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EICAS Message FWD EQPT SMOKE Displayed and SMOKE Light Illum. Light Remained Illum After Selector Was Positioned to OVRD and EICAS Message FWD EQPT COOLING Displayed Following 1 Minute Delay. SMOKE Light Remained Illum After Selector Was Positioned to STBY (Fig. 113)		135	

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EICAS Message FWD EQPT SMOKE Displayed and SMOKE Light Illum. Light Remained Illum After Selector Was Positioned to OVRD (Fig. 112)		134	
EICAS Message FWD EQPT VAL and Equipment Cooling VALVE Light Remain Extinguished with Both Engine N2 Speed Cards >50% and Ambient Temperature >45 Degrees F (Fig. 106)		124	
EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum. STBY Selected and VALVE Light Remained Illum (Fig. 105)		120	
EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum. STBY Selected and VALVE Light Extin. (Fig. 104)		116	
FLT DK SUP FLOW EICAS Message Displayed (Fig. 107)		126	
FWD EQ SUP FLOW EICAS Message Displayed (Fig. 108)		128	
FWD EQ SUP OH EICAS Message Displayed (Fig. 109)		130	
OVHT Light Failed to Illum During Equipment Cooling Test (Fig. 103)		114	
SMOKE Light Failed to Illum During Equipment Cooling Test (Fig. 116A)		142	

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CHAPTER 21 – AIR CONDITIONING

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Component Location			
Fault Isolation			
Auto Mode Failed to Control Flight Deck Temperature/Trim Valve did not Operate Normal in Manual Mode (Fig. 109)		153	
Auxiliary Zone Temperature Controller BITE Procedure (Fig. 104A)		135	
AFT CAB REST SYS EICAS Maintenance Message (Fig. 118)		166	
Compt Temp Indicator Reads High/Low/Compt Temp OK (Fig. 112)		157	
Compt Temperature Indicator Blank (Fig. 113)		158	
EICAS Aux Fwd/Aux Mid Trim Valve Position Indications Off Scale/Fluctuates (Fig. 103A)		121	
EICAS Fwd/Mid/Aft Trim Valve Position Indications Off Scale/Fluctuates (Fig. 103)		119	
EICAS Msg FWD CARGO BACKUP Displayed with Fwd Cargo A/C Selected On (Fig. 114)		160	
Flight Deck Valve Position Indicator Failed to Move When Auto or Manual Mode Selected Warmer/Cooler (Fig. 108)		151	
Flt Deck Temp EICAS Message and Inop Light Illuminated in Auto; Manual Operation Not Normal (Fig. 111)		156	
Flt Deck Zone Inop Light On in Auto Mode (Fig. 105)		145	

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Subject	Chapter Section Subject	Page	Effectivity
Flt Deck, Fwd Cabin, Aux Fwd Cabin, Mid Cabin, Aux Mid Cabin, and Aft Cabin Temp Does Not Respond with Switch ON and All Zone Temperature Selectors in AUTO (Fig. 113A)		159	
Fwd Cargo Failed To Obtain Selected Temp in "AUTO". No System EICAS Msgs Displayed (Fig. 115)		161	
Fwd/Mid/Aft Cabin Failed to Maintain Desired Temperature (Fig. 110)		154	
Fwd/Mid/Aft Zone Inop Light Illuminated (Fig. 106)		146	
FLT REST SMK VAL EICAS Status Message (Fig. 120)		171	
FLT REST SOV EICAS Status Message (Fig. 119)		170	
FLT REST SYS EICAS Maintenance Message (Fig. 116)		162	
FWD CAB REST SYST EICAS Maintenance Message (Fig. 117)		164	
Valve Position Indicator Off Scale/Fluctuates (Fig. 107)		149	
Zone Temperature Controller BITE Procedure (Fig. 104)		123	
MTH ZONAL DRYING SYSTEM	21-74-00		
Component Location		101	[*]
Component Index			
Component Location			
Fault Isolation			
[*] MTH ALL			

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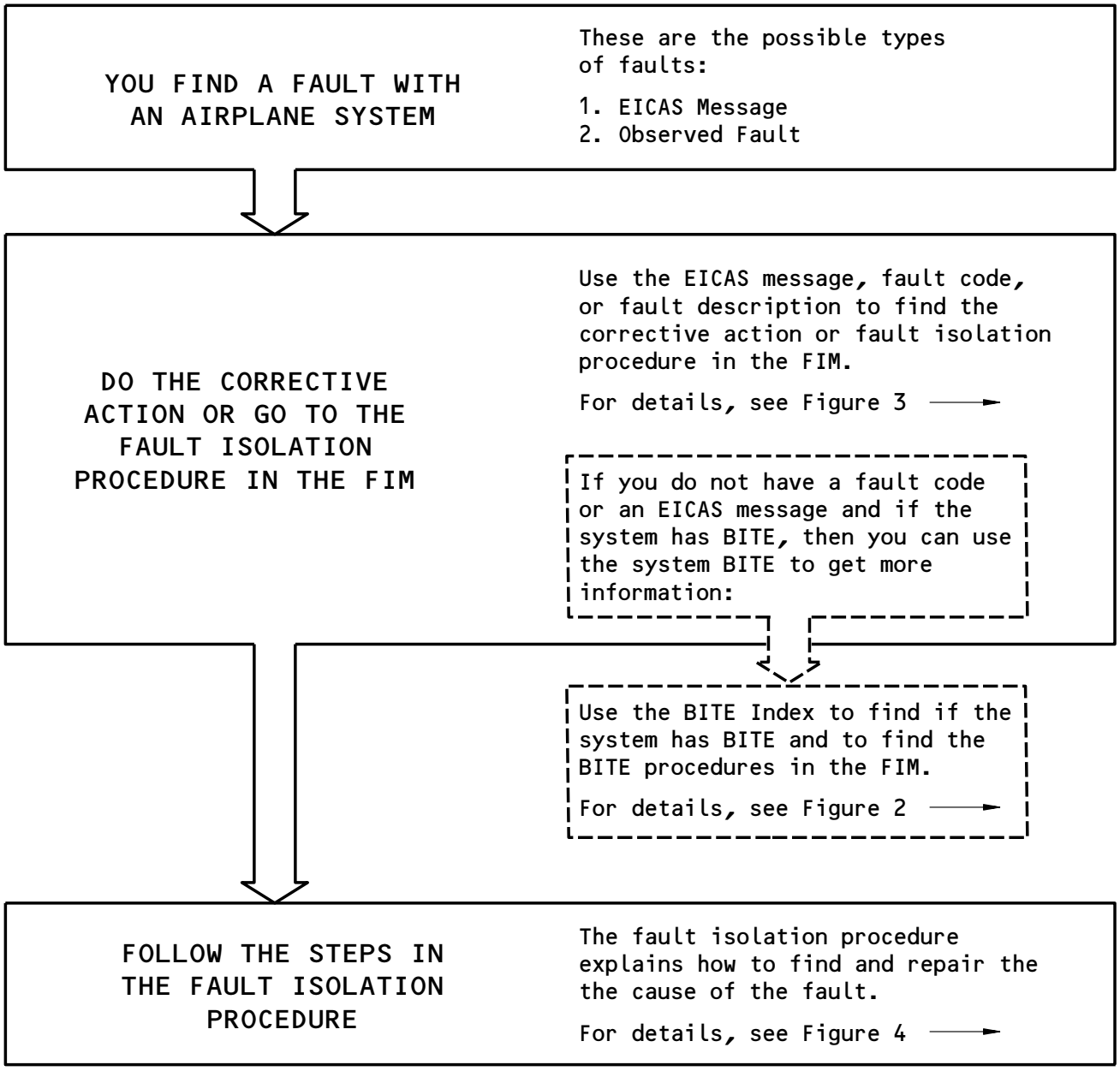

Basic Fault Isolation Process
Figure 1

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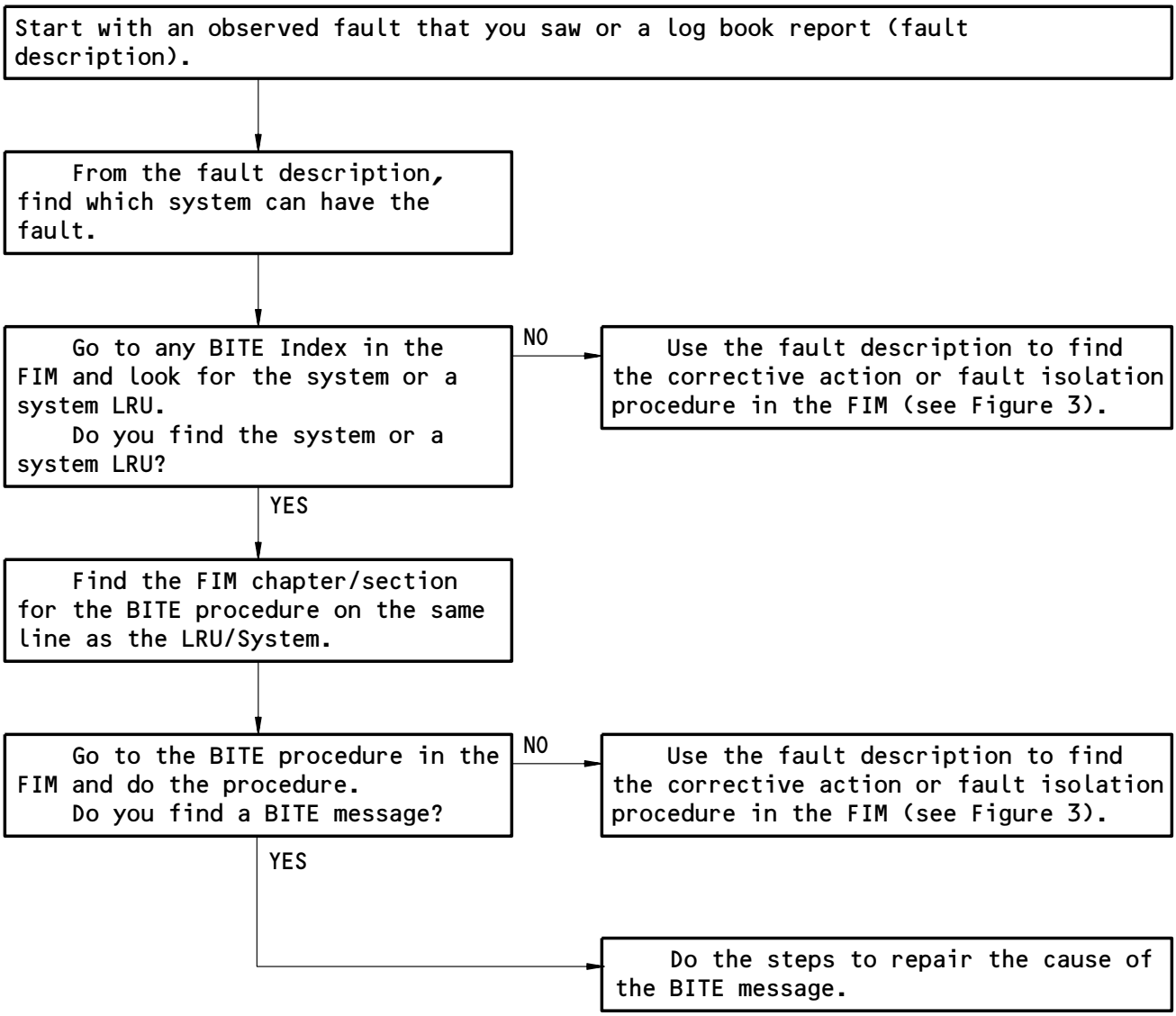

How to Get Fault Information from BITE
Figure 2

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IF YOU HAVE:	THEN DO THIS TO FIND THE CORRECTIVE ACTION OR FAULT ISOLATION PROCEDURE 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. 2. Find the Fault Isolation Reference for the fault code and do the corrective action. If there is a FIM reference, then go to that fault isolation procedure in the FIM and do the steps in the procedure (see Figure 4).
EICAS MESSAGE TEXT (with no fault code)	1. If you know the chapter of the EICAS message, then go to the EICAS Messages section in that chapter and find the EICAS message. If you do not know the chapter of the EICAS message, then do these steps: A. Go to FIM EICAS MESSAGE LIST and find the EICAS message in the table. NOTE: The list follows the INTRODUCTION to the FIM. B. Find the chapter number on the same line as the EICAS message. Go to the EICAS Messages section in that chapter and find the EICAS message. 2. Do the corrective action in the "Procedure" column for the EICAS message. If there is a FIM reference, then go to that fault isolation procedure in the FIM and do the steps in the procedure (see Figure 4).
OBSERVED FAULT DESCRIPTION	1. Go to the Fault Code Diagram for the problem in the applicable chapter. 2. Do the fault analysis on the diagram and find the fault code. 3. 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. 4. Find the Fault Isolation Reference for the fault code and do the corrective action. If there is a FIM reference, then go to that fault isolation procedure in the FIM and do the steps in the procedure (see Figure 4).

How to Find the Corrective Action or Fault Isolation Procedure in the FIM
Figure 3

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ASSUMED CONDITIONS AT START OF TASK

- External electrical power is OFF
- Hydraulic power and pneumatic power are OFF
- Engines are shut down
- Circuit breakers for the system are closed
- No equipment in the system is deactivated

PREREQUISITES

- This box gives the steps to get the airplane from the normal shutdown condition to the configuration necessary to do the fault isolation procedure.
- The Prerequisites give procedure references, circuit breakers, and special tools and equipment requirements.

FAULT ISOLATION BLOCKS

- Start the fault isolation procedure at block 1 unless specified differently.
- Do the check to get an answer to the question in the box. Follow the arrow that applies to your answer. This will go to the next check.
- When you get to a box in the column at the right of the page, you have isolated that fault. Do the steps in that box to repair the cause of the fault.
- Make sure that fault is corrected to complete the procedure.

Do the Fault Isolation Procedure
Figure 4

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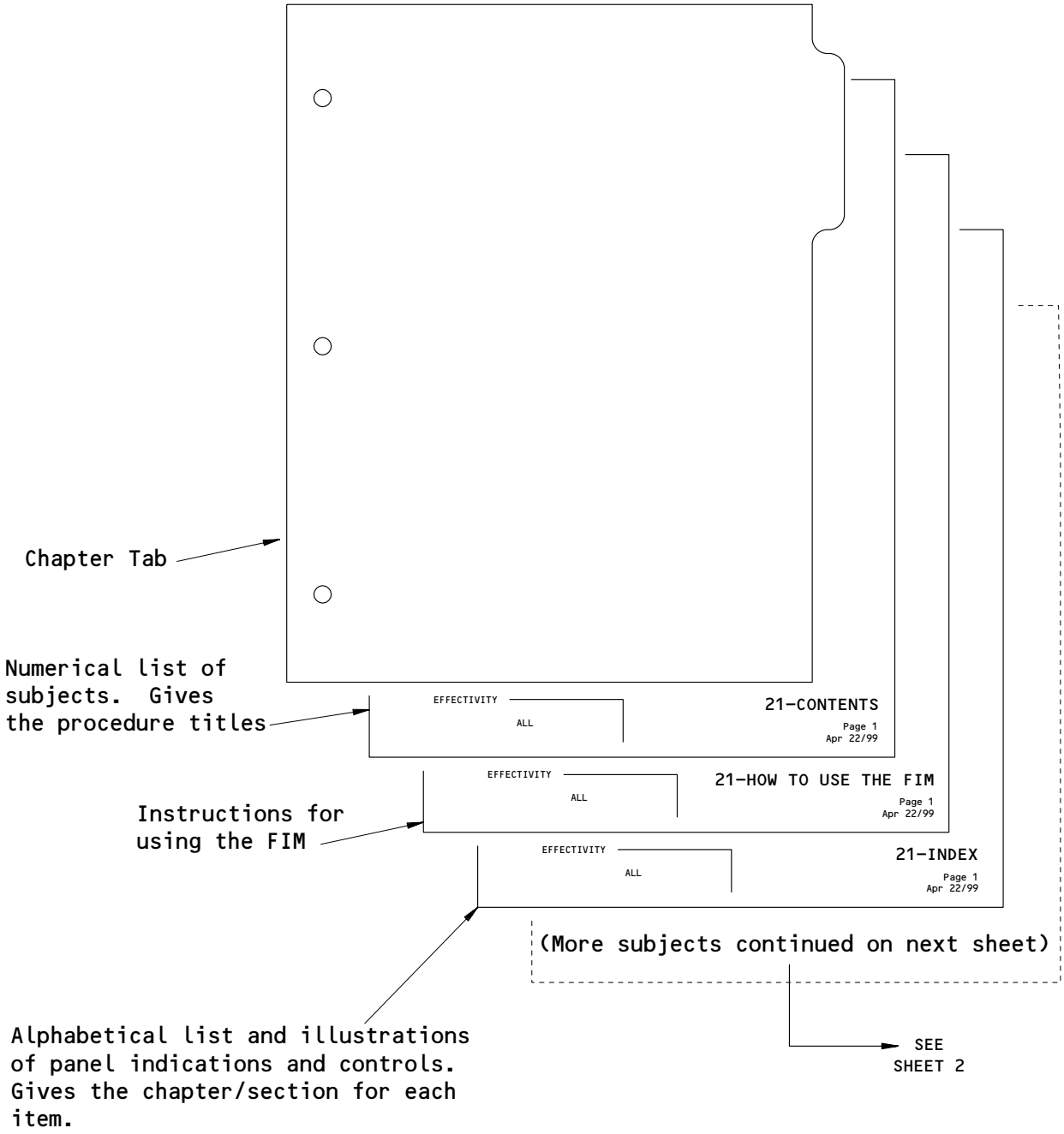

Subjects in Each FIM Chapter
Figure 5 (Sheet 1)

EFFECTIVITY
ALL

21-HOW TO USE THE FIM

K37626

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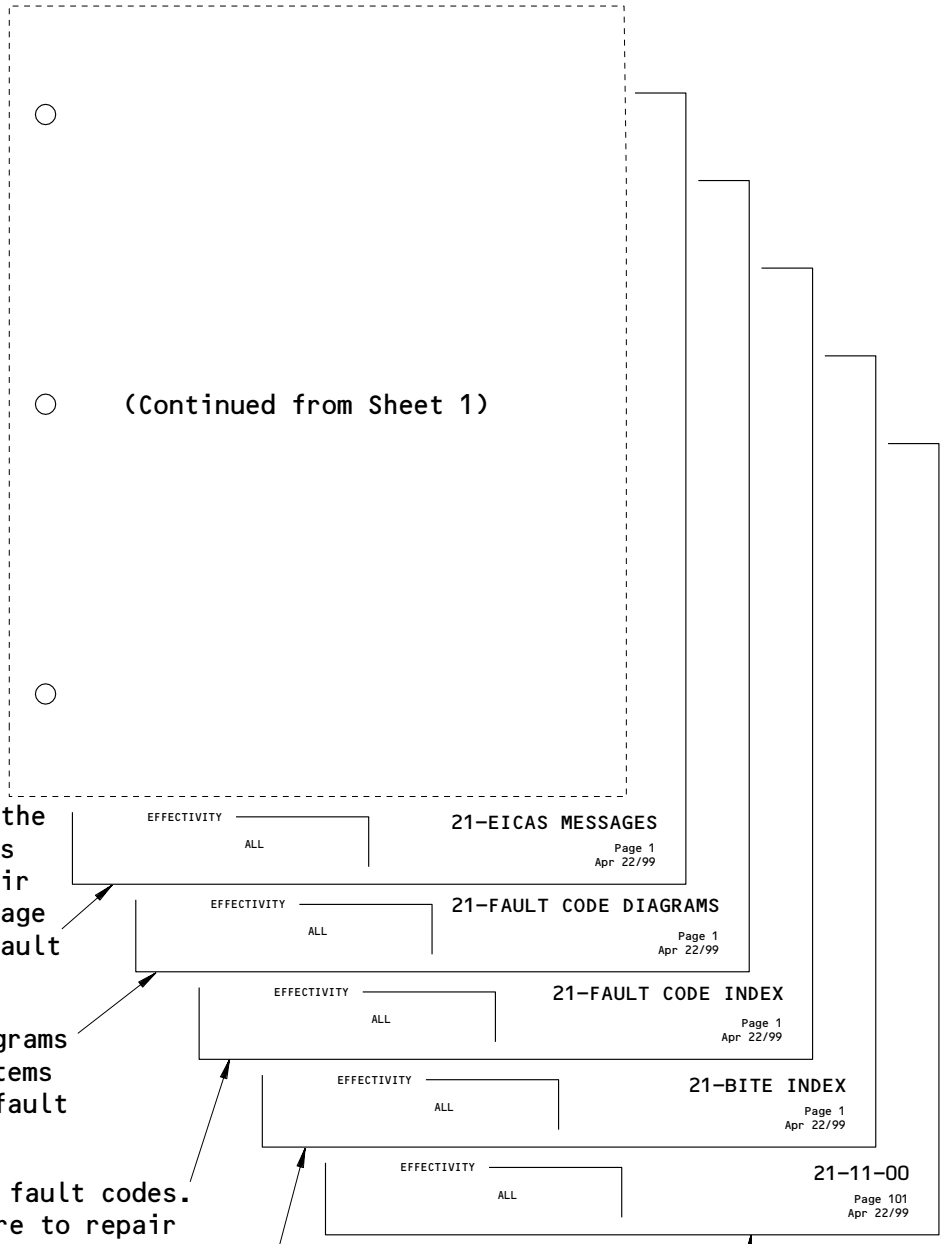

Alphabetical list of the EICAS messages. Gives the procedure to repair the cause of the message or a reference to a fault isolation procedure.

Failure analysis diagrams for the airplane systems to find the correct fault code for the fault.

Numerical list of fault codes. Gives the procedure to repair the cause of the fault or a reference to a fault isolation procedure.

Alphabetical list of all the LRUs/systems that have BITE. Gives the chapter/section for the BITE procedure.

Component index, component location, and fault isolation procedures for the systems in the chapter.

Subjects in Each FIM Chapter
Figure 5 (Sheet 2)

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TITLE	CHAP/SEC
AIR DISTRIBUTION AND TEMP CONTROL	2160
AIR CONDITIONING NOISE AND VIBRATION	2160
CABIN ZONE TRIM VALVE	2160
COLD AREA$	2160
COMPT TEMP	2160
COMPT TEMP INOP LIGHT	2160
FLT DECK COMPT TEMP INOP LIGHT	2160
FLT DECK ZONE TRIM VALVE	2160
GASPER FAN	2120
RECIRC FAN	2120
SMOKE (ELECTRICAL)	CHAPTER 24
SMOKE, FUMES FROM APU	CHAPTER 49
SMOKE, FUMES (OIL) FROM ENG	CHAPTER 79
TRIM AIR	2160
BULBS & LAMPS - MISCELLANEOUS	CHAPTER 33
CARGO AND BULK CARGO HEAT	2140
AFT CARGO OVHT	2140
BULK CARGO FAN	2140
BULK CARGO OVHT	2140
FWD CARGO OVHT	2140
FWD CARGO A/C	2140
EQUIPMENT COOLING	2158
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MONITOR	2158
NO COOLING LIGHT	2158
OVERHEAT	2158
SMOKE	2158
TEST	2158
VALVE LIGHT	2158
FLIGHT DECK SUPPLEMENTARY HEATERS	2140
FOOT HEATER	2140
SHOULDER HEATER	2140
PACK CONTROL	2151
HI FLOW	2151
PACK INOP LIGHT	2151
PACK OFF LIGHT	2151
PRESSURIZATION	2130
AUTO CONTROL	2130
CABIN ALT AUTO	2130
CABIN ALTITUDE	2130
CABIN ALT INDICATION	2130
CABIN AUTO INOP	2130
CABIN DIFF INDICATION	2130
CABIN RATE INDICATION	2130
LANDING ALT	2130
OUTFLOW VALVE INDICATION	2130

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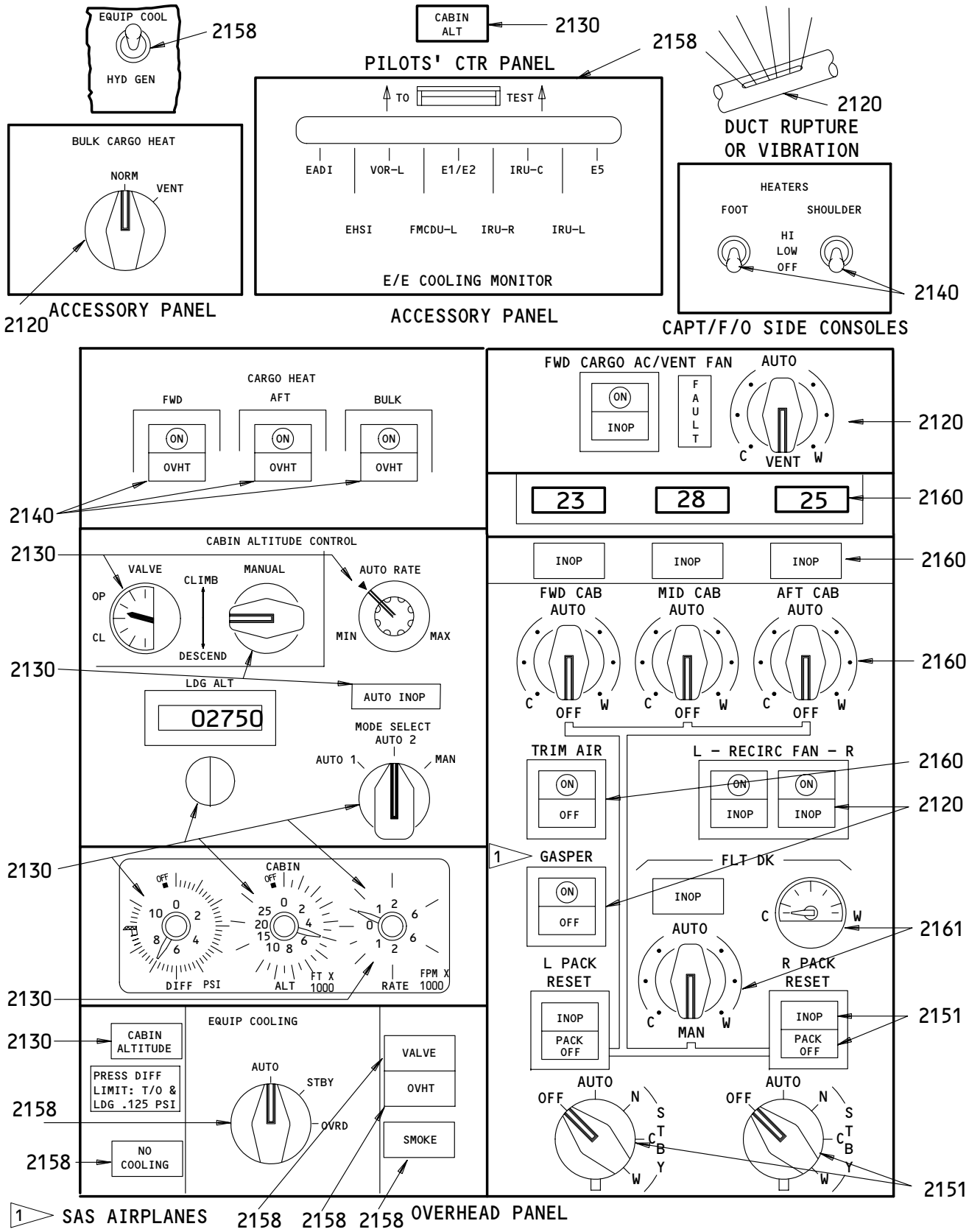

AIR CONDITIONING - INDEX

EFFECTIVITY

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21-INDEX

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AIR CONDITIONING - EICAS MESSAGE LIST

1. General
   A. This procedure shows the EICAS message locations and gives a list of procedures to find the solution for each message.
      (1) EICAS Message Locations (Fig. 1)
         (a) Figure 1 shows the location of the EICAS display units and the area where the messages show on the display units.
         (b) Each message level has a different location. The location and color of each message level is also shown.
      (2) The EICAS MESSAGE LIST gives the message, level, and procedure for each message.
         (a) The EICAS MESSAGE column lists the messages alphabetically. Messages which start with L, R, or C are put together and alphabetized at L.
         (b) The LEVEL column gives all levels for each message as follows:
            A - Warning messages
            B - Caution messages
            C - Advisory messages
            E - Communication (medium) messages
            F - Communication (low) messages
            S - Status messages
            M - Maintenance messages
         (c) The PROCEDURE column gives the steps that are necessary to remove the message and includes one or more of the procedures that follow:
            1) A Fault Isolation Manual procedure reference
            2) A Maintenance Manual procedure and reference
            3) Wiring checks and a Wiring Diagram Manual reference
            4) A reference to an EICAS message list in a different chapter.
            5) A reference to a FAULT CODE INDEX and specified fault codes
            6) A step to change the airplane configuration

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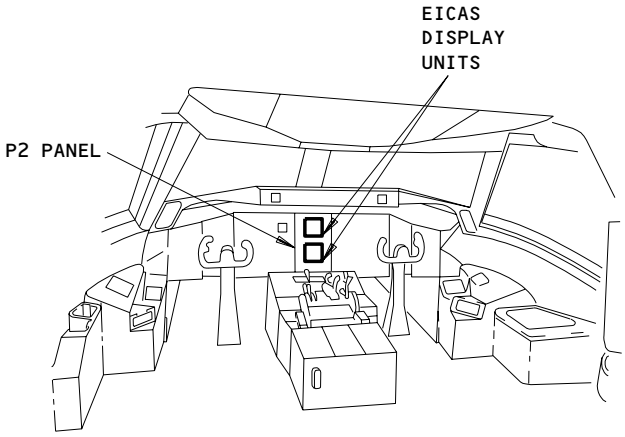
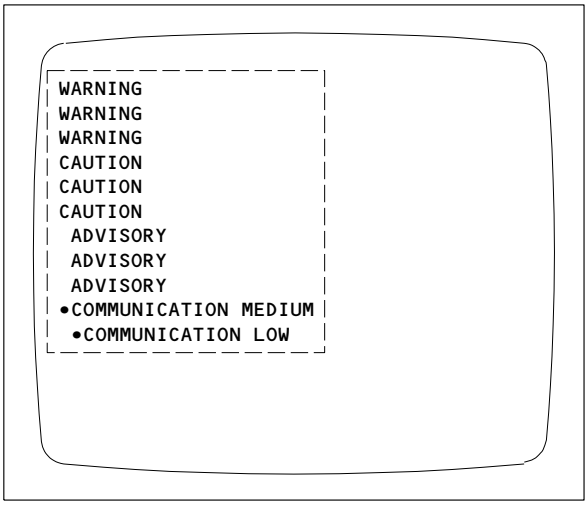
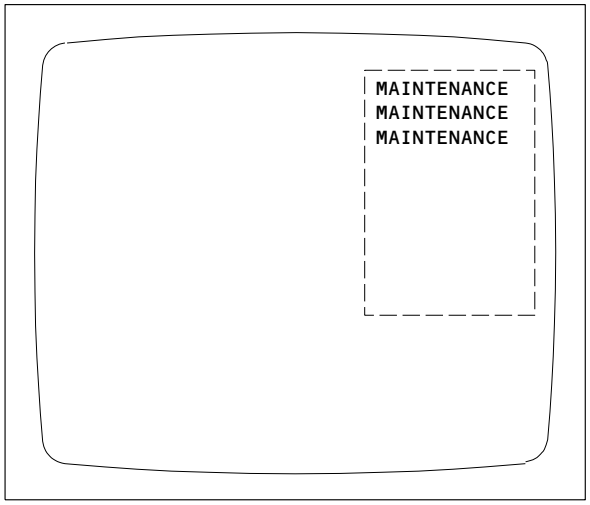


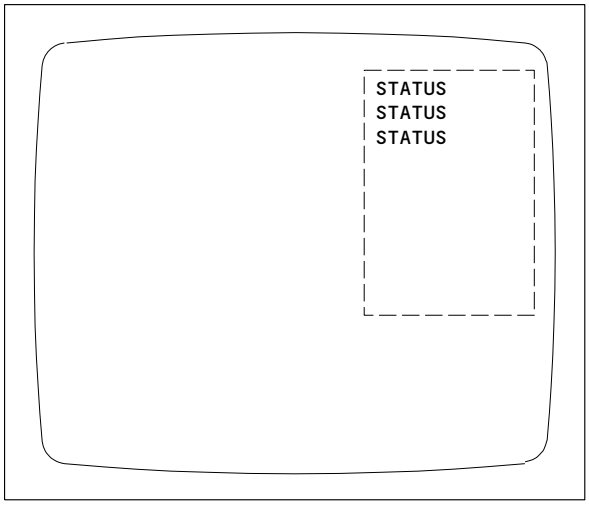
FLIGHT COMPARTMENT



ENGINE PRIMARY PAGE OR COMPACTED PAGE
(TOP DISPLAY UNIT)



ECS/MSG PAGE
(BOTTOM DISPLAY UNIT)



STATUS PAGE
(BOTTOM DISPLAY UNIT)

LEVEL	COLOR
A–WARNING	RED
B–CAUTION	YELLOW
C–ADVISORY	YELLOW
E–COMMUNICATION MEDIUM	WHITE
F–COMMUNICATION LOW	WHITE
S–STATUS	WHITE
M–MAINTENANCE	WHITE

EICAS Message Locations
Figure 1

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EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
AFT CABIN REST SYS	M	FIM 21-60-00/101, Fig. 118
AFT CABIN TEMP	C	FIM 21-60-00/101, Fig. 106
AFT CARGO HEAT	M	This message does not indicate a failure.
AFT CARGO OVHT	C	FIM 21-44-00/101, Fig. 104
AFT EQPT CLG FAN	S	FIM 21-20-00/101, Fig. 104 FIM 21-20-00/101, Fig. 105 FIM 21-20-00/101, Fig. 105A
AFT EQ EXH FAN (1,2)	S,M (NVM)	FIM 21-20-00/101, Fig. 104 or FIM 21-20-00/101, Fig. 105
AUX TEMP BITE	M	FIM 21-60-00/101, Fig. 104A
BULK CARGO FAN	S,M	FIM 21-20-00/101, Fig. 107 or FIM 21-20-00/101, Fig. 108
BULK CARGO FAN	S,M	FIM 21-26-00/101, Fig. 106 or FIM 21-26-00/101, Fig. 107
BULK CARGO HEAT	M	This message does not indicate a failure.

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EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
BULK CARGO OVHT	C	FIM 21-44-00/101, Fig. 106 or FIM 21-44-00/101, Fig. 107
CABIN ALT AUTO (1,2)	S,M	FIM 21-31-00/101, Fig. 109 or FIM 21-31-00/101, Fig. 110
CABIN ALTITUDE	A	FIM 21-31-00/101, Fig. 103 or FIM 21-31-00/101, Fig. 107
CABIN AUTO INOP	B	FIM 21-31-00/101, Fig. 104 or FIM 21-31-00/101, Fig. 106
CARGO A/C CONT	C,S,M	Replace the pack flow controller, M1610 (AMM 21-51-24/401).
CARGO A/C TEMP	S,M	FIM 21-20-00/101, Fig. 112
CARGO EXH FAN	S,M	FIM 21-20-00/101, Fig. 113
CARGO EXH VALVE	S,M	Replace the exhaust valve, V382 (AMM 21-26-10).
CARGO TRIM AIR	S,M	Do the corrective action for fault code 21 20 32 00 (FIM 21-Fault Code Index)
CARGO ZONE OVHT	M	FIM 21-60-00/101, Fig. 104A

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EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
CGO FLOOR OVHT	C	FIM 21-43-00/101, Fig. 104A
CGO GND EX VALS	C	FIM 21-20-00/101, Fig. 114
CGO GND EX VALVE	S,M	FIM 21-20-00/101, Fig. 114
COND CARGO VALVE	S,M	Replace the forward cargo air conditioning shutoff valve, V381 (AMM 21-28-01).
FLT DK SUP FLOW	M	FIM 21-58-00/101, Fig. 107
FLT DECK TEMP	C	FIM 21-60-00/101, Fig. 105 or FIM 21-60-00/101, Fig. 111
FLT REST SMK VAL	S,M	FIM 21-60-00/101, Fig. 120
FLT REST SOV	S,M	FIM 21-60-00/101, Fig. 119
FLT REST SYS	M	FIM 21-60-00/101, Fig. 116
FWD CABIN REST SYS	M	FIM 21-60-00/101, Fig. 117
FWD CABIN TEMP	C	FIM 21-60-00/101, Fig. 106
FWD CARGO A/C	C	FIM 21-20-00/101, Fig. 115

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EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
FWD CGO BACKUP	C	FIM 21-60-00/101, Fig. 114
FWD CARGO FAN	S,M	FIM 21-20-00/101, Fig. 117
FWD CARGO HEAT	M	This message does not indicate a failure.
FWD CARGO I/F	M	FIM 21-20-00/101, Fig. 116
FWD CARGO OVHT	C	FIM 21-43-00/101, Fig. 104
FWD EQ EXH FAN	S,M	FIM 21-58-00/101, Fig. 111
FWD EQ SUP FAN 1	S,M	FIM 21-58-00/101, Fig. 110
FWD EQ SUP FLOW	M	FIM 21-58-00/101, Fig. 108
FWD EQ SUP OH	M	FIM 21-58-00/101, Fig. 109
FWD EQPT COOLING	B	Do the corrective action for one of these EICAS messages: FWD EQ SUP FAN 1 FWD EQ EXH FAN
FWD EQPT OVHT	C	FIM 21-58-00/101, Fig. 115 or FIM 21-58-00/101, Fig. 116 or FIM 21-58-00/101, Fig. 117

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EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
FWD EQPT SMOKE	C	Remove the source of smoke or FIM 21-58-00/101, Fig. 112, or FIM 21-58-00/101, Fig. 113, or FIM 21-58-00/101, Fig. 114
FWD EQPT VAL	C	FIM 21-58-00/101, Fig. 104 or FIM 21-58-00/101, Fig. 105
HI FLOW INHIBIT	S,M	FIM 21-51-00/101, Fig. 107
L (R) PACK BITE	M	FIM 21-51-00/101, Fig. 103
L (R) PACK OFF	C	FIM 21-51-00/101, Fig. 104A or FIM 21-51-00/101, Fig. 104B or FIM 21-51-00/101, Fig. 105A or FIM 21-51-00/101, Fig. 105B or FIM 21-51-00/101, Fig. 105C or FIM 21-51-00/101, Fig. 105D
L (R) PACK TEMP	C	FIM 21-51-00/101, Fig. 104 or FIM 21-51-00/101, Fig. 104A or FIM 21-51-00/101, Fig. 104B or FIM 21-51-00/101, Fig. 105
L (R) RECIRC FAN	C	FIM 21-20-00/101, Fig. 103

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EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
L (R) RECIRC FAN	C	FIM 21-25-00/101, Fig. 103
MID CABIN TEMP	C	FIM 21-60-00/101, Fig. 106
TRIM AIR	C	This message does not indicate a failure.
ZONE TEMP BITE	M	FIM 21-60-00/101, Fig. 104

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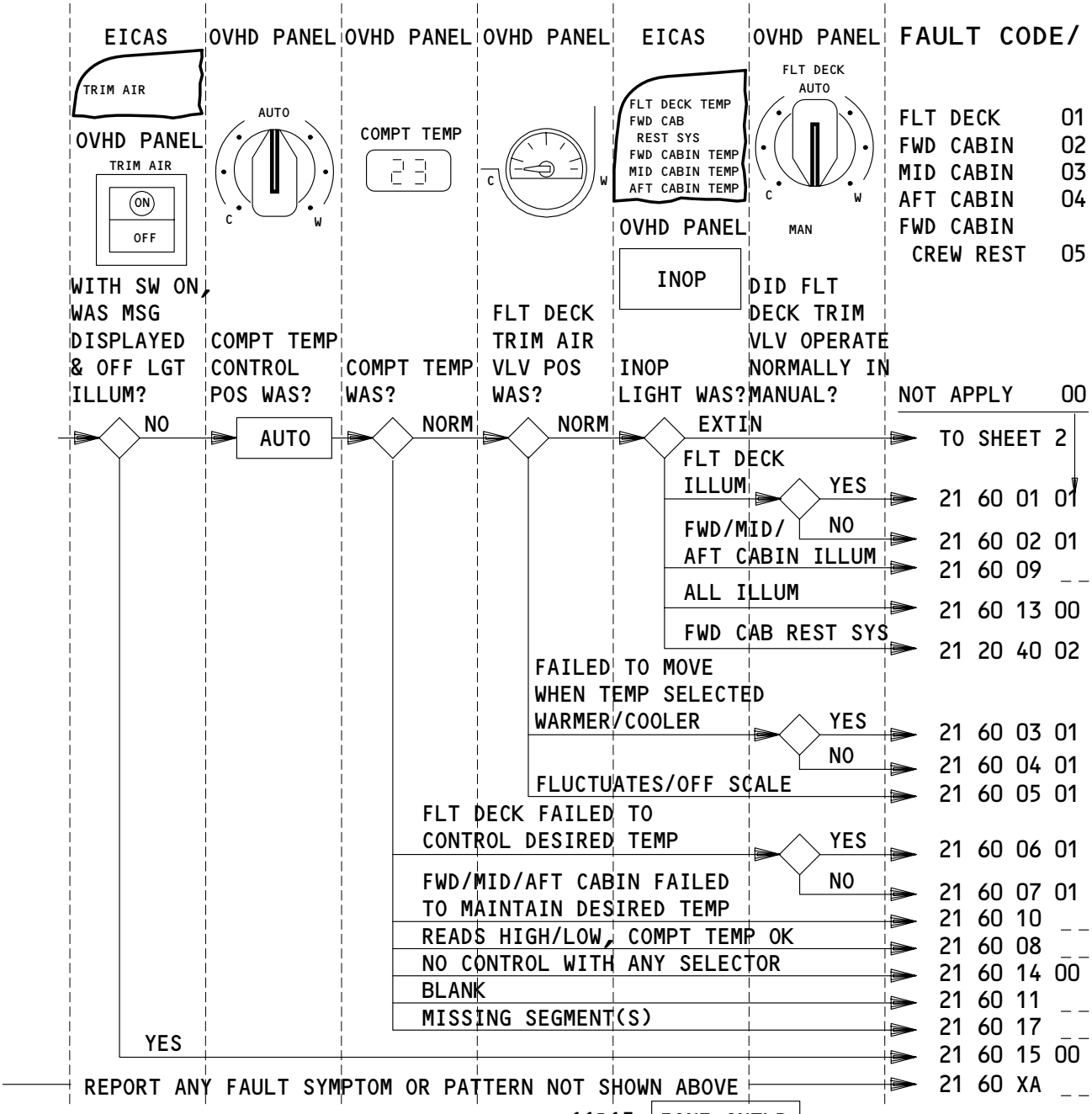

APPLICABLE CIRCUIT BREAKERS

11C33	TRIM AIR	11R15	ZONE CNTLR
11P24	ZONE TEMP CONT MAN FLT DK	11R16	ZONE TEMP IND
11P25	ZONE TEMP CONT VLV CLOSE FWD	11R24	ZONE DUCT OVHT FLT DK
11P26	ZONE TEMP CONT VLV CLOSE MID	11R25	ZONE DUCT OVHT FWD
11P27	ZONE TEMP CONT VLV CLOSE AFT	11R26	ZONE DUCT OVHT MID
		11R27	ZONE DUCT OVHT AFT

AIR DISTRIBUTION AND TEMPERATURE CONTROL (SHEET 1) – FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

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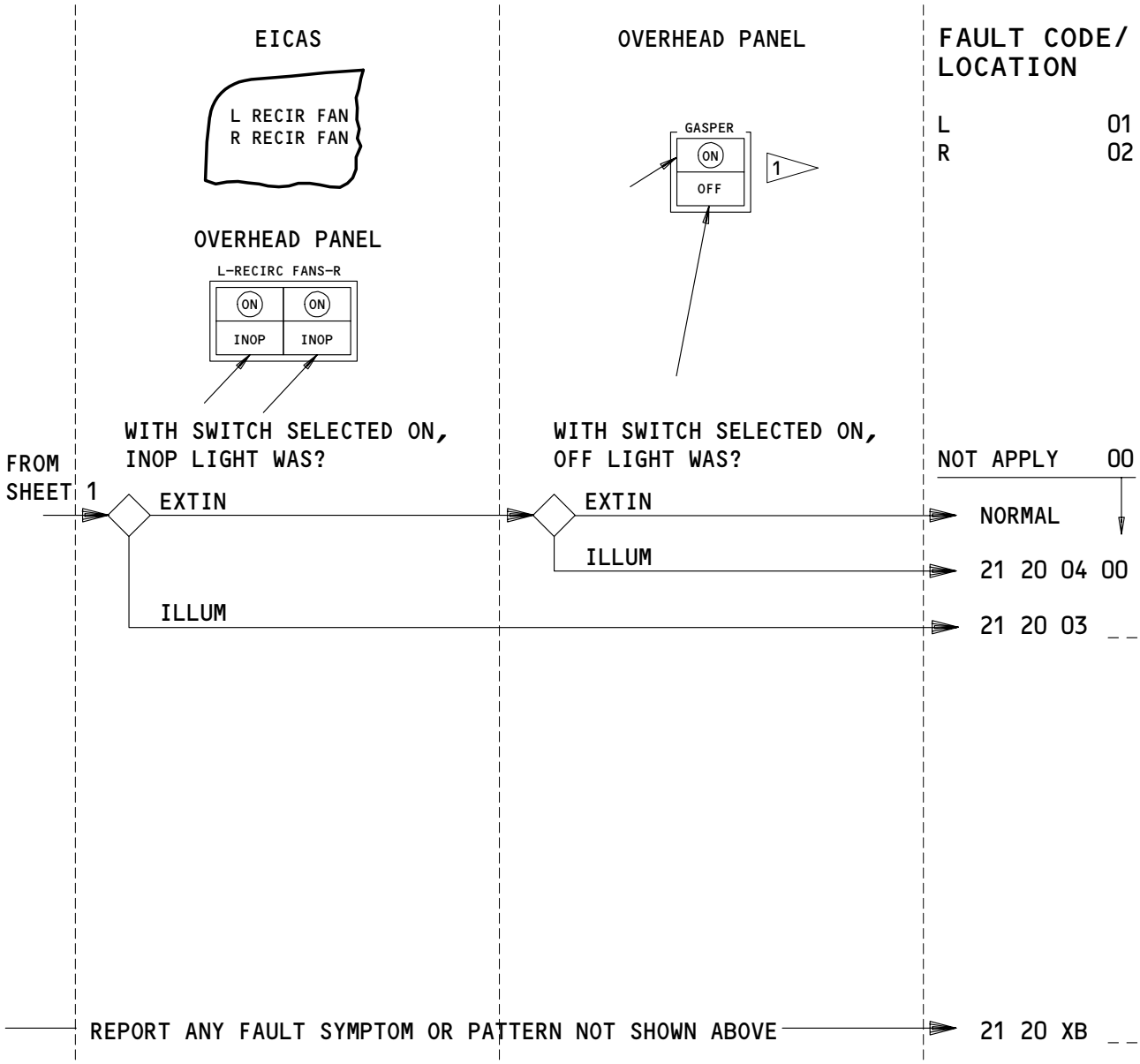

APPLICABLE CIRCUIT BREAKERS

	11R14	RECIRC FAN L
1	11R17	GASPER FAN
	11R23	RECIRC FAN R

1 ALL SAS AIRPLANES

AIR DISTRIBUTION AND TEMPERATURE CONTROL (SHEET 2) – FAULT CODES

EFFECTIVITY

ALL

21–FAULT CODE DIAGRAM

675497

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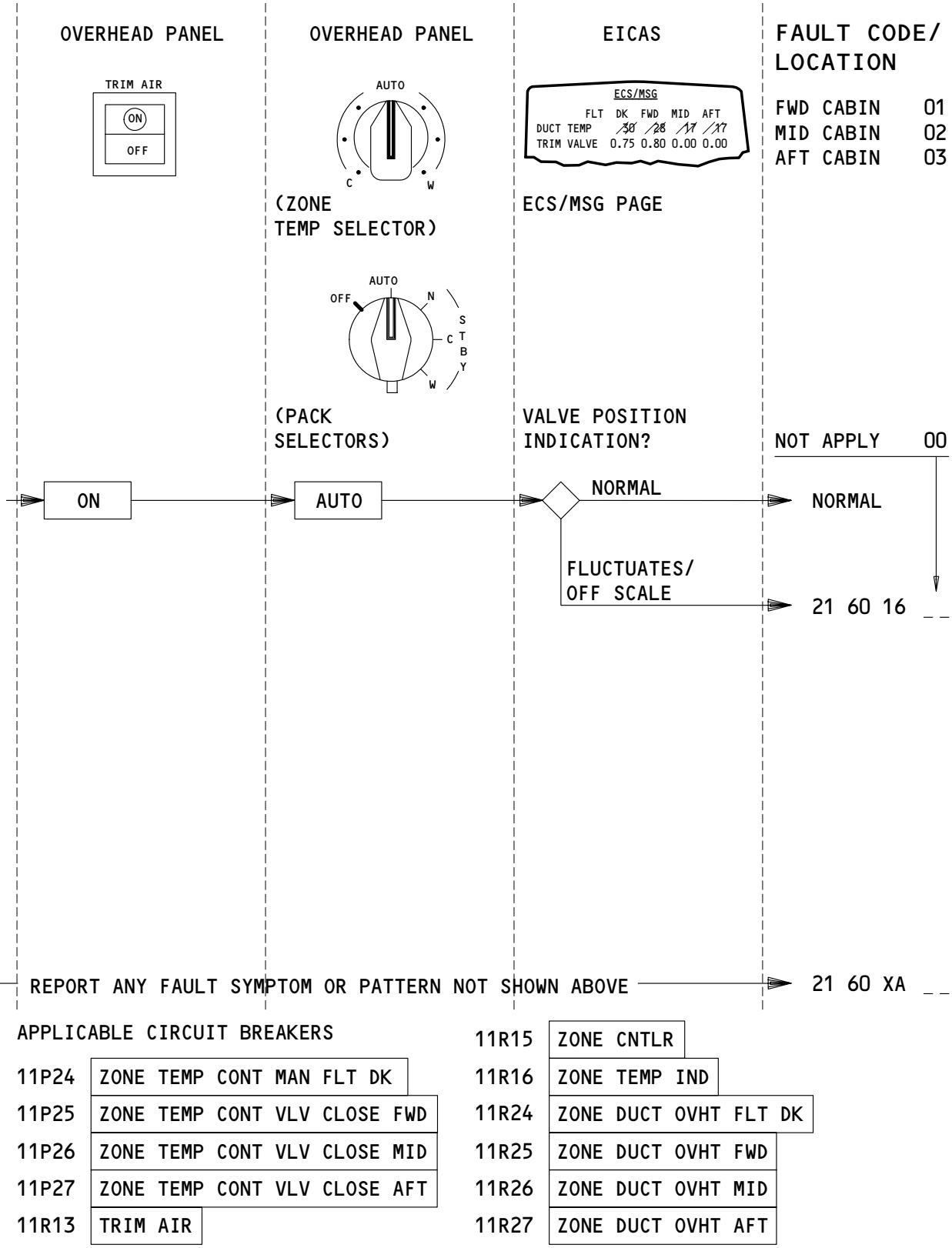

APPLICABLE CIRCUIT BREAKERS

11P24	ZONE TEMP CONT MAN FLT DK	11R15	ZONE CNTLR
11P25	ZONE TEMP CONT VLV CLOSE FWD	11R16	ZONE TEMP IND
11P26	ZONE TEMP CONT VLV CLOSE MID	11R24	ZONE DUCT OVHT FLT DK
11P27	ZONE TEMP CONT VLV CLOSE AFT	11R25	ZONE DUCT OVHT FWD
11R13	TRIM AIR	11R26	ZONE DUCT OVHT MID
		11R27	ZONE DUCT OVHT AFT

AIR DISTRIBUTION AND TEMPERATURE CONTROL (GROUND) - FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

185515

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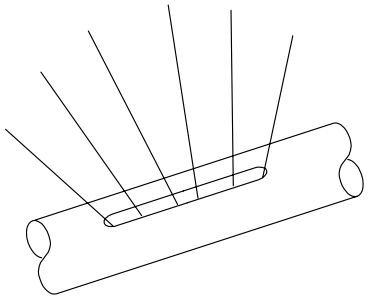

FAULT CODE/ LOCATION

L	01
R	02
C	03

WAS THERE ABNORMAL NOISE OR VIBRATION IN

FLIGHT DECK? NO

MAIN CABIN? 1 NO

NOT APPLY 00

NORMAL

SIDEWALL 21 20 16 _ _

CEILING 21 20 17 _ _

FLOOR 21 20 18 _ _

SIDEWALL (FWD/AFT) 21 20 19 _ _

CEILING (FWD/AFT) 21 20 20 _ _

FLOOR (FWD/AFT) 21 20 21 _ _

GLARESHIELD OR WINDSHIELD AREA 21 20 22 _ _

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE 21 20 XC _ _

1 IDENTIFY BY NEAREST SEAT ROW, GALLEY OR LAVATORY

APPLICABLE CIRCUIT BREAKERS.
NONE

AIR CONDITIONING NOISE AND VIBRATION – FAULT CODES

EFFECTIVITY
ALL

21-FAULT CODE DIAGRAM

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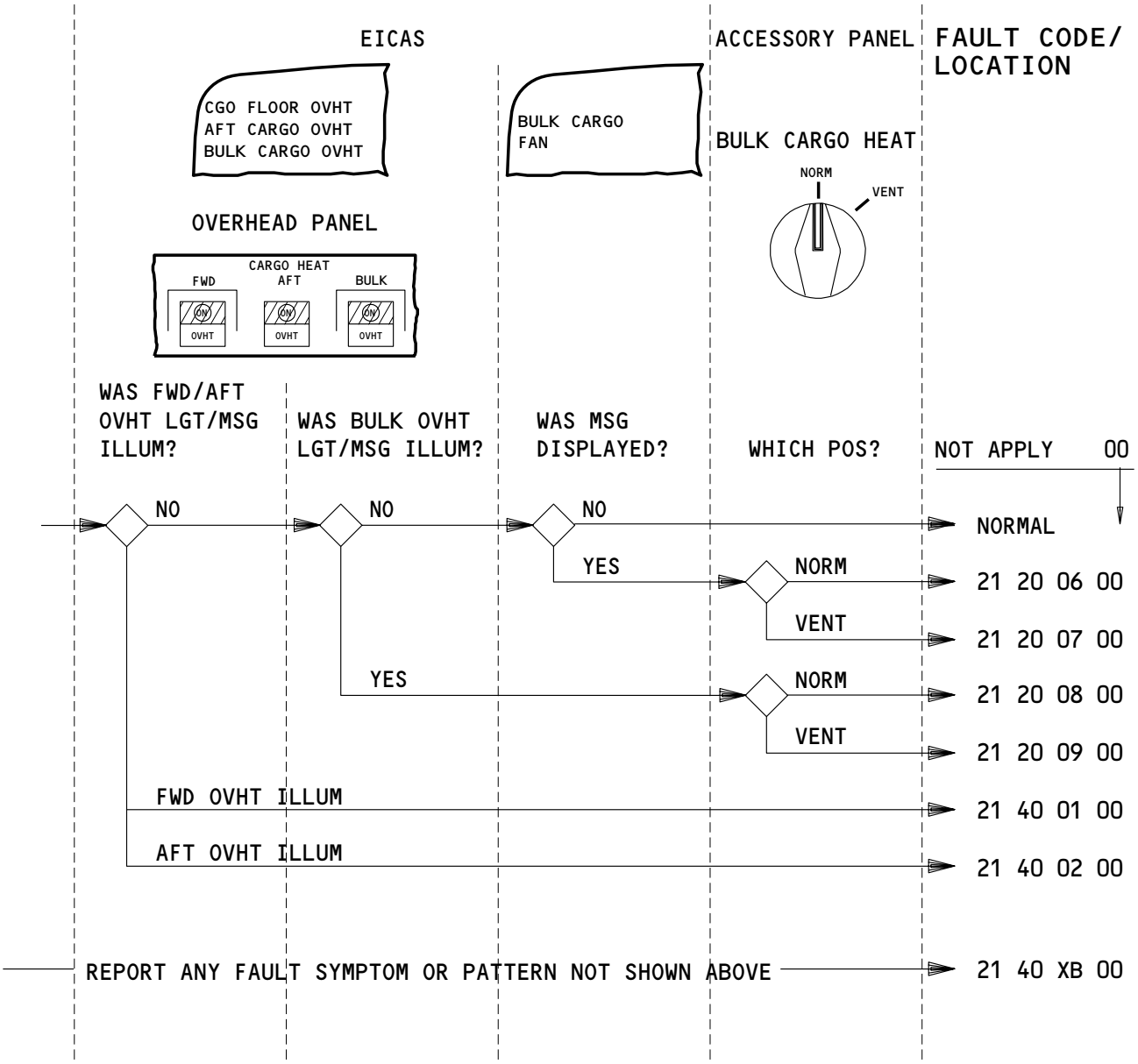
173908



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11N26	BULK CARGO HEAT CONT	11R21	CARGO HEAT OVERRIDE FWD
11N27	BULK CARGO HEAT OVRD	11R22	CARGO HEAT OVERRIDE AFT
11R19	CARGO HEAT CONTROL FWD		
11R19	CARGO HEAT FWD CONT		
11R20	CARGO HEAT CONTROL AFT		
11R20	CARGO HEAT AFT CONT		

CARGO HEAT – FAULT CODES

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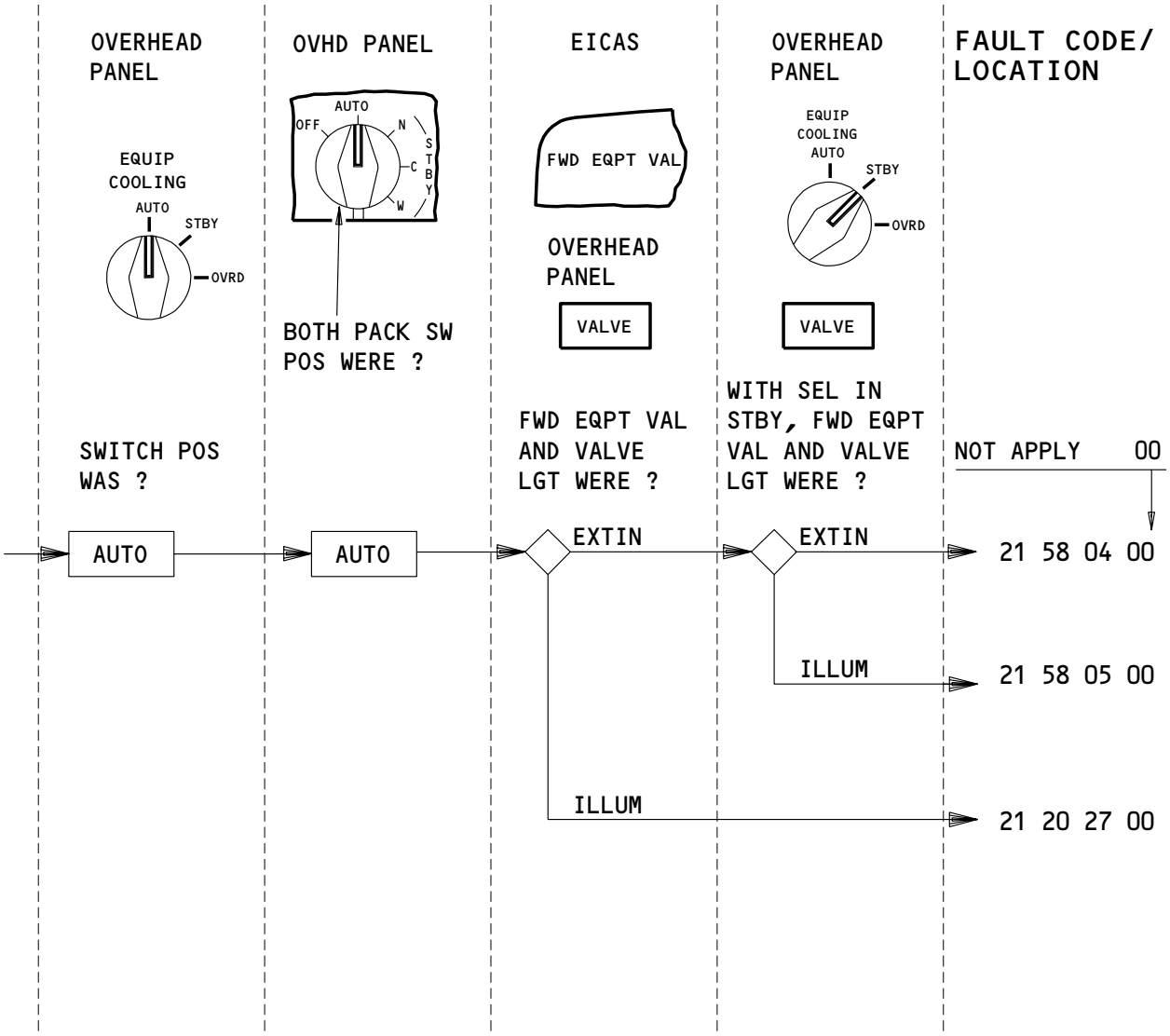

APPLICABLE CIRCUIT BREAKERS

11A26	PACK FLOW CONT R
11A13	PACK FLOW CONT L
11B11	FWD OVBD VLV
11R14	RECIRC FAN 1
11R23	RECIRC FAN 2

36F2	AIR CONDITIONING RECIRC FAN L
37G4	AIR CONDITIONING RECIRC FAN R

FWD EQPT VAL/EQUIP COOL VALVE LIGHT (GROUND) – FAULT CODES

EFFECTIVITY
AIRPLANES WITH FORWARD OVERBOARD VALVE

21-FAULT CODE DIAGRAM

H32935

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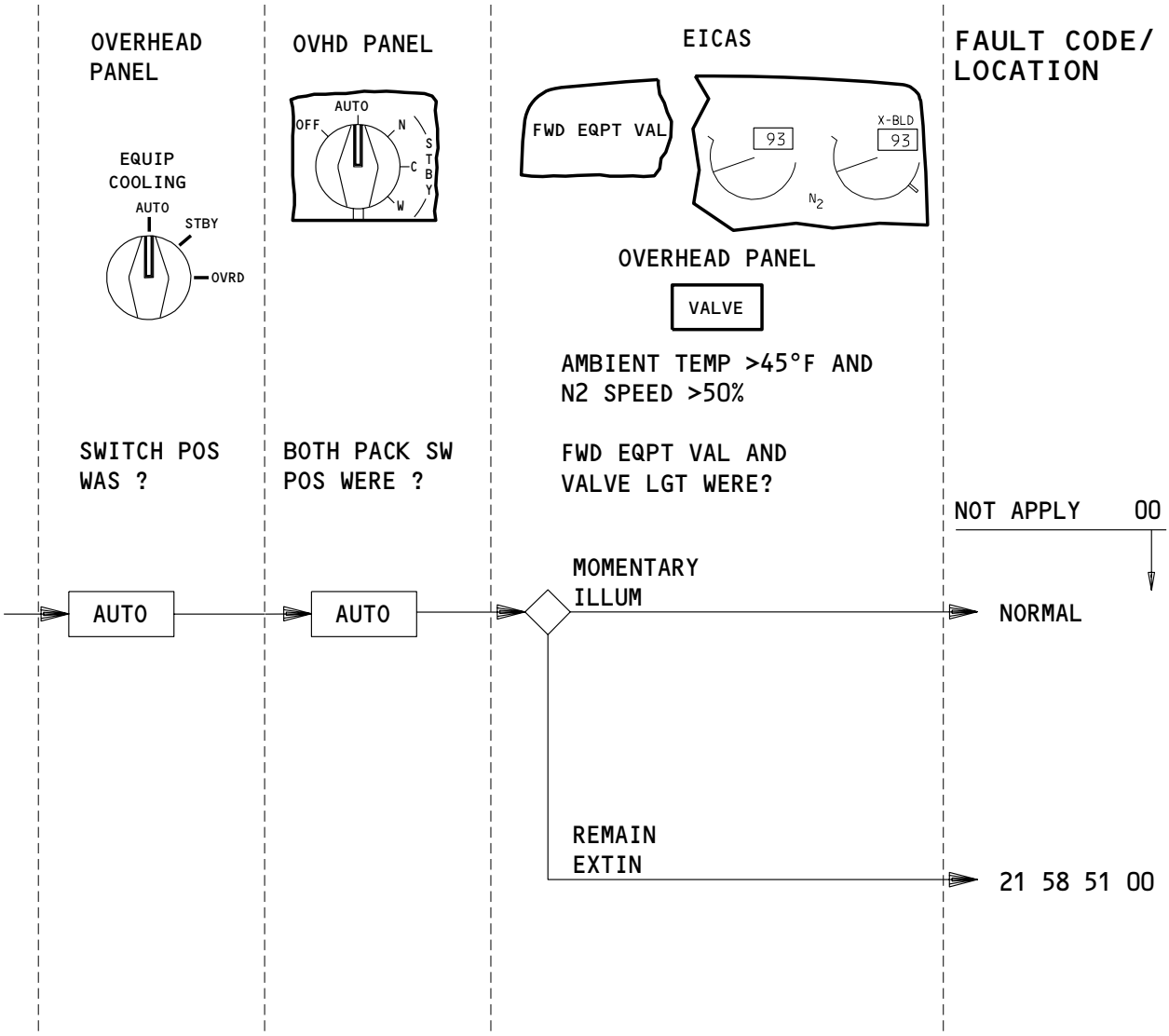

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A26	PACK FLOW CONT R
11A13	PACK FLOW CONT L
11N13	LEFT PACK FLOW CONT
11N22	RIGHT PACK FLOW CONT
11B11	FWD OVBD VLV
11R14	RECIRC FAN 1
11R23	RECIRC FAN 2

36F2	AIR CONDITIONING RECIRC FAN L
37G4	AIR CONDITIONING RECIRC FAN R

11D23	ENG SPEED SENSE L1
11D15	ENG SPEED SENSE L2
11D24	ENG SPEED SENSE R1
11D16	ENG SPEED SENSE R2

FWD EQPT VAL/EQUIP COOL VALVE LIGHT (GROUND) – FAULT CODES

EFFECTIVITY
AIRPLANES WITH SIMPLIFIED EQUIPMENT COOLING SYSTEM

21-FAULT CODE DIAGRAM

H85412

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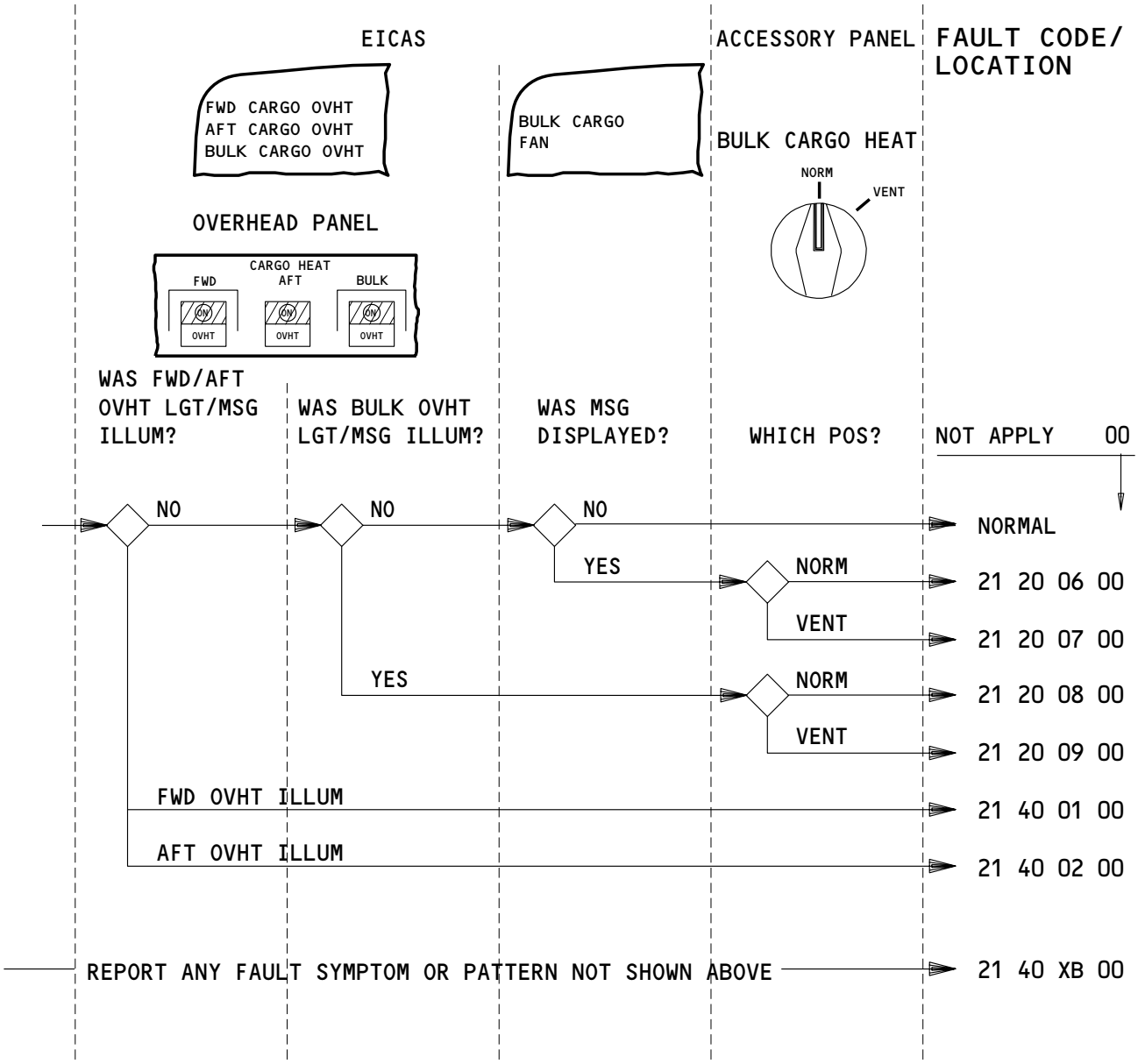

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11N26	BULK CARGO HEAT CONT	11R21	CARGO HEAT OVERRIDE FWD
11N27	BULK CARGO HEAT OVRD	11R22	CARGO HEAT OVERRIDE AFT
11R19	CARGO HEAT CONTROL FWD		
11R19	CARGO HEAT FWD CONT		
11R20	CARGO HEAT CONTROL AFT		
11R20	CARGO HEAT AFT CONT		

CARGO HEAT – FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

J30992

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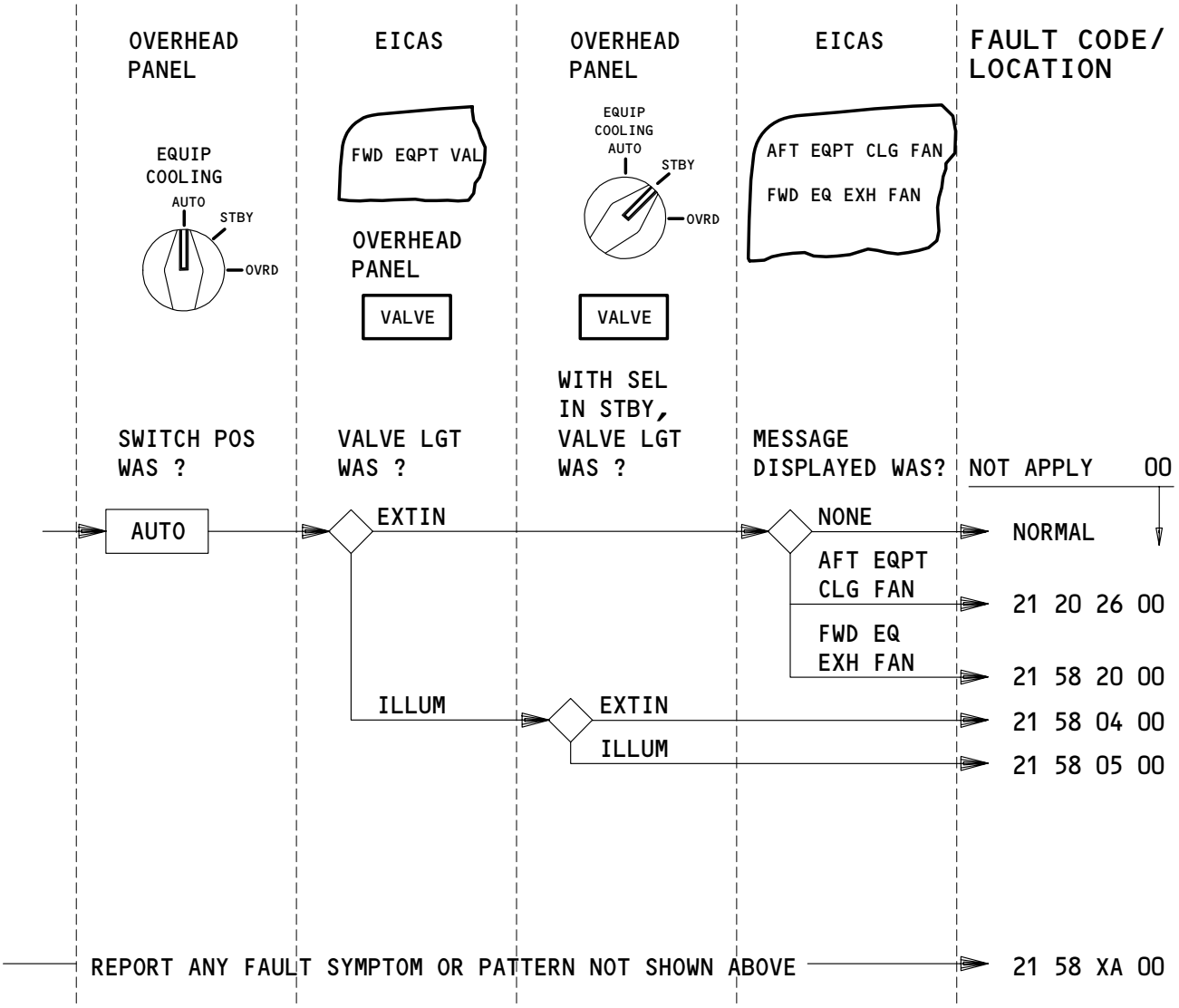

APPLICABLE CIRCUIT BREAKERS

		EQUIPMENT COOLING			
6H18	EQUIP COOL SUPPLY FAN 1	11P10	AFT FAN EXH 2	11P19	AFT FAN EXH 1
6H21	FWD EXH EQUIP COOL FAN	11P11	SUPPLY FAN 1	11P21	OVHT/SMOKE VLV IND
11B8	STBY EQUIP COOL	11P13	OUTBD VLVS	11P22	EXH FAN FWD

EQUIPMENT COOLING – FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

824758

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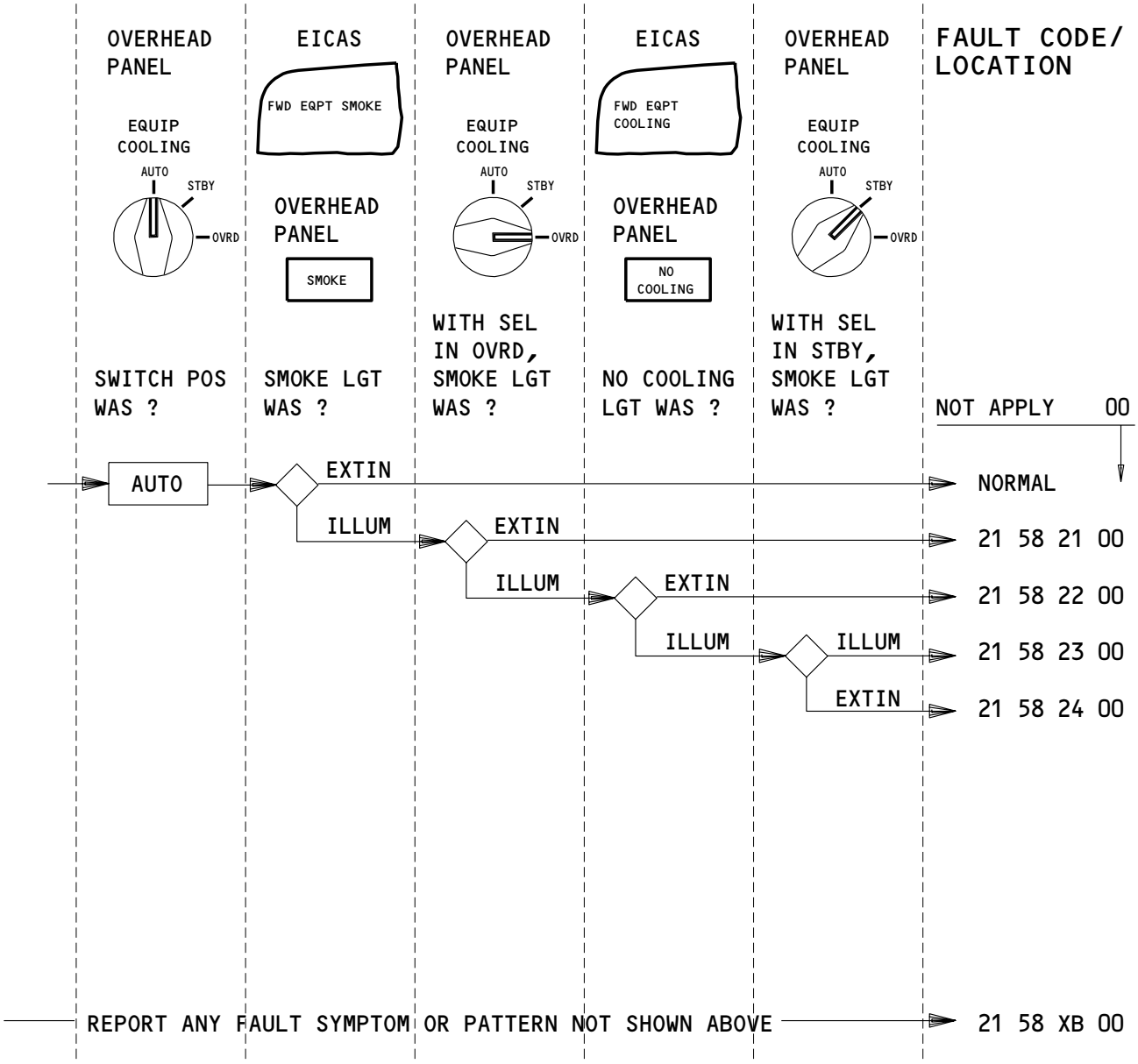

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11B8	STBY EQUIP COOL	11P14	CONT
11C19	EQUIP COOL OVRD	11P20	SUPPLY FAN 2
11C20	OVHT/SMOKE VALVE IND	11P21	OVHT/SMOKE VALVE IND
11C20	EQUIP COOL OVHT/SMOKE/VLV IND	11P21	EQUIP COOL OVHT/SMOKE/VLV IND
11P11	SUPPLY FAN 1	11P22	OVHT/SMOKE VALVE IND
11P12	INBD VALVES/VLVS	11P22	EXH FAN FWD
11P13	OUTBD VALVES/VLVS	11P23	EXH FAN FWD

EQUIPMENT COOLING SMOKE – FAULT CODES

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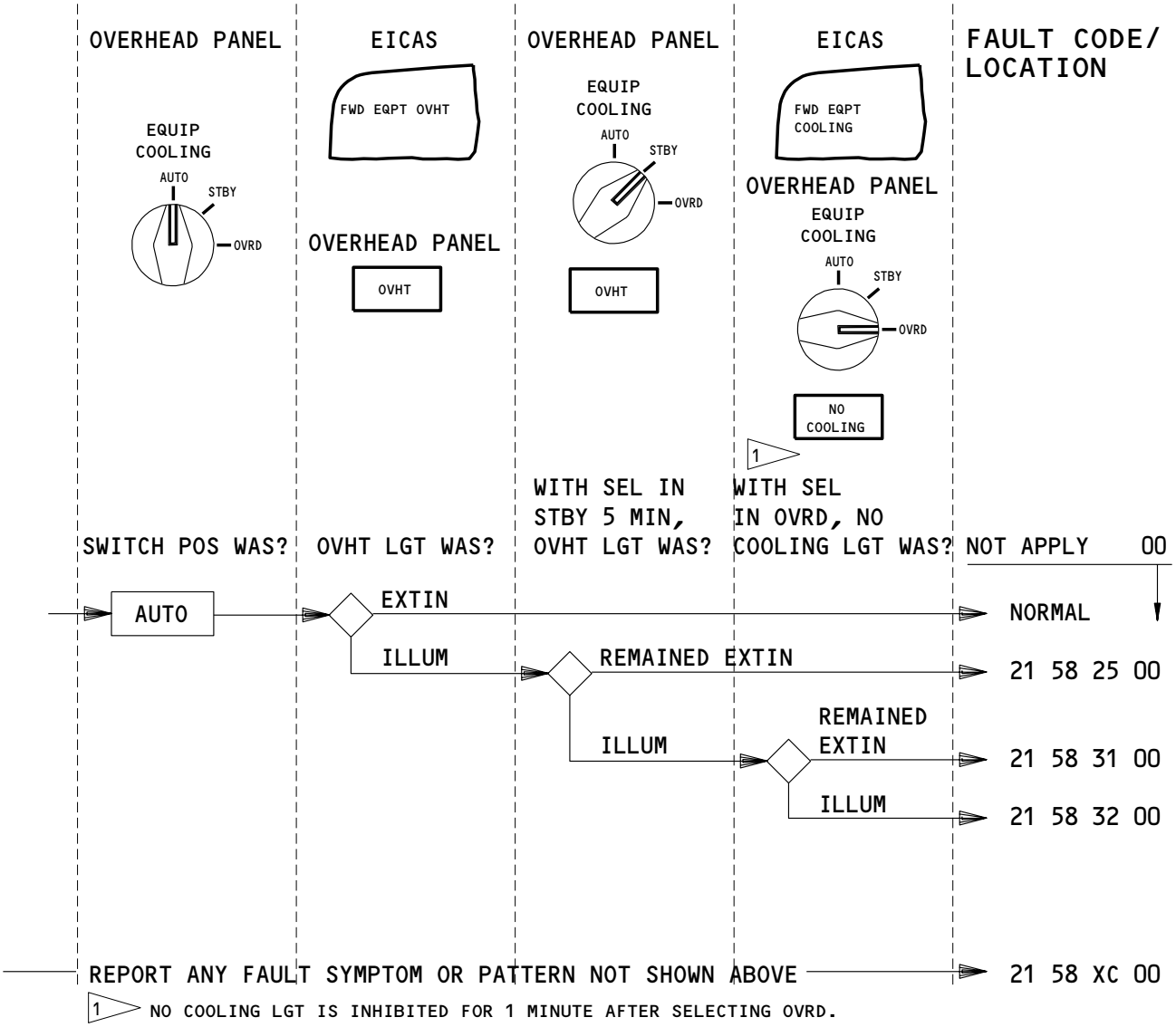

1 NO COOLING LGT IS INHIBITED FOR 1 MINUTE AFTER SELECTING OVRD.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6H18	EQUIP COOL SUPPLY FAN 1
6H21	FWD EXH EQUIP COOL FAN
6H24	EQUIP COOL SUPPLY FAN 2
11B8	STBY EQUIP COOL
11C20	OVHT/SMOKE VALVE IND
11P10	AFT FAN EXH 2
11P11	SUPPLY FAN 1
11P12	INBD VALVES
11P13	OUTBD VALVES
11P14	CONT
11P20	SUPPLY FAN 2
11P21	OVHT/SMOKE VALVE IND
11P21	EQUIP COOL OVHT/SMOKE/VLV IND
11P22	OVHT/SMOKE VALVE IND
11P22	EXH FAN FWD
11P23	EXH FAN FWD

EQUIPMENT COOLING OVERHEAT - FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

L19188

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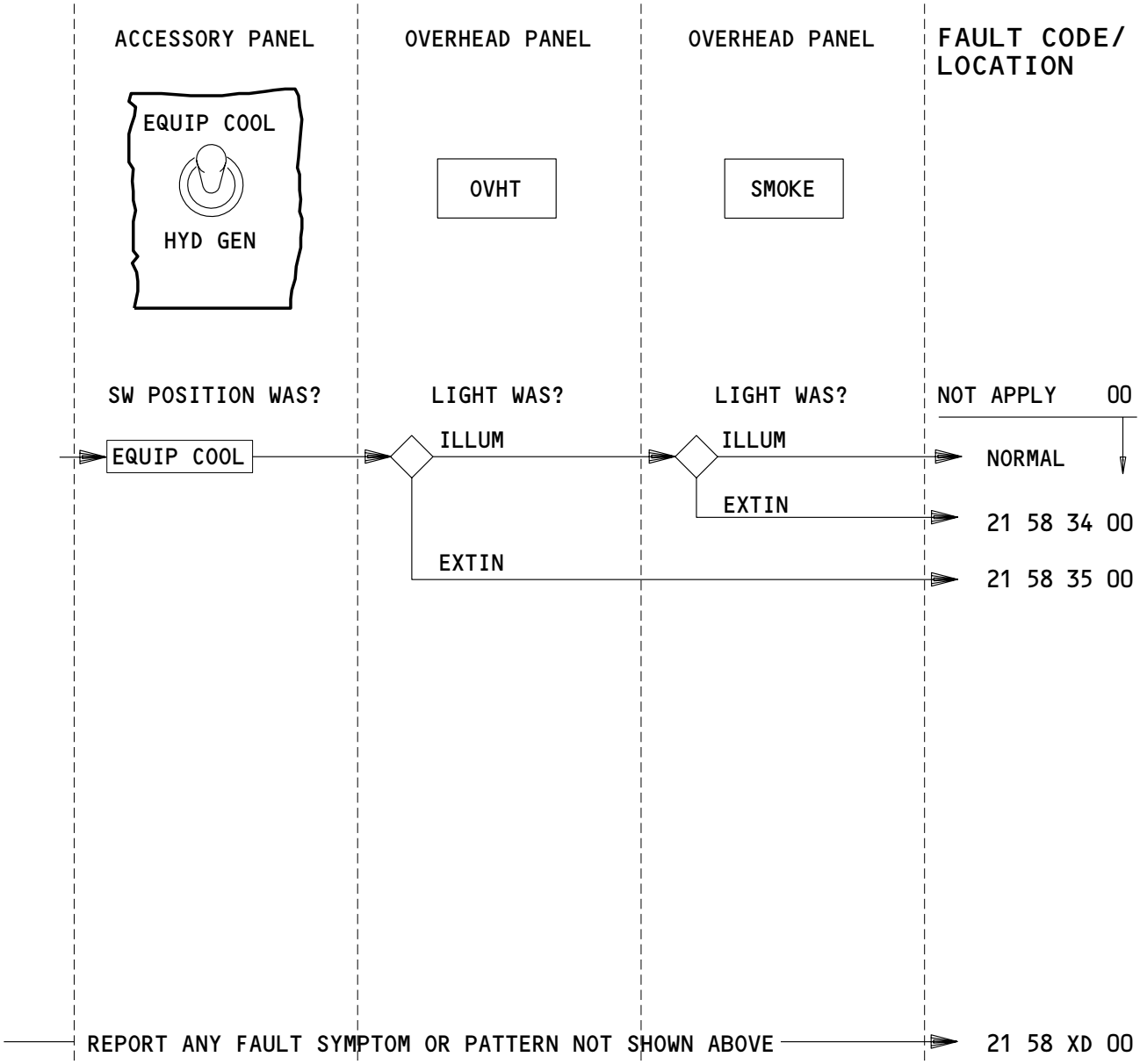

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D6	EQUIP COOL GRD WARN
11C20	OVHT/SMOKE VLV/VALVE IND
11P12	INBD VLVS/VALVES
11P21	OVHT/SMOKE VLV IND

EQUIPMENT COOLING TEST – FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

L19173

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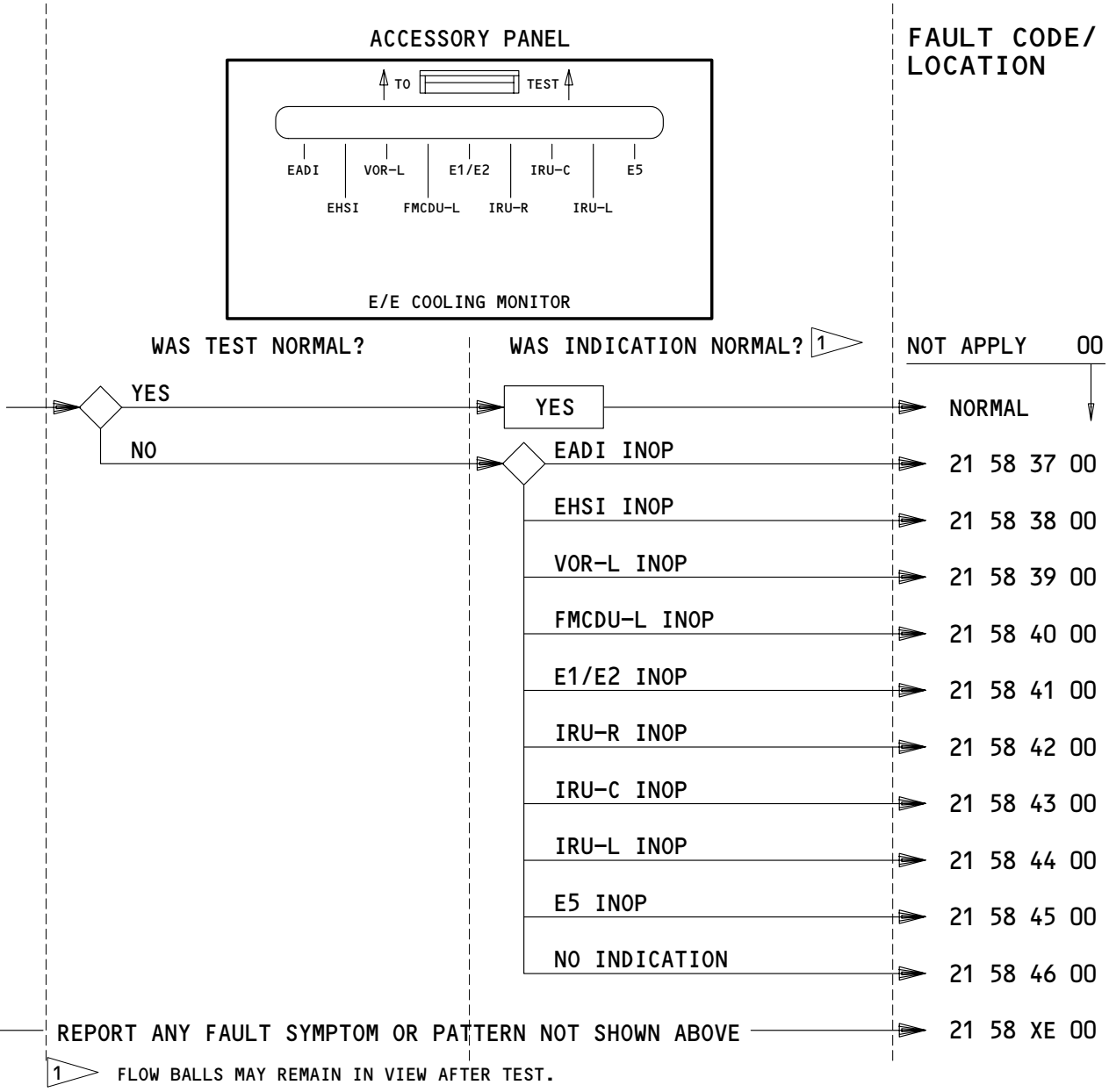

APPLICABLE CIRCUIT BREAKERS

NONE

EQUIPMENT COOLING MONITOR TEST – FAULT CODES

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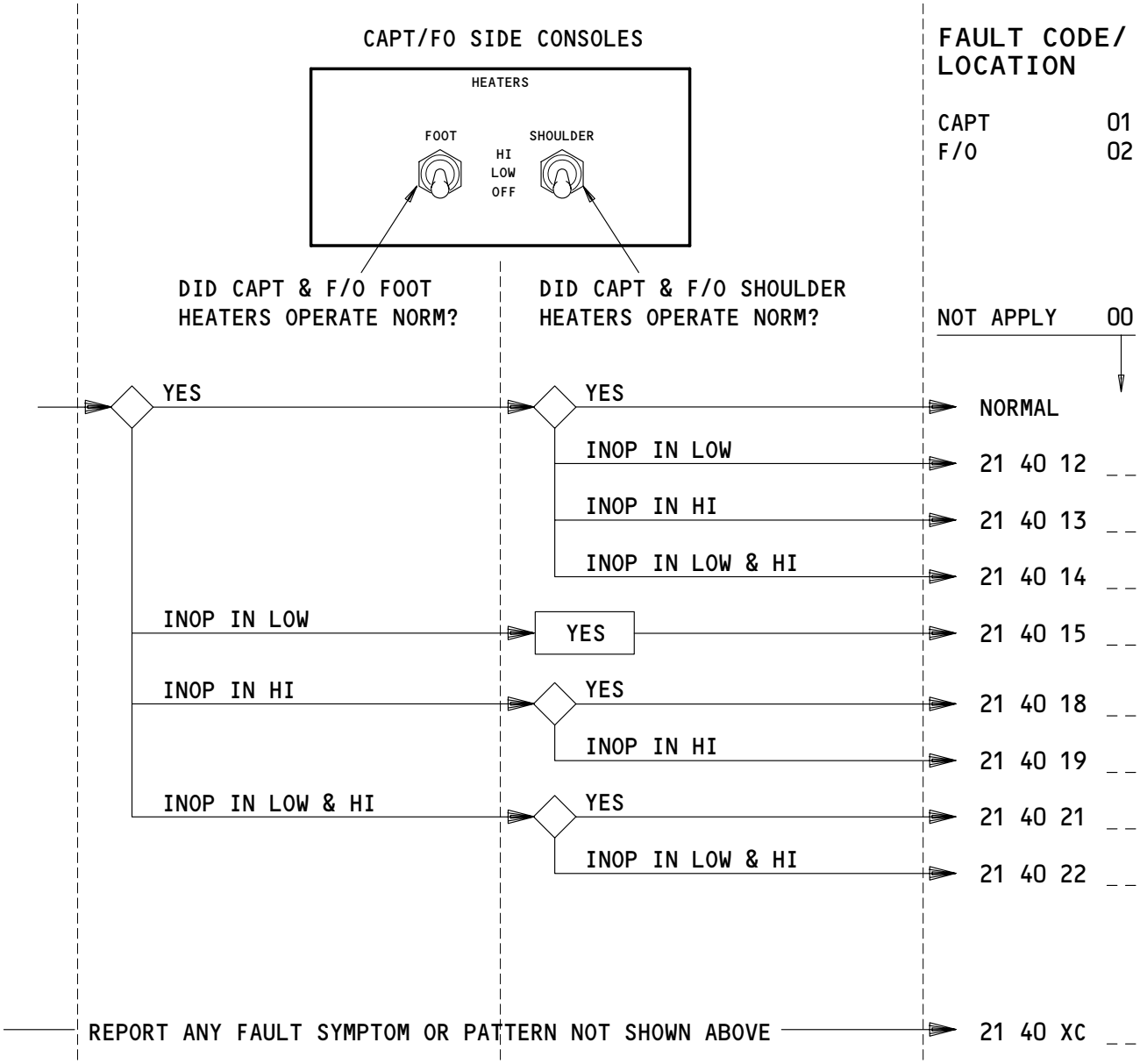

APPLICABLE CIRCUIT BREAKERS

NONE

FLIGHT DECK SUPPLEMENTARY HEATERS – FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

185346

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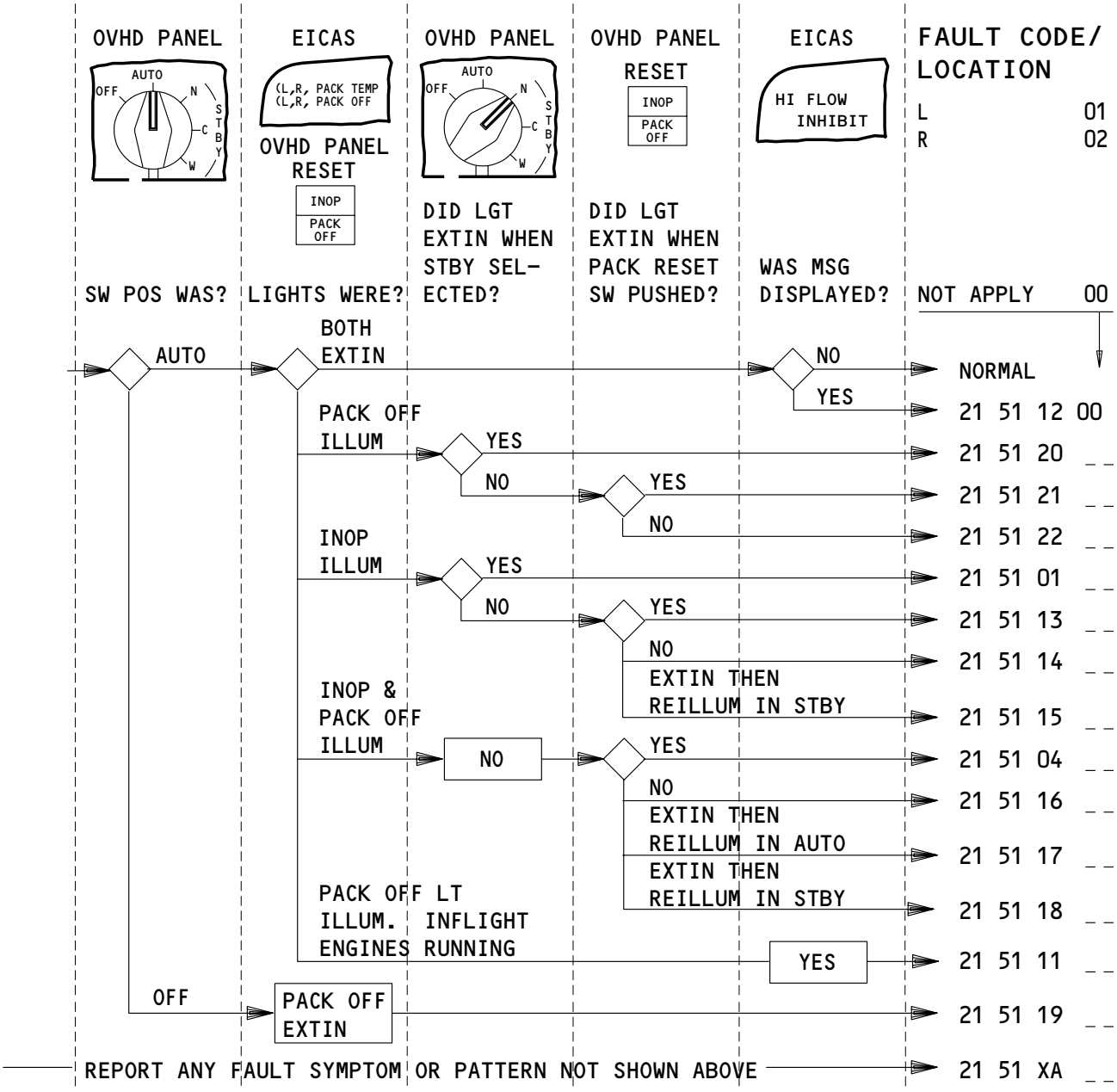

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11A13	L PACK FLOW CONT
11A26	R PACK FLOW CONT
11N10	LEFT PACK AUTO PWR
11N11	LEFT PACK AUTO CONT
11N13	LEFT PACK FLOW CONT
11N15	RIGHT PACK STANDBY PWR
11N16	RIGHT PACK STANDBY CONT
11N17	PACK FLOW IND
11N19	RIGHT PACK AUTO PWR
11N20	RIGHT PACK AUTO CONT
11N22	RIGHT PACK FLOW CONT
11N24	LEFT PACK STANDBY PWR
11N25	LEFT PACK STANDBY CONT

PACK CONTROL – FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

L19158

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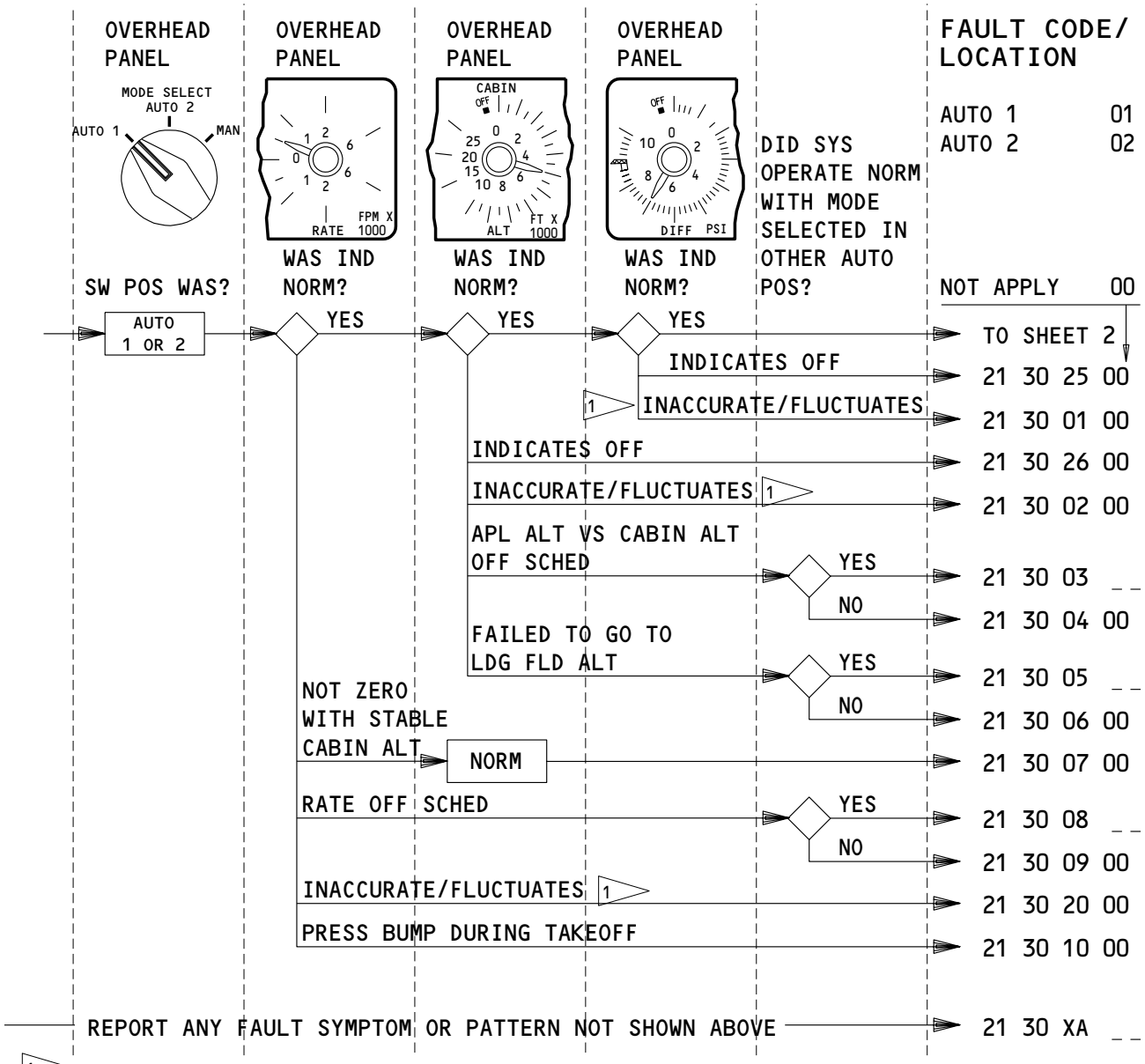

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11B12	CABIN DIFF PRESS IND	11B15	CABIN ALTITUDE CONTROL/CONT SELECT
11B13	CABIN ALTM	11P15	CABIN ALT/ALTITUDE CONTROL AUTO 1
11B14	CABIN ALTITUDE CONTROL/CONT MANUAL	11P23/24	CABIN ALT/ALTITUDE CONTROL AUTO 2

AUTO CONTROL (SHEET 1) - FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

L19148

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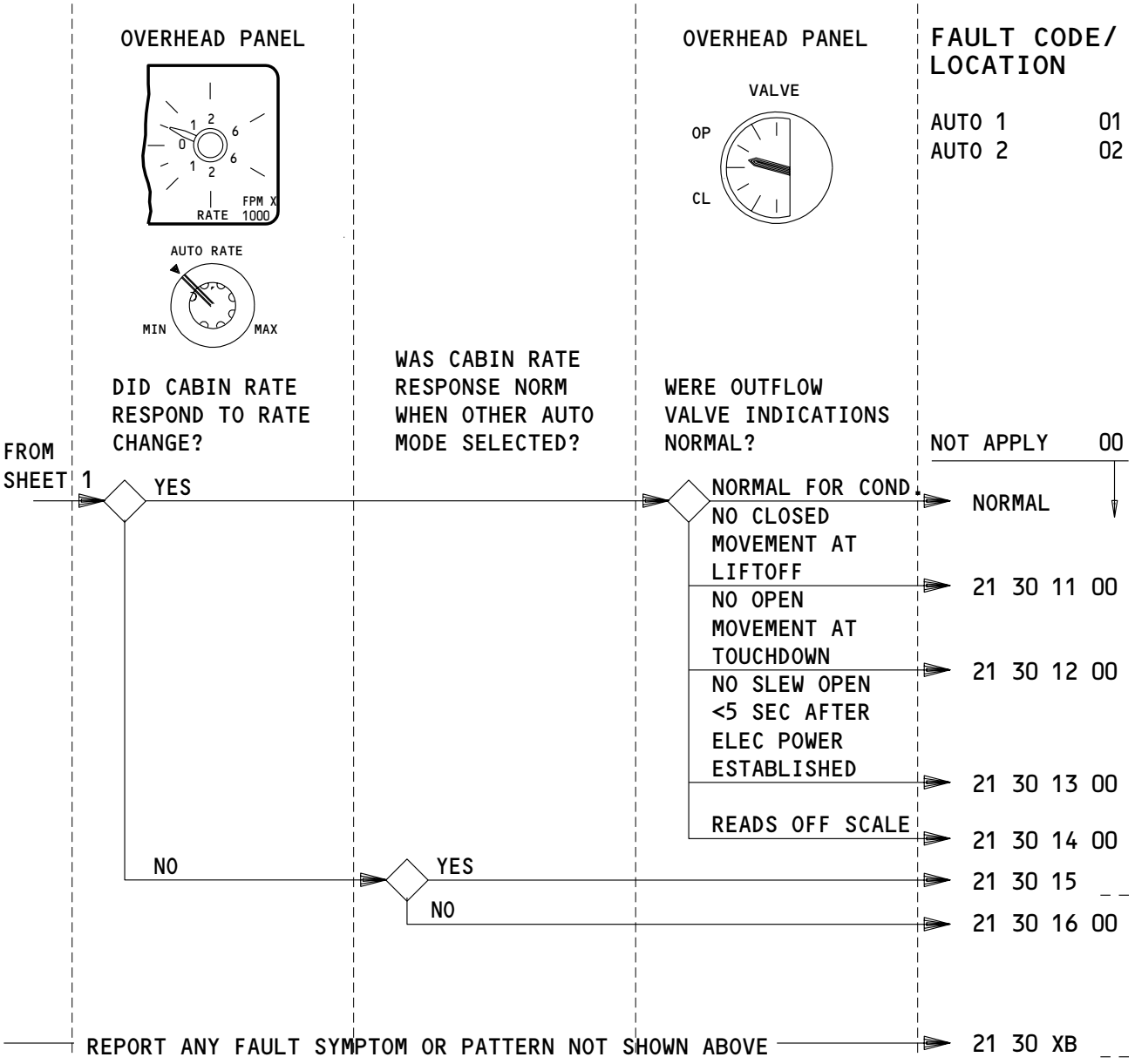

APPLICABLE CIRCUIT BREAKERS

11B12	CABIN DIFF PRESS IND
11B13	CABIN ALTM
11B14	CABIN ALTITUDE CONTROL MANUAL OR CABIN ALTITUDE CONT MANUAL
11B15	CABIN ALTITUDE CONTROL SELECT OR CABIN ALTITUDE CONT SELECT
11P15	CABIN ALTITUDE CONTROL AUTO 1 OR CABIN/CAB ALT CONTROL AUTO 1
11P23	CABIN/CAB ALT/ALTITUDE CONTROL AUTO 2
11P24	CABIN ALTITUDE CONTROL AUTO 2

AUTO CONTROL (SHEET 2) - FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

L19121

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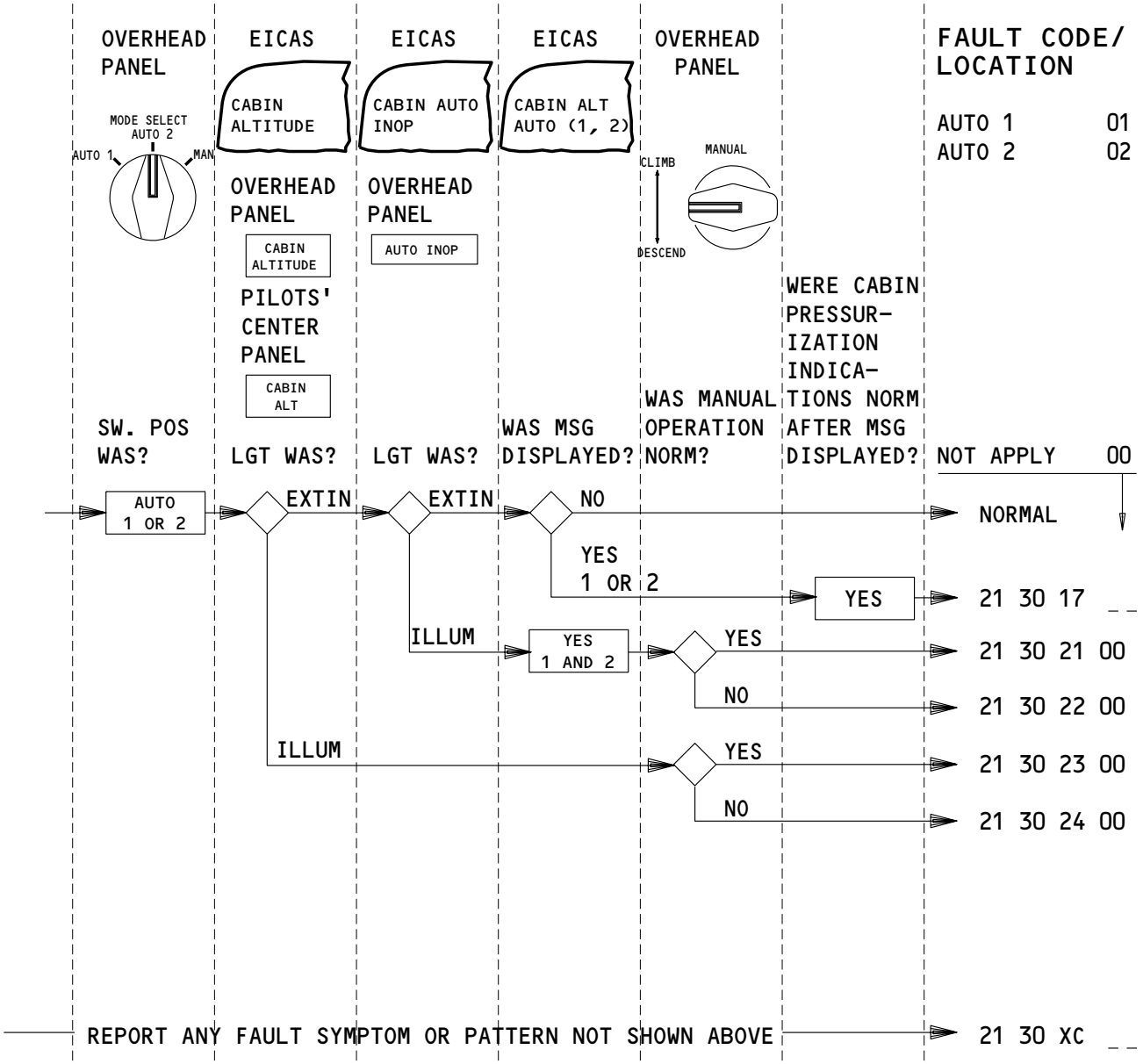

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11B14	CABIN ALTITUDE CONTROL MANUAL	11P15	CABIN ALTITUDE CONTROL AUTO 1
11B14	CABIN ALTITUDE CONT MANUAL	11P15	CABIN/CAB ALT CONTROL AUTO 1
11B15	CABIN ALTITUDE CONTROL SELECT	11P23	CABIN/CAB ALT/ALTITUDE CONTROL AUTO 2
11B15	CABIN ALTITUDE CONT SELECT	11P24	CABIN ALTITUDE CONTROL AUTO 2

CABIN ALTITUDE/AUTO FAIL/CABIN ALT AUTO – FAULT CODES

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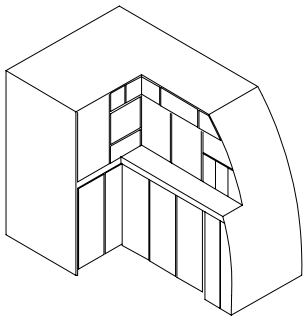

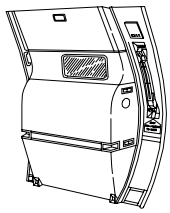

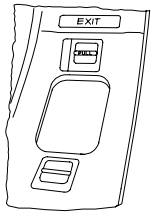

FAULT CODE/ LOCATION

GALLEYS

FWD	01
MID	02
AFT	03

2 DOORS/HATCHES

L FWD	04
R FWD	05
L EMER	06
R EMER	07
L AFT	08
R AFT	09
L FWD EMER	12
R FWD EMER	13
L AFT EMER	14
R AFT EMER	15
NOT APPLY	00

WAS THERE A COLD AREA IN

SIDEWALL/FLOOR? — NO → GALLEY? — NO → DOOR OR HATCH? — NO → NORMAL

DOOR OR HATCH? — YES → 21 20 23 _ _

GALLEY? — YES → 21 20 24 _ _

SIDEWALL/FLOOR? — YES 1 → 21 20 25 00

REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE → 21 20 XD _ _

1 LOCATE BY NEAREST SEAT OR ROW.

2 LOCATION AS INSTALLED

3 AIRPLANES WITH FORWARD DOOR HEATERS

APPLICABLE CIRCUIT BREAKERS

3	11R2	FWD DOOR AREA HTR CONT

AIR CONDITIONING COLD AREAS – FAULT CODES

270105

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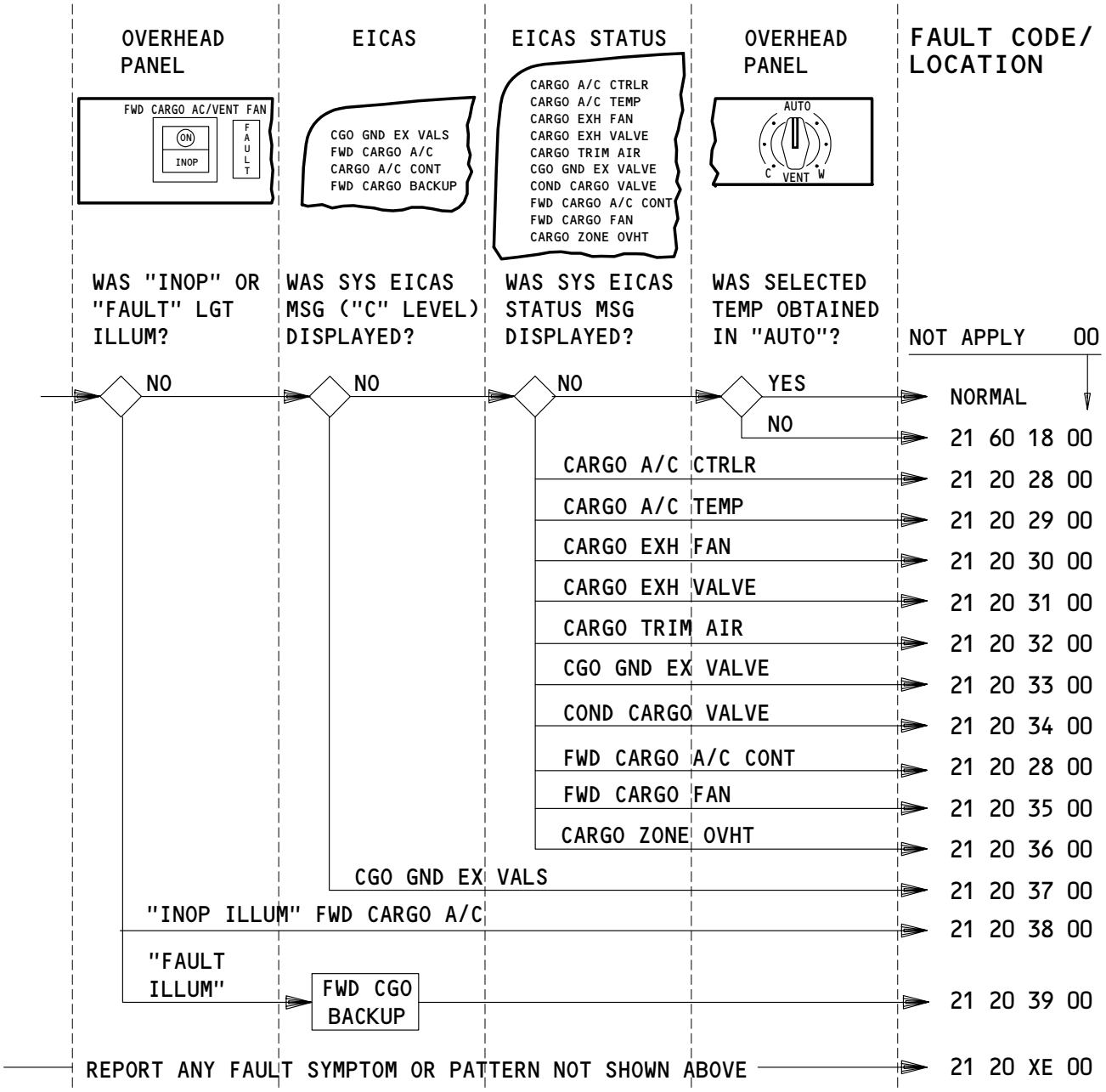

APPLICABLE CIRCUIT BREAKERS

11C20	EQUIP COOL CARGO EXH VLV	11N22	FWD CARGO DUCT OVHT
11N21	FWD CARGO TEMP CONT	11P21	CARGO A/C & VENT CONT

FWD CARGO AIR CONDITIONING – FAULT CODES

EFFECTIVITY

ALL

21-FAULT CODE DIAGRAM

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 20 XA --	1. A (01=l, 02=r, 03=l&r) air distribution and temperature control problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. SSM 21-25-01, SSM 21-25-02.
21 20 XB 00	Not Used
21 20 XC --	1. A (01=l, 02=r, 03=c) air distribution noise/vibration problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. Replace or repair ruptured or disbonded duct.
21 20 XD __	1. An air conditioning cold area problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. SSM 21-45-02 thru SSM 21-46-01.
21 20 XE 00	1. A forward cargo A/C problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. SSM 21-26-04, SSM 21-28-01, SSM 21-43-01, SSM 21-61-08.
21 30 XA --	1. A (01=AUTO 1, 02=AUTO 2) pressurization auto control problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. FIM 21-31-00/101, Fig. 103, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 30 XB --	1. A (O1=AUTO 1, O2=AUTO 2) pressurization auto control problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. FIM 21-31-00/101, Fig. 103, Block 1
21 30 XC --	1. A (O1=AUTO 1, O2=AUTO 2) cabin altitude/auto fail/cabin alt auto problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. FIM 21-31-00/101, Fig. 103, Block 1
21 40 XA 00	Not Used
21 40 XB 00	1. A cargo heat problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. SSM 21-43-01 thru SSM 21-44-02
21 40 XC --	1. A (O1=Capt, O2=F/O) flight deck supplementary heater problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. SSM 21-45-01.
21 51 XA --	1. A (O1=l, O2=r) pack control problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. FIM 21-51-00/101, Fig. 103, Block 1
21 58 XA 00	1. An equipment cooling problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. SSM 21-58-01 thru SSM 21-58-06
21 58 XB 00	1. An equipment cooling smoke problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. SSM 21-58-01 thru SSM 21-58-06
21 58 XC 00	1. An equipment cooling problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. SSM 21-58-01 thru SSM 21-58-06

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 58 XD 00	1. An equipment cooling test problem was encountered by the maintenance crew that was not covered by Fault Code Diagrams. (Ref fault code diagrams for maintenance crew actions). 2. SSM 21-58-01
21 58 XE 00	1. An equipment cooling monitor problem was encountered which is not covered by Fault Code Diagrams. (Ref fault code diagram for flight crew action). 2. FIM 21-58-00/101, Fig. 118, Block 1
21 60 XA --	1. A (01=flt deck, 02=fwd cabin, 03=mid cabin, 04=aft cabin) air distribution and temperature control problem was encountered by the flight crew which is not covered in the Fault Code Diagrams. (Ref fault code diagrams for flight crew actions). 2. FIM 21-60-00/101, Fig. 104, Block 1
21 20 01 00	Not Used
21 20 02 --	1. Black charcoal dust (soot) observed entering cabin from air conditioning outlets with L (R) RECIRC FANS on. Stopped with L (R) RECIRC FANS off. 2. Inspect the charcoal filters of the recirculation system in the forward cargo compartment for damage due to shifting cargo. Replace the damaged charcoal filters that you find (AMM 21-25-02/401). Repair/replace other damaged components that you find.
21 20 03 --	1. EICAS msg (L,R) RECIR FAN displayed and (01=L, 02=R) recirc fan INOP light illum with switch selected ON. 2. FIM 21-20-00/101, Fig. 103
21 20 04 00	1. Gasper fan OFF light illum. Switch selected ON. 2. FIM 21-20-00/101, Fig. 111, Block 1.
21 20 05 00	1. BULK CARGO FAN EICAS msg illum (Ref Chapter 31 for fault code diagrams. 2. FIM 21-20-00/101, Fig. 107, Block 1
21 20 06 00	1. EICAS message BULK CARGO FAN displayed. Bulk cargo heat sw in NORM. 2. FIM 21-20-00/101, Fig. 108, Block 1
21 20 07 00	1. EICAS message BULK CARGO FAN displayed. Bulk cargo heat sw in VENT. 2. FIM 21-20-00/101, Fig. 107, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 20 08 00	1. EICAS message BULK CARGO OVHT displayed. Bulk cargo OVHT lgt illum. Bulk cargo heat sw in NORM pos. 2. FIM 21-44-00/101, Fig. 106, Block 1
21 20 09 00	1. EICAS message BULK CARGO OVHT displayed. Bulk cargo OVHT lgt illum. Bulk cargo heat sw in VENT pos. 2. FIM 21-44-00/101, Fig. 107, Block 1
21 20 10 00	1. AFT EQ EXH FAN 1 EICAS message illum. (Ref Chapter 31 for fault code diagrams). 2. FIM 21-20-00/101, Fig. 104, Block 1
21 20 11 00	1. AFT EQ EXH FAN 2 EICAS message illum. (Ref Chapter 31 for fault code diagrams). 2. FIM 21-20-00/101, Fig. 105, Block 1
21 20 12 00	1. Smoke from air conditioning outlets. Stopped with both utility buses off. (Ref Chapter 24 for Fault Code Diagram). 2. FIM 21-20-00/101, Fig. 106, Block 1
21 20 13 00	1. Smoke from air conditioning outlets. Continued with both utility buses off. (Ref Chapter 24 for Fault Code Diagram). 2. Isolate the APU or the Engine as the source of smoke: If the APU is the source of smoke, see the APU chapter 49 for Fault Code Diagram. If the engine is the source of smoke, see the engine chapter 71 for Fault Code Diagram. Once the source of smoke is determined and repaired, do the smoke and oil contamination removal procedure (AMM 21-00-21/201)
21 20 14 00	1. EICAS message GASPER FAN displayed. 2. FIM 21-20-00/101, Fig. 111, Block 1
21 20 15 00	Not Used
21 20 16 __	1. Abnormal (noise,vibration) in (01=L, 02=R) main cabin sidewall. Most noticable by (identify by nearest seat row, galley, or lavatory). 2. Replace or repair ruptured or disbonded duct (AMM 21-23-07/801).

