. Initial Evaluation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CABIN temperature selector to the AUTO NORMAL position.

(3) Let the pack operate for a minute to let output temperature become stable.

(4) Put the CONT CABIN temperature selector to the AUTO COOL position.

(5) Make sure the position indicator for the CONT CABIN AIR MIX VALVE moves to the COLD position.

(6) Put the CONT CABIN temperature selector to the MANUAL COOL position.

(7) Make sure the position indicator for the CONT CABIN AIR MIX VALVE stays in the COLD position.

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(8) If the position indicator for the CONT CABIN AIR MIX VALVE did move to the COLD position, then there was an intermittent fault. Do this task, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(9) If the position indicator for the CONT CABIN AIR MIX VALVE did not move to the COLD position, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(2) Do this test of the air mix valve V23:

(a) Remove connector D524 from the air mix valve.

(b) Do a check for 115 VAC at pins 1 and 2 of D524.

(c) If there is 115 VAC at pins 1 and 2 of D524, then do these steps:

1) Replace the air mix valve.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Do the Repair Confirmation at the end of this task.

(d) If there is not 115 VAC at pins 1 and 2 of D524, then continue. Re-connect connector D524 to the air mix valve.

(3) Do this test of the control cabin temperature selector:

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(b) If the BITE test shows a failure of the control cabin temperature selector, then do these steps:

1) Replace the control cabin temperature selector, M392.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-804-001,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-804-001.

2) Do the Repair Confirmation at the end of this task.

(c) If the control cabin temperature selector passes the BITE test, then continue.

(4) Do this check of the wiring between air conditioning accessory unit and the air mix valve:

(a) Disconnect connector D524 from the air mix valve.

(b) Disconnect connectors D458B from the air conditioning accessory unit.

(c) Make sure there is continuity from pin 3 of D524 to the structure ground.

(d) Do a wiring check between these pins:

D458B		D524
pin 22	- - - - - - - - - - - - - - - - - -	pin 2
pin 39	- - - - - - - - - - - - - - - - - -	pin 1

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

1) Repair the wiring.

2) Re-connect connector D458B to the air conditioning accessory unit.

3) Re-connect connectors D524 to the air mix valve.

4) Do the Repair Confirmation at the end of this task.

(f) If you do not find a problem with the wiring, then continue.

(5) Replace the air conditioning accessory unit.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

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

G. Repair Confirmation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CABIN temperature selector to the AUTO NORMAL position.

(3) Operate the pack for a minute to let output temperature become stable.

(4) Move the CONT CABIN temperature selector to the COOl NORMAL position.

(5) Make sure the AIR MIX VALVE position indicator for the CONT CABIN moves to the COLD position and the control cabin temperature gets colder.

(6) Move the CONT CABIN temperature selector to the COOL MANUAL position.

(7) Make sure the AIR MIX VALVE position indicator for the CONT CABIN stays at the COLD position.

(8) If the cabin air temperature can be changed in the manual and the automatic modes, then you corrected the fault.

(9) Do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(10) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(11) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——————— END OF TASK ———————

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845. Control Cabin Too Cold, No Temperature Control in AUTO or MANUAL - Fault Isolation

A. Description

(1) The temperature in the control cabin is too cold. Control cabin temperature can not be made warmer with the temperature selector in the AUTO or MANUAL mode. The air mix valve does not move to the HOT position.

B. Possible Causes

(1) Air mix valve, V23

(2) Control cabin temperature selector, M392

(3) Wiring

(4) Air conditioning accessory unit (ACAU), M324

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

D. Related Data

(1) SSM 21-61-21

(2) WDM 21-61-21

E. Initial Evaluation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CABIN temperature selector to the AUTO NORMAL position.

(3) Let the pack operate for a minute to let output temperature become stable.

(4) Put the CONT CABIN temperature selector to the AUTO WARM position.

(5) Make sure the position indicator for the CONT CABIN AIR MIX VALVE moves to the WARM position.

(6) Put the CONT CABIN temperature selector to the MANUAL WARM position.

(7) Make sure the position indicator for the CONT CABIN AIR MIX VALVE stays in the WARM position.

(8) If the position indicator for the CONT CABIN AIR MIX VALVE did move to the WARM position, then there was an intermittent fault. Do this task, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(9) If the position indicator for the CONT CABIN AIR MIX VALVE did not move to the WARM position, then do the Fault Isolation Procedure below.

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F. Fault Isolation Procedure

(1) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(2) Do this test of the air mix valve V23:

(a) Remove connector D524 from the air mix valve.

(b) Do a check for 115 VAC at pins 1 and 2 of D524.

(c) If there is 115 VAC at pins 1 and 2 of D524, then do these steps:

1) Replace the air mix valve.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Do the Repair Confirmation at the end of this task.

(d) If there is not 115 VAC at pins 1 and 2 of D524, then continue. Re-connect connector D524 to the air mix valve.

(3) Do this test of the control cabin temperature selector:

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(b) If the BITE test shows a failure of the control cabin temperature selector, then do these steps:

1) Replace the control cabin temperature selector, M392.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-804-001,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-804-001.

2) Do the Repair Confirmation at the end of this task.

(c) If the control cabin temperature selector passes the BITE test, then continue.

(4) Do this check of the wiring between air conditioning accessory unit and the air mix valve:

(a) Disconnect connector D524 from the air mix valve.

(b) Disconnect connectors D458B from the air conditioning accessory unit.

(c) Make sure there is continuity from pin 3 of D524 to the structure ground point.

(d) Do a wiring check between these pins:

D458B		D524
pin 22	- - - - - - - - - - - - - - - - - -	pin 2
pin 39	- - - - - - - - - - - - - - - - - -	pin 1

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

1) Repair the wiring.

2) Re-connect connector D458B to the air conditioning accessory unit.

3) Re-connect connectors D524 to the air mix valve.

4) Do the Repair Confirmation at the end of this task.

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(f) If you do not find a problem with the wiring, then continue.

(5) Replace the air conditioning accessory unit.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

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

G. Repair Confirmation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CABIN temperature selector to the AUTO NORMAL position.

(3) Let the pack operate for a minute to let output temperature become stable.

(4) Move the CONT CABIN temperature selector to the WARM NORMAL position.

(5) Make sure the AIR MIX VALVE position indicator for the CONT CABIN moves to the HOT position and the control cabin temperature gets warmer.

(6) Move the CONT CABIN temperature selector to the WARM MANUAL position.

(7) Make sure the AIR MIX VALVE position indicator for the CONT CABIN stays at the HOT position.

(8) If the cabin air temperature can be changed in the manual and the automatic modes, then you corrected the fault.

(9) Do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(10) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(11) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

———————— END OF TASK ————————

846. Passenger Cabin Too Hot, No Temperature Control in AUTO or MANUAL - Fault Isolation

A. Description

(1) The temperature in the passenger cabin is too hot. Passenger cabin temperature can not be made colder with the temperature selector in the AUTO or MANUAL mode. The air mix valve does not move to the COLD position.

B. Possible Causes

(1) Air mix valve, V22

(2) Control cabin temperature selector, M393

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(3) Wiring

(4) Air conditioning accessory unit (ACAU), M324

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

D. Related Data

(1) SSM 21-61-22

(2) WDM 21-61-22

E. Initial Evaluation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the PASS CABIN temperature selector to the AUTO NORMAL position.

(3) Operate the pack for a minute to let output temperature become stable.

(4) Put the PASS CABIN temperature selector to the AUTO COOL position.

(5) Make sure the position indicator for the PASS CABIN AIR MIX VALVE moves to the COLD position.

(6) Put the PASS CABIN temperature selector to the MANUAL COOL position.

(7) Make sure the position indicator for the PASS CABIN AIR MIX VALVE stays in the COLD position.

(8) If the position indicator for the PASS CABIN AIR MIX VALVE did move to the COLD position, then there was an intermittent fault. Do this task, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(9) If the position indicator for the PASS CABIN AIR MIX VALVE did not move to the COLD position, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Open these panels in the specified sequence:

Number	Name/Location
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

(2) Do this test of the air mix valve, V22:

(a) Remove connector D522 from the air mix valve.

(b) Do a check for 115 VAC at pins 1 and 2 of D522.

(c) If there is 115 VAC at pins 1 and 2 of D522, then do these steps:

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1) Replace the air mix valve.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Do the Repair Confirmation at the end of this task.

(d) If there is not 115 VAC at pins 1 and 2 of D522, then continue. Re-connect connector D522 to the air mix valve.

(3) Do this test of the passenger cabin temperature selector:

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(b) If the BITE test shows a failure of the passenger cabin temperature selector, then do these steps:

1) Replace the control cabin temperature selector, M393.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-804-001,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-804-001.

2) Do the Repair Confirmation at the end of this task.

(c) If the passenger cabin temperature selector passes the BITE test, then continue.

(4) Do this check of the wiring between air conditioning accessory unit and the air mix valve:

(a) Disconnect connector D522 from the air mix valve.

(b) Disconnect connectors D458A from the air conditioning accessory unit.

(c) Make sure there is continuity from pin 3 of D522 to the structure ground point.

(d) Do a wiring check between these pins:

D458A		D522
pin 13	- - - - - - - - - - - - - - - - - -	pin 2
pin 39	- - - - - - - - - - - - - - - - - -	pin 1

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

1) Repair the wiring.

2) Re-connect connector D458A to the air conditioning accessory unit.

3) Re-connect connectors D522 to the air mix valve.

4) Do the Repair Confirmation at the end of this task.

(f) If you do not find a problem with the wiring, then continue.

(5) Replace the air conditioning accessory unit.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

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

G. Repair Confirmation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(2) On the P5-17 cabin temperature panel, put the PASS CABIN temperature selector to the AUTO NORMAL position.

(3) Operate the pack for a minute to let output temperature become stable.

(4) Move the PASS CABIN temperature selector to the COOl NORMAL position.

(5) Make sure the AIR MIX VALVE position indicator for the PASS CABIN moves to the COLD position and the passenger cabin temperature gets colder.

(6) Move the PASS CABIN temperature selector to the COOL MANUAL position.

(7) Make sure the AIR MIX VALVE position indicator for the PASS CABIN stays at the COLD position.

(8) If the passenger cabin air temperature can be changed in the manual and the automatic modes, then you corrected the fault.

(9) Do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(10) Close these panels in the specified sequence:

Number	Name/Location
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

(11) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

———————— END OF TASK ————————

847. Passenger Cabin Too Cold, No Temperature Control in AUTO or MANUAL - Fault Isolation

A. Description

(1) The temperature in the passenger cabin is too cold. Passenger cabin temperature can not be made warmer with the temperature selector in the AUTO or MANUAL mode. The air mix valve does not move to the HOT position.

B. Possible Causes

(1) Air mix valve, V22

(2) Control cabin temperature selector, M393

(3) Wiring

(4) Air conditioning accessory unit (ACAU), M324

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT

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Row	Col	Number	Name
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
D	7	C00124	AIR CONDITIONING MIX VALVE POS IND

D. Related Data

(1) SSM 21-61-22

(2) WDM 21-61-22

E. Initial Evaluation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the PASS CABIN temperature selector to the AUTO NORMAL position.

(3) Operate the pack for a minute to let output temperature become stable.

(4) Put the PASS CABIN temperature selector to the AUTO WARM position.

(5) Make sure the position indicator for the PASS CABIN AIR MIX VALVE moves to the WARM position.

(6) Put the PASS CABIN temperature selector to the MANUAL WARM position.

(7) Make sure the position indicator for the PASS CABIN AIR MIX VALVE stays in the WARM position.

(8) If the position indicator for the PASS CABIN AIR MIX VALVE did move to the WARM position, then there was an intermittent fault. Do this task, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(9) If the position indicator for the PASS CABIN AIR MIX VALVE did not move to the WARM position, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Open these access panels:

Number	Name/Location
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

(2) Do this test of the air mix valve V22:

(a) Remove connector D522 from the air mix valve.

(b) Do a check for 115 VAC at pins 1 and 2 of D522.

(c) If there is 115 VAC at pins 1 and 2 of D522, then do these steps:

1) Replace the air mix valve.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Do the Repair Confirmation at the end of this task.

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(d) If there is not 115 VAC at pins 1 and 2 of D522, then continue. Re-connect connector D522 to the air mix valve.

(3) Do this test of the passenger cabin temperature selector:

(a) Do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(b) If the BITE test shows a failure of the control cabin temperature selector, then do these steps:

1) Replace the control cabin temperature selector, M393.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-804-001,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-804-001.

2) Do the Repair Confirmation at the end of this task.

(c) If the passenger cabin temperature selector passes the BITE test, then continue.

(4) Do this check of the wiring between air conditioning accessory unit and the air mix valve:

(a) Disconnect connector D522 from the air mix valve.

(b) Disconnect connectors D458A from the air conditioning accessory unit.

(c) Make sure there is continuity from pin 3 of D522 to the structure ground point.

(d) Do a wiring check between these pins:

D458A		D522
pin 13	- - - - - - - - - - - - - - - - - -	pin 2
pin 39	- - - - - - - - - - - - - - - - - -	pin 1

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

1) Repair the wiring.

2) Re-connect connector D458A to the air conditioning accessory unit.

3) Re-connect connectors D522 to the air mix valve.

4) Do the Repair Confirmation at the end of this task.

(f) If you do not find a problem with the wiring, then continue.

(5) Replace the air conditioning accessory unit.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

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

G. Repair Confirmation

(1) Do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the PASS CABIN temperature selector to the AUTO NORMAL position.

(3) Operate the pack for a minute to let output temperature become stable.

(4) Move the CONT CABIN temperature selector to the WARM NORMAL position.

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(5) Make sure the AIR MIX VALVE position indicator for the PASS CABIN moves to the HOT position and the passenger cabin temperature gets warmer.

(6) Move the PASS CABIN temperature selector to the WARM MANUAL position.

(7) Make sure the AIR MIX VALVE position indicator for the PASS CABIN stays at the HOT position.

(8) Do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(9) If the cabin air temperature can be changed in the manual and the automatic modes, then you corrected the fault.

(10) Close these panels in the specified sequence:

Number	Name/Location
192CR	Air Conditioning Access Door
192DR	ECS High Pressure Access Door

(11) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——————— END OF TASK ———————

848. CONT CABIN DUCT OVERHEAT light Is On and Comes On Again After Reset - Fault Isolation

A. Description

(1) The CONT CABIN DUCT OVERHEAT light on the P5-10 air conditioning module is on and comes on again after reset.

B. Possible Causes

(1) Air mix valve, V22

(2) Control cabin duct overheat switch, S11

(3) Cabin temperature control system failure

(4) Dirty heat exchangers

(5) Blockage or unwanted material in the ram air ducting

(6) Ram air control system failure

(7) 35°F control system failure

(8) Bleed air too hot

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HAP 101-999 (Continued)

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C00344	AIR CONDITIONING TEMP CONTROL 35 DEG F LEFT
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00265	AIR CONDITIONING RAM AIR MOD CONT LEFT
C	4	C00257	AIR CONDITIONING OVERHEAT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT

D. Related Data

(1) (SSM 21-51-14)

(2) (WDM 21-51-14)

(3) (SSM 21-51-15)

(4) (WDM 21-51-15)

(5) (SSM 21-51-16)

(6) (WDM 21-51-16)

(7) (SSM 21-61-21)

(8) (WDM 21-61-21)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the CONT CABIN DUCT OVERHEAT light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the CONT CABIN DUCT OVERHEAT light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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3) If the CONT CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(2) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the CONT CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, then do these steps:

1) Replace the left pack air mix valve, V22.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the CONT CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the position indicator is in the full COLD position, then continue.

(3) Do the BITE test of the left pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

(a) If the BITE test shows a problem, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the CONT CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(4) Replace the control cabin duct overheat switch, S11.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the CONT CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the CONT CABIN DUCT OVERHEAT light comes on, then continue.

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(5) Examine the left pack ram air ducts for blockage or unwanted materials.
   (a) If the ducts have blockage or unwanted materials, then do these steps:
      1) Remove the blockage or unwanted materials.
      2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
      3) If the CONT CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.
      4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.
   (b) If the ducts do not have blockage or unwanted materials, then continue.

(6) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.
   (a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
   (b) If the CONT CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.
      1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.
   (c) If the CONT CABIN DUCT OVERHEAT light comes on, then continue.

(7) Check to see if there was a report for bleed air that is too hot (a bleed trip off).
   (a) If there was a bleed trip off, then do these steps:
      1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.
      2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
      3) If the CONT CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.
      4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.
   (b) If there was not a bleed trip off, then continue.

(8) Do these steps to do a check of the ram air modulation system:
   (a) Look at the left pack ram air doors.
   (b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.
      1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
      2) If the CONT CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.
      3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

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849. PASS CABIN DUCT OVERHEAT light Is On and Comes On Again After Reset - Fault Isolation

A. Description

(1) The PASS CABIN DUCT OVERHEAT light on the P5-10 air conditioning module is on and comes on again after reset.

B. Possible Causes

(1) Air mix valve, V22

(2) Passenger cabin duct overheat switch, S14

(3) Cabin temperature control system failure

(4) Dirty heat exchangers

(5) Blockage or unwanted material in the ram air ducting

(6) Ram air control system failure

(7) 35°F control system failure

(8) Bleed air too hot

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	3	C00267	AIR CONDITIONING TEMP CONTROL MANUAL
B	1	C00345	AIR CONDITIONING TEMP CONTROL 35 DEG F RIGHT
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C00266	AIR CONDITIONING RAM AIR MOD CONT RIGHT
C	4	C00257	AIR CONDITIONING OVERHEAT
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT

D. Related Data

(1) (SSM 21-51-24)

(2) (WDM 21-51-24)

(3) (SSM 21-51-25)

(4) (WDM 21-51-25)

(5) (SSM 21-51-26)

(6) (WDM 21-51-26)

(7) (SSM 21-61-22)

(8) (WDM 21-61-22)

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HAP 101-999 (Continued)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) If the PASS CABIN DUCT OVERHEAT light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the PASS CABIN DUCT OVERHEAT light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do the BITE test of the cabin temperature control system. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a problem, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PASS CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(2) Do these steps to do a check of the temperature control (air mix) valve:

(a) Look at the PASS CABIN AIR MIX VALVE position indicator on the temperature control module in the control cabin.

(b) If the position indicator is not in the full COLD position, then do these steps:

1) Replace the right pack air mix valve, V23.

These are the tasks:

Air Mix Valve Removal, AMM TASK 21-61-02-000-801,

Air Mix Valve Installation, AMM TASK 21-61-02-400-801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PASS CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the position indicator is in the full COLD position, then continue.

(3) Do the BITE test of the left pack 35°F control system. To do the BITE test, do this task: Low Limit (35F) Controller BITE Procedure, 21-52 TASK 801.

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HAP 101-999 (Continued)

(a) If the BITE test shows a problem, then do these steps:

1) Do the corrective action for the maintenance message shown.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PASS CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a problem, then continue.

(4) Replace the passenger cabin duct overheat switch, S14.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PASS CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PASS CABIN DUCT OVERHEAT light comes on, then continue.

(5) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the PASS CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(6) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the PASS CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the PASS CABIN DUCT OVERHEAT light comes on, then continue.

(7) Check to see if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

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HAP 101-999 (Continued)

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.
2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
3) If the PASS CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.
4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(8) Do these steps to do a check of the ram air modulation system:

(a) Look at the right pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
2) If the PASS CABIN DUCT OVERHEAT light does not come on, then you corrected the fault.
3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

———————— END OF TASK ————————

HAP 001-013, 015-026, 028-054

854. Left Pack Temperature Indication Not Correct - Fault Isolation

A. Description

(1) The L PACK air temperature shown on the indicator of the P5-17 cabin temperature panel is not correct.

B. Possible Causes

(1) Air temperature indicator, N11

(2) Left pack temperature bulb, T488

(3) Air temperature selector, S1

(4) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

D. Related Data

(1) (SSM 21-61-51)

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(2) (WDM 21-61-51)

E. Initial Evaluation

(1) Supply conditioned air with the left cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Use a thermometer, STD-1122 to determine the ambient air temperature in the control cabin.

(5) Put the air temperature selector on the P5-17 cabin temperature panel to the L PACK position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(6) Move the air temperature selector on the P5-17 cabin temperature panel to the CONT CAB SUPPLY DUCT position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(7) If the temperature on the indicator is not correct for the two positions, then do the Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position.

(8) If the temperature on the indicator is correct for the CONT CAB SUPPLY DUCT position, but not correct for the L PACK position, then do the Fault Isolation Procedure - Temperature Indication Not Correct for One Position.

(9) If the temperature on the indicator is correct for the CONT CAB SUPPLY DUCT and the L PACK positions, then there was an intermittant fault.

F. Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- cabin temperature indicator, N11
- air temperature selector, S1
- wiring

(1) Do this check for 28 VDC at the cabin temperature indicator:

(a) Lower the P5 overhead panel to get access to electrical connector D90 for cabin temperature indicator N11.

(b) Do a check for 28 VDC between pin 2 of connector D90 and structure ground.

1) If there is not 28 VDC at pin 2 of connector D90, then do these steps:

a) Repair the wiring between pin 2 of D90 and the following circuit breaker:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

b) Close the P5 overhead panel.

c) Do the Repair Confirmation at the end of this task.

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2) If there is 28 VDC at pin 2 of electrical connector D90, then continue.

(2) Replace the cabin temperature indicator N11.

These are the tasks:

Cabin Temperature Indicator Removal, AMM TASK 21-61-32-000-801,

Cabin Temperature Indicator Installation, AMM TASK 21-61-32-400-801.

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

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

(3) Replace the air temperature selector S1.

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

G. Fault Isolation Procedure - Temperature Indication Not Correct for One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- left pack temperature bulb, T488
- air temperature selector, S1
- wiring

(1) Do this check of the wiring for P5-17 cabin temperature panel and the temperature bulb for the left pack:

(a) Lower the P5 overhead panel to get access to electrical connector D3998 for the air temperature selector switch S1.

(b) Disconnect electrical connector D3930 from the left pack temperature bulb T488. (AMM TASK 21-51-60-000-801)

(c) Do a check for an open circuit between these pins:

D3998		D3930
pin 24	- - - - - - - - - - - - - - - - - -	pin B

(d) Make sure pin A of connector D3930 goes to ground.

(e) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(f) If there is continuity, then continue.

(2) Replace the left pack temperature bulb T488.

These are the tasks:

Pack Temperature Bulb Removal, AMM TASK 21-51-60-000-801,

Pack Temperature Bulb Installation, AMM TASK 21-51-60-400-801.

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

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

(3) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

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H. Repair Confirmation

(1) Supply conditioned air with the left cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Put the air temperature selector on the P5-17 cabin temperature panel to the L PACK position.

(5) Make sure the temperature shown on the cabin temperature indicator is correct for the L PACK position.

(a) If the temperature shown on the cabin temperature indicator is correct for the L PACK, then you corrected the fault.

——————— END OF TASK ———————

855. Right Pack Temperature Indication Not Correct - Fault Isolation

A. Description

(1) The R PACK air temperature shown on the indicator of the P5-17 cabin temperature panel is not correct.