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 20 17 __	1. Abnormal (noise,vibration) in (O1=L, O2=R, O3=C) main cabin ceiling. Most noticable by (identify by nearest seat row, galley, or lavatory). 2. Replace or repair ruptured or disbonded duct (AMM 21-23-07/801).
21 20 18 __	1. Abnormal (noise,vibration) in (O1=L, O2=R, O3=C) main cabin floor. Most noticable by (identify by nearest seat row, galley, or lavatory). 2. Replace or repair ruptured or disbonded duct (AMM 21-23-07/801).
21 20 19 --	1. Abnormal (noise,vibration) in (O1=L, O2=R) sidewall. (Fwd,Aft) flight deck area. 2. Replace or repair ruptured or disbonded duct.
21 20 20 --	1. Abnormal (noise,vibration) in (O1=L, O2=R, O3=C) ceiling. (Fwd,Aft) flight deck area. 2. Replace or repair ruptured or disbonded duct.
21 20 21 --	1. Abnormal (noise,vibration) in (O1=L, O2=R, O3=C) floor. (Fwd,Aft) flight deck area. 2. Replace or repair ruptured or disbonded duct.
21 20 22 --	1. Abnormal (noise,vibration) around (O1=L, O2=R) (glareshield, windshield) area. 2. Clear obstruction from windshield diffuser.
21 20 23 __	1. Cold air is evident (O4=L Fwd, O5=R Fwd, O6=L Emer, O7=R Emer, O8=L Aft, O9=R Aft, 12=L Fwd Emer, 13=R Fwd Emer, 14=L Aft Emer, 15=R Aft Emer) door area. 2. Make sure seals and insulation of the door are in good condition.
21 20 24 __	1. Cold air in (O1=Fwd, O2=Mid, O3=Aft) galley area (locate area, floor, ceiling, etc). 2. Make sure seals of the refrigeration unit are in good condition.
21 20 25 00	1. Cold air at (identify by nearest seat or row) (sidewall, floor, sidewall/floor) area. 2. Make sure insulation in the sidewall is in good condition.
21 20 26 00	1. EICAS message: AFT EQPT CLG FAN displayed. 2. FIM 21-20-00/101, Fig. 105A, Block 1
21 20 27 00	Not Used

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 20 28 00	1. EICAS status message CARGO A/C CTRLR or FWD CARGO A/C CONT is displayed. 2. Replace the pack flow controller, M1610, (AMM 21-51-24).
21 20 29 00	1. EICAS status message CARGO A/C TEMP is displayed. 2. Do FIM 21-20-00/101, Fig. 112, Block 1.
21 20 30 00	1. EICAS status message CARGO EXH FAN is displayed. 2. Do FIM 21-20-00/101, Fig. 113, Block 1.
21 20 31 00	1. EICAS status message CARGO EX VALVE is displayed. 2. Replace the forward cargo exhaust valve control relay, K1213 (WDM 21-28-11). If the fault persists, replace the forward cargo exhaust valve, V382 (AMM 21-26-10).
21 20 32 00	1. EICAS status message CARGO TRIM AIR is displayed. 2. Do these steps to determine if the EICAS message occurred intermittently: A. Make sure the FWD CARGO HEAT-ON and OVHT switch-lights are off. B. Make sure the FWD CARGO A/C-ON and INOP switch-lights are off. C. Open these circuit breakers on the P11 panel: (1) 11R19, FWD CARGO HEAT CONTROL (2) 11R21, FWD CARGO HEAT OVERRIDE D. Open the right ECS bay access panel to get access to the forward cargo heat shutoff valve, V89. E. Use the manual override to manually close the forward cargo heat shutoff valve. F. Use the manual override to manually open and close the forward cargo heat shutoff valve three complete cycles G. Close the circuit breakers, 11R19 and 11R21. H. Push the FWD CARGO HEAT switch-light to the ON position. I. If the EICAS message CARGO TRIM AIR continues to show, replace the forward cargo heat shutoff valve, V89 (AMM 21-43-01/401). If the fault continues, replace the forward cargo overheat control relay, K231 (WDM 21-43-11).
21 20 33 00	1. EICAS status message CARGO GND EX VALVE is displayed. 2. Do FIM 21-20-00/101, Fig. 114, Block 1.

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 20 34 00	1. EICAS status message COND CARGO VALVE is displayed. 2. Replace the forward cargo A/C shutoff valve control relay, K1212 (WDM 21-28-11). If the fault persists, replace the forward cargo A/C shutoff valve, V381 (AMM 21-28-01).
21 20 35 00	1. EICAS status message FWD CARGO FAN is displayed. 2. Do FIM 21-20-00/101, Fig. 117, Block 1.
21 20 36 00	1. EICAS status message CARGO ZONE OVHT is displayed. 2. Do FIM 21-60-00/101, Fig. 104A, Block 1. If no fault is found, replace the forward cargo compartment overheat switch, S794 (AMM 21-43-04).
21 20 37 00	1. EICAS advisory message CGO GND EXH VALS is displayed. 2. Do FIM 21-20-00/101, Fig. 114, Block 1.
21 20 38 00	1. Forward cargo A/C INOP light is ON. EICAS status message FWD CARGO A/C is displayed. 2. Do FIM 21-20-00/101, Fig. 115, Block 1.
21 20 39 00	1. Forward cargo A/C FAULT light is ON. EICAS status message FWD CARGO BACKUP is displayed. 2. Do FIM 21-60-00/101, Fig. 114, Block 1.
21 20 40 01	1. EICAS status message FLT REST SYS is displayed. 2. Do FIM 21-60-00/101, Fig. 116, Block 1.
21 20 40 02	1. EICAS status message FWD CAB REST SYS is displayed. 2. Do FIM 21-60-00/101, Fig. 117, Block 1.
21 20 40 03	1. EICAS status message AFT CAB REST SYS is displayed. 2. Do FIM 21-60-00/101, Fig. 118, Block 1.
21 20 41 00	1. EICAS status message FLT REST SOV is displayed. 2. Do FIM 21-60-00/101, Fig. 119, Block 1.
21 20 42 00	1. EICAS status message FLT REST SMOKE VAL is displayed. 2. Do FIM 21-60-00/101, Fig. 120, Block 1.

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 30 01 00	1. Diff press ind (inaccurate, fluctuates). Cabin pressurization rate norm. 2. FIM 21-33-00/101, Fig. 105, Block 1
21 30 02 00	1. Cabin alt ind (inaccurate, fluctuates). Cabin pressurization norm. 2. Replace cabin pressurization indicating and warning module M19 (AMM 21-33-01).
21 30 03 --	1. Apl alt vs cabin alt off normal press. schedule when operating in (O1=AUTO 1, O2=AUTO 2) mode. Operated OK when other mode was selected. 2. FIM 21-31-00/101, Fig. 103, Block 1
21 30 04 00	1. Apl alt vs cabin alt off normal press. schedule when operating in both modes. 2. FIM 21-33-00/101, Fig. 103, Block 1
21 30 05 --	1. Cabin alt failed to go to ldg alt when operating in (O1=AUTO 1, O2=AUTO 2) mode. Operated OK when other mode was selected. 2. FIM 21-31-00/101, Fig. 103, Block 1
21 30 06 00	1. Cabin alt failed to go to ldg alt when operating in both modes. 2. Replace cabin pressurization indicating and warning module M19 (AMM 21-33-01).
21 30 07 00	1. Cabin rate ind not zero with cabin altitude stable. 2. Replace cabin pressurization indicating and warning module M19 (AMM 21-33-01).
21 30 08 --	1. Cabin rate ind does not reflect rate selected when operating in (O1=AUTO 1, O2=AUTO 2) mode. Operated OK when other mode was selected. 2. FIM 21-31-00/101, Fig. 103, Block 1
21 30 09 00	1. Cabin rate ind does not reflect rate selected when operating in both modes. 2. FIM 21-33-00/101, Fig. 104, Block 1
21 30 10 00	1. Cabin had press. bump during takeoff. Verified on cabin rate ind. 2. FIM 21-31-00/101, Fig. 105, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 30 11 00	1. Outflow valve shows no closed movement at liftoff. 2. FIM 21-31-00/101, Fig. 108, Block 1
21 30 12 00	1. Outflow valve did not open after touchdown. 2. FIM 21-31-00/101, Fig. 108, Block 1
21 30 13 00	1. Outflow valve did not slew open within five seconds after electrical power was established. 2. FIM 21-31-00/101, Fig. 108, Block 1
21 30 14 00	1. Outflow valve indicator reads off scale. 2. Replace valve position indicator M13 (AMM 21-31-01)
21 30 15 --	1. When change in auto rate was selected, there was no change in cabin rate. Mode selector was in (O1=AUTO 1, O2=AUTO 2). Operation was OK when other auto mode was selected. 2. FIM 21-31-00/101, Fig. 103, Block 1
21 30 16 00	1. When change in auto rate was selected, there was no change in cabin rate. Both AUTO 1 & 2 were affected. 2. Replace cabin pressure indicating and warning module M19 (AMM 21-33-01).
21 30 17 --	1. EICAS msg CABIN ALT (O1=AUTO 1, O2=AUTO 2) displayed. Pressurization norm after msg displayed. 2. FIM 21-31-00/101, Fig. 103, Block 1
21 30 18 00	1. EICAS msg CABIN ALT AUTO 1 displayed. (Ref Chapter 31 for fault code diagrams). 2. FIM 21-31-00/101, Fig. 109, Block 1
21 30 19 00	1. EICAS msg CABIN ALT AUTO 2 displayed. (Ref Chapter 31 for fault code diagrams). 2. FIM 21-31-00/101, Fig. 110, Block 1
21 30 20 00	1. Cabin rate ind (inaccurate, fluctuates). Cabin pressurization norm. 2. Replace Pressurization and Indication Warning Module M19 (AMM 21-33-01).
21 30 21 00	1. AUTO INOP light illum. EICAS msg CABIN AUTO INOP & CABIN ALT AUTO 1 & 2 displayed. Operation in MANUAL mode was ok. 2. FIM 21-31-00/101, Fig. 104, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 30 22 00	1. AUTO INOP light illum. EICAS msg CABIN AUTO INOP & CABIN ALT AUTO 1 & 2 displayed. Unable to control outflow valve using MANUAL mode. 2. FIM 21-31-00/101, Fig. 106, Block 1
21 30 23 00	1. CABIN ALT & CABIN ALTITUDE lights illum, EICAS msg CABIN ALTITUDE was displayed. Operation in MANUAL mode restored cabin press. 2. FIM 21-31-00/101, Fig. 103, Block 1
21 30 24 00	1. CABIN ALT & CABIN ALTITUDE lights illum, EICAS msg CABIN ALTITUDE was displayed. Unable to restore cabin press using MANUAL mode. (describe cause of depressurization, if known) 2. FIM 21-31-00/101, Fig. 107, Block 1
21 30 25 00	1. Diff press ind pointer in off position. Other indications norm. 2. Replace Differential Pressure Transducer TS5072 (AMM 21-33-04). If fault persists, replace Cabin Pressurization and Indicating Warning Module M19 (AMM 21-33-01)
21 30 26 00	1. Cabin alt ind pointer in off position. Other indications norm. 2. Replace Cabin Pressurization and Indicating Warning Module M19 (AMM 21-33-01).
21 40 01 00	1. EICAS message FWD CARGO OVHT displayed. Fwd cargo OVHT lgt illum. 2. FIM 21-43-00/101, Fig. 104, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 40 01 00	1. EICAS message CGO FLOOR OVHT displayed. Fwd cargo OVHT lgt illum. 2. FIM 21-43-00/101, Fig. 104A, Block 1
21 40 02 00	1. EICAS message AFT CARGO OVHT displayed. Aft cargo OVHT lgt illum. 2. FIM 21-44-00/101, Fig. 104, Block 1
21 40 03 00	1. AFT CARGO HEAT EICAS message illuminated (Ref Chapter 31 for fault code diagrams). 2. FIM 21-44-00/101, Fig. 103, Block 1
21 40 04 00	1. FWD CARGO HEAT EICAS message illuminated (Ref Chapter 31 for fault code diagrams). 2. FIM 21-43-00/101, Fig. 103, Block 1
21 40 05 00	1. BULK CARGO HEAT EICAS message illuminated (Ref Chapter 31 for fault code diagrams). 2. FIM 21-44-00/101, Fig. 105, Block 1
21 40 06 00	1. Bulk cargo temp reading too low on EICAS status, lowest temp observed was ____ degrees. 2. FIM 21-44-00/101, Fig. 108, Block 1
21 40 07 00	1. Bulk cargo temp reading too high on EICAS status, highest temp observed was ____ degrees. 2. FIM 21-44-00/101, Fig. 109, Block 1
21 40 08 00	Not Used
21 40 09 00	Not Used
21 40 10 00	Not Used
21 40 11 00	Not Used
21 40 12 --	1. (01=Capt, 02=F/O) shoulder heater inop in LOW. 2. FIM 21-40-00/101, Fig. 109, Block 1
21 40 13 --	1. (01=Capt, 02=F/O) shoulder heater inop in HI. 2. FIM 21-40-00/101, Fig. 110, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 40 14 --	1. (O1=Capt, O2=F/O) shoulder heater inop in LOW & HI. 2. Replace the captain (first officer) heater control module, M901 (M902) on the P13 (P14) panel, or replace the shoulder heater switch, S1, on the heater control module, M901 (M902).
21 40 15 --	1. (O1=Capt, O2=F/O) foot heater inop in LOW. 2. FIM 21-40-00/101, Fig. 108, Block 1
21 40 16 --	Not Used.
21 40 17 --	Not Used.
21 40 18 --	1. (O1=Capt, O2=F/O) foot heater inop in HI. 2. FIM 21-40-00/101, Fig. 107, Block 1
21 40 19 --	1. (O1=Capt, O2=F/O) shoulder & foot heater inop in HI. 2. Check and repair circuit between HIGH CAPT (F/O) AUX HEATING circuit breaker 36H1 (37H1) and capt (F/O) Heater Control Module M901 (M902)
21 40 20 --	Not Used.
21 40 21 --	1. (O1=Capt, O2=F/O) foot heater inop in LOW & HI. 2. Replace the captain (first officer) heater control module, M901 (M902) on the P13 (P14) panel, or replace the foot heater switch, S2, on the heater control module, M901 (M902).
21 40 22 --	1. (O1=Capt, O2=F/O) shoulder & foot heater inop in LOW & HI. 2. Replace L(R) Air/Ground Relay K145 (AMM 32-09-02)
21 51 01 --	1. (O1=L, O2=R) PACK INOP light illum. EICAS message (L, R) PACK TEMP displayed. Operated norm after STBY selected. 2. FIM 21-51-00/101, Fig. 103, Block 1
21 51 02 --	Not Used
21 51 03 --	Not Used
21 51 04 --	1. (O1=L, O2=R) INOP & PACK OFF lights illum. EICAS message (L,R) PACK OFF displayed. Operation normal after RESET. 2. FIM 21-51-00/101, Fig. 103, Block 1
21 51 05 --	Not Used
21 51 06 --	Not Used

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 51 07 00	1. L PACK BITE EICAS message illuminated (Ref Chapter 31 for fault code diagrams). 2. FIM 21-51-00/101, Fig. 103, Block 1
21 51 08 00	1. R PACK BITE EICAS Message illuminated (Ref Chapter 31 for fault code diagrams). 2. FIM 21-51-00/101, Fig. 103, Block 1
21 51 09 --	Not Used.
21 51 10 00	Not Used
21 51 11 --	1. EICAS msg HI FLOW INHIBIT displayed. (O1=L, O2=R) PACK OFF light illum during flight with both engines running. 2. FIM 21-51-00/101, Fig. 107, Block 1 NOTE: Some compressor discharge overheat switches can drift out of calibration and give a nuisance indication that results in a pack shutdown during flight. Honeywell SB 2202450-21-2747 recommends replacement of switches with part number 641137-1, serial numbers 3327 to 5090.
21 51 12 00	1. EICAS message HI FLOW INHIBIT displayed during high flow condition. 2. FIM 21-51-00/101, Fig. 107, Block 1.
21 51 13 --	1. (O1=L, O2=R) PACK INOP light illum. EICAS message (L,R) PACK TEMP displayed. Light did not extin when STBY selected. Operation normal after RESET pushed. 2. FIM 21-51-00/101, Fig. 103, Block 1
21 51 14 --	1. (O1=L, O2=R) PACK INOP light illum. EICAS message (L,R) PACK TEMP displayed. Light did not extin when STBY selected and RESET pushed. 2. FIM 21-51-00/101, Fig. 105, Block 1 If Air Cycle Machine will not operate, do FIM 21-51-00/101, Fig. 104A or FIM 21-51-00/101, Fig. 104B, Block 1.
21 51 15 --	1. (O1=L, O2=R) PACK INOP light illum. EICAS message (L,R) PACK TEMP displayed. Light did not extin when STBY selected. RESET pushed, light extin then reillum. 2. FIM 21-51-00/101, Fig. 104, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 51 16 --	1. (O1=L, O2=R) INOP & PACK OFF lights illum. EICAS message (L,R) PACK OFF displayed & would not RESET. 2. FIM 21-51-00/101, Fig. 105A, Block 1
21 51 17 --	1. (O1=L, O2=R) INOP & PACK OFF lights illum. EICAS message (L,R) PACK OFF displayed. RESET pushed, light extin then reillum in AUTO. Operation normal in STBY. 2. FIM 21-51-00/101, Fig. 103, Block 1
21 51 18 --	1. (O1=L, O2=R) INOP & PACK OFF lights illum. EICAS message (L,R) PACK OFF displayed. RESET pushed, light extin then reillum in both AUTO & STBY. 2. FIM 21-51-00/101, Fig. 105B, Block 1
21 51 19 --	1. (O1=L, O2=R) PACK OFF lights extin & PACK OFF msg not displayed with PACK sw. in OFF pos. 2. FIM 21-51-00/101, Fig. 105C, Block 1
21 51 20 --	1. (O1=L, O2=R) PACK OFF light illum. EICAS message (L,R) PACK OFF displayed. Operated norm after STBY selected. 2. FIM 21-51-00/101, Fig. 103, Block 1
21 51 21 --	1. (O1=L, O2=R) PACK OFF light illum. EICAS message (L,R) PACK OFF displayed. Light did not extin when STBY selected. Operation normal after RESET pushed. 2. FIM 21-51-00/101, Fig. 103, Block 1
21 51 22 --	1. (O1=L, O2=R) PACK OFF light illum. EICAS message (L,R) PACK OFF displayed. Light did not extin when STBY selected and RESET pushed. 2. FIM 21-51-00/101, Fig. 105D, Block 1
21 52 01 00	Not Used.
21 52 02 00	Not Used.
21 52 03 00	Not Used.
21 52 04 00	1. EICAS HI FLOW INHIBIT message displayed (Ref Chapter 31 for fault code diagrams). 2. FIM 21-51-00/101, Fig. 107, Block 1
21 58 01 00	Not Used

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 58 02 00	Not Used
21 58 03 00	Not Used
21 58 04 00	1. EICAS message FWD EQPT VAL is shown. Equipment cooling VALVE lgt illum. STBY selected and VALVE lgt extin. 2. Short-term power interruptions such as after a power transfer (ground-APU, APU-engine, APU-ground, etc.) may cause the EICAS FWD EQPT VAL message and VALVE light to show. A power transfer has the potential to cause a very short-term (less than 1 second) power interruption that causes the limit switches (position indication and motor drive) of the inboard supply valve (V91), bypass valve (V178), and/or shutoff valve (V10) to be driven from its normal position to a stopping position that prevents the valve from returning to its normal commanded position which can cause the EICAS message and indication light to show. The EICAS message and indication light can be cleared by either (1) starting both engines or (2) setting the EQUIP COOLING mode selector to STBY for approximately 60 seconds, then returning selector to AUTO. If the EICAS message and indication light no longer show, then the fault may have been related to a non-simultaneous operation of the limit switches in either the inboard supply valve (V91, bypass valve (V178), or shutoff valve (V10). 3. FIM 21-58-00/101, Fig. 104
21 58 05 00	1. EICAS message FWD EQPT VAL is shown. Equipment cooling VALVE lgt illum. STBY selected and VALVE lgt remained illuminated. 2. FIM 21-58-00/101, Fig. 105 (new E/E cooling system only) NOTE: 767-300 AIRPLANES WITH FORWARD OVERBOARD VALVE (V169); This fault scenario could actually be with the Forward Overboard Valve System rather than the Equipment Cooling System. Refer to FIM 21-23-08/101, Fig. 103 for troubleshooting Forward Overboard Valve system.
21 58 06 00	Not Used
21 58 07 00	Not Used
21 58 08 00	Not Used
21 58 09 00	Not Used
21 58 10 00	Not Used

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 58 11 00	Not Used
21 58 12 00	Not Used
21 58 13 00	Not Used
21 58 14 00	1. FLT DK SUP FLOW EICAS message illum. (Ref Chapter 31 for fault code diagrams). 2. FIM 21-58-00/101, Fig. 107, Block 1
21 58 15 00	Not Used
21 58 16 00	1. FWD EQ SUP FLOW EICAS message illum. (Ref Chapter 31 for fault code diagrams). 2. FIM 21-58-00/101, Fig. 108, Block 1
21 58 17 00	1. FWD EQ SUP OH EICAS message illum. (Ref Chapter 31 for fault code diagrams). 2. FIM 21-58-00/101, Fig. 109, Block 1
21 58 18 01	1. EICAS message FWD EQ SUP FAN 1 displayed. 2. FIM 21-58-00/101, Fig. 110, Block 1
21 58 18 02	Not Used
21 58 18 03	Not Used
21 58 19 00	Not Used
21 58 20 00	1. EICAS message: FWD EQ EXH FAN displayed (Ref Chapter 31 for fault code diagrams). 2. FIM 21-58-00/101, Fig. 111, Block 1
21 58 21 00	1. EICAS msg: FWD EQPT SMOKE displayed and SMOKE lgt illum. Lgt extin after selector was positioned to OVRD. 2. Identify and eliminate source of smoke.
21 58 22 00	1. EICAS msg: FWD EQPT SMOKE displayed and SMOKE lgt illum. Lgt remained illum after selector was positioned to OVRD. 2. FIM 21-58-00/101, Fig. 112, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 58 23 00	1. EICAS msg: FWD EQPT SMOKE displayed and SMOKE lgt illum. Lgt remained illum after selector was positioned to OVRD and EICAS msg: FWD EQPT COOLING displayed following one minute delay. SMOKE lgt remained illum after selector was positioned to STBY. 2. FIM 21-58-00/101, Fig. 113, Block 1
21 58 24 00	1. EICAS msg: FWD EQPT SMOKE displayed and SMOKE lgt illum. Lgt remained illum after selector was positioned to OVRD and EICAS msg: FWD EQPT COOLING displayed following one minute delay. SMOKE lgt extin after selector was positioned to STBY. 2. FIM 21-58-00/101, Fig. 114, Block 1
21 58 25 00	1. EICAS msg: FWD EQPT OVHT displayed and OVHT lgt illum. Lgt remained extin after selector was positioned to STBY. 2. FIM 21-58-00/101, Fig. 117, Block 1
21 58 26 00	Not Used
21 58 27 00	Not Used
21 58 28 00	Not Used
21 58 29 00	1. EICAS msg: FWD EQ SUP FAN 1 displayed (Ref Chapter 31 for fault code diagrams). 2. FIM 21-58-00/101, Fig. 110, Block 1
21 58 30 00	Not Used
21 58 31 00	1. EICAS msg: FWD EQPT OVHT displayed and OVHT lgt illum. After selector was positioned to STBY, lgt re-illum following 5 minute delay. Selector was positioned to OVRD. 2. FIM 21-58-00/101, Fig. 115, Block 1
21 58 32 00	1. EICAS msg: FWD EQPT OVHT displayed and OVHT lgt illum. After selector was positioned to STBY, lgt re-illum following 5 minute delay. After selector was positioned to OVRD, EICAS msg: FWD EQPT COOLING displ and NO COOLING lgt illum. 2. FIM 21-58-00/101, Fig. 116, Block 1
21 58 33 00	Not Used

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 58 34 00	1. SMOKE light failed to illum during equipment cooling test. 2. FIM 21-58-00/101, Fig. 116A, Block 1
21 58 35 00	1. OVHT light failed to illum during equipment cooling test. 2. FIM 21-58-00/101, Fig. 103, Block 1
21 58 36 00	Not Used
21 58 37 00	1. EADI did not test normal during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1
21 58 38 00	1. EHSI did not test normal during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1
21 58 39 00	1. VOR-L did not test normal during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1
21 58 40 00	1. FMCDU-L did not test normal during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1
21 58 41 00	1. E1/E2 did not test normal during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1
21 58 42 00	1. IRU-R did not test normal during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1
21 58 43 00	1. IRU-C did not test normal during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1
21 58 44 00	1. IRU-L did not test normal during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1
21 58 45 00	1. E5 did not test normal during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1
21 58 46 00	1. There was no indication during E/E cooling monitor test. 2. FIM 21-58-00/101, Fig. 118, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 58 51 00	1. EICAS Message FWD EQPT VAL and Equipment Cooling VALVE Light Remain Extinguished with Both Engine N2 Speed Cards >50% and Ambient Temperature >45-degrees F. 2. Do FIM 21-58-00/101, Fig. 106, Block 1.
21 60 01 01	1. EICAS msg: FLT DECK TEMP displayed and flt deck compt temp INOP lgt illum in AUTO. Manual operation norm. 2. FIM 21-60-00/101, Fig. 105, Block 1
21 60 02 01	1. EICAS msg: FLT DECK TEMP displayed and flt deck compt temp INOP lgt illum in AUTO. Manual operation not normal. (Describe indications). 2. FIM 21-60-00/101, Fig. 111, Block 1
21 60 03 01	1. Flt deck zone trim valve failed to move in AUTO. Manual operation norm. 2. FIM 21-60-00/101, Fig. 104, Block 1
21 60 04 01	1. Flt deck zone trim valve failed to move in AUTO. Manual operation not norm. (Describe indications). 2. FIM 21-60-00/101, Fig. 108, Block 1
21 60 05 01	1. Flt deck zone trim valve ind (fluctuates, off scale). 2. FIM 21-60-00/101, Fig. 107, Block 1
21 60 06 01	1. Flt deck temp control failed to control desired temp. Manual operation norm. 2. FIM 21-60-00/101, Fig. 104, Block 1
21 60 07 01	1. Flt deck temp control failed to control desired temp in AUTO or MAN. 2. FIM 21-60-00/101, Fig. 109, Block 1
21 60 08 __	1. (01=Flt deck, 02=Fwd cabin, 03=Mid cabin, 04=Aft cabin) compt temp ind reads (high/low). Compt temp checked OK. 2. FIM 21-60-00/101, Fig. 112, Block 1

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 60 09 --	1. EICAS message AFT CABIN TEMP/MID CABIN TEMP/FWD CABIN TEMP displayed and (02=fwd cabin, 03=mid cabin, 04=aft cabin, 05=Fwd cab rest sys) compt temp INOP light illuminated. 2. FIM 21-60-00/101, Fig. 106, Block 1
21 60 10 __	1. (02=Fwd cabin, 03=Mid cabin, 04=Aft cabin) temp control failed to control desired temp. 2. If the temperature was controllable when the airplane was at a lower altitude or when one pack was turned off, then inspect the ram air inlets for foreign objects. If the ram air inlet is blocked, then remove the foreign object. If the ram air inlet is not blocked, then do FIM 21-51-00/101, Fig. 108. 3. If the temperature control problem continues at lower altitude or in ground operation, then do FIM 21-60-00/101, Fig. 110 or FIM 21-60-00/101, Fig. 110A. 4. Cabin temperature control problems can also be caused by a stuck/failed open fan air modulating valve (FAMV). Refer to FIM 36-20-00/101, Fig. 103 or 104 (Air Supply BITE test) and AMM 36-11-16/501 to test operation of the FAMV.
21 60 11 __	1. (01=Flt deck, 02=Fwd cabin, 03=Mid cabin, 04=Aft cabin) compt temp ind blank. 2. FIM 21-60-00/101, Fig. 113, Block 1
21 60 12 00	1. ZONE TEMP BITE EICAS message illuminated (Ref Chapter 31 for fault code diagrams). 2. FIM 21-60-00/101, Fig. 104, Block 1
21 60 13 00	1. EICAS msgs: FLT DECK TEMP, FWD CABIN TEMP, MID CABIN TEMP, AFT CABIN TEMP displayed and all compt temp INOP lgts illum in AUTO. 2. Replace Zone Temperature Controller M195 (AMM 21-61-03).
21 60 14 00	1. No temperature control with any selector. 2. FIM 21-60-00/101, Fig. 113A, Block 1
21 60 15 00	1. EICAS msg TRIM AIR displayed and OFF lgt illum with switch selected ON. 2. Replace temperature control panel M14 (WDM 21-61-51).

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FAULT CODE	1. LOG BOOK REPORT 2. FAULT ISOLATION REFERENCE
21 60 16 --	1. EICAS (01=FWD, 02=MID, 03=AFT) TRIM VALVE position indication off scale or fluctuates. 2. FIM 21-60-00/101, Fig. 103, Block 1
21 60 17 --	1. (01=Flt deck, 02=Fwd cabin, 03=Mid cabin, 04=Aft cabin) compt temp ind has missing segment(s). 2. Replace compt temp ind, M10078 (AMM 21-65-01).
21 60 18 00	1. Forward cargo A/C failed to obtain the selected temperature in AUTO. No system related EICAS message was displayed. 2. Do FIM 21-60-00/101, Fig. 115, Block 1.
21 60 19 00	1. AUX TEMP BITE EICAS message illuminated (Ref Chapter 31 for fault code diagrams). 2. FIM 21-60-00/101, Fig. 104A, Block 1

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BITE Index

1. General
   A. Use this index to find the BITE procedure for the applicable LRU/System.
   B. The BITE procedure will provide the fault isolation instructions for the fault indications/LRU maintenance messages.

LRU/System Name	Acronym	FIM Reference
ACARS Management Unit		23-22
Air Data Computer	ADC	34-12
Air Data Inertial Reference Unit	ADIRU	34-26
Air Supply Control and Test Unit	ASCTU	36-20
Air Traffic Control Transponder	ATC	34-53
Airborne Vibration Monitor Signal Conditioner	AVM	77-31
Antiskid/Autobrake Control Unit	AACU	32-42
APU Fire Detection System		26-15
Automatic Direction Finder Receiver	ADF	34-57
APU Control Unit (or Electronic Control Unit)	ECU	49-11
Autopilot/Flight Director	AFDS	22-00
Auxiliary Zone Temperature Controller	AZTC	2160/21-61
Brake Temperature Monitor Unit	BTMU	32-46
Bus Power Control Unit	BPCU	24-20
Cabin Pressure Controller	CPC	21-30/21-31
Cabin Temperature Controller	CTC	21-61
Digital Flight Data Acquisition Unit	DFDAU	31-31
Distance Measuring Equipment Interrogator	DME	34-55
Duct Leak (Wing and Body)		26-18
E/E Cooling Control Card (If cards installed)		21-58
ECS Bleed Configuration Card		36-10
Electronic Control Unit	ECU	49-11
Electronic Engine Control Monitor Unit (Non-FADEC Engines)	EECM	71-EECM Message Index
Electronic Flight Instrument System	EFIS	34-22

Bite Index
Figure 1 (Sheet 1)

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LRU/System Name	Acronym	FIM Reference
Engine Fire/Overheat Detection System		26-11
Engine Indication and Crew Alerting System Computer	EICAS	31-41
Enhanced Ground Proximity Warning Computer	EGPWC	34-46
Equipment Cooling Systen Controller		21-58
Equipment Cooling Temperature Controller		21-58
Flap/Slat Electronic Unit	FSEU	27-51
Flap/Stabilizer Position Module	FSPM	27-58
Flight Management Computer	FMC	34-61
Fuel Quantity Indicating System Processor	FQIS	28-41
Ground Proximity Warning Computer	GPWC	34-46
HF (High Frequency) Communication		23-11
In-Flight Entertainment Equipment Cooling Card		21-58
Inertial Reference Unit	IRU	34-21
Instrument Comparator Unit	ICU	34-25
Instrument Landing System Receiver	ILS	34-31
Large Format Display System	LFDS	31-63
Lower Cargo Compartment Smoke Detection System		26-16
Maintenance Control Display Panel	MCDP	22-00
Multi-Mode Receiver	MMR	34-31
PA (Passenger Address) Amplifier		23-31
Pack Standby Temperature Controller	PSTC	21-51
Pack Temperature Controller	PTC	21-51
Passenger Entertainment System	PES	23-34
Power Supply Module (Control System Electronics Units)	PSM	27-09
Propulsion Interface and Monitor Unit (FADEC Engines)	PIMU	71-PIMU Message Index
Proximity Switch Electronics Unit	PSEU	32-09

Bite Index
Figure 1 (Sheet 2)

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LRU/System Name	Acronym	FIM Reference
Radio Altimeter Transmitter/Receiver	RA	34-33
Rudder Ratio Changer Module	RRCM	27-09
Satellite Data Unit	SDU	23-25
Spoiler Control Module	SCM	27-09
Stabilizer Trim/Elevator Asymmetry Limit Module	SAM	27-09
Stall Warning Computer/Module (in Warning Electronic Unit)	SWC	27-32
Strut Overheat Detection System (RR Engines)		26-12
Thrust Management Computer/Autothrottle	TMC	22-00
Traffic Alert and Collision Avoidance Computer	TCAS	34-45
VHF (Very High Frequency) Communication		23-12
VOR/Marker Beacon Receiver	VOR/MKR	34-51
Warning Electronic Unit BITE Module (Stall Warning)	WEU	27-32
Weather Radar Transceiver	WXR	34-43
Wheel Well Fire Detection		26-17
Window Heat Control Unit	WHCU	30-41
Yaw Damper Module	YDM	22-21
Yaw Damper/Stabilizer Trim Module	YSM	27-09
Zone Temperature Controller	ZTC	21-60/21-61

Bite Index
Figure 1 (Sheet 3)

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AIR CONDITIONING SYSTEM OIL SMOKE/FUME CONTAMINATION (REMOVAL) - TROUBLESHOOTING

1. General
   A. This procedure has the steps to identify the cause of smoke or fumes in the flight compartment or in the passenger compartment.
   B. Smoke or fumes can go into the flight compartment or the passenger 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.
   C. Smoke or fumes can be caused by contamination that enters the air conditioning system through one of the two engines. Do a check of the engines for the sources of contamination that follow:
      (1) An oil leak in the engine compressor or compressor bearing area. Oil leaks are not easily detected by monitoring oil consumption trends because the oil consumption may be within acceptable limits.
      (2) An oil leak in the plenum or load compressor area of the engine.
      (3) Overfilling of the engine oil system can cause contamination of the engine.
      (4) Anti-icing fluid can be ingested by the engines during cold weather operations.
   D. The APU can also be a source of smoke or fumes. Do a check for the problems that follow to identify the source of contamination in the APU:
      (1) An APU failure can release oil into the air conditioning system. Do a check for oil leaks in the inlet plenum and load compressor areas.
      (2) Contamination can be ingested into the inlet of the APU, including oil, anti-icing fluid, or hydraulic fluid.
   E. The hydraulic system can be a source of contamination in the air conditioning system. Do a check for leaks or for evidence of overservicing. If the hydraulicsystem is overserviced, then hydraulic fluid can go into the pneumatic ducts through the hydraulic system pressurization line.
   F. Fumes can also be caused by petroleum jelly that is used during maintenance of the pneumatic ducts or air distribution ducts.
   G. After the source of the contamination has been identified and eliminated, smoke or fumes may continue because of contamination in the ducts. If this is the case, then do the procedure to remove oil contamination from the air conditioning system (AMM 21-00-21/201).
   H. If the source of the smoke or fumes is in an engine, then the heat exchanger or the precooler may also be contaminated. Do the procedures to inspect these components and clean or replace them if necessary.
   I. Also make sure you examine the ventilation and recirculation filters for contamination and replace them if necessary.

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J. Fault isolation is given for the faults that follow:
(1) PROCEDURE 1: Smoke or Fumes in the Flight Compartment or Passenger Compartment Reported During Flight. Smoke Stops With the Isolation Valve Closed and the Right Pack Switch Off.
(2) PROCEDURE 2: Smoke or Fumes in the Flight Compartment or Passenger Compartment Reported During Flight. Smoke Stops With the Isolation Valve Closed and the Left Pack Switch Off.
(3) PROCEDURE 3: Smoke or Fumes in the Flight Compartment or Passenger Compartment Reported During Flight. Smoke Does Not Stop With the Isolation Valve Closed and the Two Pack Switches Off (In Turn).
(4) PROCEDURE 4: Smoke or Fumes in the Flight Compartment or Passenger Compartment. Smoke Stops with the Recirculation Fans Off.

2. PROCEDURE 1: Smoke or Fumes in the Flight Compartment or Passenger Compartment Reported During Flight. Smoke Stops With the Isolation Valve Closed and the Right Pack Switch Off.

A. General
(1) Make sure the fault report shows that the smoke or fumes stopped with the isolation valve closed, the right pack selector switch off, and the recirculation fan switch/lights off. This means that the left engine, the pneumatic air supply from the left engine, the APU air supply, the left air conditioning pack, and the related air distribution ducts were not the source of the smoke or fumes.
(2) The fault isolation procedure that follows tells you how to find the cause of smoke or fumes in the right engine, the pneumatic air supply from the right engine, the right air conditioning pack, the recirculation system, and the related air distribution ducts.

B. References
(1) AMM 21-00-00/201, Air Conditioning - General - Maintenance Practices
(2) AMM 21-00-21/201, Air Conditioning System Oil Contamination (Removal) - Maintenance Practices
(3) AMM 21-25-00/501, Recirculation System - Adjustment Test
(4) AMM 21-25-01/401, Cabin Air Recirculation Fan - Removal/Installation
(5) AMM 21-25-02/401, Recirculation Air Filter - Removal/Installation
(6) AMM 29-00-00/601, Hydraulic Power - Inspection/Check
(7) AMM 36-11-00/501, Air Supply Distribution System - Adjustment/Test
(8) AMM 49-11-00/201, Auxiliary Power Unit - Maintenance Practices
(9) AMM 71-00-00/201, Power Plant - Maintenance Practices (Operation Procedures)
(10) AMM 71-00-00/601, Power Plant - Inspection/Check
(11) AMM 71-71-00/601, Engine Vents and Drains - Inspection/Check
(12) AMM 79-00-00/601, Oil - Inspection/Check

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C. Possible Causes
(1) Contamination in the right engine pneumatic system.
(2) Hydraulic fluid leak (for example, overservicing).
(3) Contamination in the air distribution system.
(4) Overheating of one of the recirculation fans.

D. Prepare for the Test
(1) Prepare the left and the right engines for usual operation (AMM 71-00-00/201).
(2) Start the left and the right engine (AMM 71-00-00/201).
(3) Start the APU (AMM 49-11-00/201).
(4) Make sure all of the doors and windows are closed.

NOTE: Do not do these procedures with the passengers or the crew on the airplane because these procedures can cause a high concentration of smoke or fumes in the airplane.

E. Fault Isolation Procedure
(1) Do a check of the air recirculation system:
(a) Remove the recirculation fan filters (AMM 21-25-02/401).
(b) Examine the air recirculation filters to see if it is necessary to replace them. Replace the recirculation fan filters if necessary (AMM 21-25-02/401).
(c) Do an operational test of the recirculation system (AMM 21-25-00/501) to see if the recirculation fans or the related wiring are the source of the smoke or fumes.
(d) If there is smoke from the air recirculation fans or the related wiring, then do the steps that follow:
1) Repair the defective wiring.
2) Replace the defective recirculation fan (AMM 21-25-01/401).
3) Do the repair confirmation at the end of this task.
(e) If there is no smoke or fumes, then continue.
(2) Do a check of the right engine and the right engine pneumatic system:
(a) Do the external oil system inspection (AMM 79-00-00/601) and look for indications of oil leaks on the right engine.
(b) Do the inspection of the engine vents and drains (AMM 71-71-00/601) and look for indications of oil, hydraulic fluid, or fuel fluid, or fuel leaks on the right engine.
(c) If you find indications of leaks on the right engine, then do the steps that follow:
1) Do the corrective action shown in the inspection procedures or repair the problems that you find.
2) Do the repair confirmation at the end of this task.
(d) If there is no indication of external leaks, then do the power plant inspection/check procedure (AMM 71-00-00/601) for the right engine.

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(e) If you find indications of leaks in the right engine, then do the steps that follow:
1) Do the corrective action shown in the inspection procedure or repair the problems that you find.
2) Do the repair confirmation at the end of this task.
(f) If there are no indications of leaks in the right engine, then continue.
(g) Do a test of the air supply distribution system (AMM 36-11-00/501) and look for smoke or fumes in the flight compartment or passenger compartment.
(h) If there is smoke or fumes, then do the steps that follow:
1) Do the corrective action in the test procedure or repair the problems that you find.
2) Do the repair confirmation at the end of this task.

(3) Do the steps that follow to do a check for hydraulic fluid leaks:
(a) Do the hydraulic power inspection check (AMM 29-00-00/601).
(b) If you find indications of hydraulic fluid leaks, then do the steps that follow:
1) Do the corrective action shown in the inspection procedure or repair the problemsthat you find.
2) Do the repair confirmation at the end of this task.
(c) If there are no indications of hydraulic fluid leaks, then continue.

(4) Do a check for contamination in the air distribution system.
(a) Do the task to remove oil contamination from the air conditioning and pneumatic systems (AMM 21-00-21/201) with the right engine and the right air conditioning pack on.
(b) If there is smoke or fumes, then do a check of the air distribution system for the source of the contamination. Examine the components that follow:
1) Examine each of the components of the right air conditioning pack.
2) Examine the components of the main distribution manifold.
3) Examine the air distribution ducts where the smoke or fumes first appeared.
4) Replace the component or clean the duct that is the source of the smoke or fumes.
5) Do the repair confirmation at the end of this task.
(c) If there is no smoke or fumes, then do all of the task to remove of oil contamination from the air conditioning and pneumatic systems (AMM 21-00-21/201), with the two engines, the APU, and the two air conditioning packs on.

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(d) If there is smoke or fumes, then do the steps that follow to do a check of the air distribution system for the source of the contamination:
1) Examine each of the components of the two air conditioning packs.
2) Examine the components of the main distribution manifold.
3) Examine the air distribution ducts where the smoke or fumes first appeared.
4) Replace the component or clean the duct that is the source of the smoke or fumes.
5) Do the repair confirmation at the end of this task.
(e) If there is no smoke or fumes, and if the problem does not occur on the subsequent flight, then there was an intermittent fault.

F. Repair Confirmation
(1) Make sure that smoke amd fumes do not appear in the flight compartment or in the passenger compartment when the air conditioning system operates (AMM 21-00-21/201).
(a) If the procedure to remove oil contamination from the air conditioning system is run until there is no smoke or fumes, and if the problem does not occur on the next flight, then you corrected the problem.
(b) If there is smoke and fumes, then go to PROCEDURE 2 and do the task to remove contamination from the left engine and the left air conditioning pack.

G. Put the Airplane Back to its Usual Condition.
(1) Shut down the APU if it is no longer needed (AMM 49-11-00/201).
(2) Do the procedure to shut down the left and the right engine (AMM 71-00-00/201).

3. PROCEDURE 2: Smoke or Fumes in the Flight Compartment or Passenger Compartment Reported During Flight. Smoke Stops With the Isolation Valve Closed and the Left Pack Switch Off.

A. General
(1) Make sure the fault report shows that the smoke or fumes stopped with the isolation valve closed, the left pack selector switch off, and the recirculation fan switch/lights off. This means that the right engine, the pneumatic air supply from the right engine, the right air conditioning pack, and the related air distribution ducts were not the source of the smoke and fumes.

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(2) The fault isolation procedure that follows tells you how to find the cause of smoke or fumes in the APU pneumatic air supply, the left engine, the pneumatic air supply from the left engine, the left air conditioning pack, the recirculation system, and the related air distribution ducts.

NOTE: If the smoke and fumes are only in the flight compartment, then the most likely source is the left engine or the left air conditioning pack.

B. References
(1) AMM 21-00-00/201, Air Conditioning - General - Maintenance Practices
(2) AMM 21-00-21/201, Air Conditioning System Oil Contamination (Removal) - Maintenance Practices
(3) AMM 21-25-00/501, Recirculation System - Adjustment Test
(4) AMM 21-25-01/401, Cabin Air Recirculation Fan - Removal/Installation
(5) AMM 21-25-02/401, Recirculation Air Filter - Removal/Installation
(6) AMM 29-00-00/601, Hydraulic Power - Inspection/Check
(7) AMM 36-11-00/501, Air Supply Distribution System - Adjustment/Test
(8) AMM 36-11-01/601, Pneumatic Duct
(9) AMM 49-11-00/201, Auxiliary Power Unit - Maintenance Practices
(10) AMM 71-00-00/201, Power Plant - Maintenance Practices (Operation Procedures)
(11) AMM 71-00-00/601, Power Plant - Inspection/Check
(12) AMM 71-71-00/601, Engine Vents and Drains - Inspection/Check
(13) AMM 79-00-00/601, Oil - Inspection/Check

C. Possible Causes
(1) Contamination in the left engine pneumatic system.
(2) Contamination in the APU pneumatic system.
(3) Hydraulic fluid leak (for example, overservicing).
(4) Contamination in the air distribution system.
(5) Overheating of the recirculation fans.

D. Prepare for the Test
(1) Prepare the left and the right engines for usual operation (AMM 71-00-00/201).
(2) Start the left and the right engine (AMM 71-00-00/201).
(3) Start the APU (AMM 49-11-00/201).
(4) Make sure all of the doors and windows are closed.

NOTE: Do not do these procedures with the passengers or the crew on the airplane because these procedures can cause a high concentration of smoke or fumes in the airplane.

E. Fault Isolation Procedure
(1) Do a check of the air recirculation system:
(a) Remove the recirculation fan filters (AMM 21-25-02/401).

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(b) Examine the air recirculation filters to see if it is necessary to replace them. Replace the recirculation fan filters if necessary (AMM 21-25-02/401).
(c) Do an operational test of the recirculation system (AMM 21-25-00/501) to see if the air recirculation fans or the related wiring are the source of the smoke or fumes.
(d) If there is smoke from the air recirculation fans or the related wiring, then do the steps that follow:
1) Repair the defective wiring.
2) Replace the defective recirculation fan (AMM 21-25-01/401).
3) Do the repair confirmation at the end of this task.
(e) If there is no smoke or fumes, then continue.

(2) Do a checks for contamination in the APU pneumatic system.

NOTE: If smoke or fumes appear in the flight compartment or passenger compartment when the APU is running but the engines are shut down, go directly to the APU and bleed air inspection tasks that follow.

(a) Start the APU (AMM 49-11-00/201).
(b) When the APU has stabilized, supply conditioned air to the airplane from the APU through the left air conditioning pack (AMM 21-00-00/201).
(c) If there is smoke or fumes from the APU bleed air supply, then do the steps that follow:
1) Inspect the APU for leaks and oil contamination.
a) If you find indications of leaks, repair the leaks.
2) Do the inspection and check of the APU pneumatic ducts (AMM 36-11-01/601).
3) If you find indications of leaks, then do the steps that follow:
a) Do the corrective action indicated in the procedure.
b) Do the repair confirmation at the end of this task.
(d) If no smoke or fumes come from the APU bleed air supply, and the operational testis satisfactory, then do the APU usual shutdown (AMM 49-11-00/201) and continue.

(3) Do a check of the left engine pneumatic system:
(a) Do the external oil system inspection (AMM 79-00-00/601) and look for indication of oil leaks in the left engine.
(b) Do the inspection of the engine vents and drains (AMM 71-71-00/601) and look for indications of oil, hydraulic fluid, or fuel leaks in the left engine.
(c) If you find indications of leakage on the left engine, then do the steps that follow:
1) Do the corrective action shown in the inspection procedures or repair the problems that you find.

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2) Do the repair confirmation at the end of this task.

(d) If there are no indications of external leaks, then do the power plant inspection/check procedure (AMM 71-00-00/601) for the left engine.

(e) If you find indications of leaks in the left engine, then do the steps that follow:

1) Do the corrective action shown in the inspection procedure or repair the problemsthat you find.

2) Do the repair confirmation at the end of this task.

(f) If you there are no indications of leaks in the left engine, then continue.

(4) Do the steps that follow to do a check for hydraulic fluid leaks:

(a) Do the hydraulic power inspection check (AMM 29-00-00/601).

(b) If you find indications of hydraulic fluid leaks, then do the steps that follow:

1) Do the corrective action shown in the inspection/check procedure or repair the problems that you find.

2) Do the repair confirmation at the end of this task.

3) If there are no indications of hydraulic fluid leaks, then continue.

(5) Do a check for contamination in the air distribution system.

(a) Do the task to remove oil contamination from the air conditioning and pneumatic systems (AMM 21-00-21/201) with left engine and the left air conditioning pack on.

(b) If there is smoke or fumes, then do a check of the air distribution system for the source of the contamination. Examine the components that follow:

1) Examine each of the components of the left air conditioning pack.

2) Examine the components of the main distribution manifold.

3) Examine the air distribution ducts where the smoke first appeared.

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

5) Do the repair confirmation at the end of this task.

(c) If there is no smoke or fumes, then do all of the task to remove oil contamination from the air conditioning and pneumatic systems (AMM 21-00-21/201), with the two engines, the APU, and the two air conditioning packs on.

(d) If there is smoke or fumes, then do the steps that follow to do a check of the air distribution system for the source of the contamination:

1) Examine each of the components of the two air conditioning packs.

2) Examine the components of the main distribution manifold.

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3) Examine the air distribution ducts where the smoke or fumes first appeared.
4) Replace the component or clean the duct that is the source of the smoke or fumes.
5) Do the repair confirmation at the end of this task.

(e) If there is no smoke or fumes, and if the problem does not occur on the subsequent flight, then there was an intermittent fault.

F. Repair Confirmation

(1) Make sure that smoke and fumes do not appear in the flight compartment or in the passenger compartment when the air conditioning system is operates (AMM 21-00-21/201).
(2) If the procedure to remove oil contamination from the air conditioning system is run until there is no smoke or fumes, and if the problem does not occur on the next flight, then you corrected the problem.
(a) If there is smoke or fumes, then go to PROCEDURE 1 and do the task to remove contamination from the right engine, the right air conditioning pack, and the hydraulic system.

G. Put the Airplane Back to its Usual Condition.

(1) Shut down the APU if it is no longer needed (AMM 49-11-00/201).
(2) Do the procedure to shut down the left and the right engine (AMM 71-00-00/201).

4. PROCEDURE 3: Smoke or Fumes in the Flight Compartment or Passenger Compartment Reported During Flight. Smoke Does Not Stop With Isolation Valve Closed, Each ofthe Two Pack Switches Off (In Turn).

A. References

(1) AMM 21-00-21/201, Air Conditioning System Oil Contamination (Removal) - Maintenance Practices
(2) AMM 29-00-00/601, Hydraulic Power - Inspection/Check

B. Possible Causes

(1) Hydraulic fluid leak (for example, overservicing).
(2) Contamination in the air distribution system.

C. Prepare for the Test

(1) Prepare the left and the right engines for usual operation (AMM 71-00-00/201).
(2) Start the left and the right engine (AMM 71-00-00/201).
(3) Start the APU (AMM 49-11-00/201).
(4) Make sure all of the doors and windows are closed.

NOTE: Do not do these procedures with the passengers or the crew on the airplane because these procedures can cause a high concentration of smoke or fumes in the airplane.

D. Fault Isolation Procedure

(1) Do the steps that follow to do a check for hydraulic fluid leaks:
(a) Do the hydraulic power inspection check (AMM 29-00-00/601).

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(b) If you find indications of hydraulic fluid leaks, then do the steps that follow:
1) Do the corrective action shown in the inspection procedure or repair the problems that you find.
2) Do the repair confirmation at the end of this task.
(c) If there are no indications of hydraulic fluid leaks, then continue.
(2) Do a check for contamination in the air distribution system.
(a) Do the task to removal oil contamination from the air conditioning and pneumatic systems (AMM 21-00-21/201).
(b) If there is smoke or fumes, then do a check of the areas in the air distribution system for the source of the contamination. Examine the components that follow:
1) Examine the components of main distribution manifold.
2) Examine the air distribution ducts where the smoke first appeared.
(c) Replace the component or clean the duct that is the source of the smoke or fumes.
(d) Do the repair confirmation at the end of this task.
(3) If there is no smoke or fumes, then there was an intermittent fault.

E. Repair Confirmation
(1) Make sure that smoke amd fumes do not appear in the flight compartment or in the passenger compartment when the air conditioning system operates (AMM 21-00-21/201).
(a) If the procedure to removal oil contamination from the air conditioning and pneumatic systems (AMM 21-00-21/201) is run until there is no smoke or fumes, and if the problem does not occur on the next flight, then you corrected the problem.
(b) If there is smoke or fumes, then go to PROCEDURE 4 and do a check of the recirculation system.

F. Put the Airplane Back to its Usual Condition.
(1) Shut down the APU if it is no longer needed (AMM 49-11-00/201).
(2) Do the procedure to shut down the left and the right engine (AMM 71-00-00/201).

5. PROCEDURE 4: Smoke or Fumes in the Flight Compartment or Passenger Compartment. Smoke Stops with the Recirculation Fans Off.

A. References
(1) AMM 21-25-00/501, Recirculation System - Adjustment Test
(2) AMM 21-25-01/401, Cabin Air Recirculation Fan - Removal/Installation
(3) AMM 21-25-02/401, Recirculation Air Filter - Removal/Installation
(4) AMM 49-11-00/201, Auxiliary Power Unit - Maintenance Practices
(5) AMM 71-00-00/201, Power Plant - Maintenance Practices (Operation Procedures)

B. Possible Causes
(1) Overheating of the recirculation fans or the related wiring.

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C. Prepare for the Test
(1) Prepare the left and the right engines for usual operation (AMM 71-00-00/201).
(2) Start the left and the right engine (AMM 71-00-00/201).
(3) Start the APU (AMM 49-11-00/201).
(4) Make sure all of the doors and windows are closed.

NOTE: Do not do these procedures with the passengers or the crew on the airplane because these procedures can cause a high concentration of smoke or fumes in the airplane.

D. Fault Isolation Procedure
(1) Do a check of the air recirculation system:
(a) Remove the left and right air recirculation fan filters (AMM 21-25-02/401).
(b) Examine the left and right air recirculation fan filters to see if it is necessary to replace them.
1) If a filter needs replacement, install a new air recirculation fan filter (AMM 21-25-02/401).
(c) Do an operational test of the recirculation fan system (AMM 21-25-00/501) to see if the left or right air recirculation fan or the related wiring generates smoke while it operates.
(d) If there is smoke or fumes from the left or right air recirculation fan or the related wiring, then do the steps that follow:
1) Repair the applicable wiring.
2) If necessary, replace the air recirculation fan (AMM 21-25-01/401).
3) Do an operational test of the recirculation fan system (AMM 21-25-00/501).
4) If the operational test is satisfactory and the problem does not occur on the next flight, then you corrected the problem.
(e) 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.

E. Put the Airplane Back to its Usual Condition.
(1) Shut down the APU if it is no longer needed (AMM 49-11-00/201).
(2) Do the procedure to shut down the left and the right engine (AMM 71-00-00/201).

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Not Used
Figure 101

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DISTRIBUTION

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
CARD - L ECS FAN CONTROL, M861	2	1	119AL, MAIN EQUIP CTR, P50	21-26-05
CARD - R ECS FAN CONTROL, M862	2	1	119AL, MAIN EQUIP CTR, P50	21-26-05
CIRCUIT BREAKERS -	1		FLT COMPT, P11	
CONT, BULK CARGO HEAT, C689		1	11N26	*
CONT, FWD CARGO A/C & VENT, C693		1	11P20	*
FAN, EQUIPMENT COOLING AFT 1, C706		1	11P19	*
FAN, EQUIPMENT COOLING AFT 2, C705		1	11P10	*
FAN, L RECIRC, C660		1	11R14	*
FAN, R RECIRC, C661		1	11R23	*
FAN - GASPER CONT, C677 [1]		1	11R17	*
VALVE, CARGO EXHAUST, C694		1	11C20	*
CIRCUIT BREAKERS -	2		119AL, MAIN EQUIP CTR, P33	
FAN, AFT EXH AC AVAIL 1, C676 [6]		1	33D6	*
FAN, EQUIP COOL AFT 1, C333		1	33B1	*
CIRCUIT BREAKERS -	2		119AL, MAIN EQUIP CTR, P34	
FAN, AFT EQUIP COOL 1, C707		1	34L8	*
CIRCUIT BREAKERS -	2		119AL, MAIN EQUIP CTR, P36	
FAN, AFT LH CBN CREW REST AREA, C406 [3]		1	36B2	*
FAN, AFT LH CBN CREW REST AREA CONT, C922 [3]		1	36D5	*
FAN, EQUIP COOL AFT 2, C334		1	36G4	*
FAN, FLT DK CREW REST AREA, C401 [3]		1	36C6	*
FAN, FLT DK CREW REST AREA CONT, C917 [3]		1	36D4	*
FAN, GASPER, C342		1	36F2	*
FAN, L RECIRC, C336		1	36F1	*
VALVE, CARGO GND EXHAUST B/U, C664		1	36E4	*
VALVE, FLT DK CREW REST AREA CONT, C915 [3]		1	36D2	*
CIRCUIT BREAKERS -	2		119AL, MAIN EQUIP CTR, P37	
FAN, AFT RH CBN CREW REST AREA, C407 [3]		1	37C6	*
FAN, AFT RH CBN CREW REST AREA CONT, C923 [3]		1	37D7	*
CONT, CARGO A/C SOV, C666		1	37E4	*
FAN, BULK CARGO VENT, C344		1	37E6	*
FAN, FWD CARGO VENT, C358		1	37J3	*
FAN, FWD CBN CREW REST AREA, C405 [3]		1	37C4	*
FAN, FWD CBN CREW REST AREA CONT, C921 [3]		1	37D6	*
FAN, GND EXHAUST, C359		1	37J6	*
FAN, R RECIRC, C337		1	37G4	*
VALVE, CARGO GND EXHAUST, C665		1	37E3	*
COMPUTERS - (31-41-00/101)				
L EICAS, M10181				
R EICAS, M10182				
CONNECTOR - GROUND AIR SERVICE	3	1	193GL, FAIRING	21-21-02
CONTROLLER - (21-51-00/101)				
PACK FLOW (CARGO AIR CONDITIONING), M1610				

* SEE THE WDM EQUIPMENT LIST

[1] ALL SAS AIRPLANES

[2] SAS 150-152;
THREE MUFFLERS

SAS 050-149,153-999;
FIVE MUFFLERS
ALL MTH AIRPLANES

[3] AIRPLANES WITH CREW REST AREAS

[4] SAS 150-154 WITH SB 21-86;
MTH 275 WITH SB 21-86

[5] SAS 050-144,155-999; MTH 276-999

[6] SAS 050,051,150-155,162-165 WITH SB 21-82;
MTH 275,276 WITH SB 21-82, AND SAS 156-161,
166-999; MTH 277-999

Distribution - Component Index
Figure 101 (Sheet 1)

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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
DIFFUSER - WINDSHIELD	1	1	FLT COMPT	21-22-00
DIODES - (31-01-50/101)				
L RECIRC FAN/CARGO FIRE, R112				
R RECIRC FAN/CARGO FIRE, R113				
FLT DK CREW REST AREA, R462,R463,R464,R465, R466 3				
FWD CBN CREW REST AREA, R467,R468,R469, R272 3				
DIODE - (31-01-37/101)				
CARGO GROUND EXH BLOCKING, R478 4				
EXCHANGER - FLT DK CRA HEAT 3	11	1	821, FWD CARGO COMPT	21-29-00
FAN - AFT EQUIP/LAV/GALLEY VENT 1, B15	6	1	811, BULK CARGO COMPT	21-26-01
FAN - AFT EQUIP/LAV/GALLEY VENT 2, B16	6	1	811, BULK CARGO COMPT	21-26-01
FAN - AFT LH CABIN CRA SUPPLY, B433 3	10	1	AFT PASS. COMPT CEILING	21-29-02
FAN - AFT RH CABIN CRA SUPPLY, B431 3	10	1	AFT PASS. COMPT CEILING	21-29-02
FAN - BULK CARGO VENTILATION, B123	6	1	811, BULK CARGO COMPT	21-26-06
FAN - FLT DECK CRA SUPPLY, B426 3	10	1	821, FWD CARGO COMPT	21-29-02
FAN - FWD CABIN CRA SUPPLY, B432 3	10	1	FWD PASS. COMPT CEILING	21-29-02
FAN - FWD CARGO GND EXHAUST, B378	9	1	821, FWD CARGO COMPT	21-26-12
FAN - FWD CARGO VENT, B377	8	1	821, FWD CARGO COMPT	21-28-02
FAN - GASPER, B128 1	7	1	FWD PASS. COMP	21-24-00
FAN - L RECIRCULATION AIR, B13	3	1	821, FWD CARGO COMPT	21-25-01
FAN - R RECIRCULATION AIR, B14	3	1	821, FWD CARGO COMPT	21-25-01
FILTER - GALLEY VENTILATION	4	5	GALLEY	21-26-03
FILTER - RECIRCULATION AIR	3	6	821, FWD CARGO COMPT	21-25-02
GASPERS - FLIGHT DECK	1	4	FLT COMPT	21-22-00
GASPERS - PASSENGER CABIN	7		PASSENGER COMPT	21-24-00
GRILLE - RETURN AIR	3	96	PASSENGER CABIN	21-25-00
MANIFOLD - MAIN DISTRIBUTION	3	1	821, FWD CARGO COMPT	21-21-00
MUFFLER - GALLEY VENTILATION	4	4	ABOVE AFT GALLEY CEILING PANELS	21-26-08
MUFFLER - PASSENGER CABIN DISTRIBUTION	5	2	ABOVE PASSENGER CEILING PANEL	21-23-06
OUTLETS - CREW REST AREA A/C 3	11	4	PASS. COMPT,	21-29-00
OUTLETS - FLOOR	1	11	113AL AND FLT COMPT	21-22-01
OUTLET - OVERHEAD	1	1	FLT COMPT	21-22-03
PANEL - FWD CARGO A/C, M1619	1	1	FLT COMPT, P5	*
PANELS - (21-40-00/101)				
BULK CARGO HEAT CONTROL, M912				
CARGO HEAT CONTROL, M29				
PANEL - (21-51-00/101)				
TEMP CONTROL, M14				
PANEL - (21-58-00/101)				
EQUIP COOLING CONTROL, M17				
PANEL - (26-23-00/101)				
APU/CARGO FIRE CONTROL, M10444				

* SEE THE WDM EQUIPMENT LIST

Distribution - Component Index
Figure 101 (Sheet 2)

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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
RELAY - (31-01-19/101)				
AFT ATTEND SMK INDIC, K2129 [3]				
RELAYS - (31-01-36/101)				
AFT EQUIP/LAV/GALLEY VENT FAN 2, K347				
AFT LH CBN CREW REST FAN CONT, K1270 [3]				
CARGO FIRE/FLT DK CREW REST SMK, K1268 [3]				
CONT, CARGO GND EXH B/U VALVE, K1215				
FLT DK CREW REST FAN CONT, K1267 [3]				
FLT DK SMOKE, K1266 [3]				
FLT DK SMK EVAC VAL CONT, K1264 [3]				
FLT DK SUPPLY VLV CONT, K1263 [3]				
GASPER FAN, K525 [1]				
L RECIRC FAN, K415				
RELAYS - (31-01-37/101)				
AFT EQUIP/LAV/GALLEY VENT FAN 1, K346				
AFT EXH FAN 1 AC AVAIL, K835				
AFT EXH FAN 1 BUS TRANSFER, K368				
AFT RH CBN CREW REST FAN CONT, K1271 [3]				
BULK CARGO VENT FAN CONTROL, K504				
CONT, CARGO A/C SOV, K1212				
CONT, CARGO EXHAUST VALVE, K1213				
CONT, CARGO GND EXH FAN, K1211				
CONT, CARGO GND EXHAUST VALVE, K1214				
CONT, FWD CARGO VENT FAN, K1210				
FWD LBN CREW REST FAN CONT, K1269 [3]				
FWD/AFT CGO FIRE DISCON, K2119				
R FUEL JETTISON FAN SHED NO. 1, K2126 [5]				
R RECIRC FAN, K416				
SELECTOR - BULK CARGO HEAT MODE SELECTOR, YDUS1	1	1	FLT COMPT, P61, BULK CARGO HEAT CONT PNL, M912	*
SENSORS, CURRENT - (31-01-36/101)				
AFT EQUIP/LAV/GALLEY VENT FAN 2, TS246				21-26-04
AFT LH CREW REST FAN, TS526 [3]		1		21-29-00
CARGO GND EXHAUST FAN, TS494				
FLT DK CREW REST FAN, TS524 [3]		1		21-29-00
FWD CARGO VENT FAN, TS493				
GASPER FAN, TS289 [1]				21-24-04
LEFT RECIRC FAN, TS192				21-25-04
SENSORS, CURRENT - (31-01-37/101)				
AFT EQUIP/LAV/GALLEY VENT FAN 1, TS245				21-26-04
AFT RH CREW REST FAN, TS527 [3]		1		21-29-00
BULK CARGO VENT FAN, K614				
FWD CREW REST FAN, TS525 [3]		1		21-29-00
RIGHT RECIRC FAN, TS193				21-25-04

* SEE THE WDM EQUIPMENT LIST

Distribution - Component Index
Figure 101 (Sheet 3)

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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
SWITCH/LIGHT – BULK CARGO HEAT, YDBS3	1	1	FLT COMPT, P5, CARGO HEAT CONTROL PNL, M29	*
SWITCH/LIGHT – FWD CARGO A/C, YGPS1	1	1	FLT COMPT, P5, FWD CARGO A/C PANEL, M1619	*
SWITCH/LIGHT – GASPER FAN, YBFS8 1	1	1	FLT COMPT, P5, TEMP CONT PNL, M14	*
SWITCH/LIGHT – L, R RECIRC FAN, YBFS2,YBFS3	1	2	FLT COMPT, P5, TEMP CONT PNL, M14	*
VALVE – AFT EQUIPMENT/LAVATORY VENTILATION CHECK	6	2	811, BULK CARGO COMPT	21-26-02
VALVE – FLT DK CRA SMOKE EVACUATION, V161 3	11	1		21-29-03
VALVE – FLT DK CRA SHUTOFF, V162 3	11	1		21-29-01
VALVE – FWD CARGO AIR CONDITIONING SHUTOFF, V381	8	1	821, FWD CARGO COMPT	21-28-01
VALVE – FWD CARGO EXHAUST, V382	9	1	821, FWD CARGO COMPT	21-26-10
VALVE – FWD CARGO GND EXHAUST, V383	9	1	821, FWD CARGO COMPT	21-26-11
VALVE – FWD CARGO GND EXH BACKUP, V384	9	1	821, FWD CARGO COMPT	21-26-11
VALVE – GALLEY VENTILATION CHECK	4	5	ABOVE GALLEY CEILING PANELS	21-26-07
VALVE – RECIRCULATION AIR CHECK	3	2	821, FWD CARGO COMPT	21-25-03

* SEE THE WDM EQUIPMENT LIST

Distribution – Component Index
Figure 101 (Sheet 4)

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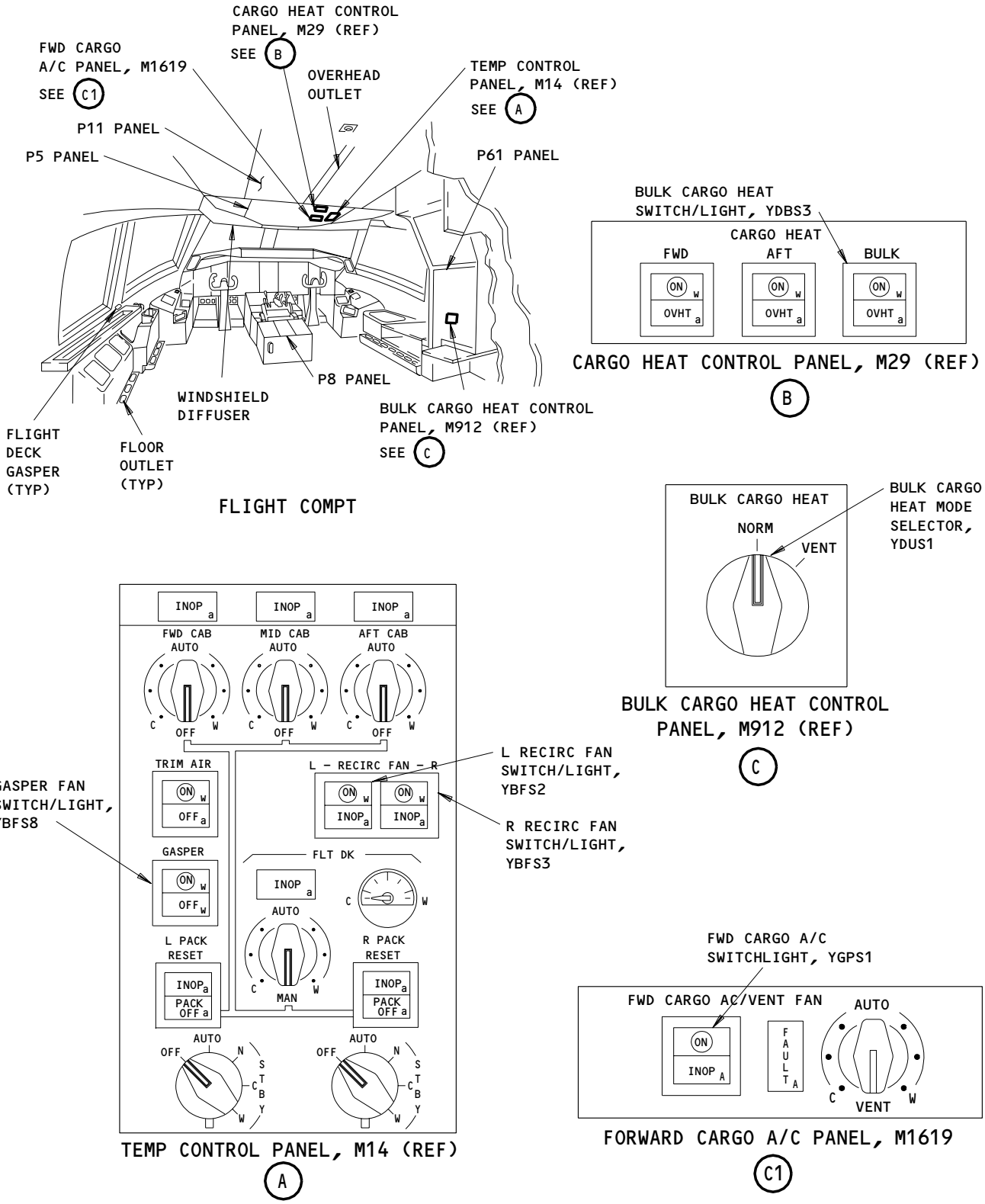

Component Location
Figure 102 (Sheet 1)

586254
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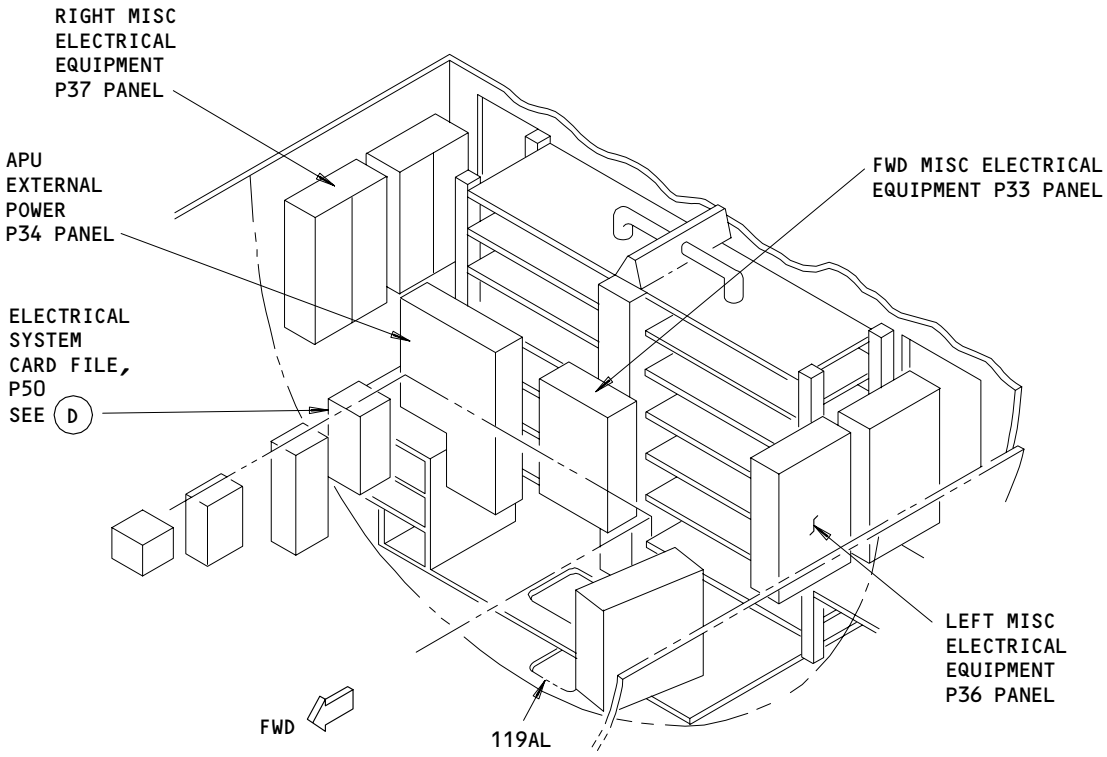
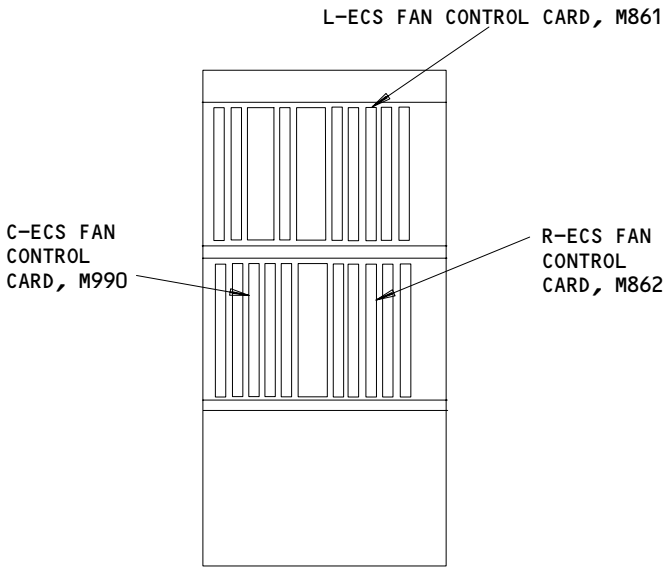


MAIN EQUIPMENT CENTER



ELECTRICAL SYSTEM CARD FILE, P50

D

Component Location
Figure 102 (Sheet 2)

38378

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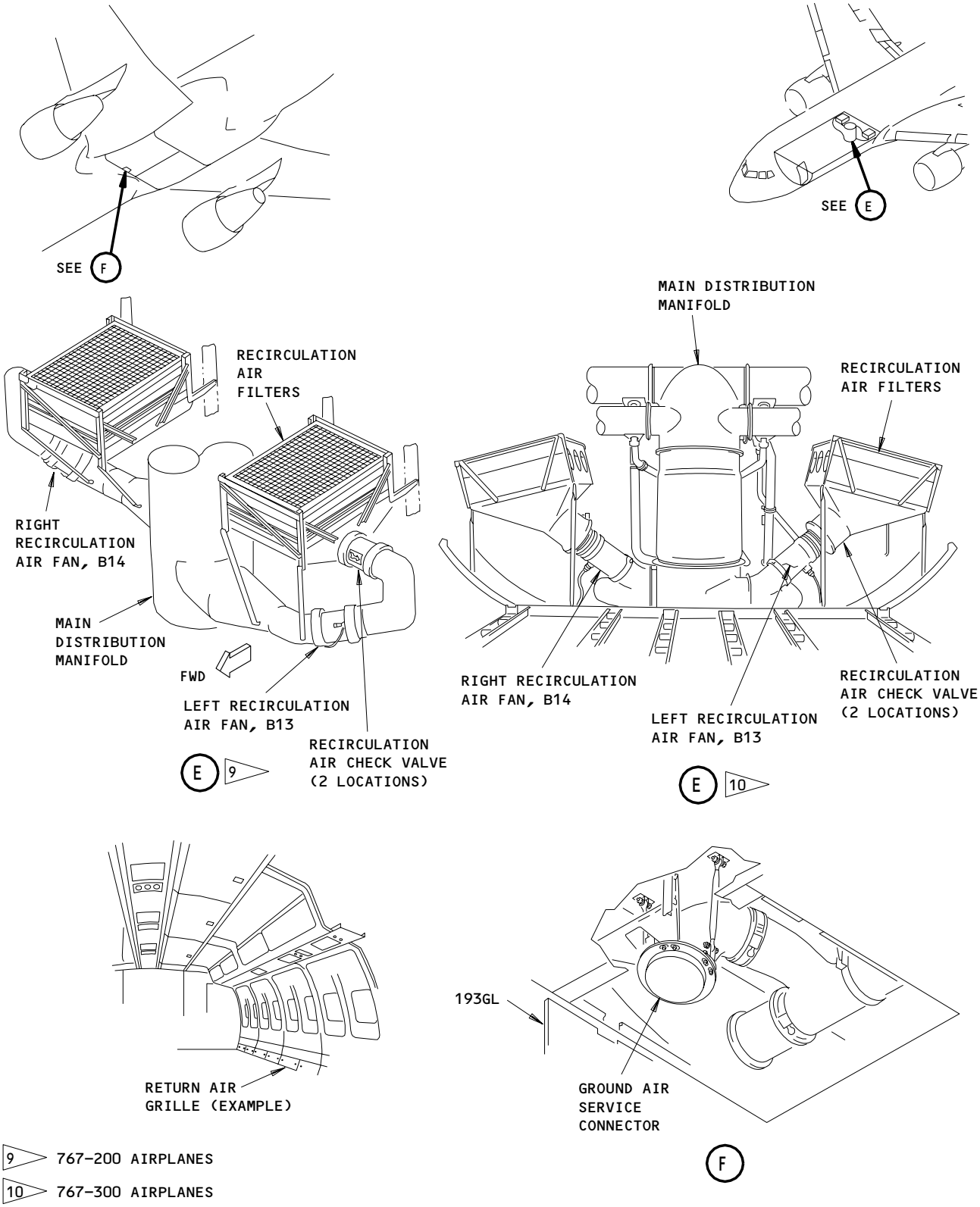

Component Location
Figure 102 (Sheet 3)

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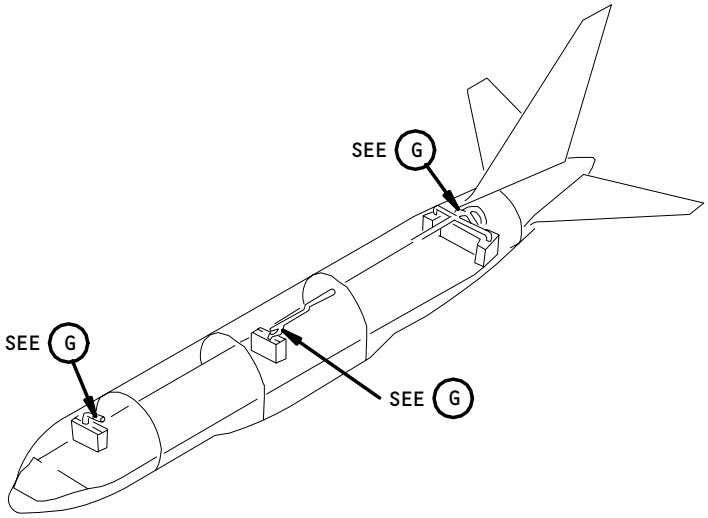

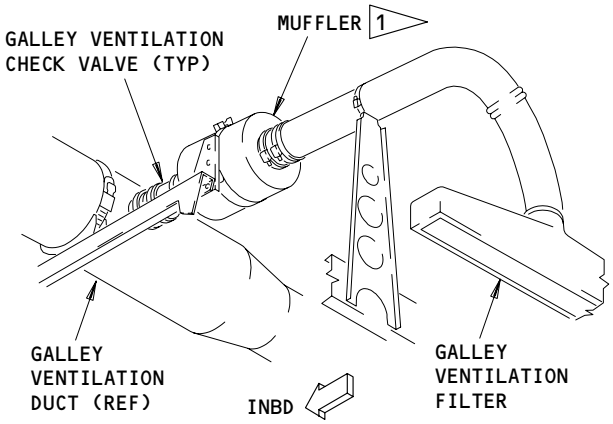

G

NOTE: (H) NOT USED

1 AFT GALLEY AREAS ONLY

Component Location
Figure 102 (Sheet 4)

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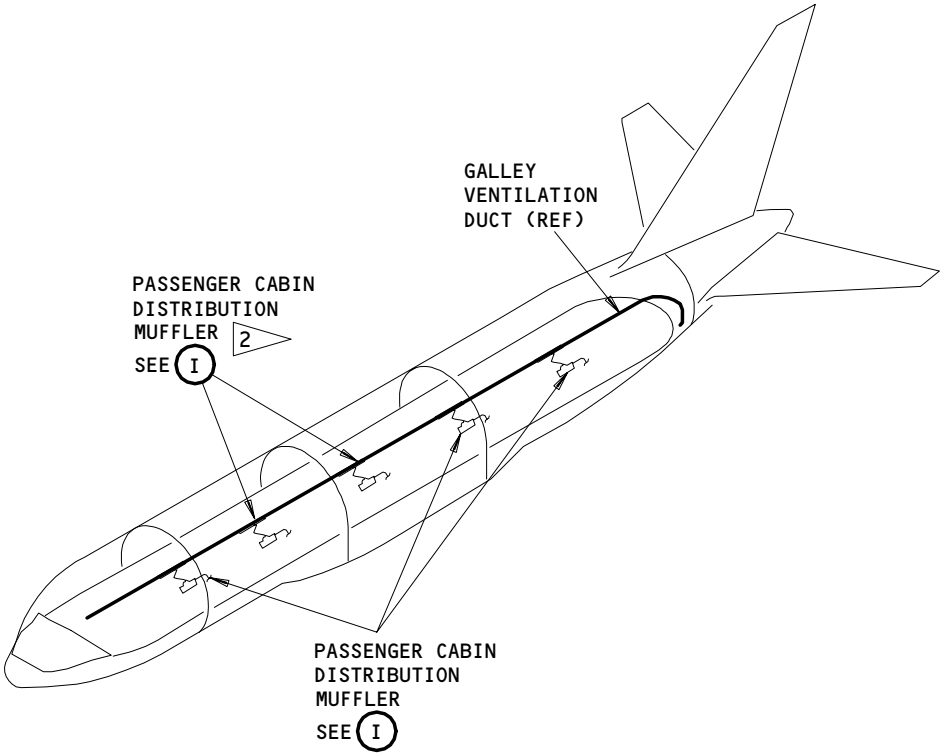

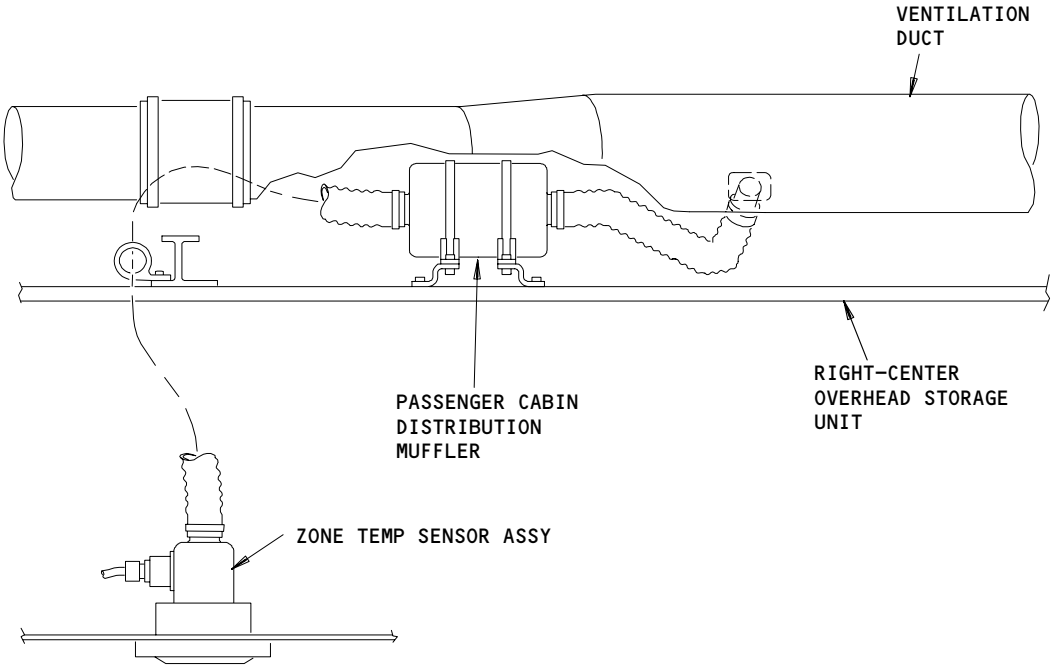

PASSENGER CABIN DISTRIBUTION MUFFLER

I

3 SAS 050-149,153-999
AND ALL MTH AIRPLANES

Component Location
Figure 102 (Sheet 5)

695541

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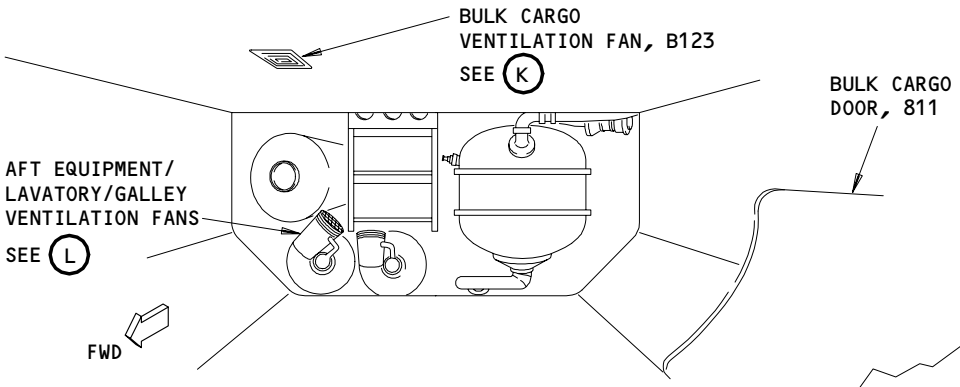
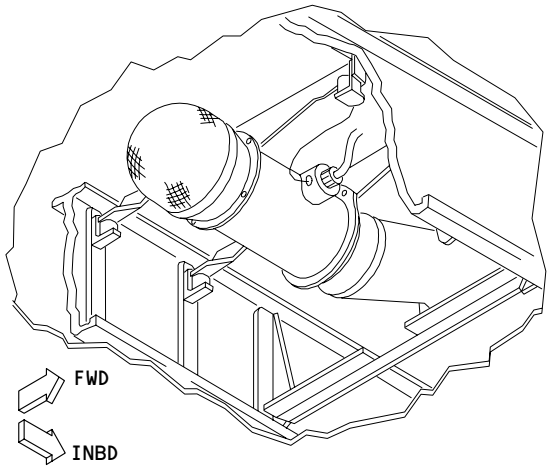
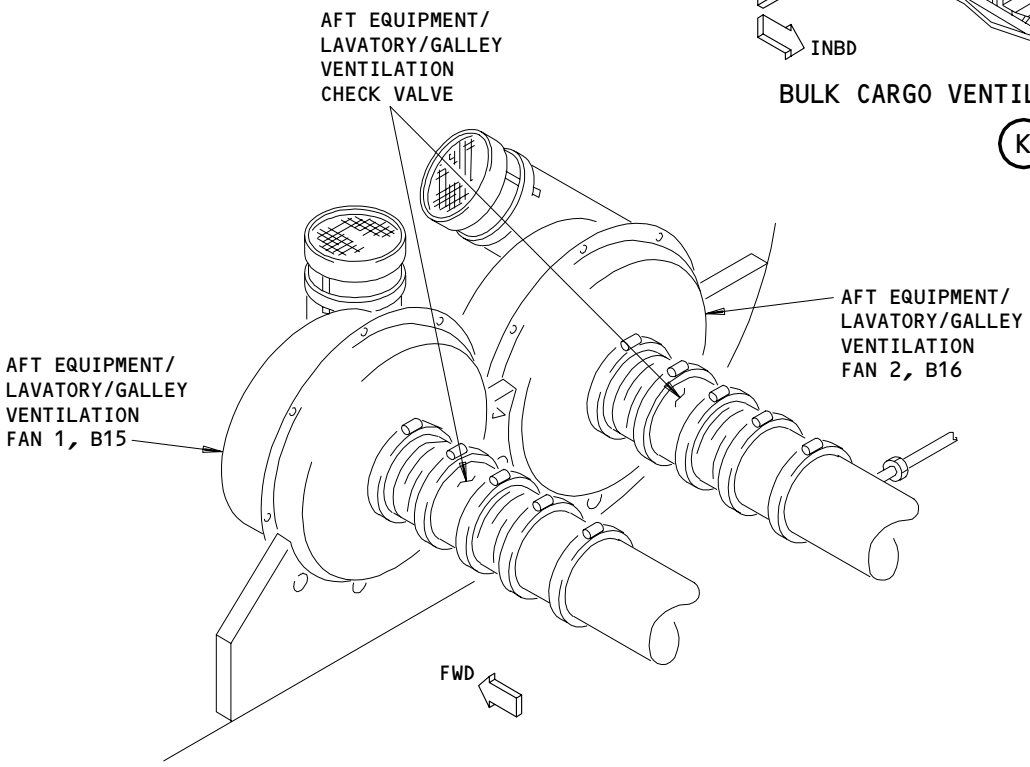


AFT AREA OF THE BULK CARGO COMPARTMENT



BULK CARGO VENTILATION FAN, B123

K



AFT EQUIPMENT/LAVATORY/GALLEY VENTILATION FANS

L

Component Location
Figure 102 (Sheet 6)

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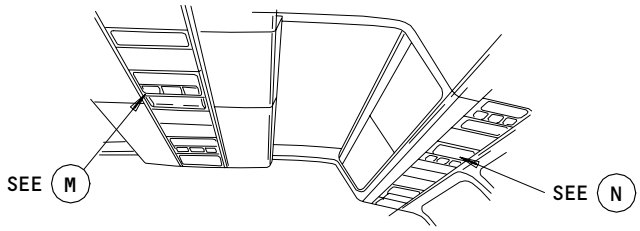

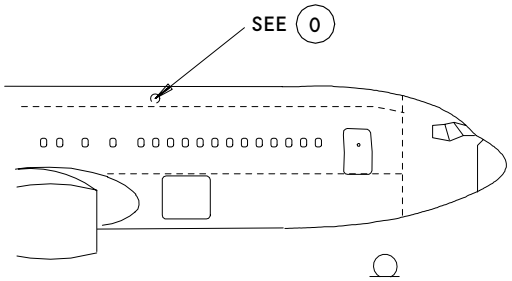

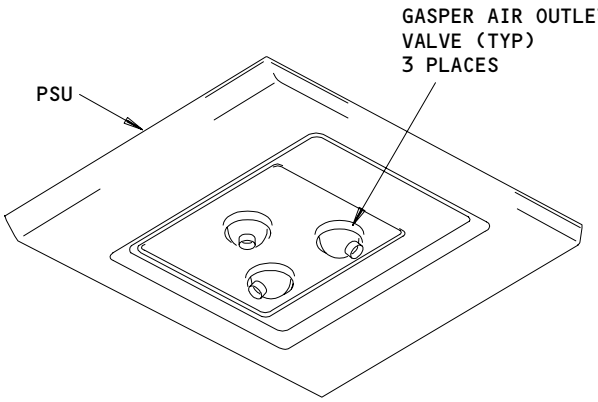

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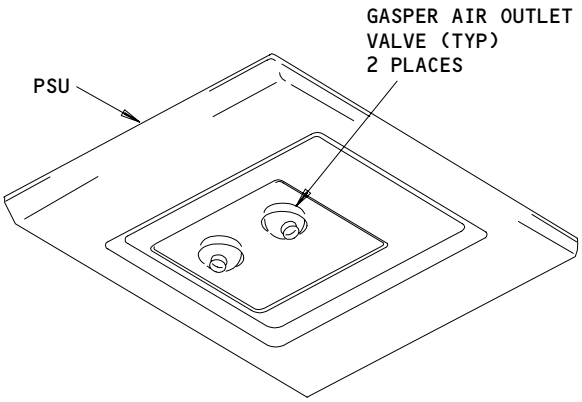

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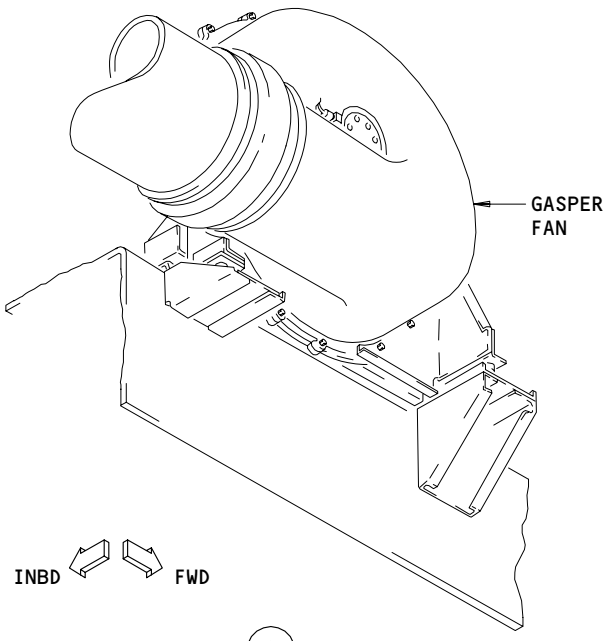

O

Component Location
Figure 102 (Sheet 7)

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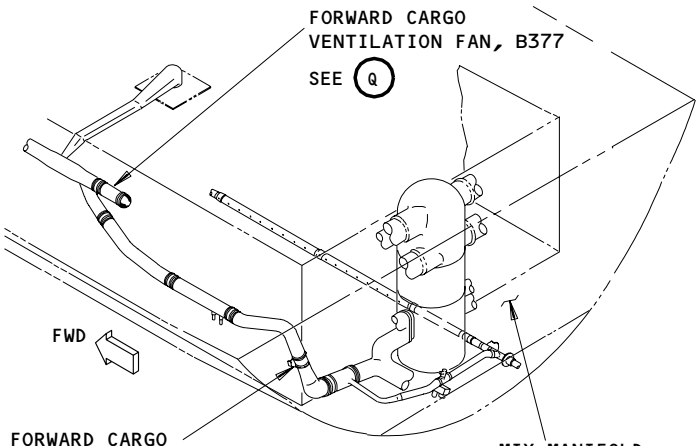
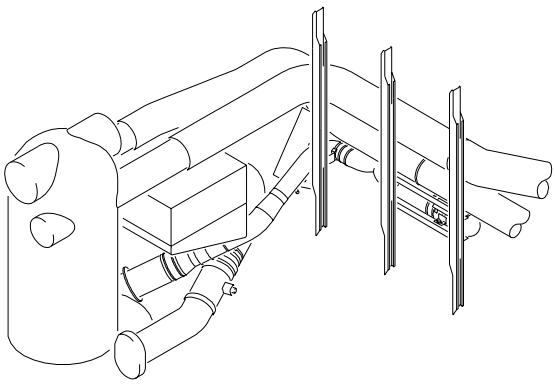
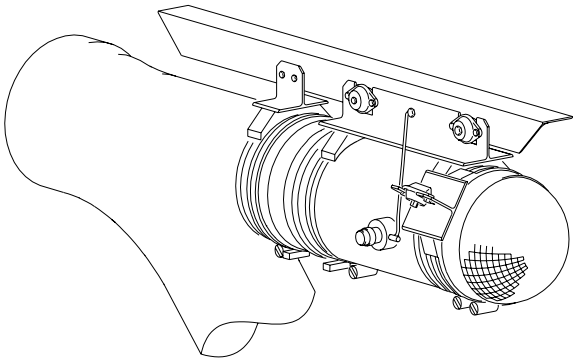


MIX MANIFOLD BAY AND
FORWARD CARGO COMPARTMENT 4

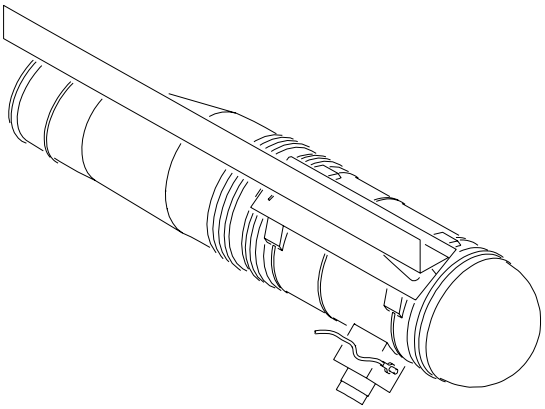


MIX MANIFOLD BAY AND
FORWARD CARGO COMPARTMENT 5



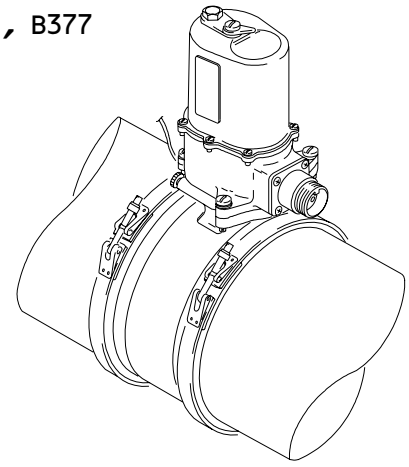
FORWARD CARGO VENTILATION FAN, B377

Q 4



FORWARD CARGO VENTILATION FAN, B377

Q 5



FORWARD CARGO A/C SHUTOFF VALVE, V381

P

4 SAS 150-999; MTH AIRPLANES
5 SAS 050-149

Component Location
Figure 102 (Sheet 8)

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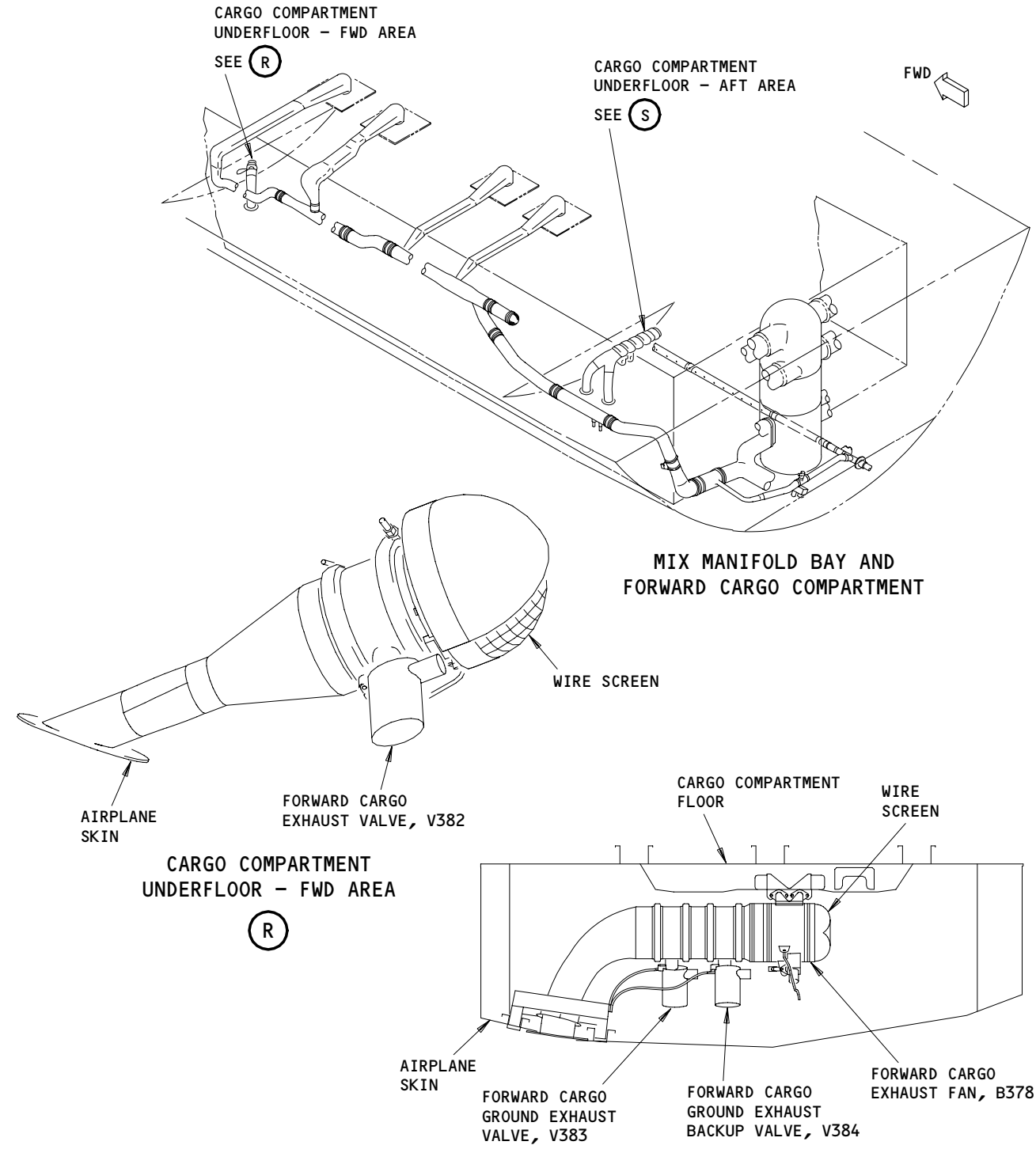

Component Location
Figure 102 (Sheet 9)

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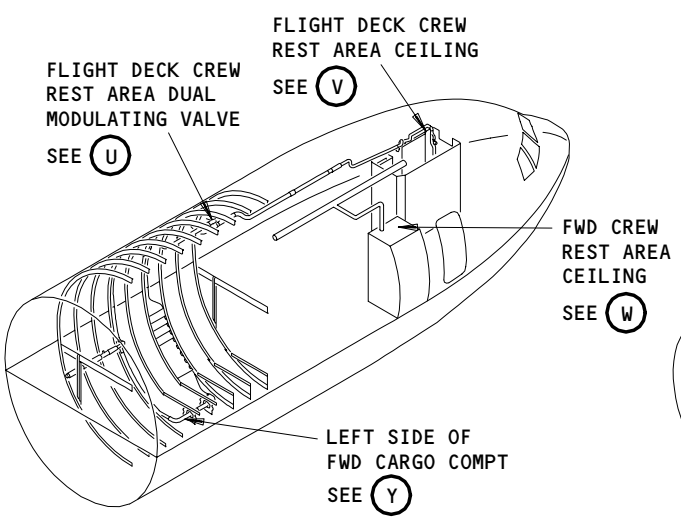
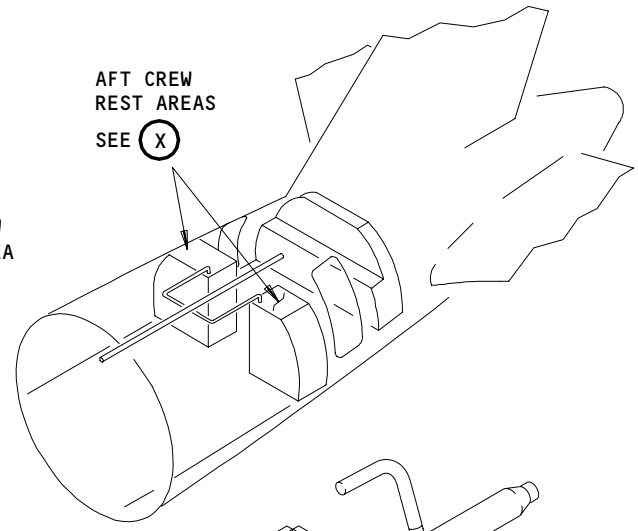
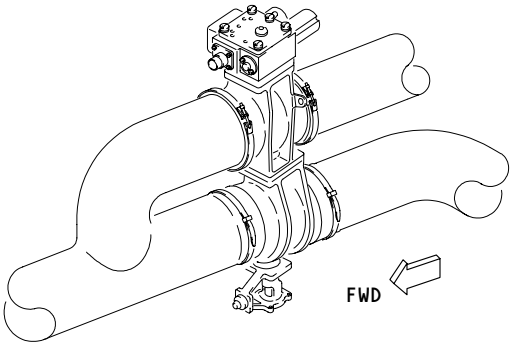
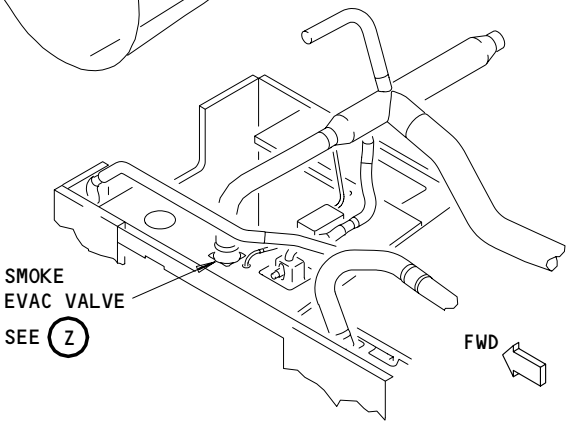






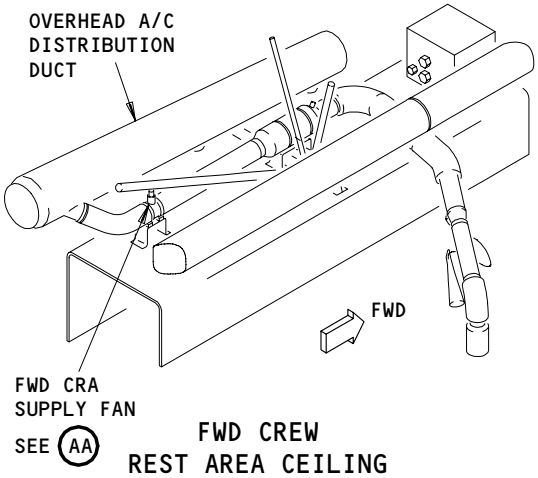
FLIGHT DECK CREW REST AREA
DUAL MODULATING VALVE

U



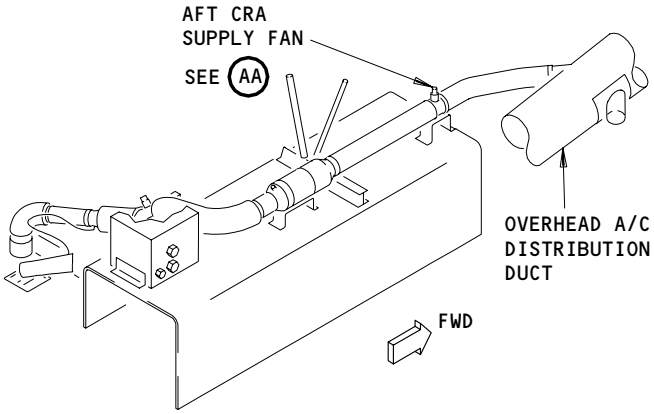
FLIGHT DECK CREW
REST AREA CEILING

V



FWD CREW
REST AREA CEILING

W



AFT CREW REST AREA CEILING
(LEFT CRA SHOWN, RIGHT CRA SIMILAR)

X

Component Location
Figure 102 (Sheet 10)

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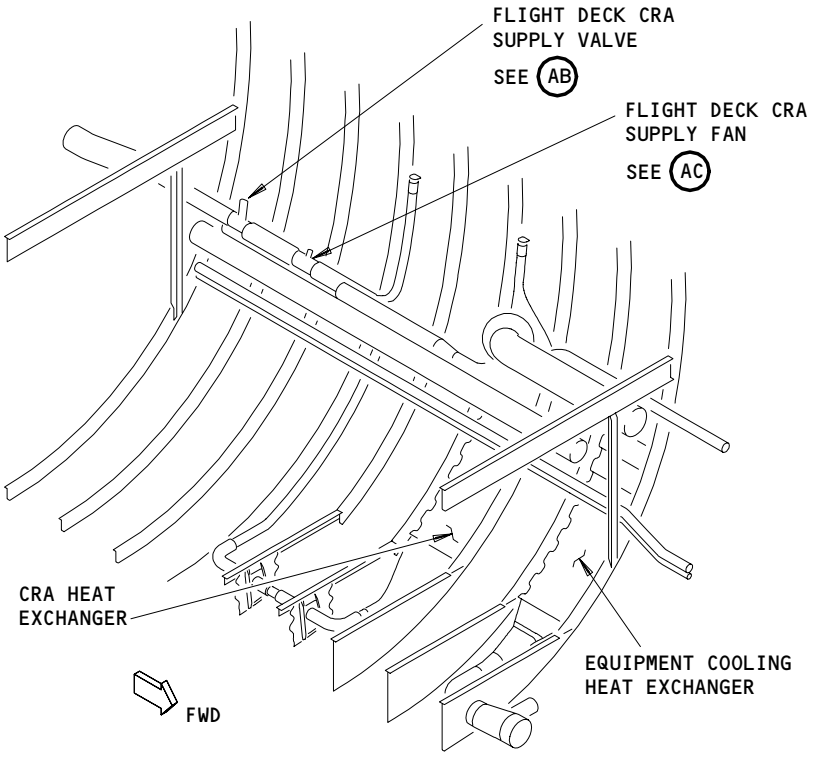
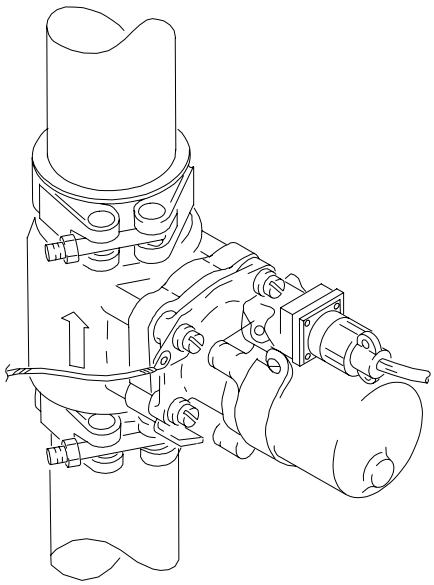
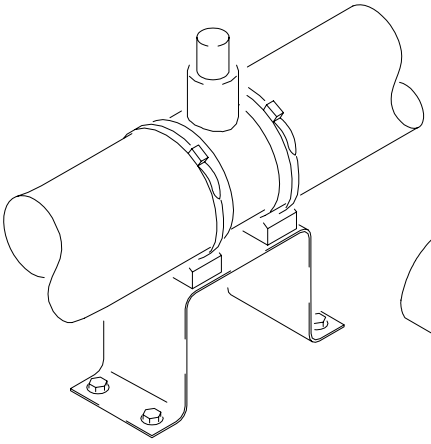


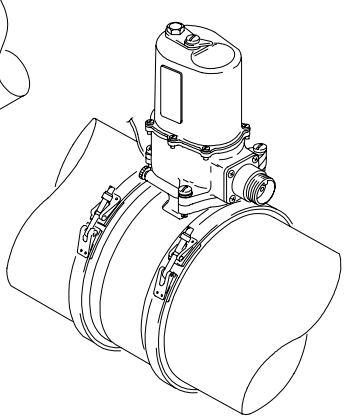
LEFT SIDE OF
FORWARD CARGO COMPARTMENT
Y



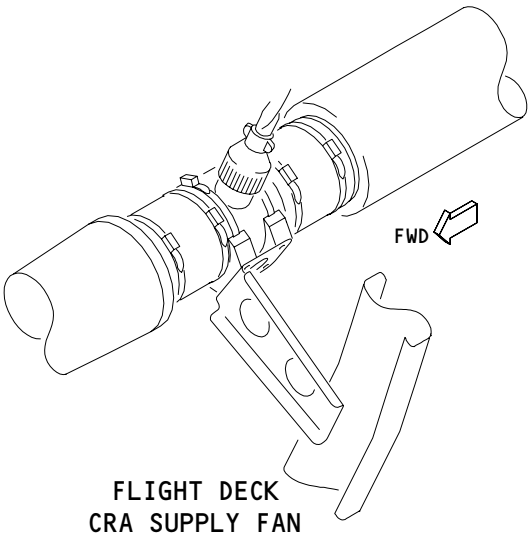
SMOKE EVAC
VALVE
Z



FWD/AFT CRA
SUPPLY FAN
AA



FLIGHT DECK CRA
SUPPLY VALVE
AB



FLIGHT DECK
CRA SUPPLY FAN
AC

Component Location
Figure 102 (Sheet 11)

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DISTRIBUTION - FAULT ISOLATION

1. General
   A. This procedure has fault isolation data for these air conditioninig distribution systems:
      (1) Gapser Air System (AMM 21-24-00)
      (2) Recirculation System (AMM 21-25-00)
      (3) Ventilation System (AMM 21-26-00)
      (4) Forward Cargo Air Distribution System (AMM 21-28-00)
2. Fault Isolation Procedures
   A. General
      (1) The fault isolation procedures are given in one of these formats:
         (a) Format 1 - Fault Isolation Tasks
         (b) Format 2 - Fault Isolation Trees (Figures)
   B. List of Fault Isolation Tasks
      (1) RECIRCULATION AIR FAN (HONEYWELL P/N 606622) POST-SB 21-0215; Recirculation Air Fan Vibration Monitor - Fault Isolation Task
   C. List of Fault Isolation Trees (Figures)
      (1) Figure 103, Recirc Fan INOP Light On, L(R) RECIRC FAN EICAS Message On
      (2) Figure 104, AFT EQ EXH FAN 1 EICAS Maintenance Message Displayed
      (3) Figure 105, AFT EQ EXH FAN 2 EICAS Maintenance Message Displayed
      (4) Figure 105A, AFT EQPT CLG FAN Is Shown on the EICAS Display
      (5) Figure 106, Smoke from Air Conditioning Outlets. Stopped with Both Utility Buses Off
      (6) Figure 107, BULK CARGO FAN EICAS Message with Bulk Cargo Heat Mode Selector in VENT
      (7) Figure 108, EICAS Message BULK CARGO FAN Displayed. Bulk Cargo Heat Selector in NORM
      (8) Figure 109, BULK CARGO OVHT EICAS Message and OVHT Light On. Bulk Cargo Heat Selector in NORM
      (9) Figure 110, BULK CARGO OVHT EICAS Message and OVHT Light On. Bulk Cargo Heat Selector in VENT
      (10) Figure 111, Gasper Fan OFF Light On
      (11) Figure 112, EICAS Status Msg CARGO A/C TEMP Displayed
      (12) Figure 113, EICAS Status Msg CARGO EXH FAN Displayed
      (13) Figure 114, EICAS Msg CGO GND EX VALVE or CGO GND EXH VALS Displayed
      (14) Figure 115, Fwd Cargo A/C INOP Light On. EICAS Msg FWD CARGO A/C Displayed
      (15) Figure 116, EICAS Message FWD CARGO I/F Displayed
      (16) Figure 117, EICAS Status Msg FWD CARGO FAN Displayed
3. RECIRCULATION AIR FAN (HONEYWELL P/N 606622) POST-SB 21-0215; Recirculation Air Fan Vibration Monitor - Fault Isolation Task
   A. Description
      (1) This fault isolation task is only for recirculation air fans (Honeywell p/n 606622) equipped with the Inflight Warning System (IWS) vibration monitor installation (AMM 21-25-01/401).

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B. Fault Isolation Procedure

(1) Supply power to the fan and observe one of the following conditions:

(a) If fan operates and monitor status indicator light shows a slow blinking (each 2 seconds) 'green' for one minute, then both the fan and the monitor are operable. Installation test or fault isolation are complete. Monitor was not responsible for the indicated shutdown.

(b) If fan is inoperative when power is supplied, then continue.

(2) Fault Isolation - new fan installation with existing monitor, or new monitor installation with existing fan:

(a) Reset the monitor:

1) Remove power from the applicable fan.

2) Depress (hold in spring loaded switch) the monitor RESET button while resupplying fan power.

NOTE: Due to configuration of some aircraft logic cards, this step may require a two-person operation. This mandates that this step must be accomplished simultaneously (one person must depress the monitor RESET button while another person resupplies fan power).

3) The fan should begin operation. When this occurs, release the spring loaded monitor RESET button.

NOTE: Fan monitor will time out and shutdown if the following step is not initiated within 10 seconds of this step. If this occurs, repeat the monitor reset step above.

4) Within 10 seconds of releasing monitor RESET button (fan is running), press again and hold the monitor RESET button for 3 to 5 seconds until the monitor STATUS LED cycles to 'green'.

5) Verify fan remains on for 7 minutes and the STATUS LED is blinking 'green' every 2 seconds.

NOTE: During the 7 minutes, the STATUS LED may blink 'amber' (yellow) on occassion which is acceptable. 'Red' blinks will result in a monitor shutdown of the fan during or at 7 minutes. If the fan shuts down, the fan must be replaced.

6) If fan does not operate while performing above monitor reset procedure, then continue.

(b) Fault Isolation - fan did not operate after monitor reset:

1) Unplug monitor from fan and check continuity between pin 5 and pin 6 at fan connector. If open circuit and fan is hot to the touch, then motor overheat switch may be open. Wait 15 minutes or until the fan is cool to the touch and repeat step.

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2) If after the fan cool down period, and continuity is not restored (open circuit) between pin 5 and pin 6, replace the fan.
3) If continuity (closed circuit) between pin 5 and pin 6 of the fan connector, then bypass monitor and attach aircraft cable to fan. Cycle the aircraft fan circuit breaker. If the fan runs, replace the monitor. If the fan does not run, do a check of the aircraft wiring.

(3) Fault Isolation - existing fan/monitor installation
(a) After report of fan shutdown, perform a monitor reset:
1) Remove power from the applicable fan.
2) Depress (hold in spring loaded switch) the monitor RESET button while resupplying fan power.

NOTE: Due to configuration of some aircraft logic cards, this step may require a two-person operation. This mandates that this step must be accomplished simultaneously (one person must depress the monitor RESET button while another person resupplies fan power).

3) The fan should then operate for the next 10 seconds. When this occurs, release the spring loaded monitor RESET button.

NOTE: During this time, the monitor should blink 'red' or 'amber' (yellow).

4) If the monitor blinks 'red' during this time, replace the fan. Previous fan shutdown was caused by fan bearing failure.
5) If the monitor blinks 'amber' (yellow) during this time, replace the monitor. Previous fan shutdown was caused by monitor failure.

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RECIRC FAN "INOP" LIGHT ON "L (R) RECIR FAN" EICAS MESSAGE ON

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11R14,11R23,36F2 OR 36F4,37G4 OR 37C4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 CHECK THAT "AFT ARMED" AND "FWD ARMED" SWITCH/LIGHTS, ON AFT PILOTS' CONTROL STAND PANEL, P8, ARE IN "UNARMED" POSITION.
PLACE RECIRC FAN SWITCH/LIGHT ON PILOTS' OVERHEAD PANEL, P5, TO "ON" POSITION.
CYCLE "L (R) UTILITY BUS" SWITCH/LIGHT ON P5 PANEL TO "OFF" AND BACK TO "ON" POSITION.
IS RECIRC FAN "INOP" LIGHT STILL ON?

YES → 20 LISTEN FOR RECIRCULATION FAN OPERATION.
IS FAN ON?

YES → 40 REPLACE ECS L (R) FAN CONTROL CARD, M861 (M862) (AMM 21-26-05/401).
IF THE PROBLEM CONTINUES, REPLACE RECIRCULATION FAN CURRENT L (R) SENSOR, TS192 (TS193)(AMM 21-25-04/401).

NO → 21 OPEN L (R) RECIRC FAN CIRCUIT BREAKER 11R14 (11R23).
REMOVE CONNECTOR D448 (D454) FROM RECIRCULATION AIR FAN.
DO A CONTINUITY CHECK FROM TERMINAL 5 TO TERMINAL 6 OF RECEPTACLE ON FAN (WDM 21-25-11,-21).
DOES CONTINUITY EXIST?

NO → 41 REPLACE L (R) RECIRCULATION AIR FAN, B13 (B14) (AMM 21-25-01/401).

YES → 42 CLOSE L (R) RECIRC FAN CIRCUIT BREAKER 11R14 (11R23).
REPLACE L (R) ECS FAN CONTROL CARD, M861 (M862) (AMM 21-26-05/401).
IF THE PROBLEM CONTINUES, REPLACE L (R) RECIRCULATION AIR FAN, B13 (B14) (AMM 21-25-01/401).
IF THE PROBLEM CONTINUES, REPLACE L (R) RECIRCULATION FAN RELAY, K415 (K416) (WDM 21-25-11,-21).
IF THE PROBLEM CONTINUES, REPLACE "FWD" AND "AFT CARGO FIRE" SWITCH/LIGHTS, YDOS1 AND YDOS2, ON APU/CARGO FIRE CONT MODULE, M10444, ON P8 PANEL OR M10444 (WDM 33-11-13).

NO → 2 THE SYSTEM IS OK.

NOTE: THERMAL OVERTRIP IN FAN CASE MAY CAUSE MESSAGE. IF FAULT REOCCURS, GO TO BLOCK 41.

Recirc Fan INOP Light On, L (R) RECIR FAN EICAS Message On
Figure 103

49223
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"AFT EQ EXH FAN 1" EICAS STATUS & MAINTENANCE MESSAGE DISPLAYED

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11P10, 11P19, 33B1, 33D6, 34L8, 36G4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 MAKE SURE THE "AFT CARGO FIRE" SWITCH ON THE P8 PANEL IS UNARMED.
PUT THE EQUIP COOLING MODE SELECTOR ON THE P5 PANEL TO "STBY" THEN BACK TO "AUTO".
DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109).
DOES "AFT EQ EXH FAN 1" MESSAGE REMAIN?

NO → 40 THE SYSTEM IS OK.
NOTE: THERMAL OVERTRIP IN THE FAN CASE CAN CAUSE MESSAGE. IF THE MESSAGE SHOWS, DO THE PROCEDURE IN BLOCK 44.

YES ↓

2 DOES THE AFT EQUIP/LAV/GALLEY VENT FAN 1 OPERATE?

YES → 41 REPLACE THE R ECS FAN CONTROL CARD, M862 (AMM 21-26-05/401). [1]
IF THE PROBLEM CONTINUES, REPLACE THE AFT EXHAUST FAN 1 CURRENT SENSOR, TS245 (AMM 21-26-04/401). [1]

NO ↓

3 DOES THE AFT EQUIP/LAV/GALLEY VENT FAN 2 OPERATE?

NO → 20 MOVE THE "BULK CARGO HEAT" SELECTOR ON THE P61 PANEL TO "VENT". PUSH THE "BULK CARGO HEAT" SWITCH-LIGHT ON THE P5 PANEL TO "ON".
DOES THE BULK CARGO VENT FAN OPERATE?

NO → 42 REPLACE THE AFT CARGO FIRE SWITCH-LIGHT, YDOS2, ON THE APU/CARGO FIRE CONTROL MODULE, M10444, ON THE P8 PANEL (AMM 33-13-00/201) OR M10444 (WDM 33-11-13). [1]

YES ↓

SEE SHEET 2 (BLOCK 4)

YES → 43 REPLACE THE R ECS FAN CONTROL CARD, M862 (AMM 21-26-05/401). [1]
ON AIRPLANES WITH THE FUEL JETTISON SYSTEM, IF THE PROBLEM CONTINUES, REPLACE THE RIGHT FUEL JETTISON FAN SHED NO. 1 RELAY, K2126 (WDM 21-26-21). [1]

[1] PUT THE EQUIP COOLING MODE SELECTOR ON THE P5 PANEL TO "STBY" THEN BACK TO "AUTO". DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109). MAKE SURE THE EICAS MESSAGE, "AFT EQ EXH FAN 1", DOES NOT SHOW ON THE BOTTOM DISPLAY.

"AFT EQ EXH FAN 1" EICAS Status & Maintenance Message Displayed
Figure 104 (Sheet 1)

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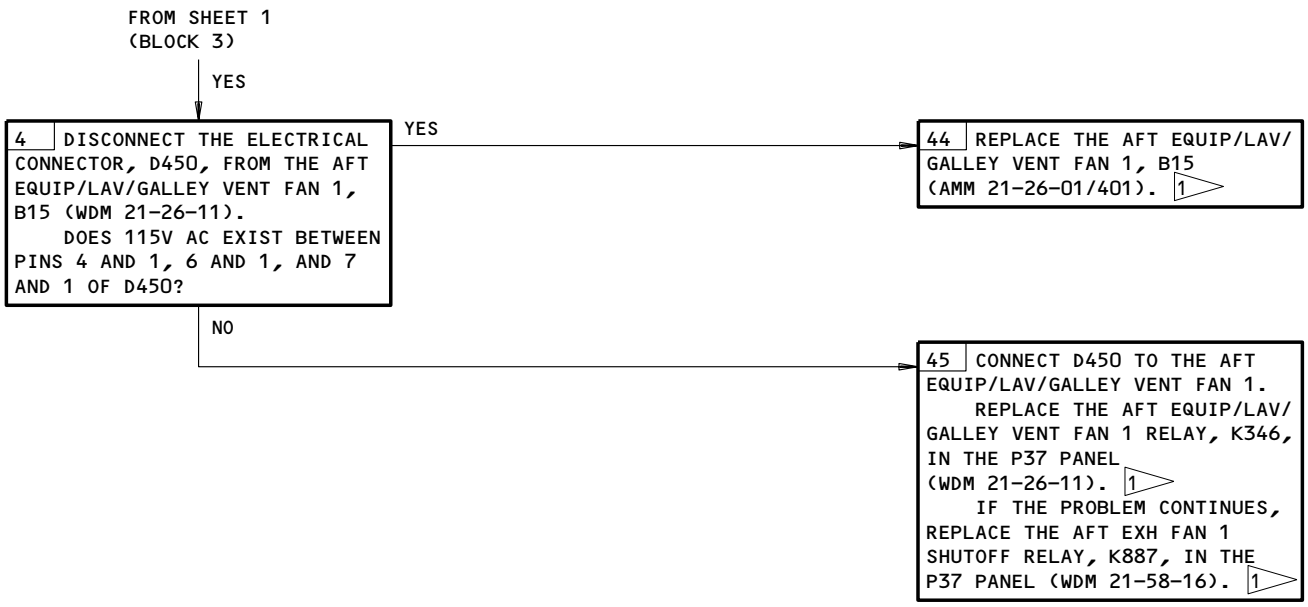

"AFT EQ EXH FAN 1" EICAS Status & Maintenance Message Displayed
Figure 104 (Sheet 2)

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"AFT EQ EXH FAN 2" EICAS STATUS & MAINTENANCE MESSAGE DISPLAYED

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11P10, 11P19, 33B1, 33D6, 36G4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 MAKE SURE THE "AFT CARGO FIRE" SWITCH ON THE P8 PANEL IS UNARMED.
PUT THE EQUIP COOLING MODE SELECTOR ON THE P5 TO "STBY".
DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109).
DOES THE EICAS MESSAGE, "AFT EQ EXH FAN 2", SHOW ON THE BOTTOM DISPLAY?

NO → 40 THE SYSTEM IS OK.
NOTE: THERMAL OVERTRIP IN THE FAN CASE CAN CAUSE MESSAGE. IF THE MESSAGE SHOWS, DO THE PROCEDURE IN BLOCK 44.

YES

2 DOES THE AFT EQUIP/LAV/GALLEY VENT FAN 2 OPERATE?

YES → 41 REPLACE THE L ECS FAN CONTROL CARD, M861 (AMM 21-26-05/401). 1
IF THE PROBLEM CONTINUES, REPLACE THE AFT EXHAUST FAN 2 CURRENT SENSOR, TS246 (AMM 21-26-04/401). 1

NO

3 DOES THE AFT EQUIP/LAV/GALLEY VENT FAN 1 OPERATE?

NO → 20 MOVE THE "BULK CARGO HEAT" SELECTOR ON THE P61 PANEL TO "VENT". PUSH THE "BULK CARGO HEAT" SWITCH-LIGHT ON THE P5 TO "ON".
DOES THE BULK CARGO VENT FAN OPERATE?

NO → 42 REPLACE THE AFT CARGO FIRE SWITCH-LIGHT, YDOS2, ON THE APU/CARGO FIRE CONTROL MODULE, M10444, ON THE P8 PANEL (AMM 33-13-00/201) OR M10444 (WDM 33-11-13). 1

YES → 43 REPLACE THE L ECS FAN CONTROL CARD, M861 (AMM 21-26-05/401). 1
ON AIRPLANES WITH THE FUEL JETTISON SYSTEM, IF THE PROBLEM CONTINUES, REPLACE THE RIGHT FUEL JETTISON FAN SHED NO. 1 RELAY, K2126 (WDM 21-26-21). 1

YES
SEE SHEET 2 (BLOCK 4)

1 DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109). MAKE SURE THE EICAS MESSAGE, "AFT EQ EXH FAN 2", DOES NOT SHOW ON THE BOTTOM DISPLAY.

"AFT EQ EXH FAN 2" EICAS Status & Maintenance Message Displayed
Figure 105 (Sheet 1)

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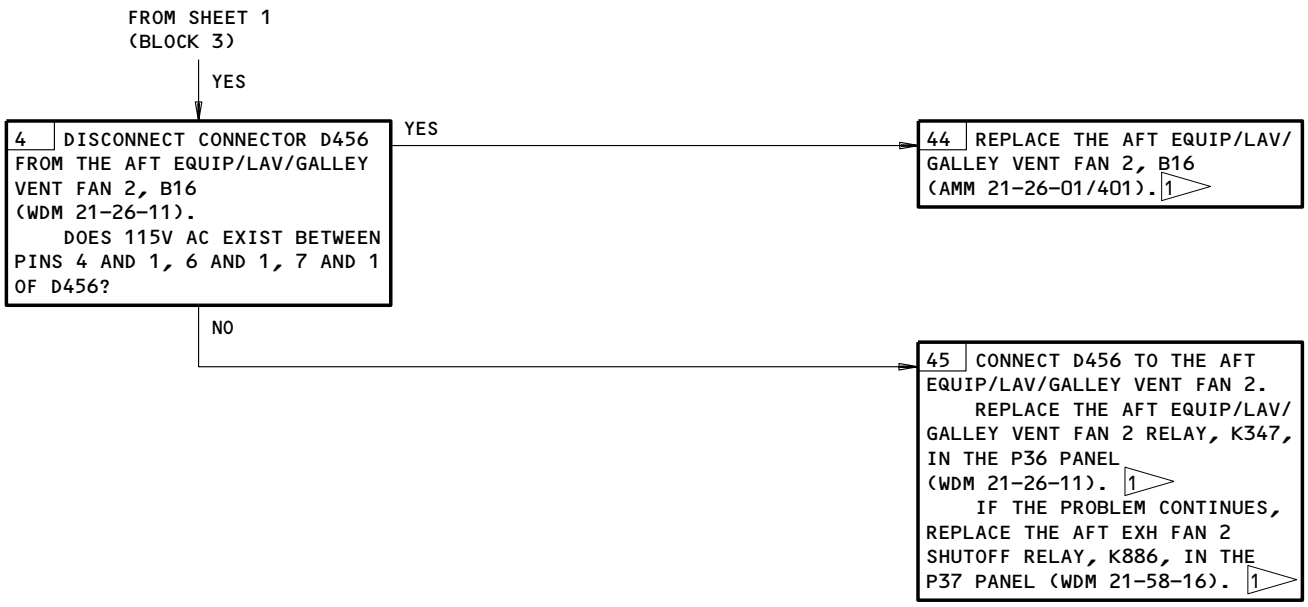

"AFT EQ EXH FAN 2" EICAS Status & Maintenance Message Displayed
Figure 105 (Sheet 2)

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"AFT EQPT CLG FAN" IS SHOWN ON THE EICAS DISPLAY

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (MM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11P10,11P19,33B1,33D6,34L8,36G4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (MM 24-22-00/201)

1 MAKE SURE THAT THE "AFT CARGO FIRE" SWITCH ON THE P8 PANEL IS DISARMED.
TURN THE "EQUIP COOLING" SELECTOR SWITCH ON THE P5 PANEL TO "STBY" THEN BACK TO "AUTO".
DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE (31-41-00/101, FIG. 109).
DOES THE MAINTENANCE MESSAGE "AFT EQ EXH FAN 2" SHOW ON THE EICAS DISPLAY?

YES → 30 DO THIS PROCEDURE: "AFT EQ EXH FAN 2" EICAS MAINTENANCE MESSAGE DISPLAYED (FIG. 105).

NO

2 DOES THE MAINTENANCE MESSAGE "AFT EQ EXH FAN 1" SHOW ON THE EICAS DISPLAY?

NO → 31 THE SYSTEM IS OK.
NOTE: THE FAN STOPS IF IT BECOMES TOO HOT. IF THE MESSAGE OCCURS AGAIN, REPLACE THE AFT EQUIP/LAV/GALLEY VENT FAN 1, B15 (MM 21-26-01/401).

YES

3 FIND THE P6 PANEL AND OPEN THE CIRCUIT BREAKERS THAT FOLLOW:
- 6H5, "CARGO FEXT BTL 1"
- 6H6, "CARGO FEXT BTL 2".

PUSH THE "AFT CARGO FIRE" SWITCH TO THE "ARMED" POSITION THEN BACK TO THE OFF POSITION.
DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE (31-41-00/101, FIG. 109).
CLOSE THE CIRCUIT BREAKERS THAT FOLLOW:
- 6H5, "CARGO FEXT BTL 1"
- 6H6, "CARGO FEXT BTL 2".

DOES "AFT EQ EXH FAN 1" SHOW ON THE EICAS DISPLAY?

NO → 32 REPLACE THE EQUIP COOL STBY RELAY, K629, IN THE P37 PANEL.

YES

SEE SHEET 2 (BLOCK 4)

AFT EQPT CLG FAN Is Shown on the EICAS Display
Figure 105A (Sheet 1)

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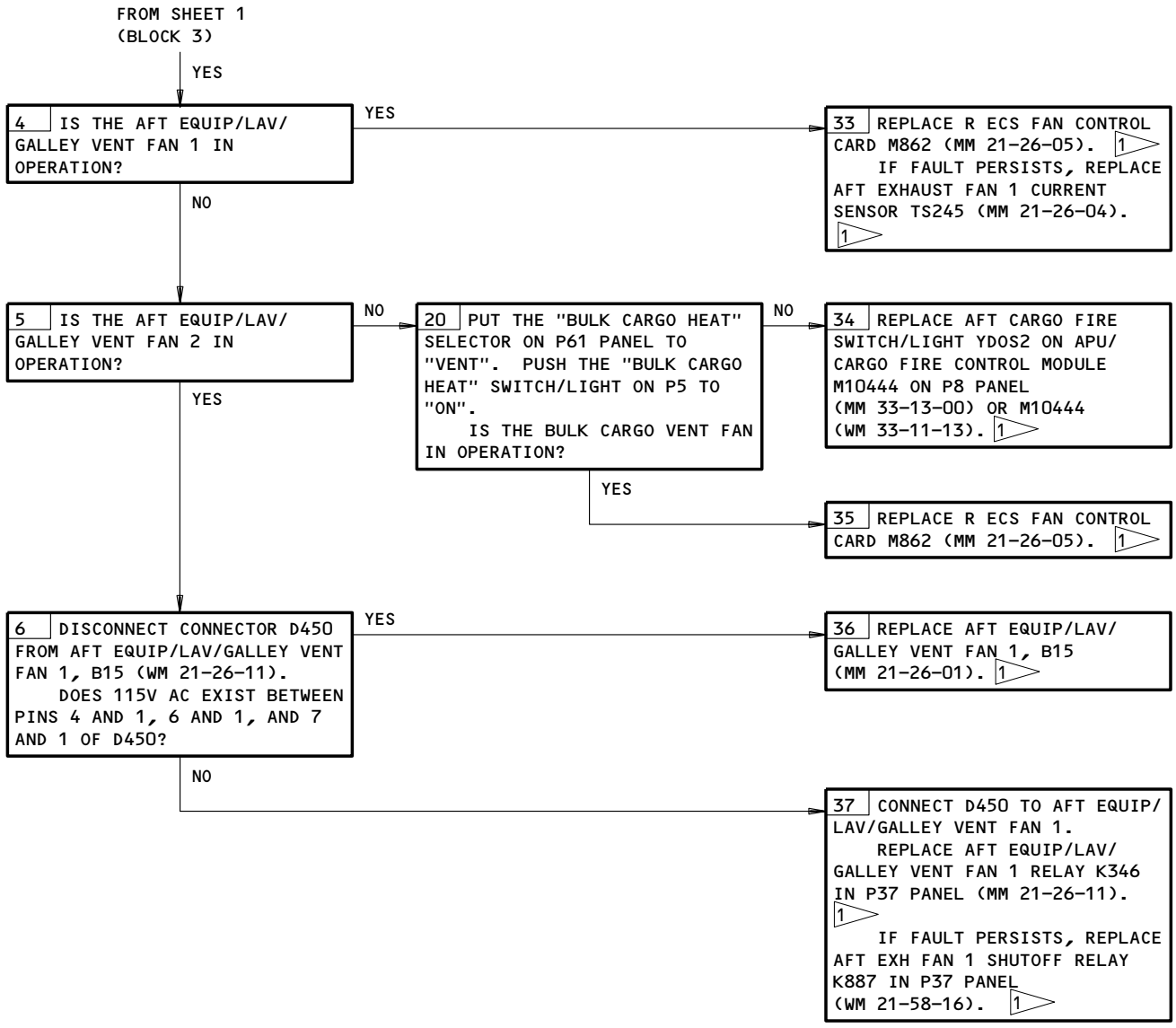

1 TURN THE "EQUIP COOLING" SELECTOR SWITCH ON THE P5 PANEL TO "STBY" THEN BACK TO "AUTO". DO THE EICAS STATUS/ MAINTENANCE MESSAGE ERASE PROCEDURE (31-41-00, FIG. 109). MAKE SURE THAT "AFT EQ EXH FAN 1" IS NOT SHOWN ON THE EICAS DISPLAY.

AFT EQUIP CLG FAN is Shown on the EICAS Display
Figure 105A (Sheet 2)

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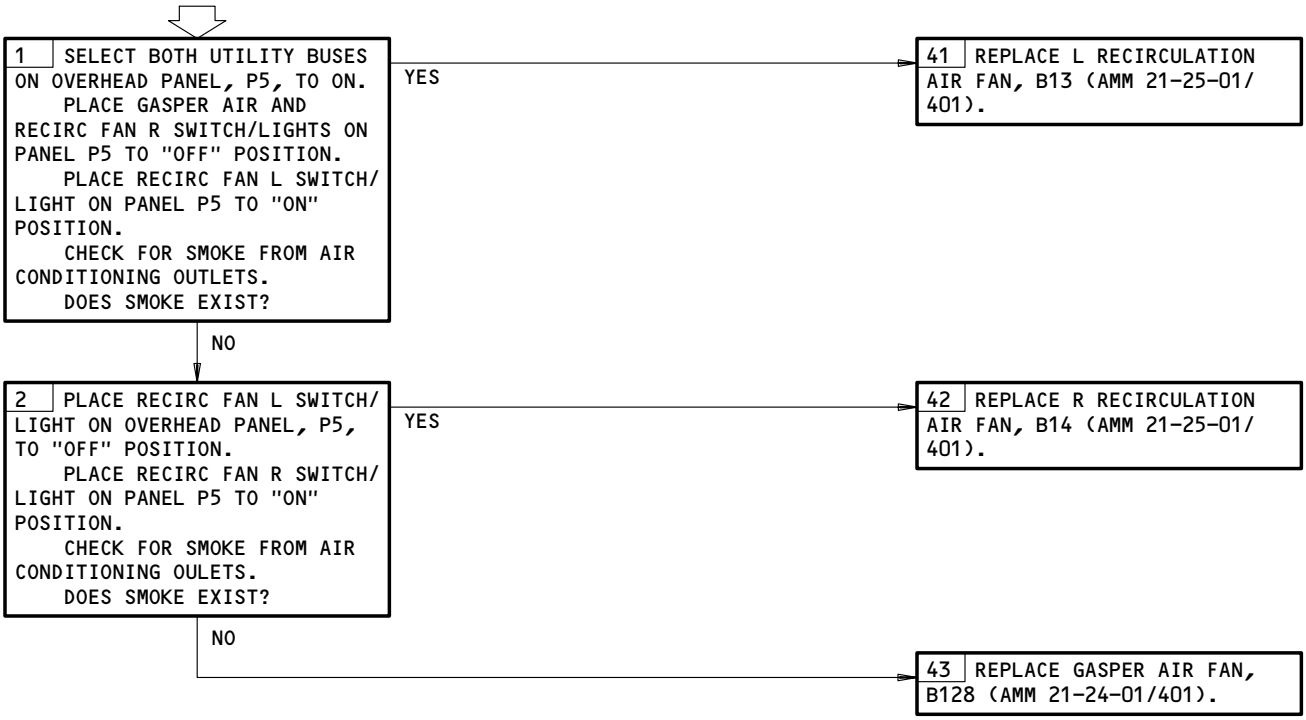
SMOKE FROM AIR CONDITIONING OUTLETS. STOPPED WITH BOTH UTILITY BUSES OFF

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11R14,11R23,11R17,36F2 OR 36F4,36F4,37G4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



Smoke from Air Conditioning Outlets. Stopped with Both Utility Buses Off
Figure 106

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"BULK CARGO FAN" EICAS MESSAGE WITH BULK CARGO HEAT MODE SELECTOR IN "VENT"

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11N26,11N27,36L1,37E6 OR 37F7

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 PUSH THE "BULK CARGO HEAT" SWITCH/LIGHT ON THE OVERHEAD PANEL, P5, TO THE "ON" POSITION.
TURN THE "BULK CARGO HEAT" SELECTOR ON THE RIGHT SIDE PANEL, P61, TO THE "VENT" POSITION.
LISTEN NEAR THE BULK CARGO FAN.
DOES THE BULK CARGO FAN OPERATE?

YES

41 REPLACE THE CURRENT SENSOR OF THE BULK CARGO VENTILATION FAN, K614 (AMM 21-26-04/401).
PUSH THE "ECS/MSG" SWITCH ON THE RIGHT SIDE PANEL, P61.
MAKE SURE THE EICAS MESSAGE, "BULK CARGO FAN", DOES NOT SHOW ON THE BOTTOM DISPLAY.

NO

2 OPEN THIS CIRCUIT BREAKER ON THE RIGHT MISCELLANEOUS ELECTRICAL EQUIPMENT PANEL, P37: 37E6 OR 37F7, BULK CARGO VENTILATION FAN.
REMOVE CONNECTOR D608 FROM THE BULK CARGO VENTILATION FAN, B123.
DO A CONTINUTIY CHECK FROM PIN 5 TO PIN 6 OF THE RECEPTACLE ON THE BULK CARGO VENTILATION FAN (WDM 21-26-21).
IS THERE CONTINUITY?

NO

42 REPLACE THE BULK CARGO VENTILATION FAN, B123 (AMM 21-26-06/401).
PUSH THE "ECS/MSG" SWITCH ON THE RIGHT SIDE PANEL, P61.
MAKE SURE THE EICAS MESSAGE, "BULK CARGO FAN", DOES NOT SHOW ON THE BOTTOM DISPLAY.

YES

43 REPLACE THE BULK CARGO VENT FAN CONTROL RELAY, K504 (WDM 21-26-21).
INSTALL CONNECTOR D608 ON THE BULK CARGO VENTILATION FAN, B123.
CLOSE THIS CIRCUIT BREAKER ON THE P37 PANEL: 37E6, BULK CARGO VENT FAN.
PUSH THE "ECS/MSG" SWITCH ON THE RIGHT SIDE PANEL, P61.
MAKE SURE THE EICAS MESSAGE, "BULK CARGO FAN", DOES NOT SHOW ON THE BOTTOM DISPLAY.
AIRPLANES WITH THE FUEL JETTISON SYSTEM;
IF THE PROBLEM CONTINUES, REPLACE THE RIGHT FUEL JETTISON FAN SHED NO. 1 RELAY, K2126 (WDM 21-26-21).

BULK CARGO FAN EICAS Message with Bulk Cargo Heat Mode Selector in VENT
Figure 107

850249

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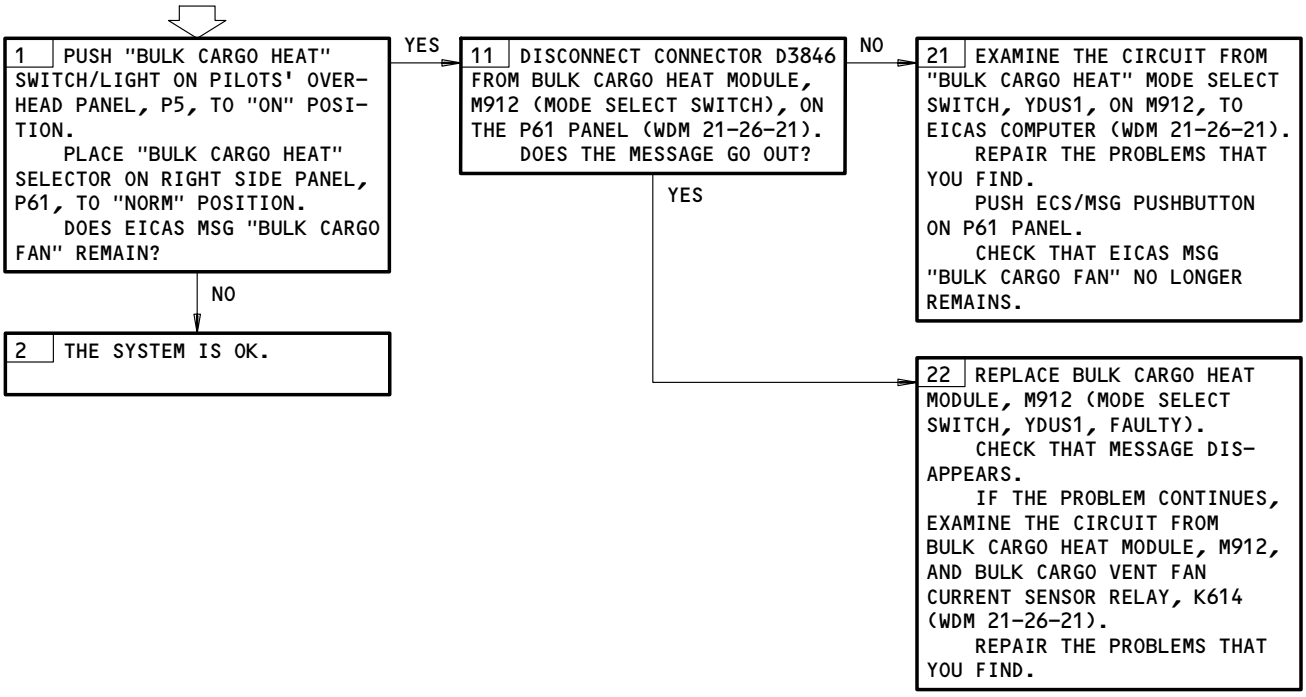
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11N26,11N27,36L1 OR 36K4,37E6 OR 37F7

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EICAS MESSAGE "BULK CARGO FAN" DISPLAYED. BULK CARGO HEAT SW IN "NORM"



EICAS Message BULK CARGO FAN Displayed. Bulk Cargo Heat Sw in NORM
Figure 108

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"BULK CARGO OVHT" EICAS MESSAGE AND "OVHT" LIGHT ON. BULK CARGO HEAT SELECTOR IN "NORM"

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11N26,11N27,36L1 OR 36K4,37E6 OR 37F7

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 PUSH THE "BULK CARGO HEAT" SWITCH/LIGHT ON PILOTS' OVERHEAD PANEL, P5, TO "ON" POSITION.
IS OVHT LIGHT STILL ON?

NO → 21 IS BULK CARGO COMPARTMENT TEMPERATURE GREATER THAN 85°F (29°C)?

YES → 41 USE ICE PACK TO COOL BULK CARGO OVHT TEMPERATURE SENSOR, S500, TO BELOW 85°F (29°C).
GO TO BLOCK 25.

NO → 42 USE HEAT GUN TO HEAT BULK CARGO OVHT TEMPERATURE SENSOR, S500, TO ABOVE 85°F (29°C).
GO TO BLOCK 22.

YES → 2 IS BULK CARGO COMPARTMENT TEMPERATURE GREATER THAN 85°F (29°C)?

YES → 22 CHECK THE BULK CARGO HEAT FLOW CONTROL VALVE, V127, VISUAL POSITION INDICATOR.
IS VALVE IN THE "CLOSED" POSITION?

YES → 43 REPLACE BULK CARGO OVHT ANNUNCIATOR RELAY, K762, IN P33 (WDM 21-44-21).

NO → 23 DISCONNECT CONNECTOR D576 FROM THE BULK CARGO HEAT FLOW CONTROL VALVE, V127 (WDM 21-44-21).
CHECK FOR 115V AC POWER TO PIN 2 OF CONNECTOR.
DOES GROUND EXIST?

YES → 44 REPLACE BULK CARGO HEAT FLOW CONTROL VALVE, V127 (AMM 21-44-04/401).

NO → 24 CONNECT CONNECTOR D576 TO THE BULK CARGO HEAT FLOW CONTROL VALVE, V127.
REMOVE THE BULK CARGO HEAT FLOW CONTROL RELAY, K497, FROM P36 (WDM 21-44-21).
CHECK FOR GROUND AT PIN X2 OF CONNECTOR.
DOES POWER EXIST?

YES → 45 INSTALL K497 IN P36 (WDM 21-44-21).
REPLACE BULK CARGO NORM TEMP THERMAL SENSOR, S498 (AMM 21-44-05/401).

NO → 46 REPLACE THE BULK CARGO HEAT FLOW CONTROL RELAY, K497, IN P36 (WDM 21-44-21).

NO → 25 REMOVE BULK CARGO OVHT RELAY, K729, FROM P33 (WDM 21-44-21).
CHECK FOR GROUND AT PIN X2 OF CONNECTOR.
DOES GROUND EXIST?

YES → 47 INSTALL K729 IN P33 (WDM 21-44-21).
REPLACE BULK CARGO OVHT TEMPERATURE SENSOR, S500 (AMM 21-44-05/401).

NO → 48 REPLACE BULK CARGO OVHT RELAY, K729, IN P33 (WDM 21-44-21).

BULK CARGO OVHT EICAS Message and OVHT Light On.
Bulk Cargo Heat Selector in NORM
Figure 109

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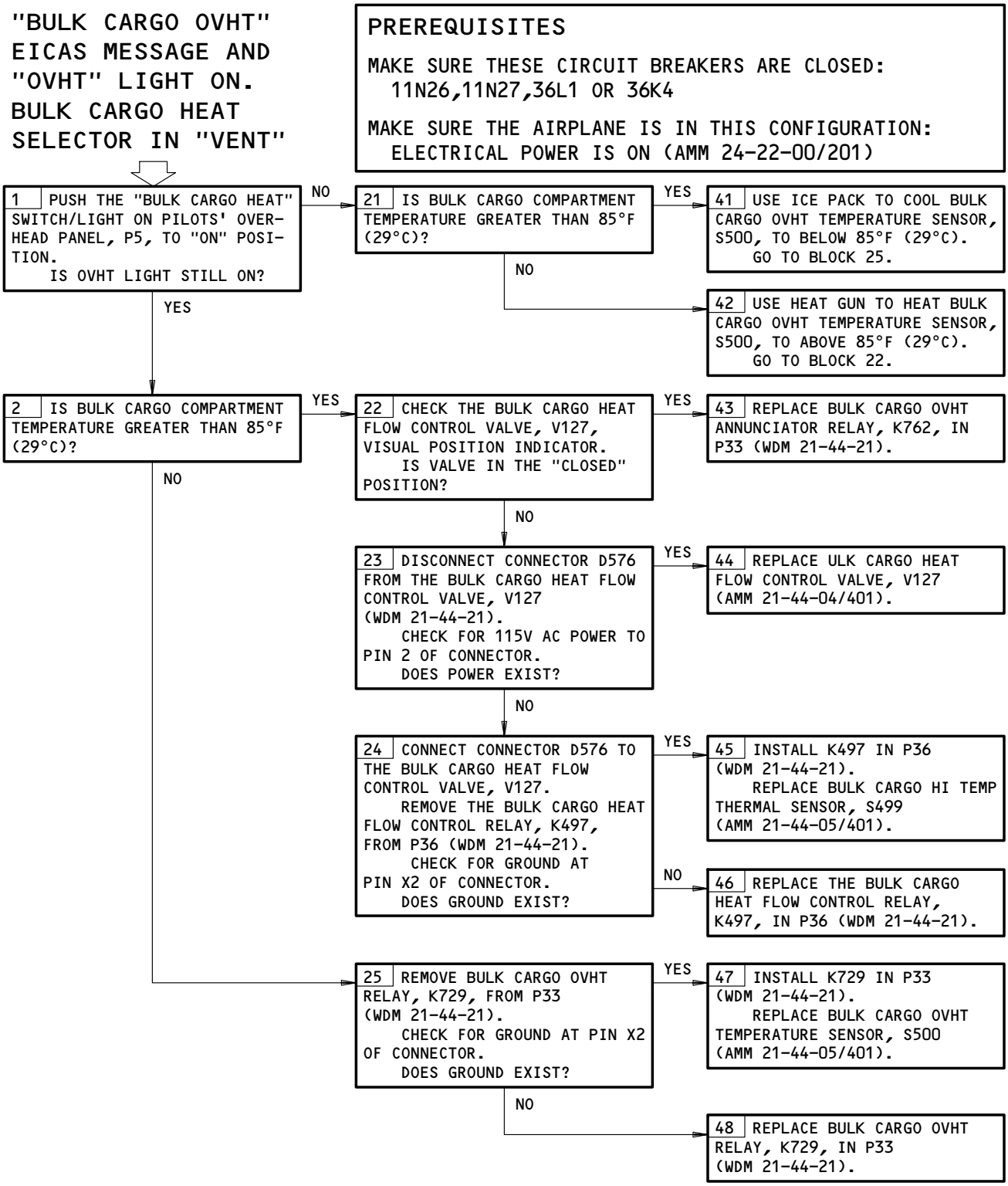
113339



BULK CARGO OVHT EICAS Message and OVHT Light On.
Bulk Cargo Heat Selector in VENT
Figure 110

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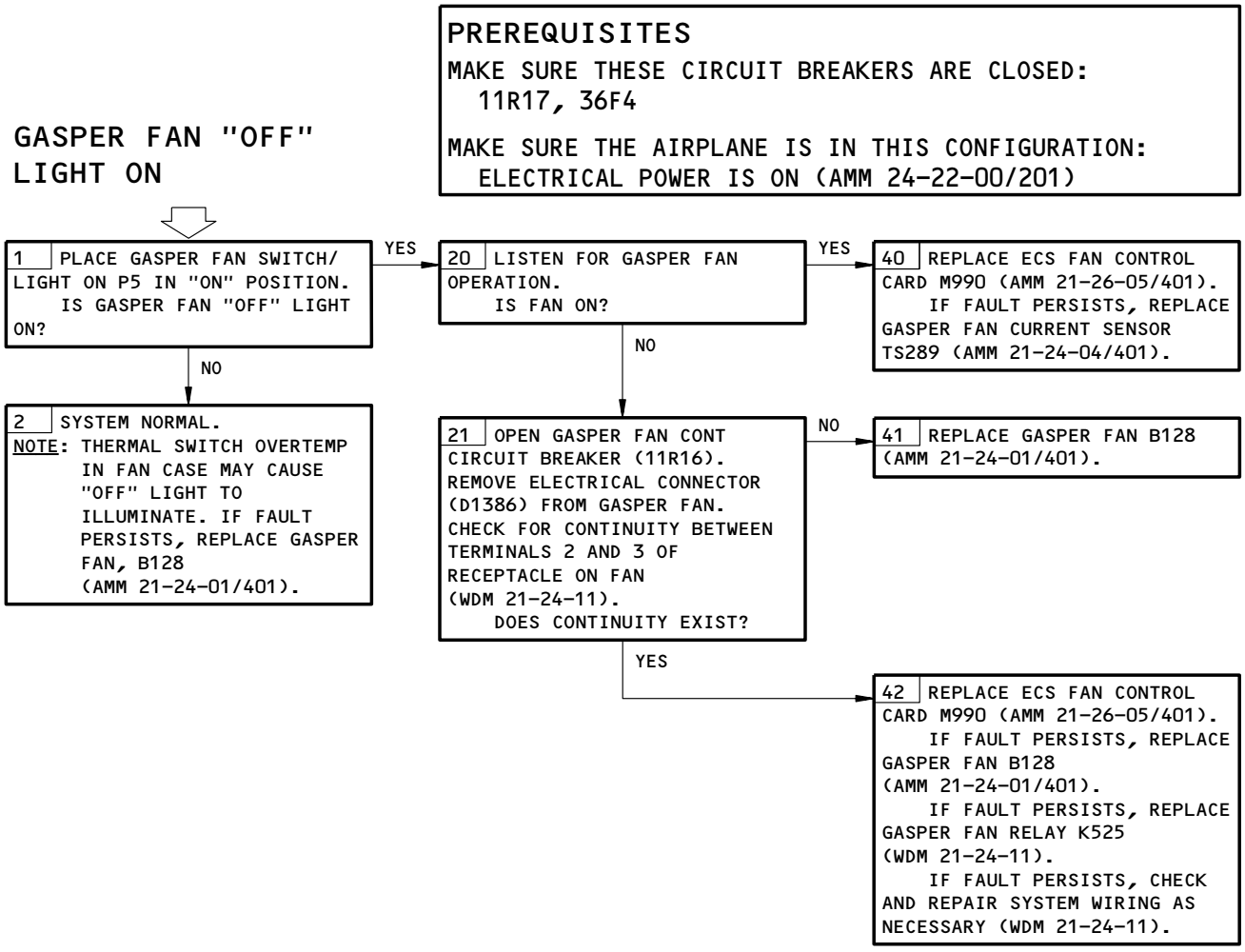

Gasper Fan OFF Light On
Figure 111

174341

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EICAS STATUS MSG "CARGO A/C TEMP" DISPLAYED

PREREQUISITES
EICAS (MM 31-41-00)
ELECTRICAL POWER (MM 24-22-00)
FWD CARGO A/C IN AUTO (MM 21-28-00)
CB'S: 11A13,11C33,11N21,11N22,11P21,11R11,11R24

1 DO THE AUX ZONE TEMPERATURE CONTROLLER BITE TEST (MM 21-60-00, FIG. 104A, BLOCK 1).
WAS A FAULT INDICATED?

YES → 41 REPLACE THE UNIT INDICATED AS FAULTY.

NO

2 REMOVE THE FWD CARGO DUCT OVHT SWITCH, S793 (MM 21-61-01).
CONNECT THE SWITCH TO ITS CONNECTOR D13596 (WM 21-43-11).
MAKE SURE THE FWD CARGO TRIM AIR MODULATING VALVE, V385, IS OPEN (0.95 ON EICAS DISPLAY).
HEAT THE SWITCH TO NOT GREATER THAN 180°F (82°C).
DOES THE MODULATING VALVE FULLY CLOSE (0.05 ON EICAS DISPLAY)?

YES → 42 REPLACE THE FWD CARGO DUCT OVHT SWITCH, S793 (MM 21-61-01).
IF THE FAULT PERSISTS, REPLACE THE PACK FLOW CONTROLLER, M1610 (MM 21-51-24).

NO

3 HEAT THE SWITCH TO GREATER THAN 200°F (93°C).
DOES THE FWD CARGO TRIM AIR MODULATING VALVE, V385, FULLY CLOSE?

NO → 21 REMOVE THE FWD CARGO DUCT OVHT RELAY, K1222 (WM 21-61-81).
JUMPER PINS D2 AND D3 OF THE RELAY, CONNECTOR D13440.
DOES THE FWD CARGO TRIM AIR MODULATING VALVE, V385, CLOSE?

NO → 43 REPLACE THE FWD CARGO TRIM AIR MODULATING VALVE, V385 (MM 21-61-07).
IF THE FAULT PERSISTS, REPLACE THE AUX ZONE TEMPERATURE CONTROLLER, M1609 (MM 21-61-12).

YES → 44 REPLACE THE FWD CARGO DUCT OVHT RELAY, K1222 (MM 21-61-81).

YES

4 SYSTEM NORMAL.

EICAS Status Msg CARGO A/C TEMP Displayed
Figure 112

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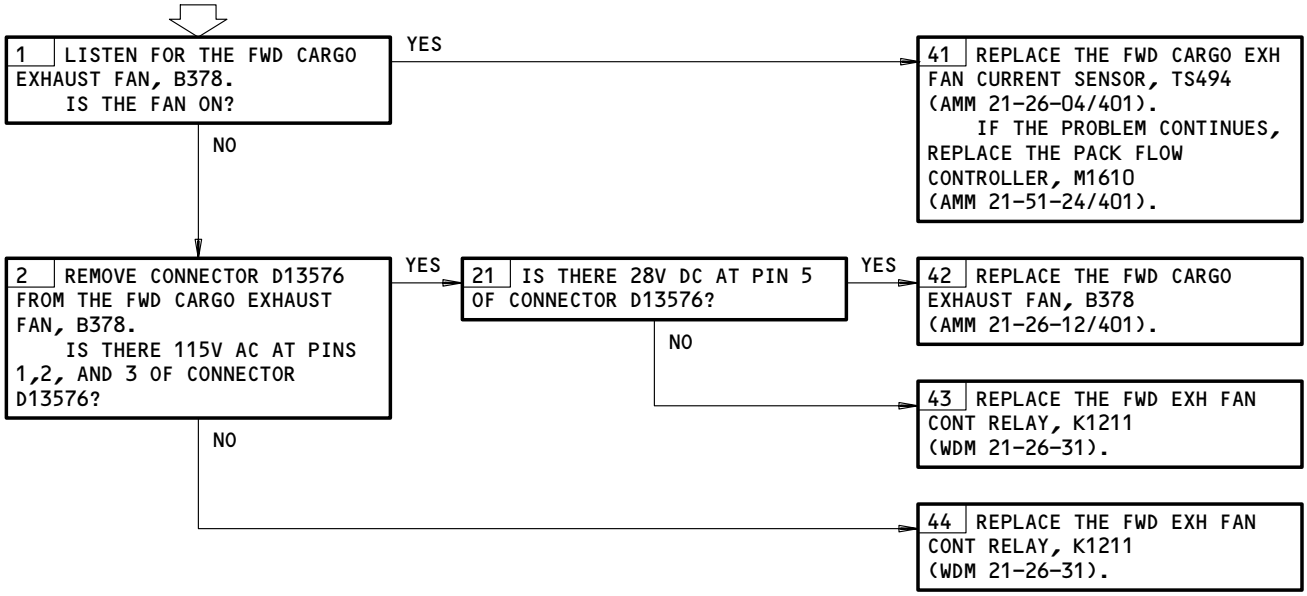
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
FWD CARGO A/C IN VENT (AMM 21-28-00/201)
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11P21,37J6 OR 37F1

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EICAS STATUS MSG "CARGO EXH FAN" DISPLAYED



EICAS Status Msg CARGO EXH FAN Displayed
Figure 113

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EICAS MSG "CGO GND EX VALVE" OR "CGO GND EXH VALS" DISPLAYED

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
- FWD CARGO A/C IN "VENT" (AMM 21-10-00/501)
- EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
- 11A13, 11N18, 11P20, 36E4 OR 36K3, 37E3 OR 37K7

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
- ELECTRICAL POWER IS ON (AMM 24-22-00/201)
- FWD CARGO A/C SWITCH SELECTED "ON" (M1619 ON THE P5 PANEL)

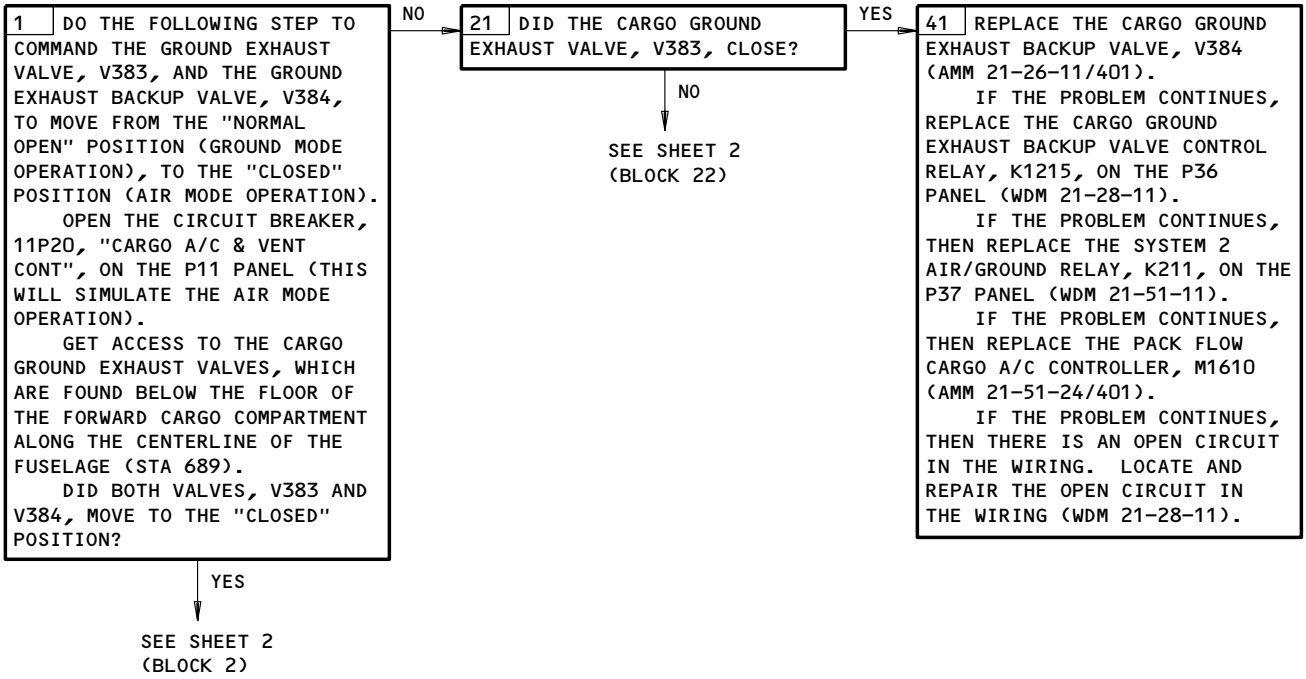
DESCRIPTION:

ONE OR BOTH CARGO GROUND EXHAUST VALVES DID NOT MOVE TO THEIR COMMANDED POSITION.

POSSIBLE CAUSES:

1. CARGO GROUND EXHAUST VALVE, V383, FAILED IN OPEN/CLOSED POSITION (AMM 21-26-11/401)
2. CARGO GROUND EXHAUST BACKUP VALVE, V384, FAILED IN OPEN/CLOSED POSITION (AMM 21-26-11/401)
3. CARGO GROUND EXHAUST VALVE CONTROL RELAY, K1214 (P37), FAILED (WDM 21-28-11)
4. CARGO GROUND EXHAUST BACKUP VALVE CONTROL RELAY, K1215 (P36), FAILED (WDM 21-28-11)
5. SYSTEM 1 AIR/GROUND RELAY, K1219 (P36), FAILED (WDM 21-28-11)
6. PACK FLOW CARGO A/C CONTROLLER, M1610, FAILED (AMM 21-51-24/401)
7. SYSTEM 2 AIR/GROUND RELAY, K211 (P37), FAILED (WDM 21-51-11).

FAULT ISOLATION:



EICAS MSG "CGO GND EX VALVE" or "CGO GND EXH VALS" Displayed
Figure 114 (Sheet 1)

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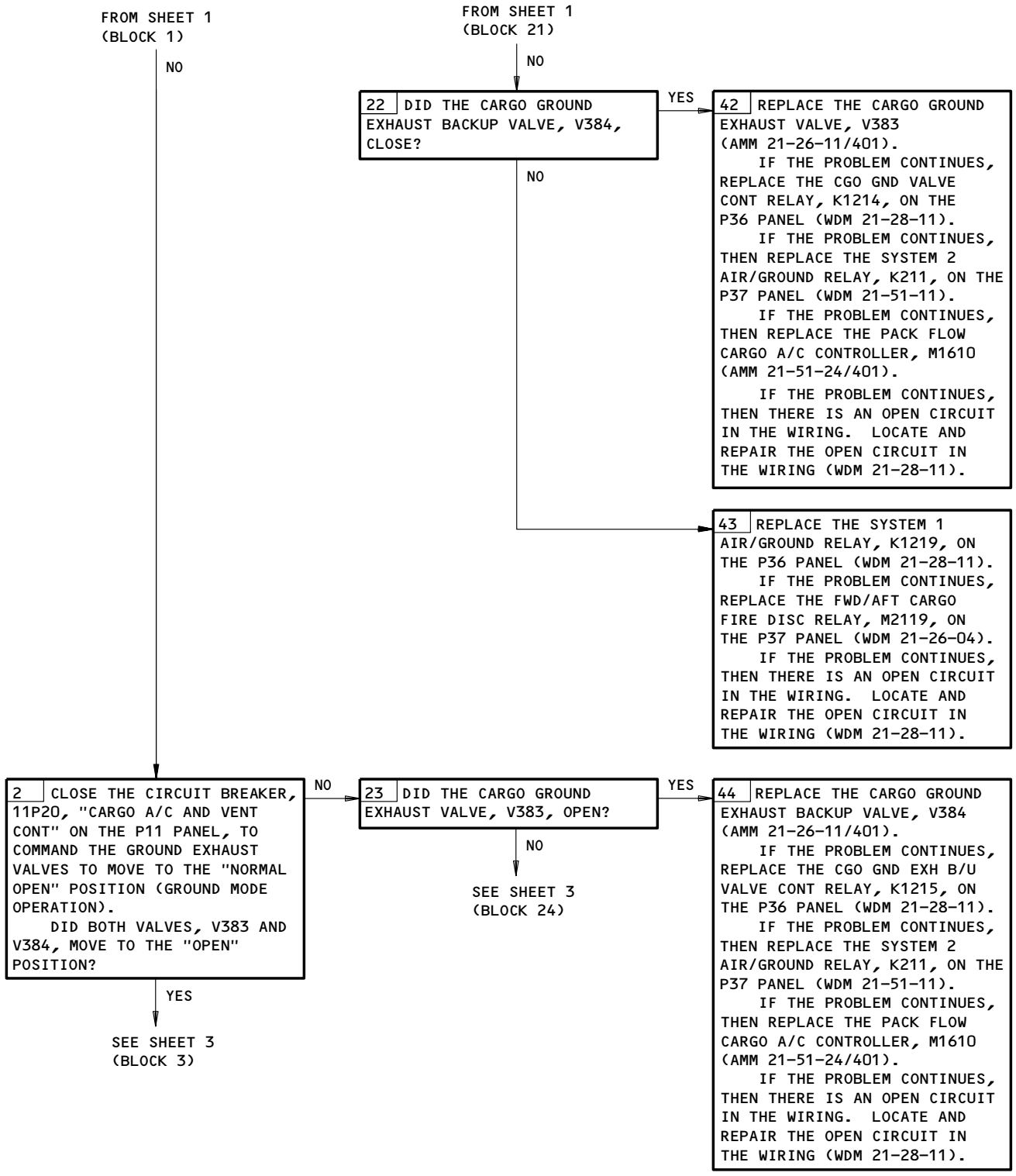

EICAS MSG "CGO GND EX VALVE" or "CGO GND EXH VALS" Displayed
Figure 114 (Sheet 2)

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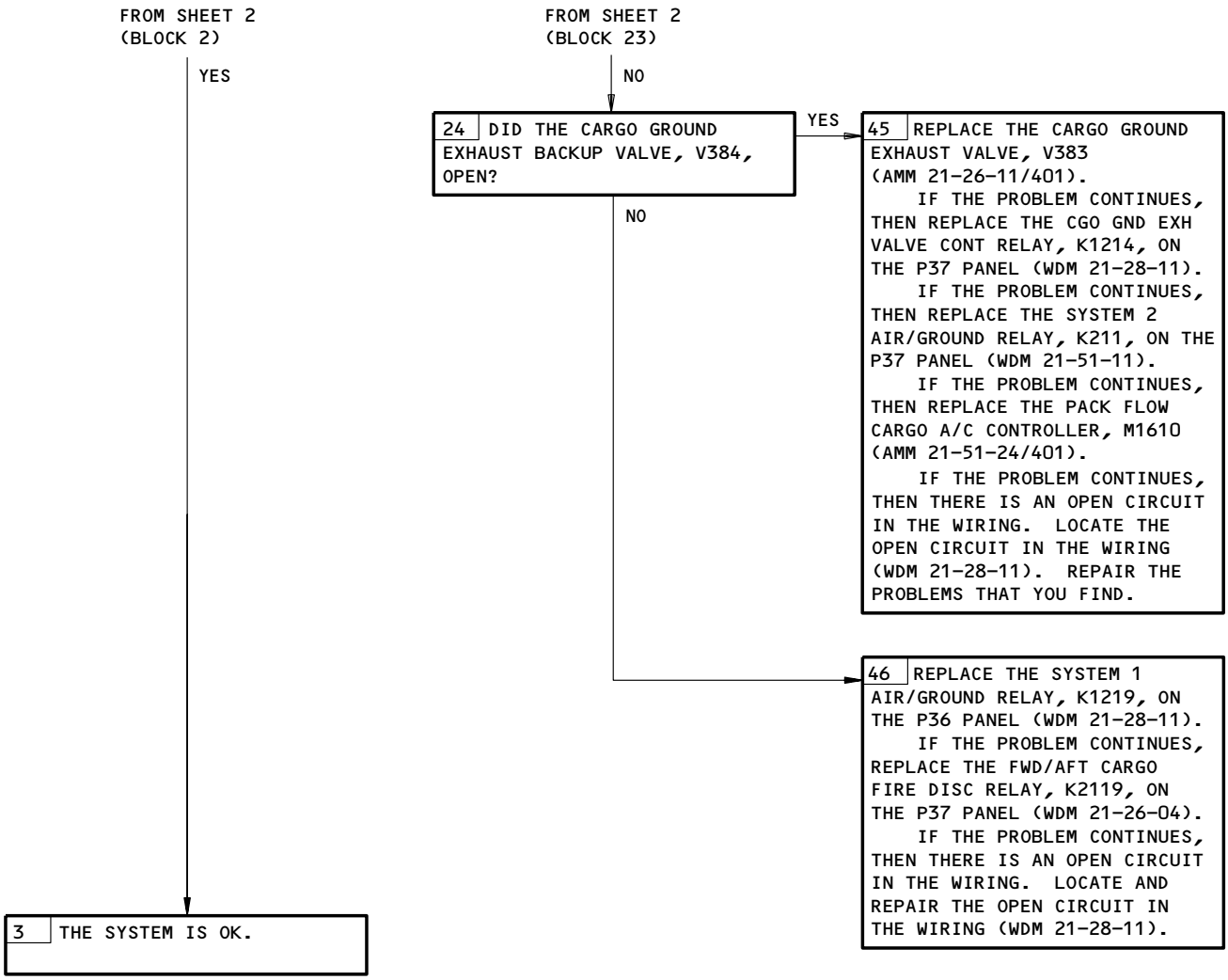

EICAS MSG "CGO GND EX VALVE" or 'CGO GND EXH VALS" Displayed
Figure 114 (Sheet 3)

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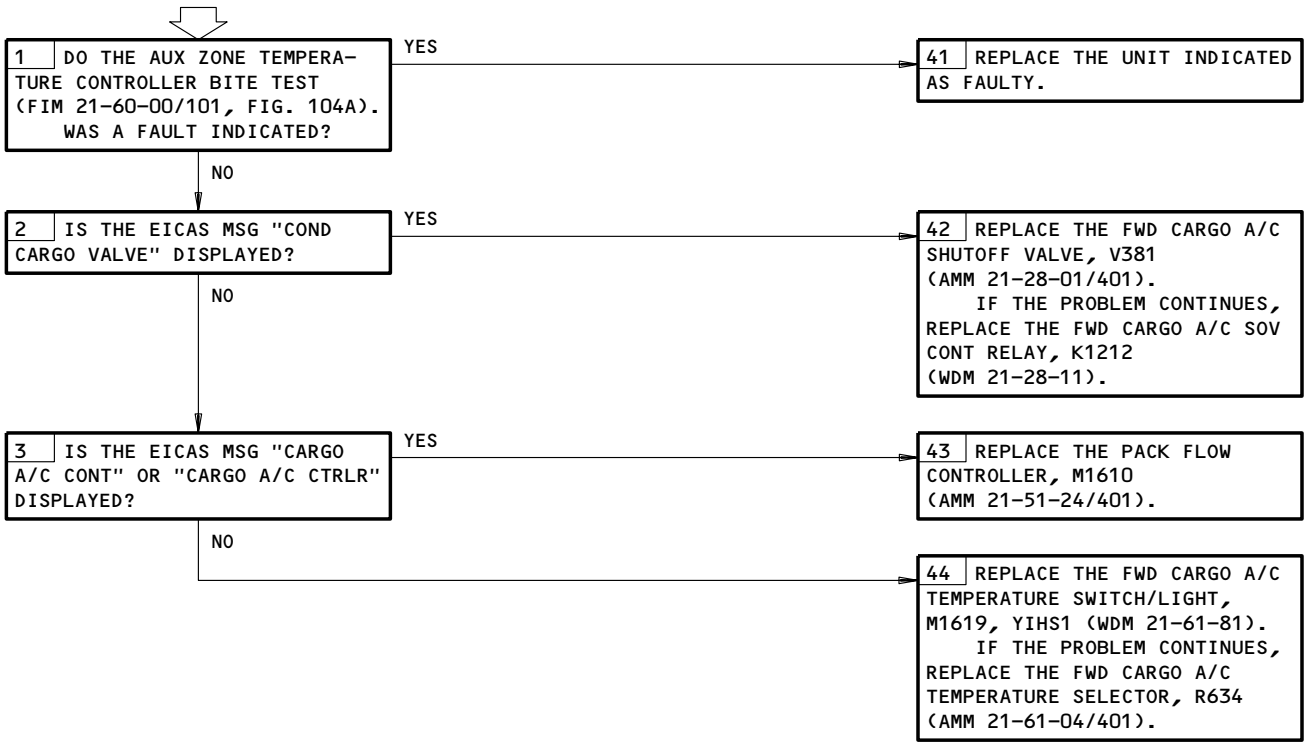
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11P21,11R11,37E4 OR 37K6

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

FWD CARGO A/C "INOP" LIGHT ON. EICAS MSG "FWD CARGO A/C" DISPLAYED



Fwd Cargo A/C INOP Light On. EICAS Msg FWD CARGO A/C Displayed
Figure 115

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PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11J2,11J3,11J29,11J30,11J31,11J32

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EQUIPMENT:
- 429 EBP, DATA BUS ANALYZER (RECOMMENDED)
  JCAIR INSTRUMENTATION
  400 INDUSTRIAL PARKWAY
  INDUSTRIAL AIRPORT, KS 66031
- 429-2, DATA BUS ANALYZER (ALTERNATIVE)
  INTERFACE TECHNOLOGY
  150 E. ARROW HIGHWAY
  SAN DIMAS, CA 91773
- A34011-1, BREAKOUT BOX (RECOMMENDED)
- A34011-112, BREAKOUT BOX (ALTERNATIVE)

NOTE: THIS FAULT ISOLATION PROCEDURE WILL FIND FAULTS IN THE DISCRETE INPUT WIRING TO THE PACK FLOW AND CARGO AIR CONDITIONING CONTROLLER (PFCAC), M1610. THIS PROCEDURE CAN BE USED WHEN THE CONDITION WHICH CAUSED THE EICAS MESSAGE "FWD CARGO I/F" TO DISPLAY STILL EXITS ON THE AIRPLANE.

TO DETERMINE WHICH DISCRETE INPUT WIRING IS FAULTY, YOU WILL NEED TO:
1. USE A BREAKOUT BOX TO GAIN ACCESS TO THE ARINC 429 BUS
2. USE AN ARINC 429 DATA BUS ANALYZER TO READ OUTPUT OCTAL LABELS AND BITS FOR FAULTY ANALOG DISCRETE INPUTS TO PFCAC, M1610
3. REPAIR ANY FAULTY WIRING OR GROUNDS THAT YOU FIND.

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 1)

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"FWD CARGO I/F"
EICAS MESSAGE
DISPLAYED

1 ERASE THE EICAS MESSAGE "FWD CARGO I/F" FROM THE MAINTENANCE PAGE OF THE COMPUTER (FIM 31-41-00/101, FIG. 109) AND WAIT 5 SECONDS FOR THE EICAS MESSAGE TO CLEAR.
DOES THE EICAS MESSAGE "FWD CARGO I/F" SHOW AGAIN?

NO → 30 THE FAULT CONDITION NO LONGER EXISTS.

YES ↓

2 REPLACE THE PACK FLOW AND CARGO AIR CONDITIONING CONTROLLER (PFCAC), M1610 (AMM 21-51-24/401).
ERASE THE EICAS MESSAGE "FWD CARGO I/F" (FIM 31-41-00/101, FIG. 109) AND WAIT 5 SECONDS FOR THE EICAS MESSAGE TO CLEAR.
DOES THE EICAS MESSAGE "FWD CARGO I/F" SHOW AGAIN?

YES → 21 DO THESE STEPS:

1. MOVE THE "COMPUTER" SWITCH TO "AUTO" ON THE PILOT DISPLAY SELECT PANEL (P9, GLARESHIELD)
2. REMOVE EITHER THE LEFT OR RIGHT EICAS COMPUTER, M10181 (M10182) (AMM 31-41-02/401)
3. REMOVE THE DUST CAP FROM THE AIRPLANE ARINC 600, ELECTRICAL CONNECTOR D881E (D883E)

WARNING: TO PREVENT ELECTRICAL SHOCK FROM ADJACENT 120V PINS ON THE EICAS COMPUTER ARINC 600 CONNECTORS, USE A BREAKOUT BOX. POSSIBLE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT COULD OCCUR.

CAUTION: DO NOT DIRECTLY TOUCH THE ARINC 600 CONNECTORS, INSTEAD USE A BREAKOUT BOX. POSSIBLE DAMAGE COULD OCCUR TO THE ARINC 600 CONNECTORS IF YOU TOUCH THEM.

4. CONNECT BREAKOUT BOX, A34011-1, OR CONNECTOR SUB-KIT, A34011-112, TO THE AIRPLANE ARINC 600, CONNECTOR D881E (D883E)
5. CONNECT AN ARINC 429 DATA BUS ANALYZER TO THE BREAKOUT BOX, A34011-1, WITH THE "HI" TERMINAL ATTACHED TO PIN H14 (POS E) AND THE "LO" TERMINAL ATTACHED TO PIN H15 (POS E). IF YOU USE THE CONNECTOR SUB-KIT, A34011-112, CONNECT THE ARINC 429 DATA BUS ANALYZER TO THE WIRE PIGTAILS WHICH CORRESPOND TO PIN H14 (POS E) AND PIN H15 (POS E) ON THE AIRPLANE ARINC 600, CONNECTOR D881E (D883E)
6. USE THE ARINC 429 DATA BUS ANALYZER TO READ THE OUTPUT OCTAL LABELS AND BITS FOR EACH PFCAC ANALOG DISCRETE INPUT FAILURE
7. DO THE FOLLOWING AIRPLANE WIRING CHECK TO LOCATE SOURCE OF THE PFCAC ANALOG DISCRETE INPUT FAILURE:
   A. USE "TABLE A" TO IDENTIFY THE RECOMMENDED AIRPLANE WIRING CHECK THAT CORRESPONDS TO THE PFCAC ANALOG DISCRETE INPUT FAILURE BASED UPON OCTAL LABELS AND BITS FROM STEP 6
   B. REMOVE THE PFCAC, M1610 (AMM 21-51-24/401) TO GET ACCESS TO AIRPLANE, CONNECTORS D13560A AND D13560B
   C. DO THE WIRING CHECK IN "TABLE A", AND CHECK FOR CONTINUITY BETWEEN THE PFCAC CONNECTOR AND THE AIRPLANE GROUND FOR THE APPLICABLE LRU (SEE ALSO THE SIMPLIFIED SCHEMATICS WITHIN FIG. 117 AS REFERENCE)
   D. REPAIR THE WIRING OR ELECTRICAL GROUND PROBLEMS THAT YOU FIND
8. ERASE THE EICAS MESSAGE "FWD CARGO I/F" (FIM 31-41-00/101, FIG. 109), AND WAIT 5 SECONDS FOR THE EICAS MESSAGE TO CLEAR.

DOES THE EICAS MESSAGE "FWD CARGO I/F" SHOW AGAIN?

NO → SEE SHEET 3 (BLOCK 31)

YES → SEE SHEET 3 (BLOCK 32)

NO ↓

3 THE SYSTEM IS OK.

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 2)

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FROM SHEET 2
(BLOCK 21)

NO

31 THE SYSTEM IS OK.
INSTALL THE PFCAC, M1610 (AMM 21-51-24/401).
REMOVE THE BREAKOUT BOX, A34011-1 OR CONNECTOR SUB-KIT, A34011-112.
INSTALL THE EICAS COMPUTER (AMM 31-41-02/401).

FROM SHEET 2
(BLOCK 21)

YES

32 IF THE PROBLEM CONTINUES, DO BLOCK 21 AGAIN UNTIL THE ARINC 429 DATA BUS ANALYZER HAS FOUND ALL ANALOG DISCRETE FAILURES.
REPAIR ANY NEW WIRING OR ELECTRICAL GROUND PROBLEMS THAT YOU FIND.
ERASE THE EICAS MESSAGE "FWD CARGO I/F" (FIM 31-41-00/101, FIG. 109) AND WAIT 5 SECONDS FOR THE EICAS MESSAGE TO CLEAR.
INSTALL THE PFCAC, M1610 (AMM 21-51-24/401).
REMOVE THE BREAKOUT BOX, A34011-1 OR CONNECTOR SUB-KIT, A34011-112.
INSTALL THE EICAS COMPUTER (AMM 31-41-02/401).

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 3)

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ARINC 429 OUTPUTS [1]		PFCAC ANALOG INPUT DISCRETE	AIRPLANE WIRING CHECK						
			FROM: PFCAC, M1610		TO: LRU				WIRING DIAGRAM
OCTAL LABEL	BIT		CONNECTOR	PIN	NOMENCLATURE	EQUIPMENT	CONNECTOR	PIN	
351	11	CGO A/C SOV OP LIM	D13560A	D2	CARGO A/C SHUTOFF VLV	V381	D13562	7,6, GND (GD3554-DC)	21-28-11
351	12	CGO A/C SOV CL LIM	D13560A	D3	CARGO A/C SHUTOFF VLV	V381	D13562	9,8, GND (GD3554-DC)	21-28-11
351	13	TRIM/HT SOV OP LIM	D13560A	F2	FORWARD CARGO HEAT SHUTOFF VALVE	V89	D2764	4,5, GND (GD776-DC)	21-43-11
351	14	TRIM/HT SOV CL LIM	D13560A	F3	FORWARD CARGO HEAT SHUTOFF VALVE	V89	D2764	6,7, GND (GD776-DC)	21-43-11
351	15	AIR/GND	D13560A	E9	SYS 2 AIR/GND RELAY	K211	D3696	2,1, GND (GDX5-DC)	21-51-11
351	16	E/E COOLING OVRD	D13560A	B4	E/E COOLING SELECTOR	S1	D1366	12,5, GND (GD104-DC)	21-51-11 21-58-16 21-58-11
351	17	CGO DUCT OVERTEMP	D13660A	G4	FORWARD CARGO DUCT OVHT SWITCH	S793	D13596	1,2, GND (GD3554-DC)	21-43-11
351	18	CGO HEAT OVERTEMP	D13560A	G3	FORWARD CARGO U-FLOOR OVHT SW	S363	D2766	1,2, GND (GD4780-DC)	21-43-11
351	19	CGO A/C OVERTEMP	D13560A	G2	FORWARD CARGO CMPTR OVHT SW	S794	D13594	1,2, GND (GD4170-DC)	21-43-11

TABLE A

[1] WHEN YOU READ OCTAL LABELS AND BITS FROM THE ARINC 429 DATABUS ANALYZER'S HEXIDECIMAL DISPLAY, THE DIGITS "ONE (1)" INDICATE AN ANALOG DISCRETE INPUT FAILURE TO PFCAC, M1610.

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 4)

H55538

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ARINC 429 OUTPUTS 1		PFCAC ANALOG INPUT DISCRETE	AIRPLANE WIRING CHECK						
			FROM: PFCAC, M1610		TO: LRU				WIRING DIAGRAM
OCTAL LABEL	BIT		CONNECTOR	PIN	NOMENCLATURE	EQUIPMENT	CONNECTOR	PIN	
351	20	CARGO FAULT	D13560A	J3	AUX ZONE TEMPERATURE CONTROL UNIT	M1609	D13460B	A9	21-51-11 21-61-81
351	21	R PRSOV CL LIM	D13560A	G9	R BLEED AIR CONT PC ASSY	M860	D1876	4	21-51-11
351	22	L PRSOV CL LIM	D13560A	G8	L BLEED AIR CONT PC ASSY	M859	D1886	38	21-51-11
351	23	R FCV CL LIM	D13560A	H9	RIGHT FLOW CONTROL AND SHUTOFF VALVE	V17	D1276	2,1	21-51-11 21-51-21
					L PACK TEMP CONT	M126	D958B	B12, B11	
351	24	L FCV CL LIM	D13560A	H8	LEFT FLOW CONTROL AND SHUTOFF VALVE	V16	D2770	2,1	21-51-11 21-51-21
					R PACK TEMP CONT	M127	D3050B	B12, B11	
351	25	CARGO INOP	D13560A	J2	AUX ZONE TEMPERATURE CONTROL UNIT	M1609	D13460B	A5	21-51-11 21-61-81
351	26	CARGO A/C AUTO	D13560A	B2	FWD CARGO TEMP SELECTOR	R634	D13572	10,9	21-28-11 21-61-81
					FWD CARGO A/C SW	S1	D13584	5,6, GND (GD112 -DC)	
351	27	CARGO FIRE ARMED	D13560A	C3	AFT CARGO FIRE SWITCH	S2	D866	13,10, GND (GD445 6-DC)	21-26-31 21-25-11
351	28	VENT FAN ONLY	D13560A	B3	FWD CARGO TEMP SELECTOR	R634	D13572	8,9	21-26-31 21-61-81
					FWD CARGO A/C SW	S1	D13584	5,6, GND (GD112 -DC)	
351	29	CARGO HEAT ON	D13560A	C2	APU/CARGO FIRE CONTROL PANEL	M10444	D864	6,8	21-43-11
					FWD CARGO HEAT SWITCH	S1	D3842	10,8, GND (GD112 -DC)	

TABLE A

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 5)

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ARINC 429 OUTPUTS 1		PFCAC ANALOG INPUT DISCRETE	AIRPLANE WIRING CHECK						
			FROM: PFCAC, M1610		TO: LRU				WIRING DIAGRAM
OCTAL LABEL	BIT		CONNECTOR	PIN	NOMENCLATURE	EQUIPMENT	CONNECTOR	PIN	
352	13	L RECIRC FAN ON	D13560A	J8	LEFT RECIRC FAN CURRENT SENSOR	TS192	N/A	5,4 GND (GDX1 8-DC)	21-51-11 21-25-11
352	14	ENG ON	D13560A	B8	RIGHT N2 ENG PC ASSY	M1092	D10062	25,16, GND (GDX5 -DC)	21-51-11
352	15	ENG OFF	D13560A	B9	RIGHT N2 ENG PC ASSY	M1092	D10062	26,16, GND (GDX5 -DC)	21-51-11
352	16	FLAP RET	D13560A	C8	C FLAP/STAB POSITION MODULE	M839	D2674	24	21-51-11
352	17	FLAP NOT RET	D13560A	C9	C FLAP/STAB POSITION MODULE	M839	D2674	27	21-51-11
352	18	WTAI ON	D13560A	E8	TIME DELAY WING TAI RELAY	K319	D792	C1,C2, GND (GDX1 -DC)	21-51-11 21-51-21
352	19	PACK SW ON	D13560A	F9	PACK MODE SELECT SW	S4	D1302	29,27, GND (GD84 -DC)	21-51-11 21-25-11
352	20	PACK OUT OVHT	D13560A	D9	LEFT PACK OVERHEAT SW	S48	D670	2,1, GND (GD82 4-DC)	21-51-11
352	21	PACK RESET	D13560A	F8	LEFT PACK RESET SW	S5	D1302	15,27, GND (GD84 -DC)	21-51-11 21-25-11
352	22	CPRSR DISCH OVHT	D13560A	D8	LEFT PACK COMPRESSOR OVHT SW	S555	D1576	2,1, GND (GD81 6-DC)	21-51-11

TABLE A

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 6)

H55675

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ARINC 429 OUTPUTS 1		PFCAC ANALOG INPUT DISCRETE	AIRPLANE WIRING CHECK						
			FROM: PFCAC, M1610		TO: LRU				WIRING DIAGRAM
OCTAL LABEL	BIT		CONNECTOR	PIN	NOMENCLATURE	EQUIPMENT	CONNECTOR	PIN	
352	23	VENT FAN CUR SNSR	D13560A	H2	N/A	N/A	N/A	GND (GDX1 1-DC)	21-26-31
352	24	EXH FAN CUR SNSR	D13560A	H3	CAR GND EXH FAN CUR SENSOR	TS494	N/A	1,2 GND (GDX19 -DC)	21-26-31
352	25	GND EXH VAL2 CL LIM	D13560A	E4	CARGO GROUND EXH B/U VALVE	V384	D13568	8,9, GND (GD568 2-DC)	21-28-11
352	26	GND EXH VALS OP LIM	D13560A	E2	CARGO GROUND EXH B/U VALVE	V384	D13568	7,6	21-26-31 21-28-11
					CARGO GROUND EXHAUST VALVE	V383	D13566	7,6, GND (GD568 2-DC)	
352	27	GND EXH VAL1 CL LIM	D13560A	E3	CARGO GROUND EXHAUST VALVE	V383	D13566	9,8, GND (GD568 2-DC)	21-28-11
352	28	CGO EXH VAL OP LIM	D13560A	F4	CARGO EXHAUST VALVE	V382	D13564	7,6, GND (GD568 4-DC)	21-28-11
352	29	CGO EXH VAL CL LIM	D13560A	F5	CARGO EXHAUST VALVE	V382	D13564	9,8, GND (GD568 4-DC)	21-28-11

TABLE A

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 7)

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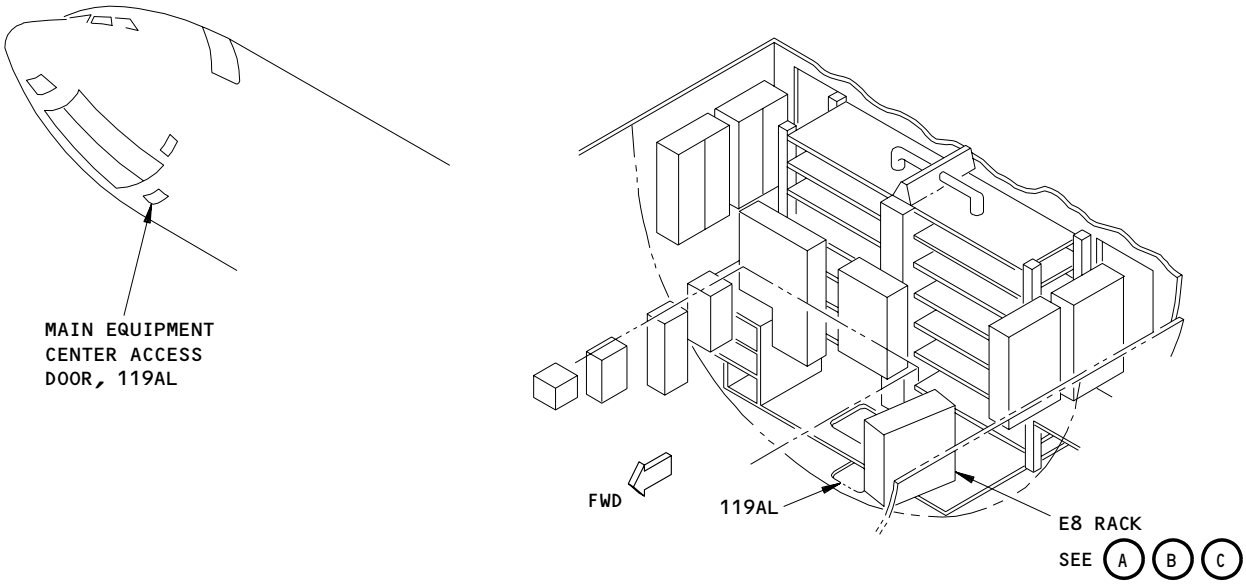
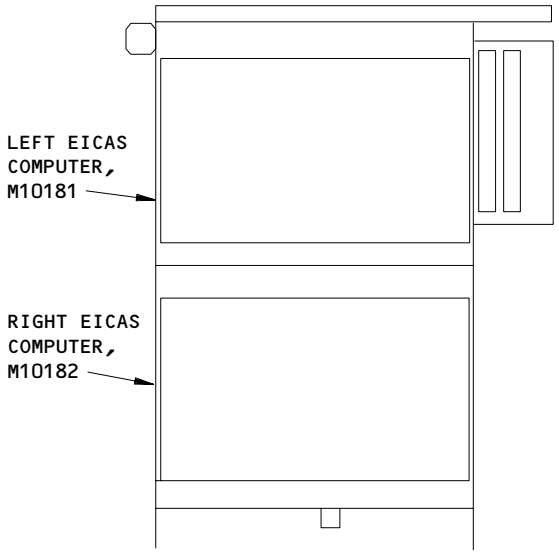


MAIN EQUIPMENT CENTER



E8 RACK
(VIEW IN THE AFT DIRECTION)

A

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 8)

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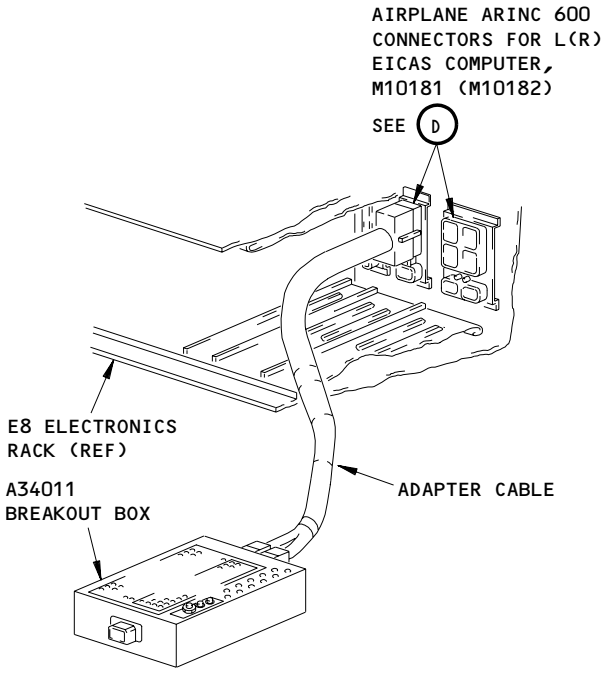
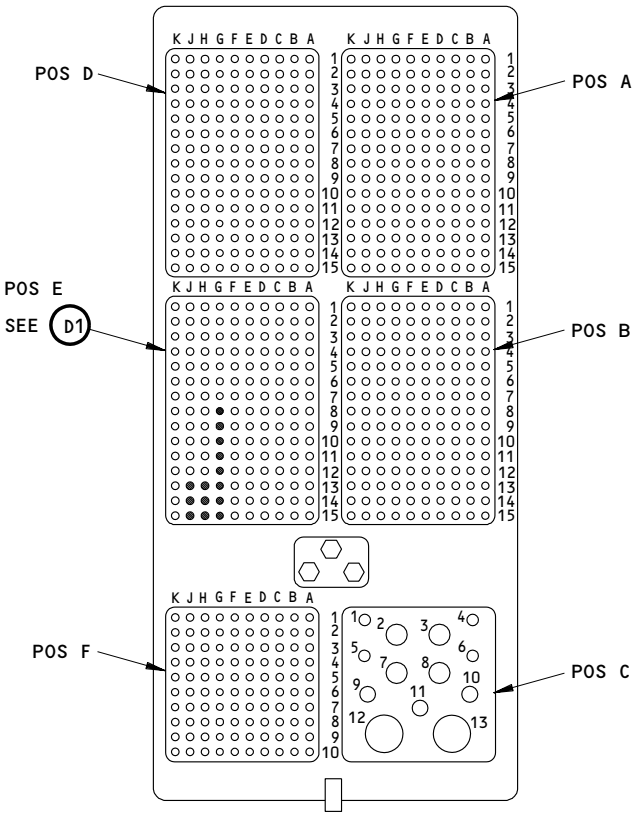


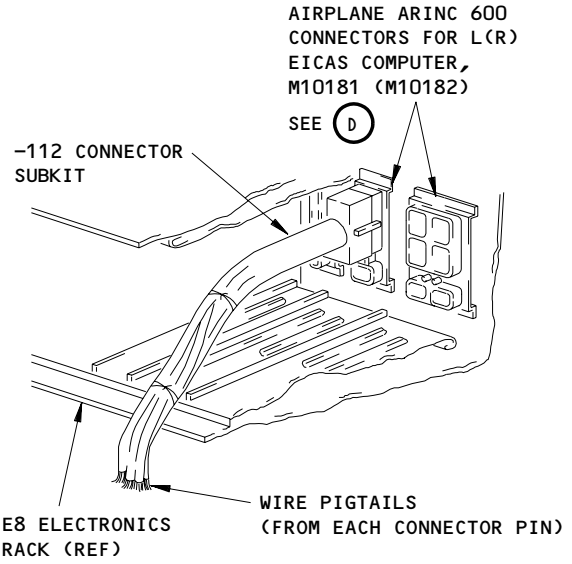
LINE MAINTENANCE ARINC 600
BREAKOUT BOX EQUIPMENT (A34011-1)

B



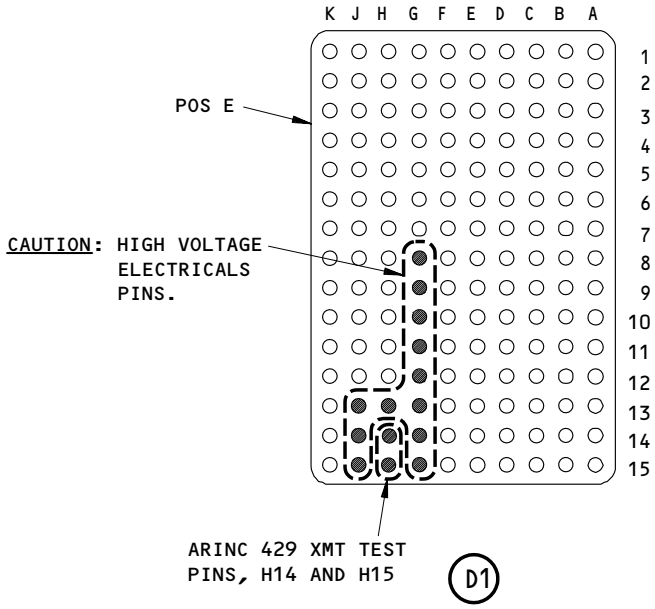
EICAS COMPUTER AIRPLANE
ARINC 600 CONNECTOR D881E (D883E)

D



OPTIONAL CONNECTOR SUBKIT (A34011-112)

C



D1

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 9)

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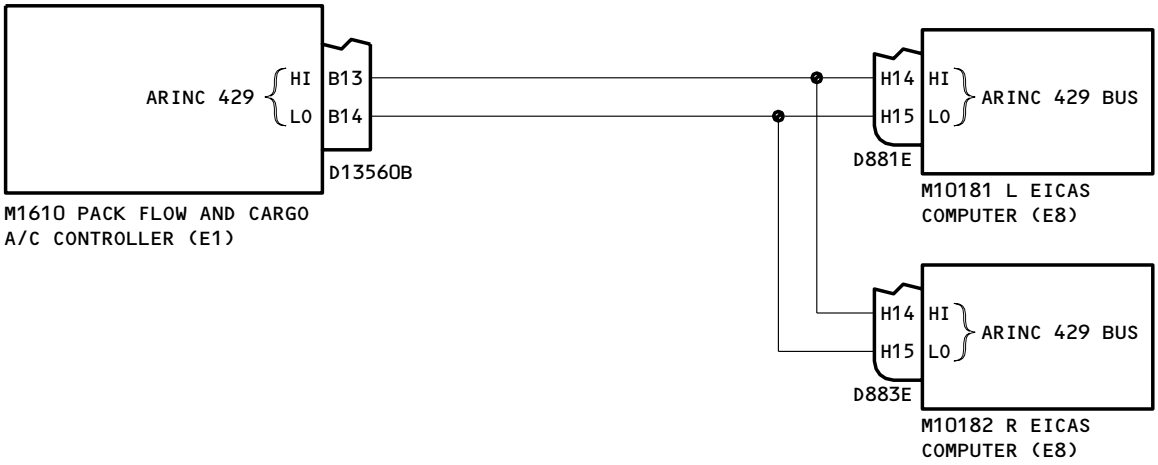

PFCAC/EICAS COMPUTER CIRCUIT

(WDM 21-28-11)

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 10)

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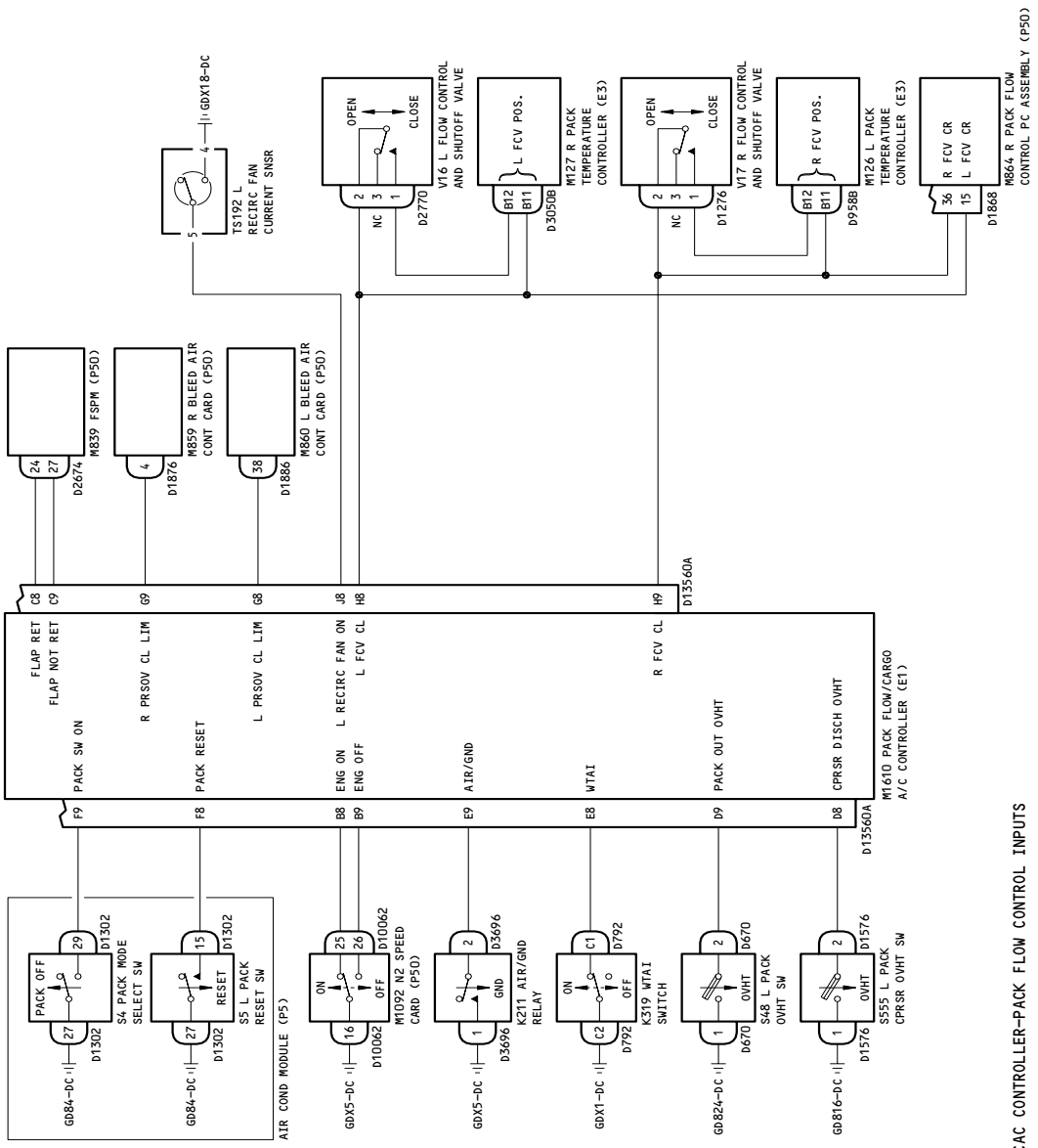