B. Possible Causes

(1) Air temperature indicator, N11

(2) Right pack temperature bulb, T489

(3) Air temperature selector, S1

(4) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

D. Related Data

(1) (SSM 21-61-51)

(2) (WDM 21-61-51)

E. Initial Evaluation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

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(4) Use a thermometer, STD-1122 to determine the ambient air temperature in the control cabin.

(5) Put the air temperature selector on the P5-17 cabin temperature panel to the R PACK position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(6) Move the air temperature selector on the P5-17 cabin temperature panel to the AFT PASS CAB position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(7) If the temperature on the indicator is not correct for the two positions, then do the Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position.

(8) If the temperature on the indicator is correct for the AFT PASS CAB position, but not correct for the R PACK position, then do the Fault Isolation Procedure - Temperature Indication Not Correct for One Position.

(9) If the temperature on the indicator is correct for the AFT PASS CAB and the R PACK positions, then there was an intermittent fault.

F. Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- cabin temperature indicator, N11
- air temperature selector, S1
- wiring

(1) Do this check for 28 VDC at the cabin temperature indicator:

(a) Lower the P5 overhead panel to get access to electrical connector D90 for cabin temperature indicator N11.

(b) Do a check for 28 VDC between pin 2 of connector D90 and structure ground.

(c) If there is not 28 VDC at pin 2 of connector D90, then do these steps:

1) Repair the wiring between pin 2 of D90 and circuit breaker C00076:

1) This is the circuit breaker:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(d) If there is 28 VDC at pin 2 of electrical connector D90, then continue.

(2) Replace the cabin temperature indicator, N11.

These are the tasks:

Cabin Temperature Indicator Removal, AMM TASK 21-61-32-000-801,

Cabin Temperature Indicator Installation, AMM TASK 21-61-32-400-801.

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

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

(3) Replace the air temperature selector, S1.

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

G. Fault Isolation Procedure - Temperature Indication Not Correct for One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- right pack temperature bulb, T489
- air temperature selector, S1
- wiring

(1) Do this check of the wiring for P5-17 cabin temperature panel and the temperature bulb for the right pack:

(a) Lower the P5 overhead panel to get access to electrical connector D3996 for the air temperature selector switch S1.

(b) Disconnect electrical connector D3982 from the right pack temperature bulb T489. (AMM TASK 21-51-60-000-801)

(c) Do check for an open circuit between these pins:

D3996		D3982
pin 24	- - - - - - - - - - - - - - - - - -	pin B

(d) Make sure pin A of connector D3982 goes to ground.

(e) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(f) If there is continuity, then continue.

(2) Replace the right pack temperature bulb T489.

These are the tasks:

Pack Temperature Bulb Removal, AMM TASK 21-51-60-000-801,

Pack Temperature Bulb Installation, AMM TASK 21-51-60-400-801.

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

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

(3) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

H. Repair Confirmation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

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(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Put the air temperature selector on the P5-17 cabin temperature panel to the R PACK position.

(5) Make sure the temperature shown on the cabin temperature indicator is correct for the R PACK position.

(a) If the temperature shown on the cabin temperature indicator is correct for the R PACK, then you corrected the fault.

——————— END OF TASK ———————

856. Forward Passenger Cabin Temperature Indication Not Correct - Fault Isolation

A. Description

(1) The FWD PASS CAB air temperature shown on the indicator of the P5-17 cabin temperature panel is incorrect.

B. Possible Causes

(1) Forward passenger cabin temperature sensor fan

(2) Forward passenger cabin temperature bulb

(3) Air temperature indicator, N11

(4) Air temperature selector, S1

(5) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

D. Related Data

(1) (SSM 21-61-51)

(2) (WDM 21-61-51)

E. Initial Evaluation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Use a thermometer, STD-1122 to determine the ambient air temperature in the forward and aft zones of the passenger cabin.

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(5) Put the air temperature selector on the P5-17 cabin temperature panel to the FWD PASS CAB position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(6) Move the air temperature selector on the P5-17 cabin temperature panel to the AFT PASS CAB position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(7) If the temperature on the indicator is not correct for the two positions, then do the Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position.

(8) If the temperature on the indicator is correct for the AFT PASS CAB position, but not correct for the FWD PASS CAB position, then do the Fault Isolation Procedure - Temperature Indication Not Correct for One Position.

(9) If the temperature on the indicator is correct for the AFT PASS CAB and the FWD PASS CAB positions, then there was an intermittant fault.

F. Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- cabin temperature indicator, N11
- air temperature selector, S1
- wiring

(1) Do this check for 28 VDC at the cabin temperature indicator:

(a) Lower the P5 overhead panel to get access to electrical connector D90 for cabin temperature indicator N11.

(b) Do a check for 28 VDC at between pin 2 of connector D90 and structure ground.

(c) If there is not 28 VDC at pin 2 of connector D90, then do these steps:

1) Repair the wiring between pin 2 of D90 and the following circuit breaker:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(d) If there is 28 VDC at pin 2 of connector D90, then continue.

(2) Replace the cabin temperature indicator N11.

These are the tasks:

Cabin Temperature Indicator Removal, AMM TASK 21-61-32-000-801,

Cabin Temperature Indicator Installation, AMM TASK 21-61-32-400-801.

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

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

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(3) Replace the air temperature selector S1.

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

G. Fault Isolation Procedure - Temperature Indication Not Correct One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- forward passenger cabin temperature sensor fan
- forward passenger cabin temperature bulb
- air temperature selector, S1
- wiring

(1) Do this test of the fan in the temperature sensor assembly for the forward passenger cabin:

(a) Hold a 3 inch by 4 inch sheet of lightweight paper over the air inlet grille of the temperature sensor assembly.

(b) Make sure that the fan holds the paper in its position.

(c) If the vacuum from the fan will not hold the paper in its position, then do these steps:

1) Do this task: Cabin Temperature Sensor Assembly Filter Removal, AMM TASK 21-61-06-000-801.

2) Examine the temperature sensor assembly filter for blockage.

3) If blockage is found, then do these steps:

a) Do this task: Cabin Temperature Sensor Assembly Filter Cleaning, AMM TASK 21-61-06-100-801.

b) Do this task: Cabin Temperature Sensor Assembly Filter Installation, AMM TASK 21-61-06-400-801.

c) Do the Repair Confirmation at the end of this task.

4) If no blockage is found, then continue.

5) Inspect the duct from the filter to the temperature sensor for blockage.

6) If blockage is found, then do these steps:

a) Clean the duct

b) Do this task: Cabin Temperature Sensor Assembly Filter Installation, AMM TASK 21-61-06-400-801.

c) Do the Repair Confirmation at the end of this task.

7) If no blockage is found, then do these steps:

a) Do this task: Cabin Temperature Sensor Assembly Filter Installation, AMM TASK 21-61-06-400-801.

b) These are the tasks:

Cabin Temperature Sensor Fan Removal, AMM TASK 21-61-11-000-801,

Cabin Temperature Sensor Fan Installation, AMM TASK 21-61-11-400-801.

c) Do the Repair Confirmation at the end of this task.

(d) If the vacuum from the fan will hold the paper, then remove the paper and continue.

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(2) Do this check of the wiring for P5-17 cabin temperature panel and the temperature bulb for the forward passenger cabin zone:

(a) Lower the P5 overhead panel to get access to electrical connector D3998 for the air temperature selector switch S1.

(b) Do the steps to remove the bullnose cover in, do this task: Cabin Temperature Bulb Removal, AMM TASK 21-61-31-000-801

to get access to the temperature bulb.

(c) Disconnect electrical connector D3920 from the forward passenger cabin temperature bulb.

(d) Do a check for an open circuit between these pins on connector D3998 and connector D3920:

D3998		D3920
pin 3	- - - - - - - - - - - - - - - - - -	pin B

(e) Make sure pin A of connector D3920 goes to ground.

(f) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(g) If there is continuity, then continue.

(3) Replace the forward passenger cabin temperature bulb.

These are the tasks:

Cabin Temperature Bulb Removal, AMM TASK 21-61-31-000-801,

Cabin Temperature Bulb Installation, AMM TASK 21-61-31-400-801.

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

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

(4) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

H. Repair Confirmation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CABIN temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Put the air temperature selector on the P5-17 cabin temperature panel to the FWD PASS CAB position.

(5) Make sure the temperature shown on the cabin temperature indicator is correct for the FWD PASS CAB position.

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(a) If the temperature shown on the cabin temperature indicator is correct for the FWD PASS CAB, then you corrected the fault.

—————— END OF TASK ——————

857. Aft Passenger Cabin Temperature Indication Not Correct - Fault Isolation

A. Description

(1) The AFT PASS CAB air temperature shown on the indicator of the P5-17 cabin temperature panel is not correct.

B. Possible Causes

(1) Aft passenger cabin temperature sensor fan

(2) Aft passenger cabin temperature bulb

(3) Air temperature indicator, N11

(4) Air temperature selector, S1

(5) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

D. Related Data

(1) (SSM 21-61-51)

(2) (WDM 21-61-51)

E. Initial Evaluation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Use a thermometer, STD-1122 to determine the ambient air temperature in the forward and aft zones of the passenger cabin.

(5) Put the air temperature selector on the P5-17 cabin temperature panel to the AFT PASS CAB position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

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(6) Move the air temperature selector on the P5-17 cabin temperature panel to the FWD PASS CAB position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(7) If the temperature on the indicator is not correct for the two positions, then do the Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position.

(8) If the temperature on the indicator is correct for the FWD PASS CAB position, but not correct for the AFT PASS CAB position, then do the Fault Isolation Procedure - Temperature Indication Not Correct for One Position.

(9) If the temperature on the indicator is correct for the AFT PASS CAB and the FWD PASS CAB positions, then there was an intermittant fault.

F. Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- cabin temperature indicator, N11
- air temperature selector, S1
- wiring

(1) Do this check for 28 VDC at the cabin temperature indicator:

(a) Lower the P5 overhead panel to get access to electrical connector D90 for cabin temperature indicator N11.

(b) Do a check for 28 VDC between pin 2 of connector D90 and structure ground.

(c) If there is not 28 VDC at pin 2 of D90, then do these steps:

1) Repair the wiring between pin 2 of D90 and circuit breaker C00076:

1) This is the circuit breaker:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(d) If there is 28 VDC at pin 2 of D90, then continue.

(2) Replace the cabin temperature indicator N11.

These are the tasks:

Cabin Temperature Indicator Removal, AMM TASK 21-61-32-000-801,

Cabin Temperature Indicator Installation, AMM TASK 21-61-32-400-801.

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

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

(3) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

G. Fault Isolation Procedure - Temperature Indication Incorrect One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- aft passenger cabin temperature sensor fan
- aft passenger cabin temperature bulb
- air temperature selector, S1
- wiring

(1) Do this test of the fan in the temperature sensor assembly for the aft passenger cabin:

(a) Hold a 3 inch by 4 inch sheet of lightweight paper over the air inlet grille of the temperature sensor assembly.

(b) Make sure that the fan holds the paper in its position.

(c) If the vacuum from the fan will not hold the paper in its position, then do these steps:

1) Do this task: Cabin Temperature Sensor Assembly Filter Removal, AMM TASK 21-61-06-000-801.

2) Examine the temperature sensor assembly filter for blockage.

3) If blockage is found, then do these steps:

a) Do this task: Cabin Temperature Sensor Assembly Filter Cleaning, AMM TASK 21-61-06-100-801.

b) Do this task: Cabin Temperature Sensor Assembly Filter Installation, AMM TASK 21-61-06-400-801.

c) Do the Repair Confirmation at the end of this task.

4) If no blockage is found, then continue.

5) Inspect the duct from the filter to the temperature sensor for blockage.

6) If blockage is found, then do these steps:

a) Clean the duct

b) Do this task: Cabin Temperature Sensor Assembly Filter Installation, AMM TASK 21-61-06-400-801.

c) Do the Repair Confirmation at the end of this task.

7) If no blockage is found, then do these steps:

a) Do this task: Cabin Temperature Sensor Assembly Filter Installation, AMM TASK 21-61-06-400-801.

b) These are the tasks:

Cabin Temperature Sensor Fan Removal, AMM TASK 21-61-11-000-801,

Cabin Temperature Sensor Fan Installation, AMM TASK 21-61-11-400-801.

c) Do the Repair Confirmation at the end of this task.

(d) If the vacuum from the fan will hold the paper, then remove the paper and continue.

(2) Do this check of the wiring for P5-17 cabin temperature panel and the temperature bulb for the aft passenger cabin zone:

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(a) Lower the P5 overhead panel to get access to electrical connector D3996 for the air temperature selector switch S1.

(b) Do the steps to remove the bullnose cover in, do this task: Cabin Temperature Bulb Removal, AMM TASK 21-61-31-000-801

to get access to the temperature bulb.

(c) Disconnect electrical connector D3922 from the aft passenger cabin temperature bulb.

(d) Do a check for an open circuit between these pins on connector D3996 and connector D3922:

D3996		D3922
pin 13	- - - - - - - - - - - - - - - - - -	pin B

(e) Make sure pin A of connector D3922 goes to ground.

(f) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(g) If there is continuity, then continue.

(3) Replace the aft passenger cabin temperature bulb.

These are the tasks:

Cabin Temperature Bulb Removal, AMM TASK 21-61-31-000-801,

Cabin Temperature Bulb Installation, AMM TASK 21-61-31-400-801.

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

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

(4) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

H. Repair Confirmation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CABIN temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Put the air temperature selector on the P5-17 cabin temperature panel to the AFT PASS CAB position.

(5) Make sure the temperature shown on the cabin temperature indicator is correct for the AFT PASS CAB position.

(a) If the temperature shown on the cabin temperature indicator is correct for the AFT PASS CAB, then you corrected the fault.

——————— END OF TASK ———————

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858. Control Cabin Supply Duct Temperature Indication Not Correct - Fault Isolation

A. Description

(1) The CONT CAB SUPPLY DUCT air temperature shown on the indicator of the P5-17 cabin temperature panel is not correct.

B. Possible Causes

(1) Air temperature indicator, N11

(2) Control cabin supply duct temperature bulb, T485

(3) Air temperature selector, S1

(4) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

D. Related Data

(1) (SSM 21-61-51)

(2) (WDM 21-61-51)

E. Initial Evaluation

(1) Supply conditioned air with the left cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Use a thermometer, STD-1122 to determine the ambient air temperature in the control cabin.

(5) Move the air temperature selector on the P5-17 cabin temperature panel to the CONT CAB SUPPLY DUCT position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(6) Put the air temperature selector on the P5-17 cabin temperature panel to the L PACK position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(7) If the temperature on the indicator is not correct for the two positions, then do the Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position.

(8) If the temperature on the indicator is correct for the L PACK position, but not correct for the CONT CAB SUPPLY DUCT position, the do the Fault Isolation Procedure - Temperature Indication Not Correct for One Position.

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(9) If the temperature on the indicator is correct for the CONT CAB SUPPLY DUCT and the L PACK positions, then there was an intermittant fault.

F. Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- cabin temperature indicator, N11
- air temperature selector, S1
- wiring

(1) Do this check for 28 VDC at the cabin temperature indicator:

(a) Lower the P5 overhead panel to get access to electrical connector D90 for cabin temperature indicator N11.

(b) Do a check for 28 VDC between pin 2 of D90 and structure ground.

(c) If there is not 28 VDC at pin 2 of D90, then do these steps:

1) Repair the wiring between pin 2 of D90 and circuit breaker C00076:

1) This is the circuit breaker:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(d) If there is 28 VDC at pin 2 of D90, then continue.

(2) Replace the cabin temperature indicator N11.

These are the tasks:

Cabin Temperature Indicator Removal, AMM TASK 21-61-32-000-801,

Cabin Temperature Indicator Installation, AMM TASK 21-61-32-400-801.

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

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

(3) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

G. Fault Isolation Procedure - Temperature Indication Not Correct for One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- control cabin supply duct temperature bulb, T485
- air temperature selector, S1
- wiring

(1) Do this check of the wiring for P5-17 cabin temperature panel and the temperature bulb for the control cabin supply duct:

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(a) Lower the P5 overhead panel to get access to electrical connector D3998 for the air temperature selector switch S1.

(b) Disconnect electrical connector D3924 from the control cabin suuply duct temperature bulb T485. (AMM TASK 21-61-30-000-803-002)

(c) Do check for an open circuit between these pins on connector D3998 and connector D3924:

D3998		D3924
pin 19	- - - - - - - - - - - - - - - - - -	pin B

(d) Make sure pin A of connector D3924 goes to ground.

(e) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Raise the P5 overhead panel to the closed position.

3) Do the Repair Confirmation at the end of this task.

(f) If there is continuity, then continue.

(2) Replace the control cabin supply duct temperature bulb T485.

These are the tasks:

Duct Temperature Bulb Removal, AMM TASK 21-61-30-000-803-002,

Duct Temperature Bulb Installation, AMM TASK 21-61-30-400-803-002.

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

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

(3) Replace the air temperature selector S1.

(a) Raise the P5 overhead panel to the closed position.

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

H. Repair Confirmation

(1) Supply conditioned air with the left cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Put the air temperature selector on the P5-17 cabin temperature panel to the CONT CAB SUPPLY DUCT position.

(5) Make sure the temperature shown on the cabin temperature indicator is correct for the CONT CAB SUPPLY DUCT position.

(a) If the temperature shown on the cabin temperature indicator is correct for the CONT CAB SUPPLY DUCT, then you corrected the fault.

——————— END OF TASK ———————

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859. Forward Passenger Cabin Supply Duct Temperature Indication Not Correct - Fault Isolation

A. Description

(1) The FWD SUPPLY DUCT air temperature shown on the indicator of the P5-17 cabin temperature panel is not correct.

B. Possible Causes

(1) Air temperature indicator, N11

(2) Forward cabin supply duct temperature bulb, T534

(3) Air temperature selector, S1

(4) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

D. Related Data

(1) (SSM 21-61-51)

(2) (WDM 21-61-51)

E. Initial Evaluation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Use a thermometer, STD-1122 to determine the ambient air temperature in the forward passenger cabin zone.

(5) Move the air temperature selector on the P5-17 cabin temperature panel to the FWD SUPPLY DUCT position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(6) Put the air temperature selector on the P5-17 cabin temperature panel to the AFT SUPPLY DUCT position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(7) If the temperature on the indicator is not correct for the two positions, then do the Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position.

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(8) If the temperature on the indicator is correct for the AFT SUPPLY DUCT position, but not correct for the FWD SUPPLY DUCT position, then do the Fault Isolation Procedure - Temperature Indication Not Correct for One Position.

(9) If the temperature on the indicator is correct for the FWD SUPPLY DUCT and the AFT SUPPLY DUCT positions, then there was an intermittant fault.

F. Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- cabin temperature indicator, N11
- air temperature selector, S1
- wiring

(1) Do this check for 28 VDC at the cabin temperature indicator:

(a) Lower the P5 overhead panel to get access to electrical connector D90 for cabin temperature indicator N11.

(b) Do a check for 28 VDC between pin 2 of D90 and structure ground.

(c) If there is not 28 VDC at pin 2 of D90, then do these steps:

1) Repair the wiring between pin 2 of D90 and circuit breaker C00076:

1) This is the circuit breaker:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(d) If there is 28 VDC at pin 2 of D90, then continue.

(2) Replace the cabin temperature indicator N11.

These are the tasks:

Cabin Temperature Indicator Removal, AMM TASK 21-61-32-000-801,

Cabin Temperature Indicator Installation, AMM TASK 21-61-32-400-801.

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

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

(3) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

G. Fault Isolation Procedure - Temperature Indication Not Correct for One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- forward cabin supply duct temperature bulb, T534
- air temperature selector, S1

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- wiring

(1) Do this check of the wiring for P5-17 cabin temperature panel and the temperature bulb for the forward passenger cabin supply duct:

(a) Lower the P5 overhead panel to get access to electrical connector D3998 for the air temperature selector switch S1.

(b) Disconnect electrical connector D11832 from the temperature bulb T534 for the forward passenger cabin supply duct. (AMM TASK 21-61-30-000-803-002)

(c) Do a check for an open circuit between these pins on connector D3998 and connector D11832:

D3998		D11832
pin 18	- - - - - - - - - - - - - - - - - - -	pin B

(d) Make sure pin A of connector D11832 goes to ground.

(e) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(f) If there is continuity, then continue.

(2) Replace the temperature bulb T534 for forward passenger cabin supply duct.

These are the tasks:

Duct Temperature Bulb Removal, AMM TASK 21-61-30-000-803-002,

Duct Temperature Bulb Installation, AMM TASK 21-61-30-400-803-002.

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

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

(3) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

H. Repair Confirmation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Put the air temperature selector on the P5-17 cabin temperature panel to the FWD SUPPLY DUCT position.

(5) Make sure the temperature shown on the cabin temperature indicator is correct for the FWD SUPPLY DUCT position.

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(a) If the temperature shown on the cabin temperature indicator is correct for the FWD SUPPLY DUCT, then you corrected the fault.

———————— END OF TASK ————————

860. Aft Passenger Cabin Supply Duct Temperature Indication Not Correct - Fault Isolation

A. Description

(1) The AFT SUPPLY DUCT air temperature shown on the indicator of the P5-17 cabin temperature panel is not correct.

B. Possible Causes

(1) Air temperature indicator, N11

(2) Aft cabin supply duct temperature bulb, T535

(3) Air temperature selector, S1

(4) Wiring

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

D. Related Data

(1) (SSM 21-61-51)

(2) (WDM 21-61-51)

E. Initial Evaluation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Use a thermometer, STD-1122 to determine the ambient air temperature in the forward passenger cabin zone.

(5) Move the air temperature selector on the P5-17 cabin temperature panel to the AFT SUPPLY DUCT position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

(6) Put the air temperature selector on the P5-17 cabin temperature panel to the FWD SUPPLY DUCT position.

NOTE: The temperature shown on the indicator should be approximately the same as the ambient air temperature.

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(7) If the temperature on the indicator is not correct for the two positions, then do the Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position.

(8) If the temperature on the indicator is correct for the FWD SUPPLY DUCT position, but not correct for the AFT SUPPLY DUCT position, then do the Fault Isolation Procedure - Temperature Indication Not Correct for One Position.

(9) If the temperature on the indicator is correct for the FWD SUPPLY DUCT and the AFT SUPPLY DUCT positions, then there was an intermittant fault.

F. Fault Isolation Procedure - Temperature Indication Not Correct for More Than One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- cabin temperature indicator, N11
- air temperature selector, S1
- wiring

(1) Do this check for 28 VDC at the cabin temperature indicator:

(a) Lower the P5 overhead panel to get access to electrical connector D90 for cabin temperature indicator N11.

(b) Do a check for 28 VDC between pin 2 of connector D90 and structure ground.

(c) If there is not 28 VDC at pin 2 of D90, then do these steps:

1) Repair the wiring between pin 2 of D90 and circuit breaker C00076:

1) This is the circuit breaker:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	8	C00076	AIR CONDITIONING TEMP IND

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(d) If there is 28 VDC at pin 2 of D90, then continue.

(2) Replace the cabin temperature indicator N11.

These are the tasks:

Cabin Temperature Indicator Removal, AMM TASK 21-61-32-000-801,

Cabin Temperature Indicator Installation, AMM TASK 21-61-32-400-801.

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

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

(3) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

G. Fault Isolation Procedure - Temperature Indication Not Correct for One Position

NOTE: This procedure isolates the fault to one of these possible causes:

- aft cabin supply duct temperature bulb, T535

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- air temperature selector, S1
- wiring

(1) Do this check of the wiring for P5-17 cabin temperature panel and the temperature bulb for the aft passenger cabin supply duct:

(a) Lower the P5 overhead panel to get access to electrical connector D3998 for the air temperature selector switch S1.

(b) Disconnect electrical connector D11838 from the left pack temperature bulb T535. (AMM TASK 21-61-30-000-803-002)

(c) Do a check for an open circuit between these pins on connector D3998 and connector D11838:

D3998		D11838
pin 17	- - - - - - - - - - - - - - - - - -	pin B

(d) Make sure pin A of connector D11838 goes to ground.

(e) If there is an open circuit, then do these steps:

1) Repair the wiring.

2) Close the P5 overhead panel.

3) Do the Repair Confirmation at the end of this task.

(f) If there is continuity, then continue.

(2) Replace the temperature bulb T535 for the aft passenger cabin supply duct.

These are the tasks:

Duct Temperature Bulb Removal, AMM TASK 21-61-30-000-803-002,

Duct Temperature Bulb Installation, AMM TASK 21-61-30-400-803-002.

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

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

(3) Replace the air temperature selector S1.

(a) Close the P5 overhead panel.

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

H. Repair Confirmation

(1) Supply conditioned air with the right cooling pack. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(3) Operate the pack for two minutes to let output temperature to become stable.

(4) Put the air temperature selector on the P5-17 cabin temperature panel to the AFT SUPPLY DUCT position.

(5) Make sure the temperature shown on the cabin temperature indicator is correct for the AFT SUPPLY DUCT position.

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HAP 001-013, 015-026, 028-054 (Continued)

(a) If the temperature shown on the cabin temperature indicator is correct for the AFT SUPPLY DUCT, then you corrected the fault.

HAP ALL

———————— END OF TASK ————————

861. Control Cabin AUTO Temperature Control Does Not Operate - Fault Isolation

A. Description

(1) The control cabin automatic temperature control does not operate.

HAP 101-999

B. Possible Causes

(1) Temperature control system failure

(2) Control cabin zone temperature sensor fan, M1718

(3) Control cabin zone temperature sensor filter

HAP 001-013, 015-026, 028-054

C. Possible Causes

(1) Pack/zone temperature control system failure

(2) Control cabin zone temperature sensor fan, M1718

(3) Control cabin zone temperature sensor filter

HAP 101-999

D. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	2	C00268	AIR CONDITIONING TEMP CONTROL AUTO LEFT

HAP 001-013, 015-026, 028-054

E. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	3	C01163	AIR CONDITIONING ZONE TEMP VALVE/FAN CONT FLT DK
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

HAP 101-999

F. Related Data

(1) (SSM 21-61-21)

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HAP 101-999 (Continued)

(2) (WDM 21-61-21)

HAP 001-013, 015-026, 028-054

G. Related Data

(1) (SSM 21-61-11)

(2) (WDM 21-61-11)

HAP 101-999

H. Initial Evaluation

(1) Supply conditioned air to the control cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) Make sure the control cabin temperature selector on the P5-17 panel is in the AUTO NORMAL position.

(3) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

(4) Put the control cabin temperature selector on the P5-17 panel to the AUTO WARM position.

(5) If the temperature in the control cabin does not increase, then do the Fault Isolation Procedure below.

(6) If the temperature in the control cabin increases, then there was an intermittent fault.

(a) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

HAP 001-013, 015-026, 028-054

I. Initial Evaluation

(1) Supply conditioned air to the control cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) Make sure the CONT CAB temperature selector on the P5-17 panel is in the AUTO position.

(3) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

(4) Put the CONT CAB temperature selector on the P5-17 panel to the AUTO W position.

(5) If the temperature in the control cabin does not increase, then do the Fault Isolation Procedure below.

(6) If the temperature in the control cabin increases, then there was an intermittent fault.

(a) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

HAP 101-999

J. Fault Isolation Procedure

(1) Do this check of the control cabin zone temperature sensor filter and fan:

(a) Hold a 3 inch (7.6 cm) by 4 inch (10 cm) sheet of lightweight paper over the air inlet grille of the temperature sensor assembly for the control cabin.

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(b) If the fan does not hold the paper in its position, then do these steps:

1) Remove the control cabin zone temperature sensor filter. To remove the filter, do this task: Cabin Temperature Sensor Assembly Filter Removal, AMM TASK 21-61-06-000-801.

2) Examine the filter for dirt or other blockage.

3) If the filter is dirty, then do these steps:

a) Clean the filter. To clean the filter, do this task: Cabin Temperature Sensor Assembly Filter Cleaning, AMM TASK 21-61-06-100-801.

b) Supply conditioned air to the control cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the control cabin temperature selector on the P5-17 panel is in the AUTO NORMAL position.

d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the control cabin temperature selector on the P5-17 panel to the AUTO WARM position.

f) If the temperature in the control cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

4) If the filter is not dirty, then do these steps:

a) Replace the zone temperature sensor fan for the control cabin zone.

These are the tasks:

Cabin Temperature Sensor Fan Removal, AMM TASK 21-61-11-000-801,

Cabin Temperature Sensor Fan Installation, AMM TASK 21-61-11-400-801.

b) Supply conditioned air to the control cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the control cabin temperature selector on the P5-17 panel is in the AUTO NORMAL position.

d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the control cabin temperature selector on the P5-17 panel to the AUTO WARM position.

f) If the temperature in the control cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(c) If the fan holds the paper in its position, then continue.

1) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

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HAP 101-999 (Continued)

(2) Do the BITE test of the cabin temperature controller, M345. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message that shows.

2) Supply conditioned air to the control cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) Make sure the control cabin temperature selector on the P5-17 panel is in the AUTO NORMAL position.

4) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

5) Put the control cabin temperature selector on the P5-17 panel to the AUTO WARM position.

6) If the temperature in the control cabin increases, then you corrected the fault.

7) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

HAP 001-013, 015-026, 028-054

K. Fault Isolation Procedure

(1) Do this check of the control cabin zone temperature sensor filter and fan:

(a) Hold a 3 inch (7.6 cm) by 4 inch (10 cm) sheet of lightweight paper over the air inlet grille of the temperature sensor assembly for the control cabin.

(b) If the fan does not hold the paper in its position, then do these steps:

1) Remove the control cabin zone temperature sensor filter. To remove the filter, do this task: Cabin Temperature Sensor Assembly Filter Removal, AMM TASK 21-61-06-000-801.

2) Examine the filter for dirt or other blockage.

3) If the filter is dirty, then do these steps:

a) Clean the filter. To clean the filter, do this task: Cabin Temperature Sensor Assembly Filter Cleaning, AMM TASK 21-61-06-100-801.

b) Supply conditioned air to the control cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the CONT CAB temperature selector on the P5-17 panel is in the AUTO position.

d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the CONT CAB temperature selector on the P5-17 panel to the AUTO W position.

f) If the temperature in the control cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

4) If the filter is not dirty, then do these steps:

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a) Replace the zone temperature sensor fan for the control cabin zone.

These are the tasks:

Cabin Temperature Sensor Fan Removal, AMM TASK 21-61-11-000-801,

Cabin Temperature Sensor Fan Installation, AMM TASK 21-61-11-400-801.

b) Supply conditioned air to the control cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the CONT CAB temperature selector on the P5-17 panel is in the AUTO position.

d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the CONT CAB temperature selector on the P5-17 panel to the AUTO W position.

f) If the temperature in the control cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(c) If the fan holds the paper in its position, then continue.

1) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(2) Do the BITE test of the right pack/zone temperature controller, M1443. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message that shows.

2) Supply conditioned air to the control cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) Make sure the CONT CAB temperature selector on the P5-17 panel is in the AUTO position.

4) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

5) Put the CONT CAB temperature selector on the P5-17 panel to the AUTO W position.

6) If the temperature in the control cabin increases, then you corrected the fault.

7) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

——————— END OF TASK ———————

HAP 101-999

862. Passenger Cabin AUTO Temperature Control Does Not Operate - Fault Isolation

A. Description

(1) The passenger cabin automatic temperature control does not operate.

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HAP 101-999 (Continued)

B. Possible Causes

(1) Temperature control system failure

(2) Passenger cabin zone temperature sensor fan, M1719

(3) Control cabin zone temperature sensor filter

(4) Separation of sidewall riser ducts from transition duct.

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	2	C00258	AIR CONDITIONING TEMP CONTROL AUTO RIGHT

D. Related Data

(1) (SSM 21-61-22)

(2) (WDM 21-61-22)

E. Initial Evaluation

(1) Supply conditioned air to the passenger cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) Make sure the passenger cabin temperature selector on the P5-17 panel is in the AUTO NORMAL position.

(3) Examine the portion of the passenger cabin sidewall panels on both sides of the aircraft near the floor that are adjacent to the forward wing-to-body fairing as follows:

(a) Make sure that the sidewall panels do not appear to be expanded inboard in the area just above the floor level and that the panels appear to have the same contour as the adjacent panels.

(b) Make sure that there are no whistling noises that could indicate the presence of leaking ducts.

(c) If either of the two conditions above are present, then do the Fault Isolation Procedure below.

(4) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

(5) Put the passenger cabin temperature selector on the P5-17 panel to the AUTO WARM position.

(6) If the temperature in the passenger cabin does not increase, then do the Fault Isolation Procedure below.

(7) If the temperature in the passenger cabin increases, then there was an intermittent fault.

(a) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

F. Fault Isolation Procedure

(1) Do this check of the passenger cabin zone temperature sensor filter and fan:

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HAP 101-999 (Continued)

(a) Hold a 3 inch (7.6 cm) by 4 inch (10 cm) sheet of lightweight paper over the air inlet grille of the temperature sensor assembly for the passenger cabin.

(b) If the fan does not hold the paper in its position, then do these steps:

1) Remove the passenger cabin zone temperature sensor filter. To remove the filter, do this task: Cabin Temperature Sensor Assembly Filter Removal, AMM TASK 21-61-06-000-801.

2) Examine the filter for dirt or other blockage.

3) If the filter is dirty, then do these steps:

a) Clean the filter. To clean the filter, do this task: Cabin Temperature Sensor Assembly Filter Cleaning, AMM TASK 21-61-06-100-801.

b) Supply conditioned air to the passenger cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the passenger cabin temperature selector on the P5-17 panel is in the AUTO NORMAL position.

d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the passenger cabin temperature selector on the P5-17 panel to the AUTO WARM position.

f) If the temperature in the passenger cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

4) If the filter is not dirty, then do these steps:

a) Replace the zone temperature sensor fan for the passenger cabin zone.

These are the tasks:

Cabin Temperature Sensor Fan Removal, AMM TASK 21-61-11-000-801,

Cabin Temperature Sensor Fan Installation, AMM TASK 21-61-11-400-801.

b) Supply conditioned air to the passenger cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the passenger cabin temperature selector on the P5-17 panel is in the AUTO NORMAL position.

d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the passenger cabin temperature selector on the P5-17 panel to the AUTO WARM position.

f) If the temperature in the passenger cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(c) If the fan holds the paper in its position, then continue.

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HAP 101-999 (Continued)

1) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(2) Do the BITE test of the cabin temperature controller, M345. To do the BITE test, do this task: Cabin Temperature Controller BITE Procedure, 21-61 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message that shows.

2) Supply conditioned air to the passenger cabin with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) Make sure the passenger cabin temperature selector on the P5-17 panel is in the AUTO NORMAL position.

4) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

5) Put the passenger cabin temperature selector on the P5-17 panel to the AUTO WARM position.

6) If the temperature in the passenger cabin increases, then you corrected the fault.

7) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(3) If the Initial Evaluation indicated damage to the portion of the passenger cabin sidewall panels near the floor in the station location near the forward wing-to-body fairing, then do the steps that follow:

(a) Remove the applicable sidewall panel(s) as follows: Do this task: Sidewall Panel Removal, AMM TASK 25-21-46-000-801.

(b) Inspect the sidewall risers and repair, if required, as follows: Do these tasks: Inspection of the Sidewall Riser Ducts/Transition Duct, AMM TASK 21-23-02-212-801 and Repair of the Sidewall Riser Ducts/Transition Duct, AMM TASK 21-23-02-360-801.

END OF TASK

HAP 001-013, 015-026, 028-054

863. Aft Cabin AUTO Temperature Control Does Not Operate - Fault Isolation

A. Description

(1) The aft cabin automatic temperature control does not operate.

B. Possible Causes

(1) Pack/zone temperature control system failure

(2) Aft cabin zone temperature sensor fan, M1446

(3) Aft cabin zone temperature sensor filter

(4) Separation of sidewall riser ducts from transition duct

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	3	C01170	AIR CONDITIONING ZONE TEMP VALVE/FAN CONT AFT PASS
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-12)

(2) (WDM 21-51-12)

(3) (SSM 21-61-14)

(4) (WDM 21-61-14)

E. Initial Evaluation

(1) Supply conditioned air to the passenger compartment with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) Make sure the AFT CAB temperature selector on the P5-17 panel is in the AUTO position.

(3) Examine the portion of the passenger cabin sidewall panels on both sides of the aircraft near the floor that are adjacent to the forward wing-to-body fairing as follows:

(a) Make sure that the sidewall panels do not appear to be expanded inboard in the area just above the floor level and that the panels appear to have the same contour as the adjacent panels.

(b) Make sure that there are no whistling noises that could indicate the presence of leaking ducts.

(c) If either of the two conditions above are present, then do the Fault Isolation Procedure below.

(4) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

(5) Put the AFT CAB temperature selector on the P5-17 panel to the AUTO W position.

(6) If the temperature in the aft cabin does not increase, then do the Fault Isolation Procedure below.

(7) If the temperature in the aft cabin increases, then there was an intermittent fault.

(a) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

F. Fault Isolation Procedure

(1) Do this check of the aft cabin zone temperature sensor filter and fan:

(a) Hold a 3 inch (7.6 cm) by 4 inch (10 cm) sheet of lightweight paper over the air inlet grille of the temperature sensor assembly for the aft cabin.

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(b) If the fan does not hold the paper in its position, then do these steps:

1) Remove the aft cabin zone temperature sensor filter. To remove the filter, do this task: Cabin Temperature Sensor Assembly Filter Removal, AMM TASK 21-61-06-000-801.

2) Examine the filter for dirt or other blockage.

3) If the filter is dirty, then do these steps:

a) Clean the filter. To clean the filter, do this task: Cabin Temperature Sensor Assembly Filter Cleaning, AMM TASK 21-61-06-100-801.

b) Supply conditioned air to the passenger compartment with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the AFT CAB temperature selector on the P5-17 panel is in the AUTO position.

d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the AFT CAB temperature selector on the P5-17 panel to the AUTO W position.

f) If the temperature in the aft cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

4) If the filter is not dirty, then do these steps:

a) Replace the zone temperature sensor fan for the aft cabin zone.

These are the tasks:

Cabin Temperature Sensor Fan Removal, AMM TASK 21-61-11-000-801,

Cabin Temperature Sensor Fan Installation, AMM TASK 21-61-11-400-801.

b) Supply conditioned air to the passenger compartment with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the AFT CAB temperature selector on the P5-17 panel is in the AUTO position.

d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the AFT CAB temperature selector on the P5-17 panel to the AUTO W position.

f) If the temperature in the aft cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(c) If the fan holds the paper in its position, then continue.

1) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(2) Do the BITE test of the left pack/zone temperature controller, M1442. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

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1) Do the corrective action for the maintenance message that shows.
2) Supply conditioned air to the passenger compartment with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.
3) Make sure the AFT CAB temperature selector on the P5-17 panel is in the AUTO position.
4) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.
5) Put the AFT CAB temperature selector on the P5-17 panel to the AUTO W position.
6) If the temperature in the aft cabin increases, then you corrected the fault.
7) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(3) If the Initial Evaluation indicated damage to the portion of the passenger cabin sidewall panels near the floor in the station location near the forward wing-to-body fairing, then do the steps that follow:

(a) Remove the applicable sidewall panel(s) as follows: Do this task: AMM TASK 25-21-46-000-801.

(b) Inspect the sidewall risers and repair, if required, as follows: Do these tasks: AMM TASK 21-23-02-212-801and AMM TASK 21-23-02-360-801.

———————— END OF TASK ————————

864. Forward Cabin AUTO Temperature Control Does Not Operate - Fault Isolation

A. Description

(1) The forward cabin automatic temperature control does not operate.

B. Possible Causes

(1) Pack/zone temperature control system failure

(2) Forward cabin zone temperature sensor fan, M1445

(3) Forward cabin zone temperature sensor filter

(4) Separation of sidewall riser ducts from transition duct

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	2	C01167	A/C ZONE TEMP VALVE/FAN CONT FWD PASS
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-22)

(2) (WDM 21-51-22)

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(3) (SSM 21-61-24)

(4) (WDM 21-61-24)

E. Initial Evaluation

(1) Supply conditioned air to the passenger compartment with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(2) Make sure the FWD CAB temperature selector on the P5-17 panel is in the AUTO position.

(3) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

(4) Examine the portion of the passenger cabin sidewall panels on both sides of the aircraft near the floor that are adjacent to the forward wing-to-body fairing as follows:

(a) Make sure that the sidewall panels do not appear to be expanded inboard in the area just above the floor level and that the panels appear to have the same contour as the adjacent panels.

(b) Make sure that there are no whistling noises that could indicate the presence of leaking ducts.

(c) If either of the two conditions above are present, then do the Fault Isolation procedure below.

(5) Put the FWD CAB temperature selector on the P5-17 panel to the AUTO W position.

(6) If the temperature in the forward cabin does not increase, then do the Fault Isolation Procedure below.

(7) If the temperature in the forward cabin increases, then there was an intermittent fault.

(a) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

F. Fault Isolation Procedure

(1) Do this check of the forward cabin zone temperature sensor filter and fan:

(a) Hold a 3 inch (7.6 cm) by 4 inch (10 cm) sheet of lightweight paper over the air inlet grille of the temperature sensor assembly for the forward cabin.

(b) If the fan does not hold the paper in its position, then do these steps:

1) Remove the forward cabin zone temperature sensor filter. To remove the filter, do this task: Cabin Temperature Sensor Assembly Filter Removal, AMM TASK 21-61-06-000-801.

2) Examine the filter for dirt or other blockage.

3) If the filter is dirty, then do these steps:

a) Clean the filter. To clean the filter, do this task: Cabin Temperature Sensor Assembly Filter Cleaning, AMM TASK 21-61-06-100-801.

b) Supply conditioned air to the passenger compartment with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the FWD CAB temperature selector on the P5-17 panel is in the AUTO position.

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d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the FWD CAB temperature selector on the P5-17 panel to the AUTO W position.

f) If the temperature in the forward cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

4) If the filter is not dirty, then do these steps:

a) Replace the zone temperature sensor fan for the forward cabin zone.

These are the tasks:

Cabin Temperature Sensor Fan Removal, AMM TASK 21-61-11-000-801,

Cabin Temperature Sensor Fan Installation, AMM TASK 21-61-11-400-801.

b) Supply conditioned air to the passenger compartment with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

c) Make sure the FWD CAB temperature selector on the P5-17 panel is in the AUTO position.

d) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

e) Put the FWD CAB temperature selector on the P5-17 panel to the AUTO W position.

f) If the temperature in the forward cabin increases, then you corrected the fault.

g) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(c) If the fan holds the paper in its position, then continue.

1) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

(2) Do the BITE test of the right pack/zone temperature controller, M1443. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then do these steps:

1) Do the corrective action for the maintenance message that shows.

2) Supply conditioned air to the passenger compartment with both packs. To supply conditioned air, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) Make sure the FWD CAB temperature selector on the P5-17 panel is in the AUTO position.

4) Let the air conditioning packs operate for a few minutes to allow the temperature of the air from the packs to stabilize.

5) Put the FWD CAB temperature selector on the P5-17 panel to the AUTO W position.

6) If the temperature in the forward cabin increases, then you corrected the fault.

7) Remove conditioned air from the airplane. To remove the conditioned air, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804

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(3) If the Initial Evaluation indicated damage to the portion of the passenger cabin sidewall panels near the floor in the station location near the forward wing-to-body fairing, then do the steps that follow:

(a) Remove the applicable sidewall panel(s) as follows: Do this task: AMM TASK 25-21-46-000-801.

(b) Inspect the sidewall risers and repair, if required, as follows: Do these tasks: AMM TASK 21-23-02-212-801 and AMM TASK 21-23-02-360-801.

——————— END OF TASK ———————

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801. Pack/Zone Temperature Controller BITE Procedure

A. General

(1) This task does a BITE test of the pack/zone temperature controller.

(2) The BITE test does the following checks:

(a) Pack/zone temperature controller self test.

(b) Zone temperature selector test.

(c) Cabin temperature sensor test.

(d) Duct temperature limit sensor test.

(e) Zone trim air modulating valve test.

(f) Ram air control temperature sensor test.

(g) Ram air inlet actuator test.

(h) Pack temperature sensor test.

(i) Temperature control valve test.

(j) Standby temperature control valve test.

(k) Mix manifold temperature sensor test.

B. BITE Procedure

(1) Do the BITE procedure for the pack/zone temperature controller:

(a) Put these switches on the P5-10 Air conditioning panel to the positions that follow:

1) Put the BLEED 1, BLEED 2, and BLEED APU switches to the OFF position.

2) Put the L PACK and R PACK switches to the AUTO position.

3) Put the L RECIRC FAN and R RECIRC FAN switches to the AUTO position.

4) Put the ISOLATION VALVE switch to the OPEN position.

(b) Put these switches on the P5-17 cabin temperature panel to the positions that follow:

1) Put the TRIM AIR switch to the ON position.

2) Put the CONT CAB, FWD CAB, and AFT CAB temperature selectors to the AUTO (12:00) position.

(c) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(d) Get access to the zone temperature controllers located on the bottom shelf (E3-3) of the E3 rack in the electronics equipment compartment.

(e) Make sure these lights are off for the left and the right pack/zone temperature controllers:

1) CONTROLLER FAULT - PACK/ZONE

2) CONTROLLER FAULT - RAM AIR

3) CONTROLLER FAULT - STANDBY PACK

(f) Do the steps that follow on the left and the right pack/zone temperature controllers:

1) Push and hold the PRESS/TEST switch on the controller.

a) Make sure all the lights on the controller come on and then go off.

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2) Push the BIT switch on the controller. The light above the BIT switch will come on when the switch is pushed fully.

NOTE: The BIT switch will show if failures occurred during the last flight.

a) Wait for the green GO light to come on.

b) If a red light comes on for a component, the component does not operate. Write down the component that does not operate.

3) Push the PREV FLT switch on the controller. The light above the PREV FLT switch will come on when the switch is pushed fully.

NOTE: The PREV FLT switch will show all the failures occurred during the last nine flights.

a) Wait for the green GO light to come on.

b) If a red light comes on for a component, the component did not operate on a previous flight. Write down the component that did not operate.