PFCAC CONTROLLER-PACK FLOW CONTROL INPUTS

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 11)

(WDM 21-25-11)
(WDM 21-51-11)
(WDM 21-51-21)

6009SH

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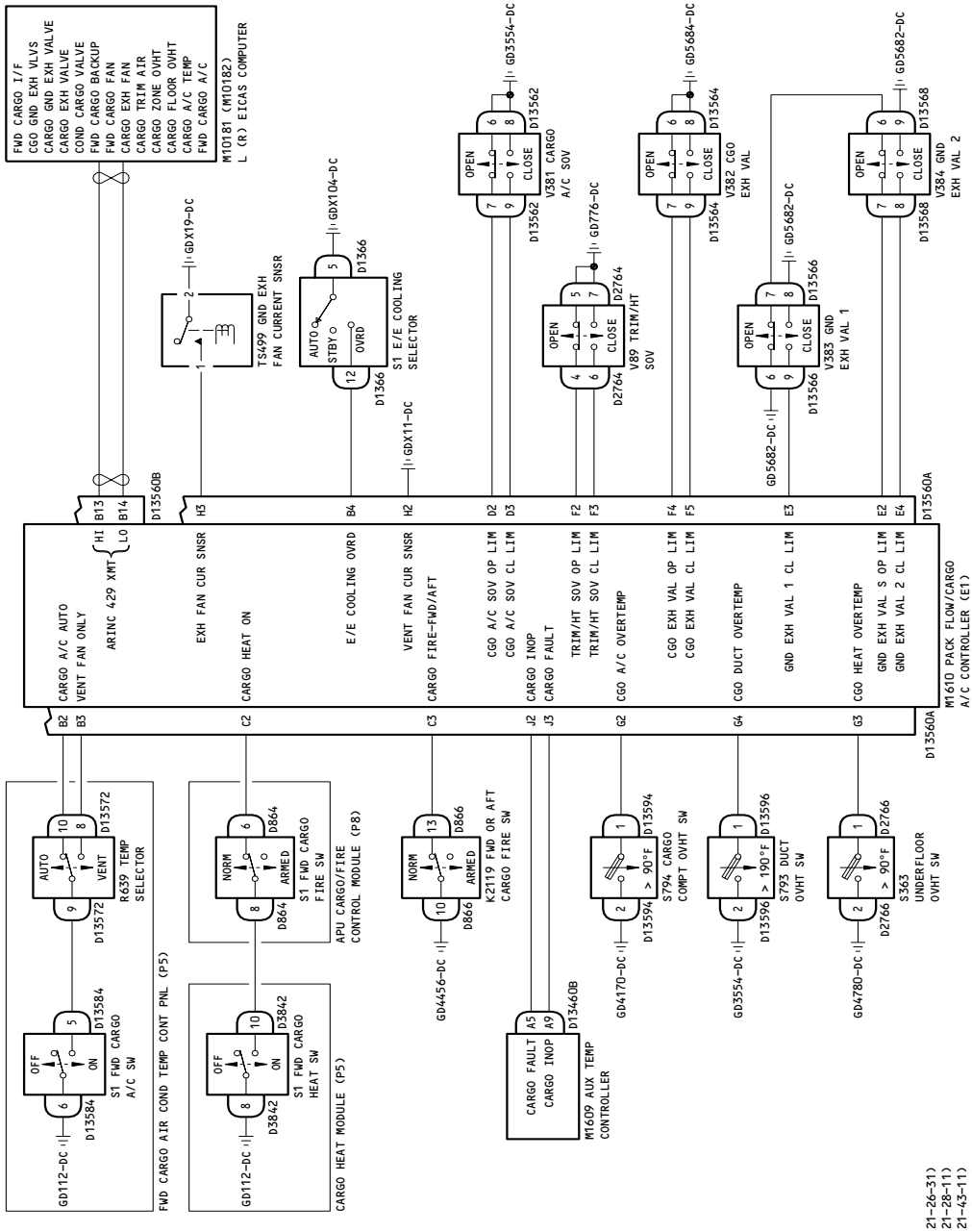

PFCAC CONTROLLER–CARGO AIR CONDITIONING INPUTS

EICAS Message FWD CARGO I/F Displayed
Figure 116 (Sheet 12)

(WDM 21-26-31)
(WDM 21-28-11)
(WDM 21-43-11)
(WDM 21-51-11)
(WDM 21-58-16)
(WDM 21-61-81)

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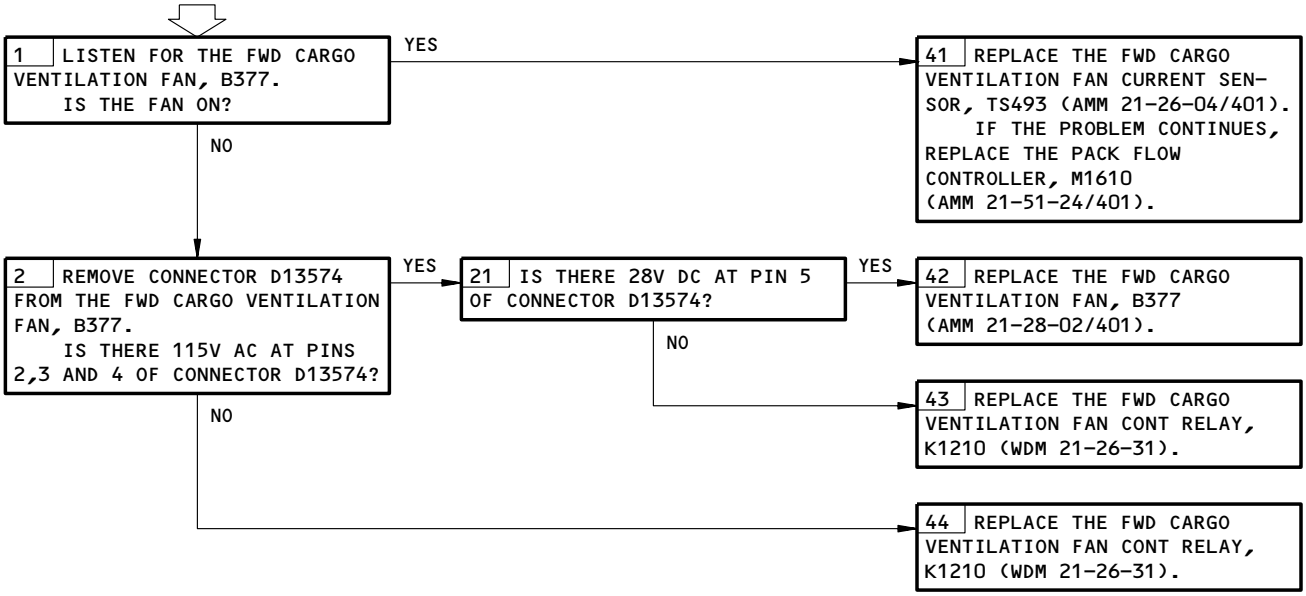
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
FWD CARGO A/C IN VENT (AMM 21-28-00/201)
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13, 11P21, 37J3 OR 37G1

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EICAS STATUS MSG "FWD CARGO FAN" DISPLAYED



EICAS Status Msg FWD CARGO FAN Displayed
Figure 117

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CABIN PRESSURE CONTROL SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ACTUATOR – CABIN PRESSURE OUTFLOW VALVE, YBWM1	1	1	811, BULK CARGO COMPT, CABIN PRESS OUTFLOW VALVE, V15	21-31-04
CIRCUIT BREAKER –	2		FLT COMPT, P11	
CABIN ALTITUDE CONTROL AUTO 1, C686		1	11P15	*
CABIN ALTITUDE CONTROL AUTO 2, C701		1	11P23	*
CABIN ALTITUDE CONTROL MANUAL, C683		1	11B14	*
CABIN ALTITUDE CONTROL SELECT, C658		1	11B15	*
COMPUTER – (FIM 31-41-00/101)				
EICAS L, M10181				
EICAS R, M10181				
CONTROLLER – CABIN PRESSURE, AUTO 1, M118	3	1	119AL, MAIN EQUIP CTR, E1	21-31-02
CONTROLLER – CABIN PRESSURE, AUTO 2, M119	3	1	119AL, MAIN EQUIP CTR, E2	21-31-02
DIODE, R205		1	TB130D	*
MICROSWITCH PACK – (FIM 22-32-00/101)				
AUTO THROTTLE, M966				
MOTOR – OUTFLOW VALVE ACTUATOR AC, AUTO 1, YBWM2	1	1	811, BULK CARGO COMPT	21-31-05
MOTOR – OUTFLOW VALVE ACTUATOR AC, AUTO 2, YBWM2	1	1	811, BULK CARGO COMPT	21-31-05
RELAY – (FIM 31-01-36/101)				
AIR/GND SYS NO. 1, K716				
RELAY – (FIM 31-01-37/101)				
AIR/GND SYS NO. 2, K211				
SELECTOR – CABIN PRESSURE, M13	2	1	FLT COMPT, P5	21-31-01
VALVE – CABIN PRESSURE OUTFLOW, V15	1	1	811, BULK CARGO COMPT	21-31-03

* SEE THE WDM EQUIPMENT LIST

Cabin Pressure Control System – Component Index
Figure 101

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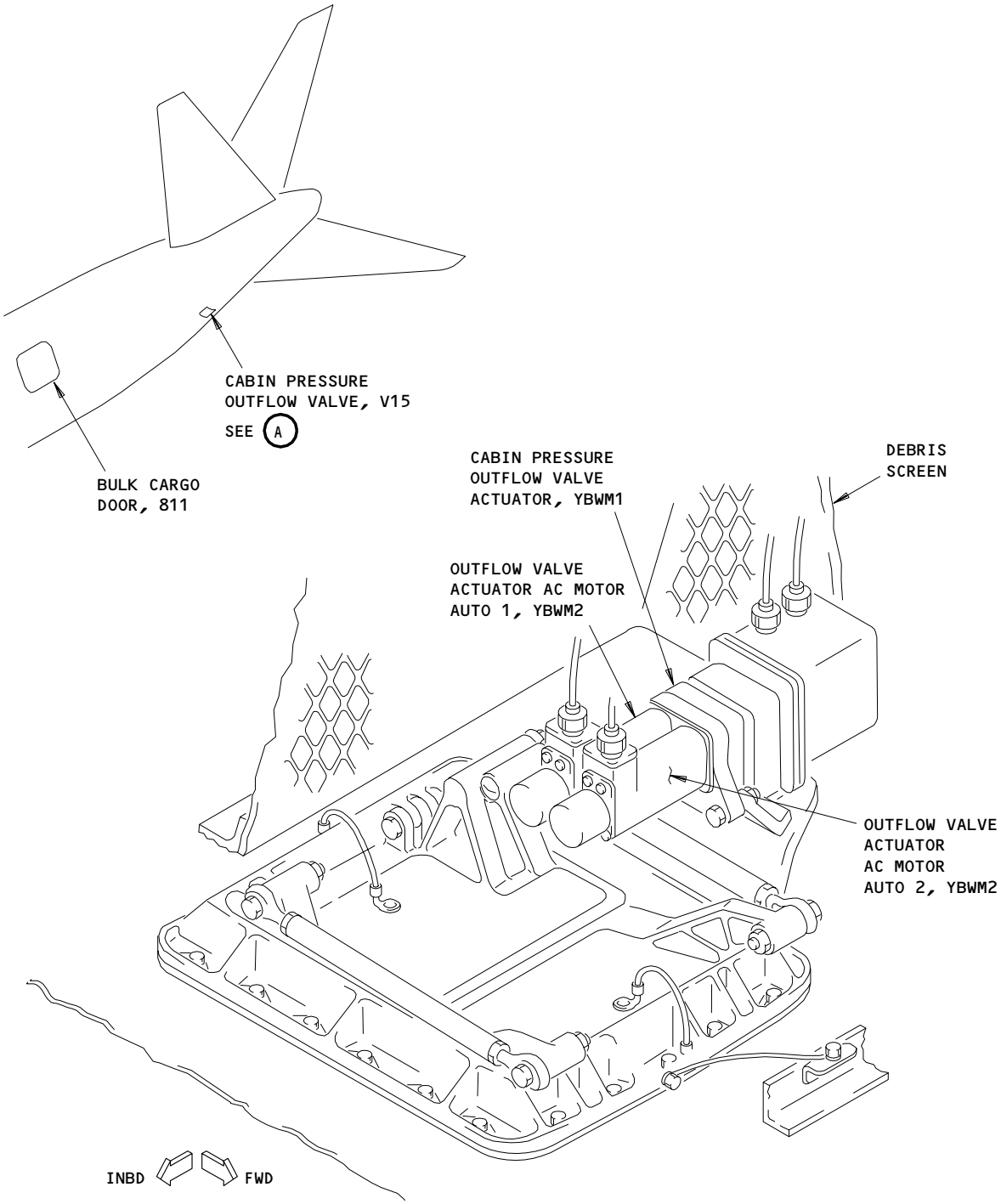

CABIN PRESSURE OUTFLOW VALVE, V15
A

Cabin Pressure Control System – Component Location
Figure 102 (Sheet 1)

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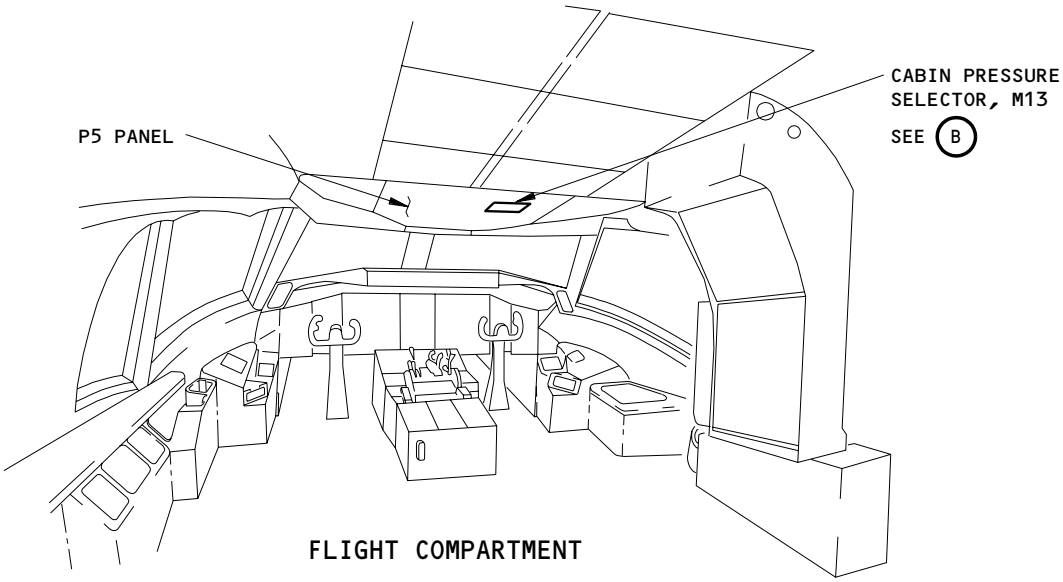
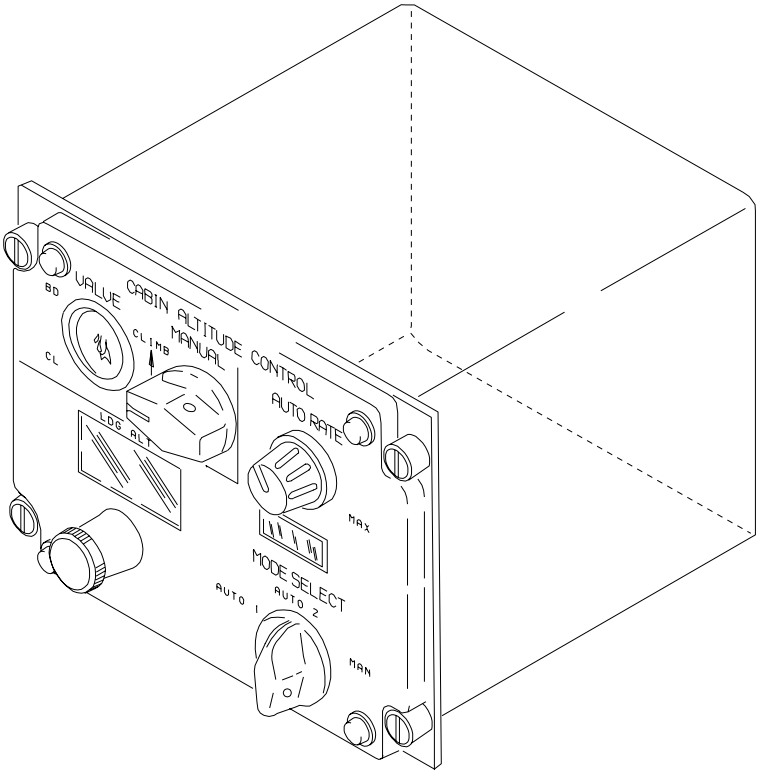


FLIGHT COMPARTMENT



CABIN PRESSURE SELECTOR, M13

(B)

Cabin Pressure Control System – Component Location
Figure 102 (Sheet 2)

U73575

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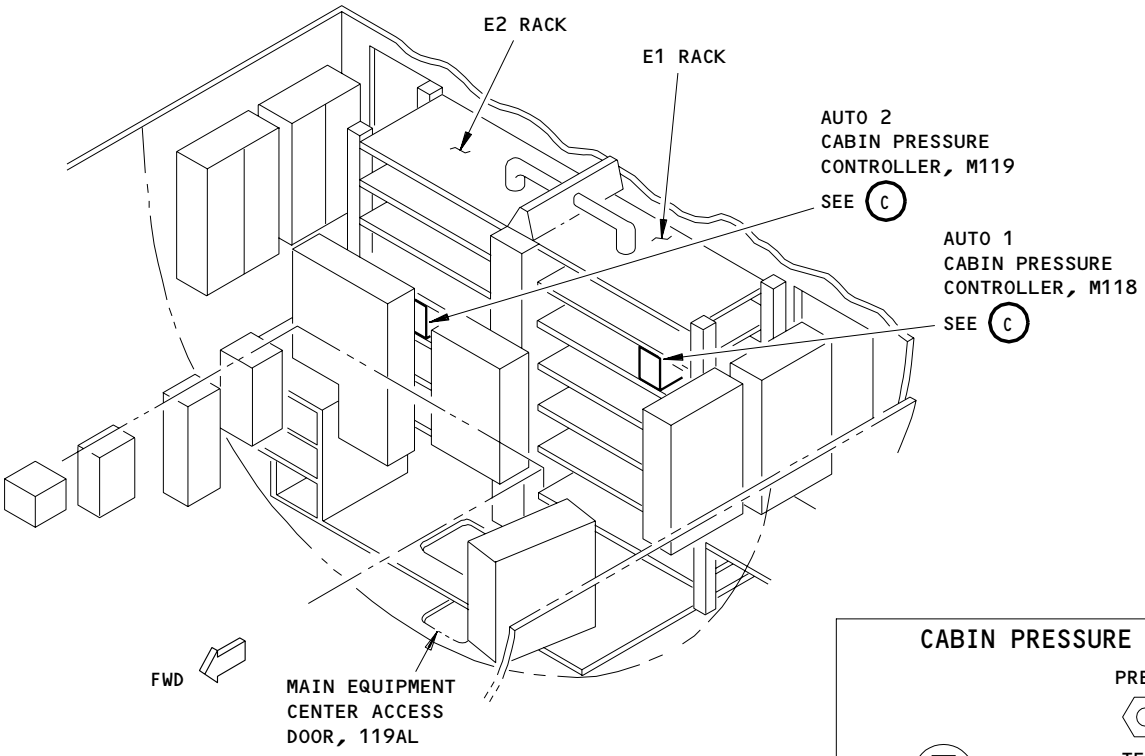
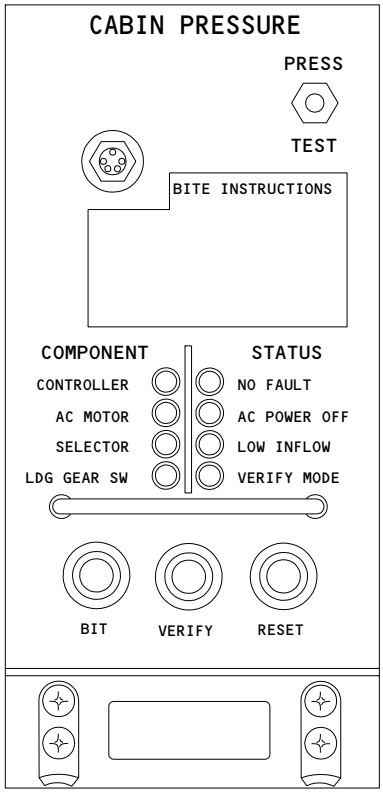


MAIN EQUIPMENT CENTER



CABIN PRESSURE CONTROLLER
AUTO 1, (M118) OR AUTO 2, (M119)
C

Cabin Pressure Control System – Component Location
Figure 102 (Sheet 3)

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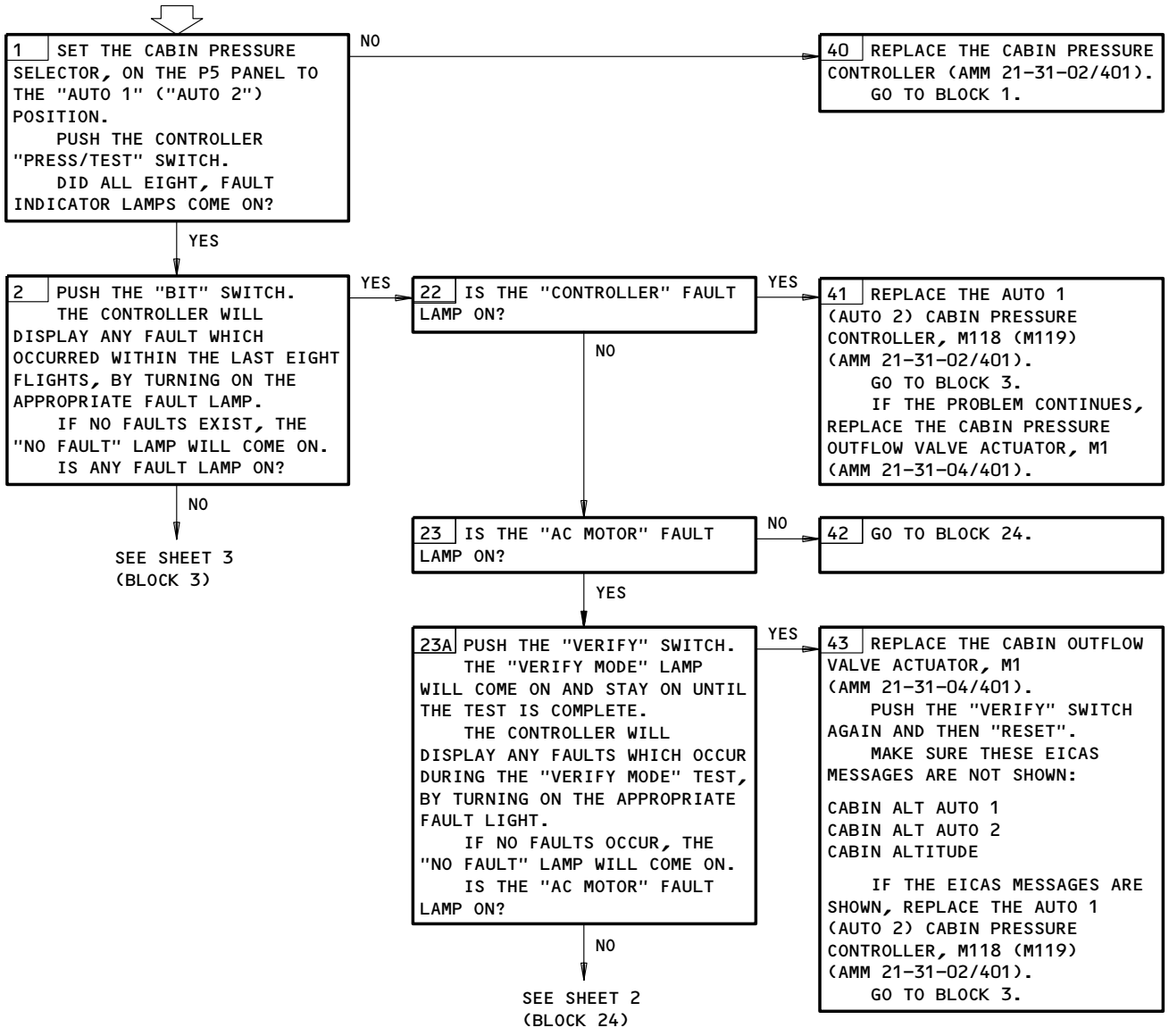
CABIN PRESSURE CONTROLLER BITE PROCEDURE

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13, 11B14, 11B15, 11P15, 11P23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURTION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



Cabin Pressure Controller BITE Procedure
Figure 103 (Sheet 1)

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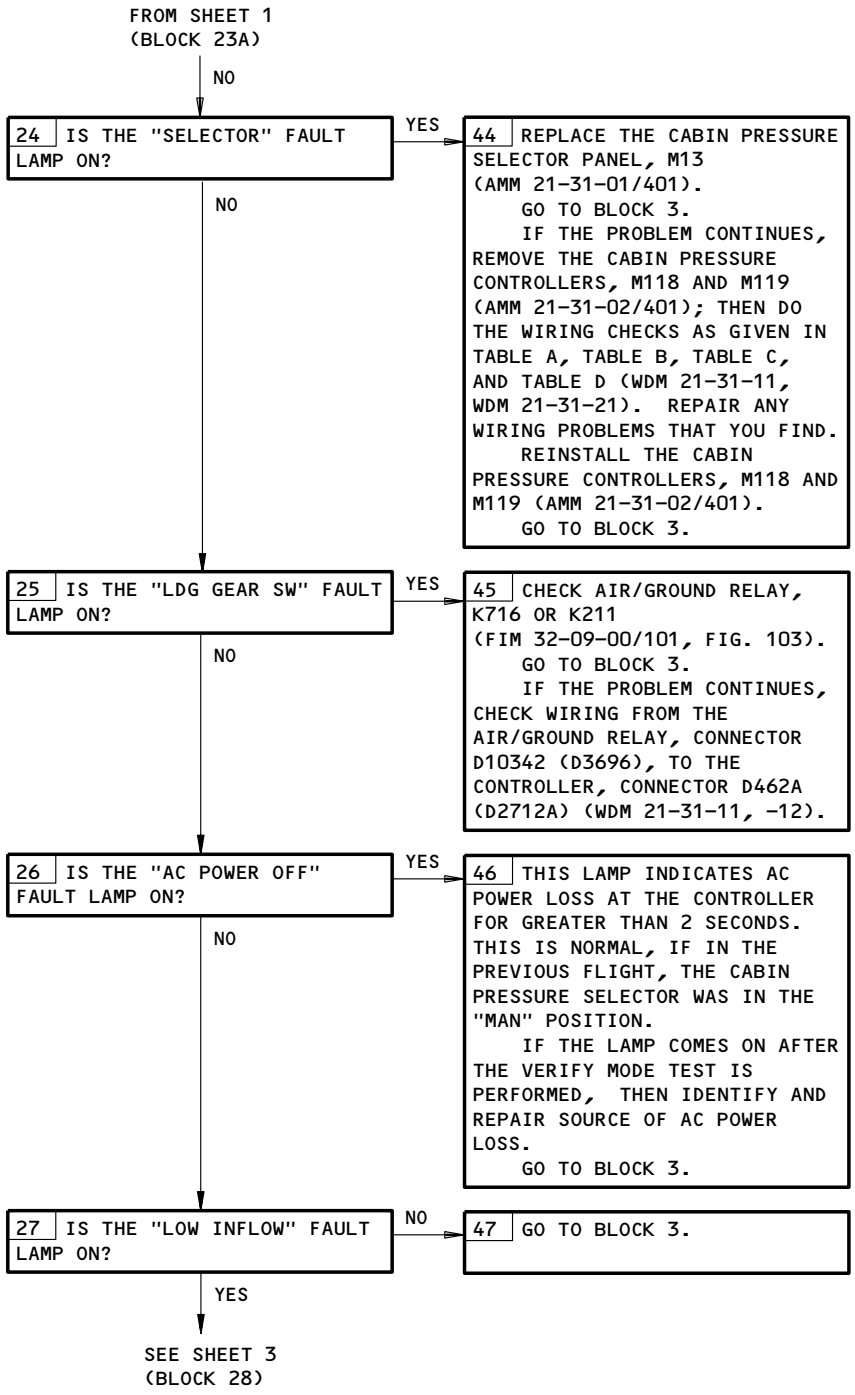

Cabin Pressure Controller BITE Procedure
Figure 103 (Sheet 2)

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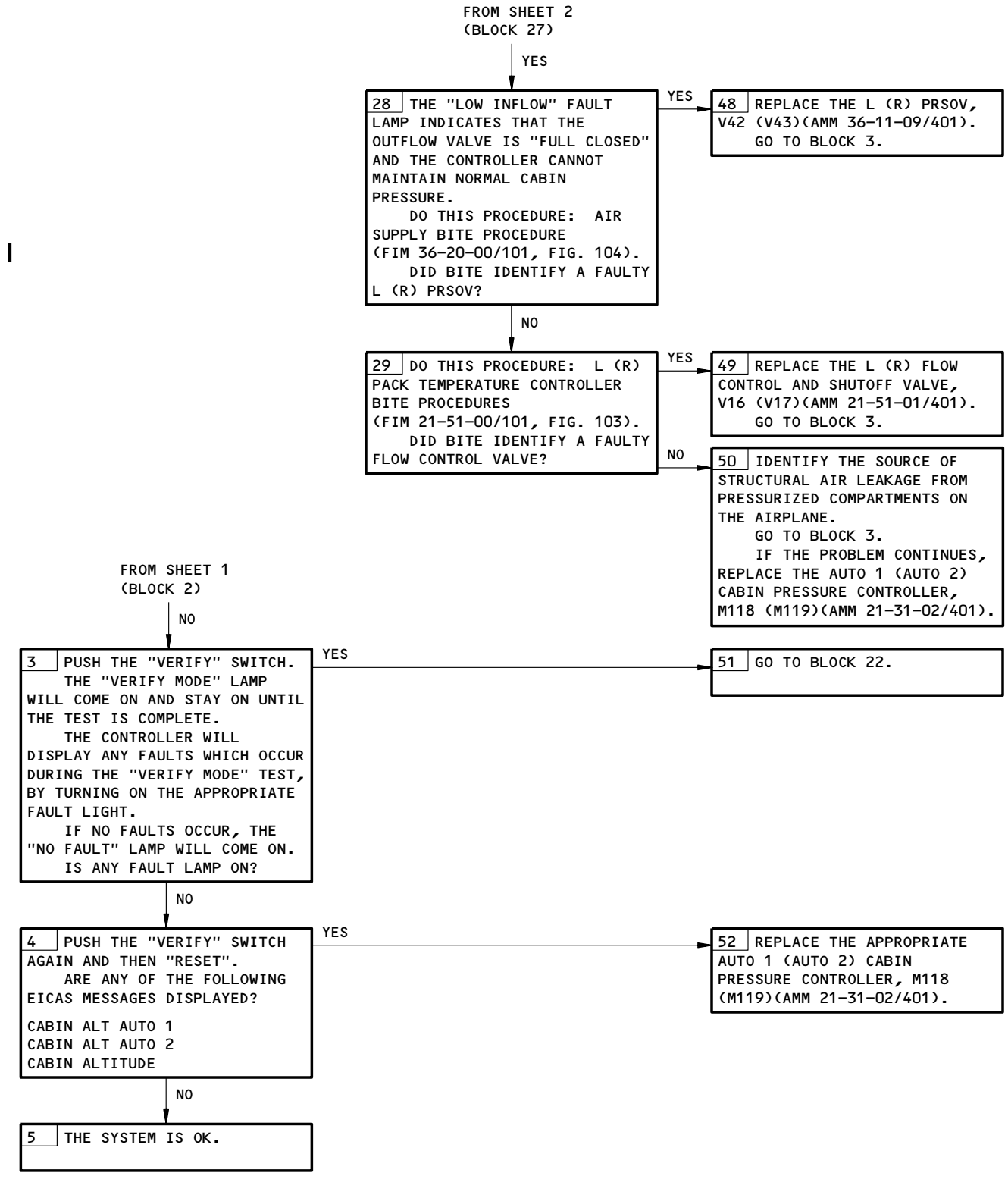

Cabin Pressure Controller BITE Procedure
Figure 103 (Sheet 3)

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CABIN PRESSURE CONTROLLER		CABIN PRESSURE SELECTOR	WIRING CHECK ACCEPTANCE
UNIT	CONNECTOR	MODE	
M118 (AUTO 1)	D462A, PIN A2	AUTO 1	GROUND (DC)
		AUTO 2	OPEN CIRCUIT
		MANUAL	OPEN CIRCUIT
M119 (AUTO 2)	D2712A, PIN A2	AUTO 1	OPEN CIRCUIT
		AUTO 2	GROUND (DC)
		MANUAL	OPEN CIRCUIT

CPC - SELECTOR PANEL WIRING CHECK
TABLE A

CABIN PRESSURE CONTROLLER		WIRING CHECK ACCEPTANCE
M118 (AUTO 1)	M119 (AUTO 2)	
FROM CONNECTOR D462A	TO CONNECTOR D2712A	
PIN C3	PIN D3	CONTINUITY
PIN C4	PIN D4	CONTINUTIY
PIN D3	PIN C3	CONTINUITY
PIN D4	PIN C4	CONTINUITY

CPC-BUS CROSS-TALK WIRING CHECK
TABLE B

Cabin Pressure Controller BITE Procedure
Figure 103 (Sheet 4)

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CABIN PRESSURE CONTROLLER	FROM CONNECTOR	TO CONNECTOR	WIRING CHECK ACCEPTANCE
M118 (AUTO 1)	D462A, PIN B9	D462A, PIN B10	OPEN CIRCUIT
M119 (AUTO 2)	D2712A, PIN B9	D2712A, PIN B10	CONTINUITY

CPC TIE-BREAKER WIRING CHECK
TABLE C

CABIN PRESSURE CONTROLLER		CABIN PRESSURE SELECTOR	WIRING CHECK ACCEPTANCE
UNIT	FROM CONNECTOR	TO CONNECTOR	
M118 (AUTO 1)	D462A, PIN A1	D1324, PIN 21	CONTINUITY
	D462A, PIN B1	D1324, PIN 9	CONTINUITY
	D462A, PIN C1	D1324, PIN 20	CONTINUITY
	D462A, PIN D1	D1324, PIN 8	CONTINUITY
M119 (AUTO 2)	D2712A, PIN A1	D1324, PIN 23	CONTINUITY
	D2712A, PIN B1	D1324, PIN 11	CONTINUITY
	D2712A, PIN C1	D1324, PIN 22	CONTINIUTY
	D2712A, PIN D1	D1324, PIN 10	CONTINUITY

CPC - SELECTOR PANEL POTENTIOMETER WIRING CHECK
TABLE D

Cabin Pressure Controller BITE Procedure
Figure 103 (Sheet 5)

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"AUTO INOP, CABIN ALT AUTO 1 AND 2" EICAS MESSAGES ON. MANUAL OPERATION NORMAL.

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13, 11B14, 11B15, 11P15, 11P23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 DO A BITE TEST ON CABIN PRESSURE CONTROLLER NUMBER 1 AND ON CABIN PRESSURE CONTROLLER NUMBER 2 (FIG. 103, BLOCK 1).

AUTO INOP, CABIN ALT AUTO 1 and 2 EICAS Messages On. Manual Operation Normal.
Figure 104

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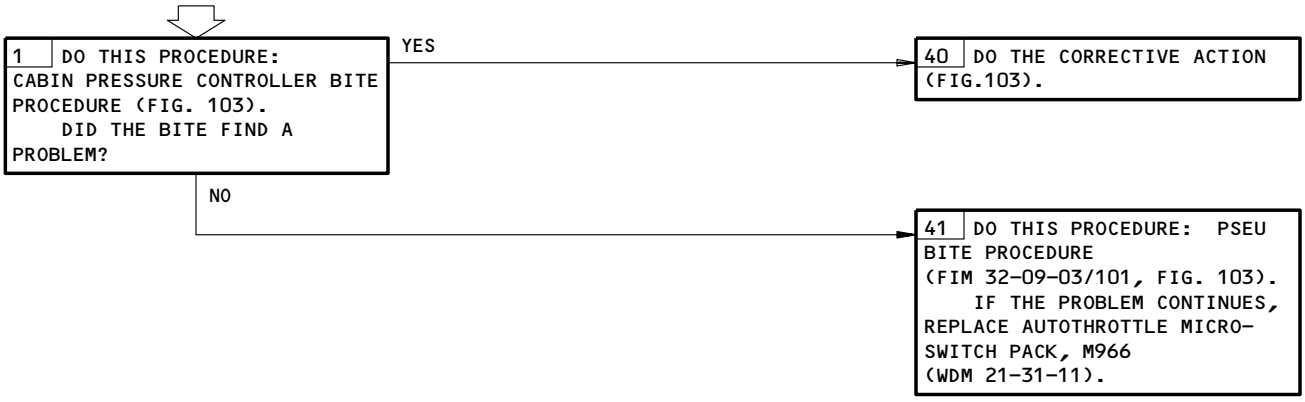
PRESSURE BUMP DURING TAKEOFF

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13, 11B14, 11B15, 11P15, 11P23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



Pressure Bump During Takeoff
Figure 105

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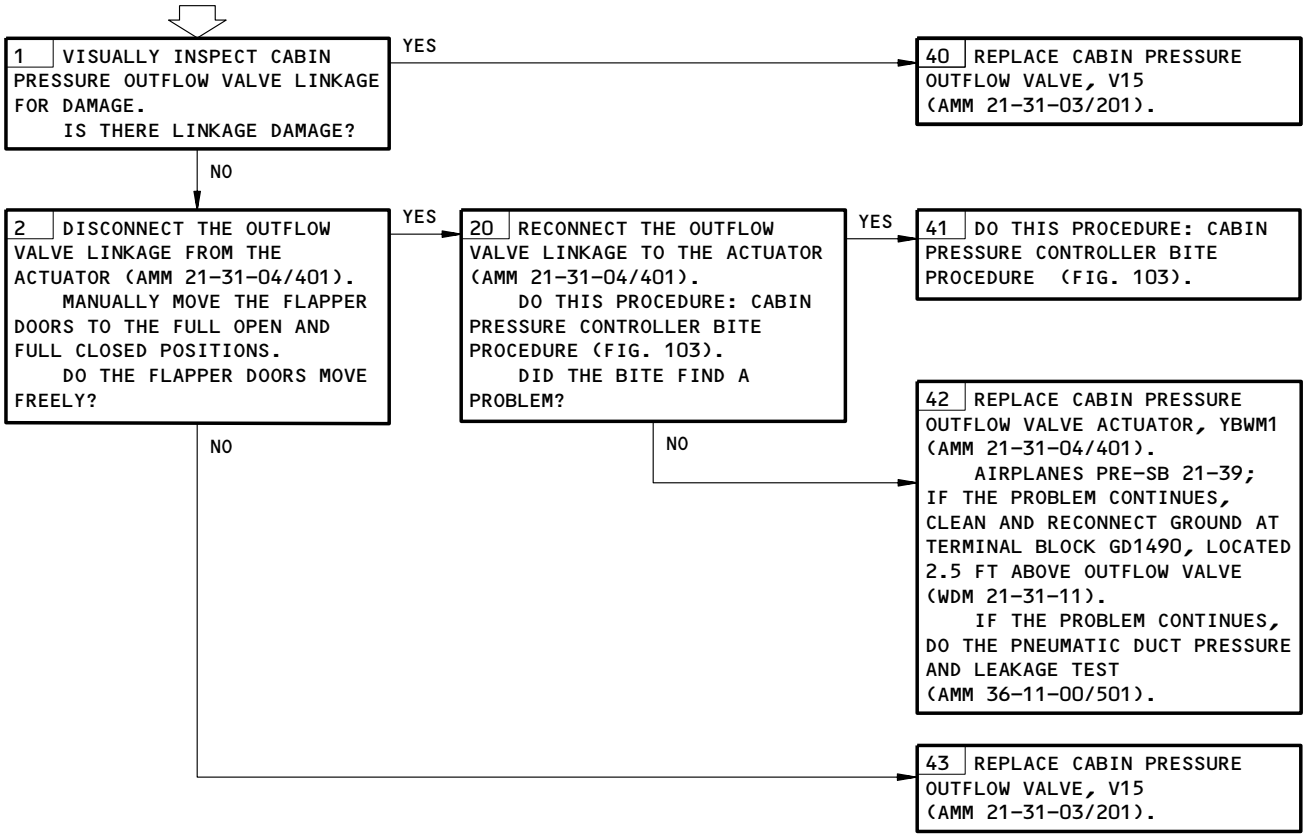
BOTH "CABIN ALT AUTO" EICAS MESSAGES ILLUM, "CABIN AUTO INOP" EICAS MESSAGE AND "AUTO INOP" LIGHT ON IN AUTO. MANUAL MODE NOT NORMAL

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13, 11B14, 11B15, 11P15, 11P23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



Both CABIN ALT AUTO EICAS Messages Illum, CABIN AUTO INOP EICAS Message and AUTO INOP Light On in Auto. Manual Mode Not Normal
Figure 106

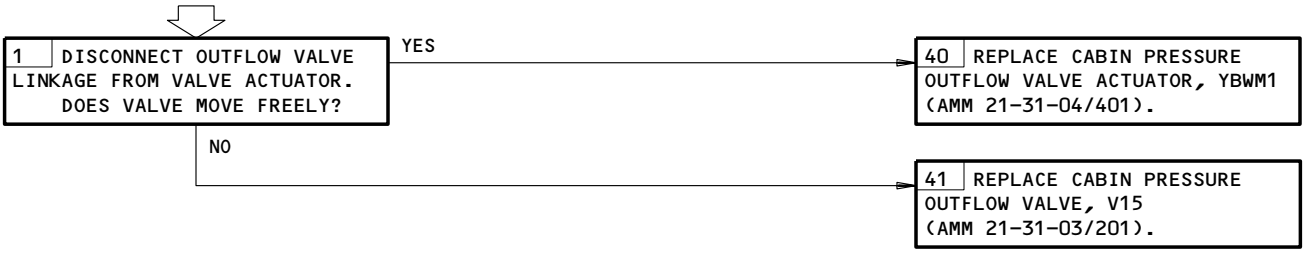
BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

CABIN ALTITUDE INDICATIONS ON IN AUTO. MANUAL OPERATION ABNORMAL

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13, 11B14, 11B15, 11P15, 11P23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



Cabin Altitude Indications On in Auto. Manual Operation Abnormal
Figure 107

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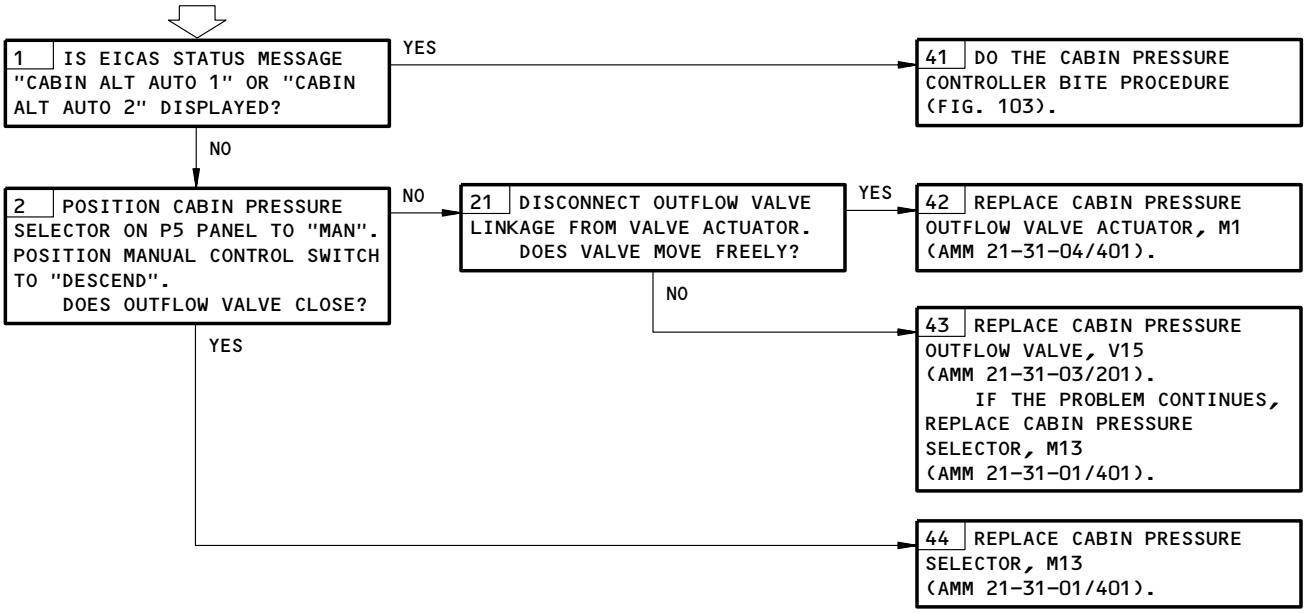
PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13, 11B14, 11B15, 11P15, 11P23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

OUTFLOW VALVE DID NOT BEGIN TO CLOSE AT LIFTOFF



Outflow Valve Did Not Begin to Close At Liftoff
Figure 108

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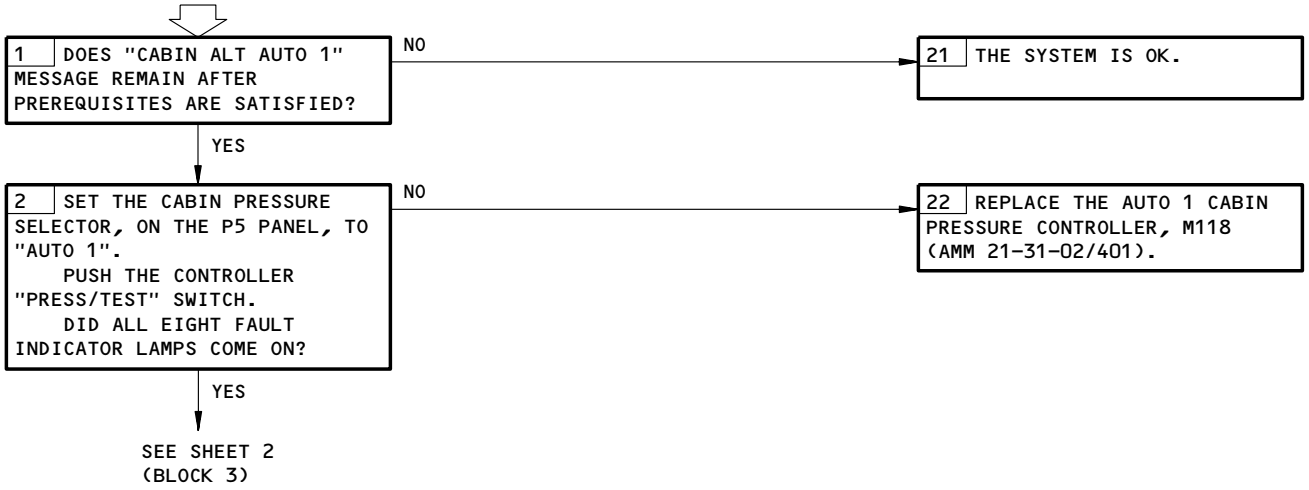
PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13, 11B14, 11B15, 11P15, 11P23;

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

NOTE: AIRPLANES WITHOUT CPC P/N S210T160-83 AND SUBSEQUENT CPC DASH NUMBERS;
DURING THE CLIMB OR DESCENT PHASE OF FLIGHT, HIGH PACK FLOW RATES CAN CAUSE THE OUTFLOW VALVE TO STALL IN THE OPEN POSITION. WHEN THE OUTFLOW VALVE STALLS, CONTROL SWITCHES FROM ONE AUTO CONTROLLER TO THE OTHER AND CAUSES THE EICAS MESSAGE "CABIN ALT AUTO 1/2" TO OCCUR. THE HIGHER PACK FLOW RATES CAN BE CAUSED BY A DAMAGED THROAT PRESSURE SENSING PROBE IN THE FLOW CONTROL VALVE. A BITE TEST OF THE CABIN PRESSURE CONTROLLER RESULTS IN THE OCCURRANCE OF THE "AC MOTOR" FAULT LIGHT. THIS CONDITION DOES NOT ACTUALLY REFLECT THE TRUE STATUS OF THE CABIN PRESSURE SYSTEM COMPONENTS AND REPLACEMENT OF THE COMPONENTS DOES NOT CORRECT THIS CONDITION. IF THE EICAS MESSAGE "CABIN ALT AUTO 1/2" CONTINUES TO OCCUR, EXAMINE THE THROAT PRESSURE SENSING PROBES OF THE FLOW CONTROL VALVES FOR DAMAGE (SL 767-SL-21-035-B). FLOW CONTROL VALVES THAT ARE NOT CALIBRATED MAY CAUSE SIMILAR CABIN PRESSURIZATION PROBLEMS.



EICAS Message CABIN ALT AUTO 1 Displayed
Figure 109 (Sheet 1)

U73724

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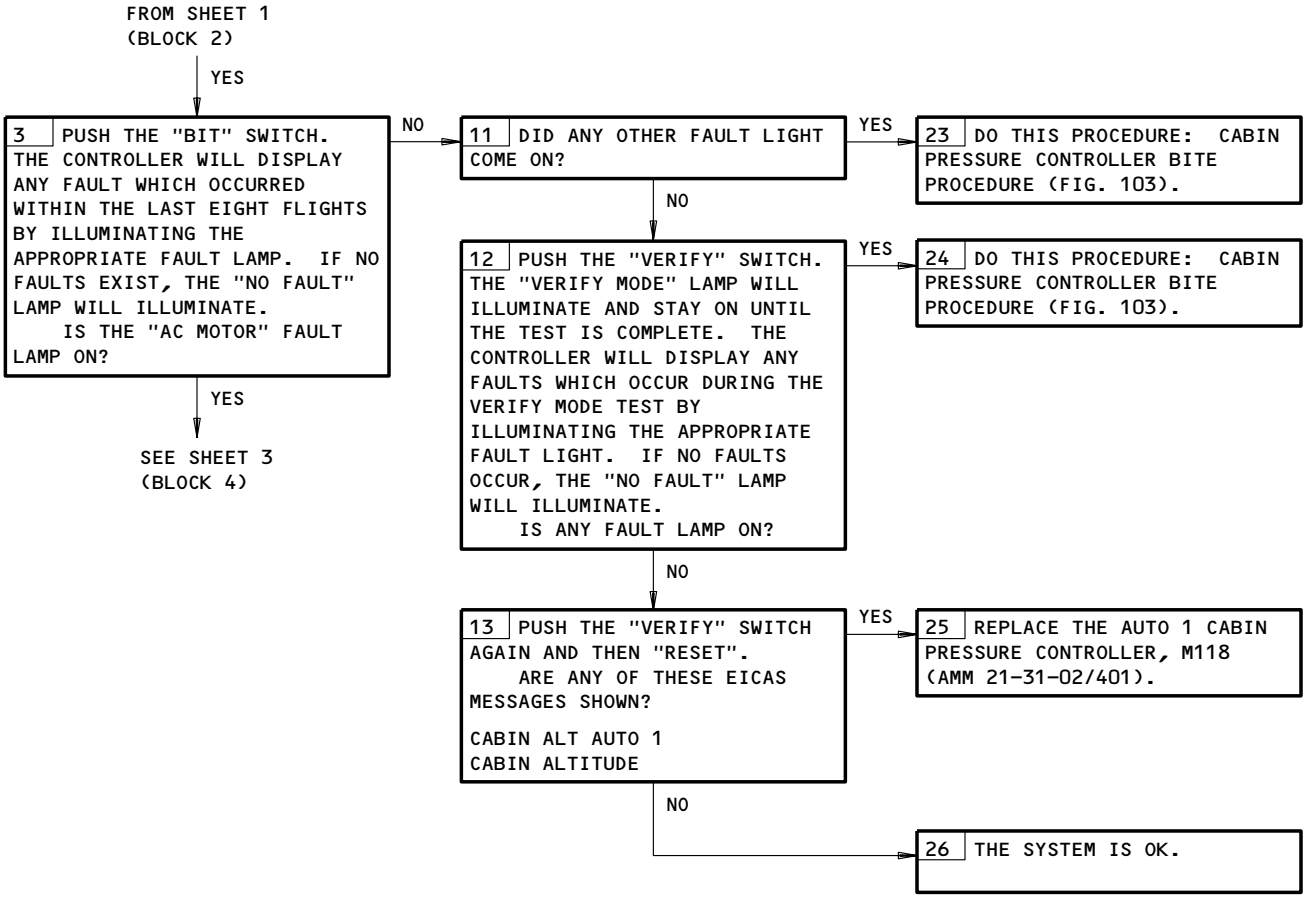
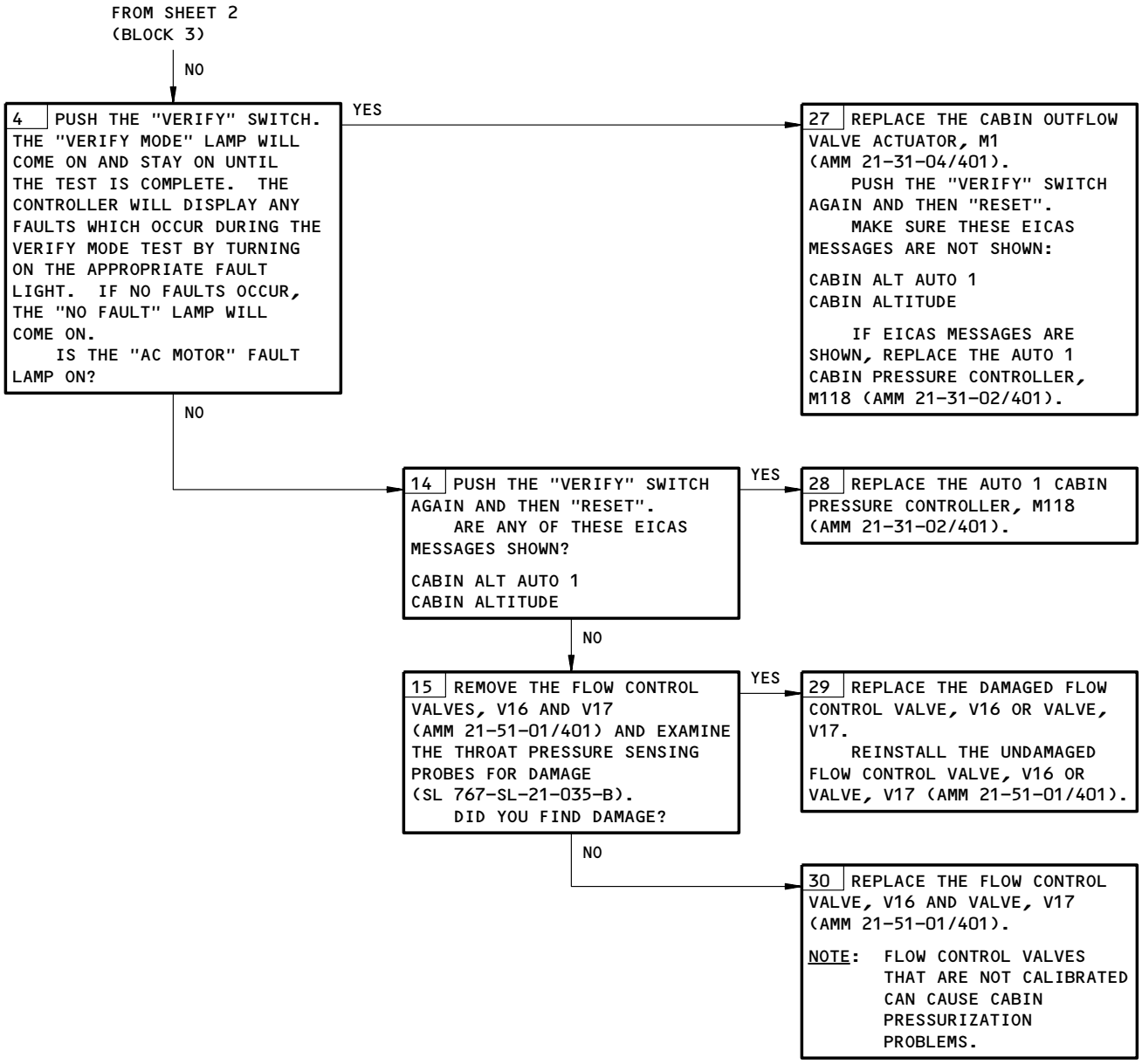


EICAS Message CABIN ALT AUTO 1 Displayed
Figure 109 (Sheet 2)

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.



EICAS Message CABIN ALT AUTO 1 Displayed
Figure 109 (Sheet 3)

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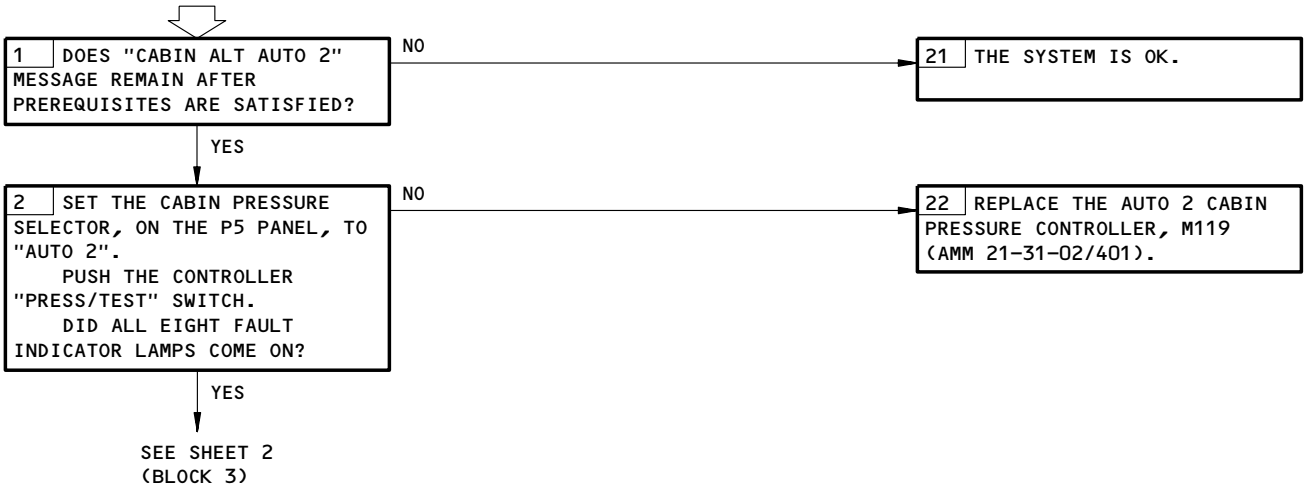
PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13, 11B14, 11B15, 11P15, 11P23;

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

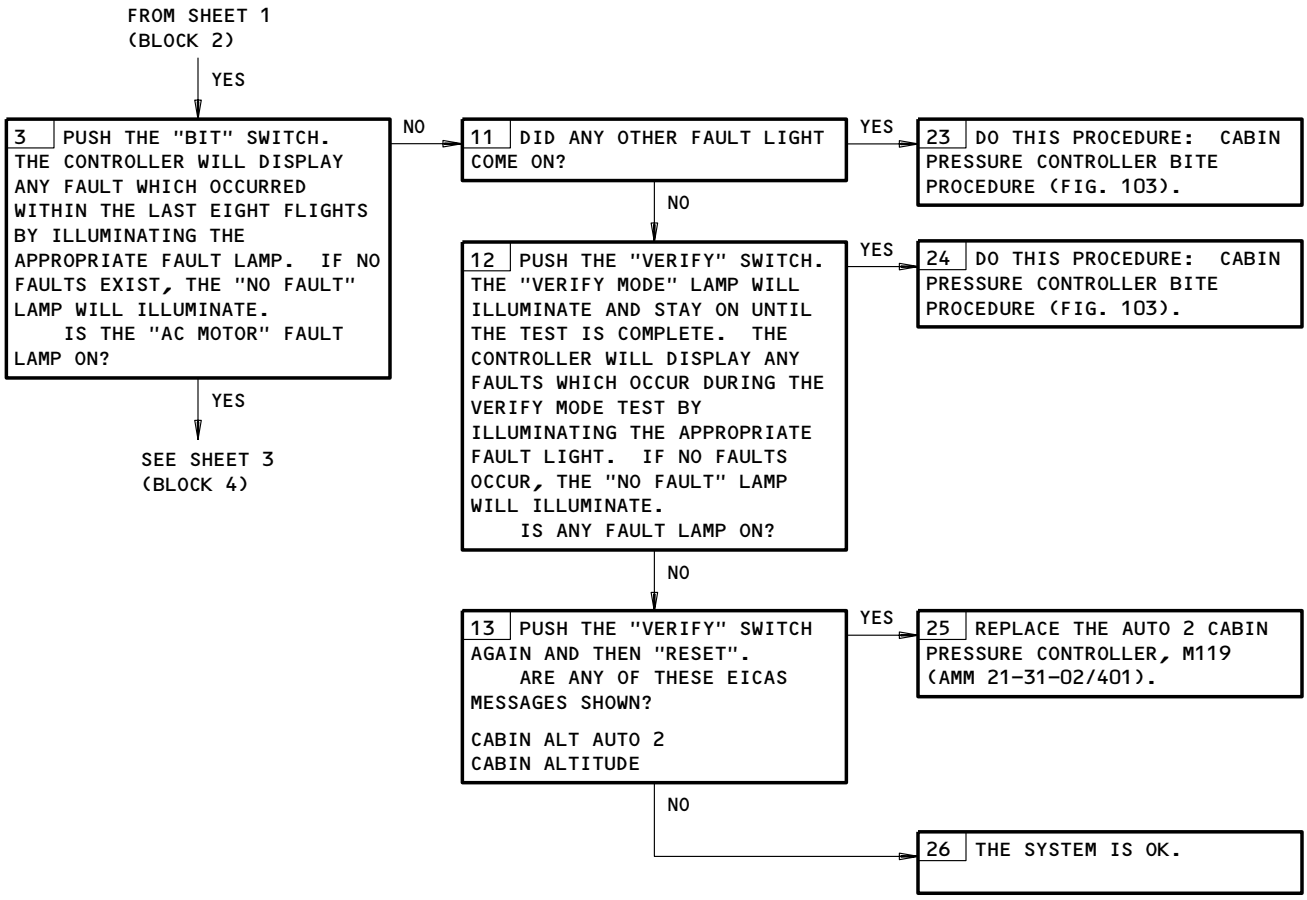
NOTE: AIRPLANES WITHOUT CPC P/N S210T160-83 AND SUBSEQUENT CPC DASH NUMBERS;
DURING THE CLIMB OR DESCENT PHASE OF FLIGHT, HIGH PACK FLOW RATES CAN CAUSE THE OUTFLOW VALVE TO STALL IN THE OPEN POSITION. WHEN THE OUTFLOW VALVE STALLS, CONTROL SWITCHES FROM ONE AUTO CONTROLLER TO THE OTHER AND CAUSES THE EICAS MESSAGE "CABIN ALT AUTO 1/2" TO OCCUR. THE HIGHER PACK FLOW RATES CAN BE CAUSED BY A DAMAGED THROAT PRESSURE SENSING PROBE IN THE FLOW CONTROL VALVE. A BITE TEST OF THE CABIN PRESSURE CONTROLLER RESULTS IN THE OCCURRANCE OF THE "AC MOTOR" FAULT LIGHT. THIS CONDITION DOES NOT ACTUALLY REFLECT THE TRUE STATUS OF THE CABIN PRESSURE SYSTEM COMPONENTS AND REPLACEMENT OF THE COMPONENTS DOES NOT CORRECT THIS CONDITION. IF THE EICAS MESSAGE "CABIN ALT AUTO 1/2" CONTINUES TO OCCUR, EXAMINE THE THROAT PRESSURE SENSING PROBES OF THE FLOW CONTROL VALVES FOR DAMAGE (SL 767-SL-21-035-B). FLOW CONTROL VALVES THAT ARE NOT CALIBRATED MAY CAUSE SIMILAR CABIN PRESSURIZATION PROBLEMS.

EICAS MESSAGE "CABIN ALT AUTO 2" DISPLAYED



EICAS Message CABIN ALT AUTO 2 Displayed
Figure 110 (Sheet 1)

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.



EICAS Message CABIN ALT AUTO 2 Displayed
Figure 110 (Sheet 2)

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FROM SHEET 2
(BLOCK 3)

NO

4 PUSH THE "VERIFY" SWITCH. THE "VERIFY MODE" LAMP WILL COME ON AND STAY ON UNTIL THE TEST IS COMPLETE. THE CONTROLLER WILL DISPLAY ANY FAULTS WHICH OCCUR DURING THE VERIFY MODE TEST BY TURNING ON THE APPROPRIATE FAULT LIGHT. IF NO FAULTS OCCUR, THE "NO FAULT" LAMP WILL COME ON.
IS THE "AC MOTOR" FAULT LAMP ON?

YES

27 REPLACE THE CABIN OUTFLOW VALVE ACTUATOR, M1 (AMM 21-31-04/401).
PUSH THE "VERIFY" SWITCH AGAIN AND THEN "RESET".
MAKE SURE THESE EICAS MESSAGES ARE NOT SHOWN:

CABIN ALT AUTO 2
CABIN ALTITUDE

IF EACAS MESSAGES ARE SHOWN, REPLACE THE AUTO 2 CABIN PRESSURE CONTROLLER, M119 (AMM 21-31-02/401).

NO

14 PUSH THE "VERIFY" SWITCH AGAIN AND THEN "RESET".
ARE ANY OF THESE EICAS MESSAGES SHOWN?

CABIN ALT AUTO 2
CABIN ALTITUDE

YES

28 REPLACE THE AUTO 2 CABIN PRESSURE CONTROLLER, M119 (AMM 21-31-02/401).

NO

15 REMOVE THE FLOW CONTROL VALVES, V16 AND V17 (AMM 21-51-01/401) AND EXAMINE THE THROAT PRESSURE SENSING PROBES FOR DAMAGE (SL 767-SL-21-035-B).
DID YOU FIND DAMAGE?

YES

29 REPLACE THE DAMAGED FLOW CONTROL VALVE, V16 OR VALVE, V17.
REINSTALL THE UNDAMAGED FLOW CONTROL VALVE, V16 OR VALVE, V17 (AMM 21-51-01/401).

NO

30 REPLACE THE FLOW CONTROL VALVE, V16 AND VALVE, V17 (AMM 21-51-01/401).

NOTE: FLOW CONTROL VALVES THAT ARE NOT CALIBRATED CAN CAUSE CABIN PRESSURIZATION PROBLEMS.

EICAS Message CABIN ALT AUTO 2 Displayed
Figure 110 (Sheet 3)

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CABIN PRESSURE RELIEF SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
DOOR - (FIM 52-34-00/101) NEGATIVE PRESSURE RELIEF/VENT (ON CARGO DOOR)				
DOOR - NEGATIVE PRESSURE RELIEF/VENT (ON FUSELAGE) 1	1	1	821, FWD CARGO COMPT	21-32-03
FILTER - POSITIVE PRESSURE RELIEF VALVE	1	2	821, FWD CARGO COMPT	21-32-02
VALVE - POSITIVE PRESSURE RELIEF	1	2	821, FWD CARGO COMPT	21-32-01

* SEE THE WDM EQUIPMENT LIST

1 767-300 PASSENGER AIRPLANES

Cabin Pressure Relief System - Component Index
Figure 101

M13895

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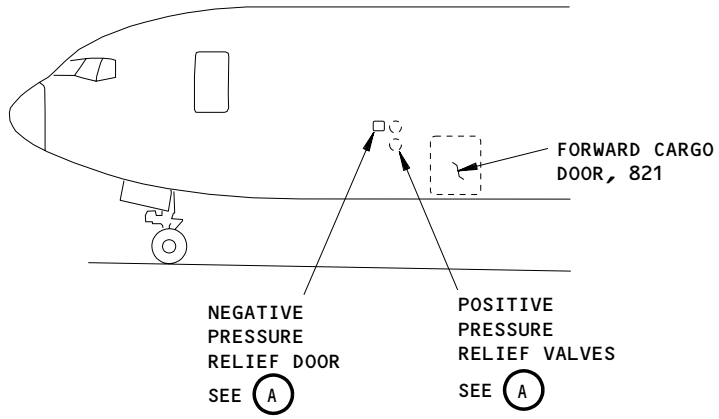

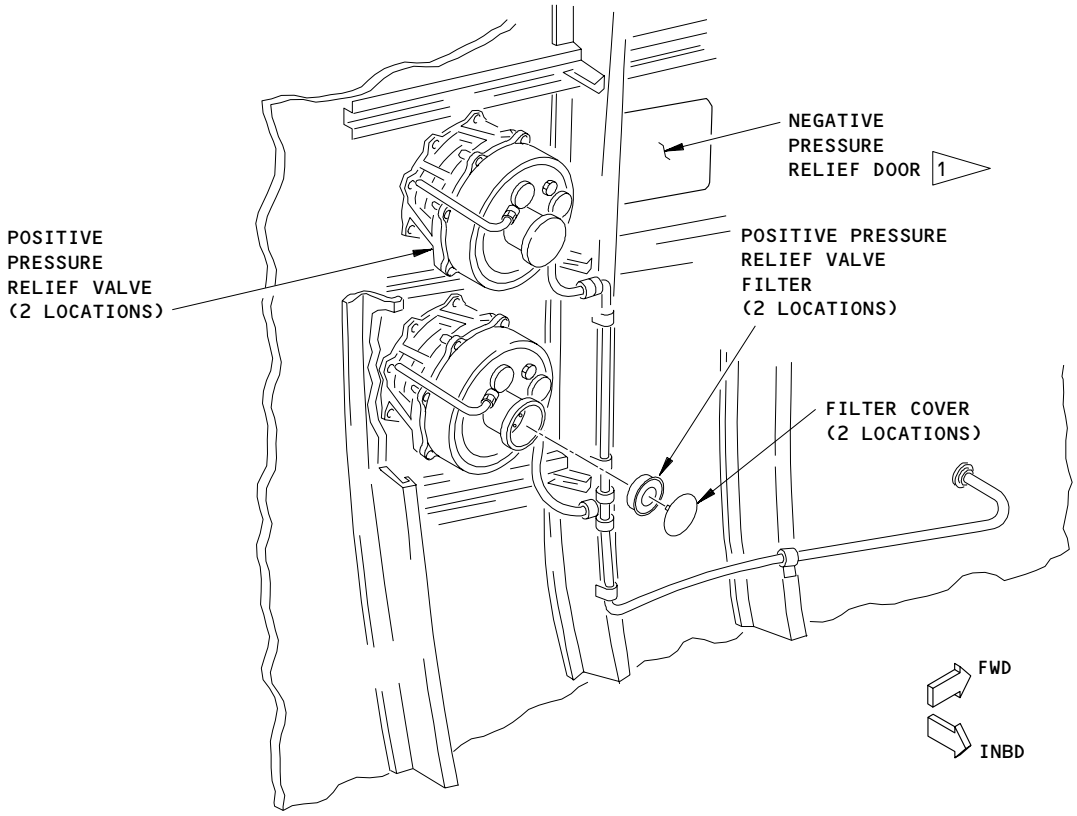

POSITIVE PRESSURE RELIEF VALVE
A

1 767-300 PASSENGER AIRPLANES

Cabin Pressure Relief System - Component Location
Figure 102

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CABIN PRESSURE INDICATION AND WARNING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			FLT COMPT, P11	
CABIN ALTM, C4205		1	11B13	*
CABIN DIFF PRESS IND, C4206		1	11B12	*
COMPUTER – (FIM 31-41-00/101)				
EICAS L, M10181				
EICAS R, M10181				
HORN – (FIM 23-43-00/101)				
GROUND CREW CALL – WARNING				
LIGHT – CABIN ALT, YDAL1	1	1	FLT COMPT, P5, EQUIP COOLING CONTROL PANEL, M17	*
MODULE – (FIM 31-51-00/101)				
WARNING DISPLAY DISCRETE, M779				
PANEL – (FIM 21-58-00/101)				
EQUIP COOLING CONTROL, M17	1	1	FLT COMPT, P5	21-58-00
PANEL – CABIN PRESSURE INDICATION, M19	1	1	FLT COMPT, P5	21-33-01
SENSOR – DIFFERENTIAL PRESSURE, TS5072	2	1	113AL, FORWARD ACCESS DOOR RIGHT SIDEWALL	21-33-04
SWITCH – CABIN ALTITUDE WARNING, S431	2	1	119AL, MAIN EQUIP CTR	21-33-00

* SEE THE WDM EQUIPMENT LIST

Cabin Pressure Indication and Warning System – Component Index
Figure 101

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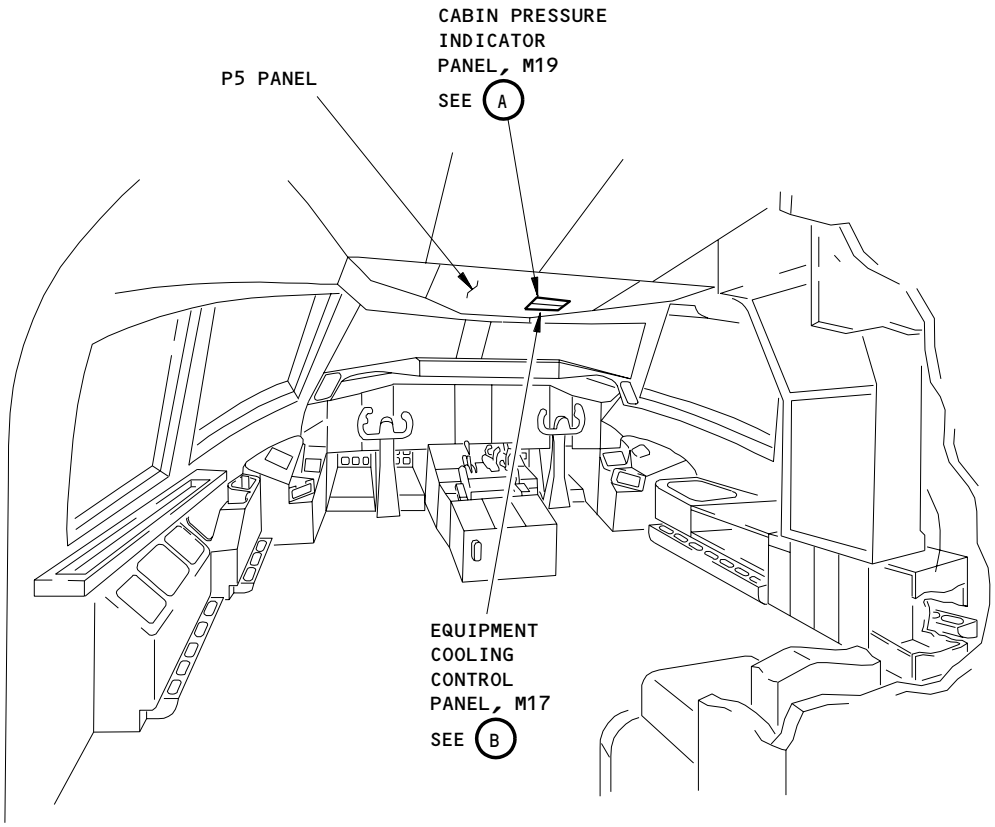
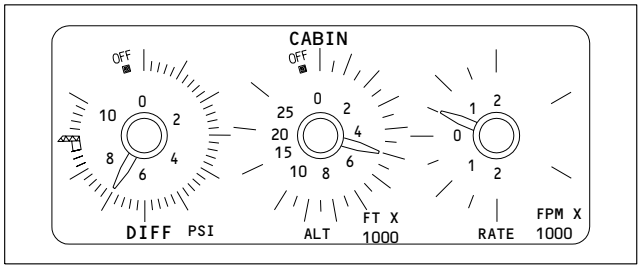
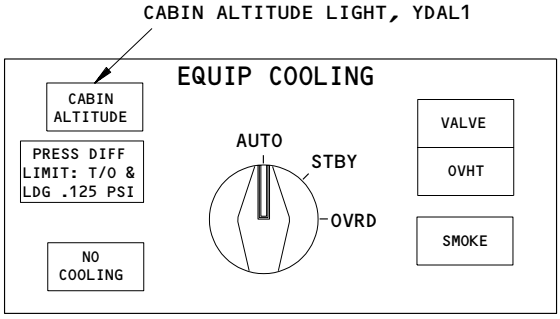


FLIGHT COMPARTMENT



CABIN PRESSURE INDICATOR PANEL, M19

A



EQUIPMENT COOLING CONTROL PANEL, M17

B

Cabin Pressure Indication and Warning System – Component Location
Figure 102 (Sheet 1)

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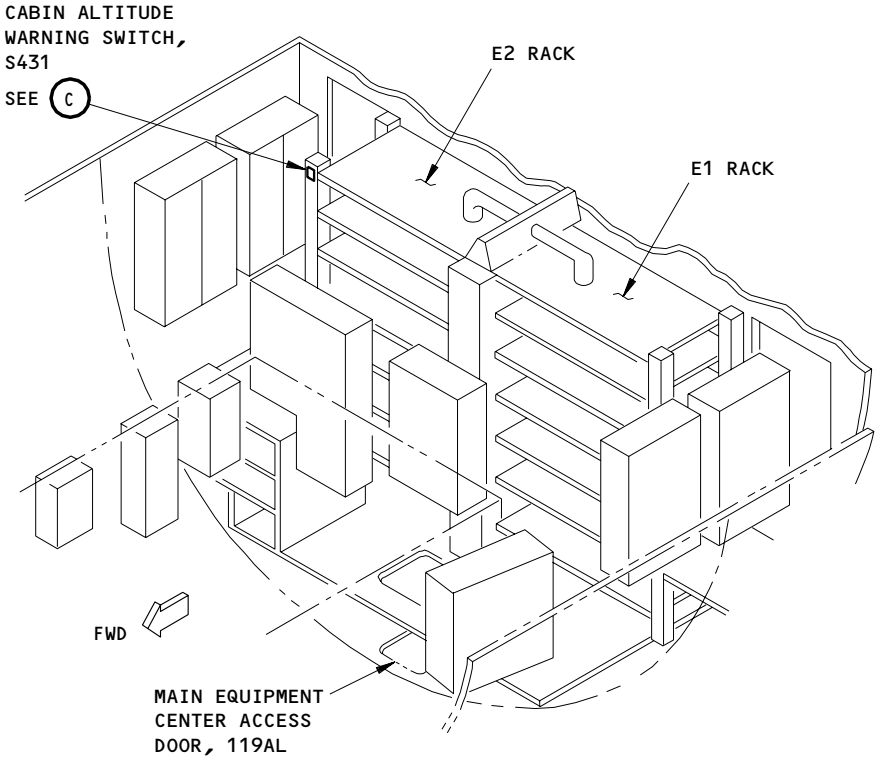
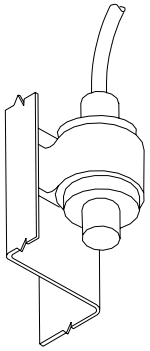
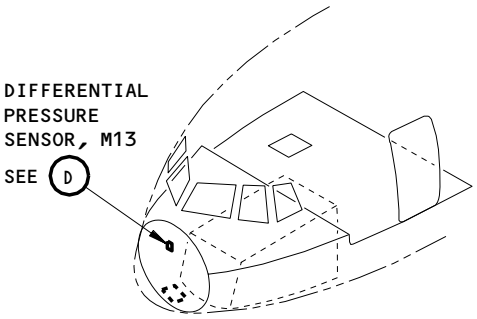
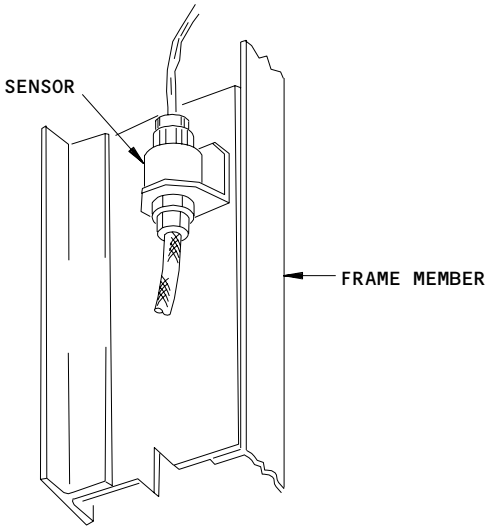


MAIN EQUIPMENT CENTER



CABIN ALTITUDE
WARNING SWITCH, S431
C





DIFFERENTIAL PRESSURE SENSOR, M13
D

Cabin Pressure Indication and Warning System – Component Location
Figure 102 (Sheet 2)

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APL ALT VS CABIN ALT OFF NORMAL PRESS SCHEDULE WHEN OPERATING IN BOTH MODES

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C30, 11U15, 11U23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 REMOVE AUTO 1 CABIN PRESS CONT UNIT, M118 (AMM 21-31-02/401).
CHECK FOR CONTINUITY BETWEEN PINS, A7 AND A8, OF CONNECTOR D462A (WDM 21-31-11).
DOES CONTINUITY EXIST?

NO → 21 INSTALL M118.
CHECK THAT EICAS MSG "NOSE A/G DISAGREE" IS DISPLAYED.
IS MSG DISPLAYED?

YES → 41 DO THIS PROCEDURE: PSEU BITE PROCEDURE (FIM 32-09-03/101, FIG. 103, BLOCK 7).

NO → 22 REMOVE SYS NO. 1 AIR/GND RELAY, K716, IN P36 (AMM 32-09-02/401).
CHECK FOR 28V DC POWER BETWEEN PINS, 6 AND 12, OF CONNECTOR D10342.
DOES POWER EXIST?

YES → 42 REPLACE SYS NO. 1 AIR/GND RELAY, K716, IN P36 (AMM 32-09-02/401).

NO → 43 INSTALL K716.
REPLACE SYS NO. 1 AIR/GND RELAY, K149, IN P36 (AMM 32-09-02/401).

YES → 2 INSTALL M118.
REMOVE AUTO 2 CABIN PRESS CONT UNIT, M119 (AMM 21-31-02/401).
CHECK FOR CONTINUITY BETWEEN PINS, A7 AND A8, OF CONNECTOR D2712A (WDM 21-31-21).
DOES CONTINUITY EXIST?

NO → 23 INSTALL M119.
REMOVE SYS NO. 2 AIR/GND RELAY, K211, IN P37 (AMM 32-09-02/401).
CHECK FOR 28V DC POWER BETWEEN PINS, 6 AND 12, OF CONNECTOR D3696.
DOES POWER EXIST?

YES → 44 REPLACE SYS NO. 2 AIR/GND RELAY, K211, IN P37 (AMM 32-09-02/401).

NO → 24 INSTALL K211.
REMOVE SYS NO. 2 AIR/GND RELAY, K204, IN P37 (AMM 32-09-02/401).
CHECK FOR 28V DC POWER BETWEEN PINS, X1 AND X2, OF CONNECTOR D3728.
DOES POWER EXIST?

YES → 45 REPLACE SYS NO. 2 AIR/GND RELAY, K204, IN P37 (AMM 32-09-02/401).

NO → 46 INSTALL K204.
DO THIS PROCEDURE: PSEU BITE PROCEDURE (FIM 32-09-03/101, FIG. 103, BLOCK 7).

YES → 47 INSTALL M119.
REPLACE CABIN PRESSURIZATION INDICATING AND WARNING MODULE, M19 (AMM 21-33-01/401).

Apl Alt vs Cabin Alt Off Normal Press Schedule when Operating in Both Modes
Figure 103

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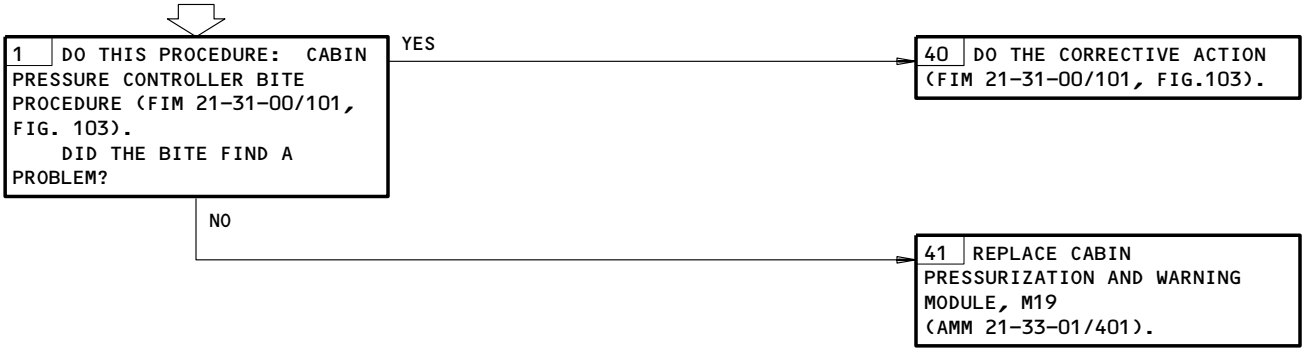
CABIN RATE OFF SCHEDULE IN AUTO, SYSTEM NOT NORMAL IN OTHER AUTO MODE

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13, 11B14, 11B15, 11P15, 11P23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



Cabin Rate Off Schedule in Auto, System Not Normal in Other Auto Mode
Figure 104

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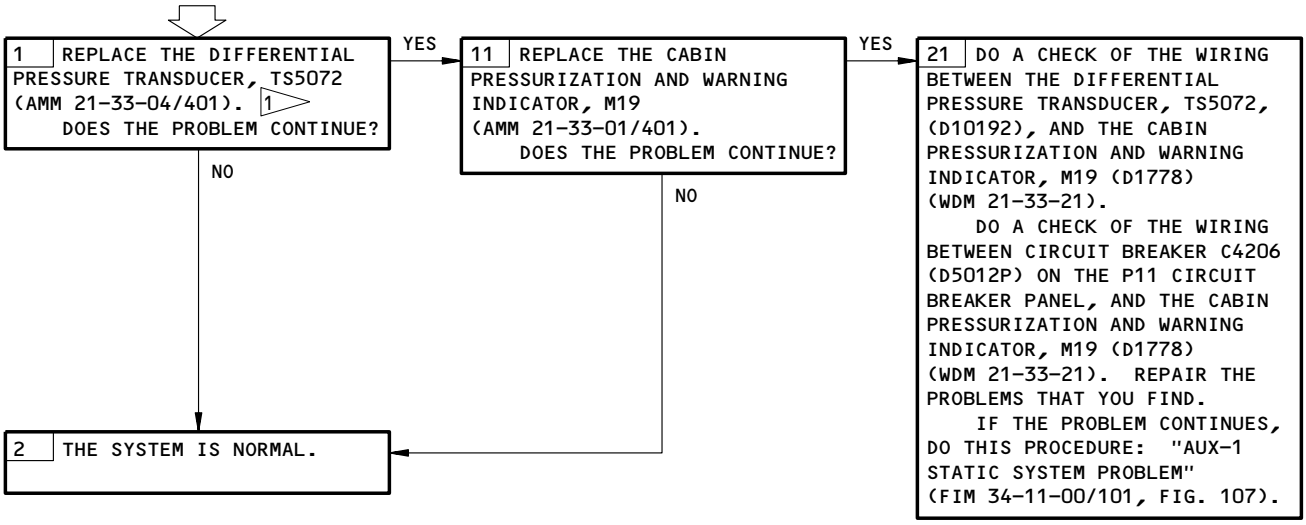
CABIN DIFFERENTIAL PRESSURE INDICATOR INACCURATE/ FLUCTUATES

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B12, 11B13

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



1 THE DIFFERENTIAL PRESSURE TRANSDUCER (TS5072) AND PRESSURIZATION INDICATION AND WARNING MODULE (M19) ARE INSTALLED AS A SET, AND MUST BE COMPATIBLE TO PREVENT ERRONEOUS INDICATION. REFER TO AIPC 21-33-04 AND AIPC 21-33-52 TO CONFIRM THE QUALIFIED INTERCHANGEABILITY DATA FOR THE TRANSDUCER AND MODULE.

Cabin Differential Pressure Indicator Inaccurate/Fluctuates
Figure 105

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FORWARD CARGO COMPARTMENT HEATING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			FLT COMPT, P11	
CONTROL, FWD CARGO HEAT, C697		1	11R19	*
OVERRIDE, FWD CARGO HEAT, C685		1	11R21	*
CIRCUIT BREAKER –			119AL, MAIN EQUIP CTR, P36	
VALVE, FWD CARGO HEAT CONT, C696		1	36L2 OR 36K5	
COMPUTER – (FIM 31-41-00/101)				
EICAS, LEFT, M10181				
EICAS, RIGHT, M10182				
PANEL – (FIM 26-22-00/101)				
APU/CARGO FIRE, M10444				
PANEL – CARGO HEAT CONTROL, M29	1	1	FLT COMPT, P5	*
RELAY – (FIM 31-01-36/101)				
AIR/GND SYS NO. 1, K145				
CONT, FWD CARGO HEAT, K230				
RELAY – (FIM 31-01-37/101)				
AIR/GND SYS NO. 2, K203				
ANNUCIATION, FWD CARGO, K766				
OVHT, FWD CARGO, K231				
SWITCH – FWD CARGO TEMP CONTROL, S364	2	1	821, FWD CARGO COMPT	21-43-05
SWITCH – FWD CARGO TEMP OVERHEAT, S363	2	1	821, FWD CARGO COMPT	21-43-05
SWITCH/LIGHT – (FIM 26-22-00/101)				
FWD CARGO FIRE, S1				
SWITCH/LIGHT – FWD CARGO HEAT, YDBS1	1	1	FLT COMPT, P5, CARGO HEAT CONTROL PNL, M29	
VALVE – FWD CARGO HEATING CONTROL, V88	3	1	194LR, RIGHT ECS BAY	21-43-02
VALVE – FWD CARGO HEATING SHUTOFF, V89	3	1	194LR, RIGHT ECS BAY	21-43-01

* SEE THE WDM EQUIPMENT LIST

Forward Cargo Compartment Heating System – Component Index
Figure 101

M11031

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FORWARD CARGO COMPARTMENT HEATING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			FLT COMPT, P11	
CONTROL, FWD CARGO HEAT, C697		1	11R19	*
OVERRIDE, FWD CARGO HEAT, C685		1	11R21	*
CIRCUIT BREAKER –			119AL, MAIN EQUIP CTR, P36	
VALVE, FWD CARGO HEAT CONT, C696		1	36L2 OR 36K5	
COMPUTER – (FIM 31-41-00/101)				
EICAS, LEFT, M10181				
EICAS, RIGHT, M10182				
PANEL – (FIM 26-22-00/101)				
APU/CARGO FIRE, M10444				
PANEL – CARGO HEAT CONTROL, M29	1	1	FLT COMPT, P5	*
RELAY – (FIM 31-01-36/101)				
AIR/GND SYS NO. 1, K145				
CONT, FWD CARGO HEAT, K230				
RELAY – (FIM 31-01-37/101)				
AIR/GND SYS NO. 2, K203				
ANNUCIATION, FWD CARGO, K766				
OVHT, FWD CARGO, K231				
SWITCH – FWD CARGO TEMP CONTROL, S364	2	1	821, FWD CARGO COMPT	21-43-05
SWITCH – FWD CARGO TEMP OVERHEAT, S363	2	1	821, FWD CARGO COMPT	21-43-05
SWITCH/LIGHT – (FIM 26-22-00/101)				
FWD CARGO FIRE, S1				
SWITCH/LIGHT – FWD CARGO HEAT, YDBS1	1	1	FLT COMPT, P5, CARGO HEAT CONTROL PNL, M29	
VALVE – FWD CARGO HEATING CONTROL, V89	4	1	821, FWD CARGO COMPT, BEHIND AFT RIGHT ENDWALL	21-43-02
VALVE – FWD CARGO HEATING CONTROL, V88	5	1	194LR, RIGHT ECS BAY	21-43-01

* SEE THE WDM EQUIPMENT LIST

Forward Cargo Compartment Heating System – Component Index
Figure 101A

M11036

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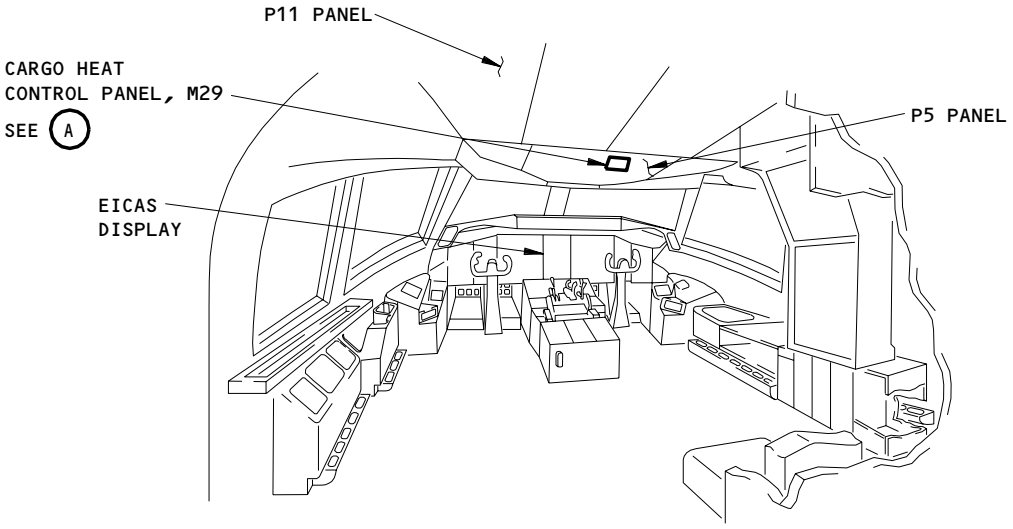
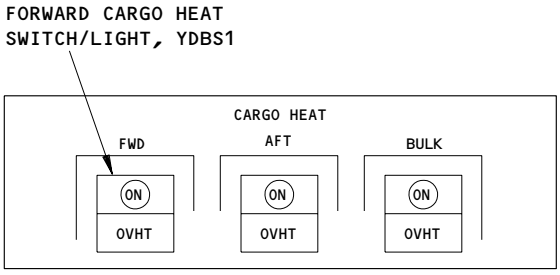


FLIGHT COMPARTMENT



CARGO HEAT CONTROL PANEL, M29

(A)

Forward Cargo Compartment Heating System – Component Location
Figure 102 (Sheet 1)

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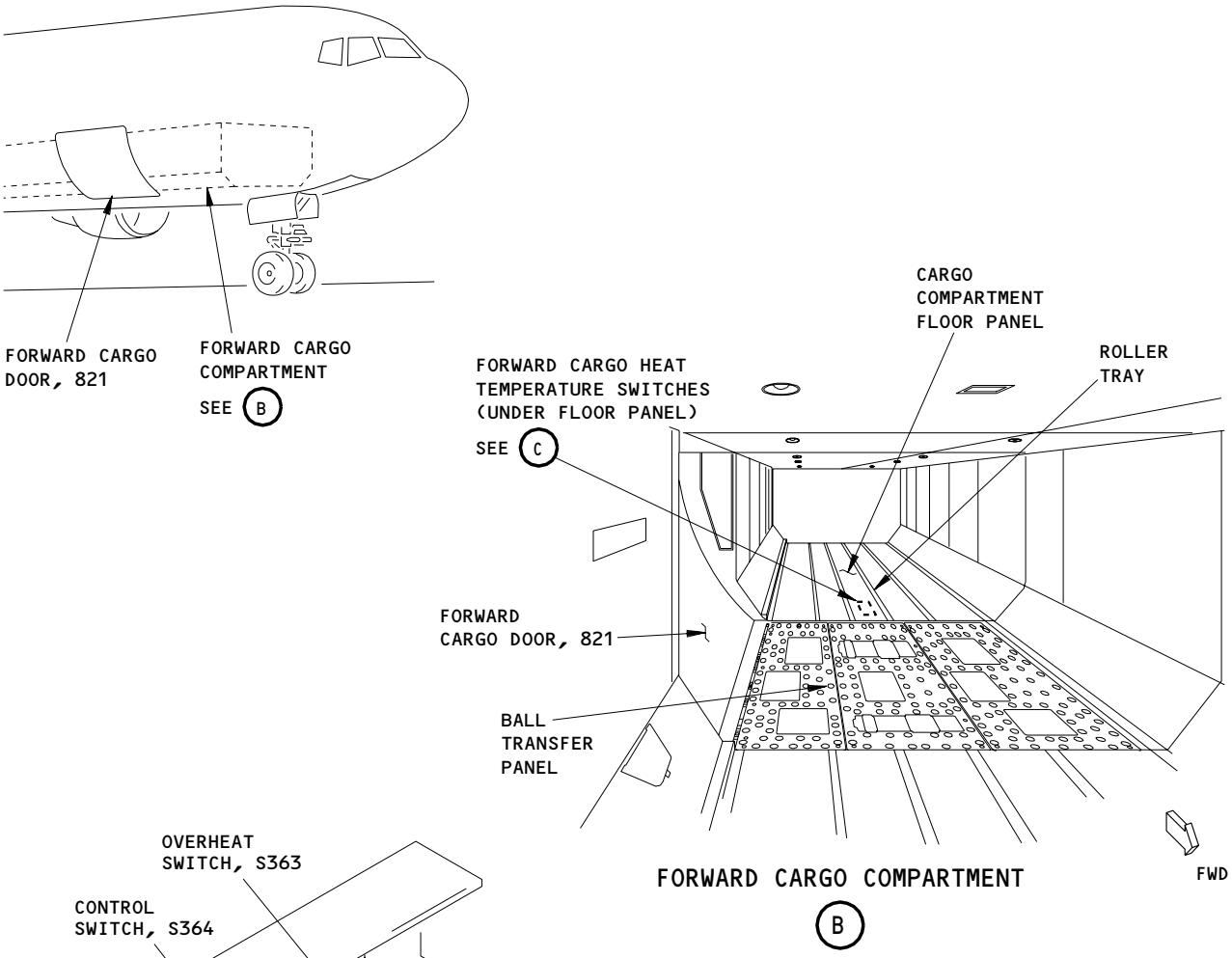

Forward Cargo Compartment Heating System – Component Location
Figure 102 (Sheet 2)

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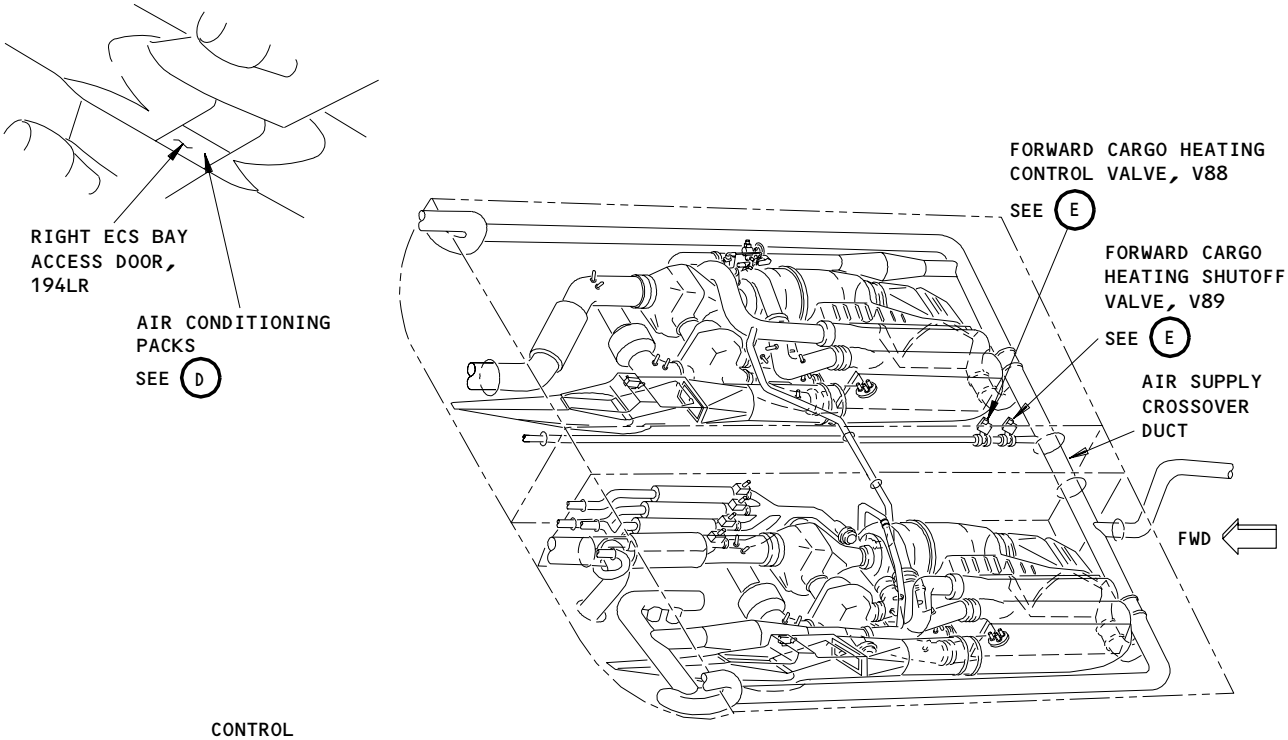
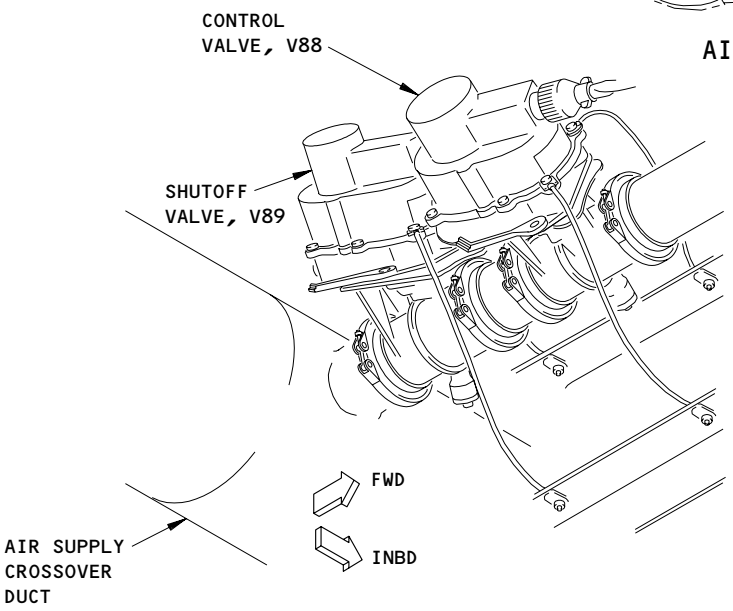


AIR CONDITIONING PACKS

D



FORWARD CARGO HEATING
CONTROL AND SHUTOFF VALVES

E

Forward Cargo Compartment Heating System – Component Location
Figure 102 (Sheet 3)

M11048

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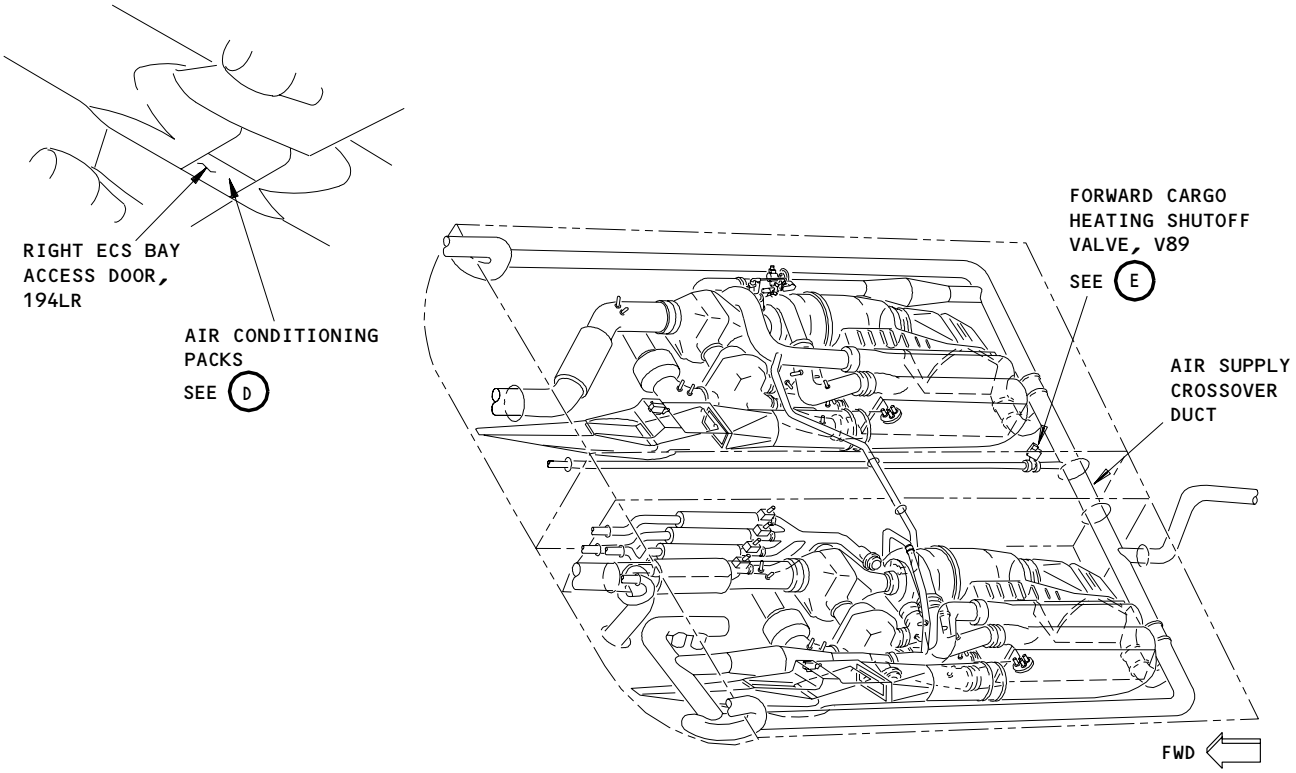

Forward Cargo Compartment Heating System – Component Location
Figure 102 (Sheet 4)

L73617

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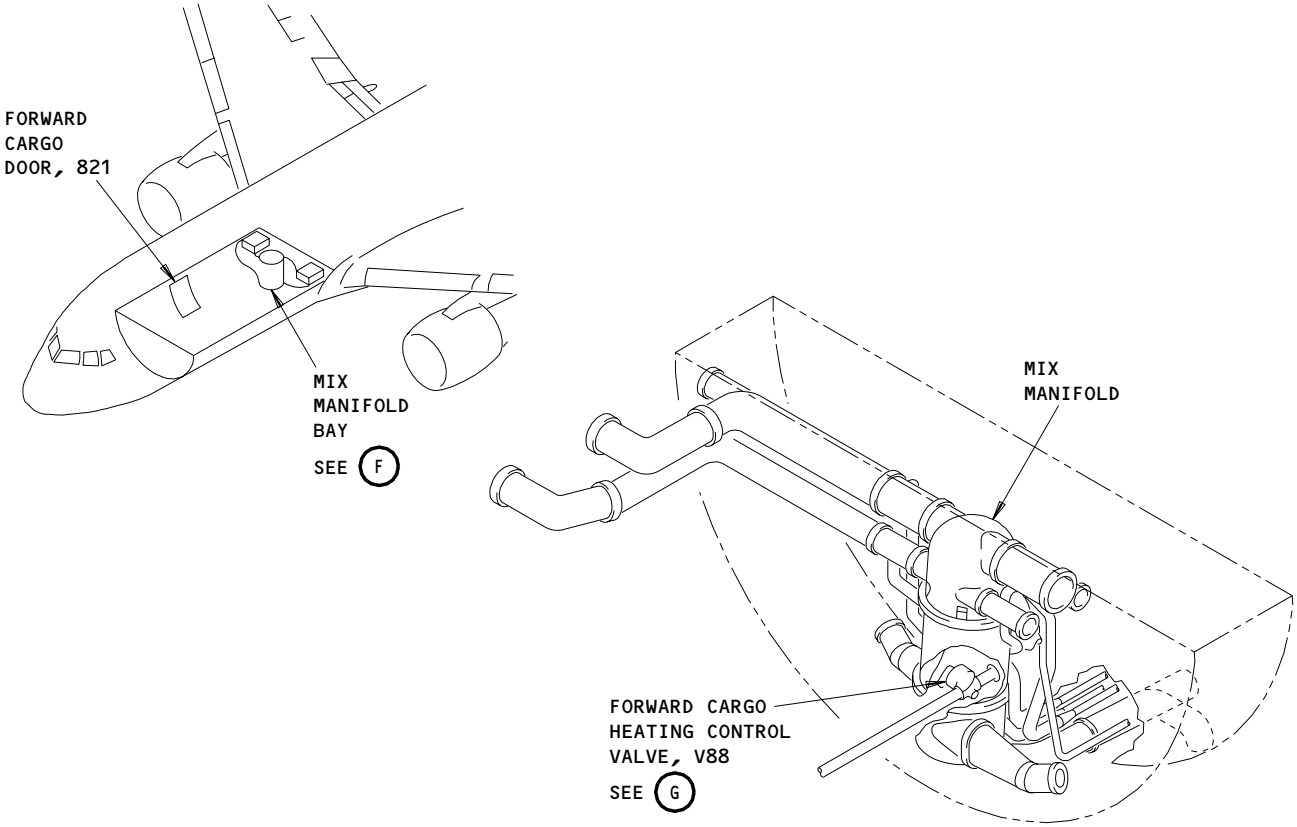
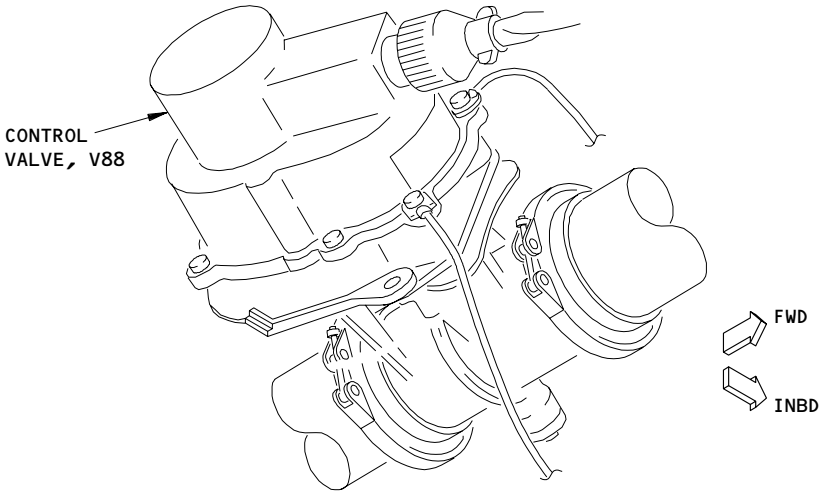