WARNING: MOVE ALL PERSONS AND EQUIPMENT AWAY FROM THE RAM AIR INLET DOOR. WHEN YOU PUSH THE VERIFY SWITCH, THE RAM AIR COMPONENTS WILL MOVE AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

4) Push the VERIFY switch on the controller. The light above the VERIFY switch will come on when the switch is pushed fully.

NOTE: The VERIFY switch will initiate a real time test of the pack and zone temperature control components.

a) Wait for the green GO light to come on.

b) If a red light comes on for a component, the component does not operate. Write down the component that does not operate.

(g) If a red light comes on, then refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message.

(h) Do the repair task for the components that do not operate. After you correct the problem, do the BITE test again.

1) Do this step to erase the existing faults and the fault history:

a) Push the RESET switch while the VERIFY and GO lights are on.

(i) After the BITE procedure is complete put the switches on the P5-10 Air conditioning panel and P5-17 cabin temperature panel to the positions that follow:

1) Put the L PACK and R PACK switches to the OFF position.

2) Put all other switches back to their original configuration.

———————— END OF TASK ————————

LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PACK/ZN CON - L	BKUP ZONE CABIN SENSOR	21-62 TASK 815
PACK/ZN CON - L	BKUP ZONE SELECTOR	21-62 TASK 809
PACK/ZN CON - L	CONTROLLER FAULT - PACK/ZONE	21-62 TASK 802
PACK/ZN CON - L	CONTROLLER FAULT - RAM AIR	21-62 TASK 802

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PACK/ZN CON - L	CONTROLLER FAULT - STANDBY	21-62 TASK 802
PACK/ZN CON - L	FLT DECK CABIN SENSOR	21-62 TASK 811
PACK/ZN CON - L	FLT DECK DUCT SENSOR	21-62 TASK 813
PACK/ZN CON - L	FLT DECK SELECTOR	21-62 TASK 805
PACK/ZN CON - L	FLT DECK TRIM VALVE	21-62 TASK 833
PACK/ZN CON - L	RAM AIR ACT	21-62 TASK 837
PACK/ZN CON - L	RAM AIR SNSR	21-62 TASK 821
PACK/ZN CON - L	STBY OTHER PACK - PACK SNSR	21-62 TASK 824
PACK/ZN CON - L	STBY OTHER PACK - TCV	21-62 TASK 829
PACK/ZN CON - L	THIS PACK - MIX MANF SENSOR	21-62 TASK 827
PACK/ZN CON - L	THIS PACK - PACK SNSR	21-62 TASK 825
PACK/ZN CON - L	THIS PACK - TCV	21-62 TASK 830
PACK/ZN CON - L	ZONE CABIN SENSOR	21-62 TASK 817
PACK/ZN CON - L	ZONE DUCT SENSOR	21-62 TASK 819
PACK/ZN CON - L	ZONE SELECTOR	21-62 TASK 808
PACK/ZN CON - L	ZONE TRIM VALVE	21-62 TASK 835
PACK/ZN CON - R	BKUP ZONE CABIN SENSOR	21-62 TASK 816
PACK/ZN CON - R	BKUP ZONE SELECTOR	21-62 TASK 807
PACK/ZN CON - R	CONTROLLER FAULT - PACK/ZONE	21-62 TASK 803
PACK/ZN CON - R	CONTROLLER FAULT - RAM AIR	21-62 TASK 803
PACK/ZN CON - R	CONTROLLER FAULT - STANDBY	21-62 TASK 803
PACK/ZN CON - R	FLT DECK CABIN SENSOR	21-62 TASK 810
PACK/ZN CON - R	FLT DECK DUCT SENSOR	21-62 TASK 812
PACK/ZN CON - R	FLT DECK SELECTOR	21-62 TASK 804
PACK/ZN CON - R	FLT DECK TRIM VALVE	21-62 TASK 832
PACK/ZN CON - R	RAM AIR ACT	21-62 TASK 836
PACK/ZN CON - R	RAM AIR SNSR	21-62 TASK 820

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LRU/SYSTEM	MAINTENANCE MESSAGE	GO TO FIM TASK
PACK/ZN CON - R	STBY OTHER PACK - PACK SNSR	21-62 TASK 823
PACK/ZN CON - R	STBY OTHER PACK - TCV	21-62 TASK 828
PACK/ZN CON - R	THIS PACK - MIX MANF SENSOR	21-62 TASK 826
PACK/ZN CON - R	THIS PACK - PACK SNSR	21-62 TASK 822
PACK/ZN CON - R	THIS PACK - TCV	21-62 TASK 831
PACK/ZN CON - R	ZONE CABIN SENSOR	21-62 TASK 814
PACK/ZN CON - R	ZONE DUCT SENSOR	21-62 TASK 818
PACK/ZN CON - R	ZONE SELECTOR	21-62 TASK 806
PACK/ZN CON - R	ZONE TRIM VALVE	21-62 TASK 834

802. Left Pack/Zone Temperature Controller Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) CONTROLLER FAULT - PACK/ZONE

(b) CONTROLLER FAULT - RAM AIR

(c) CONTROLLER FAULT - STANBY PACK

B. Possible Causes

(1) Cabin temperature controller, M1442 (No. 1)

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-31)

(2) (WDM 21-51-12)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left pack/zone temperature controller, M1442.

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These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

803. Right Pack/Zone Temperature Controller Fault - Fault Isolation

A. Description

(1) This task is for these maintenance messages:

(a) CONTROLLER FAULT - PACK/ZONE

(b) CONTROLLER FAULT - RAM AIR

(c) CONTROLLER FAULT - STANBY PACK

B. Possible Causes

(1) Cabin temperature controller, M1443 (No. 2)

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-31)

(2) (WDM 21-51-22)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

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804. Control Cabin Temperature Selector (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) FLT DECK SELECTOR

(2) This fault is for the right pack/zone temperature controller.

B. Possible Causes

(1) Control cabin temperature selector, S2

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-31)

(2) (WDM 21-51-22)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the control cabin temperature selector, S2.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-803-002,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-803-002.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the control cabin temperature selector and the right pack/zone temperature controller, M1443:

(a) Lower the overhead P5 panel.

(b) Disconnect the electrical connector from the control cabin temperature selector.

(c) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(d) Do a wiring check between these pins of the electrical connector for the control cabin temperature selector and connector D3860A of the pack/zone temperature controller:

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SELECTOR		D3860A
pin 1	- - - - - - - - - - - - - - - - - -	pin C2
pin 2	- - - - - - - - - - - - - - - - - -	pin B2
pin 3	- - - - - - - - - - - - - - - - - -	pin A2

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

1) Repair the wiring.

2) Re-connect connector D3996 to the control cabin temperature selector.

3) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the control cabin temperature selector.

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

805. Control Cabin Temperature Selector (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) FLT DECK SELECTOR

(2) This fault is for the left pack/zone temperature controller.

B. Possible Causes

(1) Control cabin temperature selector, S2

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-31)

(2) (WDM 21-51-12)

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E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the control cabin temperature selector, S2.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-803-002,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-803-002.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the control cabin temperature selector and the left pack/zone temperature controller, M1442:

(a) Lower the overhead P5 panel.

(b) Disconnect the electrical connector from the control cabin temperature selector.

(c) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(d) Do a wiring check between these pins of the electrical connector for the control cabin temperature selector and connector D3858A of the pack/zone temperature controller:

SELECTOR		D3860A
pin 4	- - - - - - - - - - - - - - - - - -	pin C2
pin 5	- - - - - - - - - - - - - - - - - -	pin B2
pin 6	- - - - - - - - - - - - - - - - - -	pin A2

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

1) Repair the wiring.

2) Re-connect connector D3996 to the control cabin temperature selector.

3) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the control cabin temperature selector.

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

END OF TASK

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806. Forward Cabin Temperature Selector (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ZONE SELECTOR

(2) This fault is for the right pack/zone temperature controller.

B. Possible Causes

(1) Forward cabin temperature selector, S3

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-31)

(2) (WDM 21-51-22)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the forward cabin temperature selector, S3.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-803-002,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-803-002.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the forward cabin temperature selector and the right pack/zone temperature controller, M1443:

(a) Lower the overhead P5 panel.

(b) Disconnect the electrical connector from the forward cabin temperature selector.

(c) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(d) Do a wiring check between these pins of the electrical connector for the forward cabin temperature selector and connector D3860A of the pack/zone temperature controller:

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SELECTOR		D3860A
pin 1	- - - - - - - - - - - - - - - - - -	pin C3
pin 2	- - - - - - - - - - - - - - - - - -	pin B3
pin 3	- - - - - - - - - - - - - - - - - -	pin A3

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

1) Repair the wiring.

2) Re-connect the electrical connector to the forward cabin temperature selector.

3) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the forward cabin temperature selector.

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

—————— END OF TASK ——————

807. Aft Cabin Temperature Selector (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) BKUP ZONE SELECTOR

(2) This fault is for the right pack/zone temperature controller.

B. Possible Causes

(1) Aft cabin temperature selector, S4

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-31)

(2) (WDM 21-51-22)

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E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the aft cabin temperature selector, S4.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-803-002,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-803-002.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the aft cabin temperature selector and the right pack/zone temperature controller, M1443:

(a) Lower the overhead P5 panel.

(b) Disconnect the electrical connector from the aft cabin temperature selector.

(c) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(d) Do a wiring check between these pins of the electrical connector for the aft cabin temperature selector and connector D3860A of the pack/zone temperature controller:

SELECTOR		D3860A
pin 1	- - - - - - - - - - - - - - - - - -	pin C11
pin 2	- - - - - - - - - - - - - - - - - -	pin B11
pin 3	- - - - - - - - - - - - - - - - - -	pin B12

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

1) Repair the wiring.

2) Re-connect the electrical connector to the aft cabin temperature selector.

3) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the aft cabin temperature selector.

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

END OF TASK

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808. Aft Cabin Temperature Selector (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ZONE SELECTOR

(2) This fault is for the left pack/zone temperature controller.

B. Possible Causes

(1) Aft cabin temperature selector, S4

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-31)

(2) (WDM 21-51-12)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the aft cabin temperature selector, S4.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-803-002,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-803-002.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the aft cabin temperature selector and the left pack/zone temperature controller, M1442:

(a) Lower the overhead P5 panel.

(b) Disconnect the electrical connector from the aft cabin temperature selector.

(c) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(d) Do a wiring check between these pins of the electrical connector for the aft cabin temperature selector and connector D3858A of the pack/zone temperature controller:

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SELECTOR		D3858A
pin 4	- - - - - - - - - - - - - - - - - -	pin C3
pin 5	- - - - - - - - - - - - - - - - - -	pin B3
pin 6	- - - - - - - - - - - - - - - - - -	pin A3

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

1) Repair the wiring.

2) Re-connect the electrical connector to the aft cabin temperature selector.

3) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the aft cabin temperature selector.

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

809. Forward Cabin Temperature Selector (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) BKUP ZONE SELECTOR

(2) This fault is for the left pack/zone temperature controller.

B. Possible Causes

(1) Forward cabin temperature selector, S3

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-31)

(2) (WDM 21-51-12)

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E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the forward cabin temperature selector, S3.

These are the tasks:

Cabin Temperature Selector Removal, AMM TASK 21-61-07-000-803-002,

Cabin Temperature Selector Installation, AMM TASK 21-61-07-400-803-002.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If the maintenance message shows, then continue.

(2) Do this check of the wiring between the forward cabin temperature selector and the left pack/zone temperature controller, M1442:

(a) Lower the overhead P5 panel.

(b) Disconnect the electrical connector from the forward cabin temperature selector.

(c) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(d) Do a wiring check between these pins of the electrical connector for the forward cabin temperature selector and connector D3858A of the pack/zone temperature controller:

SELECTOR		D3858A
pin 4	- - - - - - - - - - - - - - - - - -	pin C11
pin 5	- - - - - - - - - - - - - - - - - -	pin B11
pin 6	- - - - - - - - - - - - - - - - - -	pin B12

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

1) Repair the wiring.

2) Re-connect the electrical connector to the forward cabin temperature selector.

3) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the forward cabin temperature selector.

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

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810. Flight Deck Cabin Temperature Sensor (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) FLT DECK CABIN SENSOR

(2) The right pack/zone temperature controller has detected a short or an open circuit from the control cabin temperature sensor.

B. Possible Causes

(1) Flight deck cabin temperature sensor, M1718

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-61-11)

(2) (WDM 21-61-11)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the control cabin temperature sensor, M1718:

(a) Lower the access panel for the control cabin temperature sensor that is aft of the overhead P5 panel.

(b) Disconnect electrical connector D10958 from the control cabin temperature sensor.

(c) Do a check for an open circuit or a short between pins 1 and 2 of the control cabin temperature sensor.

(d) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the control cabin temperature sensor, M1718.

These are the tasks:

Cabin Temperature Sensor Removal, AMM TASK 21-61-10-000-802,

Cabin Temperature Sensor Installation, AMM TASK 21-61-10-400-802.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(e) If there is not a short or an open circuit between pins 1 and 2, then continue.

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(2) Do this check of the wiring between the control cabin temperature sensor and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D10958 of the control cabin temperature sensor and connector D3860A of the pack/zone temperature controller:

D10958		D3860A
pin 1	- - - - - - - - - - - - - - - - - -	pin C4
pin 2	- - - - - - - - - - - - - - - - - -	pin C5

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

1) Repair the wiring.

2) Re-connect the electrical connector to the control cabin temperature sensor.

3) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the control cabin temperature sensor.

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

811. Flight Deck Cabin Temperature Sensor (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) FLT DECK CABIN SENSOR

(2) The left pack/zone temperature controller has detected a short or an open circuit from the control cabin temperature sensor.

B. Possible Causes

(1) Flight deck cabin temperature sensor, M1718

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-61-12)

(2) (WDM 21-61-12)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the control cabin temperature sensor, M1718:

(a) Lower the access panel for the control cabin temperature sensor that is aft of the overhead P5 panel.

(b) Disconnect electrical connector D10958 from the control cabin temperature sensor.

(c) Do a check for an open circuit or a short between pins 3 and 4 of the control cabin temperature sensor.

(d) If there is a short or an open circuit between pins 3 and 4, then do these steps:

1) Replace the control cabin temperature sensor, M1718.

These are the tasks:

Cabin Temperature Sensor Removal, AMM TASK 21-61-10-000-802,

Cabin Temperature Sensor Installation, AMM TASK 21-61-10-400-802.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(e) If there is not a short or an open circuit between pins 3 and 4, then continue.

(2) Do this check of the wiring between the control cabin temperature sensor and the left pack/zone temperature controller, M1442:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D10958 of the control cabin temperature sensor and connector D3858A of the pack/zone temperature controller:

D10958		**D3858A**
pin 3	- - - - - - - - - - - - - - - - - -	pin C4
pin 4	- - - - - - - - - - - - - - - - - -	pin C5

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

1) Repair the wiring.

2) Re-connect the electrical connector to the control cabin temperature sensor.

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3) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the control cabin temperature sensor.

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

812. Flight Deck Duct Temperature Sensor (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) FLT DECK DUCT SENSOR

(2) The right pack/zone temperature controller has detected a short or an open circuit from the control cabin duct temperature sensor.

B. Possible Causes

(1) Control cabin duct temperature sensor, T478

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-61-11)

(2) (WDM 21-61-11)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

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F. Fault Isolation Procedure

(1) Do this check of the control cabin duct temperature sensor, T478:

(a) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Disconnect electrical connector D3884 from the control cabin duct temperature sensor.

(c) Do a check for an open circuit or a short between pins 1 and 2 of the control cabin duct temperature sensor.

(d) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the control cabin duct temperature sensor (Primary), T478.

These are the tasks:

Duct Temperature Limit Sensor Removal, AMM TASK 21-61-04-000-803-002,

Duct Temperature Limit Sensor Installation, AMM TASK 21-61-04-400-803-002.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(e) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the control cabin temperature sensor and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3884 of the control cabin duct temperature sensor and connector D3860A of the pack/zone temperature controller:

D3884		D3860A
pin 1	- - - - - - - - - - - - - - - - - - -	pin B5
pin 2	- - - - - - - - - - - - - - - - - - -	pin A5

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

1) Repair the wiring.

2) Re-connect the electrical connector to the control cabin temperature sensor.

3) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the control cabin temperature sensor.

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

—————— END OF TASK ——————

813. Flight Deck Duct Temperature Sensor (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) FLT DECK DUCT SENSOR

(2) The left pack/zone temperature controller has detected a short or an open circuit from the control cabin duct temperature sensor.

B. Possible Causes

(1) Control cabin duct temperature sensor, T477

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-61-12)

(2) (WDM 21-61-12)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the control cabin duct temperature sensor, T477:

(a) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(b) Disconnect electrical connector D3882 from the control cabin duct temperature sensor.

(c) Do a check for an open circuit or a short between pins 1 and 2 of the control cabin duct temperature sensor.

(d) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the control cabin duct temperature sensor (Backup), T477.

These are the tasks:

Duct Temperature Limit Sensor Removal, AMM TASK 21-61-04-000-803-002,

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Duct Temperature Limit Sensor Installation, AMM TASK 21-61-04-400-803-002.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(e) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the control cabin temperature sensor and the left pack/zone temperature controller, M1442:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3882 of the control cabin duct temperature sensor and connector D3858A of the pack/zone temperature controller:

D3882		D3858A
pin 1	- - - - - - - - - - - - - - - - - -	pin B5
pin 2	- - - - - - - - - - - - - - - - - -	pin A5

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

1) Repair the wiring.

2) Re-connect the electrical connector to the control cabin temperature sensor.

3) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the control cabin temperature sensor.

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

———————— END OF TASK ————————

814. Forward Cabin Temperature Sensor (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ZONE CABIN SENSOR

(2) The right pack/zone temperature controller has detected a short or an open circuit from the forward cabin temperature sensor.

B. Possible Causes

(1) forward cabin temperature sensor, M1445

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

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C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-61-13)

(2) (WDM 21-61-13)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the forward cabin temperature sensor, M1445:

(a) Lower the PSU that is adjacent to the forward cabin zone temperature sensor.

(b) Remove the trim panel that is adjacent to the PSU and beneath the electrical connector for the zone temperature sensor.

(c) Disconnect electrical connector D3908 from the forward cabin temperature sensor.

(d) Do a check for an open circuit or a short between pins 1 and 2 of the forward cabin temperature sensor.

(e) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the forward cabin temperature sensor, M1445.

These are the tasks:

Cabin Temperature Sensor Removal, AMM TASK 21-61-10-000-802,

Cabin Temperature Sensor Installation, AMM TASK 21-61-10-400-802.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the forward cabin temperature sensor and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3908 of the forward cabin temperature sensor and connector D3860A of the pack/zone temperature controller:

D3908		**D3860A**
pin 1	- - - - - - - - - - - - - - - - - - -	pin B4
pin 2	- - - - - - - - - - - - - - - - - - -	pin A4

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

1) Repair the wiring.

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2) Re-connect the electrical connector to the forward cabin temperature sensor.

3) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the forward cabin temperature sensor.

2) Install the trim panel adjacent to the PSU.

3) Close (lift) the PSU.

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

815. Forward Cabin Temperature Sensor (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) BKUP ZONE CABIN SENSOR

(2) The left pack/zone temperature controller has detected a short or an open circuit from the forward cabin temperature sensor.

B. Possible Causes

(1) Forward cabin temperature sensor, M1445

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-61-13)

(2) (WDM 21-61-13)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the forward cabin temperature sensor, M1445:

(a) Lower the PSU that is adjacent to the forward cabin zone temperature sensor.

(b) Remove the trim panel that is adjacent to the PSU and beneath the electrical connector for the zone temperature sensor.

(c) Disconnect electrical connector D3908 from the forward cabin temperature sensor.

(d) Do a check for an open circuit or a short between pins 3 and 4 of the forward cabin temperature sensor.

(e) If there is a short or an open circuit between pins 3 and 4, then do these steps:

1) Replace the forward cabin temperature sensor, M1445.

These are the tasks:

Cabin Temperature Sensor Removal, AMM TASK 21-61-10-000-802,

Cabin Temperature Sensor Installation, AMM TASK 21-61-10-400-802.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If there is not a short or an open circuit between pins 3 and 4, then continue.

(2) Do this check of the wiring between the forward cabin temperature sensor and the left pack/zone temperature controller, M1442:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3908 of the forward cabin temperature sensor and connector D3858A of the pack/zone temperature controller:

D3908		D3858A
pin 3	- - - - - - - - - - - - - - - - - -	pin D14
pin 4	- - - - - - - - - - - - - - - - - -	pin D13

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

1) Repair the wiring.

2) Re-connect the electrical connector to the forward cabin temperature sensor.

3) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the forward cabin temperature sensor.

2) Install the trim panel adjacent to the PSU.

3) Close (lift) the PSU.

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

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Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

816. Aft Cabin Temperature Sensor (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) BKUP ZONE CABIN SENSOR

(2) The right pack/zone temperature controller has detected a short or an open circuit from the aft cabin temperature sensor.

B. Possible Causes

(1) Aft cabin temperature sensor, M1446

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-61-14)

(2) (WDM 21-61-14)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the aft cabin temperature sensor, M1446:

(a) Lower the PSU that is adjacent to the aft cabin zone temperature sensor.

(b) Remove the trim panel that is adjacent to the PSU and beneath the electrical connector for the zone temperature sensor.

(c) Disconnect electrical connector D3912 from the aft cabin temperature sensor.

(d) Do a check for an open circuit or a short between pins 3 and 4 of the aft cabin temperature sensor.

(e) If there is a short or an open circuit between pins 3 and 4, then do these steps:

1) Replace the aft cabin temperature sensor, M1446.

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These are the tasks:

Cabin Temperature Sensor Removal, AMM TASK 21-61-10-000-802,

Cabin Temperature Sensor Installation, AMM TASK 21-61-10-400-802.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If there is not a short or an open circuit between pins 3 and 4, then continue.

(2) Do this check of the wiring between the aft cabin temperature sensor and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3912 of the aft cabin temperature sensor and connector D3860A of the pack/zone temperature controller:

D3912		D3860A
pin 3	- - - - - - - - - - - - - - - - - -	pin D14
pin 4	- - - - - - - - - - - - - - - - - -	pin D13

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

1) Repair the wiring.

2) Re-connect the electrical connector to the aft cabin temperature sensor.

3) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the aft cabin temperature sensor.

2) Install the trim panel adjacent to the PSU.

3) Close (lift) the PSU.

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

—————— END OF TASK ——————

817. Aft Cabin Temperature Sensor (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ZONE CABIN SENSOR

(2) The left pack/zone temperature controller has detected a short or an open circuit from the aft cabin temperature sensor.

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B. Possible Causes

(1) Aft cabin temperature sensor, M1446

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-61-14)

(2) (WDM 21-61-14)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the aft cabin temperature sensor, M1446:

(a) Lower the PSU that is adjacent to the aft cabin zone temperature sensor.

(b) Remove the trim panel that is adjacent to the PSU and beneath the electrical connector for the zone temperature sensor.

(c) Disconnect electrical connector D3912 from the aft cabin temperature sensor.

(d) Do a check for an open circuit or a short between pins 1 and 2 of the aft cabin temperature sensor.

(e) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the aft cabin temperature sensor, M1446.

These are the tasks:

Cabin Temperature Sensor Removal, AMM TASK 21-61-10-000-802,

Cabin Temperature Sensor Installation, AMM TASK 21-61-10-400-802.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the aft cabin temperature sensor and the left pack/zone temperature controller, M1442:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3912 of the aft cabin temperature sensor and connector D3858A of the pack/zone temperature controller:

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D3912		D3858A
pin 1	- - - - - - - - - - - - - - - - - -	pin A4
pin 2	- - - - - - - - - - - - - - - - - -	pin B4

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

1) Repair the wiring.
2) Re-connect the electrical connector to the aft cabin temperature sensor.
3) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.
4) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.
5) If the maintenance message does not show, then you corrected the fault.

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the aft cabin temperature sensor.
2) Install the trim panel adjacent to the PSU.
3) Close (lift) the PSU.

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

—————— END OF TASK ——————

818. Forward Cabin Duct Temperature Sensor - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ZONE DUCT SENSOR

(2) The right pack/zone temperature controller has detected a short or an open circuit from the forward cabin duct temperature sensor.

B. Possible Causes

(1) Forward cabin duct temperature sensor, T533

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

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D. Related Data

(1) (SSM 21-61-13)

(2) (WDM 21-61-13)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the forward cabin duct temperature sensor, T533:

(a) Remove the left ceiling panel that is just forward of the overwing escape hatches. To remove the panel, do this task: Sculptured Ceiling Panel Removal, AMM TASK 25-21-45-000-801.

(b) Disconnect electrical connector D11830 from the forward cabin duct temperature sensor.

(c) Do a check for an open circuit or a short between pins 1 and 2 of the forward cabin duct temperature sensor.

(d) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the forward cabin duct temperature sensor, T533.

These are the tasks:

Duct Temperature Limit Sensor Removal, AMM TASK 21-61-04-000-803-002,

Duct Temperature Limit Sensor Installation, AMM TASK 21-61-04-400-803-002.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(e) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the forward cabin duct temperature sensor and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D11830 of the forward cabin duct temperature sensor and connector D3860A of the pack/zone temperature controller:

D11830		D3860A
pin 1	- - - - - - - - - - - - - - - - - -	pin C6
pin 2	- - - - - - - - - - - - - - - - - -	pin C7

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

1) Repair the wiring.

2) Connect the electrical connector to the forward cabin duct temperature sensor.

3) Install the ceiling panel. To install the panel, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

4) Install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

5) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Connect the electrical connector to the forward cabin duct temperature sensor.

2) Install the ceiling panel. To install the panel, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

819. Aft Cabin Duct Temperature Sensor - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ZONE DUCT SENSOR

(2) The left pack/zone temperature controller has detected a short or an open circuit from the aft cabin duct temperature sensor.

B. Possible Causes

(1) Aft cabin duct temperature sensor, T536

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-61-14)

(2) (WDM 21-61-14)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the aft cabin duct temperature sensor, T536:

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(a) Remove the right ceiling panel that is adjacent to the overwing escape hatches. To remove the panel, do this task: Sculptured Ceiling Panel Removal, AMM TASK 25-21-45-000-801.

(b) Disconnect electrical connector D11840 from the aft cabin duct temperature sensor.

(c) Do a check for an open circuit or a short between pins 1 and 2 of the forward cabin duct temperature sensor.

(d) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the aft cabin duct temperature sensor, T536.

These are the tasks:

Duct Temperature Limit Sensor Removal, AMM TASK 21-61-04-000-803-002,

Duct Temperature Limit Sensor Installation, AMM TASK 21-61-04-400-803-002.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(e) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the aft cabin duct temperature sensor and the left pack/zone temperature controller, M1442:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D11840 of the aft cabin duct temperature sensor and connector D3858A of the pack/zone temperature controller:

D11840		D3858A
pin 1	- - - - - - - - - - - - - - - - - -	pin C6
pin 2	- - - - - - - - - - - - - - - - - -	pin C7

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

1) Repair the wiring.

2) Connect the electrical connector to the aft cabin duct temperature sensor.

3) Install the ceiling panel. To install the panel, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

4) Install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

5) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Connect the electrical connector to the aft cabin duct temperature sensor.

2) Install the ceiling panel. To install the panel, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

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820. Right Ram Air Control Temperature Sensor - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) RAM AIR SNSR

(2) The right pack/zone temperature controller has detected a short or an open circuit from the right ram air control temperature sensor.

B. Possible Causes

(1) Right ram air control temperature sensor, T482

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-24)

(2) (WDM 21-51-24)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the right ram air control temperature sensor, T482:

(a) Open this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(b) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(c) Disconnect electrical connector D3918 from the right ram air control temperature sensor.

(d) Do a check for an open circuit or a short between pins 1 and 2 of the right ram air control temperature sensor.

(e) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the right ram air control temperature sensor, T482.

These are the tasks:

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Ram Air Control Temperature Sensor Removal, AMM TASK 21-51-50-000-801,

Ram Air Control Temperature Sensor Installation, AMM TASK 21-51-50-400-801.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the right ram air control temperature sensor and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3918 of the right ram air control temperature sensor and connector D3860A of the pack/zone temperature controller:

D3918		D3860A
pin 1	- - - - - - - - - - - - - - - - - -	pin A13
pin 2	- - - - - - - - - - - - - - - - - -	pin B13

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

1) Repair the wiring.

2) Re-connect the electrical connector to the right ram air control temperature sensor.

3) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

4) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

5) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

6) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the right ram air control temperature sensor.

2) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

3) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

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(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

821. Left Ram Air Control Temperature Sensor - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) RAM AIR SNSR

(2) The left pack/zone temperature controller has detected a short or an open circuit from the left ram air control temperature sensor.

B. Possible Causes

(1) Left ram air control temperature sensor, T481

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-14)

(2) (WDM 21-51-14)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the left ram air control temperature sensor, T481:

(a) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(b) Disconnect electrical connector D3916 from the left ram air control temperature sensor.

(c) Do a check for an open circuit or a short between pins 1 and 2 of the left ram air control temperature sensor.

(d) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the left ram air control temperature sensor, T481.

These are the tasks:

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Ram Air Control Temperature Sensor Removal, AMM TASK 21-51-50-000-801,

Ram Air Control Temperature Sensor Installation, AMM TASK 21-51-50-400-801.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(e) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the left ram air control temperature sensor and the left pack/zone temperature controller, M1442:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3916 of the left ram air control temperature sensor and connector D3858A of the pack/zone temperature controller:

D3916		D3858A
pin 1	- - - - - - - - - - - - - - - - - -	pin A13
pin 2	- - - - - - - - - - - - - - - - - -	pin B13

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

1) Repair the wiring.

2) Re-connect the electrical connector to the left ram air control temperature sensor.

3) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

4) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

5) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the left ram air control temperature sensor.

2) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

822. Right Pack Temperature Sensor (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

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(a) THIS PACK - PACK SNSR

(2) The right pack/zone temperature controller has detected a short or an open circuit from the right pack temperature sensor.

B. Possible Causes

(1) Right pack temperature sensor, T474

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-22)

(2) (WDM 21-51-22)

(3) (SSM 21-51-23)

(4) (WDM 21-51-23)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the right pack temperature sensor, T474:

(a) Open this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(b) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(c) Disconnect electrical connector D3876 from the right pack temperature sensor.

(d) Do a check for an open circuit or a short between pins 1 and 2 of the right pack temperature sensor.

(e) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the right pack temperature sensor, T474.

These are the tasks:

Pack Temperature Sensor Removal, AMM TASK 21-51-52-000-801,

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Pack Temperature Sensor Installation, AMM TASK 21-51-52-400-801.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the right pack temperature sensor and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3876 of the right pack temperature sensor and connector D3860A of the pack/zone temperature controller:

D3876		D3860A
pin 1	- - - - - - - - - - - - - - - - - -	pin A6
pin 2	- - - - - - - - - - - - - - - - - -	pin B6

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

1) Repair the wiring.

2) Re-connect the electrical connector to the right pack temperature sensor.

3) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

4) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

5) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

6) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the right pack temperature sensor.

2) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

3) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

—————— END OF TASK ——————

823. Left Pack Temperature Sensor (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) STBY OTHER PACK - PACK SNSR

(2) The right pack/zone temperature controller has detected a short or an open circuit from the left pack temperature sensor.

B. Possible Causes

(1) Left pack temperature sensor, T471

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-12)

(2) (WDM 21-51-12)

(3) (SSM 21-51-13)

(4) (WDM 21-51-13)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the left pack temperature sensor, T471:

(a) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(b) Disconnect electrical connector D3866 from the left pack temperature sensor.

(c) Do a check for an open circuit or a short between pins 3 and 4 of the left pack temperature sensor.

(d) If there is a short or an open circuit between pins 3 and 4, then do these steps:

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1) Replace the left pack temperature sensor, T471.

These are the tasks:

Pack Temperature Sensor Removal, AMM TASK 21-51-52-000-801,

Pack Temperature Sensor Installation, AMM TASK 21-51-52-400-801.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(e) If there is not a short or an open circuit between pins 3 and 4, then continue.

(2) Do this check of the wiring between the left pack temperature sensor and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3866 of the left pack temperature sensor and connector D3860A of the pack/zone temperature controller:

D3866		D3860A
pin 3	- - - - - - - - - - - - - - - - - -	pin D11
pin 4	- - - - - - - - - - - - - - - - - -	pin D12

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

1) Repair the wiring.

2) Re-connect the electrical connector to the left pack temperature sensor.

3) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

4) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

5) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the left pack temperature sensor.

2) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

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824. Right Pack Temperature Sensor (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) STBY OTHER PACK - PACK SNSR

(2) The left pack/zone temperature controller has detected a short or an open circuit from the right pack temperature sensor.

B. Possible Causes

(1) Right pack temperature sensor, T474

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-22)

(2) (WDM 21-51-22)

(3) (SSM 21-51-23)

(4) (WDM 21-51-23)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the right pack temperature sensor, T474:

(a) Open this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(b) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(c) Disconnect electrical connector D3876 from the right pack temperature sensor.

(d) Do a check for an open circuit or a short between pins 3 and 4 of the right pack temperature sensor.

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(e) If there is a short or an open circuit between pins 3 and 4, then do these steps:

1) Replace the right pack temperature sensor, T474.

These are the tasks:

Pack Temperature Sensor Removal, AMM TASK 21-51-52-000-801,

Pack Temperature Sensor Installation, AMM TASK 21-51-52-400-801.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If there is not a short or an open circuit between pins 3 and 4, then continue.

(2) Do this check of the wiring between the right pack temperature sensor and the left pack/zone temperature controller, M1442:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3876 of the right pack temperature sensor and connector D3858A of the pack/zone temperature controller:

D3876		D3858A
pin 3	- - - - - - - - - - - - - - - - - -	pin D11
pin 4	- - - - - - - - - - - - - - - - - -	pin D12

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

1) Repair the wiring.

2) Re-connect the electrical connector to the right pack temperature sensor.

3) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

4) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

5) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

6) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the right pack temperature sensor.

2) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

3) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(3) Replace the left pack/zone temperature controller, M1442.

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These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

———————— END OF TASK ————————

825. Left Pack Temperature Sensor (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) THIS PACK - PACK SNSR

(2) The left pack/zone temperature controller has detected a short or an open circuit from the left pack temperature sensor.

B. Possible Causes

(1) Left pack temperature sensor, T471

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-12)

(2) (WDM 21-51-12)

(3) (SSM 21-51-13)

(4) (WDM 21-51-13)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the left pack temperature sensor, T471:

(a) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

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(b) Disconnect electrical connector D3866 from the left pack temperature sensor.

(c) Do a check for an open circuit or a short between pins 1 and 2 of the left pack temperature sensor.

(d) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the left pack temperature sensor, T471.

These are the tasks:

Pack Temperature Sensor Removal, AMM TASK 21-51-52-000-801,

Pack Temperature Sensor Installation, AMM TASK 21-51-52-400-801.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(e) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the left pack temperature sensor and the left pack/zone temperature controller, M1442:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3866 of the left pack temperature sensor and connector D3858A of the pack/zone temperature controller:

D3866		D3858A
pin 1	- - - - - - - - - - - - - - - - - -	pin A6
pin 2	- - - - - - - - - - - - - - - - - -	pin B6

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

1) Repair the wiring.

2) Re-connect the electrical connector to the left pack temperature sensor.

3) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

4) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

5) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the left pack temperature sensor.

2) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

—————— END OF TASK ——————

826. Right Mix Manifold Temperature Sensor - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) THIS PACK - MIX MANF SENSOR

(2) The right pack/zone temperature controller has detected a short or an open circuit from the right mix manifold temperature sensor.

B. Possible Causes

(1) Right mix manifold temperature sensor, T475

(2) Wiring

(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-22)

(2) (WDM 21-51-22)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the right mix manifold temperature sensor, T475:

(a) Open the forward cargo door.

(b) Remove the aft center bulkhead liner in the forward cargo compartment. To remove the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Removal, AMM TASK 25-52-17-000-801.

(c) Disconnect electrical connector D3878 from the right mix manifold temperature sensor.

(d) Do a check for an open circuit or a short between pins 1 and 2 of the right mix manifold temperature sensor.

(e) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the right mix manifold temperature sensor, T475.

These are the tasks:

Mix Manifold Temperature Sensor Removal, AMM TASK 21-51-51-000-801,

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Mix Manifold Temperature Sensor Installation, AMM TASK 21-51-51-400-801.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the right mix manifold temperature sensor and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3878 of the right mix manifold temperature sensor and connector D3860A of the pack/zone temperature controller:

D3878		D3860A
pin 1	- - - - - - - - - - - - - - - - - -	pin B7
pin 2	- - - - - - - - - - - - - - - - - -	pin A7

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

1) Repair the wiring.

2) Re-connect the electrical connector to the right mix manifold temperature sensor.

3) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

4) Close the forward cargo door.

5) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

6) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the right mix manifold temperature sensor.

2) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

3) Close the forward cargo door.

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

———————— END OF TASK ————————

827. Left Mix Manifold Temperature Sensor - Fault Isolation

A. Description

(1) This task is for this maintenance message:

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(a) THIS PACK - MIX MANF SENSOR

(2) The left pack/zone temperature controller has detected a short or an open circuit from the left mix manifold temperature sensor.

B. Possible Causes

(1) Left mix manifold temperature sensor, T472

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-12)

(2) (WDM 21-51-12)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Do this check of the left mix manifold temperature sensor, T472:

(a) Open the forward cargo door.

(b) Remove the aft center bulkhead liner in the forward cargo compartment. To remove the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Removal, AMM TASK 25-52-17-000-801.

(c) Disconnect electrical connector D3868 from the left mix manifold temperature sensor.

(d) Do a check for an open circuit or a short between pins 1 and 2 of the left mix manifold temperature sensor.

(e) If there is a short or an open circuit between pins 1 and 2, then do these steps:

1) Replace the left mix manifold temperature sensor, T472.

These are the tasks:

Mix Manifold Temperature Sensor Removal, AMM TASK 21-51-51-000-801,

Mix Manifold Temperature Sensor Installation, AMM TASK 21-51-51-400-801.

2) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(f) If there is not a short or an open circuit between pins 1 and 2, then continue.

(2) Do this check of the wiring between the left mix manifold temperature sensor and the left pack/zone temperature controller, M1442:

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(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3868 of the left mix manifold temperature sensor and connector D3858A of the pack/zone temperature controller:

D3868		D3858A
pin 1	- - - - - - - - - - - - - - - - - -	pin B7
pin 2	- - - - - - - - - - - - - - - - - -	pin A7

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

1) Repair the wiring.

2) Re-connect the electrical connector to the left mix manifold temperature sensor.

3) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

4) Close the forward cargo door.

5) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

6) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the left mix manifold temperature sensor.

2) Install the aft center bulkhead liner in the forward cargo compartment. To install the liner, do this task: Forward Cargo Compartment Aft Bulkhead Liner Installation, AMM TASK 25-52-17-400-801.

3) Close the forward cargo door.

(3) Replace the left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

828. Left Standby Temperature Control Valve - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) STANDBY OTHER PACK - TCV

(2) The right pack/zone temperature controller has detected a fault from the left standby temperature control valve.

B. Possible Causes

(1) Left standby temperature control valve, V140

(2) Wiring

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(3) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-13)

(2) (WDM 21-51-13)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left standby temperature control valve, V140.

These are the tasks:

Standby Temperature Control Valve Removal, AMM TASK 21-51-11-000-801,

Standby Temperature Control Valve Installation, AMM TASK 21-51-11-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(2) Do this check of the wiring between the left standby temperature control valve and the right pack/zone temperature controller, M1443:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3864 of the left standby temperature control valve and connector D3860A of the pack/zone temperature controller:

D3864		**D3860A**
pin 3	- - - - - - - - - - - - - - - - - -	pin A15
pin 1	- - - - - - - - - - - - - - - - - -	pin B15

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

1) Repair the wiring.

2) Re-connect the electrical connector to the left standby temperature control valve.

3) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

4) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

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5) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the left standby temperature control valve.

2) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(3) Replace the right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

829. Right Standby Temperature Control Valve - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) STANDBY OTHER PACK - TCV

(2) The left pack/zone temperature controller has detected a fault from the right standby temperature control valve.

B. Possible Causes

(1) Right standby temperature control valve, V142

(2) Wiring

(3) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-23)

(2) (WDM 21-51-23)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

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F. Fault Isolation Procedure

(1) Replace the right standby temperature control valve, V142.

These are the tasks:

Standby Temperature Control Valve Removal, AMM TASK 21-51-11-000-801,

Standby Temperature Control Valve Installation, AMM TASK 21-51-11-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(2) Do this check of the wiring between the right standby temperature control valve and the left pack/zone temperature controller, M1442:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Do a wiring check between these pins of electrical connector D3874 of the right standby temperature control valve and connector D3858A of the pack/zone temperature controller:

D3874		D3858A
pin 3	- - - - - - - - - - - - - - - - - -	pin A15
pin 1	- - - - - - - - - - - - - - - - - -	pin B15

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

1) Repair the wiring.

2) Re-connect the electrical connector to the right standby temperature control valve.

3) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

4) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

5) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

6) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(d) If you do not find a problem with the wiring, then continue.

1) Re-connect the electrical connector to the right standby temperature control valve.

2) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

3) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(3) Replace the left pack/zone temperature controller, M1442.

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These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

———————— END OF TASK ————————

830. Left Temperature Control Valve - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) THIS PACK - TCV

(2) The left pack/zone temperature controller has detected a fault from the left temperature control valve.

B. Possible Causes

(1) Left temperature control valve, V139

(2) Air conditioning relays No. 1, M324

(3) Wiring

(4) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-12)

(2) (WDM 21-51-12)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left temperature control valve, V139.

These are the tasks:

Temperature Control Valve Removal, AMM TASK 21-51-10-000-801,

Temperature Control Valve Installation, AMM TASK 21-51-10-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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(c) If the maintenace message shows, then continue.

(2) Replace the air conditioning relays No. 1, M324.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message shows, then continue.

(3) Do these checks of the wiring between the left temperature control valve, the left pack/zone temperature controller, M1442, and the air conditioning relays No. 1, M324:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Remove the air conditioning relays No. 1, M324. To remove the relays, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(c) Do a wiring check between these pins of electrical connector D3862 of the left temperature control valve and connector D3858B of the pack/zone temperature controller:

D3862		D3858B
pin 4	- - - - - - - - - - - - - - - - - -	pin D10
pin 12	- - - - - - - - - - - - - - - - - -	pin D9

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

a) Repair the wiring.

b) Re-connect the electrical connector to the left temperature control valve.

c) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

d) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

e) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

f) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If you do not find a problem with the wiring, then continue.

(d) Do a wiring check between these pins of electrical connector D3862 of the left temperature control valve and connector D458A of the air conditioning relays No 1:

D3862		D458A
pin 1	- - - - - - - - - - - - - - - - - -	pin 64
pin 2	- - - - - - - - - - - - - - - - - -	pin 63

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

a) Repair the wiring.

b) Re-connect the electrical connector to the left temperature control valve.

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c) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

d) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

e) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

f) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If you do not find a problem with the wiring, then continue.

(e) Do a wiring check between these pins of electrical connector D458A of the air conditioning relays No. 1 and connector D3858B of the pack/zone temperature controller:

D3858B		D458A
pin D12	- - - - - - - - - - - - - - - - -	pin 66
pin D13	- - - - - - - - - - - - - - - - -	pin 65
pin C2	- - - - - - - - - - - - - - - - -	pin 58

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

a) Repair the wiring.

b) Re-connect the electrical connector to the left temperature control valve.

c) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

d) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

e) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

f) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If you do not find a problem with the wiring, then continue.

(f) Make sure pins 3 and 5 of connector D3862 for the temperature control valve go to ground.

1) If pin 3 or 5 of D3862 does not go to ground, then do these steps:

a) Repair the wiring.

b) Re-connect the electrical connector to the left temperature control valve.

c) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

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d) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

e) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

f) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If pins 3 and 5 of D3862 go to ground, then do these steps and continue:

a) Re-connect the electrical connector to the left temperature control valve.

b) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

c) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(4) Install a new left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

———————— END OF TASK ————————

831. Right Temperature Control Valve - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) THIS PACK - TCV

(2) The right pack/zone temperature controller has detected a fault from the right temperature control valve.

B. Possible Causes

(1) Right temperature control valve, V141

(2) Air conditioning relays No. 2, M1455

(3) Wiring

(4) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC

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Row	Col	Number	Name
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-51-22)

(2) (WDM 21-51-22)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right temperature control valve, V141.

These are the tasks:

Temperature Control Valve Removal, AMM TASK 21-51-10-000-801,

Temperature Control Valve Installation, AMM TASK 21-51-10-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(2) Replace the air conditioning relays No. 2, M1455.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(3) Do these checks of the wiring between the right temperature control valve, the right pack/zone temperature controller, M1443, and the air conditioning relays No. 2, M1455:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Remove the air conditioning relays No. 2, M1455. To remove the relays, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(c) Do a wiring check between these pins of electrical connector D3872 of the right temperature control valve and connector D3860B of the pack/zone temperature controller:

D3872		D3860B
pin 4	- - - - - - - - - - - - - - - - - -	pin D10
pin 12	- - - - - - - - - - - - - - - - - -	pin D9

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

a) Repair the wiring.

b) Re-connect the electrical connector to the right temperature control valve.

c) Close this access panel:

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Number	Name/Location
192CR	Air Conditioning Access Door

d) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

e) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

f) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

g) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If you do not find a problem with the wiring, then continue.

(d) Do a wiring check between these pins of electrical connector D3872 of the right temperature control valve and connector D10002A of the air conditioning relays No 2:

D3872		D10002A
pin 1	- - - - - - - - - - - - - - - - - -	pin 64
pin 2	- - - - - - - - - - - - - - - - - -	pin 63

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

a) Repair the wiring.

b) Re-connect the electrical connector to the right temperature control valve.

c) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

d) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

e) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

f) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

g) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

2) If you do not find a problem with the wiring, then continue.