MIX MANIFOLD BAY
F



FORWARD CARGO HEATING
CONTROL VALVE, V88
G

Forward Cargo Compartment Heating System – Component Location
Figure 102 (Sheet 5)

L73619

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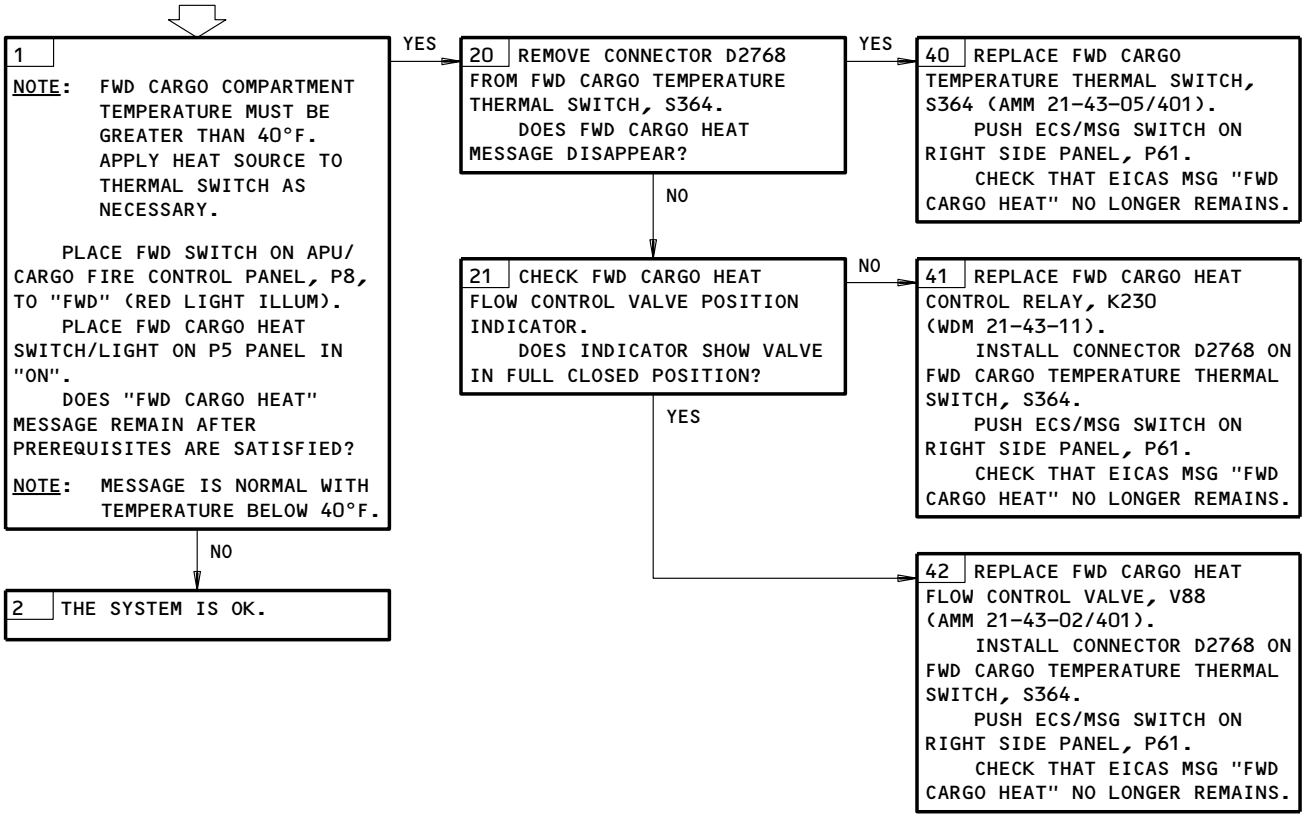
"FWD CARGO HEAT" EICAS MESSAGE DISPLAYED

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11R19, 11R21, 36L2 OR 36K5

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
NO PNEUMATIC POWER (AMM 36-00-00/201)



FWD CARGO HEAT EICAS Message Displayed
Figure 103

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PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13, 11P21, 11R19, 11R21, 36K5 OR 36L2

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EQUIPMENT: FWD CARGO TEMPERATURE SWITCHES, S363 AND S364 HEATED TO GREATER THAN 100°F (38°C)

EICAS MESSAGE "CGO FLOOR OVHT" DISPLAYED. FWD CARGO "OVHT" LGT ILLUM

1 DO THIS PROCEDURE: BITE PROCEDURE FOR THE AUX ZONE TEMPERATURE CONTROL (FIM 21-61-00/101, FIG. 104).
DOES THE EICAS MESSAGE "CGO FLOOR OVHT" SHOW?
NO → 41 THE SYSTEM IS OK.
YES ↓

2 IS THE FWD CARGO HEAT "OVHT" LIGHT ON THE P5 PANEL ON?
NO → 42 REPLACE THE FWD CARGO HEAT SWITCH/LIGHT, M29 (YDB) S1, ON THE P5 PANEL (WDM 21-43-11).
IF THE PROBLEM CONTINUES, REPLACE THE PACK FLOW CONTROLLER, M1610 (AMM 21-51-24/401).
YES ↓

3 IS THE FWD CARGO HEAT CONTROL VALVE, V88, FULLY CLOSED?
NO → 22 REMOVE CONNECTOR D2762 FROM THE HEAT CONTROL VALVE, V88 (WDM 21-43-11).
IS THERE 115V AC AT PIN 2 OF CONNECTOR?
YES → 43 REPLACE THE FWD CARGO HEAT CONTROL VALVE, V88 (AMM 21-43-02/401).
NO ↓

23 INSTALL CONNECTOR D2762.
REMOVE THE FWD CARGO HEAT CONT RELAY, K230 (WDM 21-43-11).
IS THERE 28V DC FROM PIN X1 TO PIN X2 OF THE RELAY, CONNECTOR D3568?
YES → 44 REPLACE THE FWD CARGO HEAT CONT RELAY, K230 (AMM 21-43-02/401).
NO ↓

24 IS THERE GND AT PIN X2 OF THE RELAY, CONNECTOR D3568?
YES → 45 INSTALL THE FWD CARGO HEAT CONT RELAY, K230.
REPLACE THE FWD/AFT CARGO FIRE DISCONNECT RELAY, K2119 (WDM 21-26-31).
NO ↓

SEE SHEET 2 (BLOCK 25)

SEE SHEET 2 (BLOCK 4)

EICAS Message "CGO FLOOR OVHT" Displayed. Fwd Cargo "OVHT" Lgt Illum.
Figure 104A (Sheet 1)

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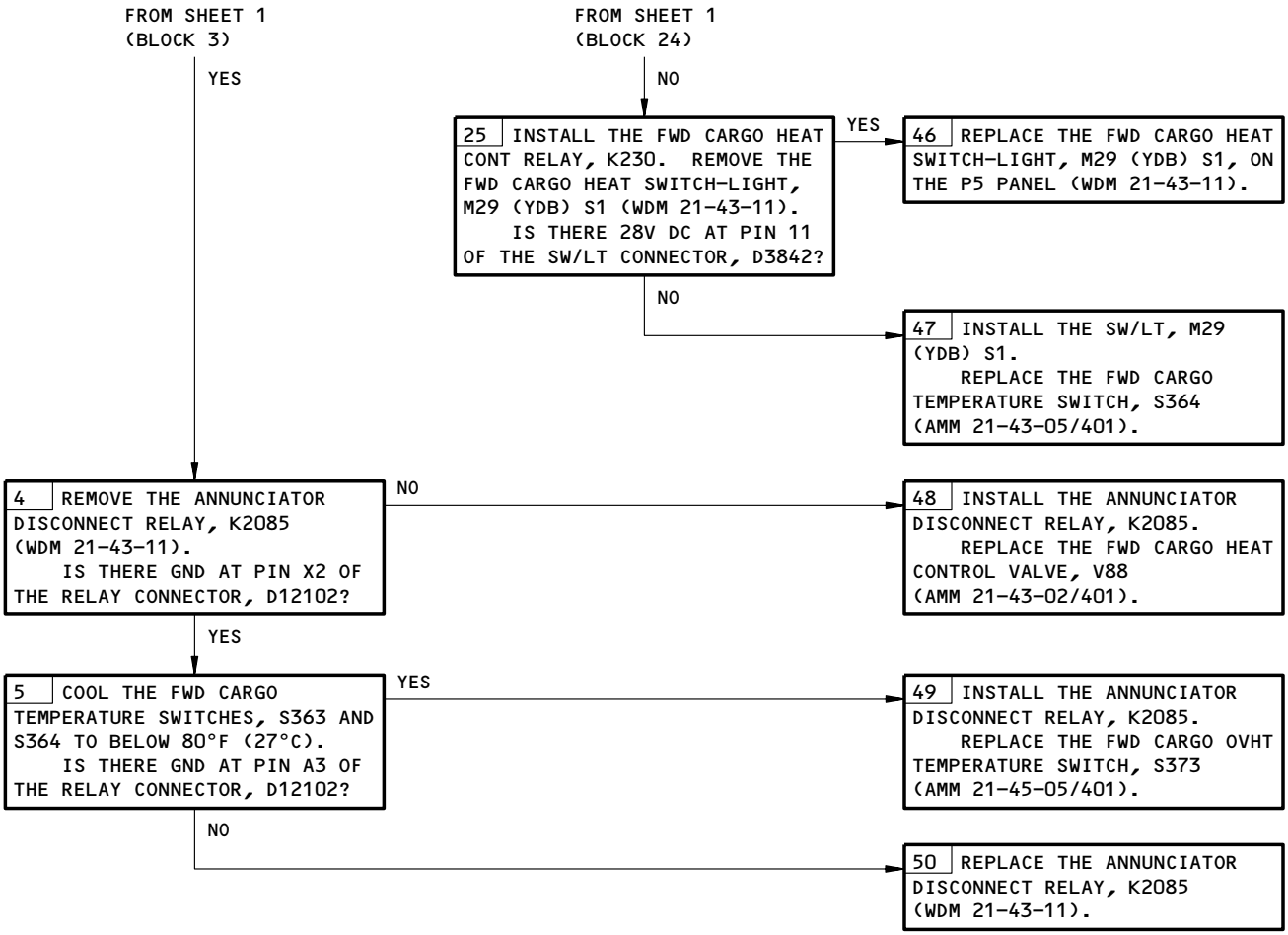

EICAS Message "CGO FLOOR OVHT" Displayed. Fwd Cargo "OVHT" Lgt Illum.
Figure 104A (Sheet 2)

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AFT/BULK CARGO COMPARTMENT HEATING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
BULB – BULK CARGO TEMPERATURE, TS297	2	1	811, BULK CARGO COMPT	21-65-03
CIRCUIT BREAKER –			FLT COMPT, P11	
CONTROL, AFT CARGO HEAT, C690		1	11R20	*
CONTROL, BULK CARGO HEAT, C689		1	11N26	*
OVERRIDE, AFT CARGO HEAT, C691		1	11R22	*
OVERRIDE, BULK CARGO HEAT, C682		1	11N27	*
CIRCUIT BREAKER –			119AL, MAIN EQUIP CTR, P36	*
VALVE, AFT CARGO HEAT CONT, C684		1	36L3 OR 36K6	
VALVE, BULK CARGO HEAT, C652		1	36L1 OR 36K4	
COMPUTER – (FIM 31-41-00/101)				
EICAS, LEFT, M10181				
EICAS, RIGHT, M10182				
PANEL – (FIM 26-22-00/101)				
APU/CARGO FIRE, M10444				
PANEL – BULK CARGO HEAT MODE SELECTOR, M912	1	1	FLT COMPT, P61	*
PANEL – CARGO HEAT CONTROL, M29	1	1	FLT COMPT, P5	*
RELAY – (FIM 31-01-33/101)				
OVHT, BULK CARGO, K729				
OVHT, CARGO ANNUNCIATION, K767				
OVRD, AFT/BULK CARGO FIRE, K634				
RELAY – (FIM 31-01-36/101)				
AIR/GND SYS NO. 1, K145				
CONT, AFT CARGO HEAT, K228				
CONT, BULK CARGO HEAT, K497				
RELAY – (FIM 31-01-49/101)				
ANNUNCIATION, AFT CARGO, K765				
OVHT, AFT CARGO, K229				
SWITCH – AFT CARGO TEMP THERMAL, S75	2	1	822, AFT CARGO COMPT	21-44-05
SWITCH – AFT CARGO OVHT TEMP, S64	2	1	822, AFT CARGO COMPT	21-44-05
SWITCH – BULK CARGO HIGH TEMP THERMAL, S499	2	1	811, BULK CARGO COMPT	21-44-06
SWITCH – BULK CARGO MODE SELECT, YDUS1	1	1	FLT COMPT, P61, BULK CARGO HEAT MODULE, M912	*
SWITCH – BULK CARGO NORMAL TEMP THERMAL, S498	2	1	811, BULK CARGO COMPT	21-44-06
SWITCH – BULK CARGO OVHT TEMP, S500	2	1	811, BULK CARGO COMPT	21-44-06
SWITCH/LIGHT – (FIM 26-22-00/101)				
AFT CARGO FIRE, S2				
SWITCH/LIGHT – AFT CARGO HEAT, YDBS2	1	1	FLT COMPT, P5, CARGO HEAT CONTROL PNL, M29	
SWITCH/LIGHT – BULK CARGO HEAT, YDBS3	1	1	FLT COMPT, P5, CARGO HEAT CONTROL PNL, M29	
VALVE – AFT CARGO HEATING CONTROL, V13	2	1	822, AFT CARGO COMPT	21-44-02
VALVE – AFT CARGO HEATING SHUTOFF, V14	2	1	822, AFT CARGO COMPT	21-44-01
VALVE – BULK CARGO HEATING CONTROL, V127	2	1	822, AFT CARGO COMPT	21-44-04
VALVE – BULK CARGO HEATING SHUTOFF, V128	2	1	822, AFT CARGO COMPT	21-44-03

* SEE THE WDM EQUIPMENT LIST

Aft/Bulk Cargo Compartment Heating System – Component Index
Figure 101

M99847

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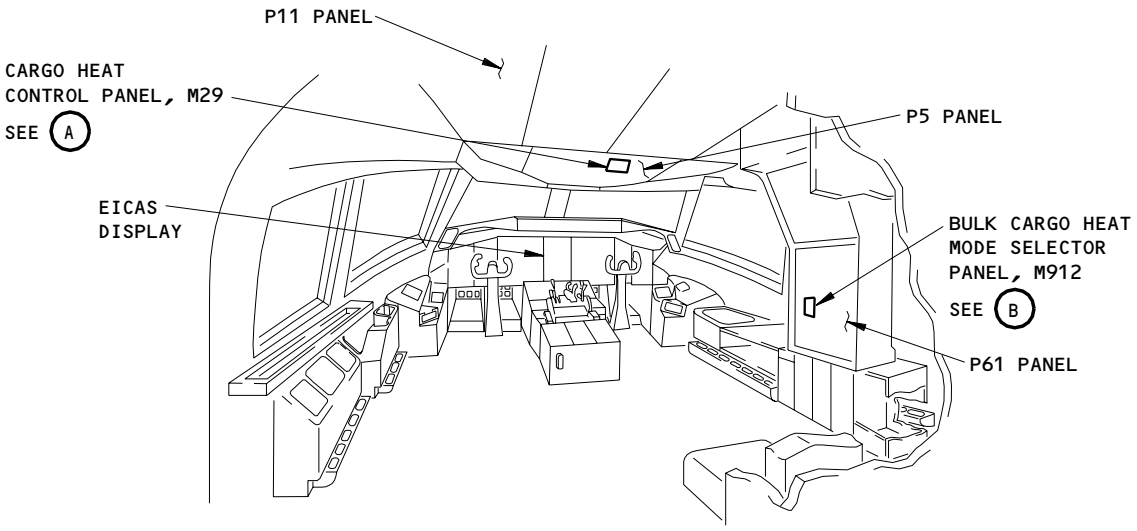
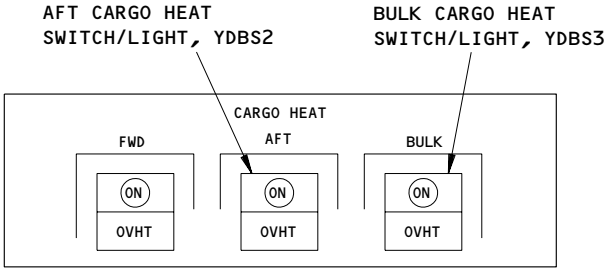
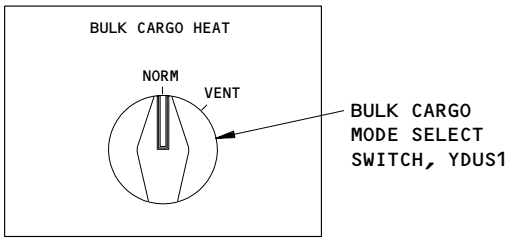


FLIGHT COMPARTMENT



CARGO HEAT CONTROL PANEL, M29

A



BULK CARGO HEAT MODE SELECTOR PANEL, M912

B

Aft/Bulk Cargo Heating System – Component Location
Figure 102 (Sheet 1)

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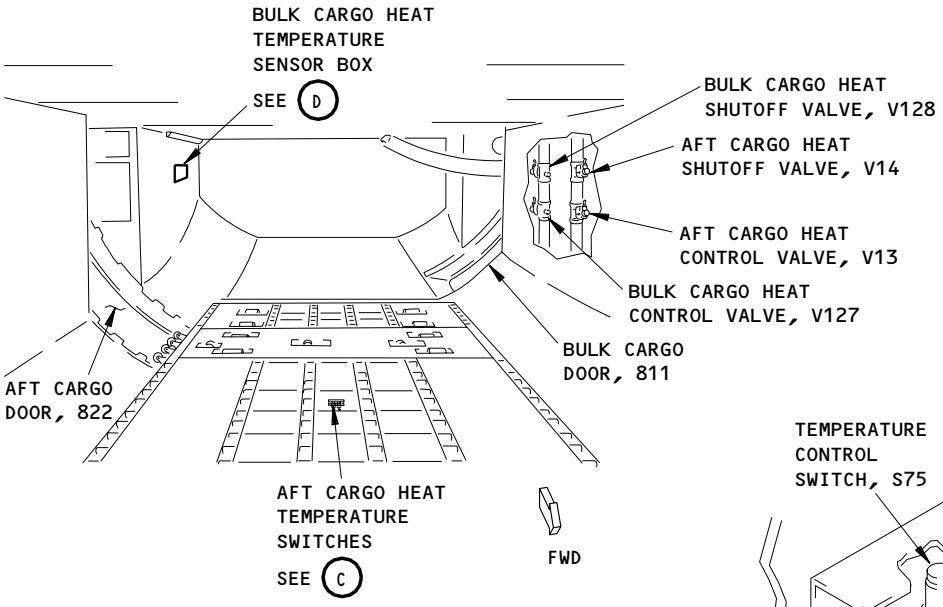
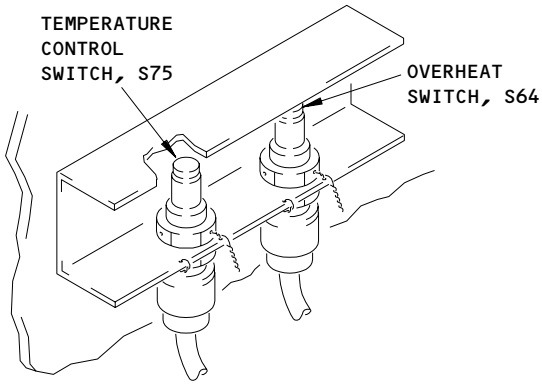
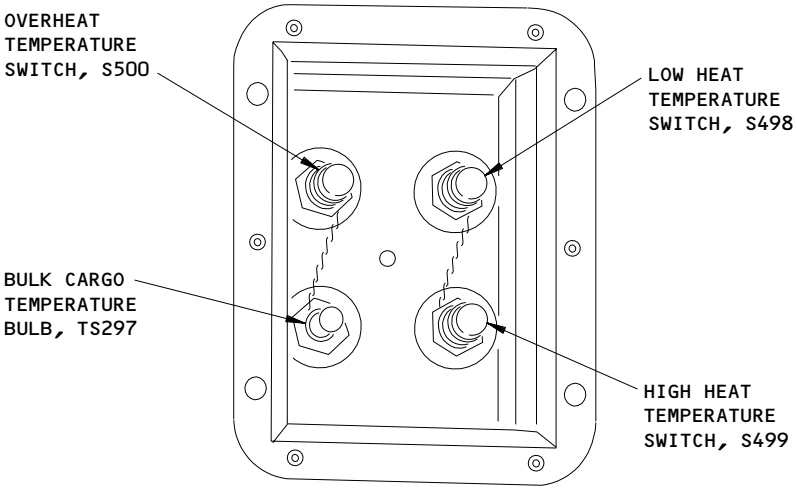


AFT/BULK CARGO COMPARTMENT



AFT CARGO HEAT TEMPERATURE SWITCHES

C



BULK CARGO HEAT TEMPERATURE SENSOR BOX

D

Aft/Bulk Cargo Compartment Heating System – Component Location
Figure 102 (Sheet 2)

M99849

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"AFT CARGO HEAT" EICAS MESSAGE DISPLAYED

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11R20, 11R22, 36L3 OR 36K6

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1

NOTE: AFT CARGO COMPARTMENT TEMPERATURE MUST BE GREATER THAN 50°F. APPLY HEAT SOURCE TO THERMAL SWITCH AS NECESSARY.

PLACE AFT SWITCH ON APU/CARGO FIRE CONTROL PANEL, P8, TO "AFT" (RED LIGHT ILLUM).
PLACE AFT CARGO HEAT SWITCH/LIGHT ON P5 PANEL TO "ON".
DOES "AFT CARGO HEAT" MESSAGE REMAIN AFTER PREREQUISITES ARE SATISFIED?

NOTE: MESSAGE IS NORMAL WITH TEMPERATURE BELOW 50°F.

YES → 20 REMOVE CONNECTOR D648 FROM AFT CARGO TEMPERATURE THERMAL SWITCH, S75.
DOES AFT CARGO HEAT MESSAGE DISAPPEAR?

YES → 40 REPLACE AFT CARGO TEMPERATURE THERMAL SWITCH, S75 (AMM 21-44-05/401).
PUSH ECS/MSG SWITCH ON RIGHT SIDE PANEL, P61.
CHECK THAT EICAS MSG "AFT CARGO HEAT" NO LONGER REMAINS.

NO → 21 CHECK AFT CARGO HEAT FLOW CONTROL VALVE POSITION INDICATOR.
DOES INDICATOR SHOW VALVE IN FULL CLOSED POSITION?

NO → 41 REPLACE AFT CARGO HEAT CONTROL RELAY, K228 (WDM 21-44-11).
INSTALL CONNECTOR D648 ON AFT CARGO TEMPERATURE THERMAL SWITCH, S75.
PUSH ECS/MSG SWITCH ON RIGHT SIDE PANEL, P61.
CHECK THAT EICAS MSG "AFT CARGO HEAT" NO LONGER REMAINS.

YES → 42 REPLACE AFT CARGO HEAT FLOW CONTROL VALVE, V13 (AMM 21-44-02/401).
INSTALL CONNECTOR D648 ON AFT CARGO TEMPERATURE THERMAL SWITCH, S75.
PUSH ECS/MSG SWITCH ON RIGHT SIDE PANEL, P61.
CHECK THAT EICAS MSG "AFT CARGO HEAT" NO LONGER REMAINS.

NO → 2 THE SYSTEM IS OK.

AFT CARGO HEAT EICAS Message Displayed
Figure 103

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"AFT CARGO OVHT" EICAS MESSAGE AND "OVHT" LIGHT ON

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11R20, 11R22, 36L3 OR 36K6

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 PLACE AFT SWITCH ON APU/ CARGO FIRE CONTROL PANEL, P8, TO "AFT" (RED LIGHT ILLUM).
PUSH AFT CARGO HEAT SWITCH/LIGHT ON PILOTS' OVERHEAD PANEL, P5, TO ON.
IS OVHT LIGHT STILL ON?

NO → 21 IS AFT CARGO COMPARTMENT TEMPERATURE GREATER THAN 90°F?

YES → 41 USE ICE PACK TO COOL AFT CARGO OVHT TEMPERATURE SENSOR, S64, TO BELOW 90°F.
GO TO BLOCK 25.

NO → 42 USE HEAT GUN TO HEAT AFT CARGO OVHT TEMPERATURE SENSOR, S64, TO ABOVE 90°F.
GO TO BLOCK 22.

YES → 2 IS AFT CARGO COMPARTMENT TEMPERATURE GREATER THAN 90°F?

YES → 22 CHECK AFT CARGO HEAT FLOW CONTROL VALVE, V13, VISUAL POSITION INDICATOR.
IS VALVE IN THE CLOSED POSITION?

YES → 43 REPLACE AFT CARGO OVHT ANNUNCIATOR RELAY, K765, IN P49 (WDM 21-44-11).

NO → 23 DISCONNECT CONNECTOR D646 FROM AFT CARGO HEAT FLOW CONTROL VALVE, V13 (WDM 21-44-11).
CHECK FOR 115V AC POWER TO PIN 2 OF CONNECTOR.
DOES POWER EXIST?

YES → 44 REPLACE AFT CARGO HEAT FLOW CONTROL VALVE, V13 (AMM 21-44-02/401).

NO → 24 CONNECT CONNECTOR D646 TO AFT CARGO HEAT FLOW CONTROL VALVE, V13.
REMOVE AFT CARGO HEAT CONTROL RELAY, K228, FROM P36.
CHECK FOR GROUND AT PIN X2 OF CONNECTOR.
DOES GROUND EXIST?

YES → 45 INSTALL K228 IN P36.
REPLACE AFT CARGO TEMP THERMAL CONTROL SENSOR, S75 (AMM 21-44-05/401).

NO → 46 REPLACE AFT CARGO HEAT CONTROL RELAY, K228, IN P36 (WDM 21-44-11).

NO → 25 REMOVE AFT CARGO OVHT RELAY, K229, FROM P49 (WDM 21-44-11).
CHECK FOR GROUND AT PIN X2 OF CONNECTOR.
DOES GROUND EXIST?

YES → 47 INSTALL K229 IN P49.
REPLACE AFT CARGO OVHT TEMPERATURE SENSOR, S64 (AMM 21-44-05/401).

NO → 48 REPLACE AFT CARGO OVHT RELAY, K229, IN P49 (WDM 21-44-11).

AFT CARGO OVHT EICAS Message and OVHT Light On
Figure 104

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"BULK CARGO HEAT" EICAS MESSAGE DISPLAYED

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11N26, 11N27, 36L1 OR 36K4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
NO PNEUMATIC POWER (AMM 36-00-00/201)

1

NOTE: BULK CARGO COMPARTMENT TEMPERATURE GREATER THAN 50°F FOR NORM MODE, OR GREATER THAN 75°F FOR VENT MODE.

PLACE AFT SWITCH ON APU/ CARGO FIRE CONTROL PANEL, P8, TO "AFT" (RED LIGHT ILLUM).
PLACE BULK CARGO HEAT SWITCH/LIGHT ON P5 PANEL TO "ON".
DOES "BULK CARGO HEAT" MESSAGE REMAIN AFTER PREREQUISITES ARE SATISFIED?

NOTE: MESSAGE IS NORMAL WITH TEMPERATURE BELOW 50°F FOR NORM MODE, OR BELOW 75°F FOR VENT MODE.

NO → 20 THE SYSTEM IS OK.

YES ↓

2 IS BULK CARGO HEAT MODE SELECTOR IN NORM?

NO ↓ SEE SHEET 2 (BLOCK 3)

YES → 21 REMOVE CONNECTOR D504 FROM BULK CARGO NORMAL TEMPERATURE THERMAL SWITCH, S498.
DOES BULK CARGO HEAT MESSAGE DISAPPEAR?

YES → 40 REPLACE BULK CARGO NORMAL TEMPERATURE THERMAL SWITCH, S498 (AMM 21-44-06/401).
CHECK THAT "BULK CARGO HEAT" MESSAGE NO LONGER REMAINS.

NO ↓

22 CHECK BULK CARGO HEAT FLOW CONTROL VALVE POSITION INDICATOR.
DOES INDICATOR SHOW VALVE IN FULL CLOSED POSITION?

NO → 41 REPLACE BULK CARGO HEAT FLOW CONTROL RELAY, K497 (WDM 21-44-21).
INSTALL CONNECTOR D504 ON BULK CARGO NORMAL TEMPERATURE THERMAL SWITCH, S498.
CHECK THAT "BULK CARGO HEAT" MESSAGE NO LONGER REMAINS.

YES ↓

42 REPLACE BULK CARGO HEAT FLOW CONTROL VALVE, V127 (AMM 21-44-04/401).
INSTALL CONNECTOR D504 ON BULK CARGO NORMAL TEMPERATURE THERMAL SWITCH, S498.
CHECK THAT "BULK CARGO HEAT" MESSAGE NO LONGER REMAINS.

BULK CARGO HEAT EICAS Message Displayed
Figure 105 (Sheet 1)

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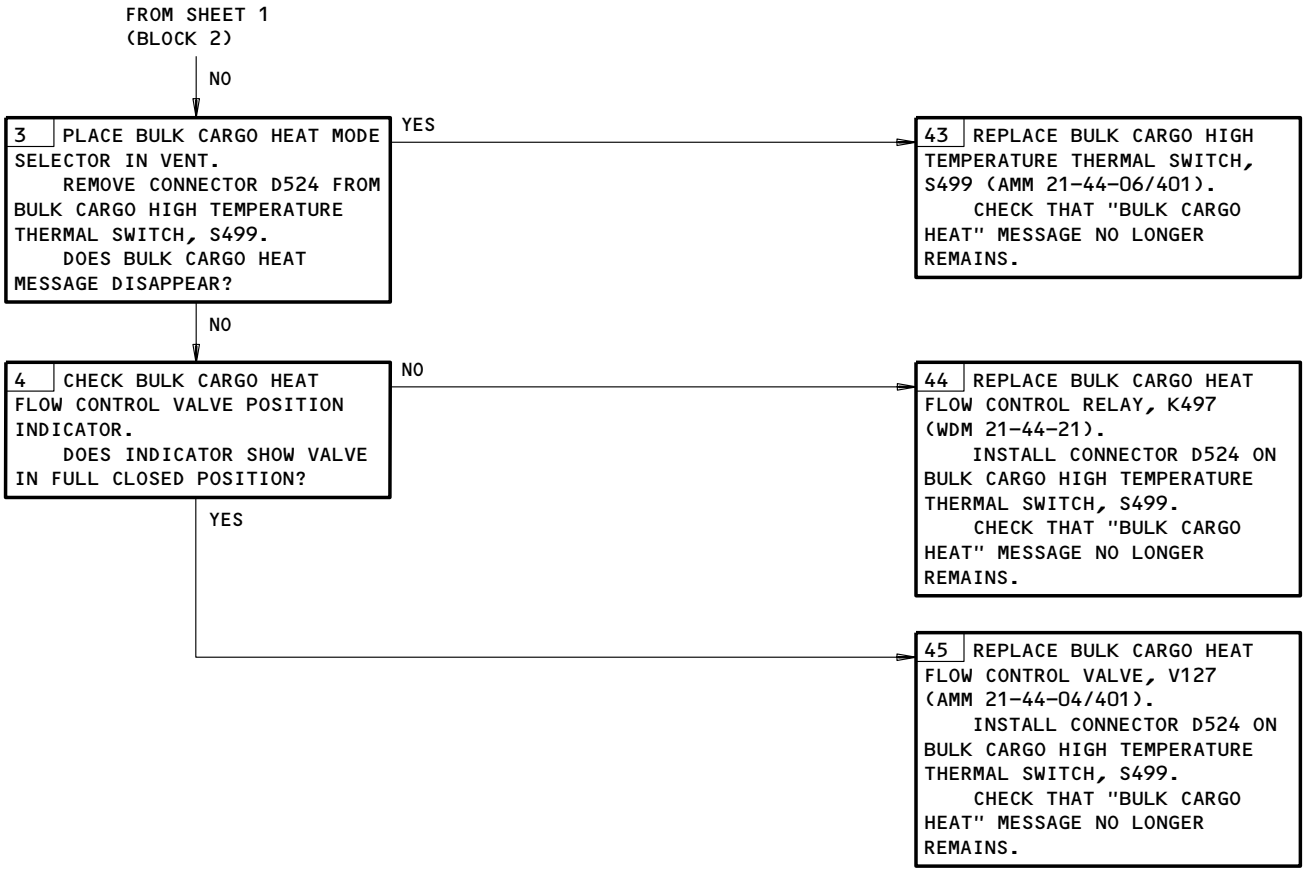

BULK CARGO HEAT EICAS Message Displayed
Figure 105 (Sheet 2)

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Not Used
Figure 106

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

Not Used
Figure 107

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PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11N26, 11N27, 36L1 OR 36K4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EQUIPMENT: THERMOMETER (30°-90°F [0°-35°C] RANGE); ICE PACK

BULK CARGO TEMP READING TOO LOW ON EICAS STATUS, LOWEST TEMP OBSERVED WAS _____ DEGREES

NOTE: CARGO COMPARTMENT HEATING SYSTEM PROVIDES HEAT WHEN COMPARTMENT TEMPERATURE IS BELOW 50°F (10°C) WITH SELECTOR IN "NORM" OR BELOW 65°F (18.5°C) WITH SELECTOR IN "VENT".

1 PUSH "C ISLN VALVE" SWITCH/LIGHT ON P5 PANEL TO ON POSITION.
CHECK THAT "VALVE "LIGHT ILLUMINATES.
DOES "VALVE" SWITCH/LIGHT REMAIN ILLUMINATED AFTER 30 SECONDS?

YES → 40 DO THIS PROCEDURE: EICAS MESSAGE "C BLD ISLN VAL" CENTER ISOLATION VALVE LIGHT FAILS TO GO OUT WITH VALVE SELECTED OPEN (FIM 36-10-00/101, FIG. 104).

NO ↓

2 OPEN THE BULK CARGO DOOR.
FIND THE BULK CARGO TEMPERATURE SENSOR BOX ASSEMBLY ON THE RIGHT SIDEWALL AFT OF THE BULK CARGO DOOR.
DO A CHECK FOR AIRFLOW THRU THE SENSOR BOX ASSEMBLY.
IS THE AIRFLOW OK?

NO → 20 REMOVE THE RIGHT SIDEWALL LINING AND THE AFT BULKHEAD LINING TO GET ACCESS TO THE AIR SUPPLY TUBE CONNECTED TO THE BACKSIDE OF THE SENSOR BOX ASSEMBLY AND TO THE LAV/GALLEY VENT FAN DUCT.
DO A CHECK OF THE AIR SUPPLY TUBE INSTALLATION.
IS THE AIR SUPPLY TUBE INSTALLATION OK?

NO → 41 REPAIR THE AIR SUPPLY TUBE INSTALLATION.
INSTALL THE RIGHT SIDEWALL LINING AND AFT BULKHEAD LINING.

YES ↓

42 DO A CHECK FOR BLOCKAGES IN THE AIR SUPPLY TUBE.
REMOVE THE BLOCKAGES THAT YOU FIND.
INSTALL THE RIGHT SIDEWALL LINING AND THE AFT BULKHEAD LINING.

YES ↓

SEE SHEET 2 (BLOCK 3)

Bulk Cargo Temp Reading Too Low on EICAS Status,
Lowest Temp Observed Was _____ Degrees
Figure 108 (Sheet 1)

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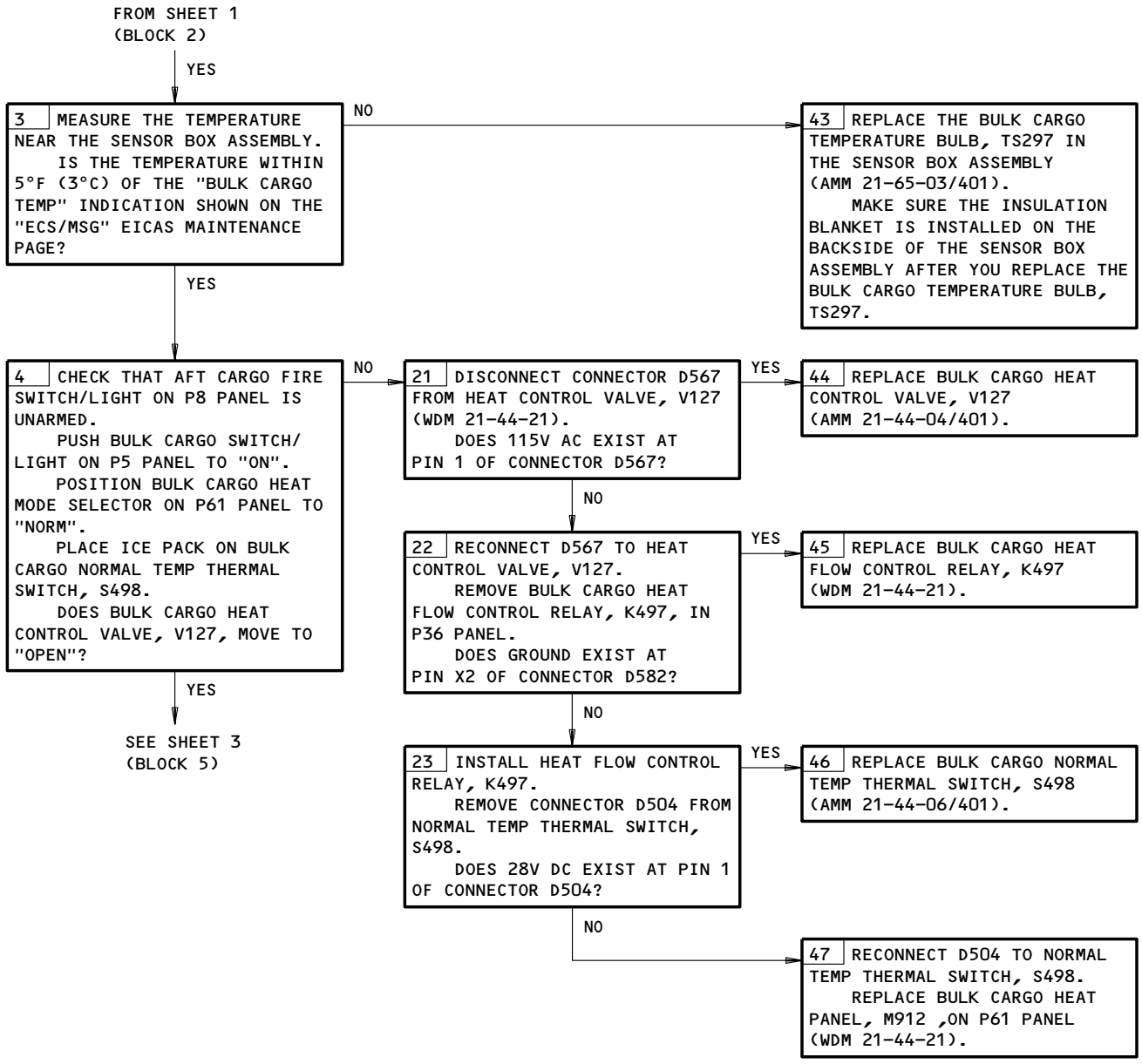

Bulk Cargo Temp Reading Too Low on EICAS Status,
Lowest Temp Observed Was _____ Degrees
Figure 108 (Sheet 2)

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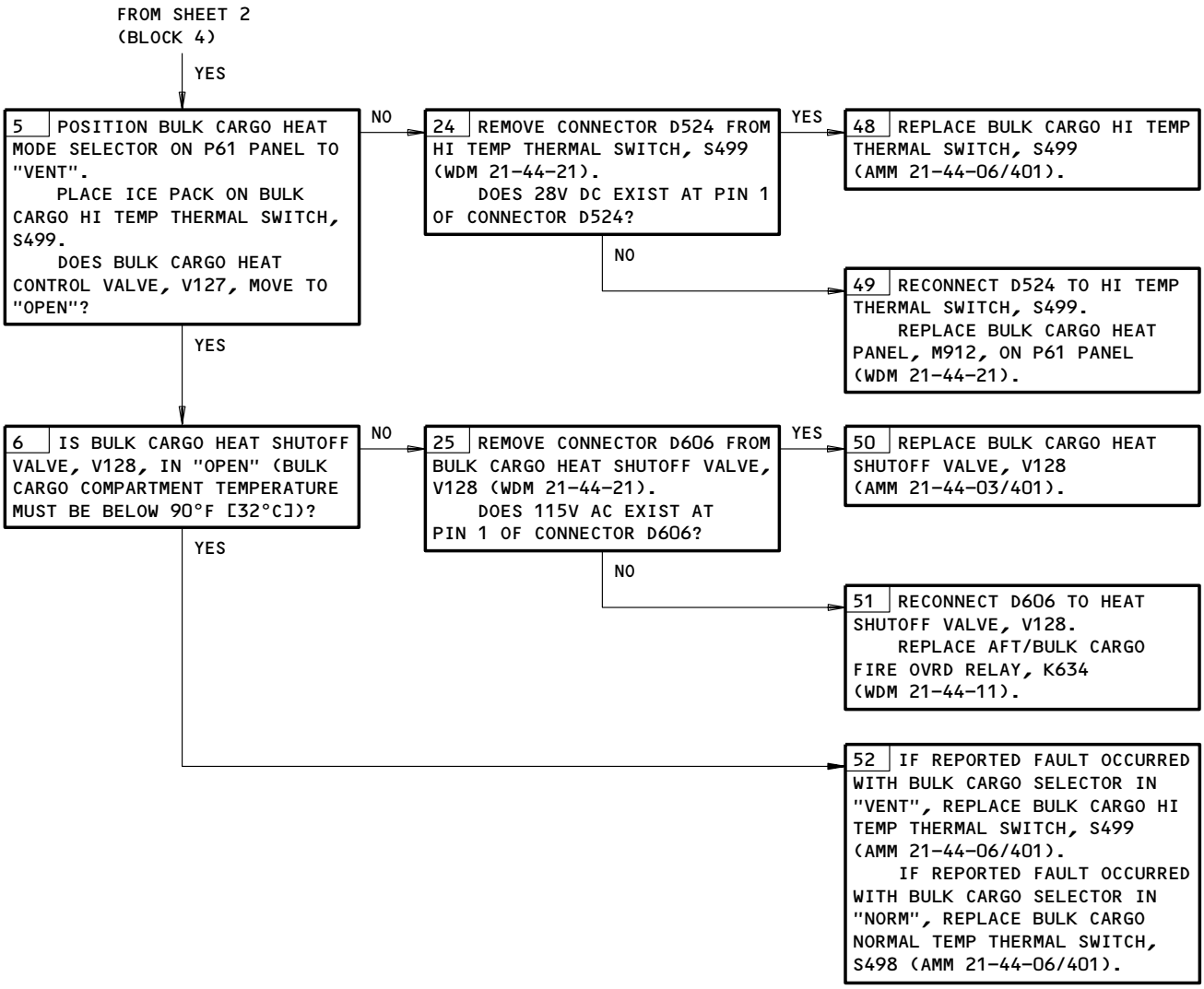

Bulk Cargo Temp Reading Too Low on EICAS Status,
Lowest Temp Observed Was _____ Degrees
Figure 108 (Sheet 3)

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BULK CARGO TEMP READING TOO HIGH ON EICAS STATUS, HIGHEST TEMP OBSERVED WAS _____ DEGREES

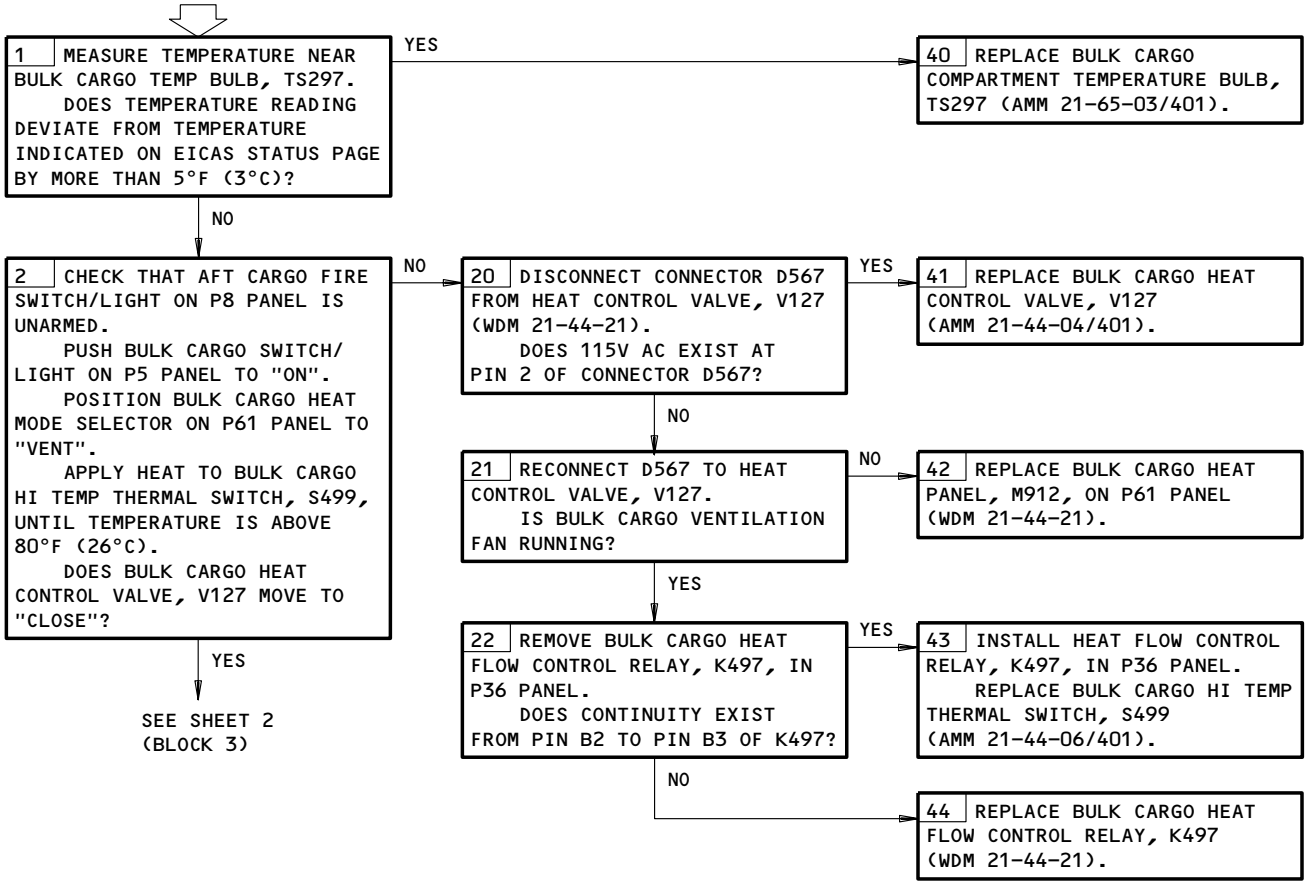
PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11N26, 11N27, 36L1 OR 36K4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EQUIPMENT: HEAT SOURCE CAPABLE OR 80°F (26°C);
THERMOMETER (30°-90°F [0°-35°C] RANGE)

NOTE: THIS PROCEDURE APPLIES TO OBSERVED TEMPERATURES BETWEEN 75°-90°F (24°-32°C).



Bulk Cargo Temp Reading Too High on EICAS Status,
Highest Temp Observed Was _____ Degrees
Figure 109 (Sheet 1)

M12293

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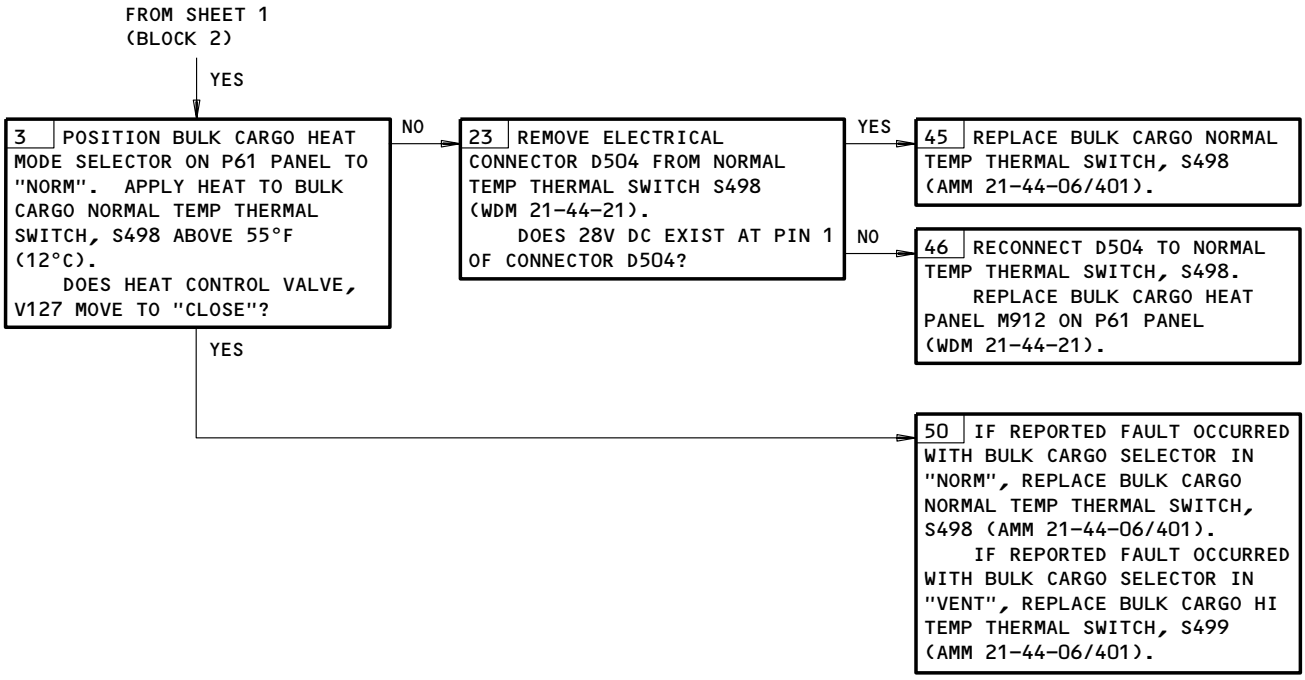

Bulk Cargo Temp Reading Too High on EICAS Status,
Highest Temp Observed Was _____ Degrees
Figure 109 (Sheet 2)

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FLIGHT COMPARTMENT SUPPLEMENTAL HEATING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			119AL, MAIN EQUIP CTR, P36	
HEATER, CAPT AUX HIGH, C662		1	36H1 OR 36D7	
HEATER, CAPT AUX LOW, C663		1	36H2 OR 36D6	
CIRCUIT BREAKER –			119AL, MAIN EQUIP CTR, P37	
HEATER, F/O AUX HIGH, C699		1	37H1 OR 37D5	
HEATER, F/O AUX LOW, C700		1	37H2 OR 37D4	
HEATER – CAPTAIN'S FOOT AIR SUPPLY, B30	--	1	113AL, LEFT SIDE CEILING	21-45-11
HEATER – CAPTAIN'S SHOULDER AIR SUPPLY, B31	--	1	113AL, LEFT SIDEWALL	21-45-12
HEATER – F/O FOOT AIR SUPPLY, B32	--	1	113AL, RIGHT SIDE CEILING	21-45-11
HEATER – F/O SHOULDER AIR SUPPLY, B33	--	1	113AL, RIGHT SIDEWALL	21-45-12
MODULE – CAPTAIN'S HEATER CONTROL, M901	--	1	FLT COMPT, P13	*
MODULE – F/O HEATER CONTROL, M902	--	1	FLT COMPT, P14	*
RELAY – (FIM 31-01-36/101)				
AIR/GND SYS NO. 1, K145				
RELAY – (FIM 31-01-37/101)				
AIR/GND MASTER SYS NO. 2, K205				
SWITCH – CAPTAIN'S FOOT HEATER, YDPS1	--	1	FLT COMPT, P13, CAPTAIN'S HEATER CONTROL MODULE, M901	*
SWITCH – CAPTAIN'S SHOULDER HEATER, YDPS2	--	1	FLT COMPT, P13, CAPTAIN'S HEATER CONTROL MODULE, M901	*
SWITCH – F/O FOOT HEATER, YDQS1	--	1	FLT COMPT, P14, F/O HEATER CONTROL MODULE, M902	*
SWITCH – F/O SHOULDER HEATER, YDQS2	--	1	FLT COMPT, P14, F/O HEATER CONTROL MODULE, M902	*

* SEE THE WDM EQUIPMENT LIST

Flight Compartment Supplemental Heating System – Component Index
Figure 101

K13254

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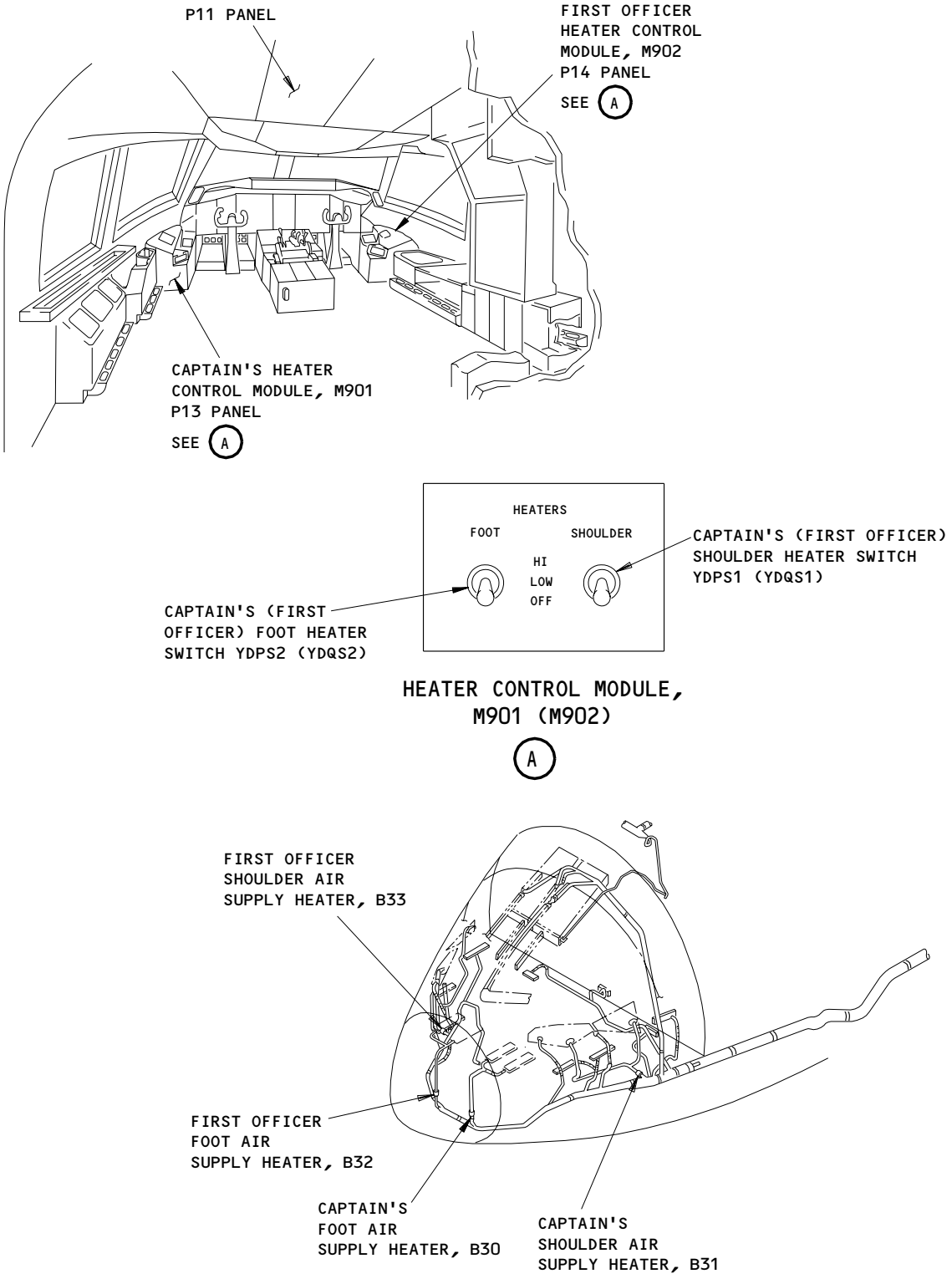

Flight Compartment Supplemental Heating System – Component Location
Figure 102

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FOOT HEATER INOP IN HI

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
36H1 OR 36D7, 36H2 OR 36D6, 37H1 OR 37D5, 37H2 OR 37D4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 WARNING

REFER TO AMM 27-61-00/201 FOR SPOILER/SPEEDBRAKE DEACTIVATION PROCEDURE. INADVERTENT SPOILER MOVEMENT RESULTING FROM NEXT STEP COULD CAUSE SERIOUS INJURY TO PERSONNEL.

CAUTION

OPEN CIRCUIT BREAKERS AND ACCOMPLISH DEACTIVATION INSTRUCTIONS IN AMM 32-09-02/201. EQUIPMENT DAMAGE MAY OCCUR WHEN AIR/GND SYS CIRCUIT BREAKER IS OPENED WITH POWER APPLIED TO AIRPLANE.

SIMULATE AIRPLANE FLIGHT MODE (AMM 32-09-02/201).
PLACE CAPTAIN (FIRST OFFICER) SHOULDER HEATER SWITCH ON P13 (P14) IN "HI."
CHECK THAT CAPTAIN'S (FIRST OFFICER'S) SHOULDER HEATER IS OPERATING IN HIGH HEAT MODE.
IS HEATER OPERATING IN HI?

NO → 41 EXAMINE THE CIRCUIT FROM "HIGH CAPT (F/O) AUX HEATERS" CIRCUIT BREAKER 36H1 OR 36D7 (37H1 OR 37D5) TO CAPT (F/O) HEATER CONTROL MODULE, M901 (M902), ON P13 (P14) PANEL (WDM 21-45-11). REPAIR THE PROBLEMS THAT YOU FIND.

YES → 21 OPEN CAPT (F/O) CIRCUIT BREAKERS 36H1 OR 36D7, 36H2 OR 36D6, (37H1 OR 37D5, 37H2 OR 37D4).
REMOVE CONNECTOR D2960 (D2964) FROM CAPTAIN (FIRST OFFICER) FOOT HEATER, B30 (B32)(WDM 21-45-11).
CLOSE CIRCUIT BREAKERS BREAKERS 36H1 OR 36D7, 36H2 OR 36D6, (37H1 OR 37D5, 37H2 OR 37D4).
PUT THE CAPTAIN'S (FIRST OFFICER'S) FOOT HEATER SWITCH ON P13 (P14) PANEL IN THE "HI" POSITION.
CHECK FOR 200V AC FROM CONNECTOR, PIN 1 TO PIN 2.
DOES POWER EXIST?

NO → 42 CONNECT CONNECTOR D2960 (D2964) TO CAPT (F/O) FOOT HEATER, B30 (B32).
REPLACE CAPT (F/O) FOOT HEATER SWITCH, YDPS1 (YDQS1) (WDM 21-45-11).

YES → 43 REPLACE CAPT (F/O) FOOT HEATER, B30 (B32) (AMM 21-45-11/401).

Foot Heater Inop In Hi
Figure 103

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FOOT HEATER INOP IN LOW

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
36H1 OR 36D7, 36H2 OR 36D6, 37H1 OR 37D5, 37H2 OR 37D4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 WARNING

REFER TO AMM 27-61-00/201 FOR SPOILER/SPEEDBRAKE DEACTIVATION PROCEDURE. INADVERTENT SPOILER MOVEMENT RESULTING FROM NEXT STEP COULD CAUSE SERIOUS INJURY TO PERSONNEL.

CAUTION

OPEN CIRCUIT BREAKERS AND ACCOMPLISH DEACTIVATION INSTRUCTIONS IN AMM 32-09-02/201. EQUIPMENT DAMAGE MAY OCCUR WHEN AIR/GND SYS CIRCUIT BREAKER IS OPENED WITH POWER APPLIED TO AIRPLANE.

SIMULATE AIRPLANE FLIGHT MODE (AMM 32-09-02/201).
PLACE CAPTAIN (FIRST OFFICER) FOOT HEATER SWITCH ON P13 (P14) IN "LOW".
OPEN CIRCUIT BREAKERS 36H1 OR 36D7, 36H2 OR 36D6, (37H1 OR 37D5, 37H2 OR 37D4)
REMOVE CONNECTOR D2960 (D2964) FROM CAPTAIN (FIRST OFFICER) FOOT HEATER, B30 (B32)(WDM 21-45-11).
CLOSE CIRCUIT BREAKERS 36H1 OR 36D7, 36H2 OR 36D6 (CAPTAIN), 37H1 OR 37D5, 37H2 OR 37D4 (FIRST OFFICER).
CHECK FOR 115V AC FROM CONNECTOR, PIN 1 (PWR) TO PIN 2 (GND).
DOES 115V AC POWER EXIST?

YES → 40 REPLACE CAPT (F/O) FOOT HEATER, B30 (B32) (AMM 21-45-11/401).

NO → 42 CONNECT CONNECTOR D2960 (D2964) TO CAPT (F/O) FOOT HEATER, B30 (B32).
REPLACE CAPT (F/O) FOOT HEATER SWITCH, YDPS1 (YDQS1) (WDM 21-45-11).
CHECK THAT FOOT HEATER OPERATES IN LOW.

Foot Heater Inop In Low
Figure 104

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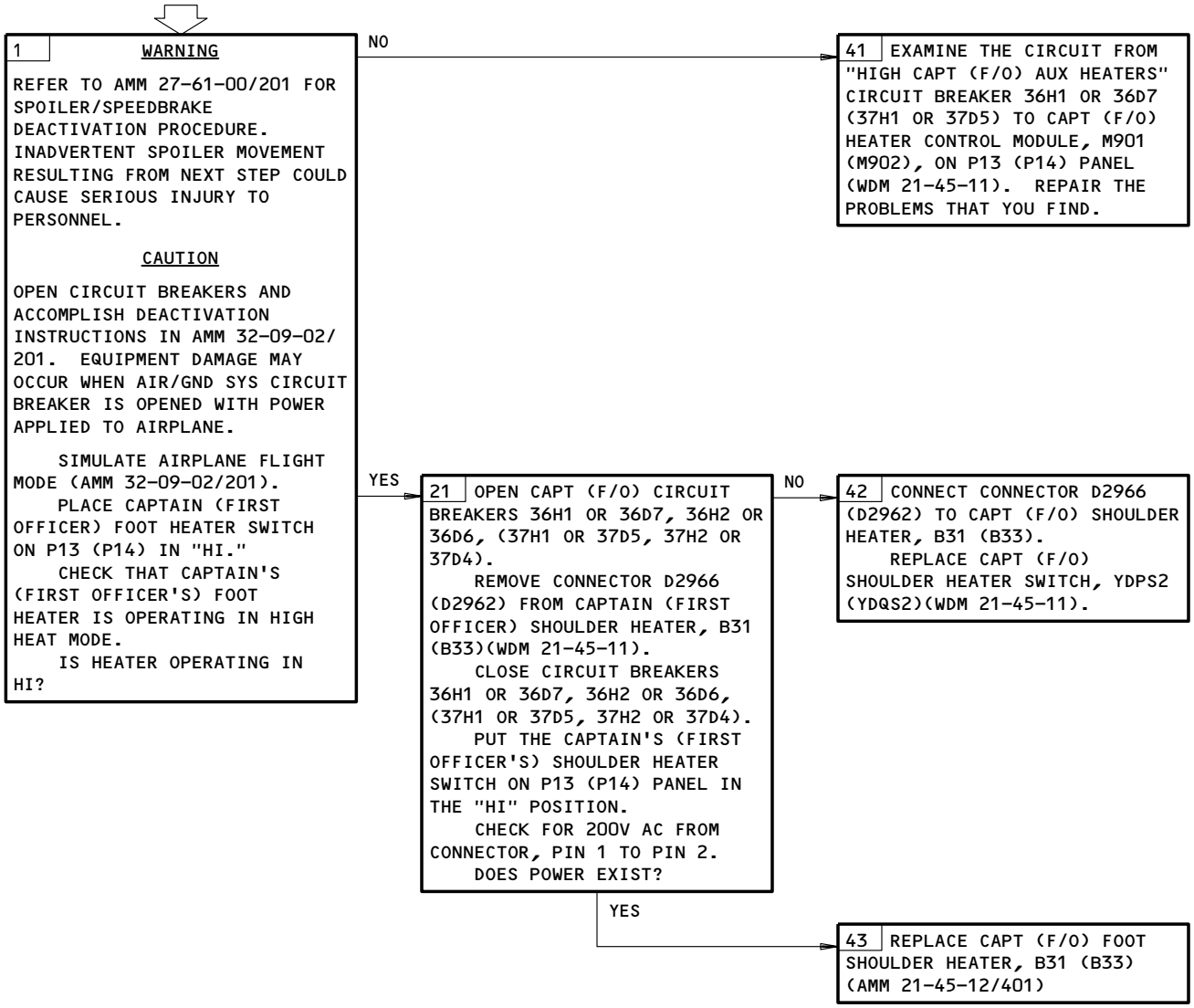
SHOULDER HEATER INOP IN HI

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
36H1 OR 36D7, 36H2 OR 36D6, 37H1 OR 37D5, 37H2 OR 37D4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



Shoulder Heater Inop In Hi
Figure 105

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PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
36H1 OR 36D7, 36H2 OR 36D6, 37H1 OR 37D5, 37H2 OR 37D4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

SHOULDER HEATER INOP IN LOW

1 WARNING

REFER TO AMM 27-61-00/201 FOR SPOILER/SPEEDBRAKE DEACTIVATION PROCEDURE. INADVERTENT SPOILER MOVEMENT RESULTING FROM NEXT STEP COULD CAUSE SERIOUS INJURY TO PERSONNEL.

CAUTION

OPEN CIRCUIT BREAKERS AND ACCOMPLISH DEACTIVATION INSTRUCTIONS IN AMM 32-09-02/201. EQUIPMENT DAMAGE MAY OCCUR WHEN AIR/GND SYS CIRCUIT BREAKER IS OPENED WITH POWER APPLIED TO AIRPLANE.

SIMULATE AIRPLANE FLIGHT MODE (AMM 32-09-02/201).
PLACE CAPTAIN (FIRST OFFICER) SHOULDER HEATER SWITCH ON P13 (P14) IN "LOW".
OPEN CIRCUIT BREAKERS 36H1 OR 36D7, 36H2 OR 36D6, (37H1 OR 37D5, 37H2 OR 37D4)
REMOVE CONNECTOR D2966 (D2962) FROM CAPTAIN (FIRST OFFICER) SHOULDER HEATER, B31 (B33).
CLOSE CIRCUIT BREAKERS 36H1 OR 36D7, 36H2 OR 36D6 (CAPTAIN), 37H1 OR 37D5, 37H2 OR 37D4 (FIRST OFFICER).
CHECK FOR 115V AC FROM CONNECTOR, PIN 1 (PWR) TO PIN 2 (GND).
DOES 115V AC POWER EXIST?

YES → 40 REPLACE CAPT (F/O) SHOULDER HEATER, B31 (B33) (AMM 21-45-12/401).

NO → 42 CONNECT CONNECTOR D2966 (D2962) TO CAPT (F/O) SHOULDER HEATER, B31 (B33).
REPLACE CAPT (F/O) SHOULDER HEATER SWITCH, YDPS2 (YDQS2)(WDM 21-45-11).
CHECK THAT SHOULDER HEATER OPERATES IN LOW.

Shoulder Heater Inop In Low
Figure 106

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FORWARD DOOR AREA SUPPLEMENTAL HEATING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CARD – (FIM 21-51-00/101)				
LEFT PACK FLOW CONTROL, M863				
RIGHT PACK FLOW CONTROL, M864				
CIRCUIT BREAKER –			FLIGHT COMPT, P11	
DOOR HEAT CONT, C680 OR C692		1	11R12	*
CIRCUIT BREAKER –			119AL, MAIN EQUIP CTR, P36	
FWD DOOR AREA HEATER PWR, C343		1	36A2 OR 36D2	*
CIRCUIT BREAKER –			119AL, MAIN EQUIP CTR, P37	
RIGHT FWD DOOR AREA HEATER PWR, C1195 1>		1	37B4	*
DIODE – BLOCKING (FIM 31-01-36/101)				
R259		1		*
DIODE – BLOCKING (FIM 31-01-37/101)				
R260, R261, R262		3		*
HEATER –				
LEFT FWD DOOR, B238	-	1	PASS COMPT, ABOVE LEFT FWD DOOR CEILING	21-45-21
RIGHT FWD DOOR, B239	-	1	PASS COMPT, ABOVE RIGHT FWD DOOR CEILING	21-45-21
RELAY – (FIM 31-01-36/101)				
AIR/GND SYS NO. 1, K147		1		*
FWD DOOR AREA HEAT, K840 OR K1041		1		*
RELAY – (FIM 31-01-37/101)				
RIGHT FWD DOOR AREA HEAT, K2289 1>		1		*
SELECTOR – RIGHT FWD DOOR HEAT, S940 1>	-	1	PASS COMPT, RIGHT FWD DOOR SIDEWALL LINING	21-45-22
SENSOR – CURRENT (FIM 21-25-00/101)				
LEFT RECIRC FAN, TS192				*
RIGHT RECIRC FAN, TS193				*

* SEE THE WDM EQUIPMENT LIST

1> AIRPLANES WITH HEAT SELECTOR AT RIGHT FORWARD DOOR (POST-PRR B12666)

Forward Door Area Supplemental Heating System – Component Index
Figure 101

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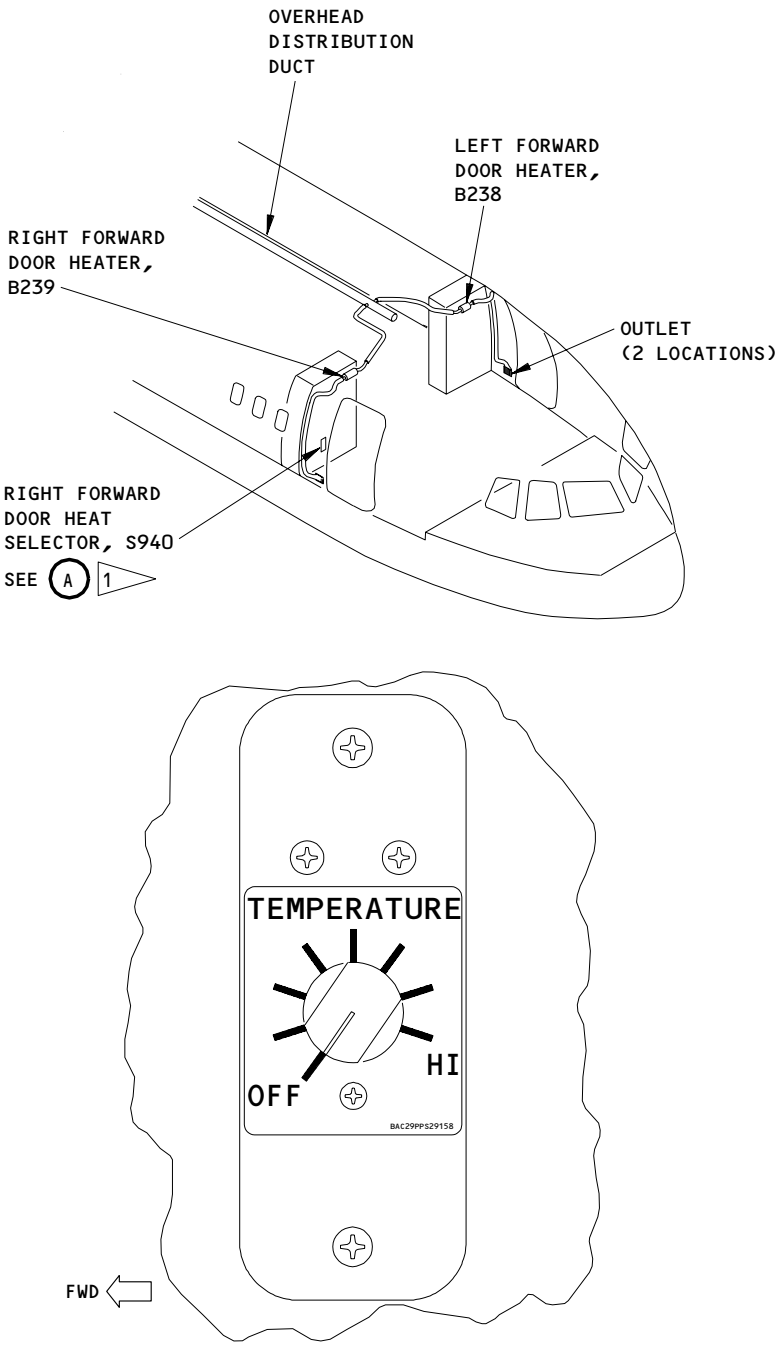
L91822



RIGHT FORWARD DOOR HEAT
SELECTOR, S940

A 1

1 AIRPLANES WITH HEAT SELECTOR
AT RIGHT FORWARD DOOR
(POST-PRR B12666)

Forward Door Area Supplemental Heating System - Component Location
Figure 102

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AFT DOOR AREA SUPPLEMENTAL HEATING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CARD - (FIM 21-51-00/101)				
LEFT PACK FLOW CONTROL, M863				
RIGHT PACK FLOW CONTROL, M864				
CIRCUIT BREAKER -			FLT COMPT, P11	
DOOR HEAT CONT, C692		1	11R12	*
CIRCUIT BREAKER -			119AL, MAIN EQUIP CTR, P87	
AFT DOOR AREA HEATER PWR, C379		1	87B3	*
LEFT AFT DOOR AREA FAN PWR, C408 1		1	87B4	*
RIGHT AFT DOOR AREA FAN PWR, C409 1		1	87A1	*
DIODE - BLOCKING (FIM 31-01-36/101)				
R259		1		*
DIODE - BLOCKING (FIM 31-01-37/101)				
R260, R261, R262		3		*
FAN - BOOST				
LEFT AFT DOOR, B467 1	-	1	PASS. COMPT, ABOVE LEFT AFT DOOR CEILING	21-45-52
RIGHT AFT DOOR, B468 1	-	1	PASS. COMPT, ABOVE RIGHT AFT DOOR CEILING	21-45-52
HEATER -				
LEFT AFT DOOR, B469	-	1	PASS. COMPT, ABOVE LEFT AFT DOOR CEILING	21-45-51
RIGHT AFT DOOR, B470	-	1	PASS. COMPT, ABOVE RIGHT AFT DOOR CEILING	21-45-51
RELAY - (FIM 31-01-36/101)				
AIR/GND SYS NO. 1, K147		1		
RELAY - (FIM 31-01-87/101)				
MID/AFT DOOR AREA HEAT, K1316		1		*
SENSOR - CURRENT (FIM 21-25-00/101)				
LEFT RECIRC FAN, TS192				*
RIGHT RECIRC FAN, TS193				*

* SEE THE WDM EQUIPMENT LIST

1 BOOST FANS NOT INSTALLED ON ALL AIRPLANES (PRR C12373)

Aft Door Area Supplemental Heating System - Component Index
Figure 101

K15745

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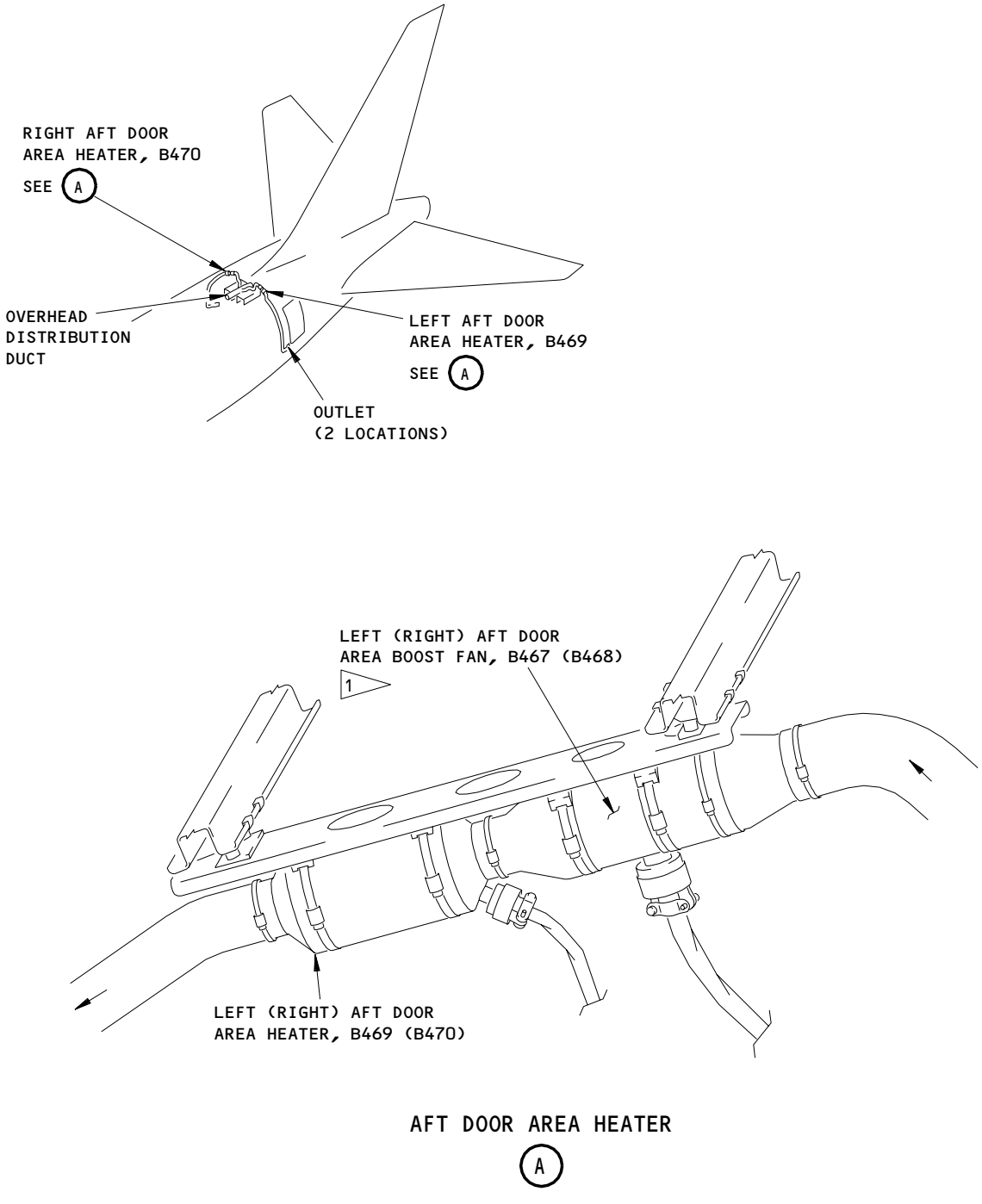

AFT DOOR AREA HEATER

A

1 BOOST FANS NOT INSTALLED ON ALL AIRPLANES (PRR C12373)

Aft Door Area Supplemental Heating System – Component Location
Figure 102

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OVERWING ESCAPE HATCH SUPPLEMENTAL HEATING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –			FLT COMPT, P11	
DOOR HEAT CONT, C692		1	11R12	*
CIRCUIT BREAKER –			119AL, MAIN EQUIP CTR, P36	
ESCAPE HATCH HEATER BLANKET, C678		1	36H3 OR 36D5	*
HEATER BLANKET – 1				
LEFT OVERWING ESCAPE HATCH 1 (FWD), B406	-	1	PASS. COMPT, ESCAPE HATCH, 832	21-45-61
LEFT OVERWING ESCAPE HATCH 2 (AFT), B407	-	1	PASS. COMPT, ESCAPE HATCH, 834	21-45-61
RIGHT OVERWING ESCAPE HATCH 1 (FWD), B408	-	1	PASS. COMPT, ESCAPE HATCH, 842	21-45-61
RIGHT OVERWING ESCAPE HATCH 2 (AFT), B409	-	1	PASS. COMPT, ESCAPE HATCH, 844	21-45-61
RELAY – (FIM 31-01-36/101)		1		*
AIR/GND SYS NO. 1, K1043		1		*
ESCAPE HATCH HEATER BLANKET, K1255				

* SEE THE WDM EQUIPMENT LIST

1 AIRPLANES WITH "DUAL" LEFT (RIGHT) OVERWING ESCAPE HATCHES HAVE HEATER BLANKETS, B406 AND B407 (B408 AND B409).

AIRPLANES WITH "SINGLE" LEFT (RIGHT) OVERWING ESCAPE HATCHES HAVE HEATER BLANKETS, B406 (B408) OR B407 (B409).

Overwing Escape Hatch Supplemental Heating System – Component Index
Figure 101

K15758

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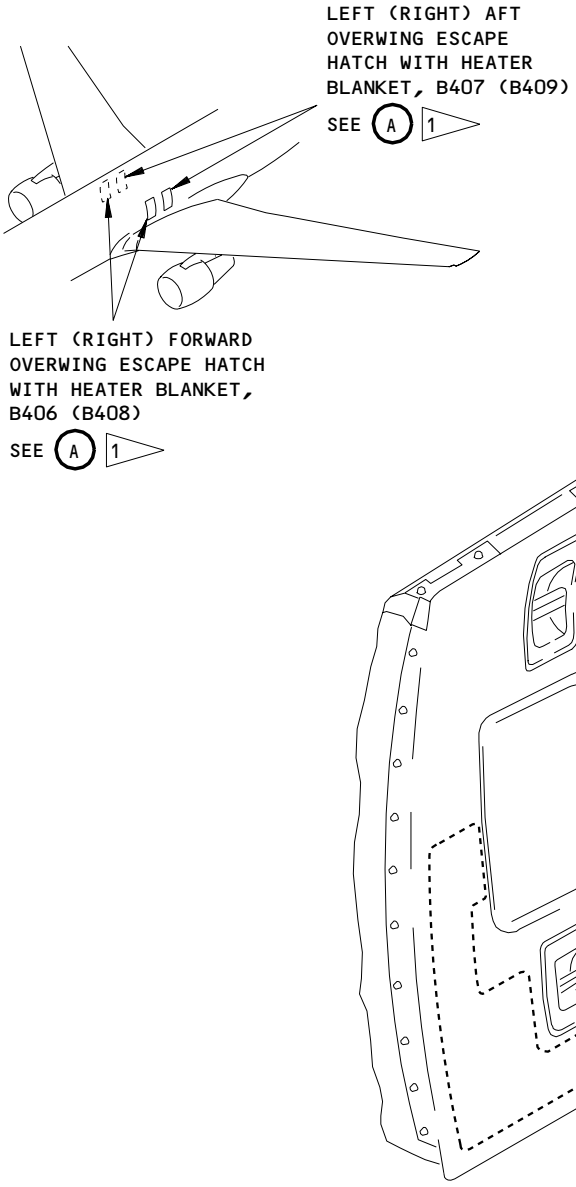

ESCAPE HATCH WITH HEATER BLANKET

A

1 AIRPLANES WITH "DUAL" LEFT (RIGHT) OVERWING ESCAPE HATCHES HAVE HEATER BLANKETS, B406 AND B407 (B408 AND B409).

AIRPLANES WITH "SINGLE" LEFT (RIGHT) OVERWING ESCAPE HATCHES HAVE HEATER BLANKETS, B406 (B408) OR B407 (B409).

Overwing Escape Hatch Supplemental Heating System - Component Location
Figure 102

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OVERWING ESCAPE HATCH SUPPLEMENTAL HEATING SYSTEM - FAULT ISOLATION

1. General
   A. This procedure has the following fault isolation data:
      (1) Figure 103, Overwing Escape Hatch Heater Blankets Do Not Provide Heat, or One Hatch Feels too Warm
   B. AIRPLANES POST-SB 25-0394;
      The Type III overwing escape hatch heating system is deactivated and not operational.

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OVERWING ESCAPE HATCH HEATER BLANKETS DO NOT PROVIDE HEAT, OR ONE HATCH FEELS TOO WARM

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11R12; 36H3 OR 36D5 1

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

NOTE: AIRPLANES POST-SB 25-0394;
THE OVERWING ESCAPE HATCH HEATING SYSTEM IS DEACTIVATED AND NOT OPERATIONAL.

DESCRIPTION

THE OVERWING ESCAPE HATCH LINERS DO NOT FEEL WARM OR ONE OVERWING ESCAPE HATCH LINER FEELS TOO WARM.

POSSIBLE CAUSES

- THE HEATER BLANKET IS FAILED (AMM 21-45-61/401):
  - B406 L ESC HATCH HTR BLKT 1
  - B408 R ESC HATCH HTR BLKT 1
  - B407 L ESC HATCH HTR BLKT 2
  - B409 R ESC HATCH HTR BLKT 2
- THE ESCAPE HATCH HEATER BLANKET SYSTEM RELAY IS FAILED (WDM 21-45-03)
- WIRING (WDM 21-45-03).

FAULT ISOLATION

1 PUT THE AIRPLANE IN THE "AIR" MODE (AMM 32-09-02/201).
USE YOUR HAND TO FEEL EACH ESCAPE HATCH LINING.
DO EACH OF THE ESCAPE HATCH LININGS FEEL COOL?

YES → 41 REPLACE THE ESC HATCH HEATER BLKT RLY, K1255 (WDM 21-45-03).
IF THE PROBLEM CONTINUES, DO A CHECK OF THE OVERWING ESCAPE HATCH HEATER BLANKET CIRCUIT. REPAIR THE PROBLEMS THAT YOU FIND.
PUT THE AIRPLANE IN THE "GROUND" MODE (AMM 32-09-02/201).

NO → SEE SHEET 2 (BLOCK 2)

1 AIRPLANES POST-SB 25-0394;
CIRCUIT BREAKER C678 IS OPENED AND COLLARED WITH THE WIRING CAPPED AND STOWED.

Overwing Escape Hatch Heater Blankets Do Not Provide Heat,
or One Hatch Feels too Warm
Figure 103 (Sheet 1)

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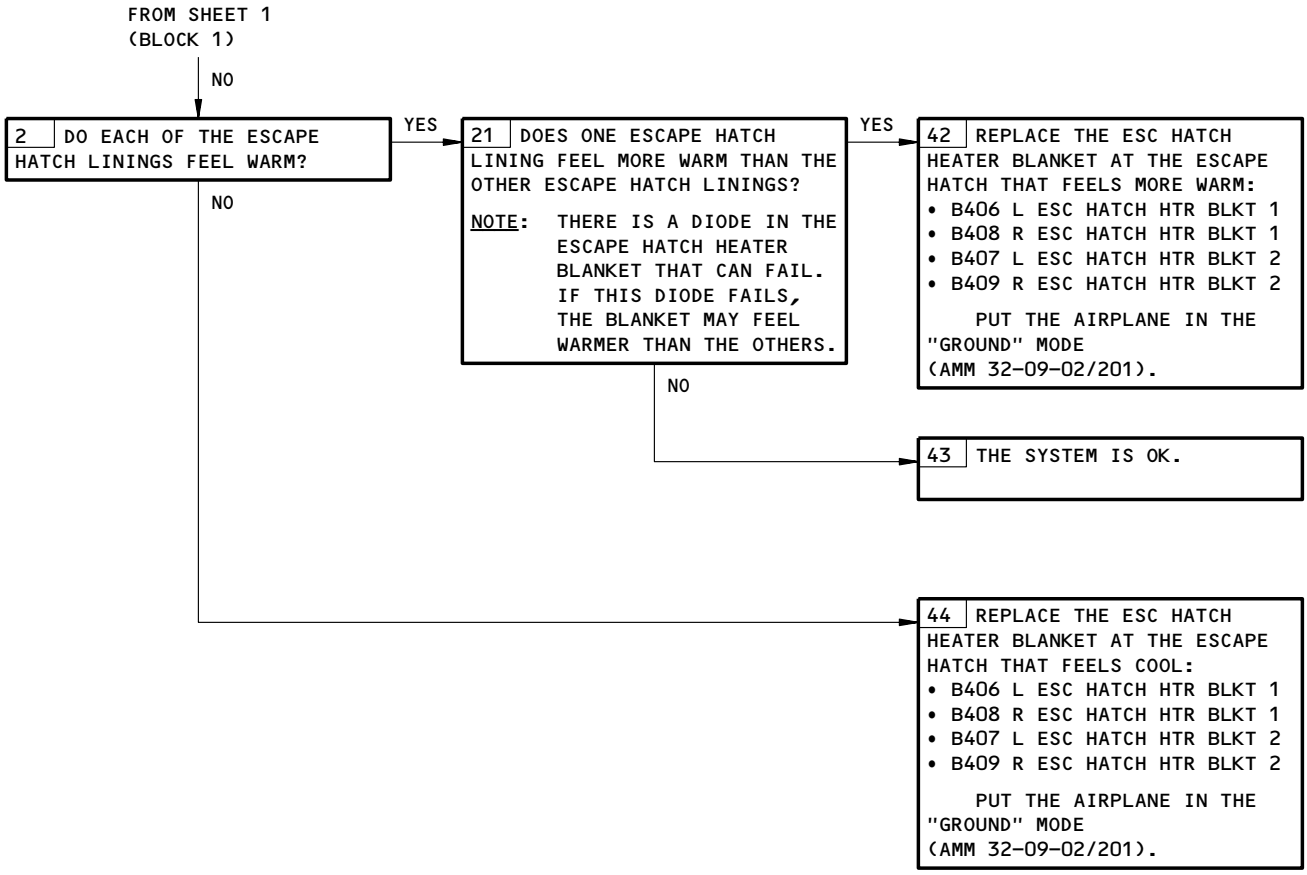

Overwing Escape Hatch Heater Blankets Do Not Provide Heat,
or One Hatch Feels too Warm
Figure 103 (Sheet 2)

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COOLING PACK

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ACTUATOR - (FIM 21-53-00/101)				
RAM AIR EXHAUST DOOR L, M320				
RAM AIR EXHAUST DOOR R, M321				
RAM AIR INLET DOOR L, M322				
RAM AIR INLET DOOR R, M323				
CARD - (FIM 21-53-00/101)				
BACKUP TEMP CONTROL L PACK, M10403				
BACKUP TEMP CONTROL R PACK, M10404				
CARD - (FIM 36-11-00, FIG. 101)				
BLEED AIR CONTROL L, M859				
BLEED AIR CONTROL R, M860				
CARD - (FIM 73-21-00/101)				
N2 ENG SPEED L, M1093				
N2 ENG SPEED R, M1092				
CARD - FLOW CONTROL PACK, M864	4	1	119AL, MAIN EQUIP CTR, P50	21-51-09
CIRCUIT BREAKER -			FLT COMPT, P11	
L PACK FLOW CONT, C653			11A13	*
LEFT PACK AUTO CONT, C702			11N11	*
LEFT PACK AUTO PWR, C673			11N10	*
LEFT PACK STANDBY CONT, C4037			11N25	*
LEFT PACK STANDBY PWR, C4036			11N24	*
PACK FLOW IND, C709 1			11N17	*
R PACK FLOW CONT, C704			11A26	*
RIGHT PACK AUTO CONT, C703			11N20	*
RIGHT PACK AUTO PWR, C674			11N19	*
RIGHT PACK STANDBY CONT, C4038			11N16	*
RIGHT PACK STANDBY PWR, C4039			11N15	*
COMPUTER - (FIM 31-41-00, FIG. 101)				
EICAS L, M10181				
EICAS R, M10182				
CONDENSER -	1	2	193NL, L PACK; 194LR, R PACK	21-51-10
CONTROLLER -				
PACK FLOW AND CARGO AIR COND, M1610	4	1	119AL, MAIN EQUIP CTR, E1-5	21-51-24
PACK STANDBY, M10389	4	1	119AL, MAIN EQUIP CTR, E3-2	21-51-14
PACK TEMPERATURE L, M126	4	1	119AL, MAIN EQUIP CTR, E3-1	21-51-14
PACK TEMPERATURE R, M127	4	1	119AL, MAIN EQUIP CTR, E3-1	21-51-14
CONVERTER - CATALYTIC	1	2	193NL, L PACK; 194LR, R PACK	21-51-22
DIODE - R563		1	119AL, MAIN EQUIP CTR, P36	*
DIODE - R564		1	119AL, MAIN EQUIP CTR, P37	*
DIODE - R187,R189		2	119AL, MAIN EQUIP CTR, P50	*

* SEE THE WDM EQUIPMENT LIST

1 SAS 050,051,150-157,162-167,275-278,280 PRE-SB 21-129

Cooling Pack - Component Index
Figure 101 (Sheet 1)

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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
EXCHANGER - PRIMARY HEAT	2	2	193NL, L PACK; 194LR, R PACK	21-51-02
EXCHANGER - SECONDARY HEAT	2	2	193NL, L PACK; 194LR, R PACK	21-51-02
EXTRACTOR - SECONDARY WATER	2	2	193NL, L PACK; 194LR, R PACK	21-51-21
EXTRACTOR - WATER	2	2	193NL, L PACK; 194LR, R PACK	21-51-04
FAN/AIR PLENUM/DIFFUSER	2	2	193NL, L PACK; 194LR, R PACK	21-51-16
MACHINE - AIR CYCLE	2	2	193NL, L PACK; 194LR, R PACK	21-51-03
MUFFLER - COOLING PACK	2	2	193NL, L PACK; 194LR, R PACK	21-51-23
PACK - AIR COOLING	1,2	2	193NL, L PACK; 194LR, R PACK	21-51-00
PANEL - AIR CONDITIONING CONTROL, M14	5	1	FLT COMPT, P5	*
REHEATER - PACK	1,2	2	193NL, L PACK; 194LR, R PACK	21-51-07
RELAYS - (FIM 31-01-33/101)				
L PACK LOW LIMIT VALVE, K10317				
R PACK AUTO/MAN NO. 1, K49				
R PACK AUTO/MAN NO. 2, K50				
R PACK AUTO/MAN NO. 3, K10316				
R PACK EXH DR CLOSE MAN, K52				
R PACK EXH DR OPEN MAN, K51				
R PACK INLET DR CLOSE MAN, K54				
R PACK INLET DR OPEN MAN, K53				
R PACK LOW LIMIT VALVE, K10318				
R PACK TEMP CONT VLV CLOSE MAN, K56				
R PACK TEMP CONT VLV OPEN MAN, K55				
RELAYS - (FIM 31-01-36/101)				
AIR/GND SYS 1, K140				
AIR/GND SYS 1, K141				
L HI FLOW INHIBIT, K775				
L PACK AUTO/MAN NO. 1, K57				
L PACK AUTO/MAN NO. 2, K58				
L PACK AUTO/MAN NO. 3, K10315				
L PACK EXH DR CLOSE MAN, K60				
L PACK EXH DR OPEN MAN, K59				
L PACK INLET DR CLOSE MAN, K62				
L PACK INLET DR OPEN MAN, K61				
L PACK TEMP CONT VLV CLOSE MAN, K64				
L PACK TEMP CONT VLV OPEN MAN, K63				
RELAYS - (FIM 31-01-37/101)				
AIR/GND SYS 2, K210				
AIR/GND SYS 2, K211				
R HI FLOW INHIBIT, K776				
RELAYS - (FIM 31-01-49/101)				
APU AIR SUPPLY VALVE OPEN, K25				

* SEE THE WDM EQUIPMENT LIST

Component Index
Figure 101 (Sheet 2)

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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
SENSOR – COMPRESSOR OUTLET L PACK, TS41	2,3	1	193NL, L PACK	21-51-06
SENSOR – COMPRESSOR OUTLET R PACK, TS42	2,3	1	194LR, R PACK	21-51-06
SENSOR – COMPRESSOR OUTLET STANDBY L PACK, TS5133	2	1	193NL, L PACK	21-51-06
SENSOR – COMPRESSOR OUTLET STANDBY R PACK, TS5135	2	1	194LR, R PACK	21-51-06
SENSOR – DUCT AIR (MIX MANIFOLD) TEMPERATURE, TS200,TS201		2	821, FWD CARGO, MIX BAY	21-61-02
SENSOR – PACK TEMPERATURE L PACK, TS198	2,3	1	193NL, L PACK	21-51-08
SENSOR – PACK TEMPERATURE R PACK, TS199	2,3	1	194LR, R PACK	21-51-08
SENSOR – PACK STANDBY TEMPERATURE L PACK, TS5132		1	193NL, L PACK	21-51-08
SENSOR – PACK STANDBY TEMPERATURE R PACK, TS5134		1	194LR, R PACK	21-51-08
SWITCH – ALTITUDE, S397	1,3	1	193NL, KEEL BEAM	21-51-17
SWITCH – COMPRESSOR OUTLET OVERHEAT L PACK, S555	2,3	1	193NL, L PACK	21-51-19
SWITCH – COMPRESSOR OUTLET OVERHEAT R PACK, S556	2,3	1	194LR, R PACK	21-51-19
SWITCH – PACK OVERHEAT L PACK, S48	1,3	1	193NL, L PACK	21-51-18
SWITCH – PACK OVERHEAT R PACK, S49	1,3	1	194LR, R PACK	21-51-18
SWITCH – L PACK CONTROL SELECTOR, YBFS4	5	1	FLT COMPT, P5, ECS CONTROL PANEL, M14	*
SWITCH – R PACK CONTROL SELECTOR, YBFS7	5	1	FLT COMPT, P5, ECS CONTROL PANEL, M14	*
SWITCH/LIGHT L PACK RESET, YBFS5	5	1	FLT COMPT, P5, ECS CONTROL PANEL, M14	*
SWITCH/LIGHT R PACK RESET, YBFS6	5	1	FLT COMPT, P5, ECS CONTROL PANEL, M14	*
VALVE – CABIN AIR SUPPLY CHECK	1	2	193FL AND 193GL OR 194HR AND 194FR	21-51-15
VALVE – FLOW CONTROL AND SHUTOFF L PACK, V16	1	1	193NL, L PACK	21-51-01
VALVE – FLOW CONTROL AND SHUTOFF R PACK, V17	1	1	194LR, R PACK	21-51-01
VALVE – LOW LIMIT CONTROL L PACK, V131	1	1	193NL, L PACK	21-51-11
VALVE – LOW LIMIT CONTROL R PACK, V132	1	1	194LR, R PACK	21-51-11
VALVE – TEMPERATURE CONTROL L PACK, V18	1	1	193NL, L PACK	21-51-12
VALVE – TEMPERATURE CONTROL R PACK, V19	1	1	194LR, R PACK	21-51-12

* SEE THE WDM EQUIPMENT LIST

Component Index
Figure 101 (Sheet 3)

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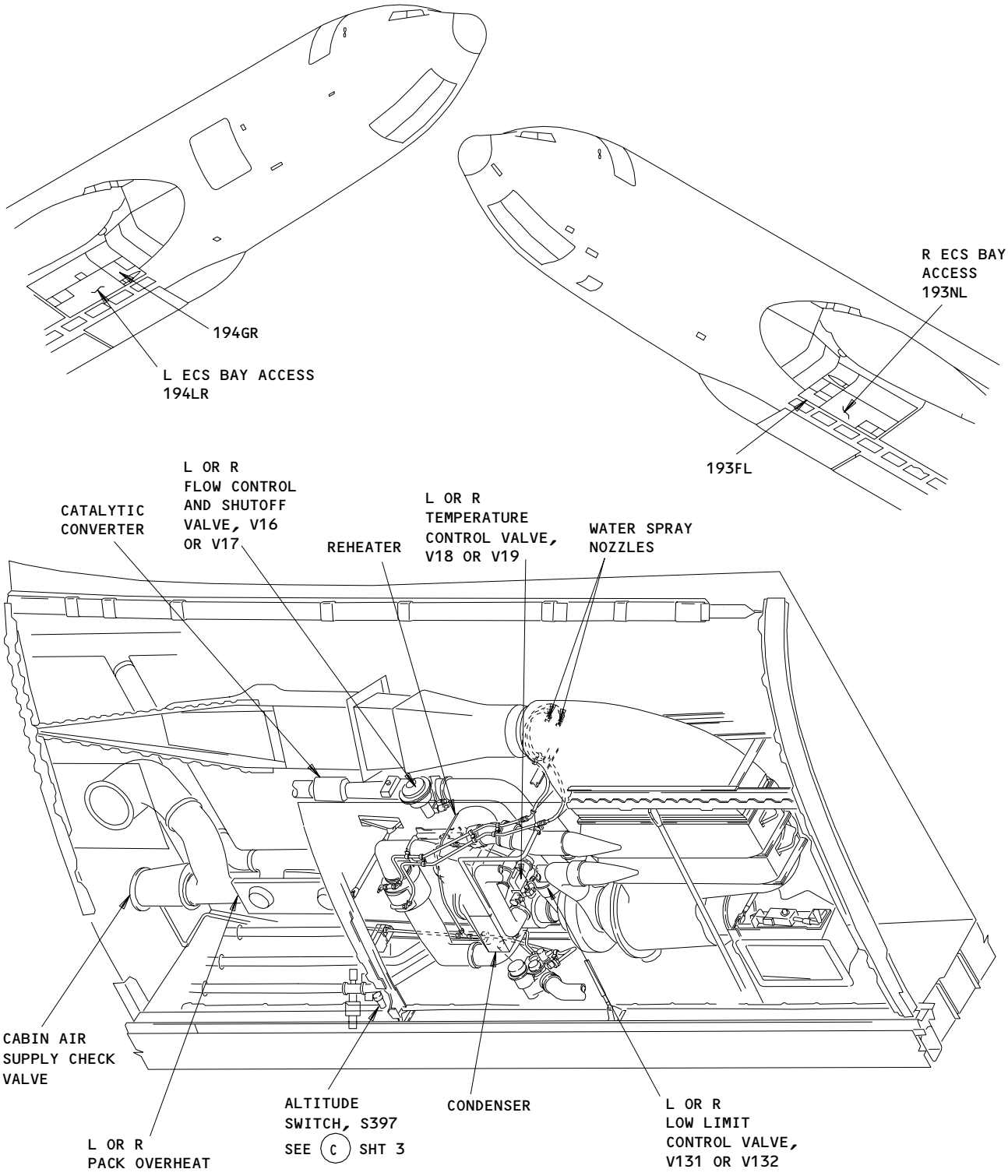

AIR CONDITIONING PACK
BOTTOM VIEW

Component Location
Figure 102 (Sheet 1)

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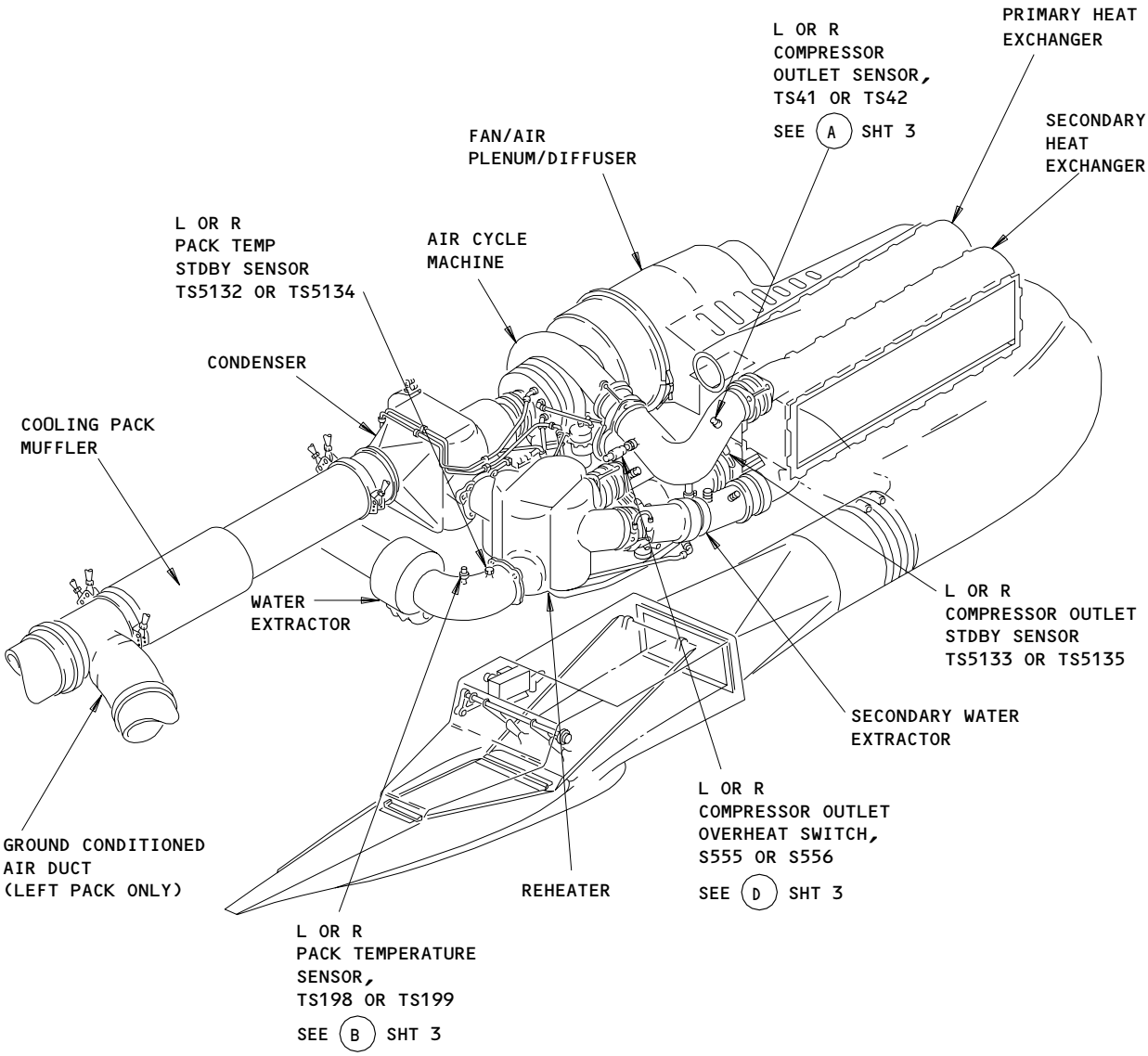

AIR CONDITIONING PACK
TOP VIEW

Component Location
Figure 102 (Sheet 2)

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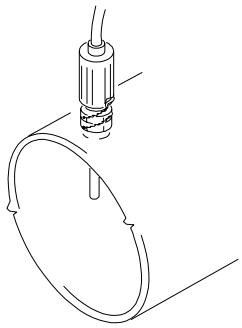
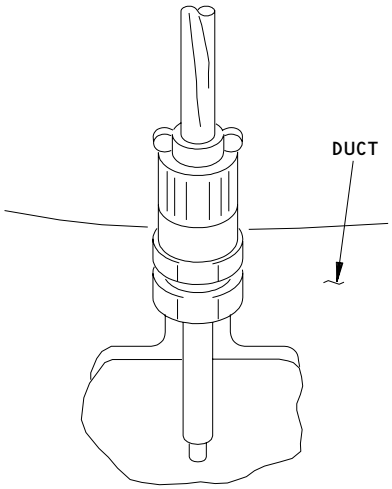


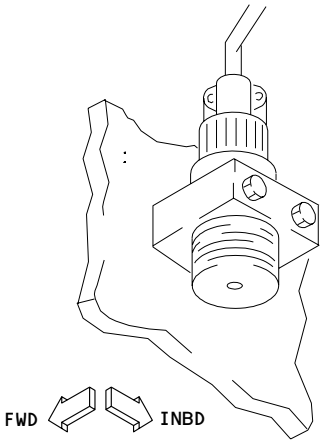
L OR R COMPRESSOR OUTLET SENSOR,
TS41 OR TS42

A



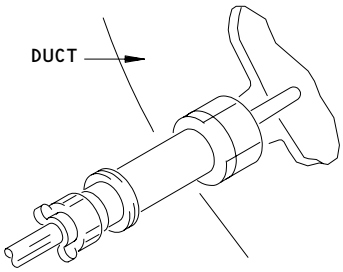
L OR R PACK TEMPERATURE SENSOR,
TS198 OR TS199

B



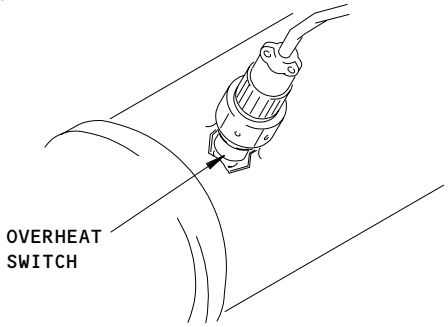
ALTITUDE SWITCH, S397

C



L OR R COMPRESSOR OUTLET OVERHEAT SWITCH,
S555 OR S556

D



L OR R PACK OVERHEAT SWITCH, S48 OR S49

E

DETAILS FROM SHT 1 AND 2

Component Location
Figure 102 (Sheet 3)

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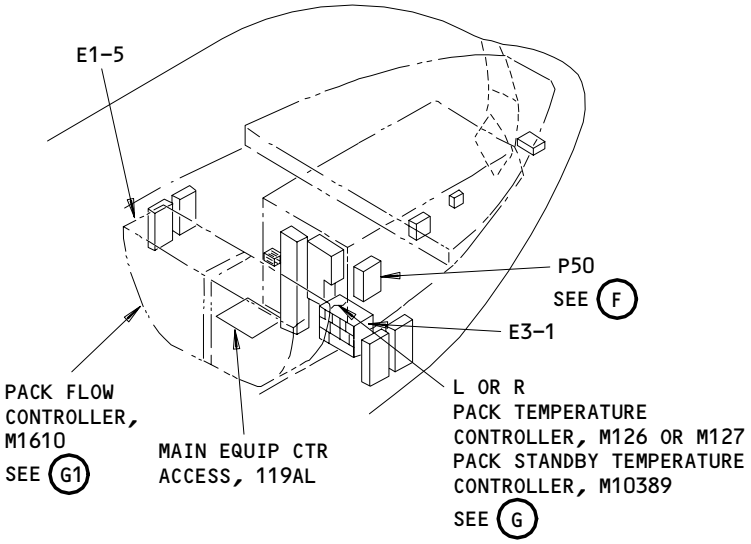
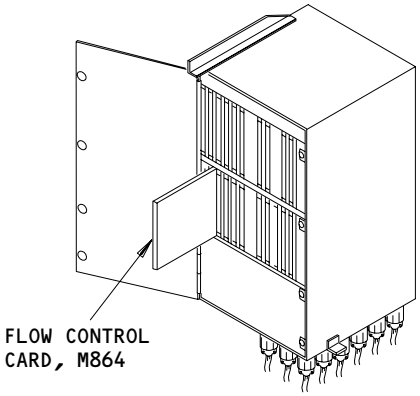
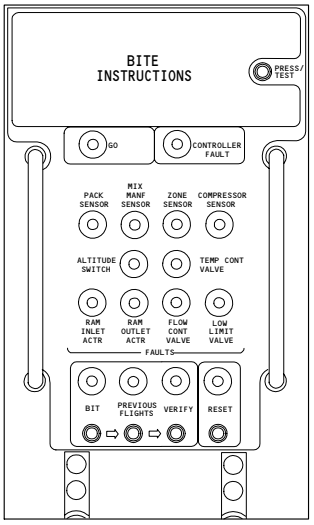


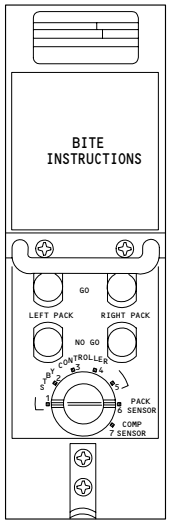


P50

F

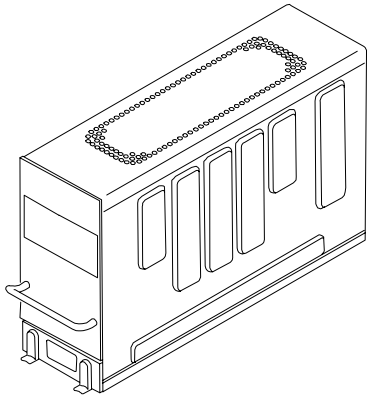


L OR R PACK TEMPERATURE CONTROLLER, M126 OR M127



PACK STANDBY TEMPERATURE CONTROLLER, M10389

G



PACK FLOW (CARGO AIR CONDITIONING) CONTROLLER, M1610

G1

Component Location
Figure 102 (Sheet 4)

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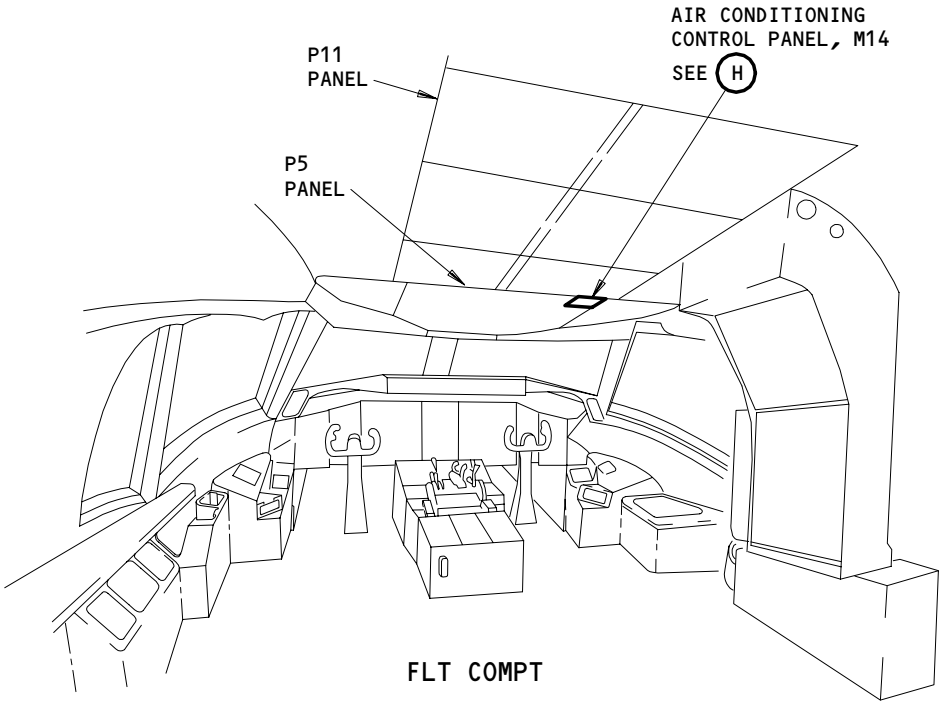
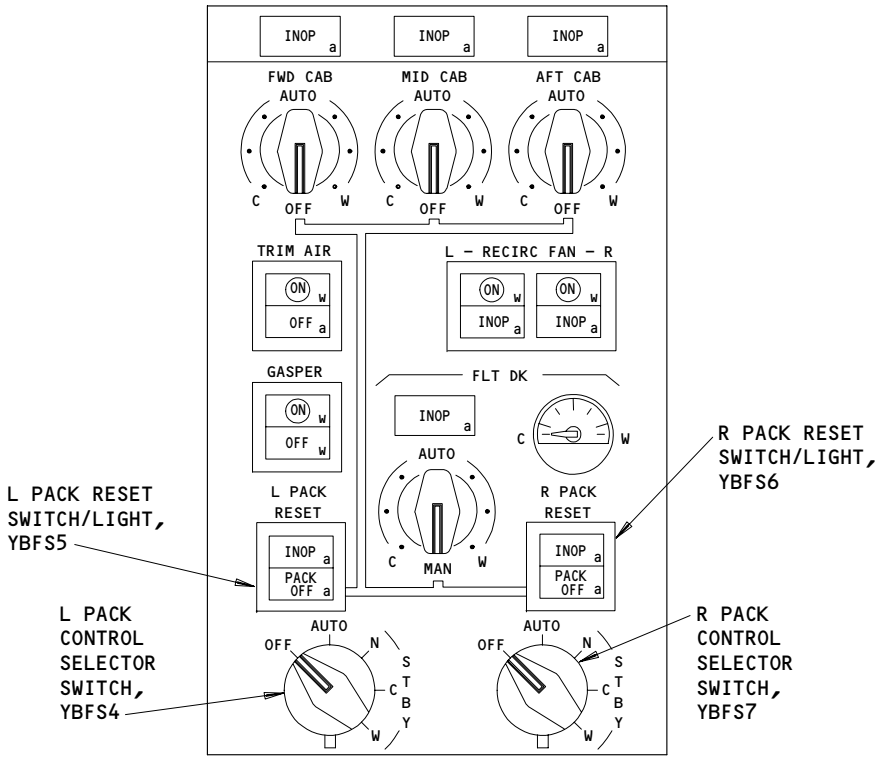


FLT COMPT



AIR CONDITIONING CONTROL PANEL, M14

H

Component Location
Figure 102 (Sheet 5)

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PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
PNEUMATICS (AMM 36-00-00/201)

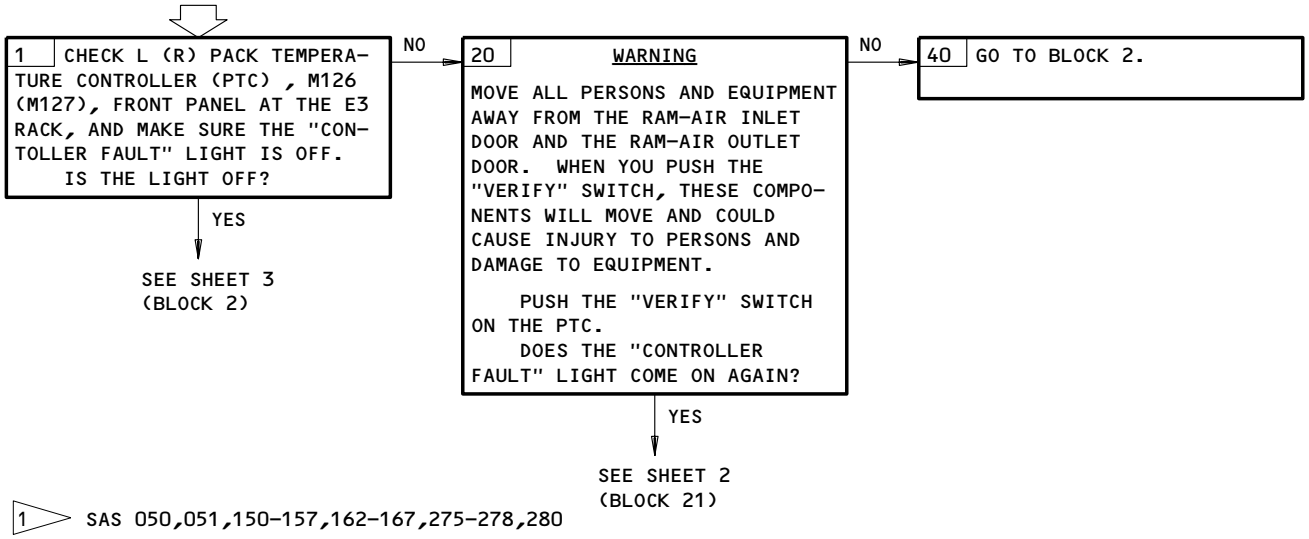
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11A26,11N10,11N11,11N15,11N16,11N19,11N20,
11N24,11N25; 1 >11N17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
PNEUMATIC SYSTEM IS OFF (AMM 36-00-00/201)
"L PACK" AND "R PACK" SELECTORS, ON THE P5 PANEL, ARE IN THE "AUTO" POSITION
"TRIM AIR" SWITCH-LIGHT, ON THE P5 PANEL, IS ON
ZONE TEMPERATURE SELECTORS, ON THE P5 PANEL, ARE IN THE AUTO (12 O'CLOCK) POSITION

NOTE: THE BUILT-IN-TEST EQUIPMENT (BITE) DOES AN ELECTRICAL CHECK OF THE PACK TEMPERATURE CONTROLLER, THE PACK TEMPERATURE SENSOR, THE COMPRESSOR OUTLET SENSOR, THE MIX MANIFOLD SENSOR, THE ZONE SENSOR, THE ALTITUDE SWITCH, AND THE FLOW CONTROL AND SHUTOFF VALVE. THE BITE DOES AN OPERATIONAL CHECK OF THE TEMPERATURE CONTROL VALVE, THE RAM AIR INLET ACTUATOR, THE RAM EXHAUST ACTUATOR, AND THE LOW LIMIT VALVE.