(e) Do a wiring check between these pins of electrical connector D10002A of the air conditioning relays No. 2 and connector D3860B of the pack/zone temperature controller:

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D3860B		D10002A
pin D12	- - - - - - - - - - - - - - - - -	pin 66
pin D13	- - - - - - - - - - - - - - - - -	pin 65
pin C2	- - - - - - - - - - - - - - - - -	pin 58

1) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-connect the electrical connector to the right temperature control valve.
   c) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

   d) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

   e) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.
   f) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
   g) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.
   h) If the maintenance message does not show, then you corrected the fault.
2) If you do not find a problem with the wiring, then continue.

(f) Make sure pins 3 and 5 of connector D3872 for the temperature control valve go to ground.
1) If pin 3 or 5 of D3872 does not go to ground, then do these steps:
   a) Repair the wiring.
   b) Re-connect the electrical connector to the right temperature control valve.
   c) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

   d) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

   e) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.
   f) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
   g) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.
   h) If the maintenance message does not show, then you corrected the fault.
2) If pins 3 and 5 of D3872 go to ground, then do these steps and continue:

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a) Re-connect the electrical connector to the right temperature control valve.

b) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

c) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

d) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(4) Install a new right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

832. Control Cabin Trim Air Valve (Primary) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) FLT DECK TRIM VALVE

(2) The right pack/zone temperature controller has detected a fault from the control cabin trim air valve.

B. Possible Causes

(1) Control cabin trim air valve, V143

(2) Air conditioning relays No. 1, M324

(3) Wiring

(4) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-61-11)

(2) (WDM 21-61-11)

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E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the control cabin trim air valve, V143.

These are the tasks:

Zone Trim Air Modulating Valve Removal, AMM TASK 21-61-21-000-801,

Zone Trim Air Modulating Valve Installation, AMM TASK 21-61-21-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(2) Replace the air conditioning relays No. 1, M324.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(3) Do these checks of the wiring between the control cabin trim air valve, the right pack/zone temperature controller, M1443, and the air conditioning relays No. 1, M324:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Remove the air conditioning relays No. 1, M324. To remove the relays, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(c) Do a wiring check between these pins of electrical connector D3886 of the control cabin trim air valve and connector D3860B of the pack/zone temperature controller:

D3886		D3860B
pin 4	- - - - - - - - - - - - - - - - - -	pin B10
pin 12	- - - - - - - - - - - - - - - - - -	pin B9

(d) Do a wiring check between these pins of electrical connector D3860B of the pack/zone temperature controller and connector D458A of the air conditioning relays No 1:

D458A		D3860B
pin 25	- - - - - - - - - - - - - - - - - -	pin B13
pin 37	- - - - - - - - - - - - - - - - - -	pin B12
pin 16	- - - - - - - - - - - - - - - - - -	pin D2

(e) Do a wiring check between these pins of electrical connector D3886 of the control cabin trim air valve and connector D458A of the air conditioning relays No 1:

D458A		D3886
pin 41	- - - - - - - - - - - - - - - - - -	pin 1
pin 42	- - - - - - - - - - - - - - - - - -	pin 2
pin 28	- - - - - - - - - - - - - - - - - -	pin 10

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(f) Make sure pins 3, 5, and 13 of connector D3886 for the control cabin trim air valve go to ground.

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

1) Repair the wiring.

2) Re-connect the electrical connector to the control cabin trim air valve.

3) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

4) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

5) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

6) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(h) If you do not find a problem with the wiring, then do these steps and continue:

1) Re-connect the electrical connector to the control cabin trim air valve.

2) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

3) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(4) Install a new right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

833. Control Cabin Trim Air Valve (Backup) - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) FLT DECK TRIM VALVE

(2) The left pack/zone temperature controller has detected a fault from the control cabin trim air valve.

B. Possible Causes

(1) Control cabin trim air valve, V143

(2) Air conditioning relays No. 1, M324

(3) Air conditioning relays No. 2, M1455

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(4) Wiring

(5) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-61-11)

(2) (WDM 21-61-11)

(3) (SSM 21-61-12)

(4) (WDM 21-61-12)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the control cabin trim air valve, V143.
These are the tasks:
Zone Trim Air Modulating Valve Removal, AMM TASK 21-61-21-000-801,
Zone Trim Air Modulating Valve Installation, AMM TASK 21-61-21-400-801.
(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.
(b) If the maintenance message does not show, then you corrected the fault.
(c) If the maintenace message still shows, then continue.

(2) Replace the air conditioning relays No. 1, M324.
These are the tasks:
Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,
Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.
(b) If the maintenance message does not show, then you corrected the fault.
(c) If the maintenace message still shows, then continue.

(3) Replace the air conditioning relays No. 2, M1455.
These are the tasks:
Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,
Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(4) Do these checks of the wiring between the control cabin trim air valve, the left pack/zone temperature controller, M1442, and the air conditioning relays No. 1, M324, and No. 2, M1455:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Remove the air conditioning relays No. 1, M324. To remove the relays, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(c) Remove the air conditioning relays No. 2, M1455. To remove the relays, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(d) Do a wiring check between these pins of electrical connector D3886 of the control cabin trim air valve and connector D3858B of the left pack/zone temperature controller, M1442:

D3886		**D3858B**
pin 4	- - - - - - - - - - - - - - - - - -	pin B10
pin 12	- - - - - - - - - - - - - - - - - -	pin B9

(e) Do a wiring check between these pins of electrical connector D3858B of the left pack/zone temperature controller and connector D10002A of the air conditioning relays No 2, M1455:

D10002A		**D3858B**
pin 25	- - - - - - - - - - - - - - - - - -	pin B13
pin 37	- - - - - - - - - - - - - - - - - -	pin B12
pin 16	- - - - - - - - - - - - - - - - - -	pin D2

(f) Do a wiring check between these pins of electrical connector D3886 of the control cabin trim air valve and connector D458A of the air conditioning relays No 1, M324:

D458A		**D3886**
pin 41	- - - - - - - - - - - - - - - - - -	pin 1
pin 42	- - - - - - - - - - - - - - - - - -	pin 2
pin 28	- - - - - - - - - - - - - - - - - -	pin 10

(g) Do a wiring check between these pins of electrical connectors D458A and D458B of the air conditioning relays No. 1, M325, and connectors D10002A and D10002B of the air conditioning relays No. 2, M1455:

D458A		**D10002B**
pin 28	- - - - - - - - - - - - - - - - - -	pin 41

D458B		**D10002A**
pin 41	- - - - - - - - - - - - - - - - - -	pin 27
pin 42	- - - - - - - - - - - - - - - - - -	pin 26

(h) Make sure pins 3, 5, and 13 of connector D3886 for the control cabin trim air valve go to ground.

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

1) Repair the wiring.

2) Re-connect the electrical connector to the control cabin trim air valve.

3) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

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4) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

5) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

6) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

7) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(j) If you do not find a problem with the wiring, then do these steps and continue:

1) Re-connect the electrical connector to the control cabin trim air valve.

2) Close this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

3) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(5) Install a new left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

834. Forward Cabin Trim Air Valve - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ZONE TRIM VALVE

(2) The right pack/zone temperature controller has detected a fault from the forward cabin trim air valve.

B. Possible Causes

(1) Forward cabin trim air valve, V144

(2) Air conditioning relays No. 2, M1455

(3) Wiring

(4) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC

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Row	Col	Number	Name
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

D. Related Data

(1) (SSM 21-61-13)

(2) (WDM 21-61-13)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the forward cabin trim air valve, V144.

These are the tasks:

Zone Trim Air Modulating Valve Removal, AMM TASK 21-61-21-000-801,

Zone Trim Air Modulating Valve Installation, AMM TASK 21-61-21-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(2) Replace the air conditioning relays No. 2, M1455.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(3) Do these checks of the wiring between the forward cabin trim air valve, the right pack/zone temperature controller, M1443, and the air conditioning relays No. 2, M1455:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Remove the air conditioning relays No. 2, M1455. To remove the relays, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(c) Do a wiring check between these pins of electrical connector D3888 of the forward cabin trim air valve and connector D3860B of the pack/zone temperature controller:

D3888		**D3860B**
pin 4	- - - - - - - - - - - - - - - - - -	pin C10
pin 12	- - - - - - - - - - - - - - - - - -	pin C9

(d) Do a wiring check between these pins of electrical connector D3860B of the pack/zone temperature controller and connector D10002A of the air conditioning relays No 2:

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D10002A		D3860B
pin 53	- - - - - - - - - - - - - - - - - -	pin C12
pin 54	- - - - - - - - - - - - - - - - - -	pin C13
pin 11	- - - - - - - - - - - - - - - - - -	pin B2

(e) Do a wiring check between these pins of electrical connector D3888 of the forward cabin trim air valve and connector D10002A of the air conditioning relays No 2:

D10002A		D3888
pin 52	- - - - - - - - - - - - - - - - - -	pin 1
pin 51	- - - - - - - - - - - - - - - - - -	pin 2
pin 67	- - - - - - - - - - - - - - - - - -	pin 10

(f) Make sure pins 3, 5, and 13 of connector D3888 for the forward cabin trim air valve go to ground.

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

1) Repair the wiring.
2) Re-connect the electrical connector to the forward cabin trim air valve.
3) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

4) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

5) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.
6) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
7) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.
8) If the maintenance message does not show, then you corrected the fault.

(h) If you do not find a problem with the wiring, then do these steps and continue:

1) Re-connect the electrical connector to the forward cabin trim air valve.
2) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

3) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

4) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(4) Install a new right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

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Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

—————— END OF TASK ——————

835. Aft Cabin Trim Air Valve - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) ZONE TRIM VALVE

(2) The left pack/zone temperature controller has detected a fault from the aft cabin trim air valve.

B. Possible Causes

(1) Aft cabin trim air valve, V145

(2) Air conditioning relays No. 1, M324

(3) Wiring

(4) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-61-14)

(2) (WDM 21-61-14)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the aft cabin trim air valve, V145.

These are the tasks:

Zone Trim Air Modulating Valve Removal, AMM TASK 21-61-21-000-801,

Zone Trim Air Modulating Valve Installation, AMM TASK 21-61-21-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(2) Replace the air conditioning relays No. 1, M324.

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These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(3) Do these checks of the wiring between the aft cabin trim air valve, the left pack/zone temperature controller, M1442, and the air conditioning relays No. 1, M324:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Remove the air conditioning relays No. 1, M324. To remove the relays, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(c) Do a wiring check between these pins of electrical connector D3890 of the aft cabin trim air valve and connector D3860B of the pack/zone temperature controller:

D3890		D3858B
pin 4	- - - - - - - - - - - - - - - - - -	pin C10
pin 12	- - - - - - - - - - - - - - - - - -	pin C9

(d) Do a wiring check between these pins of electrical connector D3858B of the pack/zone temperature controller and connector D458A of the air conditioning relays No 1:

D458A		D3858B
pin 53	- - - - - - - - - - - - - - - - - -	pin C12
pin 54	- - - - - - - - - - - - - - - - - -	pin C13
pin 11	- - - - - - - - - - - - - - - - - -	pin B2

(e) Do a wiring check between these pins of electrical connector D3890 of the aft cabin trim air valve and connector D458A of the air conditioning relays No 1:

D458A		D3890
pin 52	- - - - - - - - - - - - - - - - - -	pin 1
pin 51	- - - - - - - - - - - - - - - - - -	pin 2
pin 67	- - - - - - - - - - - - - - - - - -	pin 10

(f) Make sure pins 3, 5, and 13 of connector D3890 for the aft cabin trim air valve go to ground.

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

1) Repair the wiring.

2) Re-connect the electrical connector to the aft cabin trim air valve.

3) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

4) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

5) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

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6) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

7) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(h) If you do not find a problem with the wiring, then do these steps and continue:

1) Re-connect the electrical connector to the aft cabin trim air valve.

2) Close this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

3) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

4) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(4) Install a new left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

836. Right Pack Ram Air Actuator - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) RAM AIR ACT

(2) The right pack/zone temperature controller has detected a fault from the right ram air inlet actuator.

B. Possible Causes

(1) Right pack ram air inlet actuator, M327

(2) Air conditioning relays No. 2, M1455

(3) Wiring

(4) Cabin temperature controller, M1443 (No. 2).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC

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D. Related Data

(1) (SSM 21-51-24)

(2) (WDM 21-51-24)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the right pack ram air inlet actuator, M327.

These are the tasks:

Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(2) Replace the air conditioning relays No. 2, M1455.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(3) Do these checks of the wiring between the right pack ram air inlet actuator, the right pack/zone temperature controller, M1443, and the air conditioning relays No. 2, M1455:

(a) Remove the right pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

(b) Remove the air conditioning relays No. 2, M1455. To remove the relays, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(c) Do a wiring check between these pins of electrical connector D3860B of the pack/zone temperature controller and connector D10002A of the air conditioning relays No 2:

D10002A		D3860B
pin 61	- - - - - - - - - - - - - - - - - -	pin D8
pin 47	- - - - - - - - - - - - - - - - - -	pin D6
pin 12	- - - - - - - - - - - - - - - - - -	pin A13
pin 13	- - - - - - - - - - - - - - - - - -	pin A12

(d) Do a wiring check between these pins of electrical connector D968 of the right pack ram air inlet actuator and connector D10002A of the air conditioning relays No 2:

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D10002A		D968
pin 36	- - - - - - - - - - - - - - - - - -	pin 1
pin 24	- - - - - - - - - - - - - - - - - -	pin 6
pin 24	- - - - - - - - - - - - - - - - - -	pin 5
pin 23	- - - - - - - - - - - - - - - - - -	pin 10

(e) Make sure pins 8 and 11 of connector D968 for the right pack ram air inlet actuator go to ground.

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

1) Repair the wiring.

2) Re-connect the electrical connector to the ram air inlet actuator.

3) Close this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

4) Re-install the right pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

5) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

6) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(g) If you do not find a problem with the wiring, then do these steps and continue.

1) Re-connect the electrical connector to the ram air inlet actuator.

2) Close this access panel:

Number	Name/Location
191GR	Ram Air Actuator Panel - Forward

3) Re-install the air conditioning relays No. 2. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(4) Install a new right pack/zone temperature controller, M1443.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

———————— END OF TASK ————————

837. Left Pack Ram Air Actuator - Fault Isolation

A. Description

(1) This task is for this maintenance message:

(a) RAM AIR ACT

(2) The left pack/zone temperature controller has detected a fault from the left ram air inlet actuator.

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B. Possible Causes

(1) Left pack ram air inlet actuator, M326

(2) Air conditioning relays No. 1, M324

(3) Wiring

(4) Cabin temperature controller, M1442 (No. 1).

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC

D. Related Data

(1) (SSM 21-51-14)

(2) (WDM 21-51-14)

E. Initial Evaluation

(1) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

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

F. Fault Isolation Procedure

(1) Replace the left pack ram air inlet actuator, M326.

These are the tasks:

Ram Air Inlet Actuator Removal, AMM TASK 21-51-21-000-801,

Ram Air Inlet Actuator Installation, AMM TASK 21-51-21-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(2) Replace the air conditioning relays No. 1, M1442.

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

(c) If the maintenace message still shows, then continue.

(3) Do these checks of the wiring between the left pack ram air inlet actuator, the left pack/zone temperature controller, M1442, and the air conditioning relays No. 1, M324:

(a) Remove the left pack/zone temperature controller. To remove the controller, do this task: Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801.

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(b) Remove the air conditioning relays No. 1, M324. To remove the relays, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(c) Do a wiring check between these pins of electrical connector D3858B of the pack/zone temperature controller and connector D458A of the air conditioning relays No 1:

D458A	D3858B
pin 61	pin D8
pin 47	pin D6
pin 12	pin A13
pin 13	pin A12

(d) Do a wiring check between these pins of electrical connector D966 of the left pack ram air inlet actuator and connector D458A of the air conditioning relays No 1:

D458A	D966
pin 36	pin 1
pin 24	pin 6
pin 24	pin 5
pin 23	pin 10

(e) Make sure pins 8 and 11 of connector D966 for the left pack ram air inlet actuator go to ground.

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

1) Repair the wiring.
2) Re-connect the electrical connector to the ram air inlet actuator.
3) Close this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

4) Re-install the left pack/zone temperature controller. To install the controller, do this task: Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.
5) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.
6) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.
7) If the maintenance message does not show, then you corrected the fault.

(g) If you do not find a problem with the wiring, then do these steps and continue:

1) Re-connect the electrical connector to the ram air inlet actuator.
2) Close this access panel:

Number	Name/Location
191GL	Ram Air Actuator Panel - Forward

3) Re-install the air conditioning relays No. 1. To install the relays, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(4) Install a new left pack/zone temperature controller, M1442.

These are the tasks:

Pack/Zone Temperature Controller Removal, AMM TASK 21-61-20-000-801,

Pack/Zone Temperature Controller Installation, AMM TASK 21-61-20-400-801.

(a) Do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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

——————— END OF TASK ———————

838. Trim Air Valve Does Not Operate - Fault Isolation

A. Description

(1) The trim air pressure regulating and shutoff valve does not operate.

(2) The trim air pressure regulating and shutoff valve (PRSOV) opens to let hot bleed air to the three zone trim air modulating valves. When there is no individual temperature control for all three cabin zones, the trim air PRSOV is the usual cause.

B. Possible Causes

(1) Trim air pressure regulating and shutoff valve, V146

(2) Trim air switch, S5

(3) Wiring problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	9	C01172	AIR CONDITIONING TRIM AIR PRESS

D. Related Data

(1) (SSM 21-61-15)

(2) (WDM 21-61-15)

E. Initial Evaluation

(1) Put the TRIM AIR switch to OFF.

(2) Supply pneumatic power. To supply pnuematic power, do this task: Supply Pressure to the Pneumatic System (Selection), AMM TASK 36-00-00-860-801

(3) Operate the air conditioning packs. To do this, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(4) To get access to the trim air PRSOV, open these panels in this sequence:

Open this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(5) Put the TRIM AIR switch to ON.

(6) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB switches to AUTO (12:00) position.

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(7) Make sure the visual position indicator on the trim air PRSOV moves in the direction of the open position.

(8) On the P5-17 cabin temperature panel, put the FWD CAB switch to the fully warm (W) position.

(9) Make sure the visual position indicator on the trim air PRSOV moves closer to the fully open position.

(10) If the trim air PRSOV operates correctly, then there was an intermittent fault.

(11) If the trim air PRSOV does not operate correctly, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the ground circuit for the trim air PRSOV:

(a) Make sure the TRIM AIR switch is in the ON position.

(b) Disconnect connector D3914 from the trim air PRSOV.

(c) Make sure pin 3 of connector D3914 goes to ground.

(d) If pin 3 of connector D3914 does not go to ground, then do these steps:

1) Repair the wiring.

2) Re-install connector D3914 on the trim air PRSOV.

3) Do the Repair Confirmation at the end of this task.

(e) If pin 3 of connector D3914 goes to ground, then continue.

(2) Do this check for 28 VDC at the trim air PRSOV:

(a) Do a check for 28 VDC between pin 1 and pin 3 (ground) of connector D3914.

(b) If there is 28 VDC at pin 1 of connector D3914, then do these steps:

1) Replace the trim air PRSOV. To replace the trim air PRSOV,

These are the tasks:

Trim Air Pressure Regulating and Shutoff Valve Removal, AMM TASK 21-62-01-000-801,

Trim Air Pressure Regulating and Shutoff Valve Installation, AMM TASK 21-62-01-400-801.

2) Do the Repair Confirmation at the end of this task.

(c) If there is not 28 VDC at pin 1 of connector D3914, then re-connect connector D3914 and continue.

(3) Do this check of the wiring and switch for the trim air PRSOV:

(a) Lower the P5 forward overhead panel to get access to the electrical connections on the trim switch, S5.

(b) Do a continuity check between terminals 5 and 6 of the trim air switch S5.

(c) Put the trim air switch to the OFF position.

(d) Do a continuity check between terminals 1 and 2 of the trim air switch S5.

1) If there is not continuity between terminals 5 and 6 or between terminals 1 and 2, then do these steps:

a) Replace the trim air switch S5.

NOTE: Put the switch in the ON position.

b) Do the Repair Confirmation at the end of this task.

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2) If there is continuity between terminals 5 and 6 and between terminals 1 and 2, then do these steps:

a) Repair the wiring between these connectors:

C1172		**D3998**
term L	- - - - - - - - - - - - - - - -	pin 13
D3998		**D3914**
pin 16	- - - - - - - - - - - - - - - -	pin 1

b) Close the P5 overhead panel.

c) Do the Repair Confirmation at the end of this task.

G. Repair Confirmation

(1) Supply pneumatic power. To supply pnuematic power, do this task: Supply Pressure to the Pneumatic System (Selection), AMM TASK 36-00-00-860-801

(2) Operate the air conditioning packs. To do this, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(3) To get access to the trim air PRSOV, open these panels in this sequence:

Open this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(4) Put the TRIM AIR switch to ON.

(5) On the P5-17 cabin temperature panel, put the CONT CAB and AFT CAB selectors to the AUTO (12:00) position.

(6) On the P5-17 cabin temperature panel, put the FWD CAB selector to the fully warm (W) position.

(7) Make sure the visual position indicator on the trim air PRSOV moves in the direction of the open position.

(a) If the visual position indicator on the trim air PRSOV moves in the direction of the open position, then you corrected the fault.

(8) Do these steps to return the airplane to its usual condition:

(a) On the P5-17 cabin temperature panel, put the CONT CAB, FWD CAB and AFT CAB temperature selectors to the AUTO (12:00) position.

(b) Shutdown the air conditioning packs. To shutdown the packs, do this task: Remove Conditioned Air from the Airplane, AMM TASK 21-00-00-800-802.

(c) Remove pnuematic power if it is not necessary. To remove pneumatic power, do this task: Remove Pressure from the Pneumatic System, AMM TASK 36-00-00-860-806

(d) Close these panels in the specified sequence:

Close this access panel:

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Number	Name/Location
192CR	Air Conditioning Access Door

Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

———————— END OF TASK ————————

839. ZONE TEMP Light On, Cannot Reset, CONT CABIN - Fault Isolation

A. Description

(1) The ZONE TEMP light for the control cabin on the P5-17 cabin temperature control module is on and will not reset.

B. Possible Causes

(1) Control cabin duct overheat switch, S931

(2) Pack/zone temperature control system failure

(3) Air conditioning accessory unit, M324

(4) Wiring problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C01164	A/C ZONE TEMP DUCT OVHT FLT DECK

D. Related Data

(1) (SSM 21-61-11)

(2) (SSM 21-61-12)

(3) (WDM 21-61-11)

(4) (WDM 21-61-12)

E. Initial Evaluation

(1) Push the TRIP RESET switch on the air conditioning module on the forward overhead panel, P5.

(2) If the control cabin ZONE TEMP light goes off, then there was an intermittent fault.

(3) If the control cabin ZONE TEMP light stays on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the control cabin duct overheat switch, S931:

(a) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

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(b) Disconnect connector D3892 from the passenger cabin duct overheat switch, S931.

(c) Push the TRIP RESET switch.

(d) If the ZONE TEMP light goes out, then do these steps:

1) Replace the control cabin duct overheat switch, S931.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

2) Re-connect connector D3892 to the passenger cabin duct overheat switch, S931.

3) If the ZONE TEMP light is still off, then you corrected the fault.

4) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

(e) If the ZONE TEMP light stays on, then continue.

(2) Do the BITE test on the left (M1442) and the right (M1443) pack/zone temperature controllers. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Operate the air conditioning packs. To operate the packs, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the control cabin ZONE TEMP light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(3) Do this check of the wiring between the ACAU and the control cabin duct temperature sensor:

(a) Remove the ACAU, M324. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for a short from pin 61 at connector D458B on the E4-1 shelf to structure ground, (WDM 21-61-11).

(c) If there is a short to ground, then do these steps:

1) Repair the wiring between the air conditioning accessory unit, M324, and control cabin duct overheat switch, S931, (WDM 21-61-11).

2) Re-install the ACAU, M324. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Push the TRIP RESET switch.

4) If the ZONE TEMP light is off, then you corrected the fault. Close the

Number	Name/Location
117A	Electronic Equipment Access Door

(d) If there is not a short to ground, then continue.

(4) Replace the air conditioning accessory unit, M324. To replace it,

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These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Push the TRIP RESET switch.

(b) If the ZONE TEMP light goes out, then you corrected the fault. Close the

Number	Name/Location
117A	Electronic Equipment Access Door

(c) If the ZONE TEMP light is still on, then continue.

(5) Do this check of the wiring between the ACAU and the forward overhead panel, P5:

(a) Do a check for a short from pin 62 at connector D458B on the E4-1 shelf to structure ground, (WDM 21-61-11).

(b) If there is a short to ground, then do these steps:

1) Repair the wiring between the air conditioning accessory unit, M324, and pin 7 of connector D3996 on the forward overhead panel, P5 (WDM 21-61-11).

2) Install the ACAU, M324. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Push the TRIP RESET switch.

4) If the DUCT OVERHEAT light is off, then you corrected the fault. Close the

Number	Name/Location
117A	Electronic Equipment Access Door

——————— END OF TASK ———————

840. ZONE TEMP Light On, Cannot Reset, FWD CABIN - Fault Isolation

A. Description

(1) The ZONE TEMP light for the forward passenger cabin on the P5-17 cabin temperature control module is on and will not reset.

B. Possible Causes

(1) Forward cabin duct overheat switch, S1076

(2) Pack/zone temperature control system failure

(3) Air conditioning accessory unit, M1455

(4) Wiring problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	3	C01166	A/C ZONE TEMP DUCT OVHT FWD PASS

D. Related Data

(1) (SSM 21-61-13)

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(2) (WDM 21-61-13)

E. Initial Evaluation

(1) Push the TRIP RESET switch on the air conditioning module on the forward overhead panel, P5.

(2) If the forward cabin ZONE TEMP light goes off, then there was an intermittent fault.

(3) If the forward cabin ZONE TEMP light stays on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the forward cabin duct overheat switch, S1076:

(a) Remove the applicable ceiling panel to get access to the forward cabin overheat switch. To remove the panel, do this task: Sculptured Ceiling Panel Removal, AMM TASK 25-21-45-000-801.

(b) Disconnect connector D11834 from the forward cabin duct overheat switch, S1076.

(c) Push the TRIP RESET switch.

(d) If the ZONE TEMP light goes out, then do these steps:

1) Replace the forward cabin duct overheat switch, S1076.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

2) Connect connector D11834 to the forward cabin duct overheat switch, S1076.

3) If the ZONE TEMP light is still off, then you corrected the fault.

4) Install the ceiling panel. To install the panel, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

(e) If the ZONE TEMP light stays on, then continue.

(2) Do the BITE test on the left (M1442) and the right (M1443) pack/zone temperature controllers. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Operate the air conditioning packs. To operate the packs, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the forward cabin ZONE TEMP light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(3) Do this check of the wiring between the ACAU and the forward cabin duct temperature sensor:

(a) Remove the ACAU, M1455. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for a short from pin 48 at connector D10002B on the E4-1 shelf to structure ground, (WDM 21-61-13).

(c) If there is a short to ground, then do these steps:

1) Repair the wiring between the air conditioning accessory unit, M1455, and forward cabin duct overheat switch, S1076, (WDM 21-61-13).

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2) Install the ACAU, M1455. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Push the TRIP RESET switch.

4) If the ZONE TEMP light is off, then you corrected the fault. Close the

Number	Name/Location
117A	Electronic Equipment Access Door

(d) If there is not a short to ground, then continue.

(4) Replace the air conditioning accessory unit, M1455. To replace it,

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Push the TRIP RESET switch.

(b) If the ZONE TEMP light goes out, then you corrected the fault. Close the

Number	Name/Location
117A	Electronic Equipment Access Door

(c) If the ZONE TEMP light is still on, then continue.

(5) Do this check of the wiring between the ACAU and the forward overhead panel, P5:

(a) Do a check for a short from pin 49 at connector D10002B on the E4-1 shelf to structure ground, (WDM 21-61-13).

(b) If there is a short to ground, then do these steps:

1) Repair the wiring between the air conditioning accessory unit, M1455, and pin 7 of connector D3998 on the forward overhead panel, P5 (WDM 21-61-13).

2) Install the ACAU, M1455. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Push the TRIP RESET switch.

4) If the DUCT OVERHEAT light is off, then you corrected the fault. Close the

Number	Name/Location
117A	Electronic Equipment Access Door

a) Install the ceiling panel. To install the panel, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

—————— END OF TASK ——————

841. ZONE TEMP Light On, Cannot Reset, AFT CABIN - Fault Isolation

A. Description

(1) The ZONE TEMP light for the aft passenger cabin on the P5-17 cabin temperature control module is on and will not reset.

B. Possible Causes

(1) Aft cabin duct overheat switch, S1077

(2) Pack/zone temperature control system failure

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(3) Air conditioning accessory unit, M324

(4) Wiring problem

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	2	C01169	A/C ZONE TEMP DUCT OVHT AFT PASS

D. Related Data

(1) (SSM 21-61-14)

(2) (WDM 21-61-14)

E. Initial Evaluation

(1) Push the TRIP RESET switch on the air conditioning module on the forward overhead panel, P5.

(2) If the aft cabin ZONE TEMP light goes off, then there was an intermittent fault.

(3) If the aft cabin ZONE TEMP light stays on, then do the Fault Isolation Procedure below.

F. Fault Isolation Procedure

(1) Do this check of the aft cabin duct overheat switch, S1077:

(a) Remove the applicable ceiling panel to get access to the forward cabin overheat switch. To remove the panel, do this task: Sculptured Ceiling Panel Removal, AMM TASK 25-21-45-000-801.

(b) Disconnect connector D11836 from the aft cabin duct overheat switch, S1077.

(c) Push the TRIP RESET switch.

(d) If the ZONE TEMP light goes out, then do these steps:

1) Replace the aft cabin duct overheat switch, S1077.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

2) Re-connect connector D11836 to the aft cabin duct overheat switch, S1077.

3) If the ZONE TEMP light is still off, then you corrected the fault.

4) Install the ceiling panel. To install the panel, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

(e) If the ZONE TEMP light stays on, then continue.

(2) Do the BITE test on the left (M1442) and the right (M1443) pack/zone temperature controllers. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Operate the air conditioning packs. To operate the packs, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the aft cabin ZONE TEMP light does not come on, then you corrected the fault.

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3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(3) Do this check of the wiring between the ACAU and the aft cabin duct temperature sensor:

(a) Remove the ACAU, M324. To remove the ACAU, do this task: Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801.

(b) Do a check for a short from pin 48 at connector D458B on the E4-1 shelf to structure ground, (WDM 21-61-14).

(c) If there is a short to ground, then do these steps:

1) Repair the wiring between the air conditioning accessory unit, M324, and aft cabin duct overheat switch, S1077, (WDM 21-61-14).

2) Install the ACAU, M324. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Push the TRIP RESET switch.

4) If the ZONE TEMP light is off, then you corrected the fault. Close the

Number	Name/Location
117A	Electronic Equipment Access Door

(d) If there is not a short to ground, then continue.

(4) Replace the air conditioning accessory unit, M324. To replace it,

These are the tasks:

Air Conditioning Accessory Unit (ACAU) Removal, AMM TASK 21-51-02-000-801,

Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

(a) Push the TRIP RESET switch.

(b) If the ZONE TEMP light goes out, then you corrected the fault. Close the

Number	Name/Location
117A	Electronic Equipment Access Door

(c) If the ZONE TEMP light is still on, then continue.

(5) Do this check of the wiring between the ACAU and the forward overhead panel, P5:

(a) Do a check for a short from pin 49 at connector D458B on the E4-1 shelf to structure ground, (WDM 21-61-14).

(b) If there is a short to ground, then do these steps:

1) Repair the wiring between the air conditioning accessory unit, M458B, and pin 20 of connector D3996 on the forward overhead panel, P5 (WDM 21-61-14).

2) Install the ACAU, M324. To install it, do this task: Air Conditioning Accessory Unit (ACAU) Installation, AMM TASK 21-51-02-400-801.

3) Push the TRIP RESET switch.

4) If the DUCT OVERHEAT light is off, then you corrected the fault. Close the

Number	Name/Location
117A	Electronic Equipment Access Door

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a) Install the ceiling panel. To install the panel, do this task: Sculptured Ceiling Panel Installation, AMM TASK 25-21-45-400-801.

—————— END OF TASK ——————

842. Control Cabin ZONE TEMP Light On and Stays OFF After Reset - Fault Isolation

A. Description

(1) The control cabin ZONE TEMP light on the P5-17 air conditioning module comes on and stays off after reset.

B. Possible Causes

(1) Control cabin duct overheat switch, S931

(2) Pack/zone temperature control system failure

(3) Flight compartment trim air modulating valve, V143

(4) Control cabin duct temperature sensor, T478

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	4	C01164	A/C ZONE TEMP DUCT OVHT FLT DECK

D. Related Data

(1) (SSM 21-61-11)

(2) (SSM 21-61-12)

(3) (WDM 21-61-11)

(4) (WDM 21-61-12)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(a) Make sure the TRIM AIR switch on the P5-17 temperature control panel is set to the ON position.

(2) If the ZONE TEMP light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the ZONE TEMP light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do the Pack/Zone Temperature Controller BITE Procedure on the right (M1443) and the left (M1442) pack zone temperature controllers. To do the BITE procedure, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

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(a) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Operate the left air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

2) If the control cabin ZONE TEMP light does not come on, then you corrected the fault.

a) Stop the pack. To stop the pack, do this task: AMM TASK 21-00-00-800-804.

3) If the control cabin ZONE TEMP light comes on, then continue.

(2) Do an operational test of the duct overheat switch (S931) for the control cabin. For the check of the overheat switch, do this task: AMM TASK 21-61-00-700-811.

(a) If the control cabin ZONE TEMP light did not come on between 180°F and 200°F (82°C and 93°C), then replace the control cabin duct overheat switch. To replace the S931 switch, do these tasks: AMM TASK 21-61-05-000-801 and AMM TASK 21-61-05-400-801.

(b) If the control cabin ZONE TEMP light came on between 180°F and 200°F (82°C and 93°C), then continue.

(3) Do a check of the resistance of the duct temperature limit sensor. To do the resistance check, do this task: AMM TASK 21-61-04-000-805-002.

(a) If you replaced the duct temperature limit sensor, do these steps:

1) Operate the left air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

2) Allow the pack to operate until the temperatures stabilize.

3) If the control cabin ZONE TEMP light does not come on, you corrected the fault.

4) If the control cabin ZONE TEMP light comes on, then continue.

(4) Replace the right pack/zone temperature controller (M1443). To replace the controller, do these tasks: AMM TASK 21-61-20-000-801 and AMM TASK 21-61-20-400-801.

——————— END OF TASK ———————

843. Forward Cabin ZONE TEMP Light On and Stays OFF After Reset - Fault Isolation

A. Description

(1) The forward passenger cabin ZONE TEMP light on the P5-17 air conditioning module comes on and stays off after reset.

B. Possible Causes

(1) Forward cabin zone duct overheat switch, S1076

(2) Pack/zone temperature control system failure

(3) Forward passenger zone trim air modulating valve, V144

(4) Forward cabin duct temperature sensor, T533

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	3	C01166	A/C ZONE TEMP DUCT OVHT FWD PASS

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D. Related Data

(1) (SSM 21-61-13)

(2) (WDM 21-61-13)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

NOTE: Make sure the TRIM AIR switch on the P5-17 panel is in the ON position.

(2) If the ZONE TEMP light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the ZONE TEMP light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do the Pack/Zone Temperature Controller BITE Procedure on the right (M1443) pack/zone temperature controller. To do the BITE procedure, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Operate the left air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803

2) If the forward cabin ZONE TEMP light does not come on, then you corrected the fault.

a) Stop the pack operation. To stop the pack, do this task: AMM TASK 21-00-00-800-804.

3) If the forward cabin ZONE TEMP light comes on, then continue.

(2) Do an operational test of the duct overheat switch, S1076, for the forward cabin. For the check of the overheat switch, do this task: AMM TASK 21-61-00-700-811.

(a) If the forward cabin ZONE TEMP light did not come on between 180°F and 200°F (82°C and 93°C), then replace the forward cabin duct overheat switch. To replace the S1076 overheat switch, do these tasks: AMM TASK 21-61-05-000-801and AMM TASK 21-61-05-400-801.

(b) If the forward cabin ZONE TEMP light came on between 180°F and 200°F (82°C and 93°C), then continue.

(3) Do a check of the resistance of the duct temperature limit sensor, T533. To do the resistance check, do this task: AMM TASK 21-61-04-000-805-002.

(a) If you replaced the duct temperature limit sensor, T533, do these steps:

1) Operate the left air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

2) Allow the pack to operate until the temperatures stabilize.

3) If the forward cabin ZONE TEMP light does not come on, you corrected the fault.

4) If the forward cabin ZONE TEMP light comes on, then continue.

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(4) Replace the right pack/zone temperature controller (M1443). To replace the controller, do these tasks: AMM TASK 21-61-20-000-801and AMM TASK 21-61-20-400-801.

———————— END OF TASK ————————

844. Aft Cabin ZONE TEMP Light On and Stays OFF After Reset - Fault Isolation

A. Description

(1) The aft passenger cabin ZONE TEMP light on the P5-17 air conditioning module comes on and stays off after reset.

B. Possible Causes

(1) Aft cabin duct overheat switch, S1077

(2) Pack/zone temperature control system failure

(3) Aft cabin trim air modulating valve, V145

(4) Aft cabin duct temperature sensor, T536

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
C	2	C01169	A/C ZONE TEMP DUCT OVHT AFT PASS

D. Related Data

(1) (SSM 21-61-14)

(2) (WDM 21-61-14)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(a) Make sure the TRIM AIR switch on the P5-17 temperature control panel is set to ON.

(2) If the ZONE TEMP light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the ZONE TEMP light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do the Pack/Zone Temperature Controller BITE Procedure on the left (M1442) pack/zone temperature controller. To do the BITE procedure, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Operate the right air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.

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2) If the aft cabin ZONE TEMP light does not come on, then you corrected the fault.
   a) Stop the operation of the pack. To stop the pack, do this task: AMM TASK 21-00-00-800-804.
3) If the aft cabin ZONE TEMP light comes on, then continue.

(2) Do an operational test of the aft cabin duct overheat switch, S1077. For the check of the overheat switch, do this task: AMM TASK 21-61-00-700-811.
   (a) If the aft cabin ZONE TEMP light did not come on between 180°F and 200°F (82°C and 93°C), then replace the aft cabin duct overheat switch, S1077. To replace the overheat switch, S1077, do this tasks: AMM TASK 21-61-05-000-801 and AMM TASK 21-61-05-400-801.
   (b) If the aft cabin ZONE TEMP LIGHT came on between 180°F and 200°F (82°C and 93°C), then continue.

(3) Do a check of the resistance of the aft cabin duct temperature limit sensor, T536. To do the resistance check, do this task: AMM TASK 21-61-04-000-805-002.
   (a) If you replaced the aft cabin duct temperature limit sensor, do these steps:
      1) Operate the right air conditioning pack. To operate the pack, do this task: AMM TASK 21-00-00-800-803.
      2) Allow the pack to operate until the temperatures stabilize.
      3) If the aft cabin ZONE TEMP light does not come on, then you corrected the fault.
      4) If the aft cabin ZONE TEMP comes on, then continue.

(4) Replace the left pack/zone temperature controller, M1442. To replace the controller, do these tasks: AMM TASK 21-61-20-000-801and AMM TASK 21-61-20-400-801.

———————— END OF TASK ————————

845. Control Cabin ZONE TEMP Light Is On and Comes On Again After Reset - Fault Isolation

A. Description

(1) The control cabin ZONE TEMP light on the P5-17 air conditioning module is on and comes on again after reset.

B. Possible Causes

(1) Pack/zone temperature control system failure

(2) Control cabin duct overheat switch, S931

(3) Dirty heat exchangers

(4) Blockage or unwanted material in the ram air ducting

(5) Ram air control system failure

(6) Bleed air too hot

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC

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Row	Col	Number	Name
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC
C	4	C01164	A/C ZONE TEMP DUCT OVHT FLT DECK
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT

D. Related Data

(1) (SSM 21-61-11)

(2) (WDM 21-61-11)

(3) (SSM 21-61-12)

(4) (WDM 21-61-12)

(5) (SSM 21-51-12)

(6) (WDM 21-51-12)

(7) (SSM 21-51-22)

(8) (WDM 21-51-22)

E. Initial Evaluation

(1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

NOTE: Make sure the TRIM AIR switch on the P5-17 panel is in the ON position.

(2) If the control cabin ZONE TEMP light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the control cabin ZONE TEMP light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do the BITE test of the pack/zone temperature control system. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the control cabin ZONE TEMP light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(2) Replace the control cabin duct overheat switch, S931.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

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(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the ZONE TEMP light for the CONT CAB does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ZONE TEMP light for the CONT CAB light comes on, then continue.

(3) Examine the left pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the ZONE TEMP light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(4) Clean the left pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the ZONE TEMP light for the CONT CAB does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the control cabin ZONE TEMP light comes on, then continue.

(5) See if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the ZONE TEMP light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Do this check of the ram air modulation system:

(a) Look at the left pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the left air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the ZONE TEMP light for the control cabin does not come on, then you corrected the fault.

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3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

—————— END OF TASK ——————

846. Forward Cabin ZONE TEMP Light Is On and Comes On Again After Reset - Fault Isolation

A. Description

(1) The forward passenger cabin ZONE TEMP on the P5-17 air conditioning module is on and comes on again after reset.

B. Possible Causes

(1) Pack/zone temperature control system failure

(2) Forward cabin duct overheat switch, S1076

(3) Dirty heat exchangers

(4) Blockage or unwanted material in the ram air ducting

(5) Ram air control system failure

(6) Bleed air too hot

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC
C	3	C01166	A/C ZONE TEMP DUCT OVHT FWD PASS
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT

D. Related Data

(1) (SSM 21-61-13)

(2) (WDM 21-61-13)

(3) (SSM 21-51-12)

(4) (WDM 21-51-12)

(5) (SSM 21-51-22)

(6) (WDM 21-51-22)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

NOTE: Make sure the TRIM AIR switch on the P5-17 panel is in the ON position.

(2) If the forward cabin ZONE TEMP light comes on, then do the Fault Isolation Procedure below.

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(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the forward cabin ZONE TEMP light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do the BITE test of the pack/zone temperature control system. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the forward cabin ZONE TEMP light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(2) Replace the forward cabin duct overheat switch, S1076.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the ZONE TEMP light for the FWD CAB does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ZONE TEMP light for the FWD CAB light comes on, then continue.

(3) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the ZONE TEMP light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(4) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the ZONE TEMP light for the FWD CAB does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

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(c) If the forward cabin ZONE TEMP light comes on, then continue.

(5) See if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the ZONE TEMP light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Do this check of the ram air modulation system:

(a) Look at the right pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the ZONE TEMP light for the forward cabin does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

——————— END OF TASK ———————

847. Aft Cabin ZONE TEMP Light Is On and Comes On Again After Reset - Fault Isolation

A. Description

(1) The aft passenger cabin ZONE TEMP on the P5-17 air conditioning module is on and comes on again after reset.

B. Possible Causes

(1) Pack/zone temperature control system failure

(2) Aft cabin duct overheat switch, S1077

(3) Dirty heat exchangers

(4) Blockage or unwanted material in the ram air ducting

(5) Ram air control system failure

(6) Bleed air too hot

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC

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Row	Col	Number	Name
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC
C	2	C01169	A/C ZONE TEMP DUCT OVHT AFT PASS
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT

D. Related Data

(1) (SSM 21-61-14)

(2) (WDM 21-61-14)

(3) (SSM 21-51-12)

(4) (WDM 21-51-12)

(5) (SSM 21-51-22)

(6) (WDM 21-51-22)

E. Initial Evaluation

(1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

NOTE: Make sure the TRIM AIR switch on the P5-17 panel is in the ON position.

(2) If the aft cabin ZONE TEMP light comes on, then do the Fault Isolation Procedure below.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(3) If the aft cabin ZONE TEMP light does not come on, then there was an intermittent fault.

(a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

F. Fault Isolation Procedure

(1) Do the BITE test of the pack/zone temperature control system. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(a) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the aft cabin ZONE TEMP light does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the BITE test does not show a fault, then continue.

(2) Replace the aft cabin duct overheat switch, S1077.

These are the tasks:

Duct Overheat Switch Removal, AMM TASK 21-61-05-000-801,

Duct Overheat Switch Installation, AMM TASK 21-61-05-400-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the ZONE TEMP light for the AFT CAB does not come on, then you corrected the fault.

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1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the ZONE TEMP light for the AFT CAB light comes on, then continue.

(3) Examine the right pack ram air ducts for blockage or unwanted materials.

(a) If the ducts have blockage or unwanted materials, then do these steps:

1) Remove the blockage or unwanted materials.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the ZONE TEMP light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If the ducts do not have blockage or unwanted materials, then continue.

(4) Clean the right pack heat exchangers. To clean the heat exchangers, do this task: Heat Exchanger and Plenum/Diffuser Assembly Cleaning, AMM TASK 21-51-03-000-801.

(a) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(b) If the ZONE TEMP light for the AFT CAB does not come on, then you corrected the fault.

1) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(c) If the forward cabin ZONE TEMP light comes on, then continue.

(5) See if there was a report for bleed air that is too hot (a bleed trip off).

(a) If there was a bleed trip off, then do these steps:

1) Do the fault isolation procedure for a bleed trip off. To do the procedure, do this task: BLEED TRIP OFF Light On - Fault Isolation, 36-10 TASK 801.

2) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

3) If the ZONE TEMP light does not come on, then you corrected the fault.

4) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

(b) If there was not a bleed trip off, then continue.

(6) Do this check of the ram air modulation system:

(a) Look at the right pack ram air doors.

(b) If the ram air doors are not in the full open position, do this task: RAM DOOR FULL OPEN Light is Not On, Airplane is On the Ground - Fault Isolation, 21-51 TASK 804.