NOTE: BITE DOES NOT KNOW THE DIFFERENCE BETWEEN A COMPONENT FAULT AND AN AIRPLANE WIRING FAULT. MAKE SURE THE CIRCUIT IS CORRECT AND THE CONNECTOR IS IN GOOD CONDITION BEFORE YOU REPLACE A COMPONENT.

PACK TEMPERATURE CONTROLLER BITE PROCEDURE



Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 1)

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FROM SHEET 1
(BLOCK 20)

YES

21 YOU WILL NEED TO REPLACE THE PTC CONTROLLER BECAUSE IT PROBABLY HAS A BLOWN FUSE WHICH CAN BE CAUSED BY AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE RAM AIR INLET/EXHAUST DOOR ACTUATORS OR THE TEMPERATURE CONTROL VALVE.

NO → 41 CONTINUE THE AIRPLANE IN SERVICE.

NOTE

AIRPLANES WITH PTC P/N S210T130-79 AND SUBSEQUENT PTC DASH NUMBERS; THE "TEMP CONT VALVE" LIGHT, "RAM INLET ACTR" LIGHT, OR "RAM OUTLET ACTR" LIGHT WILL ALSO COME ON IN ADDITION TO THE "CONTROLLER FAULT" LIGHT WHEN THERE IS A BLOWN FUSE IN THE PTC CONTROLLER CAUSED BY AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE RAM AIR INLET/ EXHAUST DOOR ACTUATORS OR THE TEMPERATURE CONTROL VALVE.

CAUTION

DO NOT INSTALL A NEW PTC CONTROLLER UNTIL AFTER YOU DO AN ELECTRICAL RESISTANCE CHECK OF THE CIRCUIT WIRING FOR THE RAM AIR INLET/ EXHAUST DOOR ACTUATORS AND TEMPERATURE CONTROL VALVE.

IF YOU REPLACE THE PTC CONTROLLER BEFORE YOU DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING, THE HIDDEN ELECTRICAL SHORT IN THE CIRCUIT WIRING WILL CAUSE ANOTHER BLOWN FUSE TO OCCUR IN THE NEW PTC CONTROLLER, WHICH WILL THEN REQUIRE SUBSEQUENT REPLACEMENT OF THE NEW PTC CONTROLLER.

DO THESE STEPS TO DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE RAM AIR INLET/EXHAUST DOOR ACTUATORS AND THE TEMPERATURE CONTROL VALVE:

1. SET THE "L (R) PACK" SELECTOR TO "OFF" POSITION
2. OPEN THE "L (R) PACK AUTO CONT" AND "L (R) PACK AUTO PWR" CIRCUIT BREAKERS ON THE P11 PANEL
3. REMOVE THE L (R) PTC CONTROLLER, M126 (M127)(AMM 21-51-14/401).
4. CLOSE THE "L (R) PACK AUTO CONT" CIRCUIT BREAKER
5. SET THE "L (R) PACK" SELECTOR TO "AUTO" POSITION
6. USE "TABLE A" AND THE SIMPLIFIED CIRCUIT SCHEMATICS WITHIN THIS FIGURE TO DO A CHECK OF THE ELECTRICAL RESISTANCE IN THE CIRCUIT WIRING FOR THE RAM AIR INLET/EXHAUST DOOR ACTUATORS AND THE TEMPERATURE CONTROL VALVE.
   A. IF THE ELECTRICAL RESISTANCE IS NOT WITHIN THE LIMITS GIVEN IN "TABLE A", THEN DO THESE STEPS:
      (1) REPLACE THE FAULTY COMPONENT AND/OR REPAIR THE CIRCUIT WIRING FOR THE COMPONENT (WDM 21-53-11,-21):
         (a) TEMPERATURE CONTROL VALVE, V18 (V19) (AMM 21-51-12/401).
         (b) RAM AIR INLET DOOR ACTUATOR, M322 (M323) (AMM 21-53-03/401).
         (c) RAM AIR EXHAUST DOOR ACTUATOR, M320 (M321) (AMM 21-53-04/401).
      (2) CONTINUE TO STEP 7.
   B. IF THE ELECTRICAL RESISTANCE IS WITHIN THE LIMITS GIVEN IN "TABLE A", THEN CONTINUE TO STEP 7.
7. SET THE "L (R) PACK" SELECTOR TO "OFF" POSITION.
8. OPEN THE "L (R) PACK AUTO CONT" CIRCUIT BREAKER.
9. INSTALL A "NEW" L (R) PTC CONTROLLER, M126 (M127)(AMM 21-51-14/401).
10. CLOSE THE "L (R) PACK AUTO CONT" AND "L (R) PACK AUTO PWR" CIRCUIT BREAKERS.
11. SET THE "L (R) PACK" SELECTOR TO "AUTO" POSITION.
12. MAKE SURE THE "CONTROLLER FAULT" LIGHT DOES NOT ILLUMINATE ON THE FRONT PANEL OF THE NEW PTC CONTROLLER.

    DOES THE "CONTROLLER FAULT" LIGHT COME ON AGAIN?

YES → SEE SHEET 3 (BLOCK 22)

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 2)

G89706

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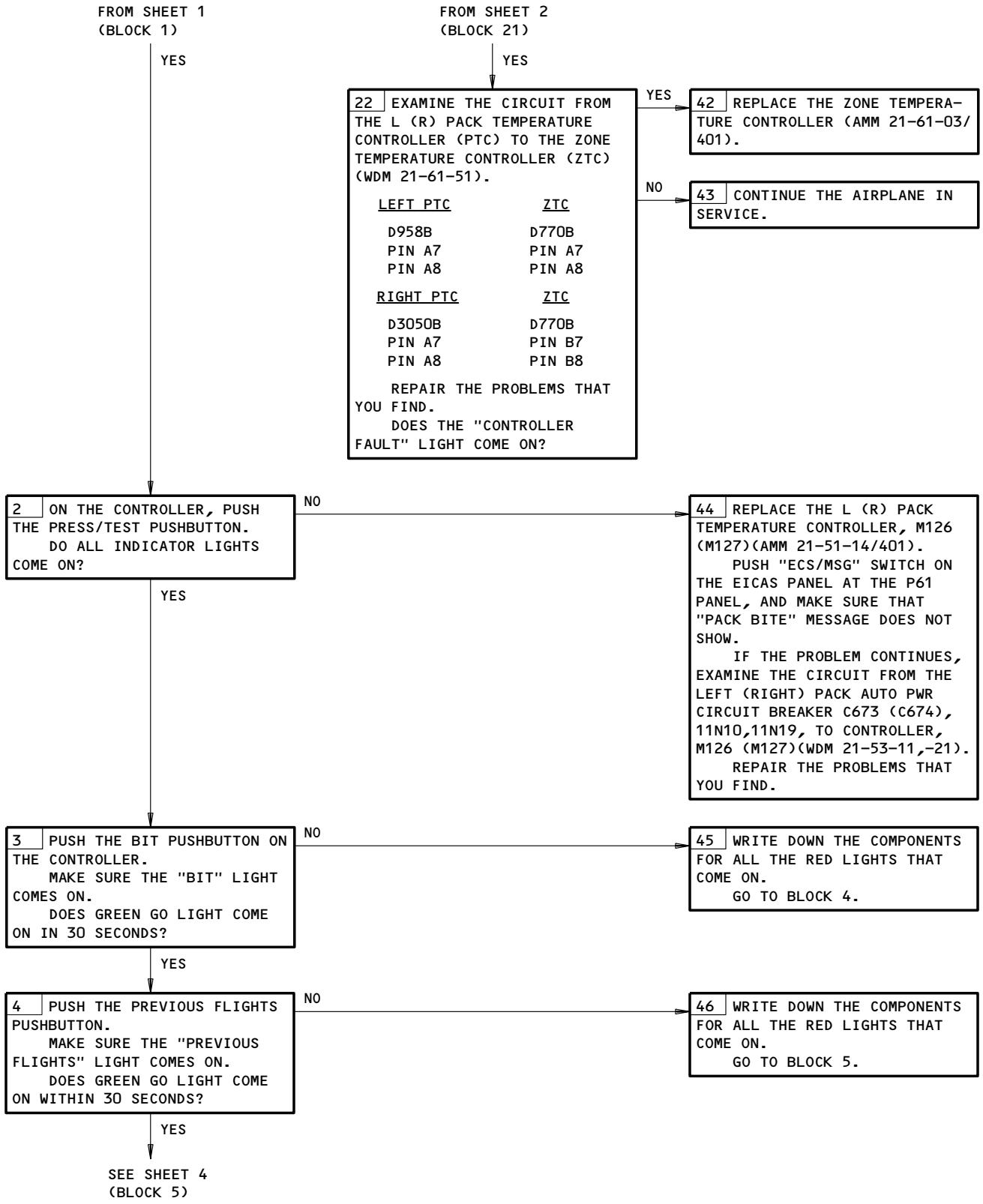

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 3)

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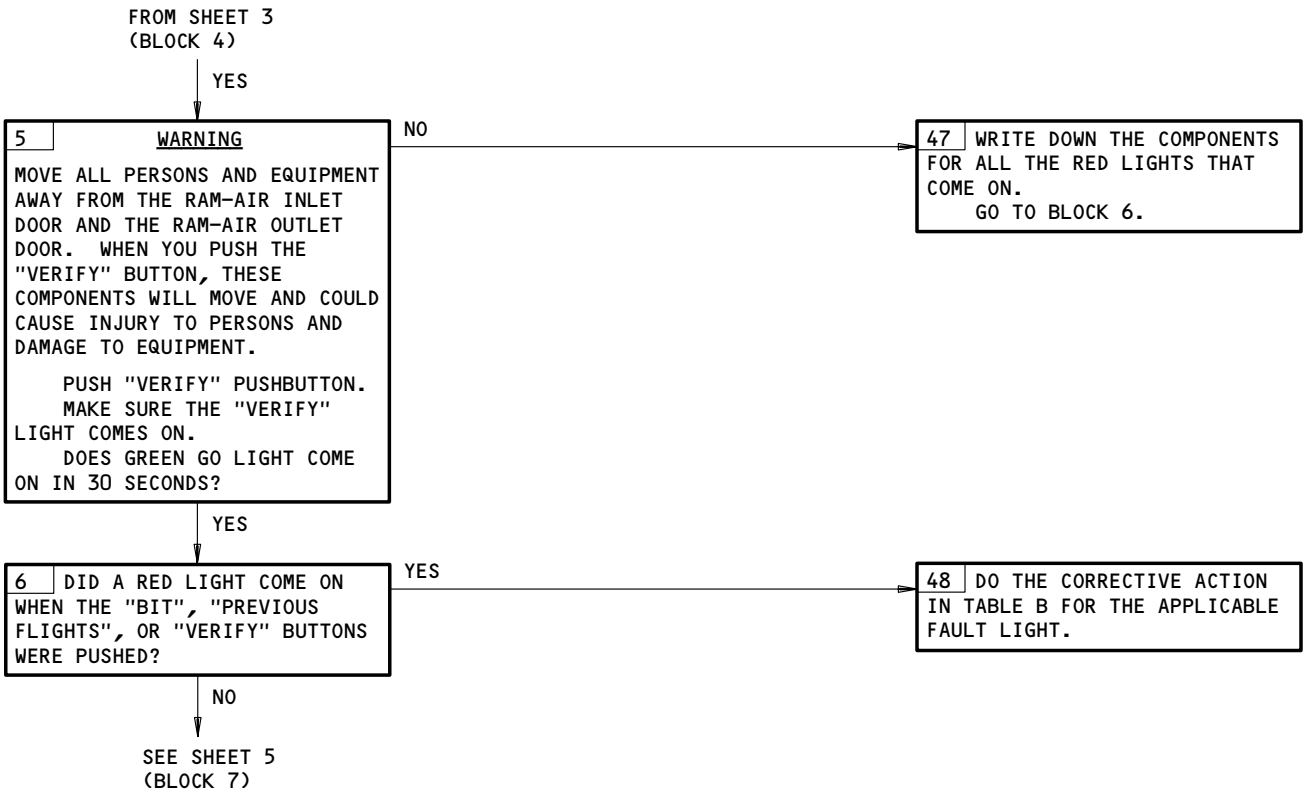

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 4)

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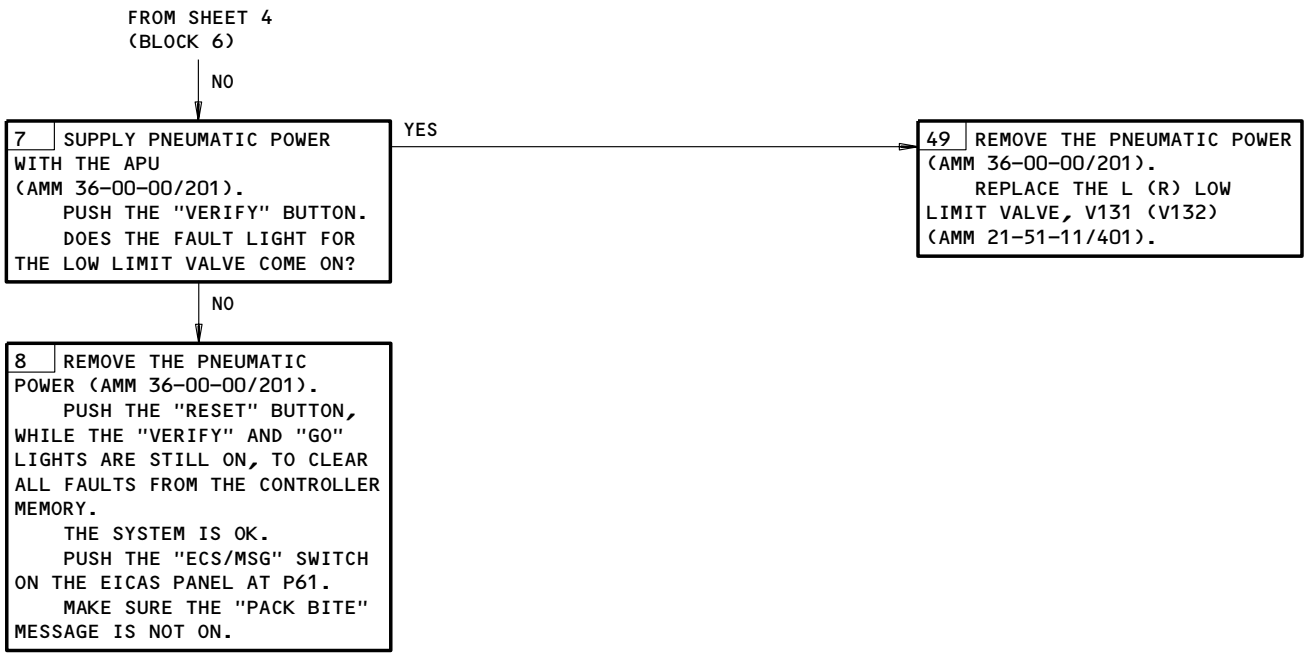

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 5)

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COMPONENT CHECKED	FROM CONNECTOR D958B (D30508)	TO CONNECTOR D958C (D30508)	ACCEPTABLE RESISTANCE (OHMS)
TEMPERATURE CONTROL VALVE, V18 (V19) (WDM 21-53-11,-21) (AMM 21-51-12/401)	PIN A13	PIN 4	70-105
	PIN A15	PIN 4	70-105
RAM AIR INLET ACTUATOR, M322 (M323) (WDM 21-53-11,-21) (AMM 21-53-03/401)	PIN B13	PIN 4	15-30
	PIN B15	PIN 4	15-30
RAM AIR EXHAUST ACTUATOR, M320 (M321) (WDM 21-53-11,-21) (AMM 21-53-04/401)	PIN C13	PIN 4	15-30
	PIN C15	PIN 4	15-30

LEFT (RIGHT) PACK TEMPERATURE CONTROLLER RESISTANCE CHECK
TABLE A

DO THESE STEPS TO DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE RAM AIR INLET/EXHAUST DOOR ACTUATORS AND THE TEMPERATURE CONTROL VALVE:

1. SET THE "L (R) PACK" SELECTOR TO "OFF" POSITION
2. OPEN THE "L (R) PACK AUTO CONT" AND "L (R) PACK AUTO PWR" CIRCUIT BREAKERS ON THE P11 PANEL
3. REMOVE THE L (R) PTC CONTROLLER, M126 (M127)(AMM 21-51-14/401).
4. CLOSE THE "L (R) PACK AUTO CONT" CIRCUIT BREAKER
5. SET THE "L (R) PACK" SELECTOR TO "AUTO" POSITION
6. USE "TABLE A" AND THE SIMPLIFIED CIRCUIT SCHEMATICS WITHIN THIS FIGURE TO DO A CHECK OF THE ELECTRICAL RESISTANCE IN THE CIRCUIT WIRING FOR THE RAM AIR INLET/EXHAUST DOOR ACTUATORS AND THE TEMPERATURE CONTROL VALVE.
   A. IF THE ELECTRICAL RESISTANCE IS NOT WITHIN THE LIMITS GIVEN IN "TABLE A", THEN DO THESE STEPS:
      (1) REPLACE THE FAULTY COMPONENT AND/OR REPAIR THE CIRCUIT WIRING FOR THE COMPONENT (WDM 21-53-11,-21):
         (a) TEMPERATURE CONTROL VALVE, V18 (V19)(AMM 21-51-12/401)
         (b) RAM AIR INLET DOOR ACTUATOR, M322 (M323)(AMM 21-53-03/401)
         (c) RAM AIR EXHAUST DOOR ACTUATOR, M320 (M321)(AMM 21-53-04/401).
      (2) CONTINUE TO STEP 7.
   B. IF THE ELECTRICAL RESISTANCE IS WITHIN THE LIMITS GIVEN IN "TABLE A", THEN CONTINUE TO STEP 7.
7. SET THE "L (R) PACK" SELECTOR TO "OFF" POSITION.
8. OPEN THE "L (R) PACK AUTO CONT" CIRCUIT BREAKER.
9. INSTALL A "NEW" L (R) PTC CONTROLLER, M126 (M127)(AMM 21-51-14/401).
10. CLOSE THE "L (R) PACK AUTO CONT" AND "L (R) PACK AUTO PWR" CIRCUIT BREAKERS.
11. SET THE "L (R) PACK" SELECTOR TO "AUTO" POSITION.
12. MAKE SURE THE "CONTROLLER FAULT" LIGHT DOES NOT COME ON ON THE FRONT PANEL OF THE NEW PTC CONTROLLER.

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 6)

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BITE MESSAGE	CORRECTIVE ACTION
CONTROLLER FAULT	1. DO THE PTC RESISTANCE CHECK IN "TABLE A" TO DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE RAM AIR INLET/EXHAUST DOOR ACTUATORS OR THE TEMPERATURE CONTROL VALVE. NOTE AIRPLANES WITH PTC P/N S210T130-79 AND SUBSEQUENT PTC DASH NUMBERS; THE "TEMP CONT VALVE" LIGHT, "RAM INLET ACTR" LIGHT, OR "RAM OUTLET ACTR" LIGHT WILL ALSO COME ON IN ADDITION TO THE "CONTROLLER FAULT" LIGHT WHEN THERE IS A BLOWN FUSE IN THE PTC CONTROLLER CAUSED BY AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE RAM AIR INLET/EXHAUST DOOR ACTUATORS OR THE TEMPERATURE CONTROL VALVE.
PACK SENSOR	1. MAKE SURE THE AIR CYCLE MACHINE IS NOT SEIZED. 2. REPLACE THE LEFT (RIGHT) PACK TEMPERATURE SENSOR, TS198 (TS199) (AMM 21-51-08/401). 3. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS A4 AND A5, TO THE LEFT PACK TEMPERATURE SENSOR, TS198, CONNECTOR D2824, PINS 1 AND 2 (WDM 21-51-12). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050A, PINS A4 AND A5, TO THE RIGHT PACK TEMPERATURE SENSOR, TS199, CONNECTOR D2830, PINS 1 AND 2 (WDM 21-51-22).
MIX MANF SENSOR	1. REPLACE THE SENSOR: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - REPLACE THE LEFT MIX MANIFOLD TEMPERATURE SENSOR, TS200 (AMM 21-61-02/401). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - REPLACE THE RIGHT MIX MANIFOLD TEMPERATURE SENSOR, TS201 (AMM 21-61-02/401). 2. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS B4 AND B5, TO THE MIX MANIFOLD TEMPERATURE SENSOR 1, TS200, CONNECTOR D2794, PINS 1 AND 2 (WDM 21-51-12). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050A, PINS B4 AND B5, TO THE MIX MANIFOLD TEMPERATURE SENSOR 2, TS201, CONNECTOR D2826, PINS 1 AND 2 (WDM 21-51-22).
ZONE SENSOR	1. REPLACE THE SENSOR: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - REPLACE THE FORWARD CABIN ZONE TEMPERATURE SENSOR, TS178 (AMM 21-61-08/401). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - REPLACE THE AFT CABIN TEMPERATURE SENSOR, TS180 (AMM 21-61-08/401). 2. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS C4 AND C5, TO THE FORWARD CABIN ZONE TEMPERATURE SENSOR, TS178, CONNECTOR D2796, PINS 3 AND 4 (WDM 21-51-12). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE RIGHT PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050A, PINS C4 AND C5, TO THE AFT CABIN ZONE TEMPERATURE SENSOR, TS180, CONNECTOR D2828, PINS 3 AND 4 (WDM 21-51-22).

PACK TEMPERATURE CONTROLLER - FAULT LIGHT TROUBLESHOOTING
TABLE B (SHEET 1)

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 7)

F56248

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BITE MESSAGE	CORRECTIVE ACTION
COMPRESSOR SENSOR	1. REPLACE THE LEFT (RIGHT) PACK COMPRESSOR OUTLET TEMPERATURE SENSOR, TS41 (TS42)(AMM 21-51-06/401). 2. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS D4 AND D5, TO THE LEFT PACK COMPRESSOR OUTLET TEMPERATURE SENSOR, TS41, CONNECTOR D688, PINS 1 AND 2 (WDM 21-51-12). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE RIGHT PACK COMPRESSOR OUTLET TEMPERATURE CONTROLLER, M127, CONNECTOR D30508A, PINS D4 AND D5, TO THE RIGHT PACK COMPRESSOR OUTLET TEMPERATURE SENSOR, TS42, CONNECTOR D736, PINS 1 AND 2 (WDM 21-51-22).
ALTITUDE SWITCH	1. REPLACE THE LEFT PACK ALTITUDE SWITCH, S397 (AMM 21-51-17/401). 2. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958B, PINS A9, A10 AND A11, TO THE ALTITUDE SWITCH, S397, CONNECTOR D2792, PINS 2, 1, 3 (WDM 21-51-12). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D30508B, PINS A9, A10 AND A11, TO THE ALTITUDE SWITCH, S397, CONNECTOR D2792, PINS 2, 1, 3 (WDM 21-51-22).
TEMP CONT VALVE	1. DO THE STEPS THAT FOLLOW: A. MOVE THE L (R) PACK SELECTOR TO "STBY N" AND WAIT 30 SECONDS. B. MOVE THE L (R) PACK SELECTOR TO "STBY W". C. REPEAT THE ABOVE STEPS 3 TIMES. NOTE: A NOT EQUAL DISTRIBUTION OF THE LUBRICATION IN THE TCV POTENTIOMETER CAN CAUSE AN INTERMITTENT OPEN CIRCUIT. D. MOVE THE L (R) PACK SELECTOR TO "AUTO". E. PUSH THE "VERIFY" SWITCH ON THE PACK TEMP CONTROLLER. IF THE "TEMP CONT VALVE" FAULT LIGHT DOES NOT SHOW, THEN THE TEMPERATURE CONTROL VALVE IS OK. 2. IF THE STEPS ABOVE DID NOT FIX THE PROBLEM, THEN REPLACE THE LEFT (RIGHT) PACK TEMPERATURE CONTROL VALVE, V18 (V19)(AMM 21-51-12/401). 3. REPLACE THE LEFT (RIGHT) PACK AUTO/MANUAL RELAY 2, K58 (K50)(WDM 21-53-11, WDM 21-53-21). 4. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING FOR THE LIMIT SWITCHES: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS A10, A11 AND A12, TO THE LEFT PACK TEMPERATURE CONTROL VALVE, V18, CONNECTOR D676, PINS 4, 5 AND 12 (WDM 21-53-11). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D30508A, PINS A10, A11 AND A12, TO THE RIGHT PACK TEMPERATURE CONTROL VALVE, V19, CONNECTOR D722, PINS 4, 5 AND 12 (WDM 21-53-21). 5. DO A CHECK OF THE WIRING FOR THE POTENTIOMETER: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS A1, A2 AND A3, TO THE LEFT PACK TEMPERATURE CONTROL VALVE, V18, CONNECTOR D678, PINS 2, 4 AND 6 (WDM 21-51-12). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D30508A, PINS A1, A2 AND A3, TO THE RIGHT PACK TEMPERATURE CONTROL VALVE, V19, CONNECTOR D724, PINS 2, 4 AND 6 (WDM 21-51-22).

PACK TEMPERATURE CONTROLLER - FAULT LIGHT TROUBLESHOOTING
TABLE B (SHEET 2)

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 8)

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BITE MESSAGE	CORRECTIVE ACTION
TEMP CONT VALVE (CONTINUED)	6. DO A CHECK OF THE WIRING FOR THE VALVE DRIVER CIRCUIT: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958B, PINS A13 AND A15, TO THE LEFT PACK TEMPERATURE CONTROL VALVE, V18, CONNECTOR D676, PINS 1 AND 2 (WDM 21-53-11). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050B, PINS A13 AND A15, TO THE RIGHT PACK TEMPERATURE CONTROL VALVE, V19, CONNECTOR D722, PINS 1 AND 2 (WDM 21-53-21).
RAM INLET ACTR	1. REPLACE THE LEFT (RIGHT) RAM AIR INLET DOOR ACTUATOR, M322 (M323) (AMM 21-53-03/401). 2. REPLACE THE LEFT (RIGHT) PACK AUTO/MANUAL RELAY 1 K57 (K49)(WDM 21-53-11, WDM 21-53-21). 3. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING FOR THE LIMIT SWITCHES: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS B10, B11 AND B12, TO THE LEFT RAM AIR INLET ACTUATOR, M322, CONNECTOR D674, PINS 11, 10 AND 12 (WDM 21-53-11). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050A, PINS B10, B11 AND B12, TO THE RIGHT RAM AIR INLET ACTUATOR, M323, CONNECTOR D718, PINS 11, 10 AND 12 (WDM 21-53-21). 4. DO A CHECK OF THE WIRING FOR THE POTENTIOMETER: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS B1, B2 AND B3, TO THE LEFT RAM AIR INLET ACTUATOR, M322, CONNECTOR D674, PINS 6, 5 AND 4 (WDM 21-51-12). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050A, PINS B1, B2 AND B3, TO THE RIGHT RAM AIR INLET ACTUATOR, M323, CONNECTOR D718, PINS 6, 5 AND 4 (WDM 21-51-22). 5. DO A CHECK OF THE WIRING FOR THE VALVE DRIVER CIRCUIT: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958B, PINS B13 AND B15, TO THE LEFT RAM AIR INLET ACTUATOR, M322, CONNECTOR D674, PINS 2 AND 3 (WDM 21-53-11). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050B, PINS B13 AND B15, TO THE RIGHT RAM AIR INLET ACTUATOR, M323, CONNECTOR D718, PINS 2 AND 3 (WDM 21-53-21).
RAM OUTLET ACTR	1. REPLACE THE LEFT (RIGHT) RAM AIR OUTLET DOOR ACTUATOR, M320 (M321) (AMM 21-53-04/401). 2. REPLACE THE LEFT (RIGHT) PACK AUTO/MANUAL RELAY 1, K57 (K49) (WDM 21-53-11, WDM 21-53-21). 3. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING FOR THE LIMIT SWITCHES: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS C10, C11 AND C12, TO THE LEFT RAM AIR OUTLET ACTUATOR, M320, CONNECTOR D682, PINS 11, 10 AND 12 (WDM 21-53-11). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: - EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050A, PINS C10, C11 AND C12, TO THE RIGHT RAM AIR OUTLET ACTUATOR, M321, CONNECTOR D728, PINS 11, 10 AND 12 (WDM 21-53-22).

PACK TEMPERATURE CONTROLLER – FAULT LIGHT TROUBLESHOOTING
TABLE B (SHEET 3)

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 9)

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BITE MESSAGE	CORRECTIVE ACTION
RAM OUTLET ACTR (CONTINUED)	4. DO A CHECK OF THE WIRING FOR THE POTENTIOMETER: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: – EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958A, PINS C1, C2 AND C3, TO THE LEFT RAM AIR OUTLET ACTUATOR, M320, CONNECTOR D682, PINS 6, 5 AND 4 (WDM 21-51-12). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: – EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050A, PINS B1, B2 AND B3, TO THE RIGHT RAM AIR OUTLET ACTUATOR, M321, CONNECTOR D728, PINS 6, 5 AND 4 (WDM 21-51-22). 5. DO A CHECK OF THE WIRING FOR THE VALVE DRIVER CIRCUIT: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: – EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958B, PINS C13 AND C15, TO THE LEFT RAM AIR OUTLET ACTUATOR, M320, CONNECTOR D682, PINS 2 AND 3 (WDM 21-53-11). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: – EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050B, PINS C13 AND C15, TO THE RIGHT RAM AIR OUTLET ACTUATOR, M321, CONNECTOR D728, PINS 2 AND 3 (WDM 21-53-22).
FLOW CONT VALVE	1. REPLACE THE LEFT (RIGHT) FLOW CONTROL AND SHUTOFF VALVE, V16 (V17) (AMM 21-51-01/201). 2. IF THE PROBLEM CONTINUES, REPLACE THE L (R) PACK AUTO/MANUAL RELAY 3, K10315 (K10316)(WDM 21-51-11, WDM 21-51-21). 3. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: – EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958B, PINS B1 AND B2, TO THE LEFT PACK FLOW CONTROL AND SHUTOFF VALVE, V16, CONNECTOR D1598, PINS 3 AND 1 (WDM 21-51-11). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: – EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050B, PINS B1 AND B2, TO THE RIGHT PACK FLOW CONTROL AND SHUTOFF VALVE, V17, CONNECTOR D1602, PINS 3 AND 1 (WDM 21-51-21).
LOW LIMIT VALVE	1. REPLACE THE LEFT (RIGHT) LOW LIMIT VALVE, V131 (V132)(AMM 21-51-11/201). 2. IF THE PROBLEM CONTINUES, REPLACE THE L (R) PACK LOW LIMIT VALVE RELAY, K10317 (K10318)(WDM 21-51-12, WDM 21-51-22). 3. IF THE PROBLEM CONTINUES, DO A CHECK OF THE WIRING: • FOR THE LEFT PACK TEMPERATURE CONTROLLER: – EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M126, CONNECTOR D958B, PINS C1 AND C2, TO THE LEFT PACK LOW LIMIT VALVE, V131, CONNECTOR D1590, PINS 3 AND 1 (WDM 21-51-12). • FOR THE RIGHT PACK TEMPERATURE CONTROLLER: – EXAMINE THE CIRCUIT FROM THE PACK TEMPERATURE CONTROLLER, M127, CONNECTOR D3050B, PINS C1 AND C2, TO THE RIGHT PACK LOW LIMIT VALVE, V132, CONNECTOR D1568, PINS 3 AND 1 (WDM 21-51-22).

PACK TEMPERATURE CONTROLLER – FAULT LIGHT TROUBLESHOOTING
TABLE B (SHEET 4)

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 10)

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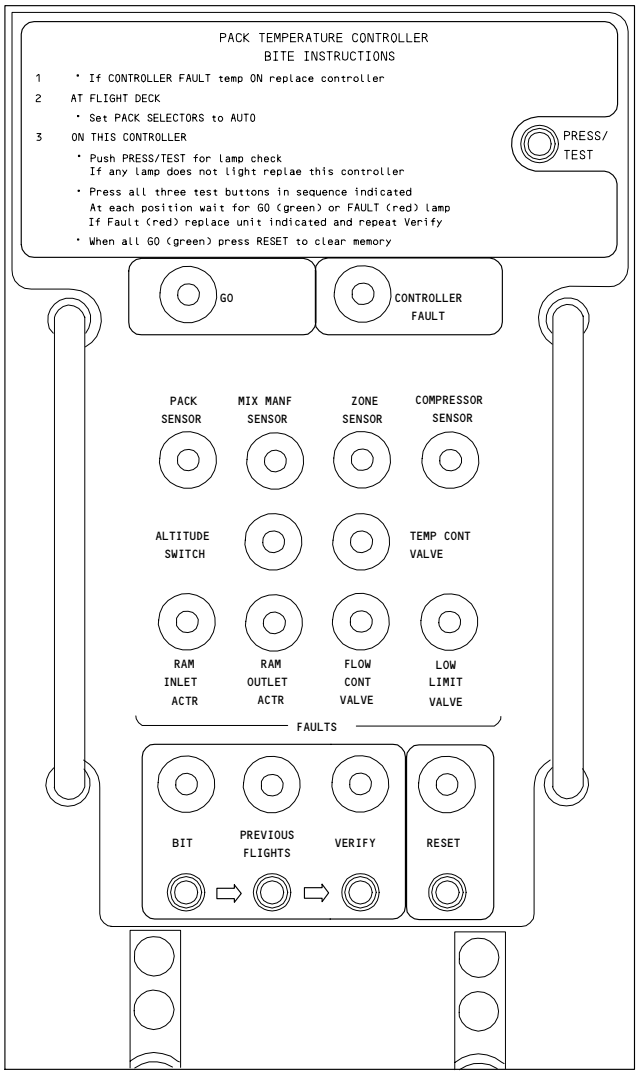

PACK TEMPERATURE CONTROLLER

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 11)

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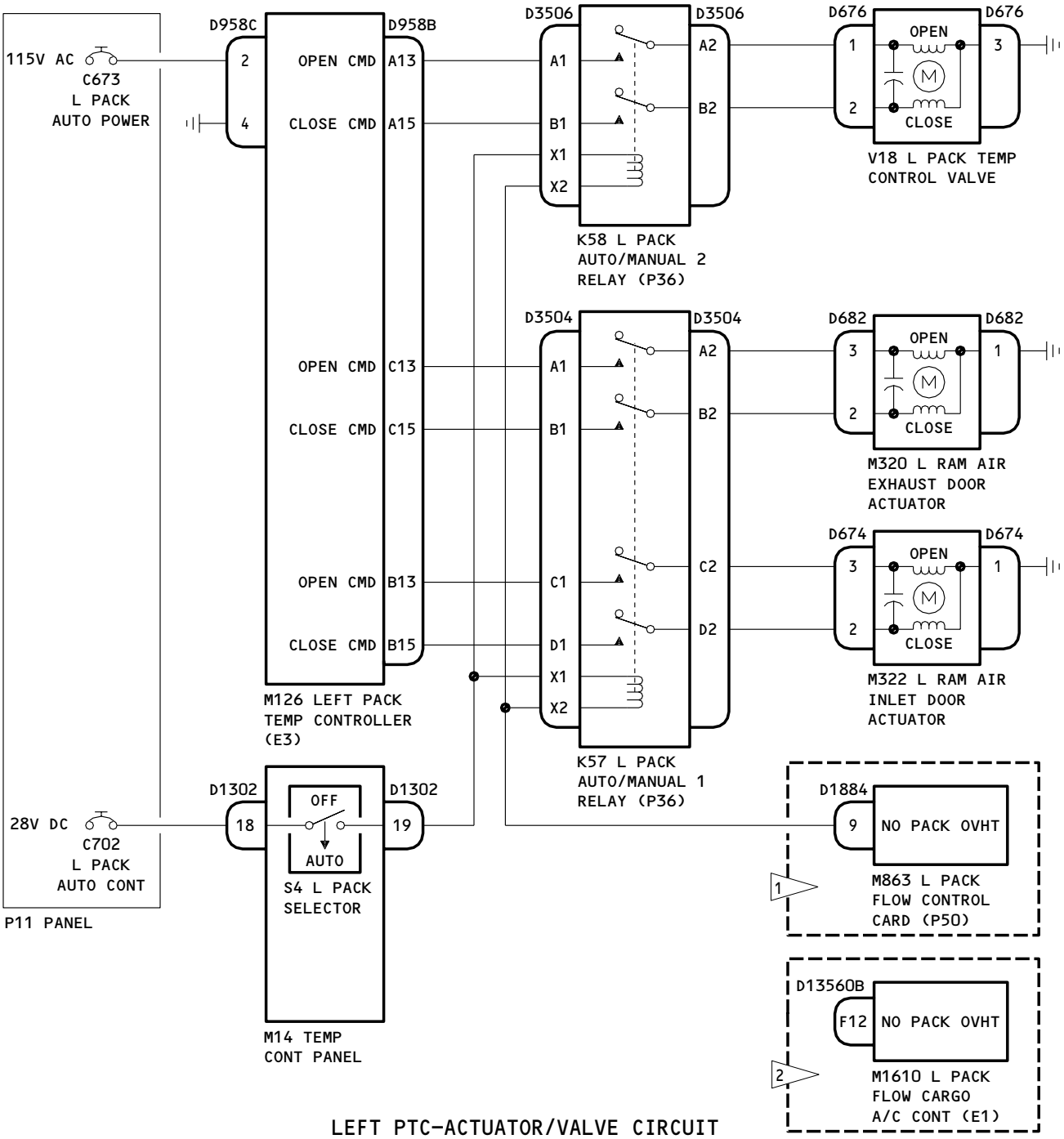

LEFT PTC-ACTUATOR/VALVE CIRCUIT
(RESISTANCE CHECK)

1 AIRPLANES WITHOUT FORWARD CARGO AIR CONDITIONING

2 AIRPLANES WITH FORWARD CARGO AIR CONDITIONING

(WDM 21-53-11)

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 12)

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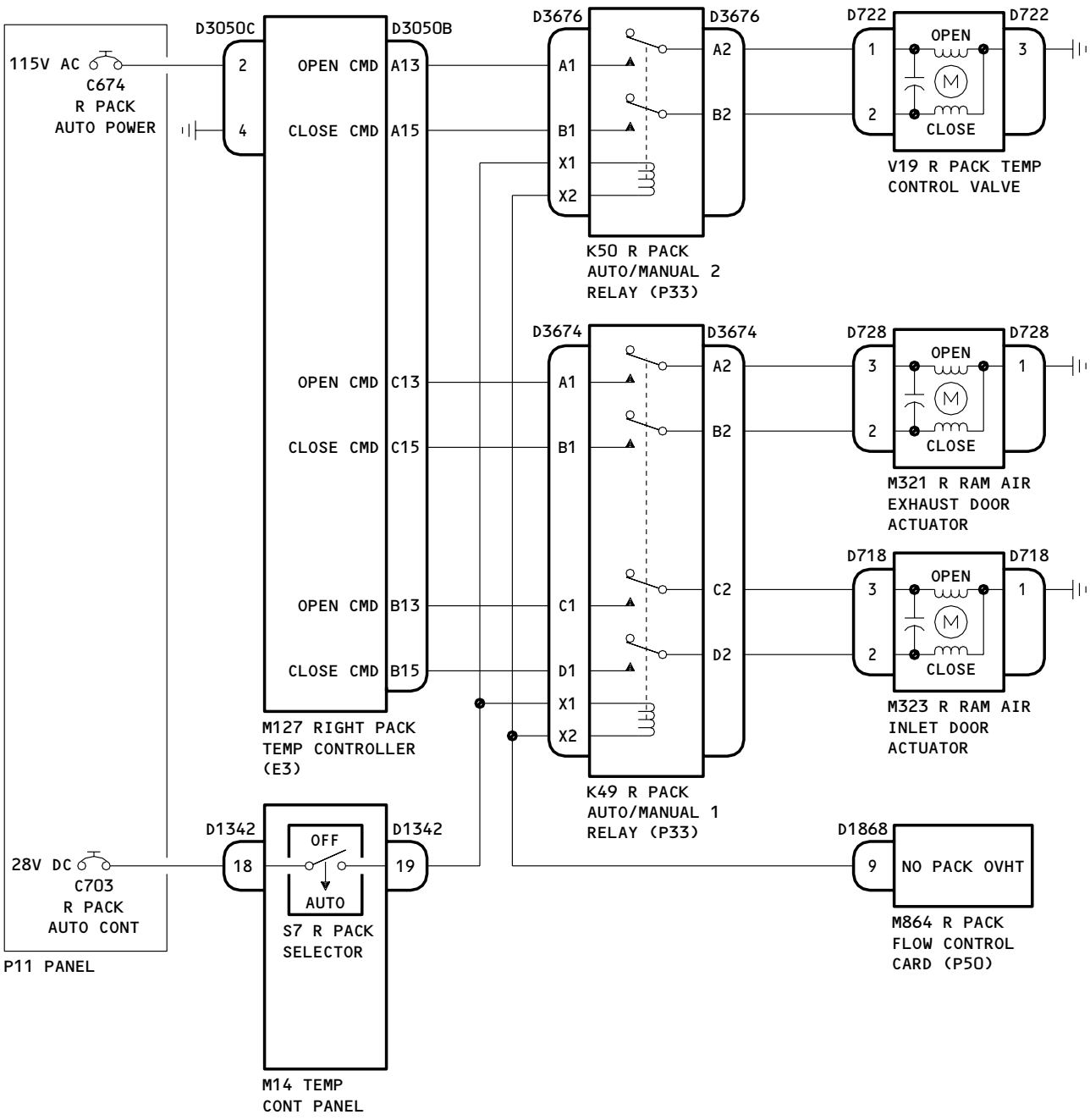

RIGHT PTC–ACTUATOR/VALVE CIRCUIT
(RESISTANCE CHECK)

(WDM 21–53–21)

Pack Temperature Controller BITE Procedure
Figure 103 (Sheet 13)

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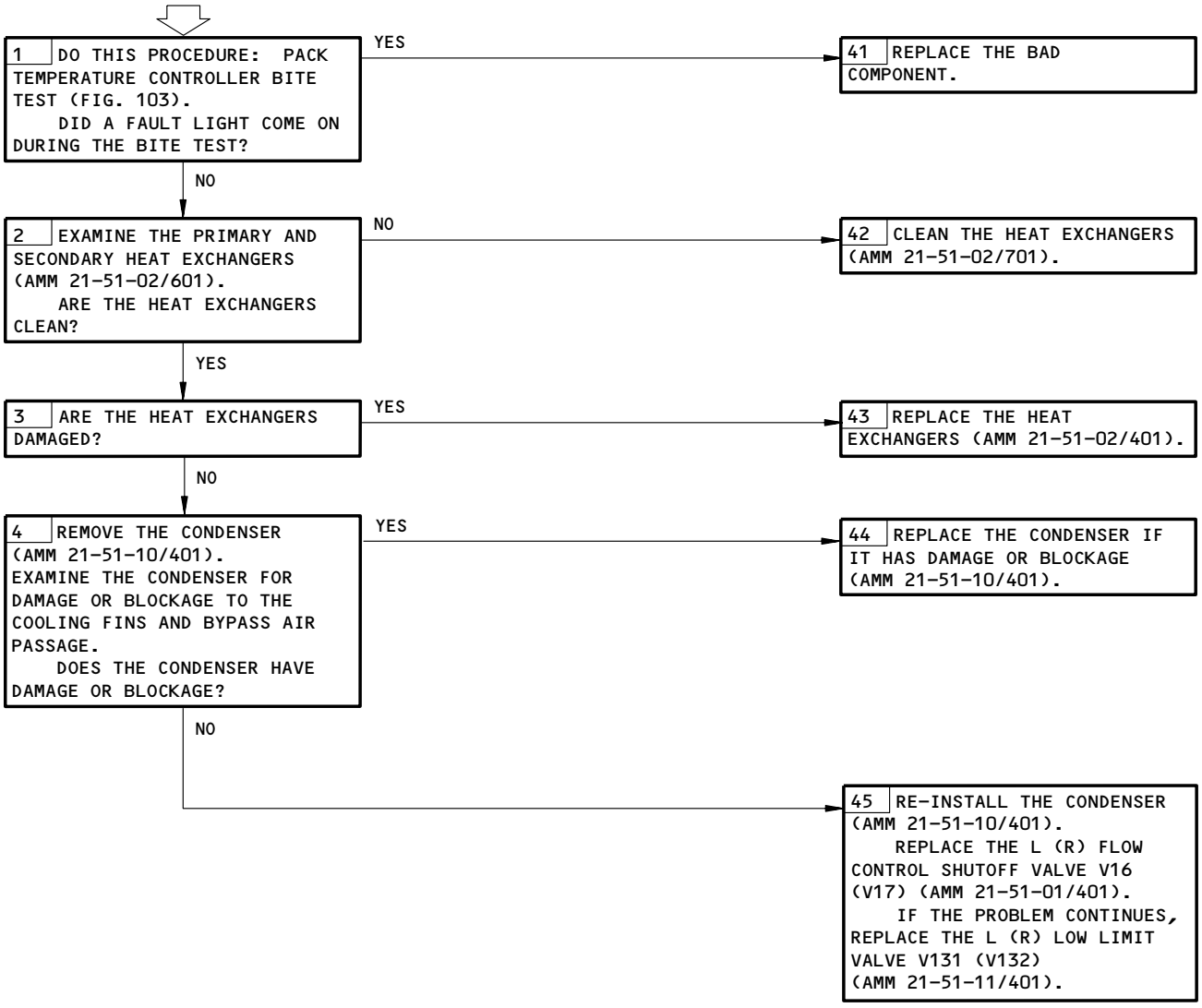
PACK "INOP" LGT ILLUM. EICAS MSG "L (R) PACK TEMP" DISPLAYED. DID NOT OPERATE IN STBY. "INOP" EXTIN THEN REILLUM WHEN RESET PUSHED.

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED: 11A13, 11A13, 11A26, 11N10, 11N11, 11N12, 11N13, 11N15, 11N16, 11N19; 11N20, 11N21; 11N24, 11A25, [1] 11N17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION: ELECTRICAL POWER IS ON (AMM 24-22-00/201)



[1] SAS 050, 051, 150-157, 162-167, 275-278, 280

Pack INOP Lgt Illum. EICAS Msg L (R) PACK TEMP Displayed.
Did Not Operate in STBY. INOP Extin Then Reillum When RESET Pushed.
Figure 104

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.

"INOP" AND "PACK OFF" LIGHTS ILLUM IN AUTO, AND AIR CYCLE MACHINE (ACM) WILL NOT OPERATE WITH ENGINES ON.

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
ENGINES ARE ON
ENGINE BLEED AIR SWITCHES ARE IN THE "ON" POSITION

NOTE: CONTAMINATION OF THE ACM TURBINE THRUST BEARING CAN CAUSE THE ACM IMPELLER SHAFT NOT TO TURN. THIS PROCEDURE CAN HELP YOU START THE ACM IF IT HAS CONTAMINATION.

1

1. TURN L (R) PACK SELECTOR TO "OFF"
2. WAIT 2 TO 5 MINUTES FOR PACK TO COOL
3. TURN PACK SELECTOR TO THE "AUTO" POSITION
4. PUSH THE PACK RESET PUSH-BUTTON
5. MAKE SURE THAT THE "INOP" AND "PACK OFF" LIGHTS ARE OFF
6. MAKE SURE THAT THE EICAS MESSAGE "L/R PACK TEMP" DOES NOT SHOW
7. PUSH THE EICAS ECS/MSG PUSH-BUTTON
8. SET THESE SWITCHES AS FOLLOWS:
   - PACK SELECTOR TO "OFF"
   - L AND R RECIRC FAN TO "ON"
   - ENGINE BLEED AIR SWITCH TO "ON"
   - PACK SELECTOR TO "AUTO"
   - TRIM AIR SWITCH TO "ON"
   - FLT DK AND ALL CAB ZONE TEMPERATURE SELECTORS TO "AUTO".

CAUTION: MAKE SURE THAT THE PACK OUT TEMPERATURE IS LESS THAN 150°F (65°C).

9. LOOK AT THE EICAS ECS MAINTENANCE PAGE TO SEE IF THE PACK OUT TEMPERATURE IS LESS THAN 150°F (65°C).

   NOTE: IF THE PACK OUT TEMPERATURE IS HOTTER THAN 150°F (65°C), TURN THE PACK SELECTOR TO "OFF".

10. GO TO THE RAM AIR EXHAUST DOOR AND MAKE SURE THERE IS AIRFLOW.

    NOTE: WHEN THE ACM OPERATES, AIRFLOW WILL COME OUT OF THE RAM AIR EXHAUST DOOR.

    DOES THE ACM OPERATE?

    NOTE: IF THE ACM DOES NOT OPERATE, TURN THE PACK SELECTOR SWITCH IMMEDIATELY TO "OFF" TO PREVENT AN OVERHEAT.

YES → 20 THE PACK IS OK.

NO → SEE SHEET 2 (BLOCK 2)

INOP and PACK OFF Lights Illum in Auto, and Air Cycle Machine (ACM) Will Not Operate with Engines On.
Figure 104A (Sheet 1)

C61598

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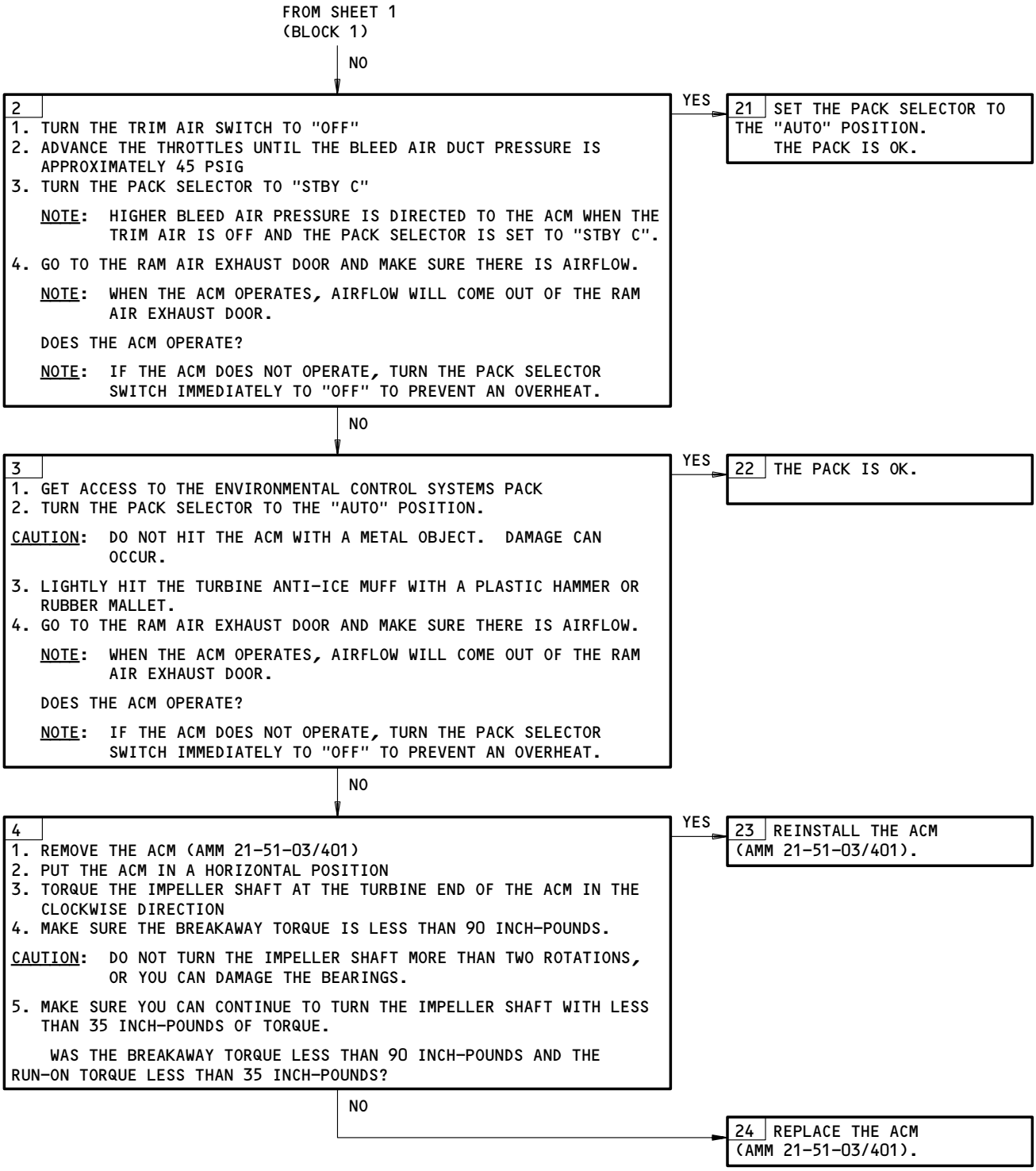

INOP and PACK OFF Lights Illum in Auto, and Air Cycle Machine (ACM) Will Not Operate with Engines On.
Figure 104A (Sheet 2)

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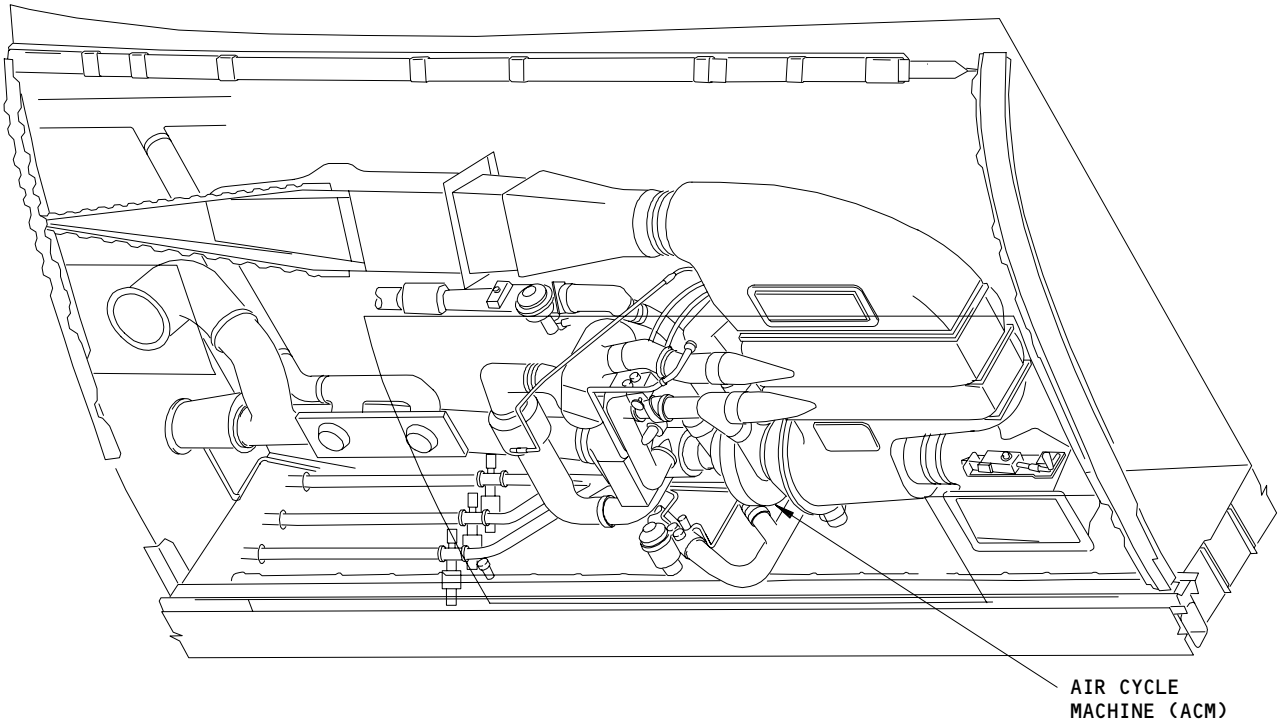
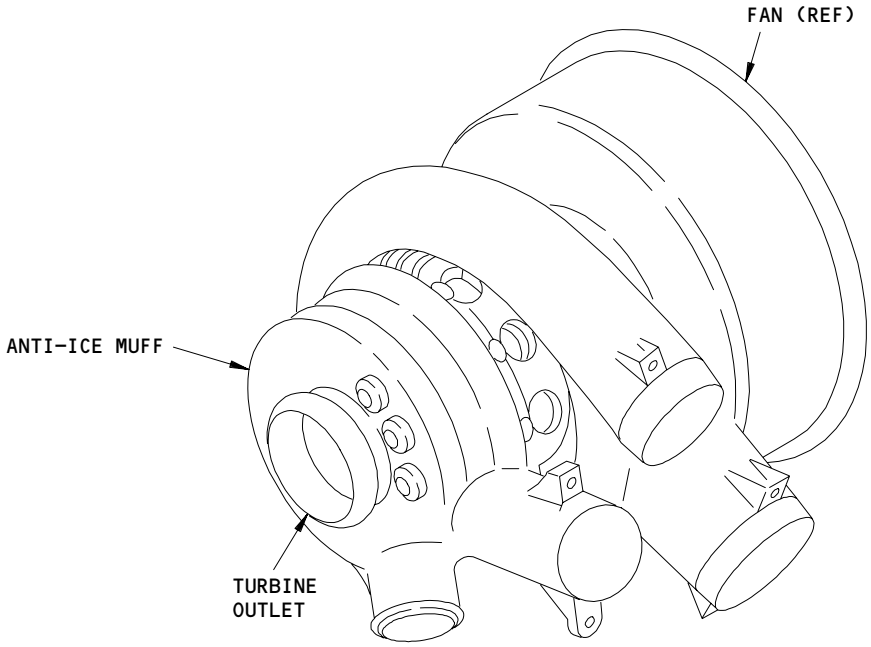


AIR CONDITIONING PACK



AIR CYCLE MACHINE (ACM)

(A)

INOP and PACK OFF Lights Illum in Auto, and Air Cycle Machine (ACM) Will Not Turn with Engines On.
Figure 104A (Sheet 3)

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PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
APU IS ON
APU BLEED AIR SWITCH IS IN THE "ON" POSITION

"INOP" AND "PACK OFF" LIGHTS ILLUM IN AUTO, AND AIR CYCLE MACHINE (ACM) WILL NOT OPERATE WITH APU ON.

NOTE: CONTAMINATION OF THE ACM TURBINE THRUST BEARING CAN CAUSE THE ACM IMPELLER SHAFT NOT TO TURN. THIS PROCEDURE CAN HELP YOU START THE ACM IF IT HAS CONTAMINATION.

1

1. TURN L (R) PACK SELECTOR TO "OFF"
2. WAIT 2 TO 5 MINUTES FOR PACK TO COOL
3. TURN PACK SELECTOR TO THE "AUTO" POSITION
4. PUSH THE PACK RESET PUSH-BUTTON
5. MAKE SURE THAT THE "INOP" AND "PACK OFF" LIGHTS ARE OFF
6. MAKE SURE THAT THE EICAS MESSAGE "L/R PACK TEMP" DOES NOT SHOW
7. PUSH THE EICAS ECS/MSG PUSH-BUTTON
8. SET THESE SWITCHES AS FOLLOWS:
   - PACK SELECTOR TO "OFF"
   - L AND R RECIRC FAN TO "ON"
   - APU BLEED AIR SWITCH TO "ON"
   - TRIM AIR SWITCH TO "ON"
   - FLT DK ZONE TEMPERATURE SELECTOR TO "AUTO"
   - ALL CAB ZONE TEMPERATURE SELECTORS TO "OFF"
   - PACK SELECTOR TO "AUTO".

CAUTION: MAKE SURE THAT THE PACK OUT TEMPERATURE IS LESS THAN 150°F (65°C).

9. LOOK AT THE EICAS ECS MAINTENANCE PAGE TO SEE IF THE PACK OUT TEMPERATURE IS LESS THAN 150°F (65°C).

   NOTE: IF THE PACK OUT TEMPERATURE IS HOTTER THAN 150°F (65°C), TURN THE PACK SELECTOR TO "OFF".

10. GO TO THE RAM AIR EXHAUST DOOR AND MAKE SURE THERE IS AIRFLOW.

    NOTE: WHEN THE ACM OPERATES, AIRFLOW WILL COME OUT OF THE RAM AIR EXHAUST DOOR.

    DOES THE ACM OPERATE?

    NOTE: IF THE ACM DOES NOT OPERATE, TURN THE PACK SELECTOR SWITCH IMMEDIATELY TO "OFF" TO PREVENT AN OVERHEAT.

YES → 20 THE PACK IS OK.

NO → SEE SHEET 2 (BLOCK 2)

INOP and PACK OFF Lights Illum in Auto, and Air Cycle Machine (ACM) Will Not Operate with APU On.
Figure 104B (Sheet 1)

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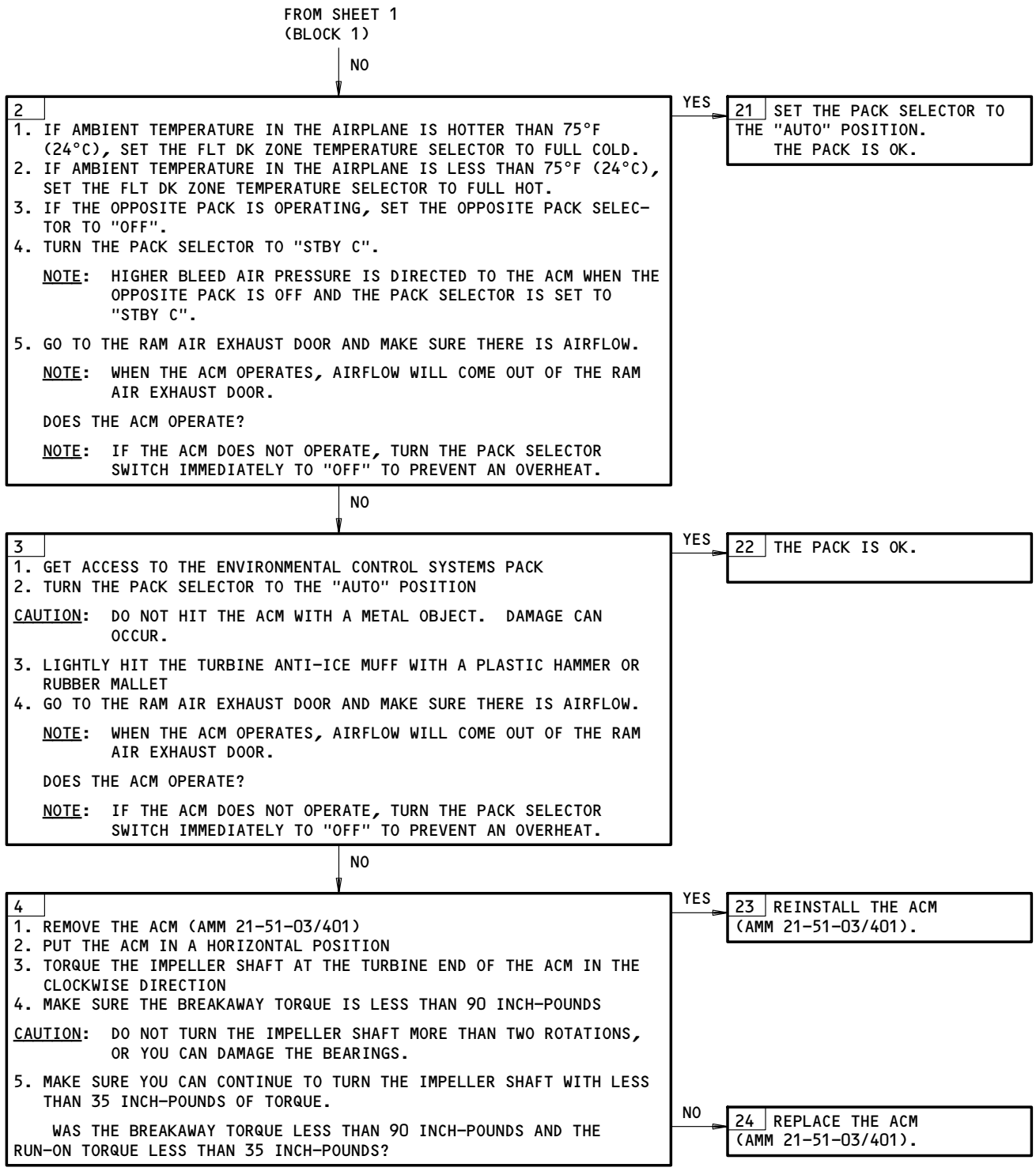

INOP and PACK OFF Lights Illum in Auto, and Air Cycle Machine (ACM) Will Not Operate with APU On.
Figure 104B (Sheet 2)

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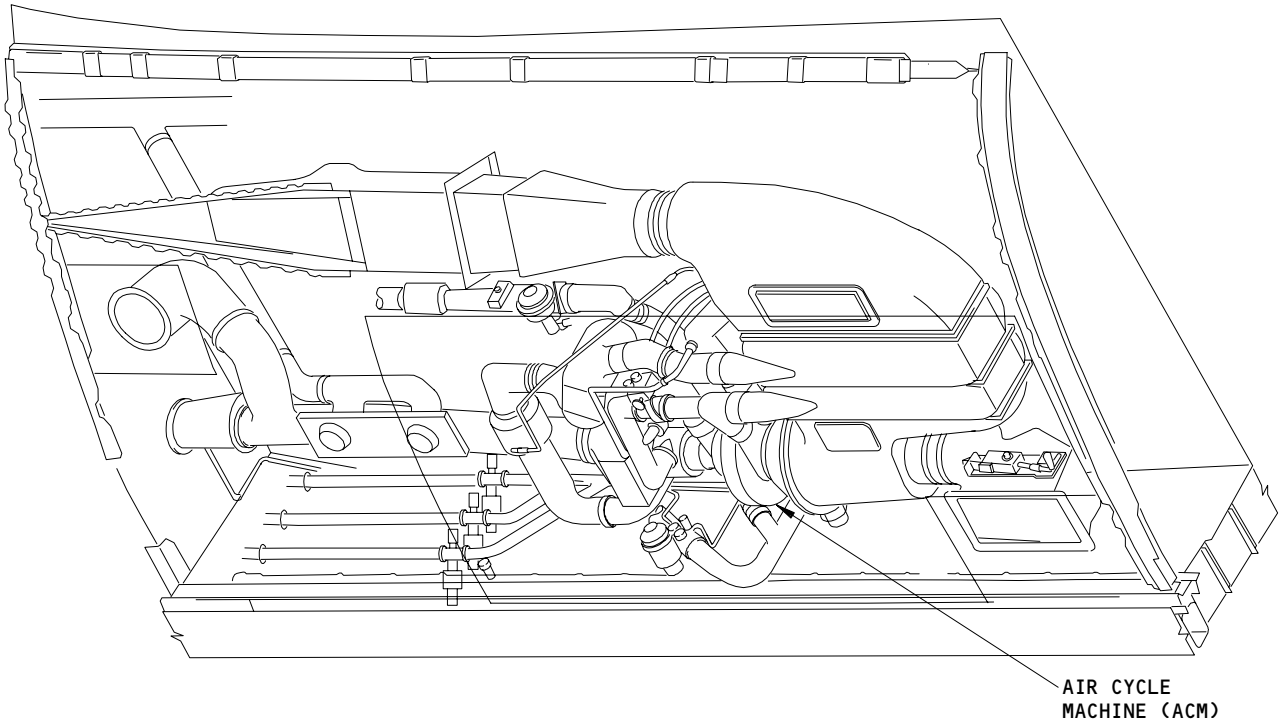
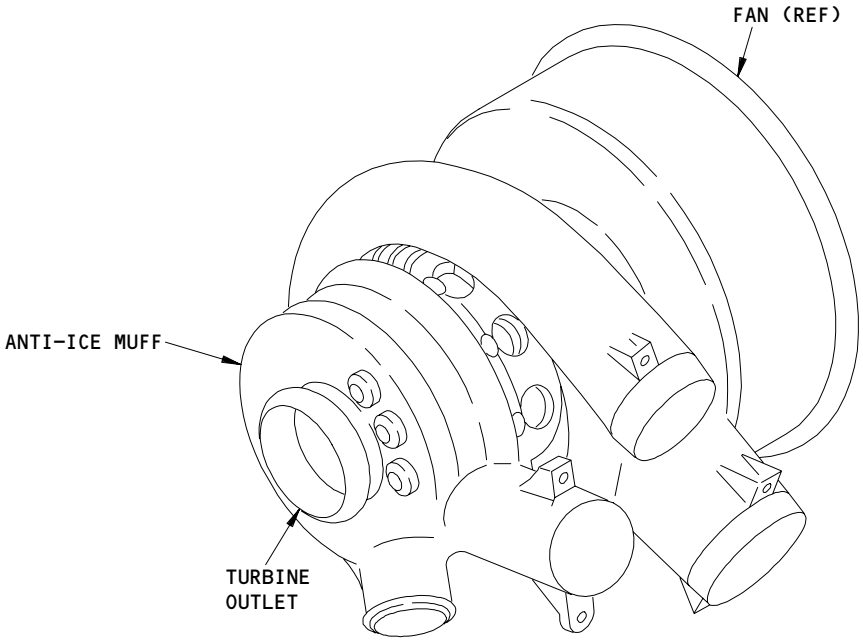


AIR CONDITIONING PACK



AIR CYCLE MACHINE (ACM)

(A)

INOP and PACK OFF Lights Illum in Auto, and Air Cycle Machine (ACM) Will Not Turn with APU On.
Figure 104B (Sheet 3)

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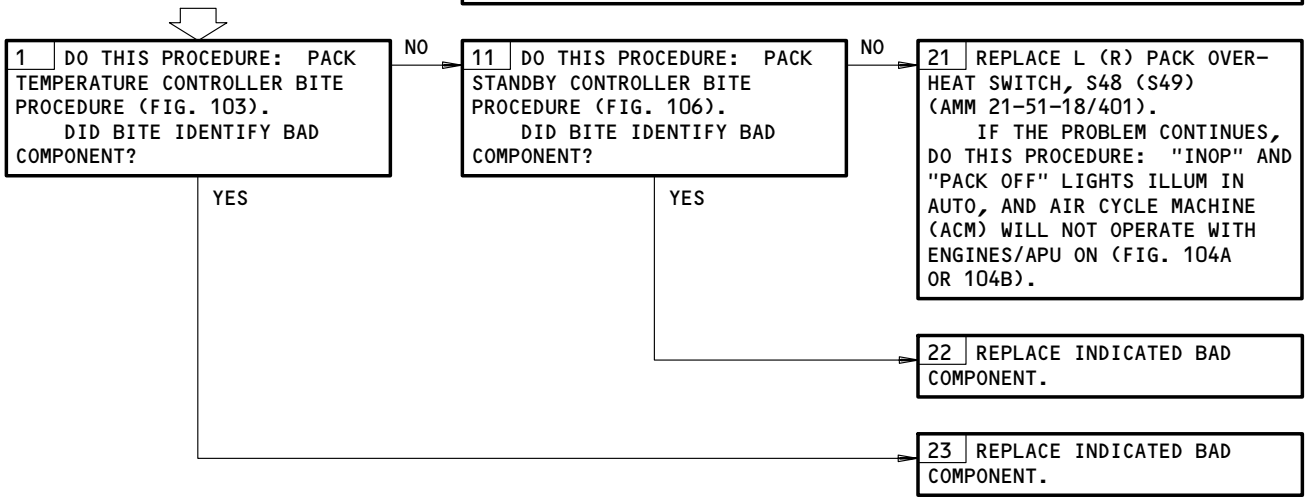
PACK "INOP" LGT ILLUM. EICAS MSG "L (R) PACK TEMP" DISPLAYED. DID NOT OPERATE IN STBY. COULD NOT RESET.

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11A26,11N10,11N11,11N12,11N13,11N15,11N16,
11N19,11N20,11N21,11N24,11N25; 1 11N17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



1 SAS 050,051,150-157,162-167,275-278,280

Pack INOP Lgt Illum. EICAS Msg L (R) PACK TEMP Displayed.
Did Not Operate in STBY. Could Not Reset.
Figure 105

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PACK "INOP" AND "PACK OFF" LGTS ILLUM. EICAS MSG "L (R) PACK OFF" DISPLAYED. COULD NOT RESET.

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11A26,11N10,11N11,11N12,11N15,11N16,11N19,
11N20,11N21,11N24,11N25; 1 11N17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 DO THIS PROCEDURE: PACK TEMPERATURE CONTROLLER BITE PROCEDURE (FIG. 103).
DID BITE IDENTIFY BAD COMPONENT?

NO → 21 REPLACE COMPRESSOR OUTLET OVERHEAT SWITCH, S555 (S556) (AMM 21-51-19/201).

YES → 22 REPLACE INDICATED BAD COMPONENT.

1 SAS 050,051,150-157,162-167,275-278,280

Pack INOP and PACK OFF Lgts Illum. EICAS Msg L (R) PACK OFF Displayed.
Could Not Reset.
Figure 105A

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PACK "INOP" AND "PACK OFF" LGTS ILLUM. EICAS MSG "L (R) PACK OFF" DISPLAYED. LGTS EXTIN, THEN REILLUM WHEN RESET IN BOTH "AUTO" AND "STBY"

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11A26,11N10,11N11,11N12,11N15,11N16,11N19, 11N20,11N21,11N24,11N25; 1 11N17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 SAS 050, 051, 150-157, 162-167, 275-278, 280

Pack INOP and PACK OFF Lgts Illum. EICAS Msg L (R) PACK OFF Displayed.
Lgts Extin, Then Reillum When RESET in Both AUTO and STBY
Figure 105B

F37666
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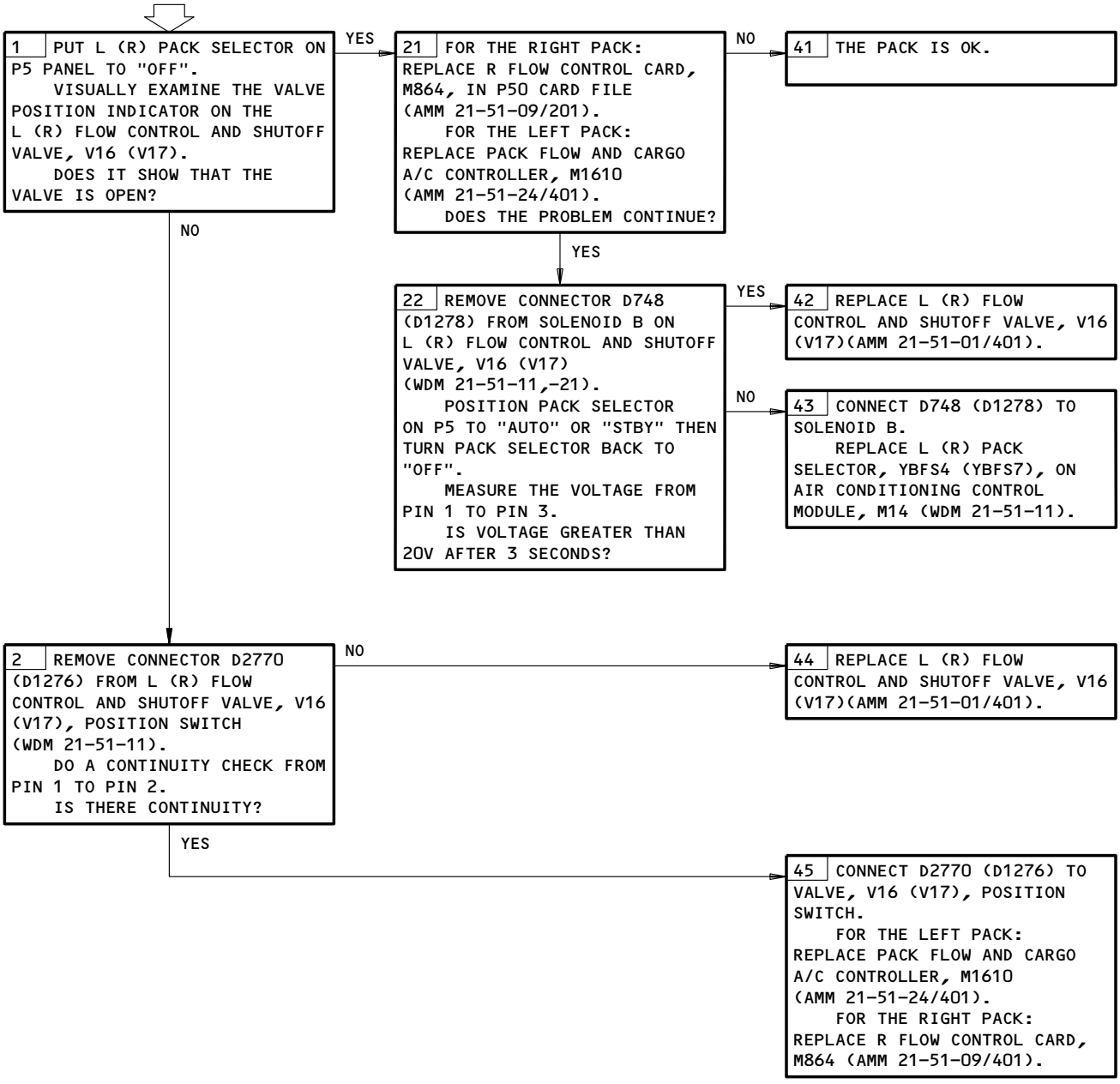
"PACK OFF" LIGHT EXTIN. & "PACK OFF" EICAS MSG NOT DISPLAYED WITH PACK SW IN "OFF"

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11A26

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
PNEUMATIC POWER (AMM 36-00-00/201)



PACK OFF Light Extin. & PACK OFF EICAS Msg Not Displayed with PACK Sw in OFF
Figure 105C

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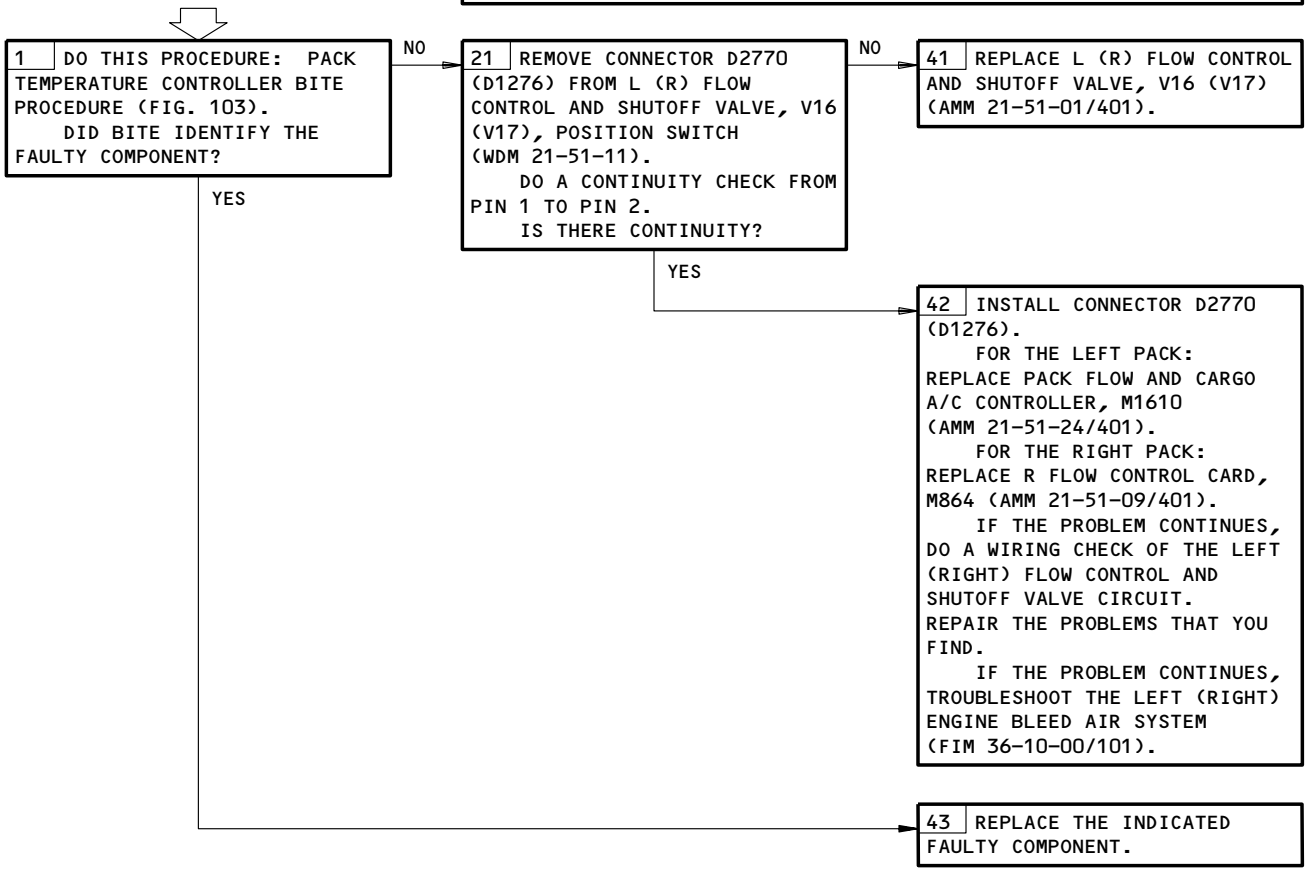
"PACK OFF" LIGHT ILLUM. EICAS MSG "L (R) PACK OFF" DISPLAYED. COULD NOT RESET.

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11A26,11N10,11N11,11N12,11N15,11N16,11N19,
11N20,11N21,11N24,11N25; 1 > 11N17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



1 > SAS 050,051,150-157,162-167,275-278,280

PACK OFF Light Illum. EICAS Msg L (R) PACK OFF Displayed. Could Not Reset.
Figure 105D (Sheet 1)

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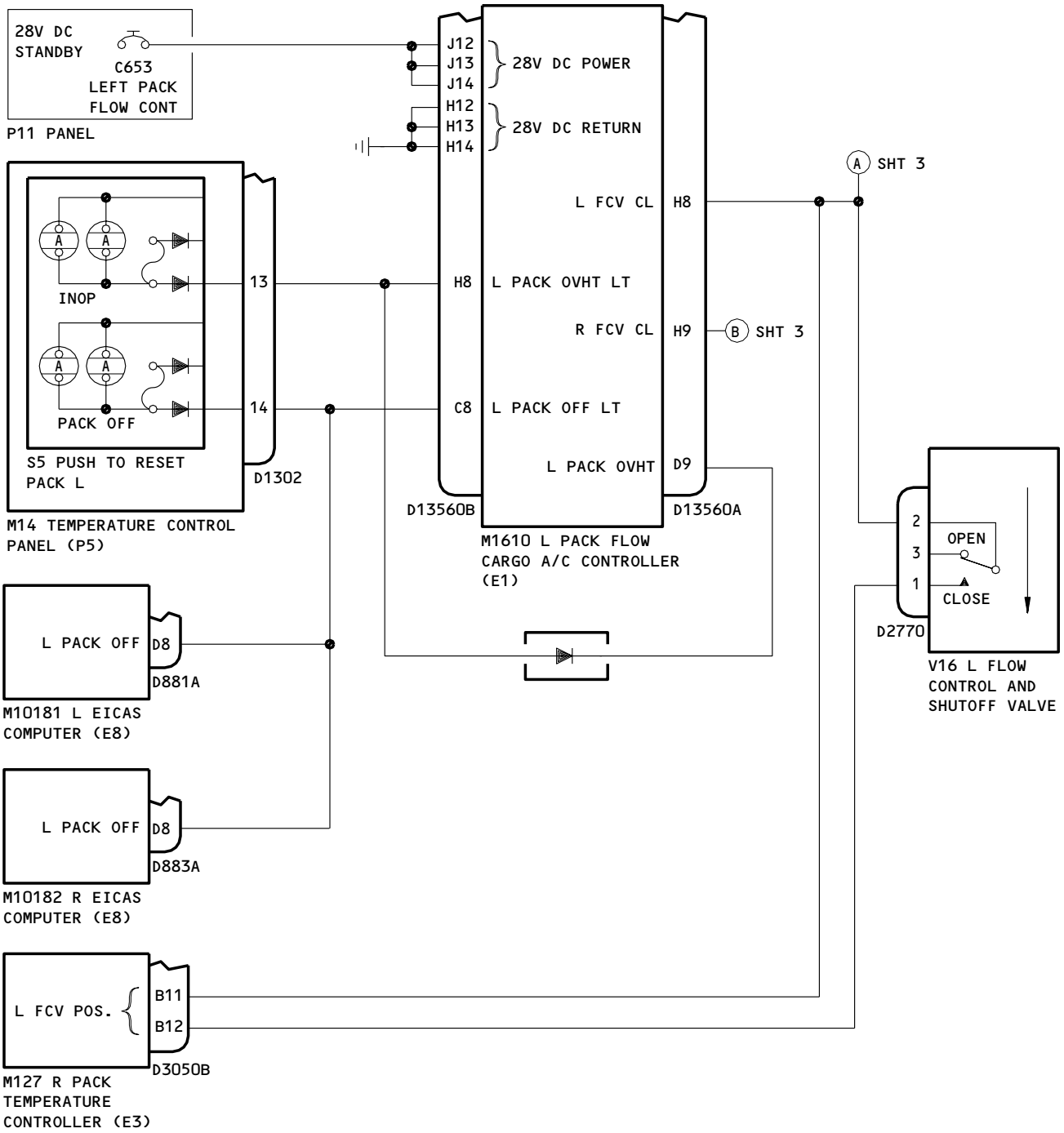

LEFT FLOW CONTROL AND SHUTOFF VALVE CIRCUIT

(WDM 21-51-11)

PACK OFF Light Illum. EICAS Msg L (R) PACK OFF Displayed. Could Not Reset.
Figure 105D (Sheet 2)

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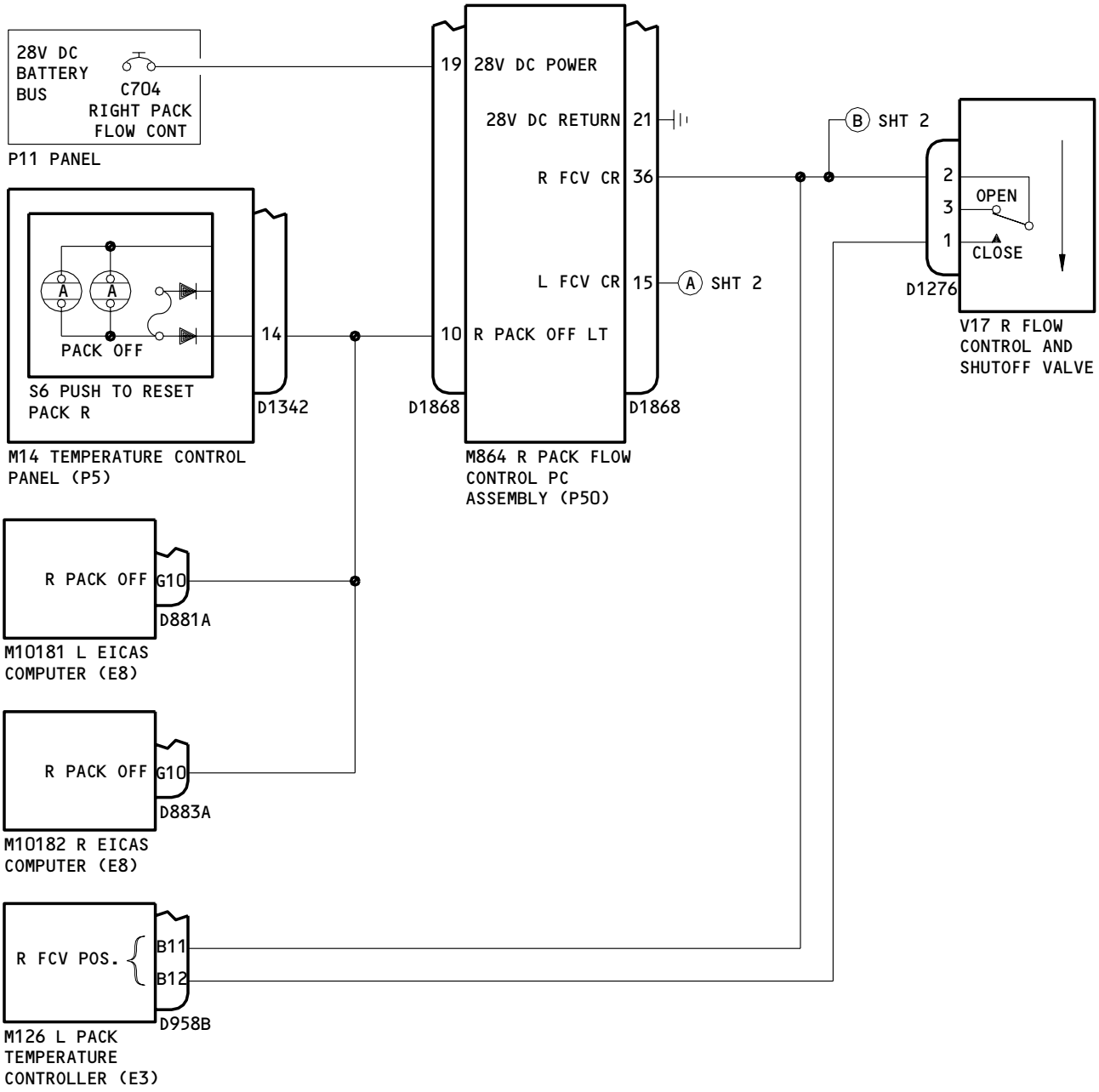

RIGHT FLOW CONTROL AND SHUTOFF VALVE CIRCUIT

(WDM 21-51-21)

PACK OFF Light Illum. EICAS Msg L (R) PACK OFF Displayed. Could Not Reset.
Figure 105D (Sheet 3)

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PACK STANDBY CONTROLLER BITE PROCEDURE

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13, 11A26, 11N10, 11N11, 11N15, 11N16, 11N19, 11N20, 11N24, 11N25

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
PNEUMATIC DUCT PRESSURE IS ZERO (AMM 36-00-00/201)

1 PUT LEFT AND RIGHT PACK CONTROL SELECTORS ON P5 PANEL, TO "STBY-N" POSITION.
PUSH ALL "GO" AND "NO GO" LAMPS ON PACK STANDBY CONTROLLER, M10389, AT E3.
DO ALL LAMPS COME ON?

NO → 21 REPLACE THE LAMPS THAT DO NOT COME ON.
PUSH ALL THE "GO" AND THE "NO GO" LAMPS ON THE PACK STANDBY CONTROLLER, M10389, ON THE E3 RACK.
DO ALL THE LAMPS COME ON?

NO → 40 REPLACE PACK STANDBY CONTROLLER, M10389 (AMM 21-51-14/401). 1

YES

YES

2 TURN TEST SWITCH TO POSITION 1. PUSH TEST SWITCH AND WAIT FOR STEADY LAMP INDICATION.
DOES "GO" LAMP COME ON FOR BOTH PACKS?

NO → 41 REPLACE PACK STANDBY CONTROLLER, M10389 (AMM 21-51-14/401). 1

YES

3 TURN TEST SWITCH TO POSITION 2. PUSH TEST SWITCH AND WAIT FOR STEADY LAMP INDICATION.
DOES "GO" LAMP COME ON FOR BOTH PACKS?

NO → 42 REPLACE PACK STANDBY CONTROLLER, M10389 (AMM 21-51-14/401). 1

YES

4 TURN TEST SWITCH TO POSITION 3. PUSH TEST SWITCH AND WAIT FOR STEADY LAMP INDICATION.
DOES THE "GO" LAMP COME ON FOR BOTH PACKS?

NO → 43 REPLACE PACK STANDBY CONTROLLER, M10389 (AMM 21-51-14/401). 1

YES

SEE SHEET 2
(BLOCK 5)

1 DO BLOCK 1 ACTION.

Pack Standby Controller BITE Procedure (Ground)
Figure 106 (Sheet 1)

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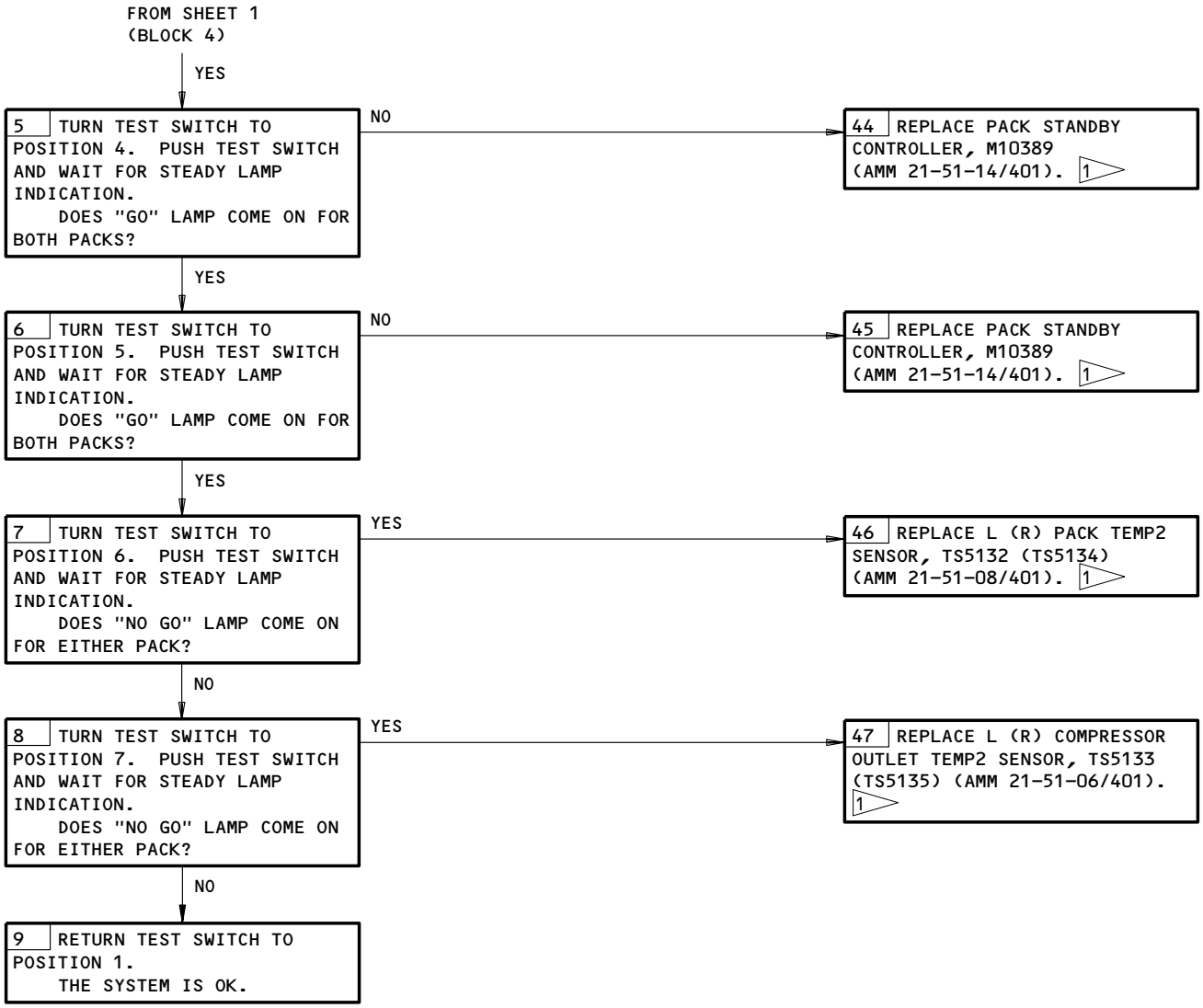

Pack Standby Controller BITE Procedure (Ground)
Figure 106 (Sheet 2)

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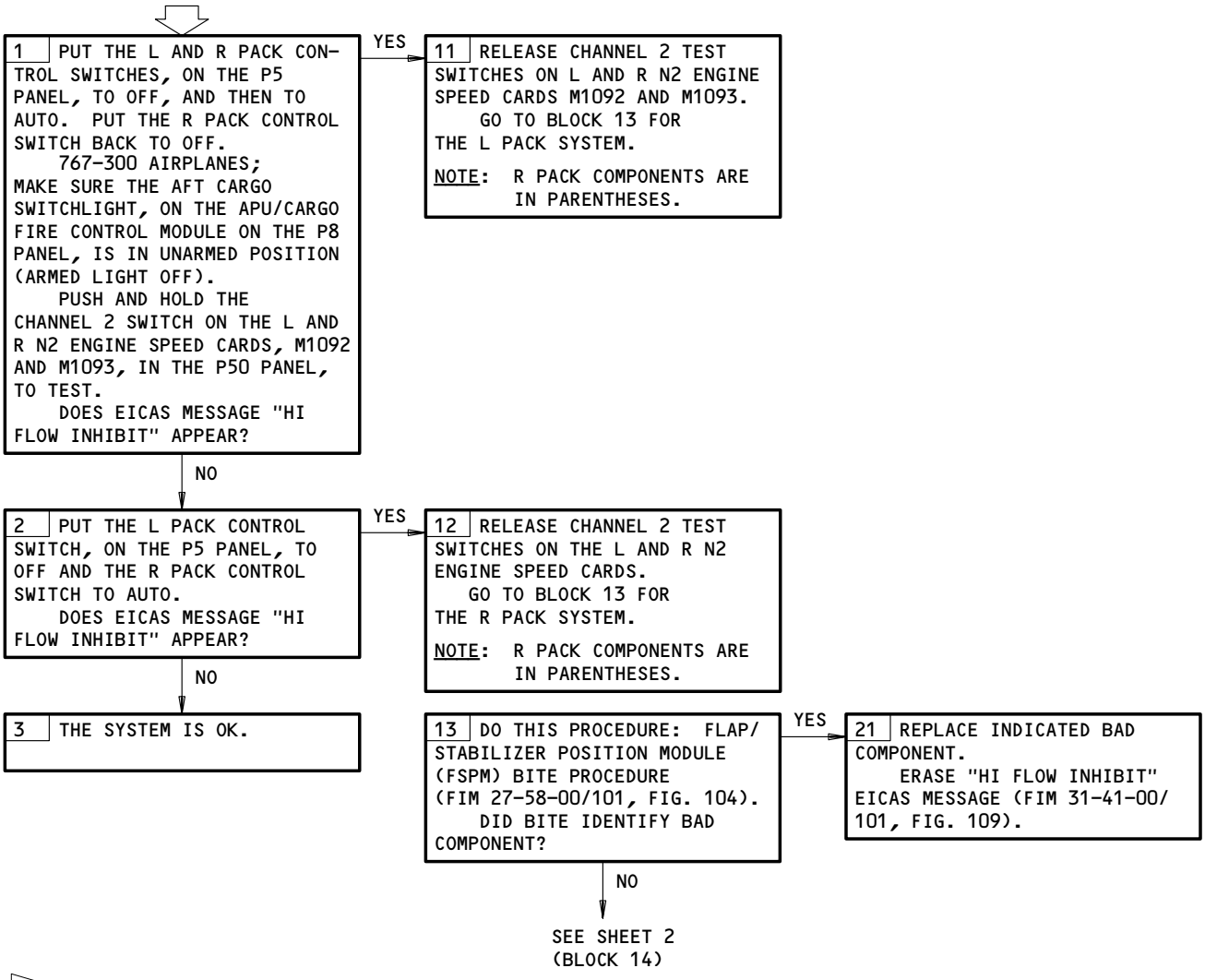
PREREQUISITES

MAKE SURE THESE SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13,11A26,11D15,11D16,11D23,11D24,11J26,
11N10,11N11,11N15,11N16,11N19,11N20,11N24,
11N25,11S10,11S19; 1 11N17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
FLAPS/SLATS RETRACTED (AMM 27-51-00/201)
SIMULATE FLIGHT MODE (AMM 32-09-02/201)
WING THERMAL ANTI-ICE SWITCH OFF (P5 PANEL)
BOTH RECIRC FAN SWITCHES OFF (P5 PANEL)

EICAS MESSAGE "HI FLOW INHIBIT" DISPLAYED.