1) Operate the right air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

2) If the ZONE TEMP light for the aft cabin does not come on, then you corrected the fault.

3) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.

END OF TASK

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848. PACK or ZONE TEMP lights come on intermittently during MASTER CAUTION recall - Fault Isolation

A. Description

(1) One, two or all three ZONE TEMP lights on the P5-17 temperature control panel or the PACK lights on the P5-10 air conditioning panel come on intermittently during MASTER CAUTION recall.

(2) Trim air valve faults may be found during a BITE test of pack/zone temperature controllers when you fault isolate for this condition.

(3) The MASTER CAUTION recall is required during airplane departure and landing approach.

B. Possible Causes

(1) Fault in pack/zone temperature controller M1442 or M1443

C. Circuit Breakers

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	1	C01157	AIR CONDITIONING TEMP CONT VALVE CLOSE LEFT
A	3	C01170	AIR CONDITIONING ZONE TEMP VALVE/FAN CONT AFT PASS
A	4	C00399	AIR CONDITIONING RAM AIR MOD LEFT
A	8	C00555	AIR CONDITIONING RAM AIR MOD CONT LEFT
A	9	C01158	AIR CONDITIONING PACK CONTROL LEFT DC
A	11	C01159	AIR CONDITIONING PACK CONTROL LEFT AC
B	1	C01160	AIR CONDITIONING TEMP CONT VALVE CLOSE RIGHT
B	2	C01167	A/C ZONE TEMP VALVE/FAN CONT FWD PASS
B	3	C01163	AIR CONDITIONING ZONE TEMP VALVE/FAN CONT FLT DK
B	4	C00400	AIR CONDITIONING RAM AIR MOD RIGHT
B	8	C01178	AIR CONDITIONING RAM AIR MOD CONT RIGHT
B	9	C01161	AIR CONDITIONING PACK CONT RIGHT DC
B	11	C01162	AIR CONDITIONING PACK CONT RIGHT AC
C	2	C01169	A/C ZONE TEMP DUCT OVHT AFT PASS
C	4	C01164	A/C ZONE TEMP DUCT OVHT FLT DECK
C	5	C00263	AIR CONDITIONING PACK CONT VALVES RIGHT
C	6	C00262	AIR CONDITIONING PACK CONT VALVES LEFT
C	7	C01177	A/C PACK/ENGINE BLEED AIR OVHT RIGHT
C	8	C01176	A/C PACK/ENGINE BLEED AIR OVHT LEFT

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

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
C	15	C01355	LANDING GEAR AIR/GND SYS 2
C	16	C01356	LANDING GEAR AIR/GND SYS 1
D	1	C01399	PSEU PRI
D	2	C01400	PSEU ALTN
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1

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Row	Col	Number	Name
D	14	C00312	INDICATOR MASTER DIM BUS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES LEFT
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES RIGHT
D	8	C00076	AIR CONDITIONING TEMP IND
D	9	C01172	AIR CONDITIONING TRIM AIR PRESS

HAP 023-026, 028-054; HAP 001-013, 015-022 POST SB 737-21-1133

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

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
D	3	C01613	AIR CONDITIONING PACK CONT VALVES L ALT
D	4	C01614	AIR CONDITIONING PACK CONT VALVES R ALT

HAP 001-013, 015-026, 028-054

D. Related Data

(1) SSM 31-52-51

E. Initial Evaluation

(1) Push and release either the left annunciator or the right annunciator on the P7 glareshield panel.

(2) Make a record if any of the ZONE TEMP lights on the temperature control panel and the PACK lights on the air conditioning panel come on intermittently, then do the Fault Isolation procedure below.

F. Fault Isolation Procedure

(1) Do the BITE test on both pack/zone temperature controllers. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(2) If the BITE test shows a fault, then go to the fault isolation task for the applicable maintenance message to correct the fault.

(3) Do the BITE test again to make sure the fault is corrected.

(4) Push and release either the left annunciator or the right annunciator on the P7 glareshield panel.

(5) Make sure that none of the ZONE TEMP lights on the temperature control panel or the PACK lights on the air conditioning panel come on.

———————— END OF TASK ————————

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849. Cannot Cool Cabins with All Temperature Selectors in Full Cold - Fault Isolation

A. Description

(1) The flight deck and or forward and aft compartments cannot be adequately cooled on the ground and or in-flight with the CONT CAB, FWD CAB, and AFT CAB temperature selectors all positioned to the full cold (C) position. This fault can also be shown by putting the TRIM AIR switch to ON, no faults on the controllers and one pack outlet temperature being much higher than the other packs outlet temperature. You can observe this on the ground by selecting the AIR TEMP selector switch on the cabin temperature control panel, P5-17 for each L or R pack.

(2) Uncontrolled hot cabins that occurs in-flight can be caused by the following conditions:

(a) If the sense lines from the conditioned air check valve or condenser low pressure side to the standby temperature control valve are cracked or leaking (sensing ambient pressure). When these lines are leaking or cracked they can cause the standby temperature control valve to open in flight.

(b) If the sense lines from the ACM turbine outlet and high pressure sense line from the condenser are plugged. When these lines are plugged they can cause the standby temperature control valve to open in flight.

(3) Uncontrolled hot cabins that occurs on the ground and in-flight can be caused by the following conditions:

(a) The ACM turbine outlet sense line has higher pressure than normal because the ACM turbine scroll is cracked. This will cause the standby temperature control valve to be open uncommanded.

NOTE: This condition can be seen by visually inspecting the standby temperature control valve position on the ground. Normally the valve should be closed. An open valve on the ground could be an indication that a problem exists with the ACM or standby temperature control valve.

(b) Sense lines are cross connected at the standby temperature control valve.

1) Condenser high pressure tube cross connected with the ACM turbine sense line.

NOTE: The connection ports are located next to each other on the valve. The connections are identified as CONDITIONED AIR CHECK VALVE (COND AIR CV) and HEAT EXCHANGER OUTLET (HEAT EX OUT).

(c) Mix Manifold temperature sensors drifting.

(d) Pack Temperature Sensor drifting

(4) A condition where the flight deck and passenger cabins cannot be cooled on the ground can be caused by a missing fan bypass check valve door in a primary plenum/diffuser assembly. This condition would result in an insufficient amount of cooling air drawn through the heat exchangers for adequate cooling.

B. Possible Causes

(1) Air Cycle Machine, V18 or V19, a cracked ACM turbine scroll will cause the standby temperature control valve to open, causing high temperatures in the cabin.

(2) The standby temperature control valve (butterfly plate is failed open).

NOTE: These conditions can happen on the ground or in-flight.

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(3) The standby temperature control valve sense lines leaking, cross connected, or plugged.

NOTE: These delta pressure sense lines being cracked or plugged will indicate a hot cabin in flight only. If these lines are clogged or leaking this will cause the standby temperature control valve to open thus causing high cabin temperatures.

NOTE: If operating the pack on the ground, with high cabin temperatures and the standby temperature control valve is open, this may be an indication that the sense lines are leaking, cross connected or there is a crack in the turbine scroll of the ACM. These conditions can happen on the ground or in-flight.

NOTE: There are sense lines from the ACM turbine housing to the standby temperature control valve and from the conditioned air check valve to the standby temperature control valve. If these lines are clogged or leaking this will cause the standby temperature control valve to open thus causing high cabin temperatures.

(4) The mix manifold sensor, T472 or T475 (drifted).

NOTE: The mix manifold temperature sensors drifting or is contaminated can cause the temperature control valve to be open. This can cause high cabin or flight deck temperatures. These failures can be seen on the ground or in-flight.

(5) The pack temperature sensor, T471 or T474 (drifted).

NOTE: The pack out temperature sensors drifting or is contaminated can cause the temperature control valve to be open. This can cause high cabin or flight deck temperatures. These failures can be seen on the ground or in-flight.

(6) The heat exchanger and plenum/diffuser assembly.

C. Initial Evaluation

(1) Do the BITE test of the pack/zone temperature control system. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

NOTE: Do this BITE before you begin each check. After you complete a check, fix or clear the BITE faults. Do this for each check.

(2) If the BITE test did indicate faults, then correct all faults found.

(a) Do the repair confirmation at the end of this task.

(3) If the BITE test did not indicate any faults, then continue.

(4) Do these steps if the ACM was slow to start on the ground and to make sure the operation of the air cycle machine is satisfactory:

NOTE: With the APU as the pneumatic source this check will make sure the ACM starts with the highest duct pressure available.

(a) Set the BLEED 1 and BLEED 2 switches on the P5-10 air conditioning panel to OFF.

(b) Set the TRIM AIR switch on the P5-17 temperature control panel to OFF.

(c) Do this task: Supply Pressure to the Pneumatic System with the APU, AMM TASK 36-00-00-860-803.

(d) Operate the applicable air conditioning pack. To operate the pack, do this task: Supply Conditioned Air with a Cooling Pack, AMM TASK 21-00-00-800-803.

(e) Put the selectors to FULL COLD.

(f) Do a check of the airflow at the exhaust duct outlet for the applicable pack ram air system.

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1) If there is little or no airflow at the exhaust duct outlet, then do these steps:
   a) Stop the pack. To stop the pack, do this task: Remove Conditioned Air Supplied by a Cooling Pack, AMM TASK 21-00-00-800-804.
   b) Remove the mix muff down stream of the ACM.
   c) Make sure that you can turn the ACM rotating components in the direction of rotation.

      NOTE: Apply a maximum of 20 inch-pounds of torque to the ACM axial nut just aft of the fan impeller.

   d) If the ACM does not rotate with 20 inch-pounds of torque, then replace the air cycle machine.

      These are the tasks:

      Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

      Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

   e) Do the applicable steps of the Repair Confirmation at the end of this task.
   f) If the ACM does rotate with 20 inch-pounds of torque or less, then do the steps that follow:
   g) Install the mix muff.
   h) Do the applicable steps of the Repair Confirmation at the end of this task, if the problem continues then continue with the Fault Isolation procedure.
2) If the airflow at the exhaust duct outlet is satisfactory, and you can control the temperature in the cabin then there was an intermittent fault.

   NOTE: If the high uncontrollable temperatures occurred in-flight only then you may want to do a check of the standby temperature control valve and the associated sense lines for blockage or leakage.

3) If the airflow at the exhaust duct outlet is satisfactory, and you cannot control the temperature in the cabin then continue.

(5) Do these steps if the uncontrollable high cabin temperatures occurred in-flight only:

NOTE: This condition can be caused by leaking or cracked sense lines from the condenser outlet (low pressure sense line) or conditioned air check valve sense line to the standby temperature control valve. Plugged or blocked sense lines from the ACM turbine outlet or from the condenser inlet pressure sense line (high pressure sense line) to the standby temperature control valve can also cause this condition.

(a) Check the conditioned air check valve sense line and condenser low pressure sense lines from the conditioned air check valve and condenser to the standby temperature control valve for leakage or cracks.

(b) Check the ACM turbine outlet and condenser high pressure sense lines from the ACM/ condenser to standby temperature control valve for blockage.

(c) If you find problems with the sense lines repair the sense lines.

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

(e) If you do not find any problems with the sense lines then continue with the Fault Isolation Procedure - Standby Temperature Control Valve Check.

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(6) If the uncontrolled hot cabin occurred in flight and on the ground then do the Fault Isolation Procedure - Standby Temperature Control Valve Check below.

NOTE: This condition can be caused by the standby temperature control valve being open, which can be caused by cross connected sense lines, cracked ACM turbine scroll. The Standby Temperature Control Valve Check procedure will isolate an ACM problem from the temperature sensor drift or standby temperature control valve problem.

(7) Do the Fault Isolation Procedure - Standby Temperature Control Valve Check.

D. Fault Isolation Procedure - Standby Temperature Control Valve Check

(1) Do this check of the standby temperature control valve operation:

NOTE: This check will make sure the standby temperature control valve operates and the associated sense lines are not leaking, or blocked. This check will also isolate a cracked ACM turbine scroll from a standby temperature control valve problem.

(a) Do the BITE test of the pack/zone temperature control system. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(b) If the BITE test did indicate faults, then correct all faults found and continue.

(c) Open these doors to get access to the air conditioning bays:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door

(d) Use the APU to supply pneumatic power to the airplane. To supply pneumatic power, do this task: Supply Pressure to the Pneumatic System with the APU, AMM TASK 36-00-00-860-803.

(e) Set the L and R PACK switches on the P5-10 air conditioning panel to AUTO.

(f) Set the CONT CAB, FWD CAB and AFT CAB temperature selectors on the P5-17 temperature control panel to the fully cold position (C).

(g) Put the TRIM AIR to ON.

(h) Allow the packs to operate until the temperatures stabilize.

(i) Check to see if the standby temperature control valve is in the closed position.

WARNING: THE DUCTING CAN BE HOT. YOU MUST USE CAUTION WHEN YOU CHECK THE TEMPERATURE OF THE DUCT. INJURY TO PERSONS CAN OCCUR.

1) If the valves are in the fully closed position, feel near the ducting downstream of the valve for false indication of the butterfly position.

NOTE: The position indicator on the valve will show if the valve is in the open or closed position. If the butterfly on the valve is broken or disconnected from the shaft the indicator may show the valve is closed yet it may be open.

a) If the ducting downstream of the valve is hot, then replace the valve.

These are the tasks:

Standby Temperature Control Valve Removal, AMM TASK 21-51-11-000-801,

Standby Temperature Control Valve Installation, AMM TASK 21-51-11-400-801.

b) Do the repair confirmation at the end of this task.

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(j) If one or both of the standby temperature control valves are in the open position, then do the steps that follow:

NOTE: If the standby temperature control valve is open on the ground, this may be caused by a crack in the ACM turbine scroll.

(k) Do the BITE test of the pack/zone temperature control system. To do the BITE test, do this task: Pack/Zone Temperature Controller BITE Procedure, 21-62 TASK 801.

(l) If the BITE test did indicate faults, then correct all faults found and continue.

1) If no faults show on the pack/zone temperature controllers, make sure the sense lines connected to the standby temperature control valve are not cross connected.
2) Set the L and R PACK switches on the P5-10 air conditioning panel to OFF.
3) Remove the sense line at the Air Cycle Machine (ACM) turbine outlet to the standby temperature control valve.

NOTE: This check determines if the standby temperature control valve is serviceable or the ACM turbine scroll is cracked which will cause the standby temperature control valve to open.

4) Set the applicable L and R PACK switches on the P5-10 air conditioning panel to AUTO.
5) Check the standby temperature control valve position, if the standby temperature control valve remains closed, replace the ACM.

These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

6) If the standby temperature control valve is open, then disconnect the remaining sense lines at the standby temperature control valve.
7) If the standby temperature control valve does not close, then replace the valve.

These are the tasks:

Standby Temperature Control Valve Removal, AMM TASK 21-51-11-000-801,

Standby Temperature Control Valve Installation, AMM TASK 21-51-11-400-801.

8) Do the repair confirmation at the end of this task.
9) Reconnect the sense lines to the standby temperature control valve.
10) If the standby temperature control valve closes, then re-connect the sense lines and continue.

(2) Do this check of the temperature control valve:

NOTE: This check will determine if the butterfly is serviceable.

(a) Set the L and R PACK switches on the P5-10 air conditioning panel to OFF.

(b) Do a check of the position indicator on the temperature control valve to make sure it is in the fully closed position.

(c) If the valve is not in the fully closed position then replace the valve.

These are the tasks:

Temperature Control Valve Removal, AMM TASK 21-51-10-000-801,

Temperature Control Valve Installation, AMM TASK 21-51-10-400-801.

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(d) If the valve is in the fully closed position then disconnect the electrical connector on the valve.

NOTE: To clear any faults due to disconnecting the electrical connectors you must do the BITE procedure for the pack/zone temperature controller.

(e) Set the L and R PACK switches on the P5-10 air conditioning panel to AUTO.

WARNING: THE DUCTING CAN BE HOT. YOU MUST USE CAUTION WHEN YOU CHECK THE TEMPERATURE OF THE DUCT. INJURY TO PERSONS CAN OCCUR.

(f) Feel near the ducting downstream of the temperature control valve. If the ducting is hot then replace the temperature control valve.

These are the tasks:

Temperature Control Valve Removal, AMM TASK 21-51-10-000-801,

Temperature Control Valve Installation, AMM TASK 21-51-10-400-801.

1) Do the repair confirmation at the end of the task.

(g) If the ducting is not hot then reconnect the electrical connector and continue.

NOTE: To clear any faults due to disconnecting the electrical connectors you must do the BITE procedure for the pack/zone temperature controller.

(h) Set the L and R PACK switches on the P5-10 air conditioning panel to OFF.

(i) Do the Fault Isolation Procedure - Air Cycle Machine Cooling Check

E. Fault Isolation - Air Cycle Machine Cooling Check

NOTE: This check has three tests; test of the ACM, test of the temperature control valve and a test of the temperature sensors. You can do these tests in any order.

(1) Do this check of the air cycle machines:

NOTE: This check will make sure that the ACMs are capable of cooling the cabins:

(a) Open these doors to get access to the air conditioning bays:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door

(b) Disconnect these electrical connectors from the temperature control valves and standby temperature control valves:

1) Electrical connector D3862 from the left temperature control valve, V139
2) Electrical connector D3864 from the left standby temperature control valve, V140
3) Electrical connector D3872 from the right temperature control valve, V141
4) Electrical connector D3874 from the right standby temperature control valve, V142.

(c) Supply pneumatic power to the airplane. To supply pneumatic power, do this task: Supply Pressure to the Pneumatic System with the APU, AMM TASK 36-00-00-860-803.

(d) Set the L and R PACK switches on the P5-10 air conditioning panel to HIGH.

(e) Put the TRIM AIR switch to ON.

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CAUTION: DO NOT CONTINUE TO OPERATE THE PACKS AFTER THE TEMPERATURES STABILIZE. ICE FORMATION IN THE CONDENSER MAY OCCUR. ICING IN THE CONDENSER COULD RESULT IN EQUIPMENT DAMAGE.

(f) Allow the packs to operate until the temperatures stabilize.

NOTE: The standby temperature control valve may open due to icing of the High Pressure Water Separator condenser.

(g) Allow the packs to operate until the temperatures stabilize.

(h) Set the AIR TEMP selector on the P5-17 temperature control panel to PACK R.

1) Make a record of the indication from temperature indicator gage on the P5-17 panel.

(i) Set the AIR TEMP selector on the P5-17 temperature control panel to PACK L.

1) Make a record of the indication from temperature indicator gage on the P5-17 panel.

(j) The pack outlet temperature for the left and right pack should be approximately 5 degrees Celsius of each other.

NOTE: If the temperature is not approximately 5 degrees Celsius, the problem can be a dirty heat exchanger, poorly performing Air Cycle Machine, or a sensor.

1) These are the tasks:

Air Cycle Machine (ACM) Removal, AMM TASK 21-51-04-000-802-002,

Air Cycle Machine Installation, AMM TASK 21-51-04-400-802-002.

(k) If the pack outlet temperatures are approximately 5 degrees Celsius of each other, then continue.

(l) Re-connect these electrical connectors to the temperature control valves and the standby temperature control valves:

NOTE: To clear any faults due to disconnecting the electrical connectors you must do the BITE procedure for the pack/zone temperature controller.

1) Electrical connector D3862 to the left temperature control valve, V139

2) Electrical connector D3864 to the left standby temperature control valve, V140

3) Electrical connector D3872 to the right temperature control valve, V141

4) Electrical connector D3874 to the right standby temperature control valve, V142.

(2) Do this test of the resistance of each mix manifold sensor to make sure the resistance has not drifted:

(a) Do this task: Mix Manifold Temperature Sensor Test, AMM TASK 21-51-51-000-802.

(b) Do a check of the wiring between the zone/temp controller and the mix manifold temperature sensor.

1) Repair any problems that you find.

(c) Replace the mix manifold sensor if it is out of tolerance as follows:

1) These are the tasks:

Mix Manifold Temperature Sensor Removal, AMM TASK 21-51-51-000-801,

Mix Manifold Temperature Sensor Installation, AMM TASK 21-51-51-400-801.

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

(3) Do this test of the resistance of each pack temperature sensor to make sure the resistance has not drifted:

(a) Check the resistance per the vendor component maintenance manual.

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(b) Do a check of the wiring between the zone/temp controller and the pack temperature sensor.

1) Repair any problems that you find.

(c) Replace the pack temperature sensor if it is out of tolerance as follows:

1) These are the tasks:

Pack Temperature Sensor Removal, AMM TASK 21-51-52-000-801,

Pack Temperature Sensor Installation, AMM TASK 21-51-52-400-801.

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

F. Fault Isolation - Heat Exchangers/Plenum Diffuser Assembly Check

NOTE: This check would be applicable to the condition when the pack would not cool the airplane on the ground.

(1) Do this check of the fan bypass check valve in the primary plenum/diffuser assembly:

(a) Get access to the fan bypass check valve in the left pack primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CL	Air Conditioning Access Door

(b) Get access to the fan bypass check valve in the right pack primary plenum/diffuser assembly as follows:

1) Open this access panel:

Number	Name/Location
192CR	Air Conditioning Access Door

(c) Open the access panel on the bottom of the primary plenum/diffuser assembly.

(d) Make sure that the fan bypass check valve door is in place and that the door hinge is not damaged.

(e) If the fan bypass check valve door is gone or damaged, do these tasks to replace the primary plenum/diffuser assembly:

1) AMM TASK 21-51-03-000-805-002

2) AMM TASK 21-51-03-400-804-002.

3) Make sure that the access panel is installed on the bottom of the applicable primary plenum/diffuser assembly.

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

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

(3) Clean the heat exchangers. Do this task to clean the heat exchangers: AMM TASK 21-51-03-000-801.

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

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G. Repair Confirmation

(1) Re-connect these electrical connectors to the temperature control valves and the standby temperature control valves:

NOTE: To clear any faults due to disconnecting the electrical connectors you must do the BITE procedure for the pack/zone temperature controller.

(a) Electrical connector D3862 to the left temperature control valve, V139

(b) Electrical connector D3864 to the left standby temperature control valve, V140

(c) Electrical connector D3872 to the right temperature control valve, V141

(d) Electrical connector D3874 to the right standby temperature control valve, V142.

(2) Supply pressure to the pneumatic system as follows:

(a) Do this task: Supply Pressure to the Pneumatic System with the APU, AMM TASK 36-00-00-860-803.

(3) Put the TRIM AIR switch to ON.

(4) Set the L and R PACK switches on the P5-10 air conditioning panel to AUTO.

(5) Set the CONT CAB, FWD CAB and AFT CAB temperature selectors on the P5-17 temperature control panel to near the cold position (C).

NOTE: This check will be to compare the right and left pack temperatures. If you put the temperature control to full cold position, you may not be able to compare the right and left temperature indications.

(6) Allow the left and right packs to operate until the temperatures stabilize.

(7) Make sure the temperature in the control cabin, the forward passenger cabin and the aft passenger cabin is approximately 70°F (21°C).

NOTE: The left and right pack temperatures are approximately 5 degrees Celsius of each other.

(8) Close the applicable access panels:

Number	Name/Location
192CL	Air Conditioning Access Door
192CR	Air Conditioning Access Door

END OF TASK

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