1 SAS 050,051,150-157,162-167,275-278,280

EICAS Message HI FLOW INHIBIT Displayed.
Figure 107 (Sheet 1)

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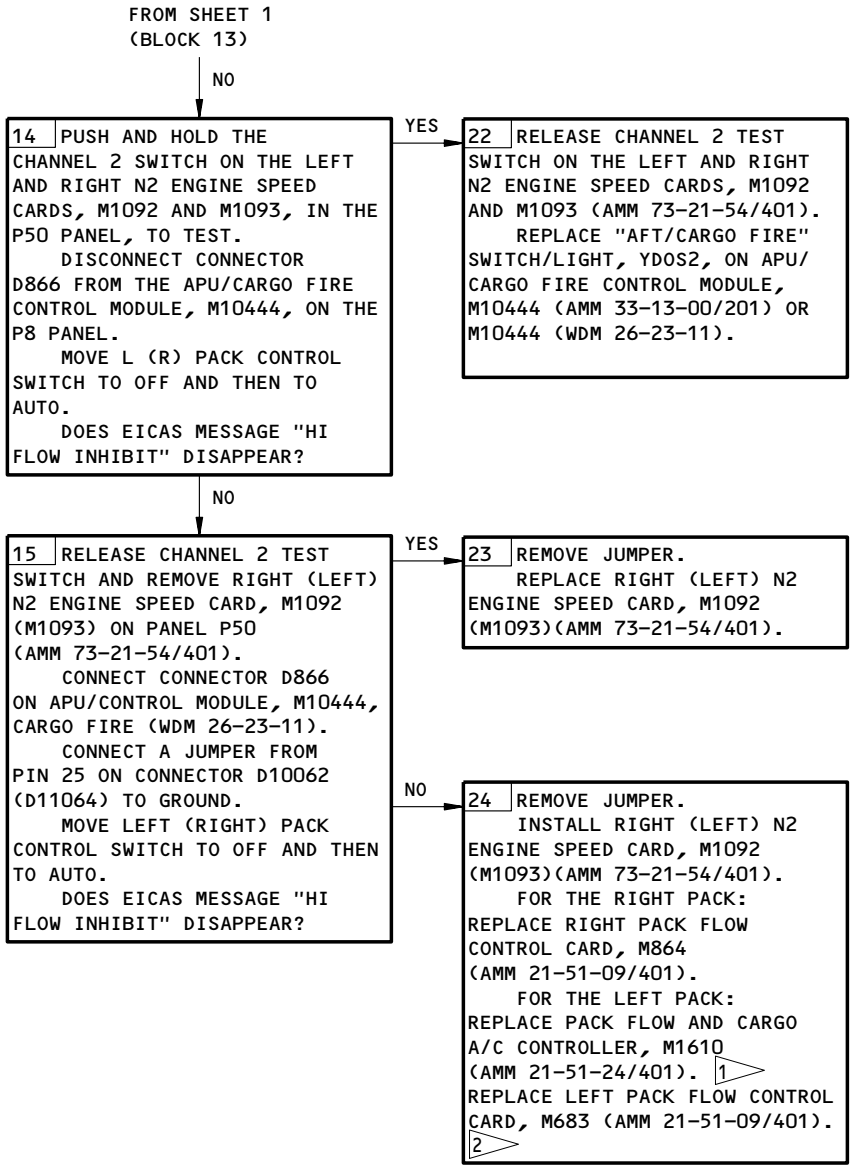

1 AIRPLANES WITH FORWARD CARGO AIR CONDITIONING
2 AIRPLANES WITHOUT FORWARD CARGO AIR CONDITIONING

EICAS Message HI FLOW INHIBIT Displayed.
Figure 107 (Sheet 2)

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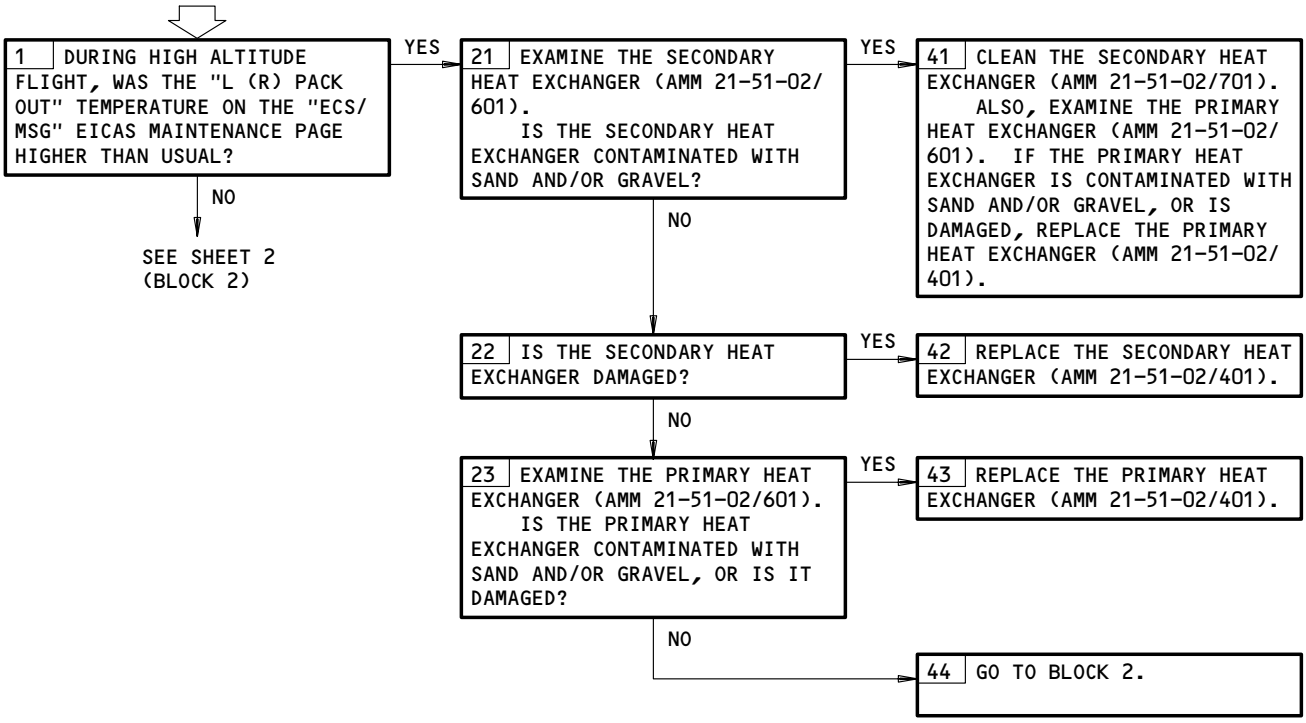
CABIN TEMPERATURE TOO WARM DURING HIGH ALTITUDE FLIGHT

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE OPEN AND ATTACH DO-NOT-CLOSE TAGS:
11A13,11A26,11N10,11N11,11N15,11N16,11N19,11N20,
11N24,11N25; 1> 11N17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
PNEUMATIC POWER IS OFF (AMM 36-00-00/201)
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



1> SAS 050,051,150-157,162-167,275-278,280

Cabin Temperature Too Warm During High Altitude Flight
Figure 108 (Sheet 1)

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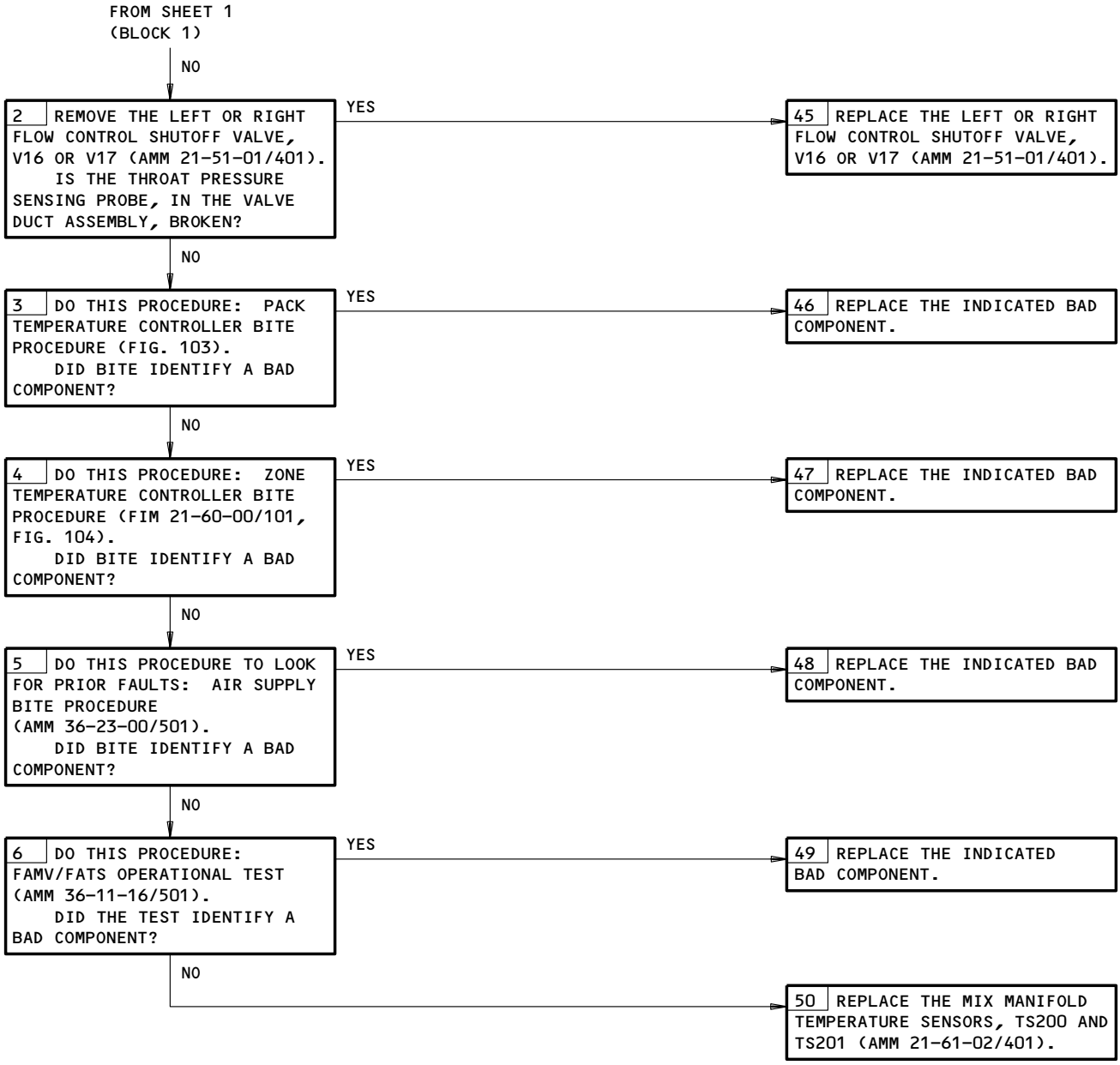

Cabin Temperature Too Warm During High Altitude Flight
Figure 108 (Sheet 2)

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COOLING PACK TEMPERATURE INDICATION

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
BULB - COMPRESSOR OUTLET TEMPERATURE	2	2	193NL,194LR	21-52-01
L PACK, TS292				
R PACK, TS293				
BULB - PACK OUTLET TEMPERATURE	2	2	193FL,194GR	21-52-06
L PACK, TS39				
R PACK, TS40				
BULB - PRIMARY HEAT EXCHANGER INLET (PACK INLET) TEMPERATURE	2	2	193NL,194LR	21-52-08
L PACK, TS433				
R PACK, TS432				
BULB - PRIMARY HEAT EXCHANGER OUTLET (COMPRESSOR INLET) TEMPERATURE	2	2	193NL,194LR	21-52-02
L PACK, TS290				
R PACK, TS291				
BULB - SECONDARY HEAT EXCHANGER OUTLET	2	2	193NL,194LR	21-52-05
L PACK, TS431				
R PACK, TS430				
BULB - TURBINE INLET TEMPERATURE	2	2	193NL,194LR	21-52-07
L PACK, TS294				
R PACK, TS295				
CIRCUIT BREAKER -	1		FLT COMPT, P11	
L PACK FLOW CONT, C653		1	11A13	*
LEFT PACK AUTO CONT, C702		1	11N11	*
LEFT PACK AUTO PWR, C673		1	11N10	*
LEFT PACK STANDBY CONT, C4037		1	11N25	*
LEFT PACK STANDBY PWR, C4036		1	11N24	*
PACK FLOW IND, C709 1		1	11N17	*
R PACK FLOW CONT, C704		1	11A26	*
RIGHT PACK AUTO CONT, C703		1	11N20	*
RIGHT PACK AUTO PWR, C674		1	11N19	*
RIGHT PACK STANDBY CONT, C4038		1	11N16	*
RIGHT PACK STANDBY PWR, C4039		1	11N15	*
COMPUTER - (FIM 31-41-00/101)				
EICAS L, M10181				
EICAS R, M10182				
PROCESSOR - FLOW SENSOR SIGNAL, M916 1	1	1	119AL, MAIN EQUIP CTR, E3 RACK	21-52-04
SENSOR - PACK FLOW	2	2	193NL,194LR	21-52-03
L PACK, TS285 1				
R PACK, TS286 1				

* SEE THE WDM EQUIPMENT LIST

1 SAS 050,051,150,157,162-167,275-278,280

Cooling Pack Temperature Indication - Component Index
Figure 101

F37736
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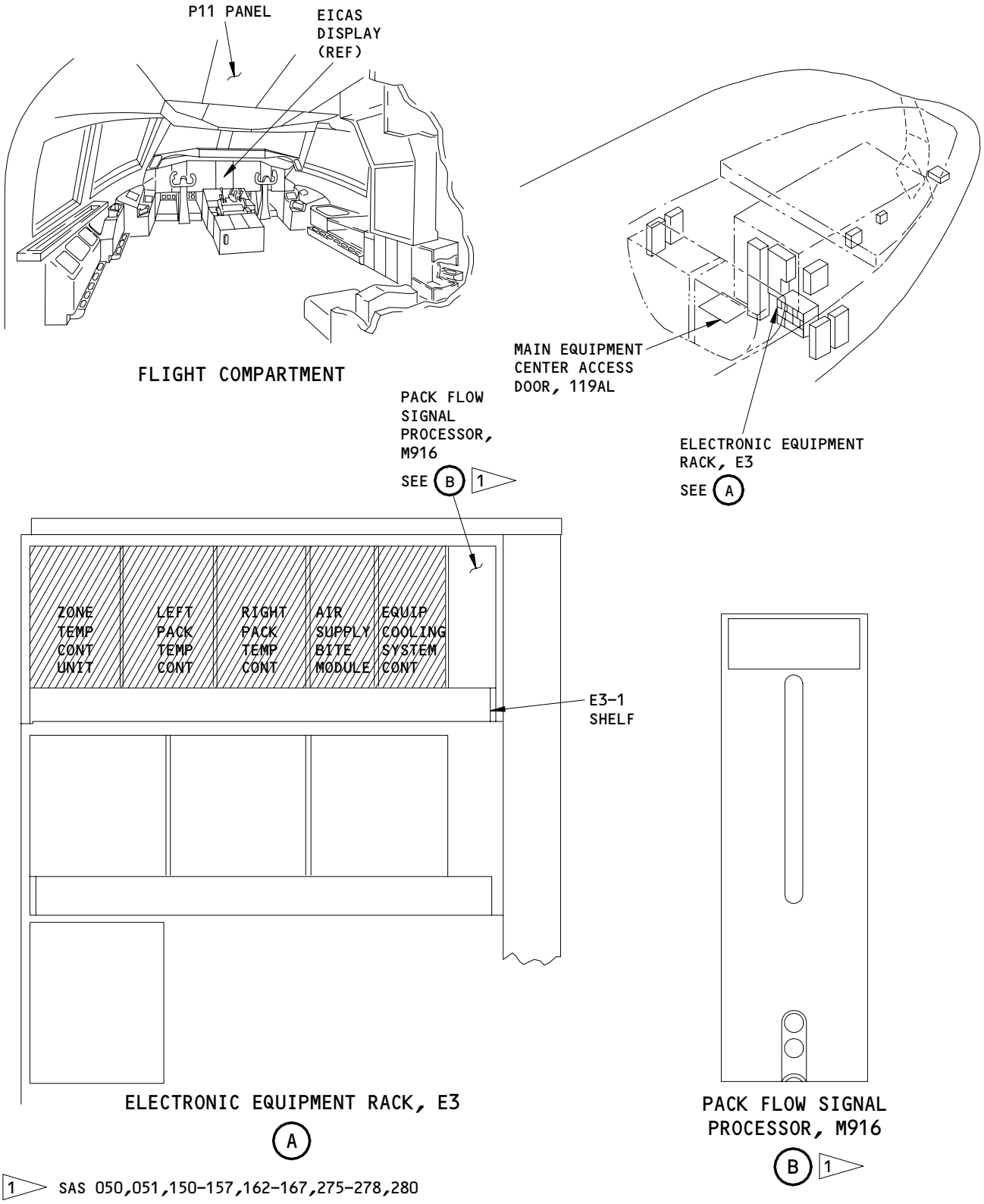

Cooling Pack Temperature Indication - Component Location
Figure 102 (Sheet 1)

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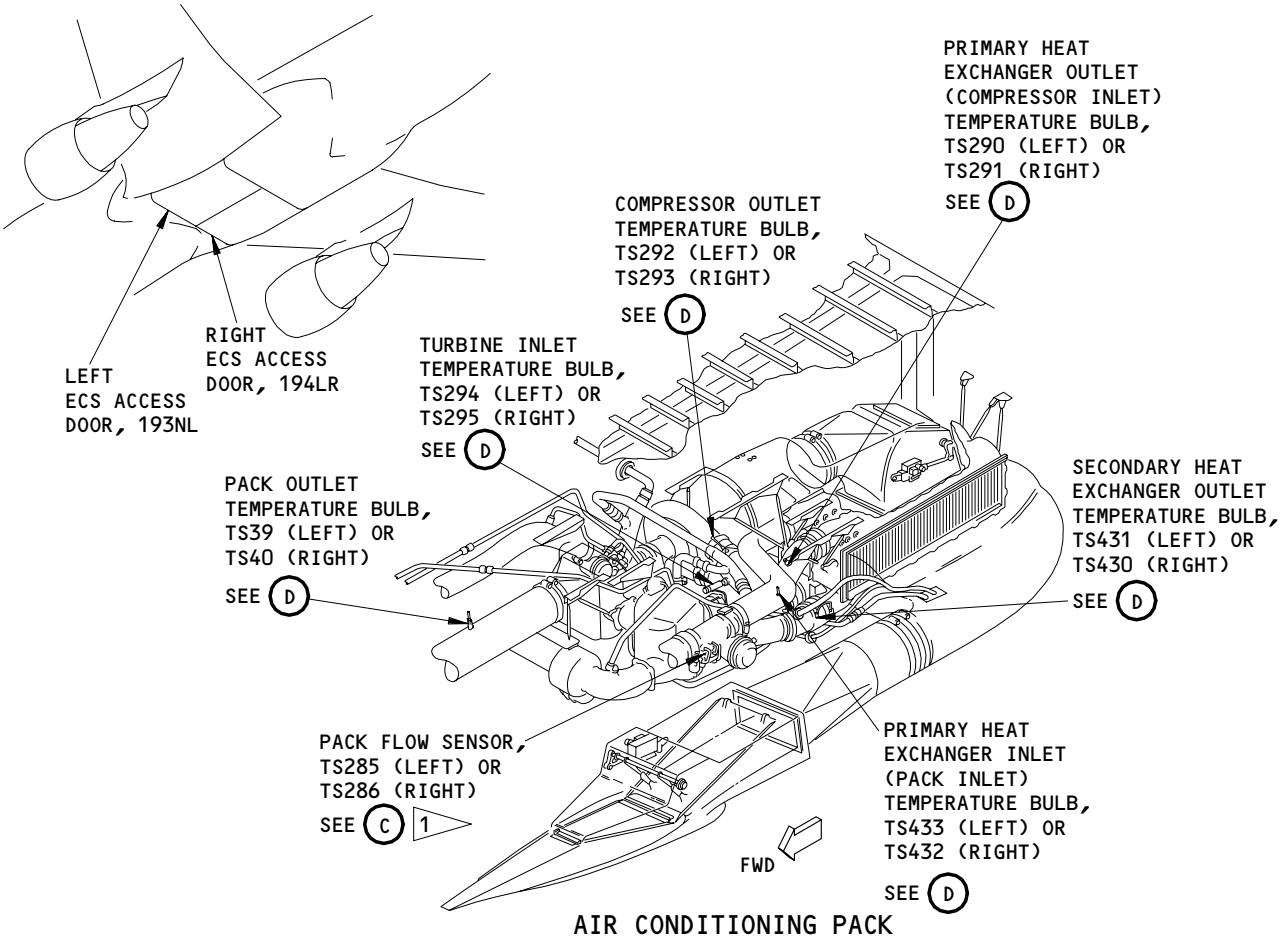
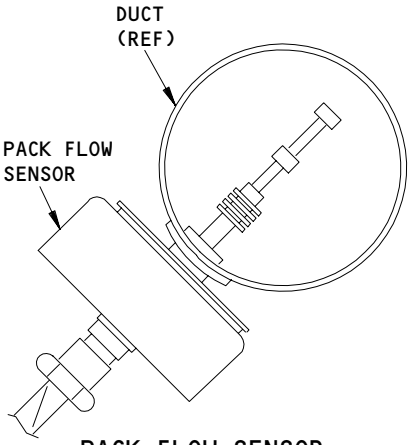
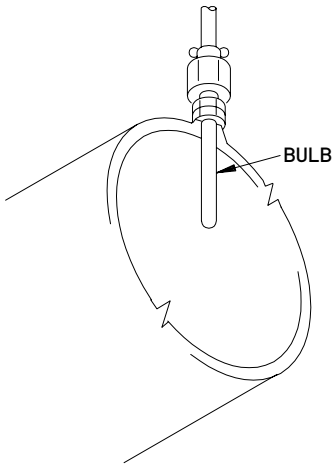


AIR CONDITIONING PACK
(LEFT PACK SHOWN, RIGHT PACK EQUIVALENT)



PACK FLOW SENSOR,
TS285 (LEFT) OR TS286 (RIGHT)

C 1



TEMPERATURE BULB
(EXAMPLE)

D

1 SAS 050,051,150-157,
162-167,275-278,280

Cooling Pack Temperature Indication - Component Location
Figure 102 (Sheet 2)

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RAM AIR SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ACTUATOR – RAM AIR EXHAUST DOOR	1	2	193NL, 194LR	21-53-04
L DOOR, M320				
R DOOR, M321				
ACTUATOR – RAM AIR INLET DOOR	1	2	193NL, 193FL, 194GR	21-53-03
L DOOR, M322				
R DOOR, M323				
CARD – (FIM 21-51-00/101)				
FLOW CONTROL L PACK, M863				
FLOW CONTROL R PACK, M864				
CARD – TEMPERATURE CONTROL	3	2	119AL, MAIN EQUIP CTR, P50	21-53-06
L PACK, M10403				
R PACK, M10404				
CIRCUIT BREAKER –			FLT COMPT, P11	
L PACK AUTO CONT, C702			11N11	*
L PACK AUTO PWR, C673			11N10	*
L PACK STANDBY CONT, C4037			11N25	*
L PACK STANDBY PWR, C4036			11N24	*
R PACK AUTO CONT, C703			11N20	*
R PACK AUTO PWR, C674			11N19	*
R PACK STANDBY CONT, C4039			11N16	*
R PACK STANDBY PWR, C4038			11N15	*
COMPUTER – (FIM 31-41-00/101)				
EICAS L, M10181				
EICAS R, M10182				
CONTROLLER – (FIM 21-51-00/101)				
PACK TEMPERATURE L, M126				
PACK TEMPERATURE R, M127				
DOOR – RAM AIR EXHAUST	2	2	193NL, 194LR	21-53-02
DOOR – RAM AIR INLET	2	2		21-53-01
NOZZLE – WATER SPRAY	1	2	193NL, 194LR	21-53-05
PANEL – (FIM 21-51-00/101)				
AIR CONDITIONING CONTROL, M14				

* SEE THE WDM EQUIPMENT LIST

Ram Air System – Component Index
Figure 101 (Sheet 1)

38057
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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
RELAY - (FIM 31-01-33/101) RIGHT PACK AUTO/MANUAL 1, K49 RIGHT PACK AUTO/MANUAL 2, K50 RIGHT PACK AUTO/MANUAL 3, K10316 RIGHT PACK EXIT DOOR CLOSE MANUAL, K52 RIGHT PACK EXIT DOOR OPEN MANUAL, K51 RIGHT PACK INLET DOOR CLOSE MANUAL, K54 RIGHT PACK INLET DOOR OPEN MANUAL, K53 RIGHT PACK TEMPERATURE CONTROL VALVE CLOSE MANUAL, K56 RIGHT PACK TEMPERATURE CONTROL VALVE OPEN MANUAL, K55 RELAY - (FIM 31-01-36/101) AIR/GND SYS NO. 1, K141 LEFT PACK AUTO/MANUAL 1, K57 LEFT PACK AUTO/MANUAL 2, K58 LEFT PACK AUTO/MANUAL 3, K10315 LEFT PACK EXIT DOOR CLOSE MANUAL, K60 LEFT PACK EXIT DOOR OPEN MANUAL, K59 LEFT PACK INLET DOOR CLOSE MANUAL, K62 LEFT PACK INLET DOOR OPEN MANUAL, K61 LEFT PACK TEMPERATURE CONTROL VALVE CLOSE MANUAL, K64 LEFT PACK TEMPERATURE CONTROL VALVE OPEN MANUAL, K63 RELAY - (FIM 31-01-37/101) AIR/GND SYS NO. 2, K210 VALVE - (FIM 21-51-00/101) TEMPERATURE CONTROL L PACK, V18 TEMPERATURE CONTROL R PACK, V19				

Ram Air System - Component Index
Figure 101 (Sheet 2)

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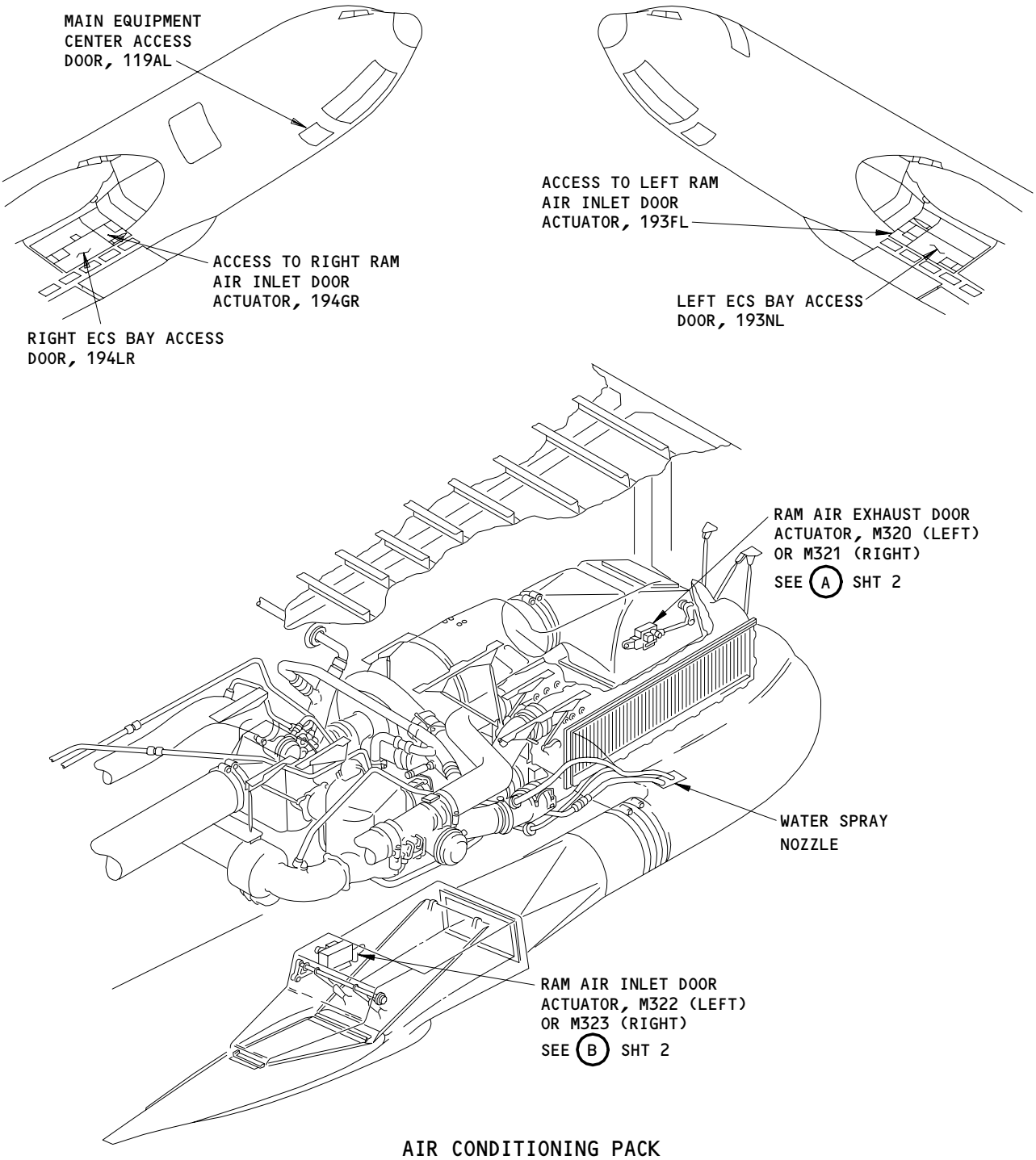

AIR CONDITIONING PACK
(LEFT PACK SHOWN, RIGHT PACK EQUIVALENT)

Ram Air System – Component Location
Figure 102 (Sheet 1)

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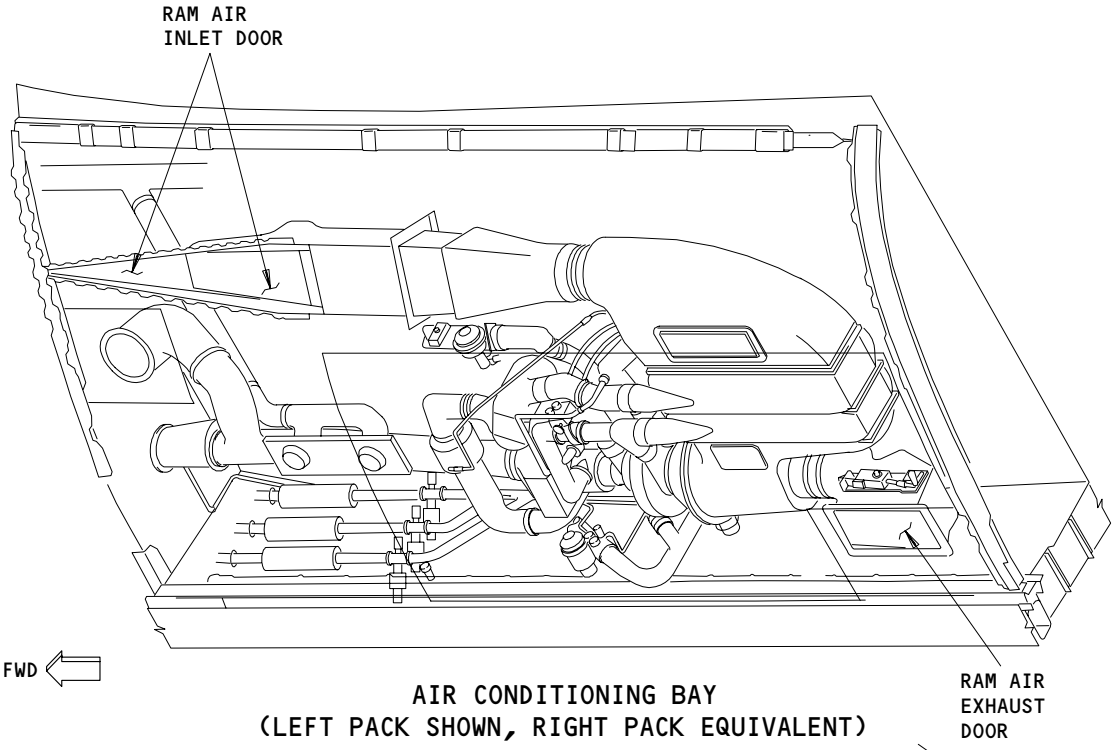
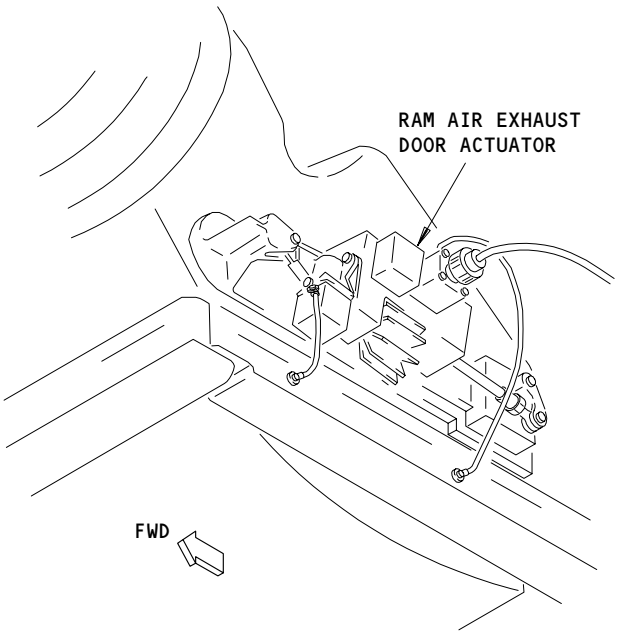
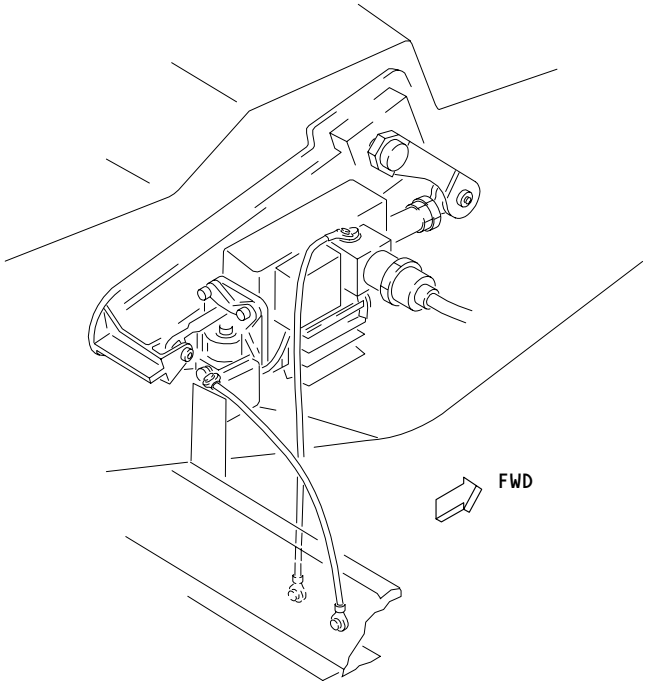


AIR CONDITIONING BAY
(LEFT PACK SHOWN, RIGHT PACK EQUIVALENT)



RAM AIR EXHAUST DOOR ACTUATOR,
M320 (LEFT) OR M321 (RIGHT)

A



RAM AIR INLET DOOR ACTUATOR,
M322 (LEFT) OR M323 (RIGHT)

B

Ram Air System - Component Location (Details from Sht 1)
Figure 102 (Sheet 2)

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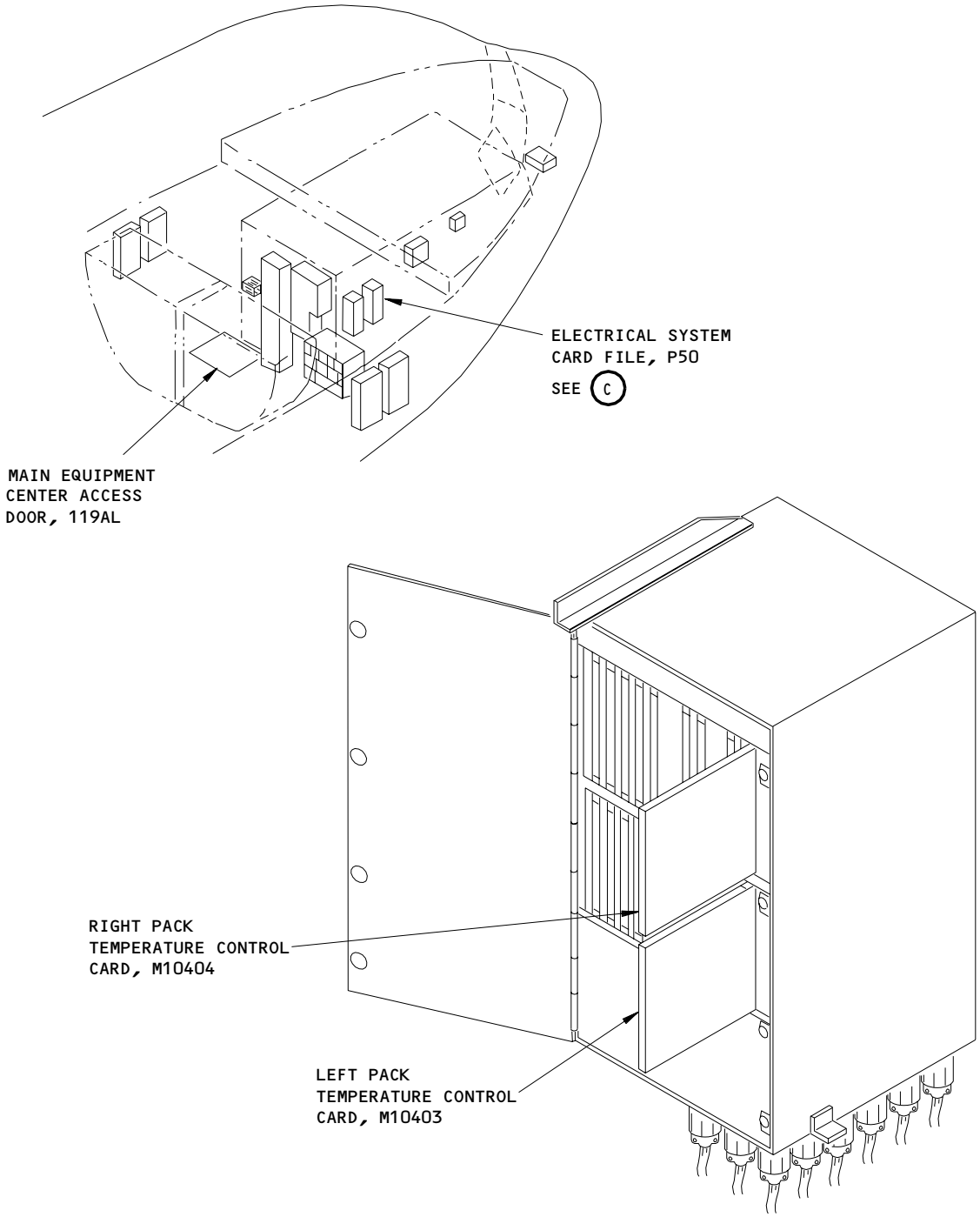

ELECTRICAL SYSTEM CARD FILE, P50

(C)

Ram Air System - Component Location
Figure 102 (Sheet 3)

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EQUIPMENT COOLING

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CARD - (FIM 73-21-00/101)				
L N2 ENGINE SPEED, M1093				
R N2 ENGINE SPEED, M1092				
CARD - EQUIPMENT COOLING INDICATION, M867	7	1	119AL, MAIN EQUIP CTR, P50	21-26-05
CARD - FAN CONTROL C, M990	7	1	119AL, MAIN EQUIP CTR, P50	21-26-05
CARD - FAN CONTROL L, M861	7	1	119AL, MAIN EQUIP CTR, P50	21-26-05
CIRCUIT BREAKER -			FLT COMPT, P6	
EQUIP COOL GND WARN, C711		1	6D6	*
EQUIP COOL SUPPLY FAN 1, C331		1	6H18	*
FWD EXH EQUIP COOL FAN, C335		1	6H21	*
CIRCUIT BREAKER -			FLT COMPT, P11	
EQUIP COOL OVHT/SMOKE VALVE IND, C656		1	11P21	*
EQUIP COOL OVRD, C679		1	11C19	*
EQUIPMENT COOLING EXH FAN FWD, C687		1	11P22	*
EQUIPMENT COOLING OUTBD VALVES, C651		1	11P13	*
EQUIPMENT COOLING STANDBY, C688		1	11B8	*
EQUIPMENT COOLING SUPPLY FAN 1, C654		1	11P11	*
CLEANER - AIR	4	1	821, FWD CARGO COMPT	21-58-30
COMPUTER - (FIM 31-41-00/101)				
L EICAS, M10181				
R EICAS, M10182				
DETECTOR - EQUIPMENT COOLING LOW FLOW				
FLIGHT DECK, TS163	1	1	119AL, MAIN EQUIP CTR	21-58-17
FORWARD RACK, TS104	5	1	821, FWD CARGO COMPT	21-58-17
DETECTOR - EQUIPMENT COOLING SMOKE, TS164	1	1	821, FWD CARGO COMPT	21-58-19
DIODE - (FIM 31-01-36/101)				
R330,R331,R561				
DIODE - (FIM 31-01-37/101)				
R270,R271,R272,R273				
FAN - FORWARD RACK EXHAUST, B12	1	1	821, FWD CARGO COMPT	21-58-06
FAN - FORWARD RACK SUPPLY, B10	1	1	821, FWD CARGO COMPT	21-58-06
INDICATOR - E/E COOLING AIR FLOW MONITOR	8	1	FLT COMPT, P61	21-58-34
LIGHT - NO COOLING, YDAL5	8	1	FLT COMPT, P5, EQUIP COOL CONT PNL, M17	*
LIGHT - OVERHEAT, YDAL2	8	1	FLT COMPT, P5, EQUIP COOL CONT PNL, M17	*
LIGHT - SMOKE, YDAL3	8	1	FLT COMPT, P5, EQUIP COOL CONT PNL, M17	*
LIGHT - VALVE, YDAL4	8	1	FLT COMPT, P5, EQUIP COOL CONT PNL, M17	*
PANEL - (FIM 23-42-00/101)				
PILOTS' CALL, M51				
PANEL - (FIM 28-43-00/101)				
MISC TEST, M10398				
PANEL - (FIM 34-21-00/101)				
INERTIAL REFERENCE MODE, M59				
PANEL - EQUIP COOL CONT, M17	8	1	FLT COMPT, P5	*

* SEE THE WDM EQUIPMENT LIST

Equipment Cooling - Component Index
Figure 101 (Sheet 1)

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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
RELAY - (FIM 31-01-36/101) AIR/GROUND SYS NO. 1, K146 AIR/GROUND SYS NO. 1, K167 EQUIP COOL EICAS DISC, K761 EQUIP COOL OVERHEAT INDICATION, K699 EQUIP COOL OVERHEAT TIME DELAY, K700 EQUIP COOL PRESS DIFF TIME DELAY, K698 EQUIP COOL SMOKE CLEARANCE, K369,K1011 EQUIP COOL STANDBY, K629 EQUIP COOL SUPPLY FAN NO. 1, K343 EQUIP COOL VALVE T/D, K1206 EXHAUST FAN CONTROL, K1010 EXHAUST VALVE CLOSED INDICATION, K1008 INBOARD SUPPLY VALVE, K336 INBOARD SUPPLY VALVE INDICATION, K1006, K1007 OVERBOARD EXHAUST VALVE, K340 OVERBOARD EXHAUST VALVE INDICATION, K1005 SKIN TEMP SWITCH, K1068 SUPPLY AND EXHAUST FAN CONTROL, K1009 RELAY - (FIM 31-01-37/101) AIR/GROUND SYS NO. 1, K148 AIR/GROUND SYS NO. 2, K200, K206 EQUIP COOL FWD EXHAUST FAN, K345 EQUIP COOL TEST, K626				
SCREEN - CONICAL	1	2	821, FWD CARGO COMPT	21-58-22
SENSOR - (FIM 31-01-36/101) SUPPLY FAN 1 CURRENT, TS102				21-58-11
SENSOR - (FIM 31-01-37/101) EXHAUST FAN CURRENT, TS230				21-58-11
SWITCH - EQUIP COOLING DIFFERENTIAL PRESSURE, S613	1	1	821, FWD CARGO COMPT	21-58-29
SWITCH - EQUIP COOLING MODE SELECT, YDAS1	8	1	FLT COMPT, P5, EQUIP COOL CONT PNL, M17	*
SWITCH - EQUIP COOLING SUPPLY AIR OVERHEAT, S41	5	2	821, FWD CARGO COMPT	21-58-26
SWITCH - EQUIP COOLING TEST, YEIS8	8	1	FLT COMPT, P61, TEST PNL, M10398	*
SWITCH - EQUIPMENT COOLING SKIN TEMPERATURE, S456	6	1	821, FWD CARGO COMPT	21-58-21
VALVE - FAN CHECK	1	2	821, FWD CARGO COMPT	21-58-02
VALVE - INBOARD SUPPLY, V91	1	1	821, FWD CARGO COMPT	21-58-07
VALVE - MANIFOLD INTERCONNECT, V90	1	1	119AL, MAIN EQUIP CTR, RIGHT SIDE OUTBOARD OF NOSE WHEEL WELL COMPARTMENT	21-58-01
VALVE - OVERBOARD EXHAUST, V12	5	1	821, FWD CARGO COMPT	21-58-05
VALVE - OVERRIDE, V140	4	1	821, FWD CARGO COMPT	21-58-20
VALVE - SHUTOFF, V10	5	1	821, FWD CARGO COMPT	21-58-13

* SEE THE WDM EQUIPMENT LIST

Equipment Cooling - Component Index
Figure 101 (Sheet 2)

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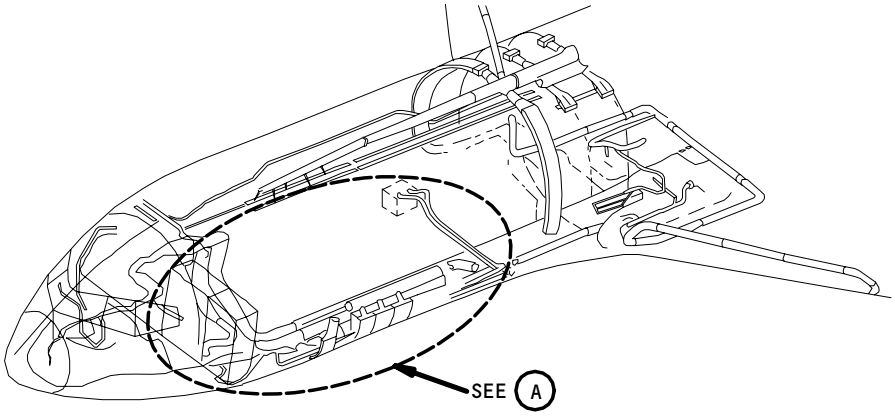

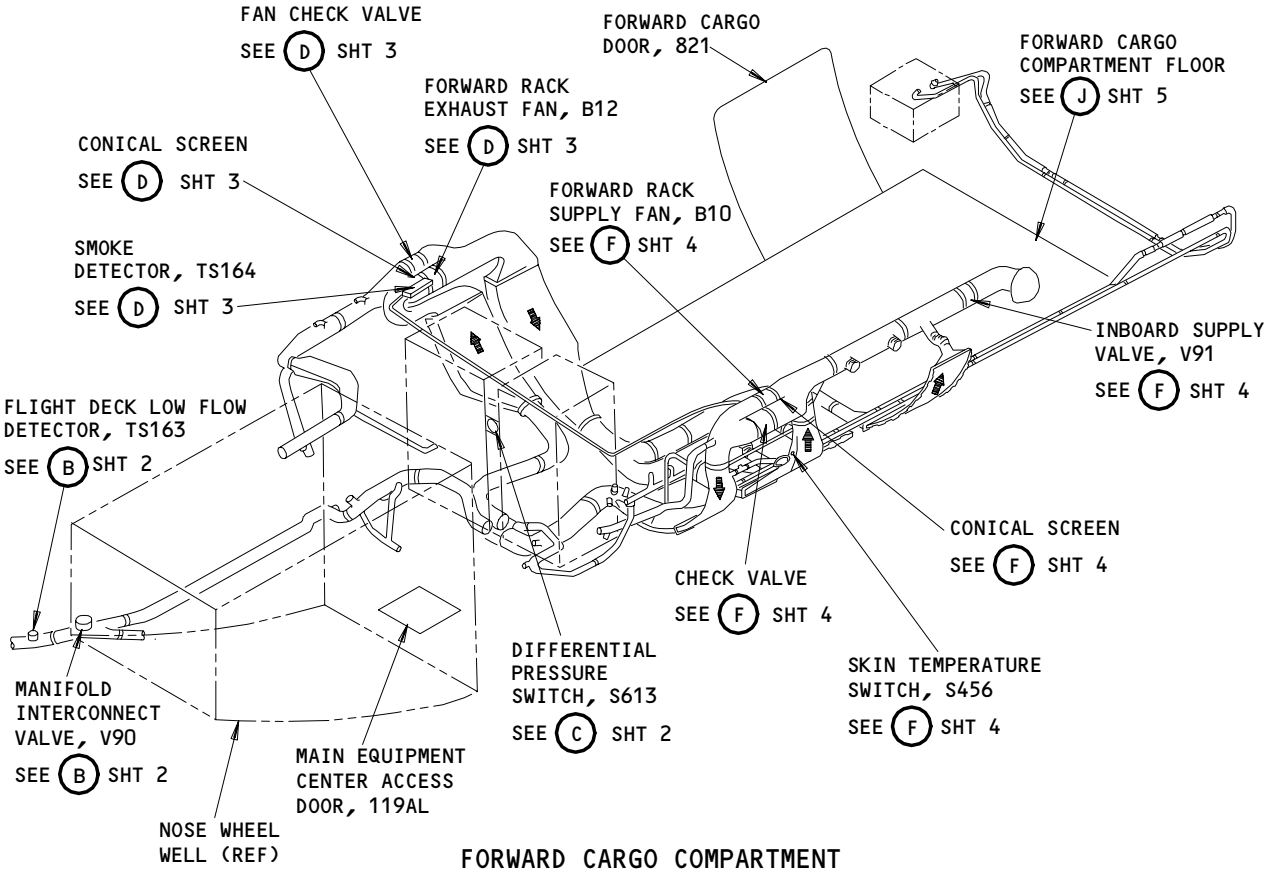

FORWARD CARGO COMPARTMENT
AND MAIN EQUIPMENT CENTER

A

Equipment Cooling – Component Location
Figure 102 (Sheet 1)

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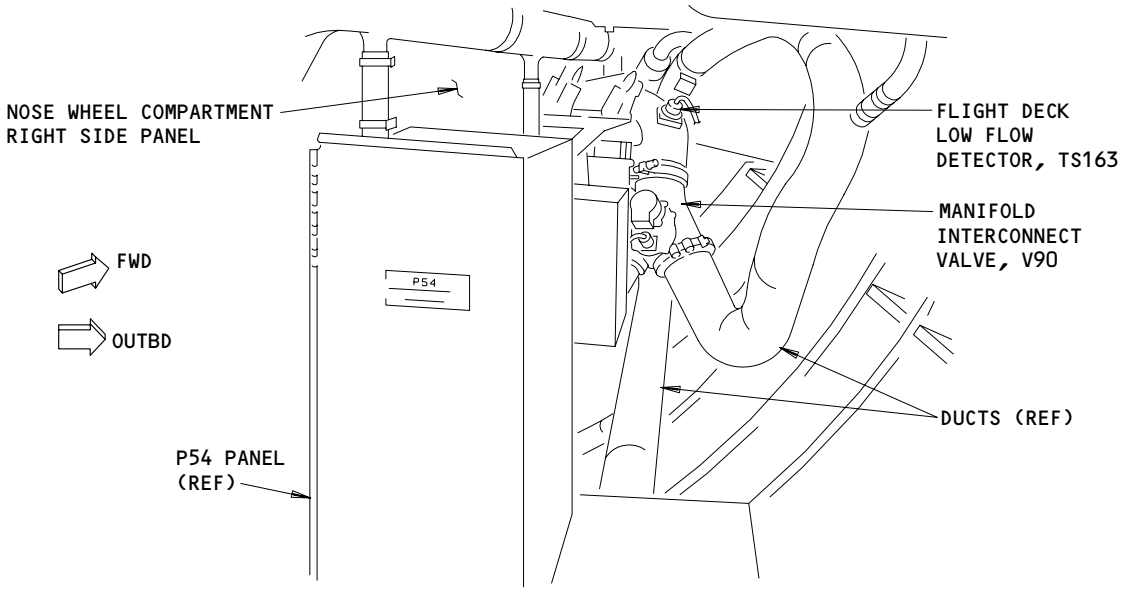
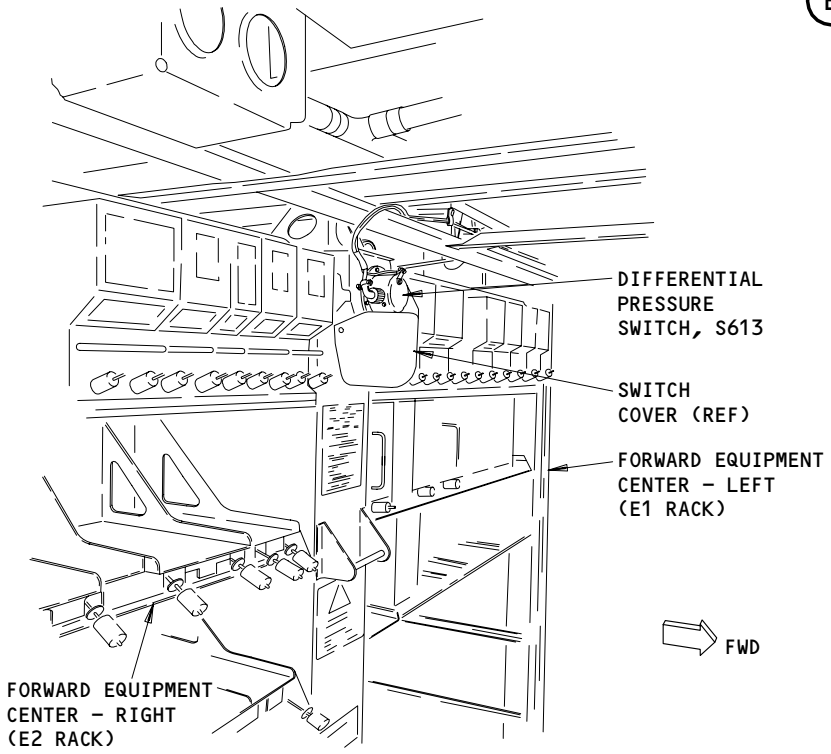


AREA OUTBOARD OF NOSE WHEEL WELL COMPARTMENT

(B)



MAIN EQUIPMENT CENTER

(C)

Equipment Cooling – Component Location (Details from Sht 1)
Figure 102 (Sheet 2)

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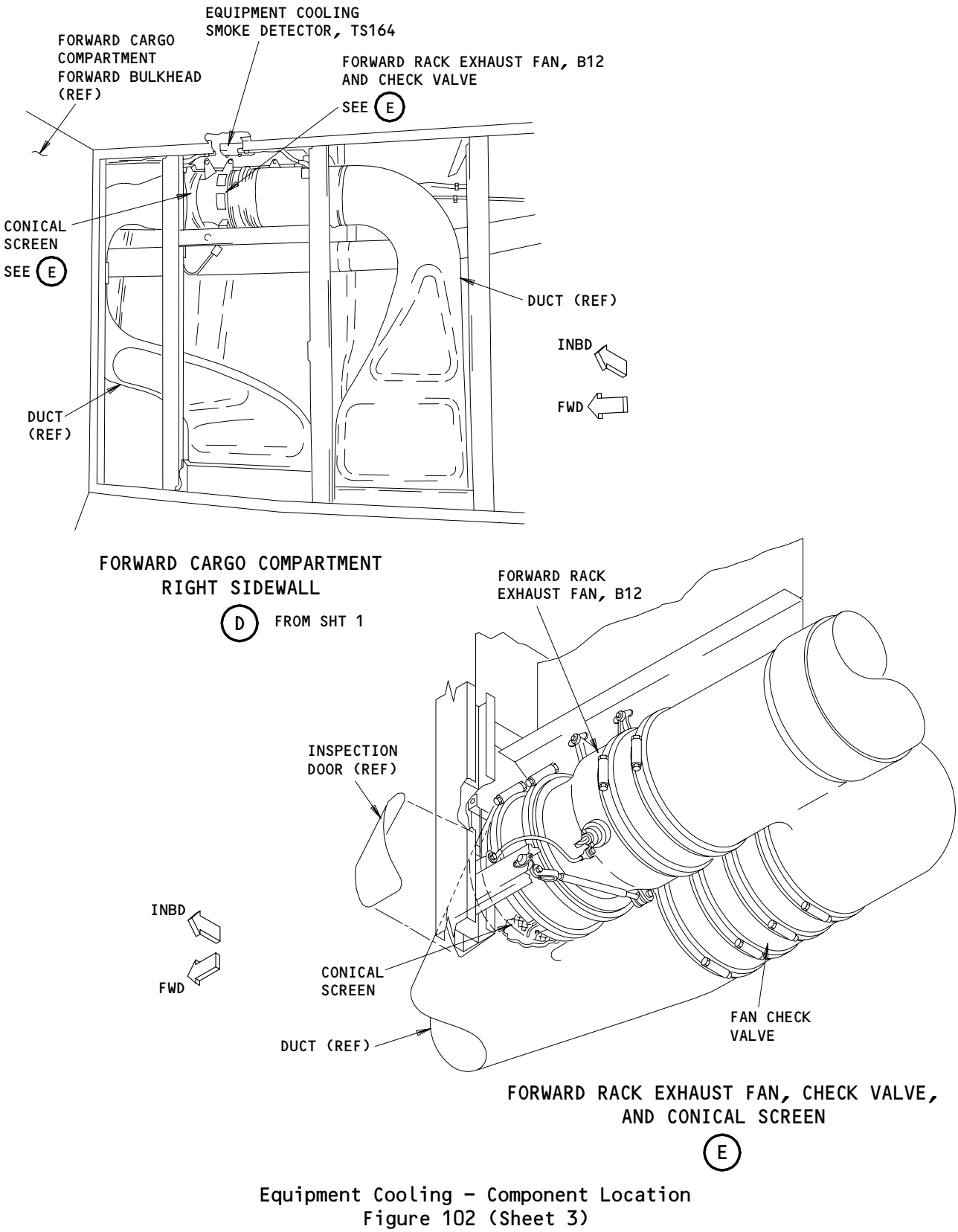

Equipment Cooling - Component Location
Figure 102 (Sheet 3)

234808
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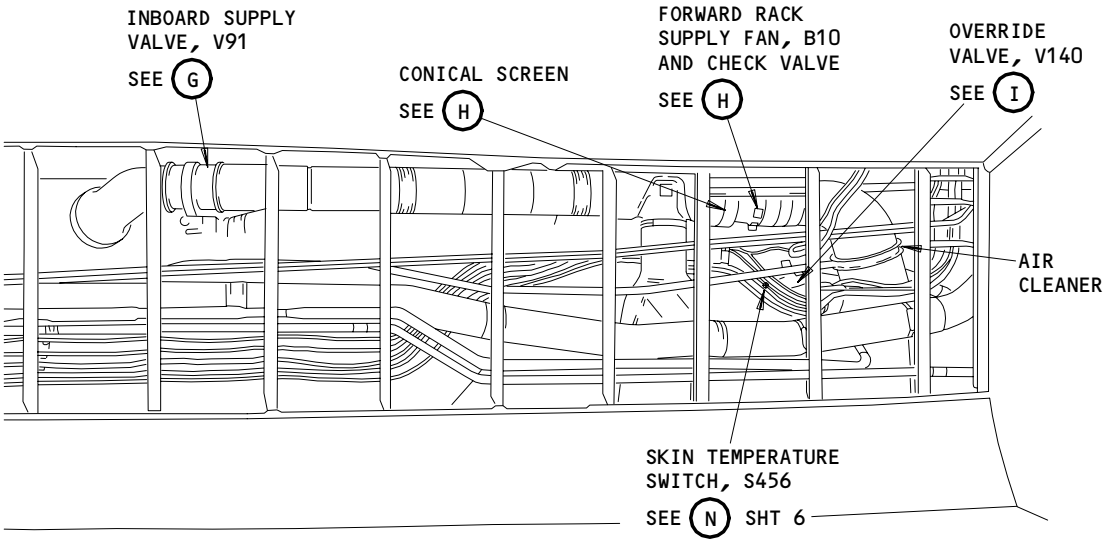
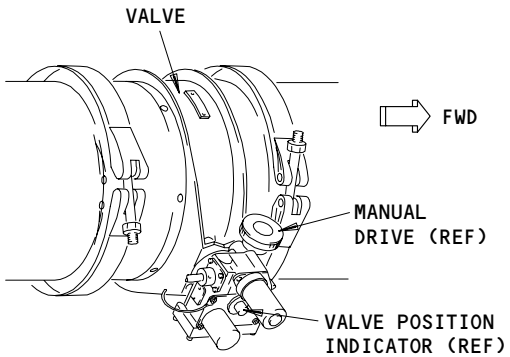


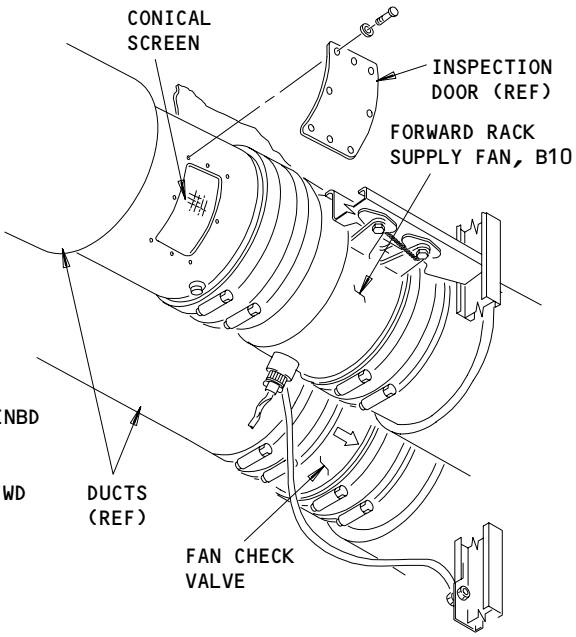
FORWARD CARGO COMPARTMENT LEFT SIDEWALL

F FROM SHT 1



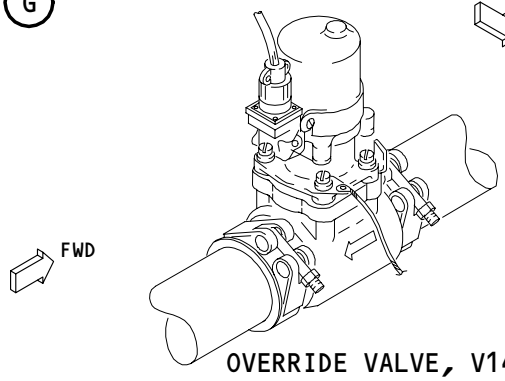
INBOARD SUPPLY VALVE, V91

G



FORWARD RACK SUPPLY FAN, CHECK VALVE, AND CONICAL SCREEN

H



OVERRIDE VALVE, V140

I

Equipment Cooling - Component Location
Figure 102 (Sheet 4)

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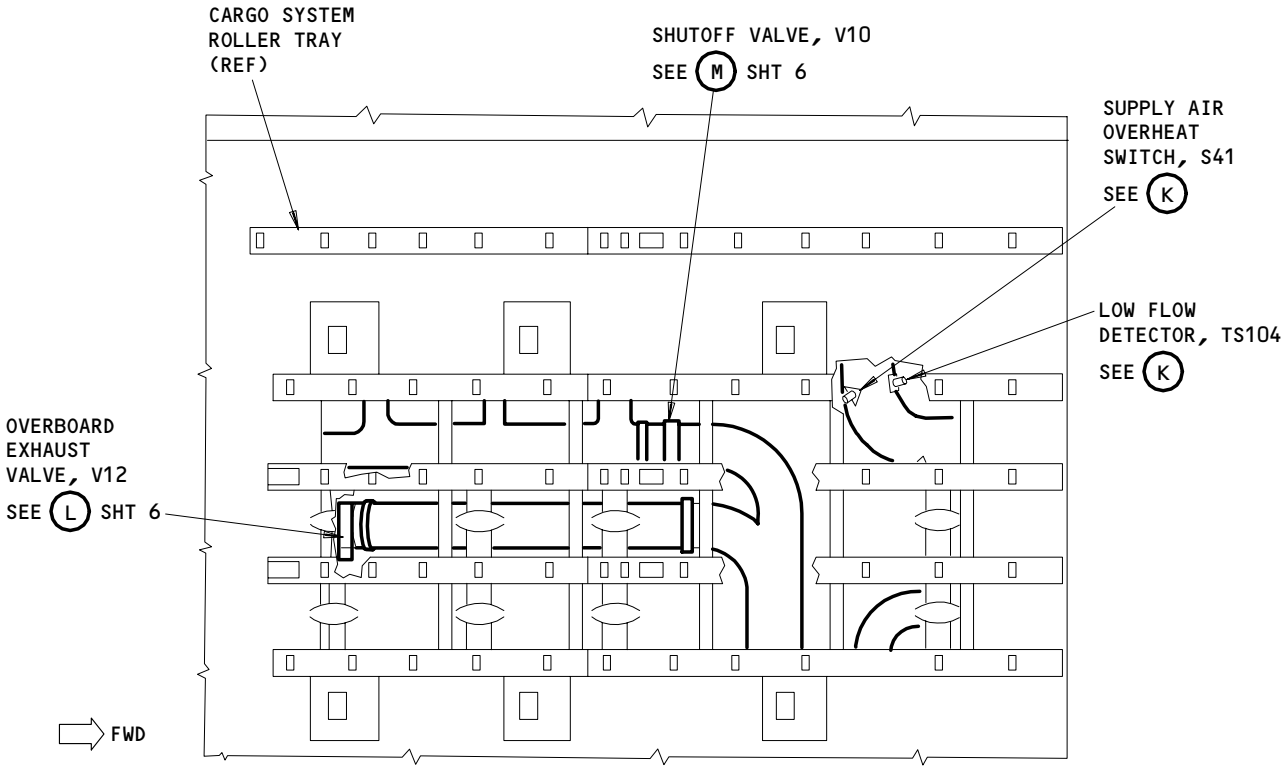
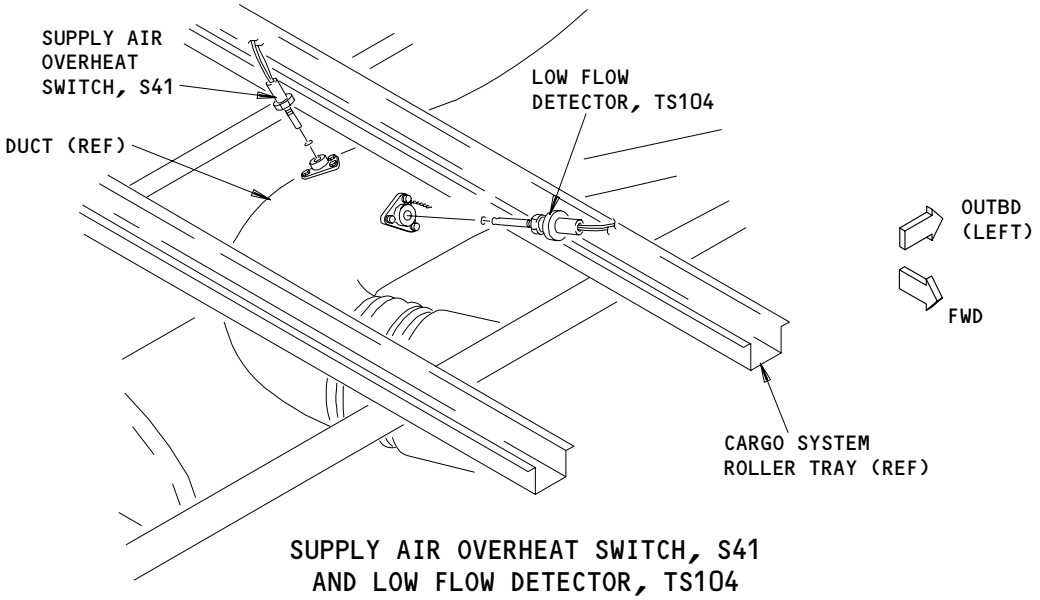


FORWARD CARGO COMPARTMENT FLOOR

(J) FROM SHT 1



SUPPLY AIR OVERHEAT SWITCH, S41
AND LOW FLOW DETECTOR, TS104

(K)

Equipment Cooling – Component Location
Figure 102 (Sheet 5)

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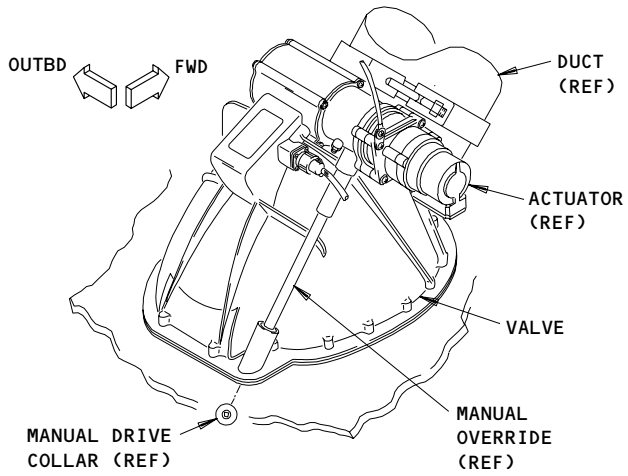
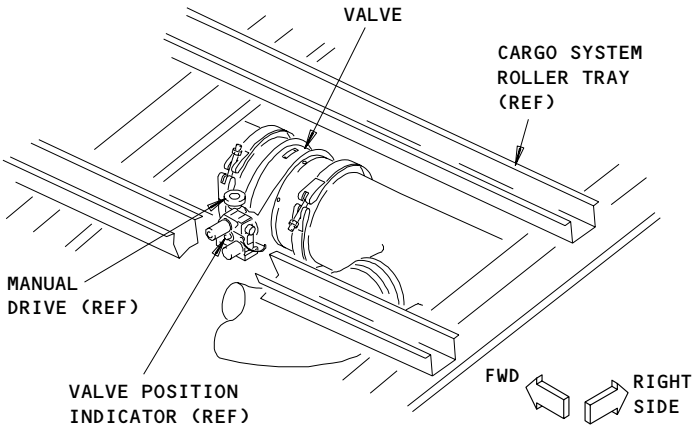


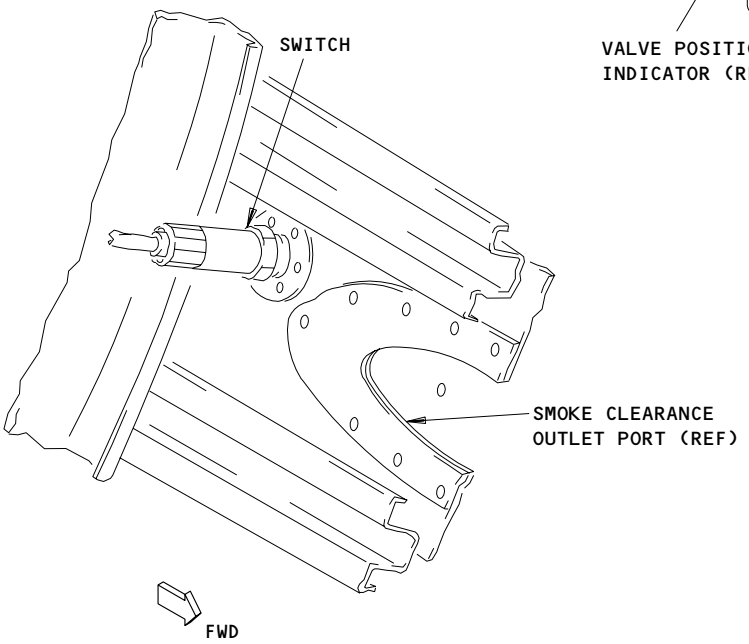
OVERBOARD EXHAUST VALVE, V12

(L) FROM SHT 5



SHUTOFF VALVE, V10

(M) FROM SHT 5



SKIN TEMPERATURE SWITCH, S456

(N) FROM SHT 4

Equipment Cooling – Component Location
Figure 102 (Sheet 6)

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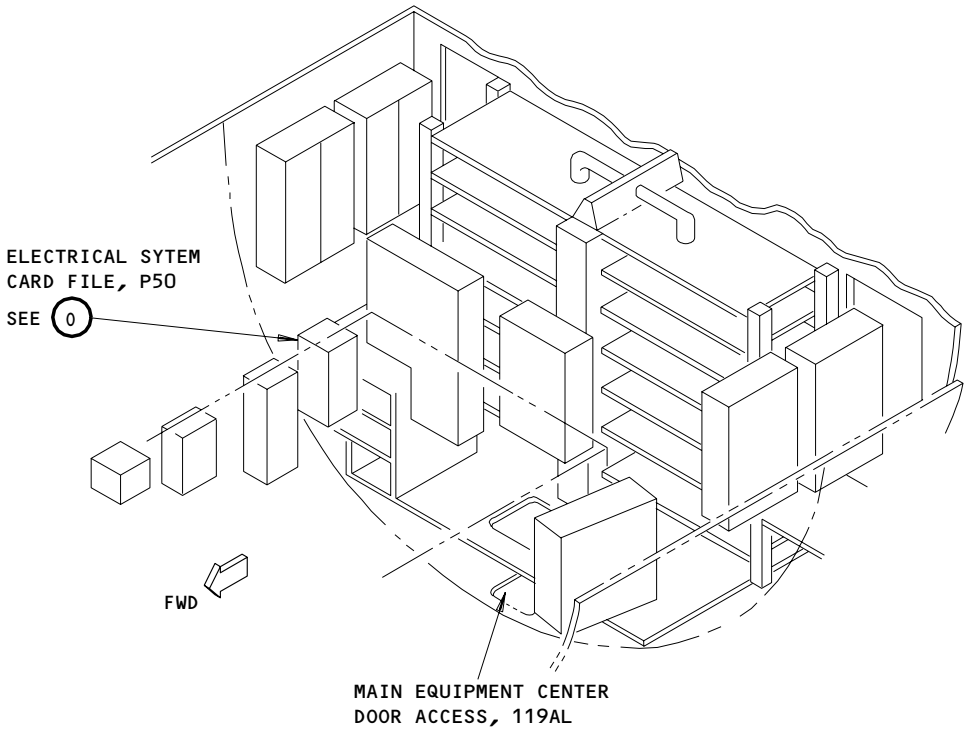

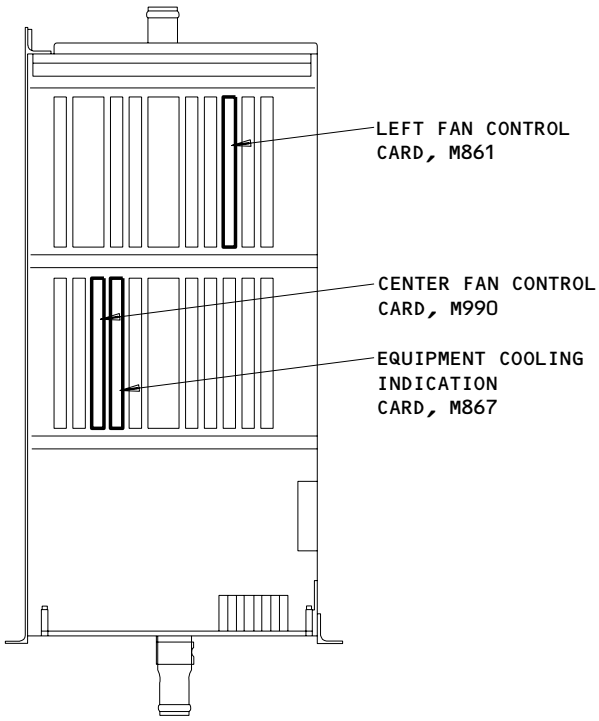

ELECTRICAL SYSTEM CARD FILE, P50

0

Equipment Cooling - Component Location
Figure 102 (Sheet 7)

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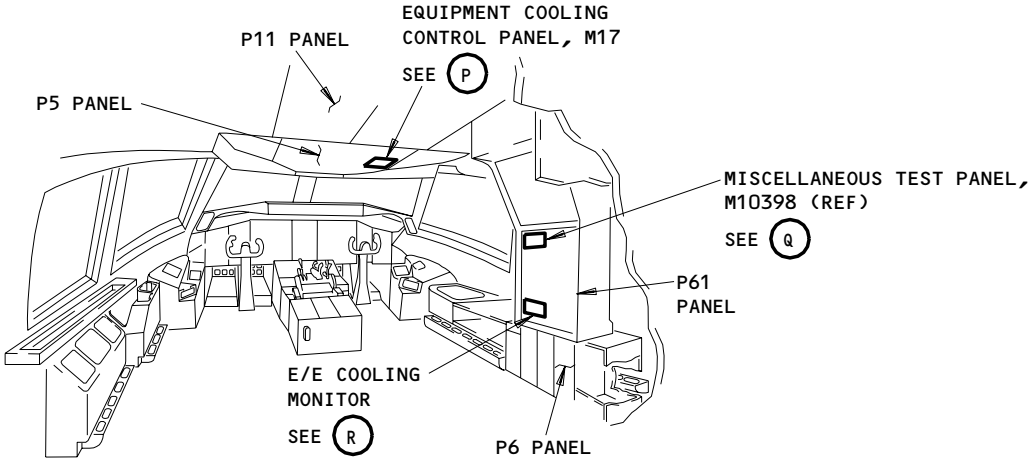
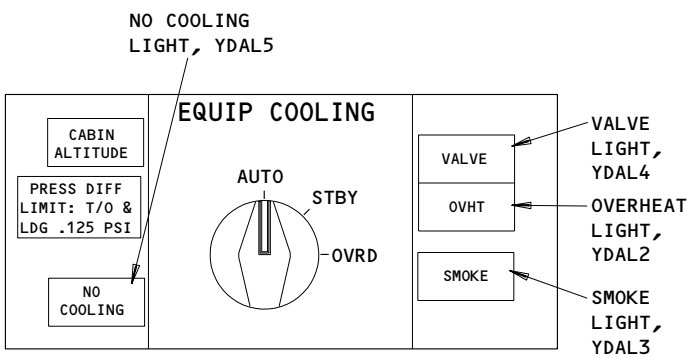
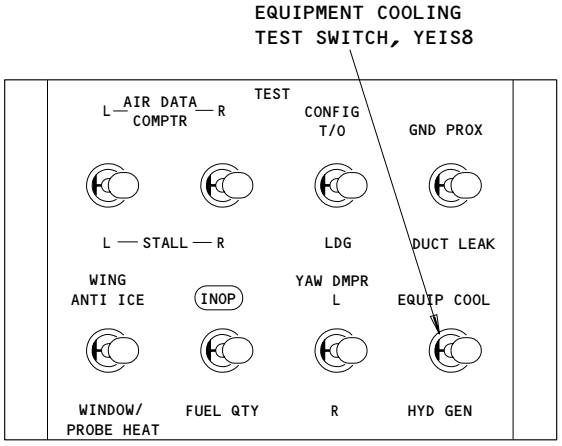


FLIGHT COMPARTMENT



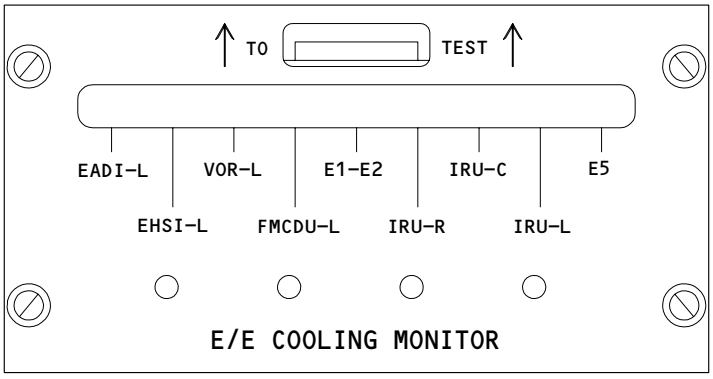
EQUIPMENT COOLING CONTROL PANEL, M17

P



MISCELLANEOUS TEST PANEL, M10398 (REF)

Q



E/E COOLING MONITOR INDICATOR

R

Equipment Cooling - Component Location
Figure 102 (Sheet 8)

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EQUIPMENT COOLING SYSTEM - FAULT ISOLATION

1. General
   A. This procedure has fault isolation data for the equipment cooling system.
2. Fault Isolation Procedures
   A. General
      (1) The fault isolation procedures are given in one of these formats:
         (a) Format 1 - Fault Isolation Tasks
         (b) Format 2 - Fault Isolation Trees (Figures)
   B. List of Fault Isolation Tasks
      (1) AIR COOLING FAN (HAMILTON SUNDSTRAND P/N 732591) POST-SB 21-0215; Fan Vibration Monitor - Fault Isolation Task
   C. List of Fault Isolation Trees (Figures)
      (1) Figure 103, OVHT Light Failed to Illum During Equipment Cooling Test
      (2) Figure 104, EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum. STBY Selected and VALVE Light Extin.
      (3) Figure 105, EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum. STBY Selected and VALVE Light Remained Illum.
      (4) Figure 106, EICAS Message FWD EQPT VAL and Equipment Cooling VALVE Light Remain Extinguished with Both Engine N2 Speed Cards >50% and Ambient Temperature >45 Degrees F
      (5) Figure 107, FLT DK SUP FLOW EICAS Msg Displayed
      (6) Figure 108, FWD EQ SUP FLOW EICAS Message Displayed
      (7) Figure 109, FWD EQ SUP OH EICAS Message Displayed
      (8) Figure 110, EICAS Message FWD EQ SUP FAN 1 Displayed
      (9) Figure 111, EICAS Message FWD EQ EXH FAN Displayed
      (10) Figure 112, EICAS Message FWD EQPT SMOKE Displayed and Smoke Light Illum. Light Remained Illum After Selector was Positioned to OVRD
      (11) Figure 113, EICAS Message FWD EQPT SMOKE Displayed and SMOKE Light Illum. Light Remained Illum After Selector Was Positioned to OVRD and EICAS Message FWD EQPT COOLING Displayed Following 1 Minute Delay. SMOKE Light Remained Illum After Selector Was Positioned to STBY
      (12) Figure 114, EICAS Message FWD EQPT SMOKE Displayed and SMOKE Light Illum. Light Remained Illum After Selector Was Positioned to OVRD and EICAS Message FWD EQPT COOLING Displayed Following 1 Minute Delay. SMOKE Light Extin After Selector Was Positioned to STBY.
      (13) Figure 115, EICAS Message FWD EQPT OVHT Displayed and OVHT Light Illum. After Selector Was Positioned to STBY, Light Re-illum Following 5 Minute Delay. NO COOLING Light Did Not Illum in OVRD.
      (14) Figure 116, EICAS Message FWD EQPT OVHT Displayed and OVHT Light Illum. After Selector Was Positioned to STBY, Light Re-illum Following 5 Minute Delay. After Selector Was Positioned to OVRD, EICAS Message FWD EQPT COOLING Displayed and NO COOLING Light Illum.

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(15) Figure 116A, SMOKE Light Failed to Illum During Equipment Cooling Test
(16) Figure 117, EICAS Message FWD EQPT OVHT Displayed and OVHT Light Illum. Light Remained Extin After Selector Was Positioned to STBY.
(17) Figure 118, E/E Cooling Monitor Problems

3. AIR COOLING FAN (HAMILTON SUNDSTRAND P/N 732591) POST-SB 21-0215;
Fan Vibration Monitor - Fault Isolation Task

A. Description
(1) This fault isolation task is only applicable to these equipment cooling system air cooling fans (Hamilton Sundstrand p/n 732591) equipped with the Inflight Warning System (IWS) vibration monitor installation (AMM 21-58-06/401):
(a) Exhaust Fan (B12)

B. Fault Isolation Procedure
(1) Supply power to the fan and observe one of the following conditions:
(a) If fan operates and monitor status indicator light shows a slow blinking (each 2 seconds) 'green' for one minute, then both the fan and the monitor are operable. Installation test or fault isolation are complete. Monitor was not responsible for the indicated shutdown.
(b) If fan is inoperative when power is supplied, then continue.
(2) Fault Isolation - new fan installation with existing monitor, or new monitor installation with existing fan:
(a) Reset the monitor:
1) Remove power from the applicable fan.
2) Depress (hold in spring loaded switch) the monitor RESET button while resupplying fan power.

NOTE: Due to configuration of some aircraft logic cards, this step may require a two-person operation. This mandates that this step must be accomplished simultaneously (one person must depress the monitor RESET button while another person resupplies fan power).

3) The fan should begin operation. When this occurs, release the spring loaded monitor RESET button.

NOTE: Fan monitor will time out and shutdown if the following step is not initiated within 10 seconds of this step. If this occurs, repeat the monitor reset step above.

4) Within 10 seconds of releasing monitor RESET button (fan is running), press again and hold the monitor RESET button for 3 to 5 seconds until the monitor STATUS LED cycles to 'green'.

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5) Verify fan remains on for 7 minutes and the STATUS LED is blinking 'green' every 2 seconds.

NOTE: During the 7 minutes, the STATUS LED may blink 'amber' (yellow) on occassion which is acceptable. 'Red' blinks will result in a monitor shutdown of the fan during or at 7 minutes. If the fan shuts down, the fan must be replaced.

6) If fan does not operate while performing above monitor reset procedure, then continue.

(b) Fault Isolation - fan did not operate after monitor reset:

1) Unplug monitor from fan and check continuity between pin 5 and pin 6 at fan connector. If open circuit and fan is hot to the touch, then motor overheat switch may be open. Wait 15 minutes or until the fan is cool to the touch and repeat step.
2) If after the fan cool down period, and continuity is not restored (open circuit) between pin 5 and pin 6, replace the fan.
3) If continuity (closed circuit) between pin 5 and pin 6 of the fan connector, then bypass monitor and attach aircraft cable to fan. Cycle the aircraft fan circuit breaker. If the fan runs, replace the monitor. If the fan does not run, do a check of the aircraft wiring.

(3) Fault Isolation - existing fan/monitor installation

(a) After report of fan shutdown, perform a monitor reset:

1) Remove power from the applicable fan.
2) Depress (hold in spring loaded switch) the monitor RESET button while resupplying fan power.

NOTE: Due to configuration of some aircraft logic cards, this step may require a two-person operation. This mandates that this step must be accomplished simultaneously (one person must depress the monitor RESET button while another person resupplies fan power).

3) The fan should then operate for the next 10 seconds. When this occurs, release the spring loaded monitor RESET button.

NOTE: During this time, the monitor should blink 'red' or 'amber' (yellow).

4) If the monitor blinks 'red' during this time, replace the fan. Previous fan shutdown was caused by fan bearing failure.
5) If the monitor blinks 'amber' (yellow) during this time, replace the monitor. Previous fan shutdown was caused by monitor failure.

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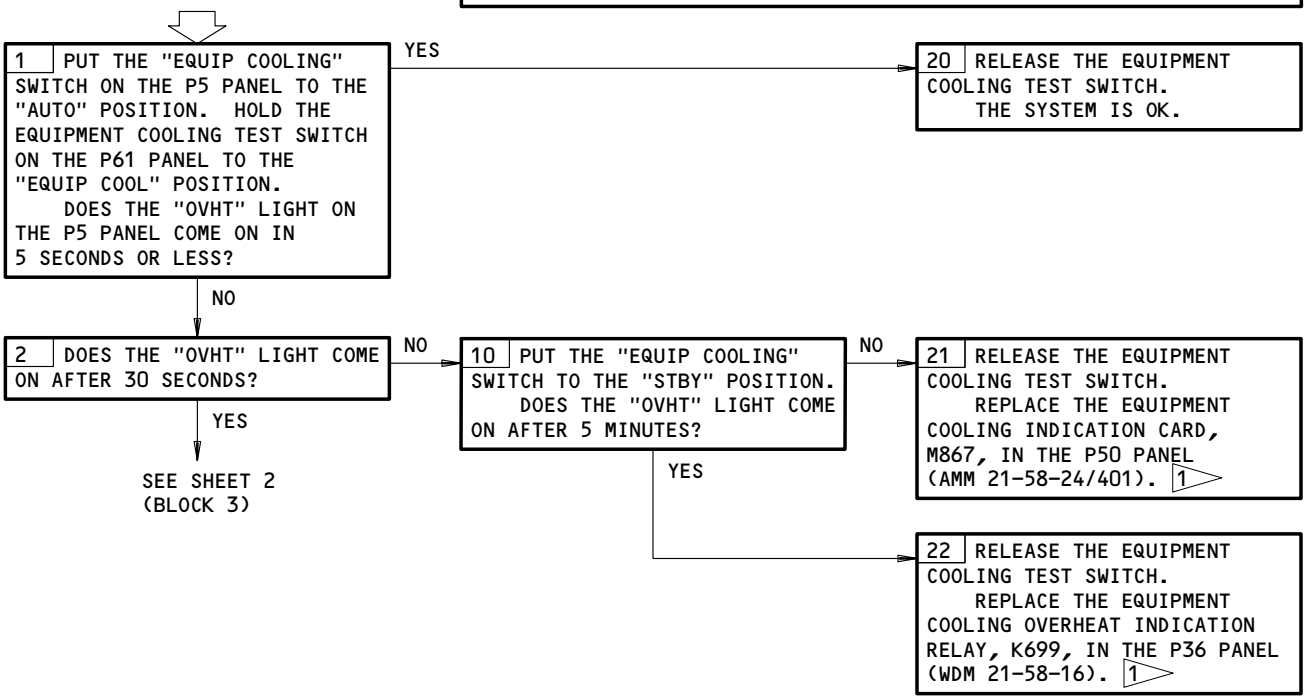
"OVHT" LIGHT FAILED TO ILLUM DURING EQUIPMENT COOLING TEST

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6D6,11P21

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



1 DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109)

2 GO TO BLOCK 1.

OVHT Light Failed to Illum During Equipment Cooling Test
Figure 103 (Sheet 1)

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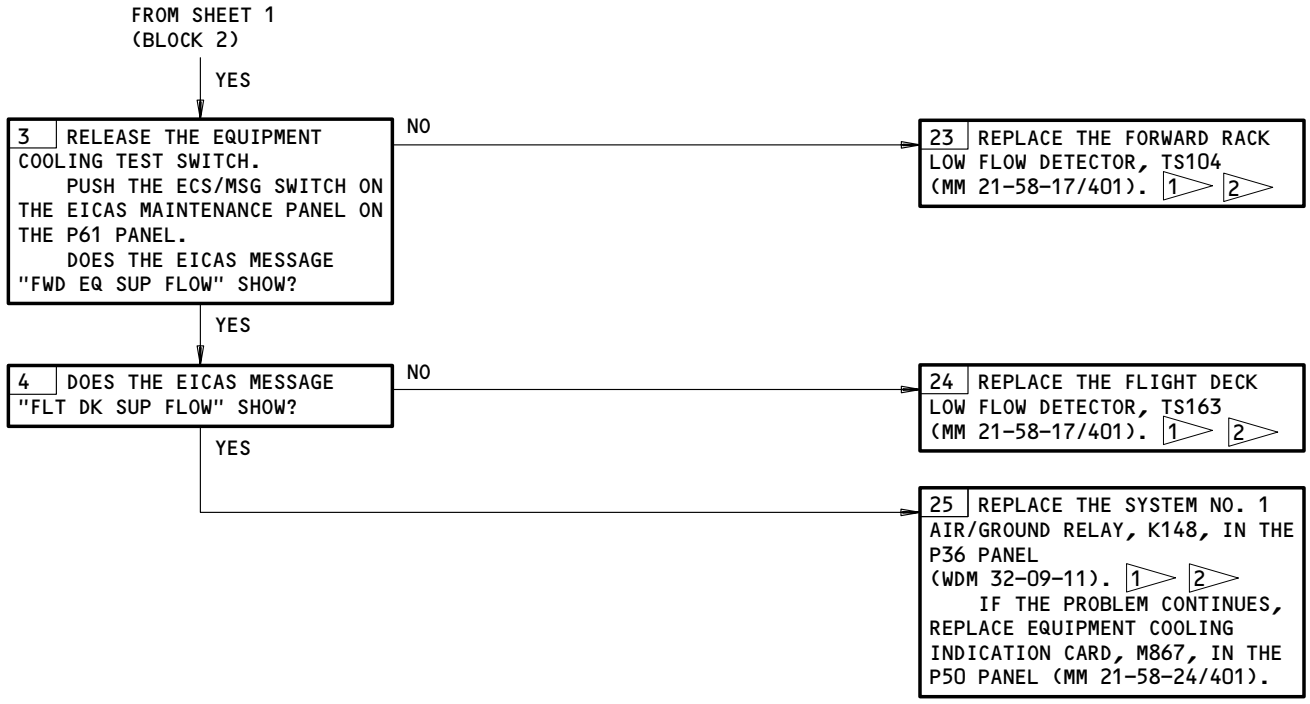

OVHT Light Failed to Illum During Equipment Cooling Test
Figure 103 (Sheet 2)

A94515

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PREREQUISITES

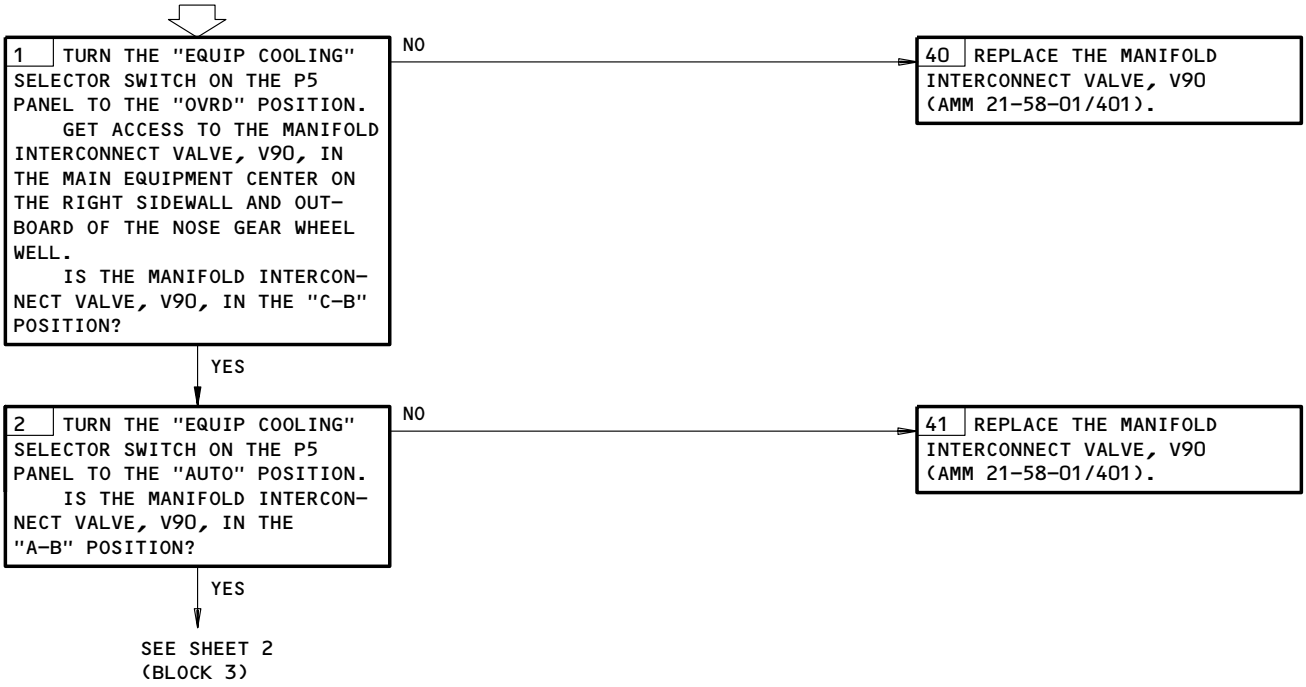
MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18,6H21,11B8,11C19,11P11,11P13,11P21,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
PNEUMATIC POWER IS ON (AMM 36-00-00/201)

EICAS MESSAGE "FWD EQPT VAL" DISPLAYED. EQUIPMENT COOLING "VALVE" LIGHT ILLUM. "STBY" SELECTED AND "VALVE" LIGHT EXTIN.

NOTE: THE "VALVE" LIGHT COMES ON FOR APPROXIMATELY 30 SECONDS, WHEN THE VALVES CHANGE THEIR POSITIONS, AND THEN GOES OFF.



EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum. STBY Selected and VALVE Light Extin.
Figure 104 (Sheet 1)

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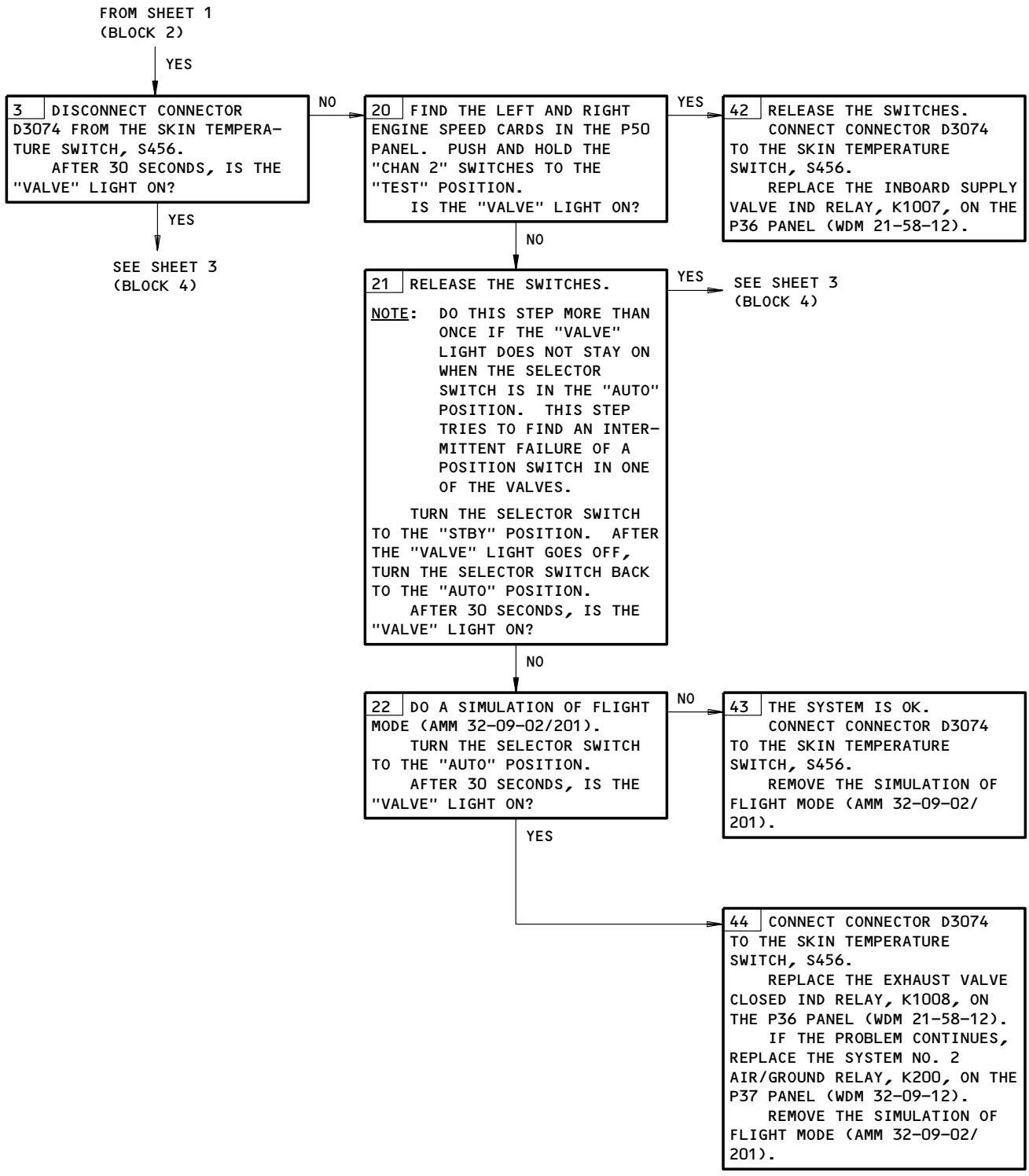

EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum.
STBY Selected and VALVE Light Extin.
Figure 104 (Sheet 2)

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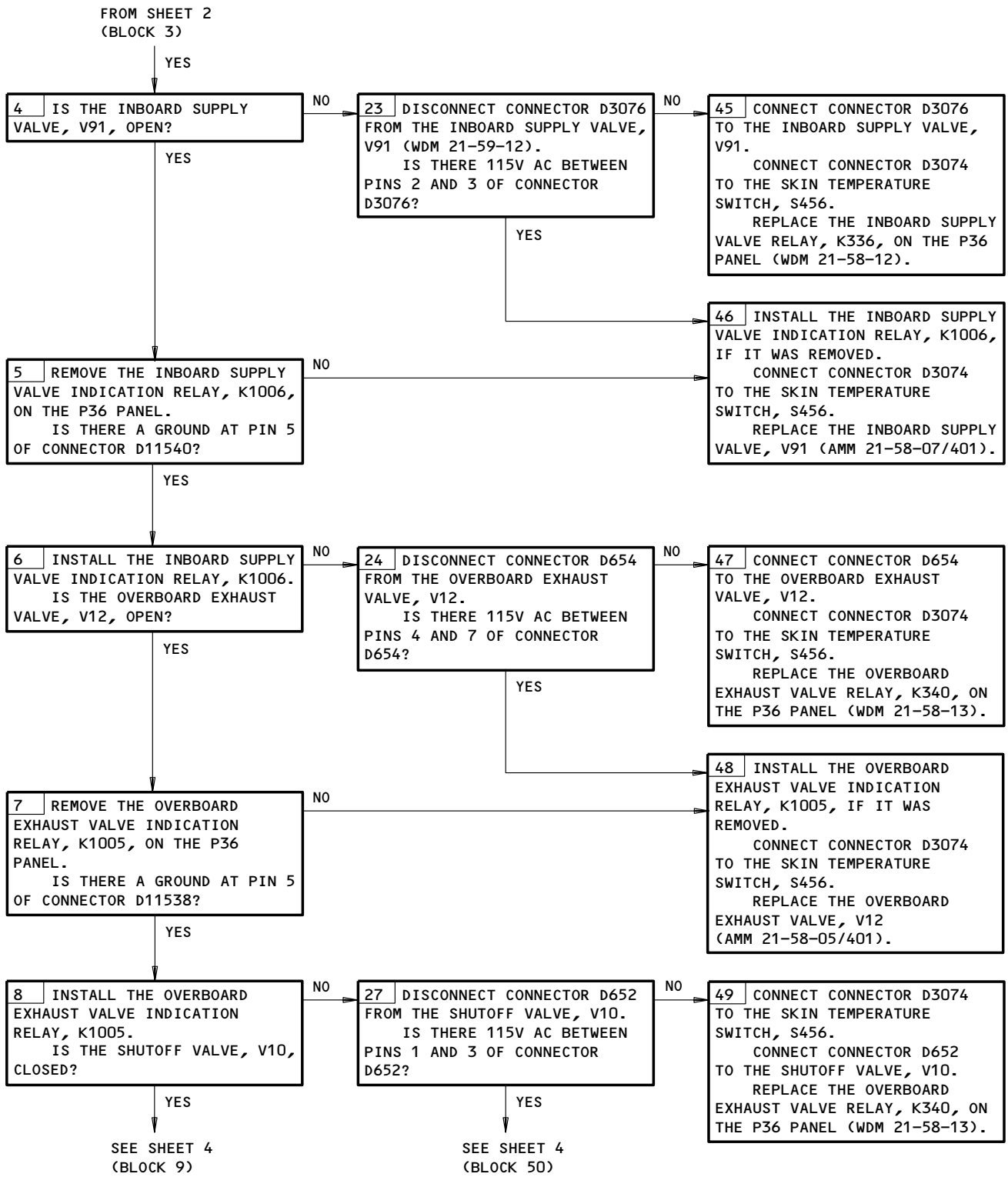

EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum.
STBY Selected and VALVE Light Extin.
Figure 104 (Sheet 3)

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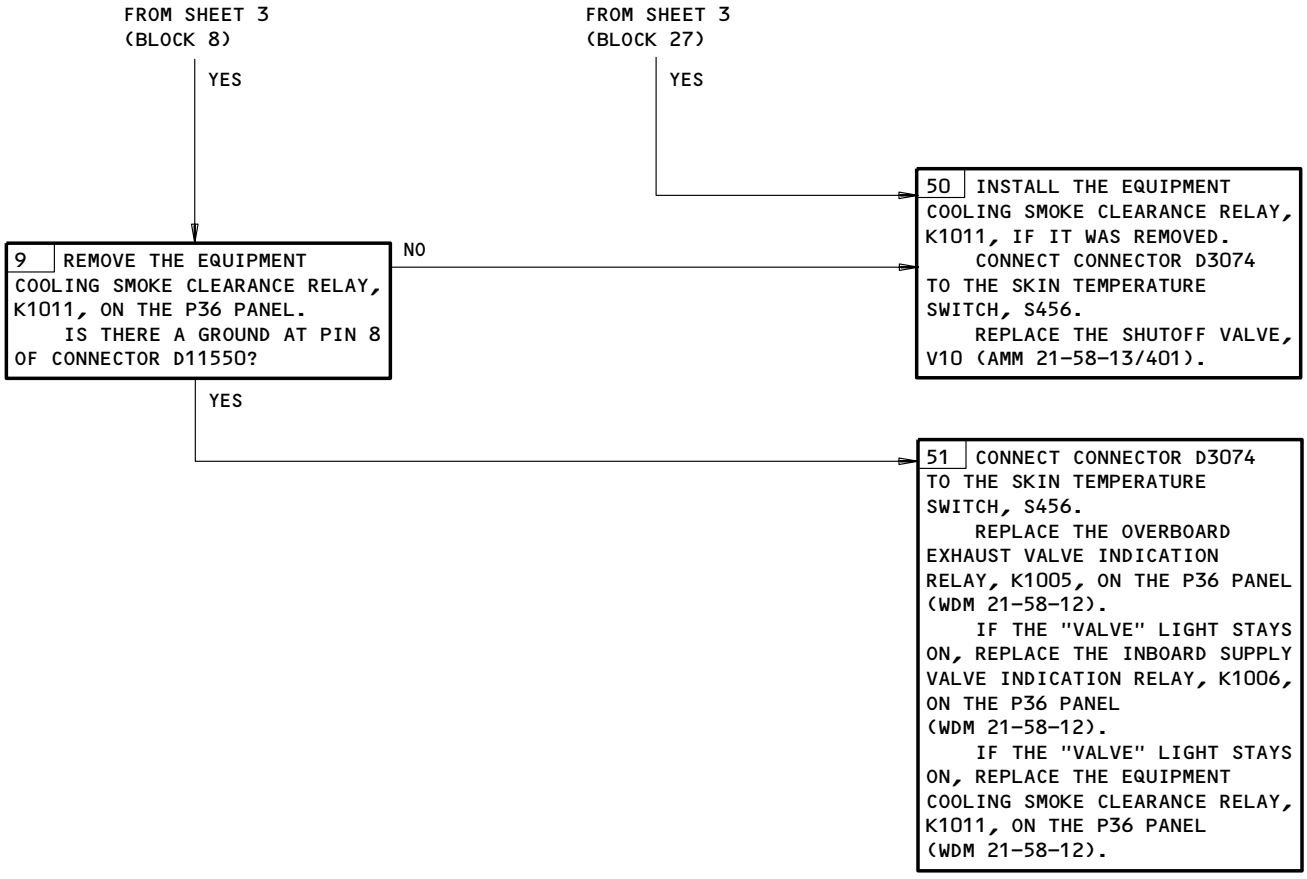

EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum.
STBY Selected and VALVE Light Extin.
Figure 104 (Sheet 4)

A94562

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PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18, 6H21, 6H8, 11C19, 11P11, 11P13, 11P21, 11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EICAS MESSAGE "FWD EQPT VAL" DISPLAYED. EQUIPMENT COOLING "VALVE" LIGHT ILLUM. "STBY" SELECTED AND "VALVE" LIGHT REMAINED ILLUM.

NOTE: THE "VALVE" LIGHT COMES ON FOR APPROXIMATELY 30 SECONDS, WHEN THE VALVES CHANGE THEIR POSITIONS, AND THEN THE "VALVE" LIGHT GOES OFF.

1 TURN THE "EQUIP COOLING" SELECTOR SWITCH ON THE P5 PANEL TO THE "OVRD" POSITION.
GET ACCESS TO THE MANIFOLD INTERCONNECT VALVE, V90, IN THE MAIN EQUIPMENT CENTER ON THE RIGHT SIDEWALL, AND OUTBOARD OF THE NOSE GEAR WHEEL WELL.
IS THE MANIFOLD INTERCONNECT VALVE, V90, IN THE "C-B" POSITION?

NO → 40 REPLACE THE MANIFOLD INTERCONNECT VALVE, V90 (AMM 21-58-01/401).

YES ↓

2 TURN THE "EQUIP COOLING" SELECTOR SWITCH ON THE P5 PANEL TO THE "AUTO" POSITION.
IS THE MANIFOLD INTERCONNECT VALVE, V90, IN THE "A-B" POSITION?

NO → 41 REPLACE THE MANIFOLD INTERCONNECT VALVE, V90 (AMM 21-58-01/401).

YES ↓

SEE SHEET 2 (BLOCK 3)

EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum. STBY Selected and VALVE Light Remained Illum.
Figure 105 (Sheet 1)

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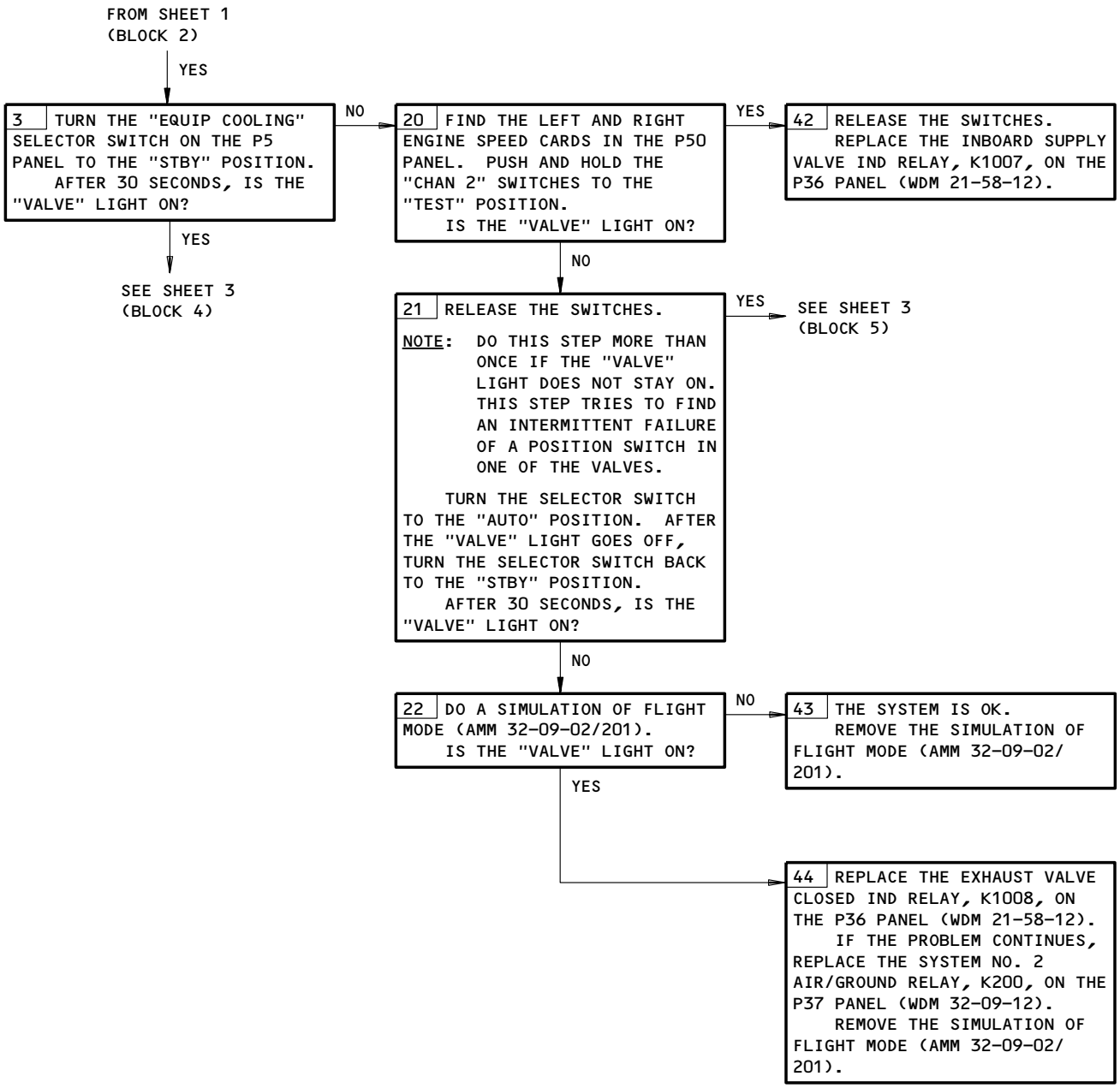

EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum.
STBY Selected and VALVE Light Remained Illum.
Figure 105 (Sheet 2)

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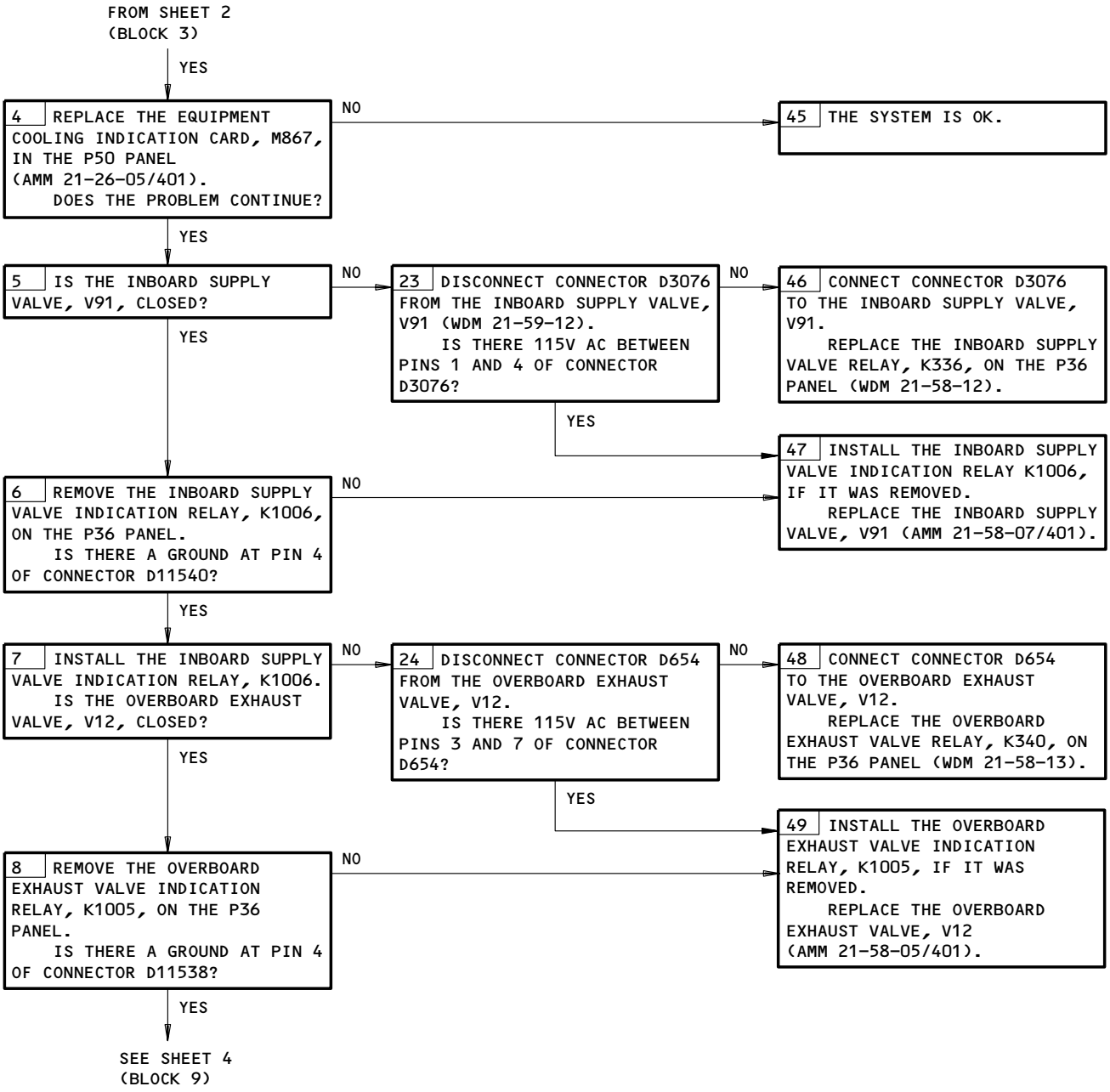

EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum.
STBY Selected and VALVE Light Remained Illum.
Figure 105 (Sheet 3)

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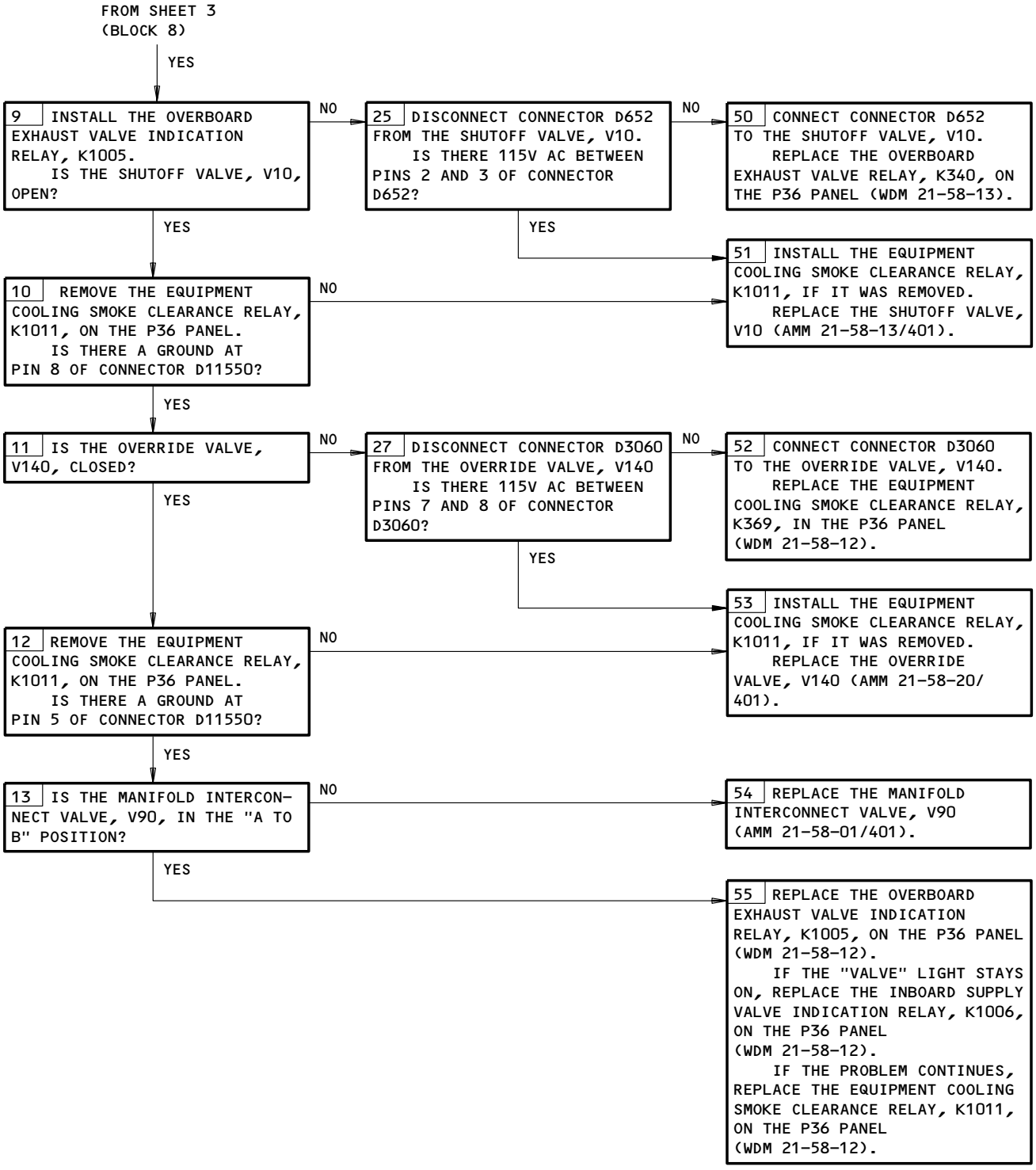

EICAS Message FWD EQPT VAL Displayed. Equipment Cooling VALVE Light Illum. STBY Selected and VALVE Light Remained Illum.
Figure 105 (Sheet 4)

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EICAS MESSAGE "FWD EQPT VAL" AND EQUIPMENT COOLING "VALVE" LIGHT REMAIN EXTINGUISHED WITH BOTH ENGINE N2 SPEED CARDS >50% AND AMBIENT TEMPERATURE >45°F

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A13 OR 11N13, 11A26 OR 11N22, 11B11, 11D15, 11D16, 11D23, 11D24, 11R14, 11R23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 OPEN THE FORWARD CARGO COMPARTMENT DOOR, 821, AND REMOVE THE LEFT SIDEWALL PANEL, FOUR FEET AFT OF THE FORWARD ENDLINER.
LOCATE AND DISCONNECT CONNECTOR D3074 FROM THE EQUIPMENT COOLING SKIN TEMPERATURE SENSOR, S456.
IS THERE CONTINUITY BETWEEN PINS 1 AND 2 OF THE EQUIPMENT COOLING SKIN TEMPERATURE SENSOR, S456 (WDM 21-58-11)?

YES → 40 REPLACE THE EQUIPMENT COOLING SKIN TEMPERATURE SENSOR, S456 (AMM 21-58-21/401).

NO

2 APPLY A COLD SOURCE (ICE PACK) TO THE EQUIPMENT COOLING SKIN TEMPERATURE SENSOR, S456, TO LOWER THE TEMPERATURE TO LESS THAN 45°F (17°C).
IS THERE CONTINUITY BETWEEN PINS 1 AND 2 OF THE EQUIPMENT COOLING SKIN TEMPERATURE SENSOR, S456?

NO → 41 REPLACE THE EQUIPMENT COOLING SKIN TEMPERATURE SENSOR, S456 (AMM 21-58-21/401).

YES

SEE SHEET 2
(BLOCK 3)

EICAS Message FWD EQPT VAL and Equipment Cooling VALVE Light Remain Extinguished with Both Engine N2 Speed Cards >50% and Ambient Temperature >45 Degrees F
Figure 106 (Sheet 1)

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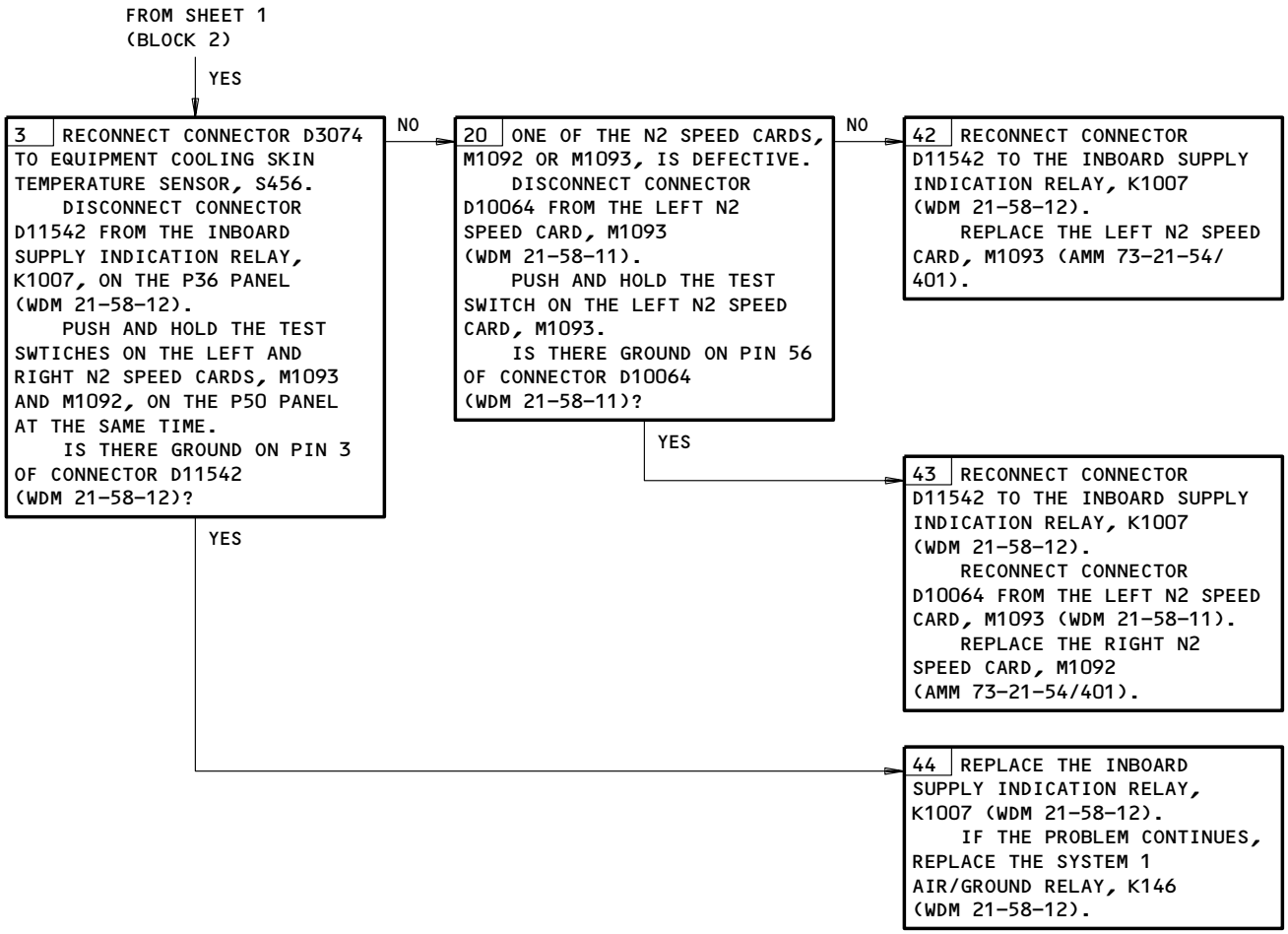

EICAS Message FWD EQPT VAL and Equipment Cooling VALVE Light Remain Extinguished with Both Engine N2 Speed Cards >50% and Ambient Temperature >45 Degrees F
Figure 106 (Sheet 2)

K18743

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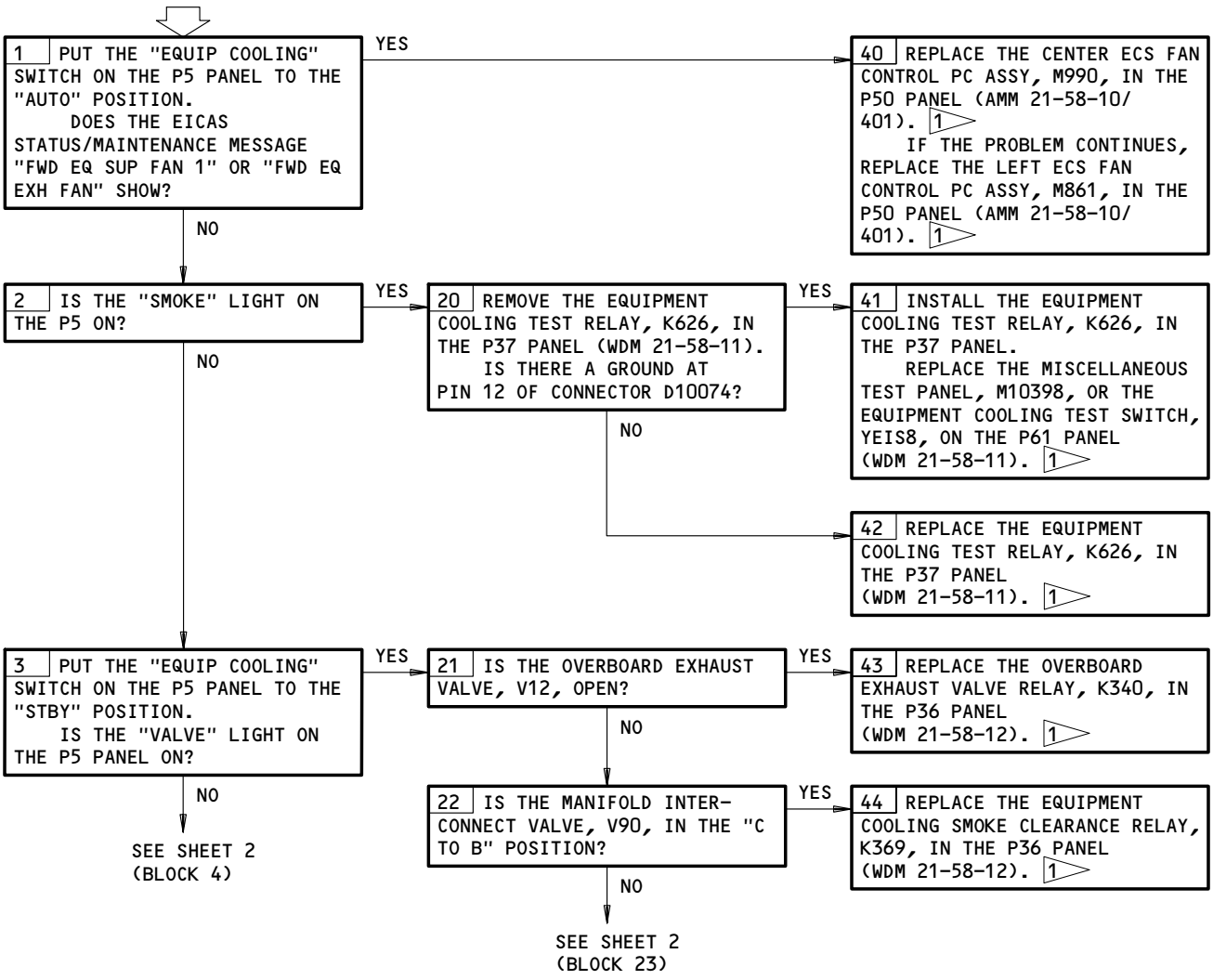
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6D6,6H18,6H21,11B8,11P11,11P13,11P21,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

"FLT DK SUP FLOW" EICAS MESSAGE DISPLAYED



1 DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109)

FLT DK SUP FLOW EICAS Message Displayed
Figure 107 (Sheet 1)

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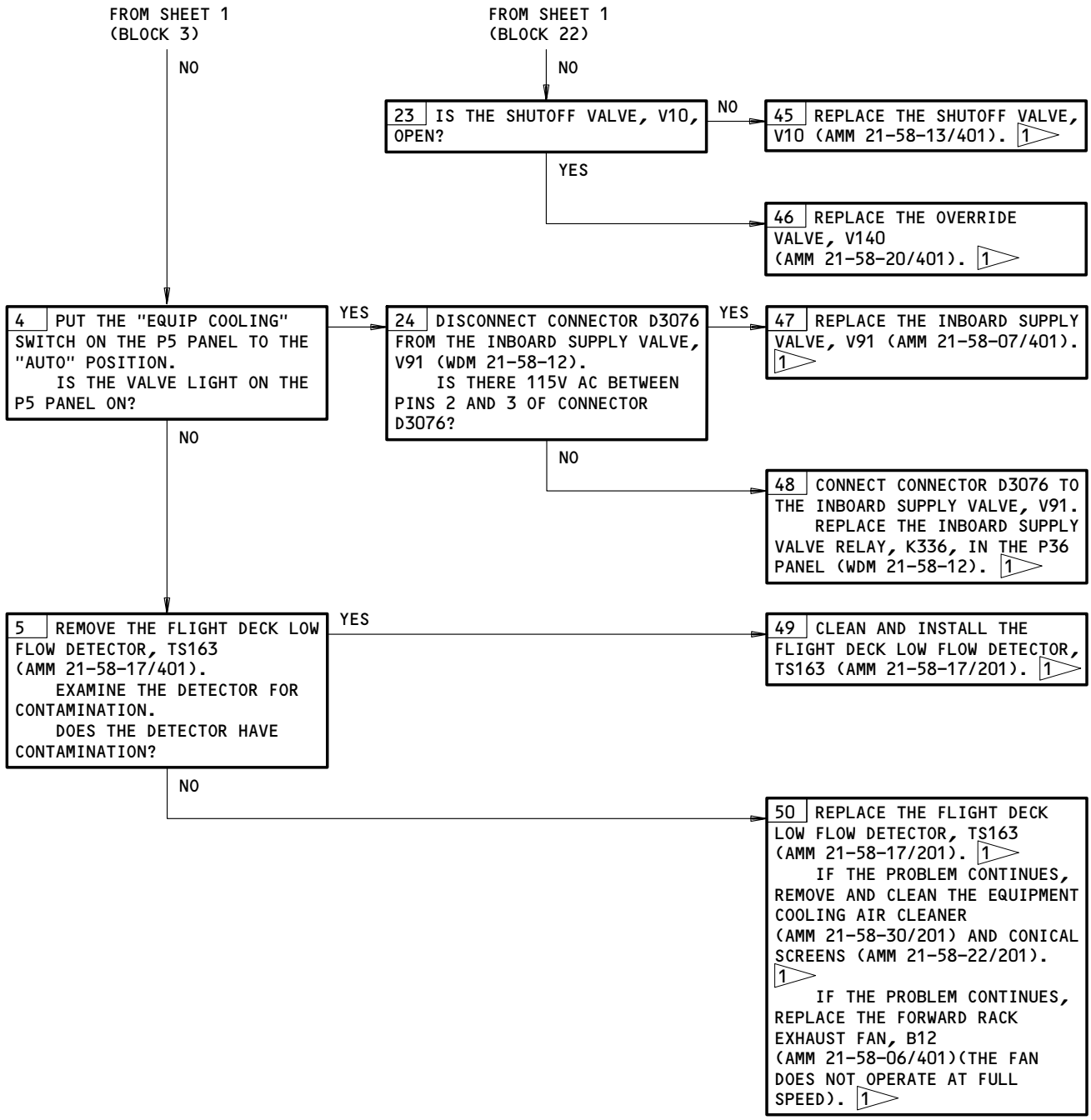

FLT DK SUP FLOW EICAS Message Displayed
Figure 107 (Sheet 2)

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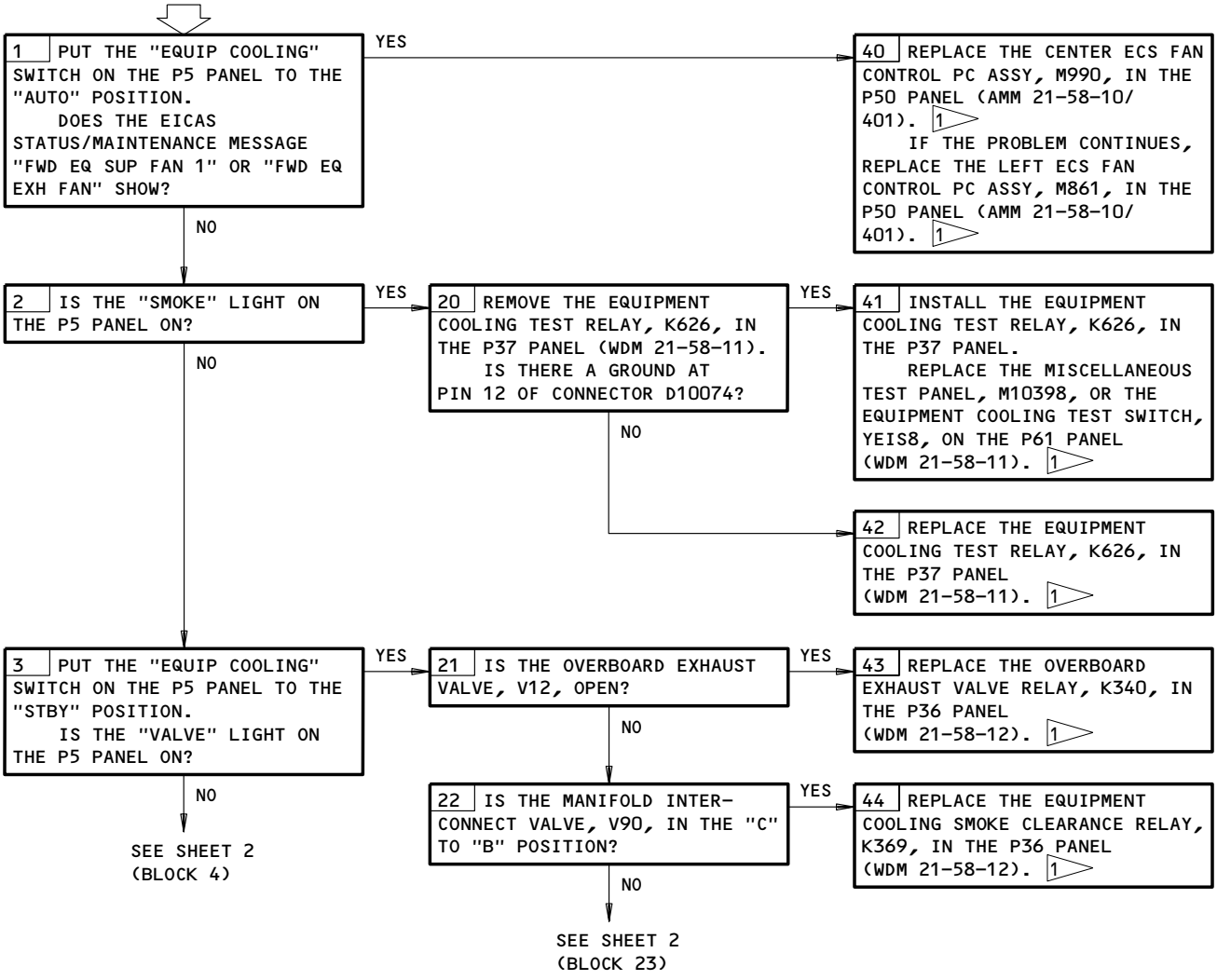
"FWD EQ SUP FLOW" EICAS MESSAGE DISPLAYED

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6D6,6H18,6H21,11B8,11P11,11P13,11P21,11P22

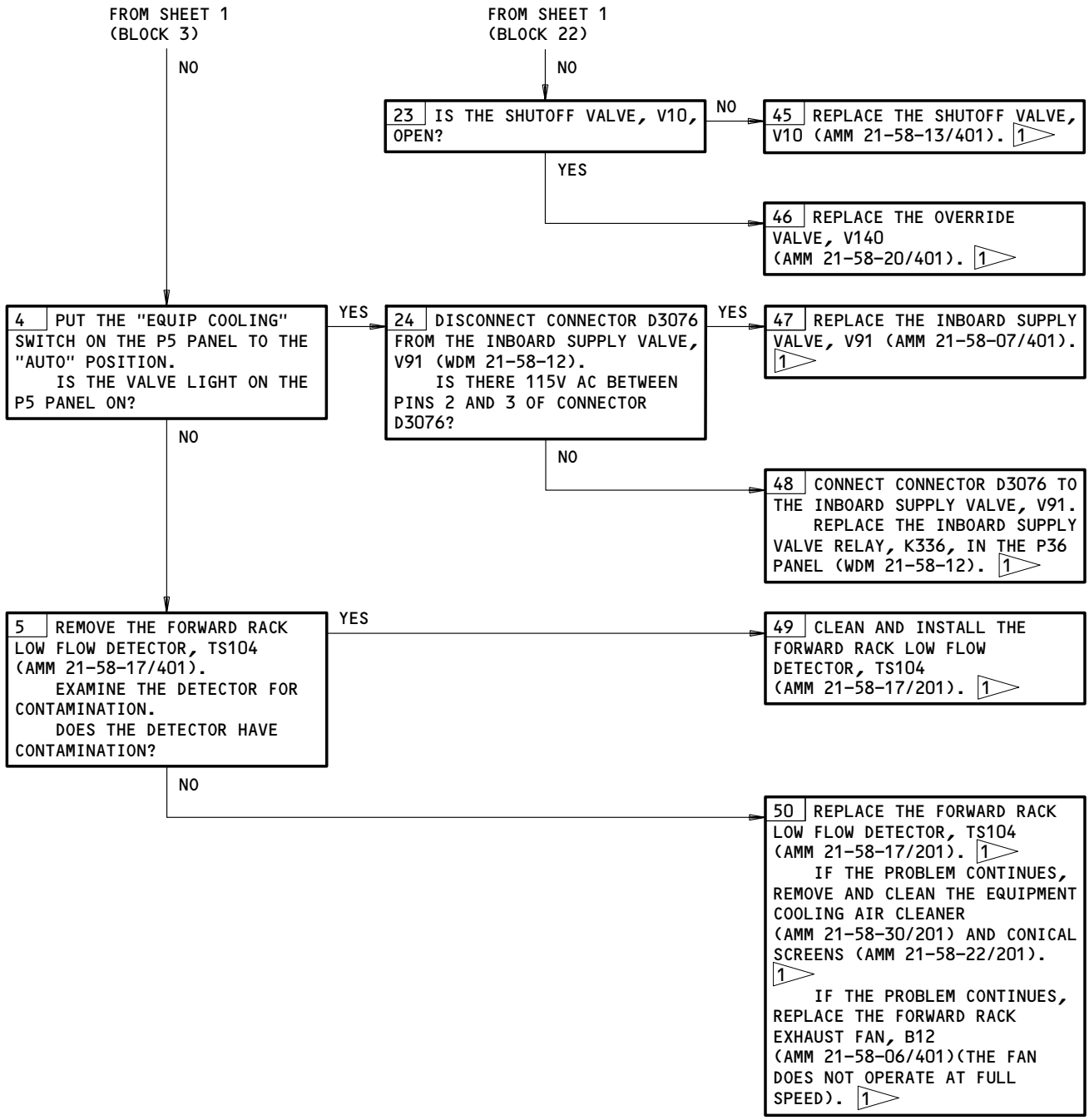
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



1 DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109)

FWD EQ SUP FLOW EICAS Message Displayed
Figure 108 (Sheet 1)

BOEING PROPRIETARY - Copyright (C) - Unpublished Work - See title page for details.



FLT EQ SUP FLOW EICAS Message Displayed
Figure 108 (Sheet 2)

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"FWD EQ SUP OH" EICAS MESSAGE DISPLAYED

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (MM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18,6H21,11P11,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (MM 24-22-00/201)

1 DO THE EICAS MAINTENANCE MESSAGE ERASE PROCEDURE (31-41-00, FIG. 109)

FWD EQ SUP OH EICAS Message Displayed
Figure 109

234812
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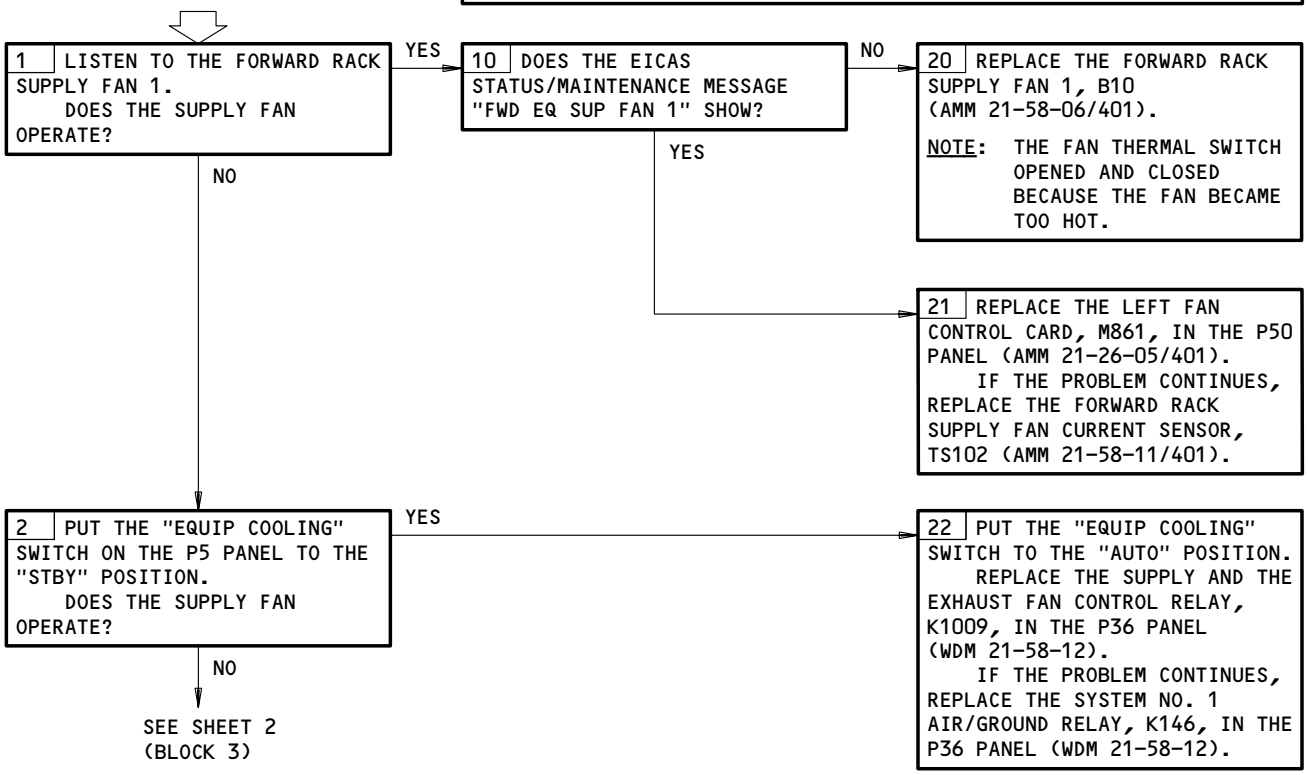
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18,6H21,11B8,11P11,11P13,11P21,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EICAS MESSAGE "FWD EQ SUP FAN 1" DISPLAYED



EICAS Message FWD EQ SUP FAN 1 Displayed
Figure 110 (Sheet 1)

327621
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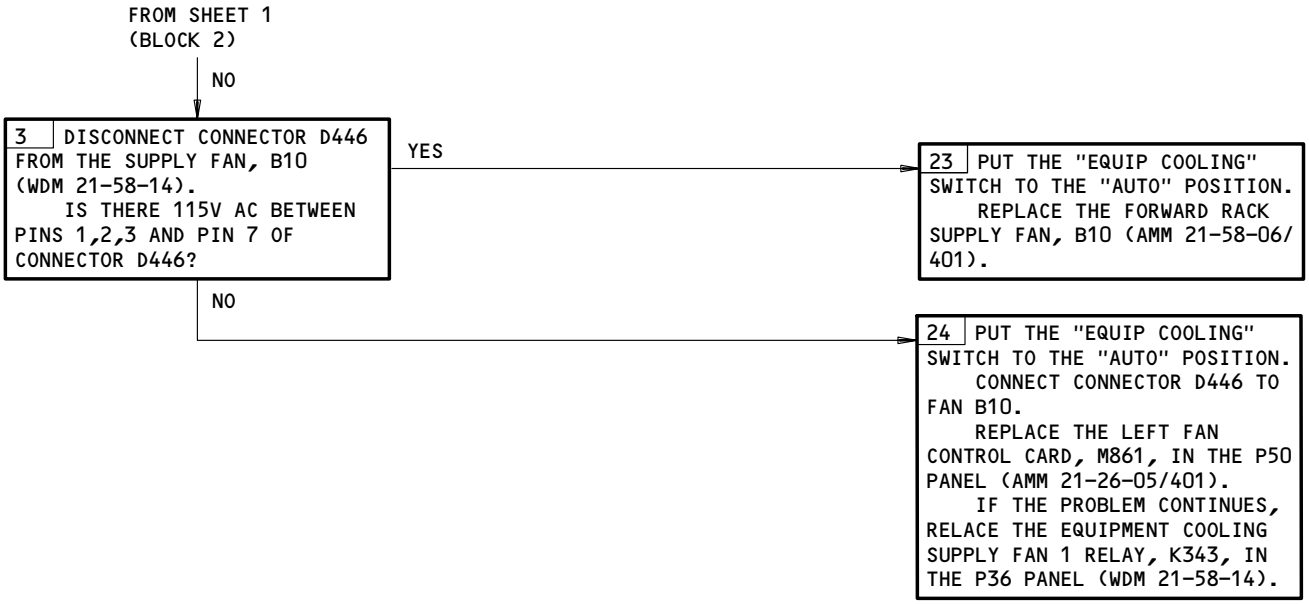

EICAS Message FWD EQ SUP FAN 1 Displayed
Figure 110 (Sheet 2)

A95018

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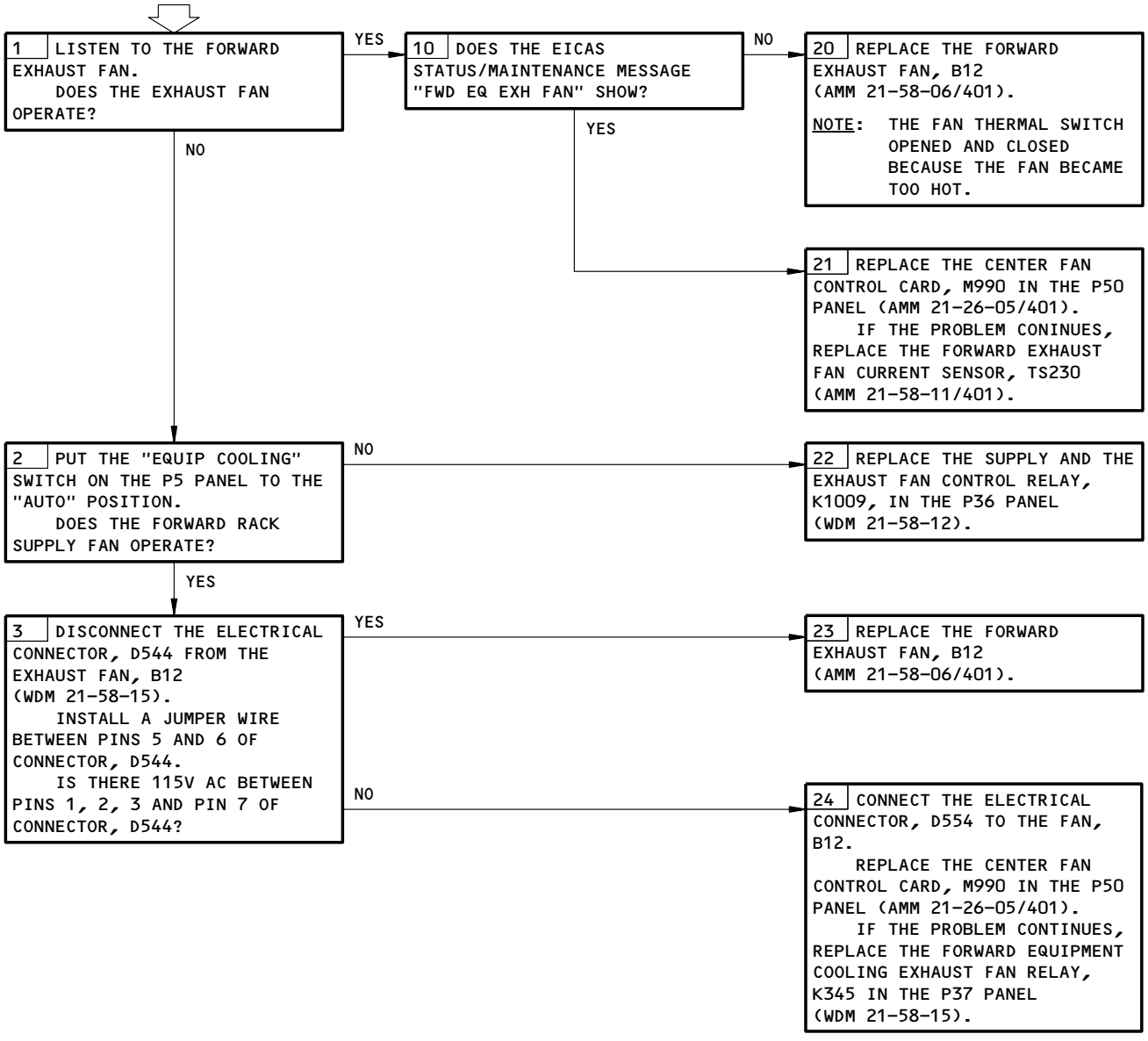
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18, 6H21, 11B8, 11P11, 11P13, 11P21, 11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

EICAS MESSAGE "FWD EQ EXH FAN" DISPLAYED



EICAS Message FWD EQ EXH FAN Displayed
Figure 111

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EICAS MESSAGE "FWD EQPT SMOKE" DISPLAYED AND "SMOKE" LIGHT ILLUM. LIGHT REMAINED ILLUM AFTER SELECTOR WAS POSITIONED TO "OVRD"

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18,6H21,11B8,11C19,11P11,11P13,11P21,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

NOTE: THERE IS OR THERE WAS A SMOKE CONDITION. FIND AND FIX THE SOURCE OF THE SMOKE.

1 PUT THE "EQUIP COOLING" SWITCH ON THE P5 PANEL TO THE "AUTO" POSITION.
FIND THE OVERRIDE VALVE, V140. PUT THE "EQUIP COOLING SWITCH TO THE "OVRD" POSITION.
DOES THE MANUAL OVERRIDE KNOB ON THE OVERRIDE VALVE TURN FROM THE CLOSED TO THE OPEN POSITION?

NO → 10 REMOVE CONNECTOR D3060 FROM THE OVERRIDE VALVE, V140 (WDM 21-58-16).
IS THERE 28V DC AT PIN 9 OF CONNECTOR D3060?

NO → 20 PUT THE "EQUIP COOLING" SWITCH TO THE "AUTO" POSITION.
CONNECT CONNECTOR D3060 TO THE OVERRIDE VALVE.
REPLACE THE EQUIPMENT COOLING SMOKE CLEARANCE RELAY, K369, IN THE P36 PANEL (WDM 21-58-12).

YES → 21 PUT THE "EQUIP COOLING" SWITCH TO THE "AUTO" POSITION.
REPLACE THE OVERRIDE VALVE, V140 (AMM 21-58-20/401).

YES → 2 PUT THE "EQUIP COOLING" SWITCH TO THE "AUTO" POSITION.
PUSH THE ECS/MSG SWITCH ON THE EICAS MAINTENANCE PANEL ON THE P61 PANEL.
DOES THE EICAS MESSAGE "FWD EQ SUP FLOW" SHOW?

NO → 22 REPLACE THE EQUIPMENT COOLING SMOKE DETECTOR, TS164 (AMM 21-58-19/401).

YES → 3 REMOVE THE EQUIPMENT COOLING TEST RELAY, K626, IN THE P37 PANEL (WDM 21-58-11).
IS THERE A GROUND AT PIN 12 OF CONNECTOR D10074?

NO → 23 REPLACE THE EQUIPMENT COOLING TEST RELAY, K626 (WDM 21-58-11).

YES → 24 INSTALL THE EQUIPMENT COOLING TEST RELAY, K626, IN THE P37 PANEL.
REPLACE THE MISCELLANEOUS TEST PANEL, M10398, OR THE EQUIPMENT COOLING TEST SWITCH, YEIS8, ON THE P61 PANEL (WDM 21-58-11).

EICAS Message FWD EQPT SMOKE Displayed and SMOKE Light Illum.
Light Remained Illum After Selector Was Positioned to OVRD
Figure 112

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EICAS MESSAGE "FWD EQPT SMOKE" DISPLAYED AND "SMOKE" LIGHT ILLUM. LIGHT REMAINED ILLUM AFTER SELECTOR WAS POSITIONED TO "OVRD" AND EICAS MESSAGE "FWD EQPT COOLING" DISPLAYED FOLLOWING 1 MINUTE DELAY. "SMOKE" LIGHT REMAINED ILLUM AFTER SELECTOR WAS POSITIONED TO "STBY"

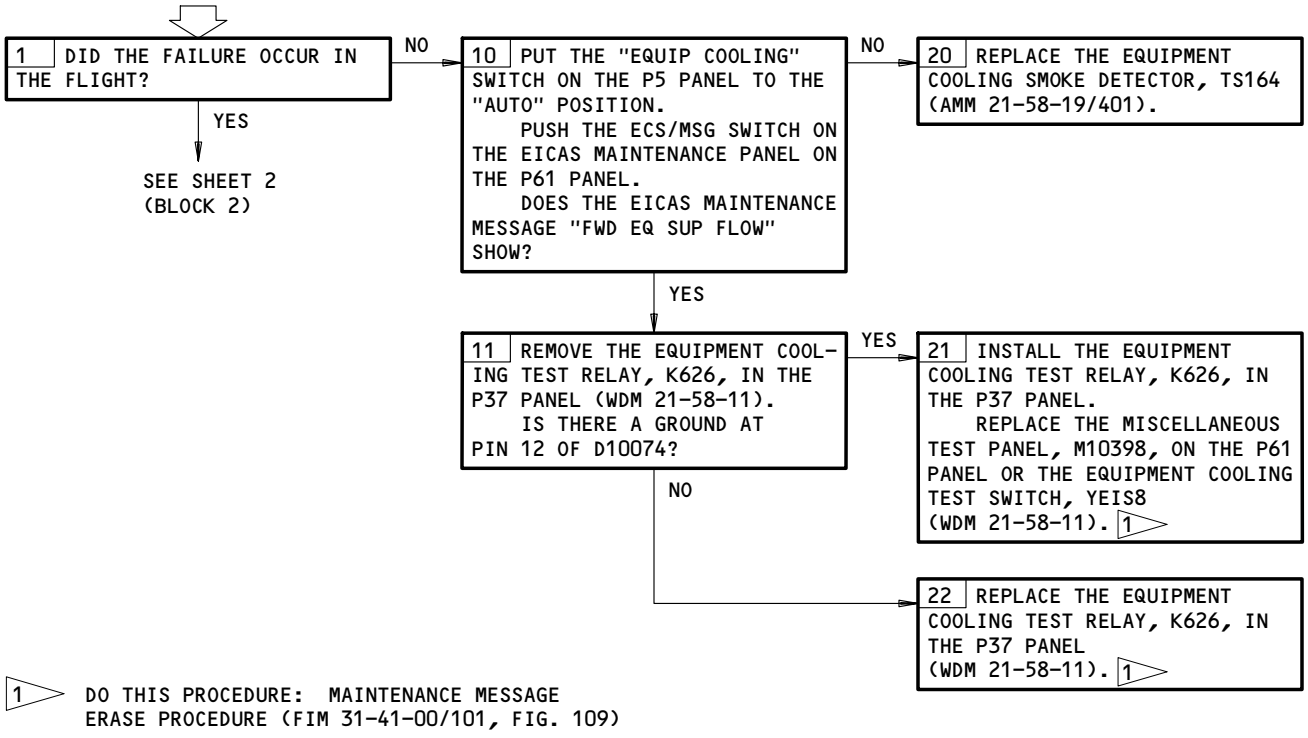
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18,6H21,11B8,11C19,11P11,11P13,11P21,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

NOTE: THERE IS OR THERE WAS A SMOKE CONDITION. FIND AND FIX THE SOURCE OF THE SMOKE.



EICAS Message FWD EQPT SMOKE Displayed and SMOKE Light Illum.
Light Remained Illum After Selector Was Positioned to OVRD and EICAS Message
FWD EQPT COOLING Displayed Following 1 Minute Delay.
SMOKE Light Remained Illum After Selector Was Positioned to STBY
Figure 113 (Sheet 1)

327627
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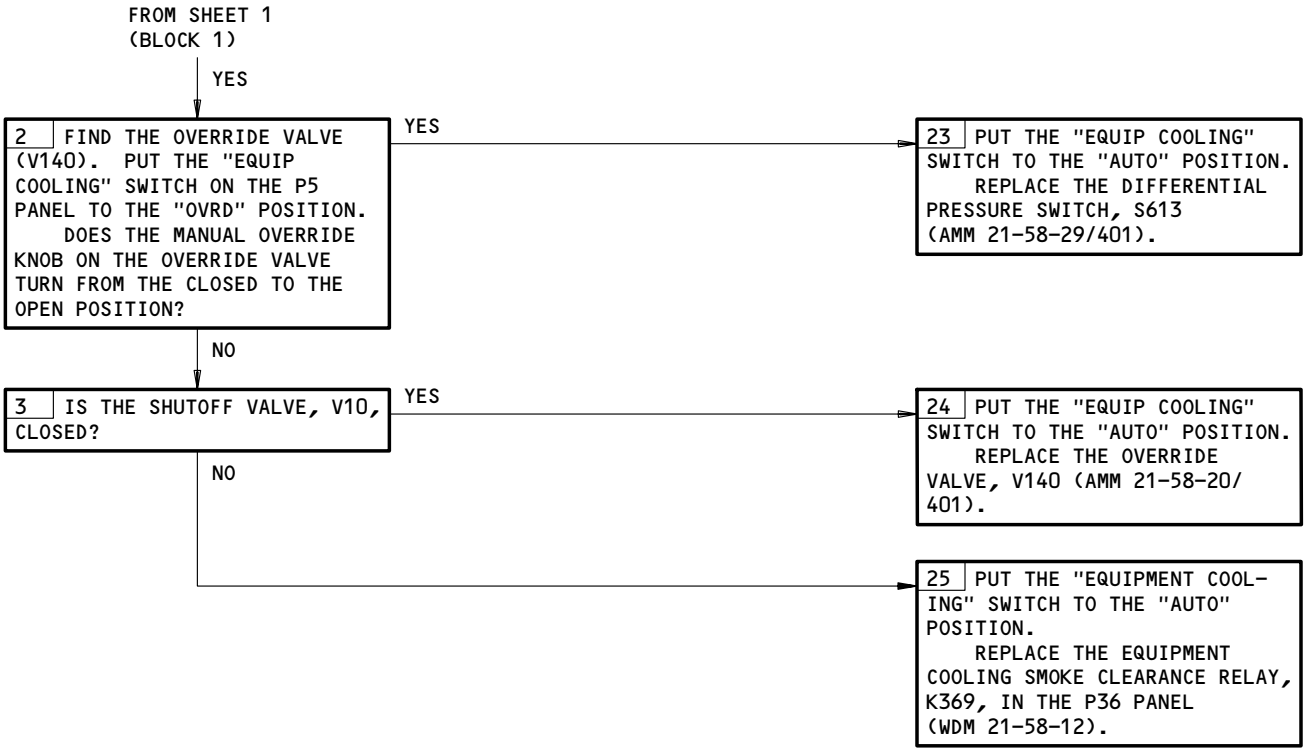

EICAS Message FWD EQPT SMOKE Displayed and SMOKE Light Illum.
Light Remained Illum After Selector Was Positioned to OVRD and EICAS Message
FWD EQPT COOLING Displayed Following 1 Minute Delay.
SMOKE Light Remained Illum After Selector Was Positioned to STBY
Figure 113 (Sheet 2)

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EICAS MESSAGE "FWD EQPT SMOKE" DISPLAYED AND "SMOKE" LIGHT ILLUM. LIGHT REMAINED ILLUM AFTER SELECTOR WAS POSITIONED TO "OVRD" AND EICAS MESSAGE "FWD EQPT COOLING" DISPLAYED FOLLOWING 1 MINUTE DELAY. "SMOKE" LIGHT EXTIN AFTER SELECTOR WAS POSITIONED TO "STBY"

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18,6H21,11B8,11C19,11P11,11P13,11P21,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

NOTE: THERE IS OR THERE WAS A SMOKE CONDITION. FIND AND FIX THE SOURCE OF THE SMOKE.

1 PUT THE "EQUIP COOLING" SWITCH ON THE P5 PANEL TO THE "AUTO" POSITION.
FIND THE OVERRIDE VALVE V140. PUT THE "EQUIP COOLING" SWITCH TO THE "OVRD" POSITION.
DOES THE MANUAL OVERRIDE KNOB ON THE OVERRIDE VALVE TURN FROM THE CLOSED TO THE OPEN POSITION?

YES → 20 PUT THE "EQUIP COOLING" SWITCH TO THE "AUTO" POSITION.
REPLACE THE DIFFERENTIAL PRESSURE SWITCH, S613 (AMM 21-58-29/401).

NO

2 IS THE SHUTOFF VALVE, V10, CLOSED?

YES → 21 PUT THE "EQUIP COOLING" SWITCH TO THE "AUTO" POSITION.
REPLACE THE OVERRIDE VALVE, V140 (AMM 21-58-20/401).

NO → 22 PUT THE "EQUIP COOLING" SWITCH TO THE "AUTO" POSITION.
REPLACE THE EQUIPMENT COOLING SMOKE CLEARANCE RELAY, K369, IN THE P36 PANEL (WDM 21-58-12).

EICAS Message FWD EQPT SMOKE Displayed and SMOKE Light Illum.
Light Remained Illum After Selector Was Positioned to OVRD and EICAS Message
FWD EQPT COOLING Displayed Following 1 Minute Delay.
SMOKE Light Extin After Selector Was Positioned to STBY
Figure 114

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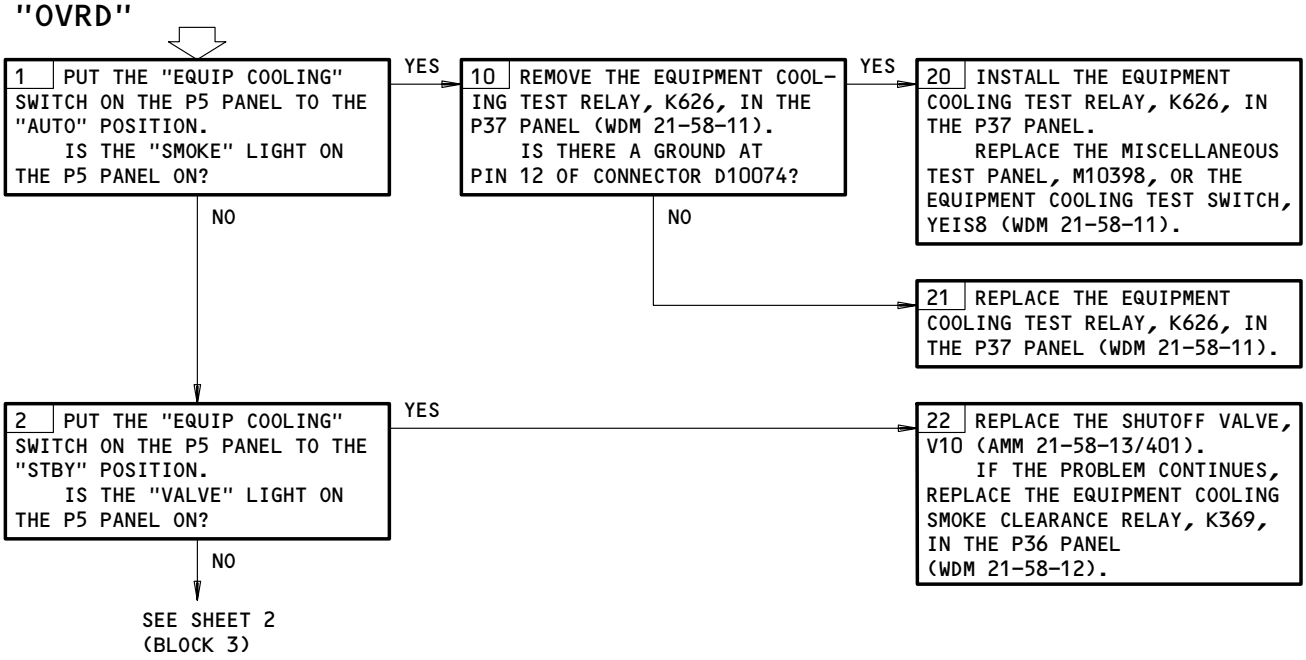
EICAS MESSAGE "FWD EQPT OVHT" DISPLAYED AND "OVHT" LIGHT ILLUM. AFTER SELECTOR WAS POSITIONED TO "STBY", LIGHT RE-ILLUM FOLLOWING 5 MINUTE DELAY. "NO COOLING" LIGHT DID NOT ILLUM IN "OVRD"

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18,6H21,11B8,11P11,11P13,11P21,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



1 DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109)

EICAS Message FWD EQPT OVHT Displayed and OVHT Light Illum.
After Selector Was Positioned to STBY, Light Re-illum Following 5 Minute Delay.
NO COOLING Light Did Not Illum in OVRD
Figure 115 (Sheet 1)

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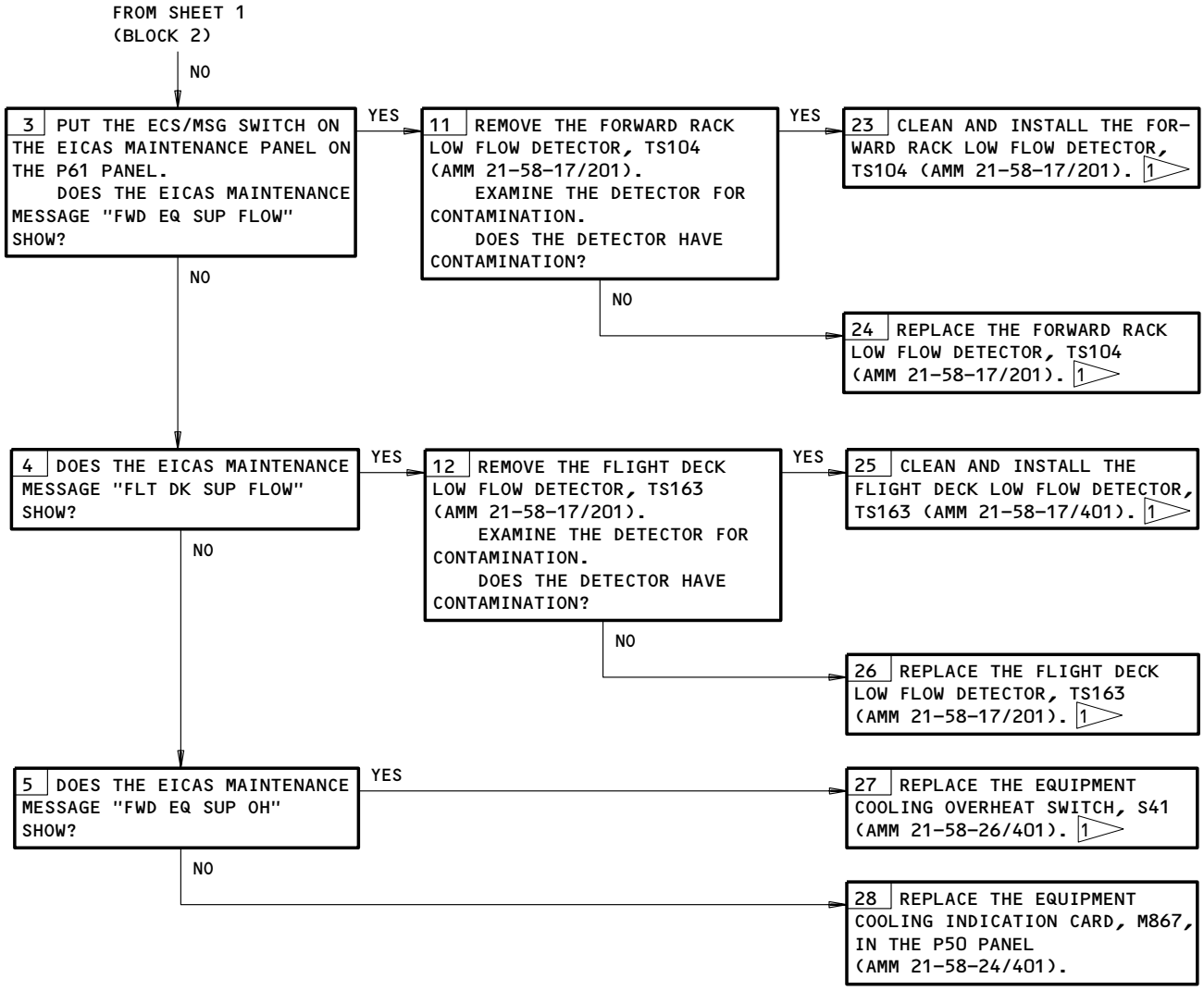

EICAS Message FWD EQPT OVHT Displayed and OVHT Light Illum.
After Selector Was Positioned to STBY, Light Re-illum Following 5 Minute Delay.
NO COOLING Light Did Not Illum in OVRD
Figure 115 (Sheet 2)

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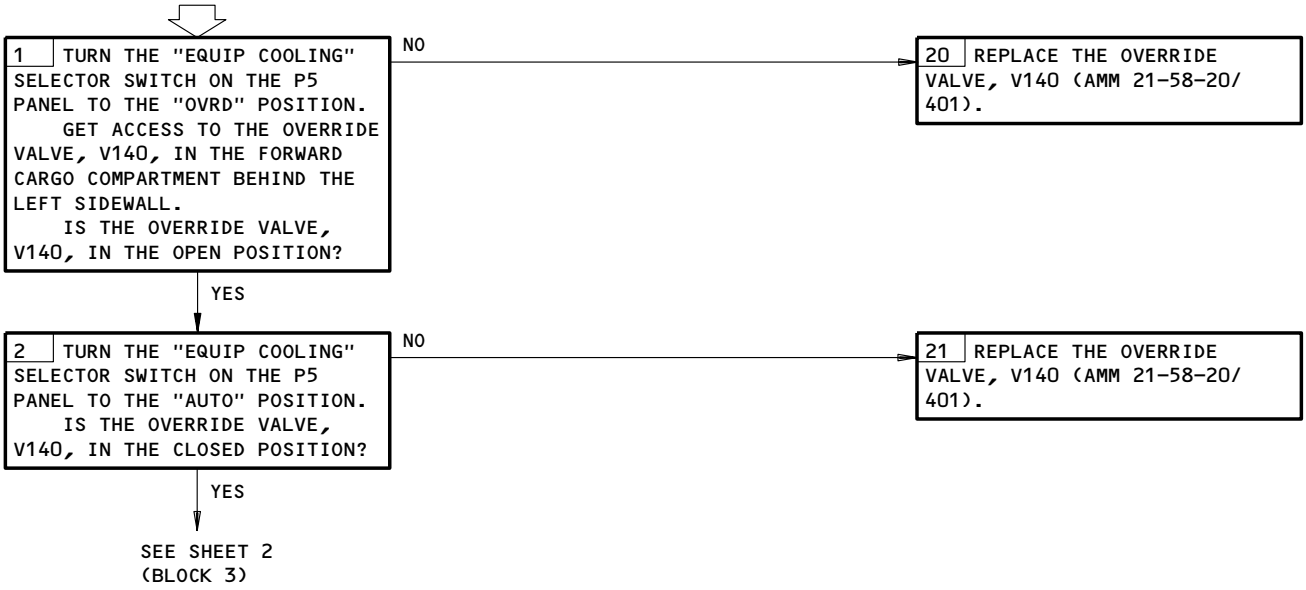
EICAS MESSAGE "FWD EQPT OVHT" DISPLAYED AND "OVHT" LIGHT ILLUM. AFTER SELECTOR WAS POSITIONED TO "STBY", LIGHT RE-ILLUM FOLLOWING 5 MINUTE DELAY. AFTER SELECTOR WAS POSITIONED TO "OVRD", EICAS MESSAGE "FWD EQPT COOLING" DISPLAYED AND "NO COOLING" LIGHT ILLUM

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18,6H21,11B8,11P11,11P13,11P21,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



EICAS Message FWD EQPT OVHT Displayed and OVHT Light Illum.
After Selector Was Positioned to STBY, Light Re-illum Following 5 Minute Delay.
After Selector Was Positioned to OVRD, EICAS Message
FWD EQPT COOLING Displayed and NO COOLING Light Illum
Figure 116 (Sheet 1)

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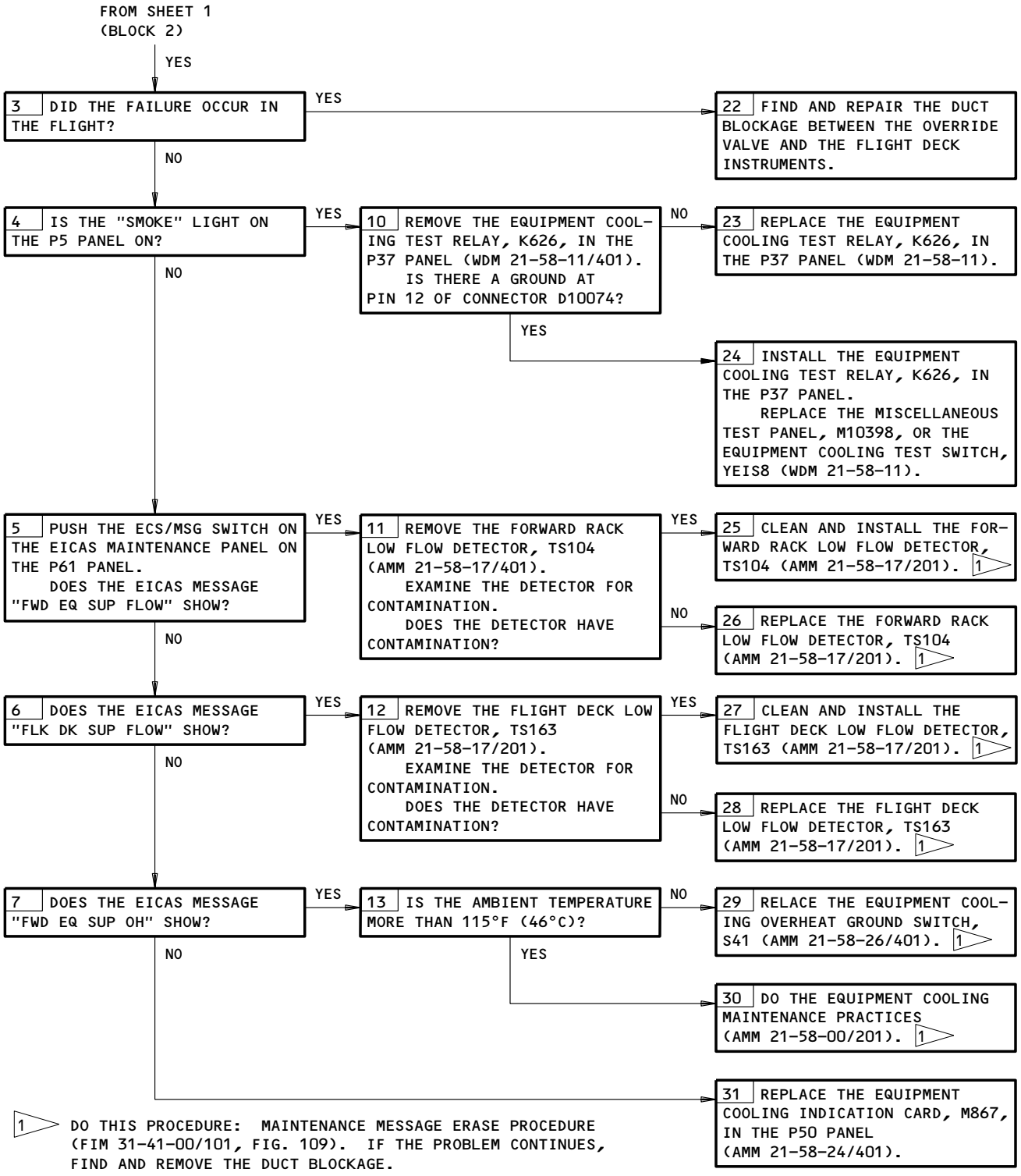

EICAS Message FWD EQPT OVHT Displayed and OVHT Light Illum.
After Selector Was Positioned to STBY, Light Re-illum Following 5 Minute Delay.
After Selector Was Positioned to OVRD, EICAS Message
FWD EQPT COOLING Displayed and NO COOLING Light Illum
Figure 116 (Sheet 2)

234822
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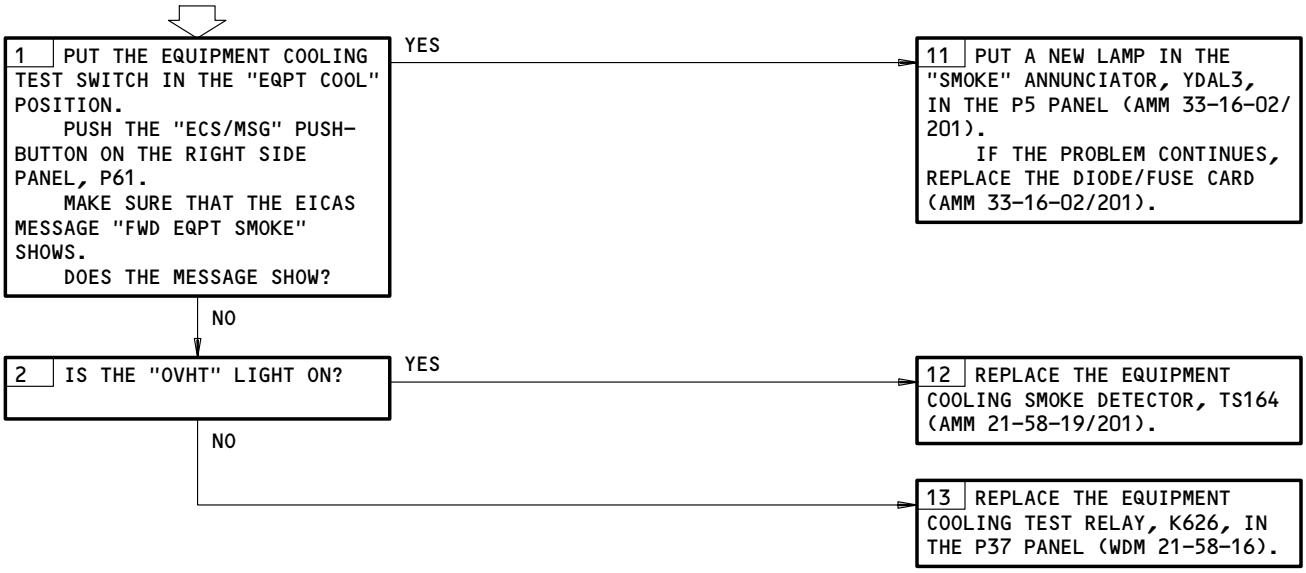
"SMOKE" LIGHT FAILED TO ILLUM DURING EQUIPMENT COOLING TEST

PREREQUISITES

MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
11P21

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



SMOKE Light Failed to Illum During Equipment Cooling Test
Figure 116A

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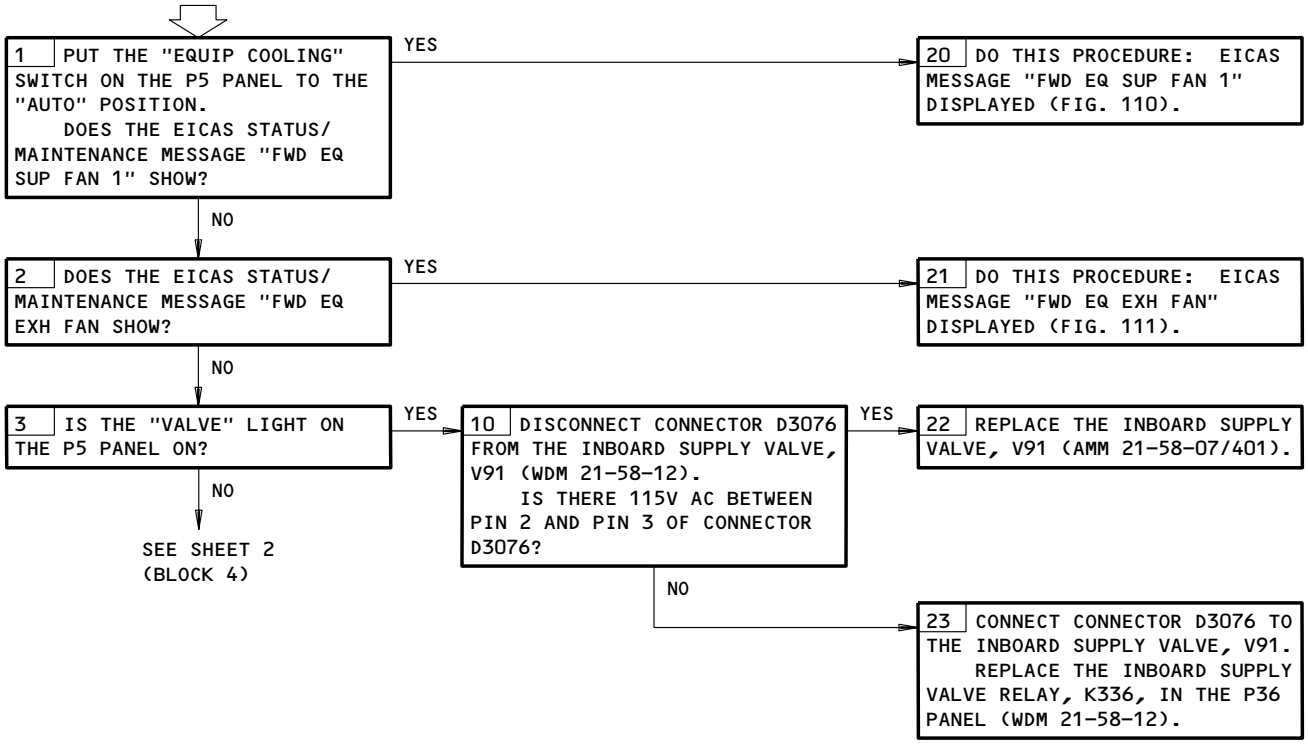
EICAS MESSAGE "FWD EQPT OVHT" DISPLAYED AND "OVHT" LIGHT ILLUM. LIGHT REMAINED EXTIN AFTER SELECTOR WAS POSITIONED TO "STBY"

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18,6H21,11B8,11P11,11P13,11P21,11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



EICAS Message FWD EQPT OVHT Displayed and OVHT Light Illum.
Light Remained Extin After Selector Was Positioned to STBY
Figure 117 (Sheet 1)

327636
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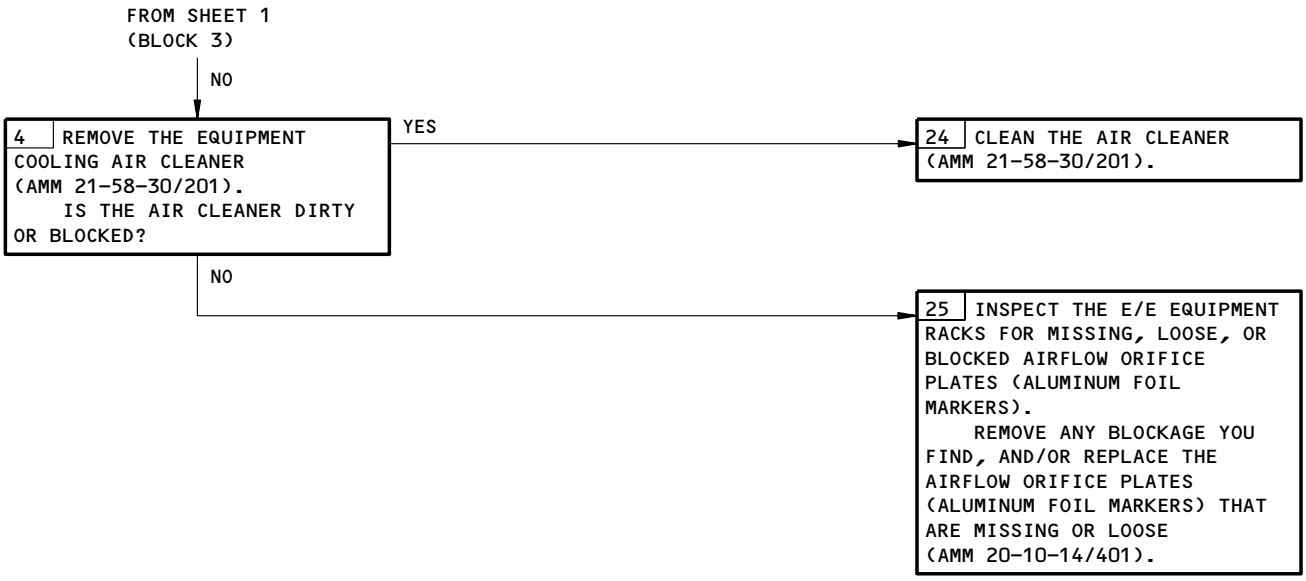

EICAS Message FWD EQPT OVHT Displayed and OVHT Light Illum.
Light Remained Extin After Selector Was Positioned to STBY
Figure 117 (Sheet 2)

A95171

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E/E COOLING MONITOR PROBLEMS

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6H18, 6H21, 11B8, 11P11, 11P13, 11P21, 11P22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

1 PUT THE "EQUIP COOLING" SWITCH ON THE P5 PANEL TO THE "AUTO" POSITION. LIFT THE LEVER ON THE E/E COOLING MONITOR TO THE "TO TEST" POSITION.
CAN YOU SEE ALL THE NINE BALLS?

NO → 20 CAN YOU SEE ANY OF THE BALLS?

NO → 40 REPLACE THE SUPPLY FAN CHECK VALVE (AMM 21-58-02/401).
IF THE PROBLEM CONTINUES, REPLACE THE SUPPLY FAN, B10 (AMM 21-58-06/401).
IF THE PROBLEM CONTINUES, REPLACE THE SUPPLY/EXHAUST FAN CONTROL RELAY, K1009, ON THE P36 PANEL (WDM 21-58-12).

YES

21 REMOVE THE E/E COOLING MONITOR INDICATOR FROM THE P61 PANEL AND CONNECT THE A21012 TEST GAUGE TO EACH INLET TUBE, ONE AT A TIME (AMM 21-58-34/201).
DOES THE A21012 TEST GAUGE MEASURE A MINIMUM PRESSURE OF 0.8-INCHES OF WATER (0.03 PSI) OR HIGHER (MINIMUM STATIC PRESSURE ON THE GROUND) FOR EACH INLET TUBE?

NO → 41 LOOK FOR EQUIPMENT THAT IS NOT ALIGNED, DUCT BLOCKAGE, OR LEAKAGE, AS SHOWN ON TABLE A.
IF THE PROBLEM CONTINUES, REMOVE AND CLEAN THE E/E COOLING MONITOR (AMM 21-58-34/201).

YES

22 EXAMINE THE EICAS FOR THE "FWD EQ EXH FAN" MESSAGE.
DOES THE MESSAGE SHOW?

YES → 42 DO THIS PROCEDURE: "FWD EQ EXH FAN" PROCEDURE (FIG. 111, BLOCK 1).

NO → 43 DO THIS PROCEDURE: "FWD EQ SUP FAN 1" PROCEDURE (FIG. 110, BLOCK 1).

YES

2 PUT THE "TO TEST" LEVER TO THE DOWN POSITION.
CAN YOU SEE ALL THE NINE BALLS?

YES → 44 REMOVE AND CLEAN THE E/E COOLING MONITOR (AMM 21-58-34/201).
IF THE PROBLEM CONTINUES, REPLACE THE E/E COOLING MONITOR (AMM 21-58-34/201).

NO

3 THE SYSTEM IS OK.

NOTE: THE BALLS MAY STAY IN THE UP POSITION MOMENTARILY.

E/E Cooling Monitor Problems
Figure 118 (Sheet 1)

327638
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FLOW BALL	SENSE-LINE LOCATION
L VOR EADI EHSI FMCDU-1	OPEN THE FORWARD ACCESS DOOR 113AL AND FIND THE SENSE-LINES ON THE FORWARD SIDE OF THE NOSE GEAR WHEEL WELL.
E-1/E-2 IRU-L IRU-C IRU-R	OPEN THE MAIN EQUIPMENT CENTER DOOR 119AL AND FIND THE SENSE-LINES BELOW THE FLOOR PANEL TO THE LEFT OF DOOR 119AL.
E-5	OPEN THE FORWARD CARGO DOOR 821 AND REMOVE THE SIDEWALL PANEL THAT IS FOUND 4 FEET (1.3 METERS) AFT OF THE FORWARD CARGO DOOR (AMM 25-52-01/401). FIND THE SENSE-LINE ON THE EQUIPMENT COOLING DUCT.

TABLE A

E/E Cooling Monitor Problems
Figure 118 (Sheet 2)

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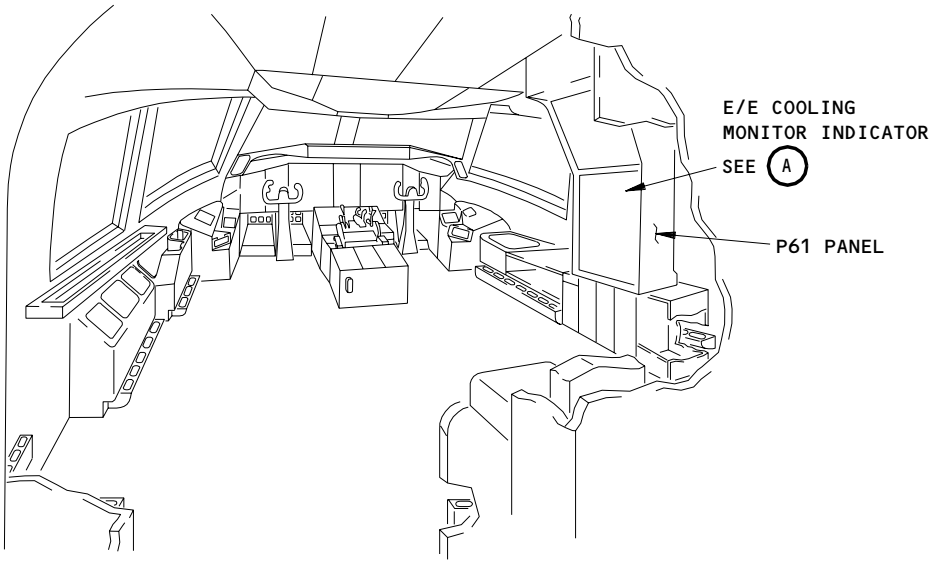
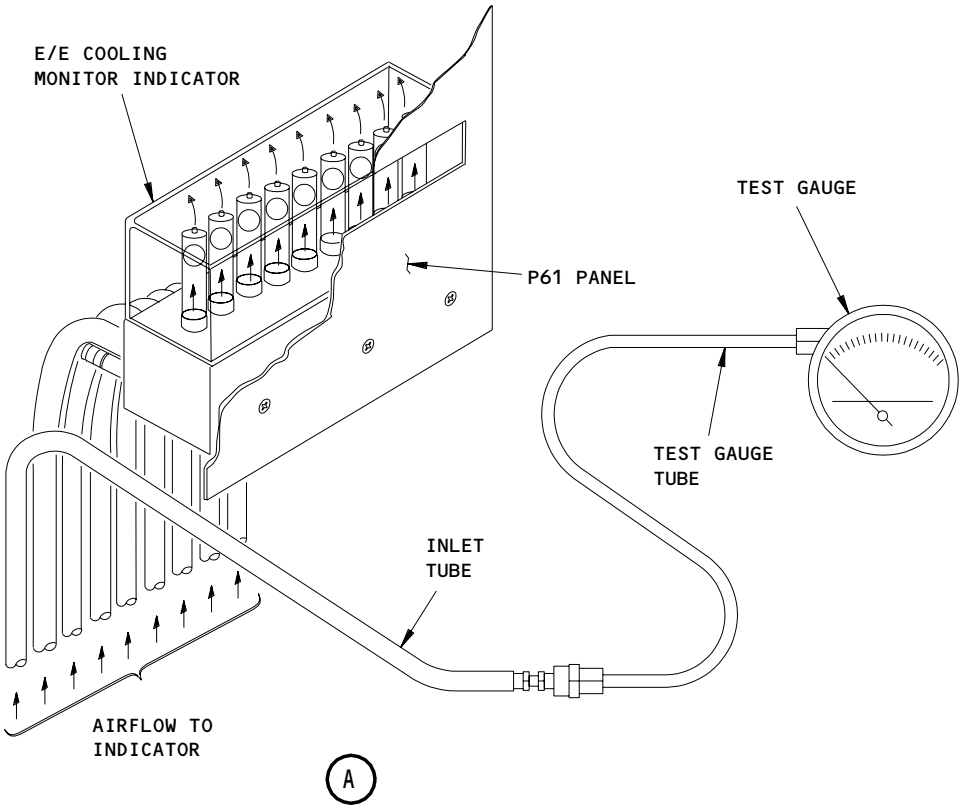


FLIGHT COMPARTMENT



E/E Cooling Monitor Problems
Figure 118 (Sheet 3)

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TEMPERATURE CONTROL

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
BULB - COMPARTMENT TEMPERATURE				21-65-03
AFT, TS183	5	1	PASSENGER COMPT CEILING	
FWD, TS182	5	1	PASSENGER COMPT CEILING	
FWD CARGO, TS497	9	1	FWD CARGO DOOR, 821	
MID, TS375	5	1	PASSENGER COMPT CEILING	
BULB - DUCT TEMPERATURE				21-65-04
AFT, TS186	4	1	PASS COMPT SCULPTURED CEILING PANEL	
AUX FWD, TS471	3	1	PASS COMPT SCULPTURED CEILING PANEL	
AUX MID, TS472	4	1	PASS COMPT SCULPTURED CEILING PANEL	
FLT COMPT, TS184	3	1	119AL, MAIN EQUIP CTR	
FWD, TS185	4	1	PASS COMPT SCULPTURED CEILING PANEL	
MID, TS376	4	1	PASS COMPT SCULPTURED CEILING PANEL	
CIRCUIT BREAKERS	1		FLT COMPT, P11	*
AUX ZONE CNTLR, C668		1	11R11	*
FWD CARGO DUCT OVHT, C4025		1	11N22	*
FWD CARGO TEMP CONT VLV CLOSE, C4180		1	11N21	*
TRIM AIR, C670		1	11C33	*
ZONE CNTLR, C667		1	11R15	*
ZONE DUCT OVHT AFT, C4031		1	11R27	*
ZONE DUCT OVHT AUX FWD, C4026		1	11H5	*
ZONE DUCT OVHT AUX MID, C4027		1	11H6	*
ZONE DUCT OVHT FLT DK, C4029		1	11R24	*
ZONE DUCT OVHT FWD, C4030		1	11R25	*
ZONE DUCT OVHT MID, C4028		1	11R26	*
ZONE TEMP CONT MAN FLT DK, C4184		1	11P24	*
ZONE TEMP CONT VLV CLOSE AFT, C4186		1	11P27	*
ZONE TEMP CONT VLV CLOSE AUX FWD, C4181		1	11H2	*
ZONE TEMP CONT VLV CLOSE AUX MID, C4182		1	11H3	*
ZONE TEMP CONT VLV CLOSE FWD, C4185		1	11P25	*
ZONE TEMP CONT VLV CLOSE MID, C4183		1	11P26	*
ZONE TEMP IND, C4019		1	11R16	*
CIRCUIT BREAKERS			119AL, MAIN EQUIP CENTER, P36	
AFT LH CBN CREW REST AREA HEAT, C403 [2]		1	36B4	*
AFT LH CBN CREW REST AREA TEMP CONT, C919 [2]		1	36D6	*
FLT DK CREW REST AREA HEAT, C400 [2]		1	36C4	
FLT DK CREW REST AREA TEMP CONT, C916 [2]		1	36D3	
CIRCUIT BREAKERS			119AL, MAIN EQUIP CENTER, P37	
AFT RH CBN CREW REST AREA HEAT, C404 [2]		1	37B6	*
AFT RH CBN CREW REST AREA TEMP CONT, C920 [2]		1	37H5	*
FWD CBN CREW REST AREA HEAT, C402 [2]		1	37B4	
FWD CBN CREW REST AREA TEMP CONT, C918 [2]		1	37H4	

* SEE THE WDM EQUIPMENT LIST

[1] 767-300 AIRPLANES

[2] ALL SAS AIRPLANES

Temperature Control - Component Index
Figure 101 (Sheet 1)

587336

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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
COMPUTERS - (31-41-00/101)				
L EICAS, M10181				
R EICAS, M10182				
CONTROLLERS - (21-51-00/101)				
L PACK TEMPERATURE, M126				
R PACK TEMPERATURE, M127				
CONTROLLER - (49-61-00/101)				
AUX POWER, M206				
CONTROLLER - AUX ZONE TEMPERATURE, M1609	2	1	119AL, MAIN EQUIP CTR	21-61-12
CONTROLLERS - CREW REST TEMPERATURE 2				
AFT LH CABIN, M1771	11	1	AFT PASS. COMPT CEILING	21-66-01
AFT RH CABIN, M1772	11	1	AFT PASS. COMPT CEILING	21-66-01
FLT DECK, M1769	11	1	FWD PASS. COMPT CEILING	21-66-01
FWD CABIN, M1770	11	1	FWD PASS. COMPT CEILING	21-66-01
CONTROLLER - ZONE TEMPERATURE, M195	1	1	119AL, MAIN EQUIP CTR	21-61-03
DIODES -			119AL, MAIN EQUIP CTR, P37	
AFT ZONE INOP, R212		1		
AUX FWD ZONE INOP, R630		1		
AUX MID ZONE INOP, R633		1		
FLT DK CREW REST AREA, R273 2		1		
FWD ZONE INOP, R211		1		
FWD CARGO ZONE INOP, R638		1		
MID ZONE INOP, R250		1		
32K ALT SUPPRESSOR, R447,R446		1		
FILTER - ZONE TEMPERATURE SENSOR	3	4	LEFT SIDE FLT COMPT CEILING PANEL AND PASS COMPT CEILING	21-61-09
HEATER - AFT LH CREW REST, B429 2	10	1	AFT PASS. COMPT CEILING	21-66-01
HEATER - AFT RH CREW REST, B430 2	10	1	AFT PASS. COMPT CEILING	21-66-01
HEATER - FLT DK CREW REST, B427 2	10	1	FWD PASS. COMPT CEILING	21-66-01
HEATER - FWD CBN CREW REST, B428 2	10	1	FWD PASS. COMPT CEILING	21-66-01
INDICATOR - COMPARTMENT TEMPERATURE, M10078	1	1	FLT COMPT, P5	21-65-01
INDICATOR - VALVE POSITION, YBFN1	1	1	FLT COMPT, P5, AIR COND CONT PNL	21-64-01
LIGHTS -				
AFT ZONE INOP, YBFL3	1	1	FLT COMPT, P5, AIR COND CONT PANEL, M14	*
FLT DECK INOP, YBFL1	1	1	FLT COMPT, P5, AIR COND CONT PANEL, M14	*
FWD CARGO A/C FAULT, YIHL1	2	1	FLT COMPT, P5, FWD CARGO A/C CONT PANEL, M1619	*
FWD ZONE INOP, YBFL2	1	1	FLT COMPT, P5, AIR COND CONT PANEL, M14	*
MID ZONE INOP, YBFL4	1	1	FLT COMPT, P5, AIR COND CONT PANEL, M14	*
MUFFLER - TRIM AIR 1	1	6	193FL, LEFT ECS BAY	21-61-11
PANEL - AIR CONDITIONING CONTROL, M14	1	1	FLT COMPT, P5	*
PANEL - (31-41-00/101)				
EICAS MAINTENANCE, M10372				
PANEL - FWD CARGO A/C CONTROL, M1619	2	1	FLT COMPT, P5	*
RELAYS - (31-01-36/101)				
AIR/GROUND SYS 1, K141				
AIR/GROUND SYS 1, K1219				
CARGO AIR COND STATUS, K2058				

* SEE THE WDM EQUIPMENT LIST

Temperature Control - Component Index
Figure 101 (Sheet 2)

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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
RELAYS -			119AL, MAIN EQUIP CTR, P37	
AFT ZONE AUTO/OFF, K10313		1		
AFT ZONE DUCT OVHT, K240		1		
AFT ZONE INOP, K10364		1		
AUX FWD ZONE AUTO/OFF, K2060		1		
AUX FWD ZONE DUCT OVHT, K2059		1		
AUX FWD ZONE INOP, K2061		1		
AUX MID ZONE AUTO/OFF, K2063		1		
AUX MID ZONE DUCT OVHT, K2062		1		
AUX MID ZONE INOP, K2064		1		
FLT COMPT ZONE DUCT OVHT, K238		1		
FWD CARGO AUTO/OFF, K1221		1		
FWD CARGO DUCT OVHT, K1222		1		
FWD CARGO INOP, K1217		1		
32K ALT, K2123		1		
FWD ZONE AUTO/OFF, K10312		1		
FWD ZONE DUCT OVHT, K239		1		
FWD ZONE INOP, K10363		1		
MID ZONE AUTO/OFF, K831		1		
MID ZONE DUCT OVHT, K833		1		
MID ZONE INOP, K832		1		
RESISTORS - FWD CARGO TEMPERATURE				
CARGO DUCT TEMP, R656		1		
L PACK TEMP, R657		1		
SELECTORS - ZONE TEMPERATURE				21-61-04
AFT, YBFR517	1	1	FLT COMPT, P5, AIR COND CONT PANEL, M14	
AUX FWD, YBFR516	1	1	FLT COMPT, P5, AIR COND CONT PANEL, M14	
AUX MID, YBFR571	1	1	FLT COMPT, P5, AIR COND CONT PANEL, M14	
FLT COMPT, YBFR515	1	1	FLT COMPT, P5, AIR COND CONT PANEL, M14	
FWD CARGO, R634	2		FLT COMPT, P5, FWD CARGO A/C CONT PANEL, M1619	
SELECTORS - CREW REST TEMPERATURE 2				
AFT LH CABIN, M1766	11	1	AFT LH CREW REST AREA	21-66-02
AFT RH CABIN, M1767	11	1	AFT RH CREW REST AREA	21-66-02
FLT DECK, M1764	11	1	FLT DK CREW REST AREA	21-66-02
FWD CABIN, M1768	11	1	FWD CREW REST AREA	21-66-02
SENSORS - CREW DUCT TEMPERATURE 2				
AFT LH CREW REST, TS517	12	1	AFT PASS. COMPT CEILING	21-66-03
AFT RH CREW REST, TS519	12	1	AFT PASS. COMPT CEILING	21-66-03
FLT DK CREW REST, TS516	12	1	FWD PASS. COMPT CEILING	21-66-03
FWD CREW REST, TS521	12	1	FWD PASS. COMPT CEILING	21-66-03

Temperature Control - Component Index
Figure 101 (Sheet 3)

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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
SENSOR - CREW REST ZONE TEMPERATURE 2				
AFT LH CREW REST, TS518	12	1	AFT LH CREW REST AREA	21-66-04
AFT RH CREW REST, TS520	12	1	AFT RH CREW REST AREA	21-66-04
FLT DK CREW REST, TS515	12	1	FLT DK CREW REST AREA	21-66-04
FWD CREW REST, TS522	12	1	FWD CREW REST AREA	21-66-04
SENSOR - DUCT AIR TEMPERATURE				21-61-02
AFT, TS179	4	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
AUX FWD, TS468	3	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
AUX MID, TS476	4	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
FLT COMPT, TS175	3	1	119AL, MAIN EQUIP CTR	
FWD, TS177	4	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
FWD CARGO, TS495	9	1	FORWARD CARGO DOOR, 821	
MID, TS372	4	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
SENSOR - DUCT AIR (MIX MANIFOLD) TEMPERATURE, TS200, TS201	6	2	821, FWD CARGO, MIX BAY MANIFOLD	21-61-02
SENSOR - SKIN TEMPERATURE, TS523 2	11	1	821, FWD CARGO COMPT	21-66-05
SENSOR - ZONE TEMPERATURE				21-61-08
AFT CABIN, TS180	6	1	PASSENGER COMPT CEILING	
AUX FWD CABIN, TS469	6	1	PASSENGER COMPT CEILING	
AUX MID CABIN, TS470	6	1	PASSENGER COMPT CEILING	
FLT COMPT, TS176	5	1	LEFT SIDE FLT COMPT CEILING PANEL	
FWD CABIN, TS178	6	1	PASSENGER COMPT CEILING	
FWD CARGO, TS496	9	1	FORWARD CARGO DOOR, 821	
MID CABIN, TS373	6	1	PASSENGER COMPT CEILING	
SWITCH - ZONE DUCT OVERHEAT				21-61-01
AFT CABIN, S23	4	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
AUX FWD CABIN, S791	3	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
AUX MID CABIN, S792	4	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
FLT COMPT, S21	3	1	119AL, MAIN EQUIP CTR	
FWD CABIN, S22	4	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
FWD CARGO COMPT, S793	9	1	FORWARD CARGO DOOR, 821	
MID CABIN, S635	4	1	PASSENGER COMPT SCULPTURED CEILING PANEL	
SWITCH/LIGHT - FWD CARGO A/C, YIHS1	2	1	FLT COMPT, P5, FWD CARGO A/C CONT PANEL, M1619	*
SWITCH/LIGHT - TRIM AIR, YBFS1	1	1	FLT COMPT, P5, AIR COND CONT PANEL, M14	*

SEE THE WDM EQUIPMENT LIST

Temperature Control - Component Index
Figure 101 (Sheet 4)

587339
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COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
UNIT - (REF 31-31-00, FIG. 101)				
DIGITAL FLIGHT DATA ACQUISITION, M138				
VALVE - DUAL MODULATING, V163	11	1	FWD PASS COMPT CEILING	21-66-06
VALVE - TRIM AIR MODULATING				21-61-07
AFT CABIN ZONE, V3	8	1	193FL, LEFT ECS BAY	
AUX FWD CABIN ZONE, V152	8	1	193FL, LEFT ECS BAY	
AUX MID CABIN ZONE, V153	8	1	193FL, LEFT ECS BAY	
FLT COMPT ZONE, V1	8	1	193FL, LEFT ECS BAY	
FWD CABIN ZONE, V2	8	1	193FL, LEFT ECS BAY	
FWD CARGO ZONE, V385	10	1	821, FWD CARGO, MIX BAY	
MID CABIN ZONE, V145	8	1	193FL, LEFT ECS BAY	
VALVE - TRIM AIR PRESSURE REGULATING, V4	8	1	193NL, LEFT ECS BAY	21-61-06
VALVE - TRIM AIR SUPPLY CHECK	8	2	193NL, LEFT ECS BAY	21-61-05

Temperature Control - Component Index
Figure 101 (Sheet 5)

745399
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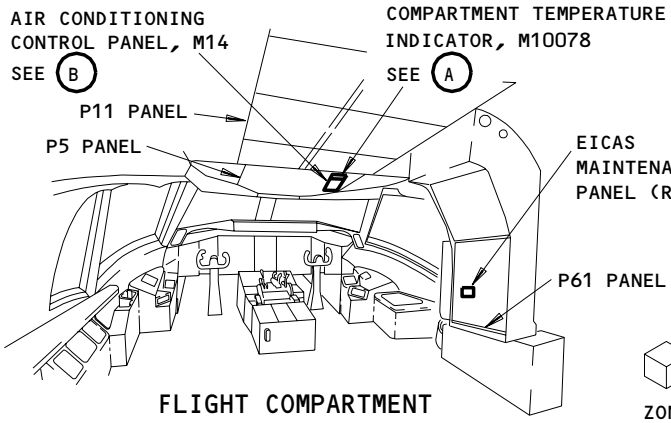
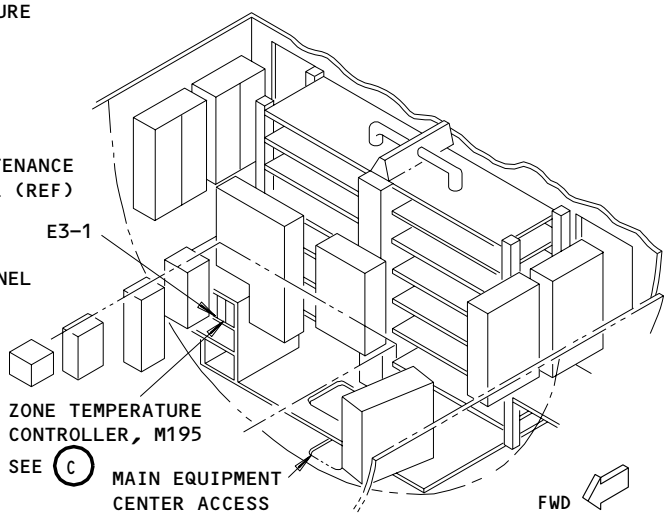
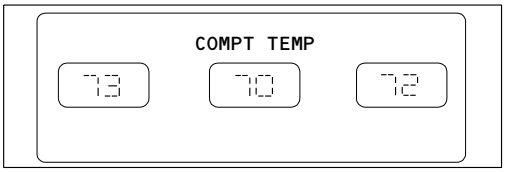


FLIGHT COMPARTMENT

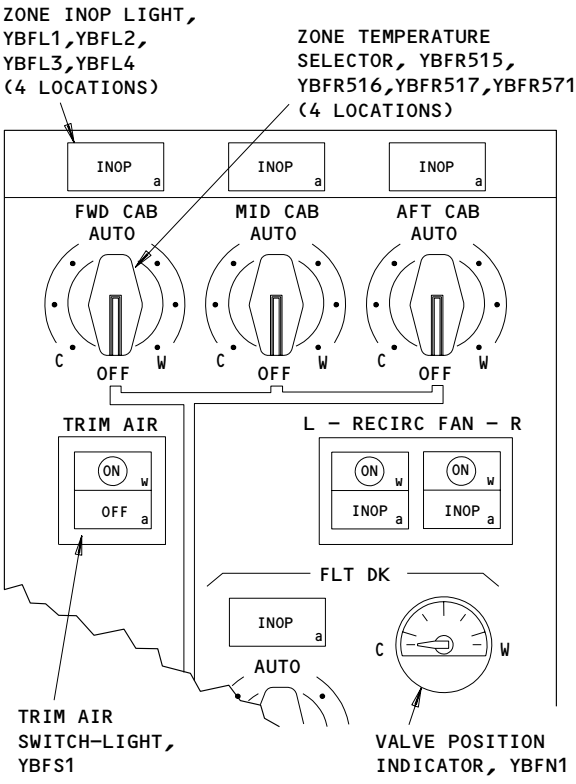


MAIN EQUIPMENT CENTER



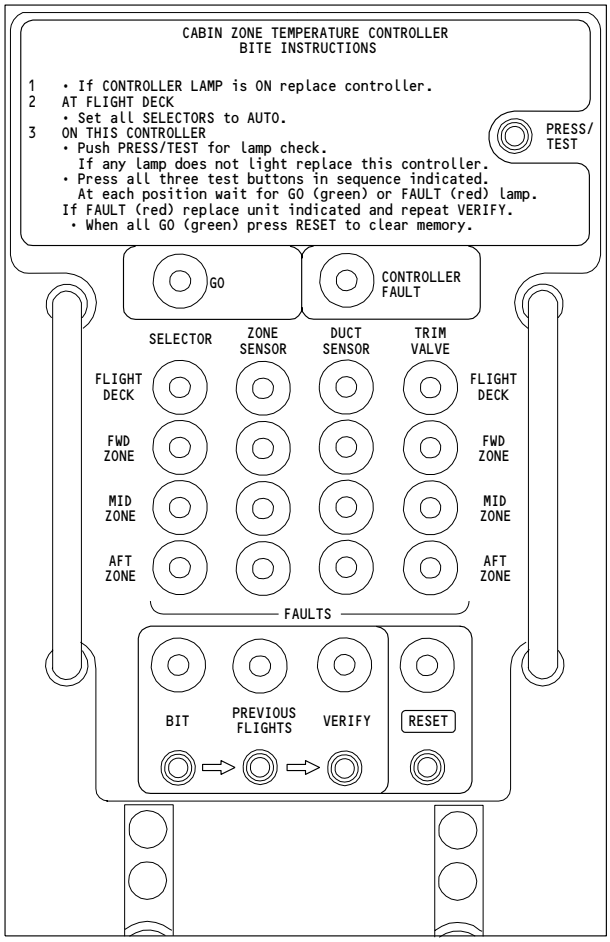
COMPARTMENT TEMPERATURE INDICATOR, M10078

A



AIR CONDITIONING CONTROL PANEL, M14

B



ZONE TEMPERATURE CONTROLLER, M195

C

Component Location
Figure 102 (Sheet 1)

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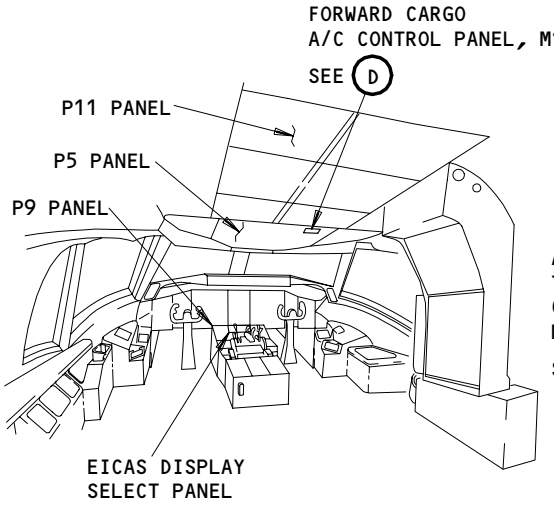
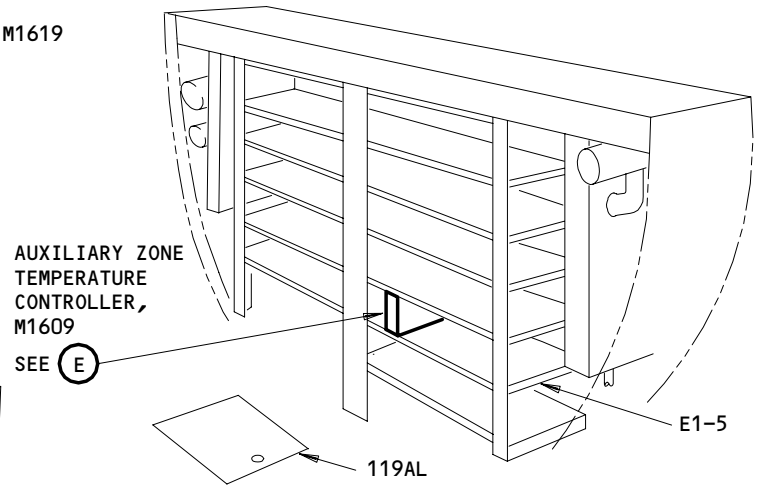


FLIGHT COMPARTMENT



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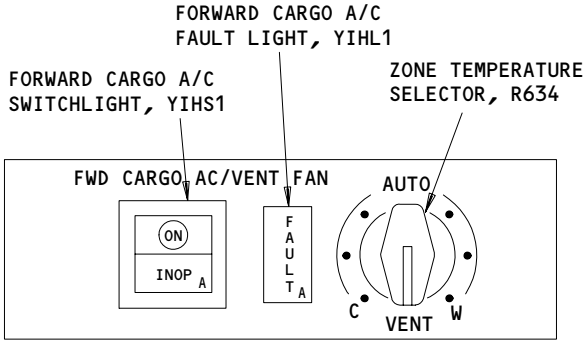
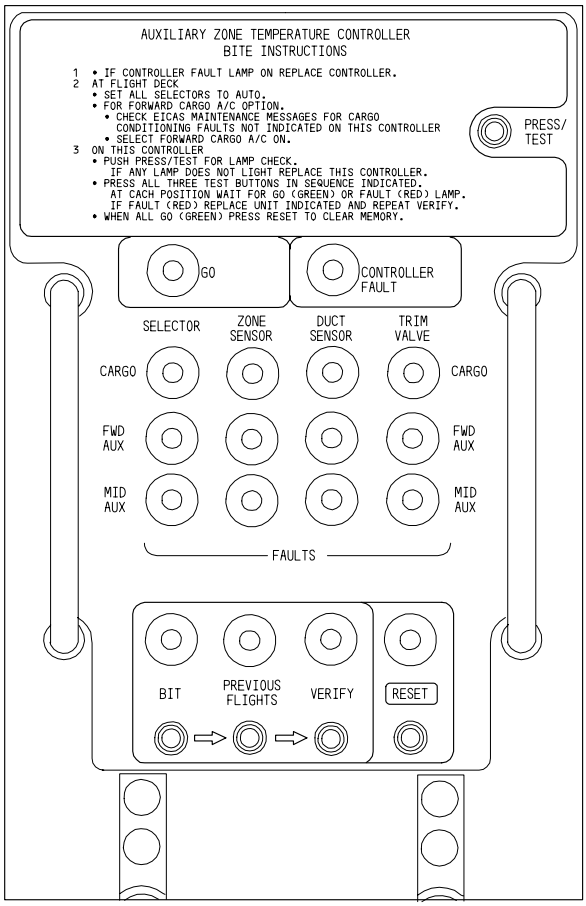


FORWARD CARGO A/C CONTROL PANEL, M1619

D



AUXILIARY ZONE TEMPERATURE CONTROLLER, M1609

E

Temperature Control - Component Location
Figure 102 (Sheet 2)

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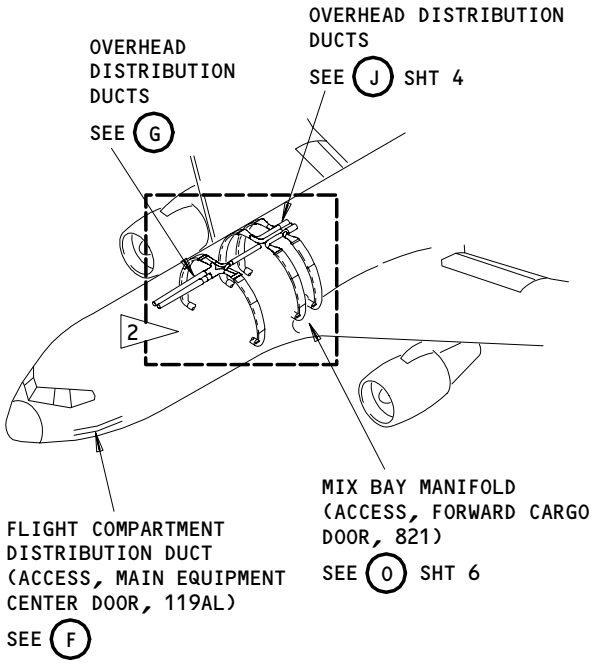
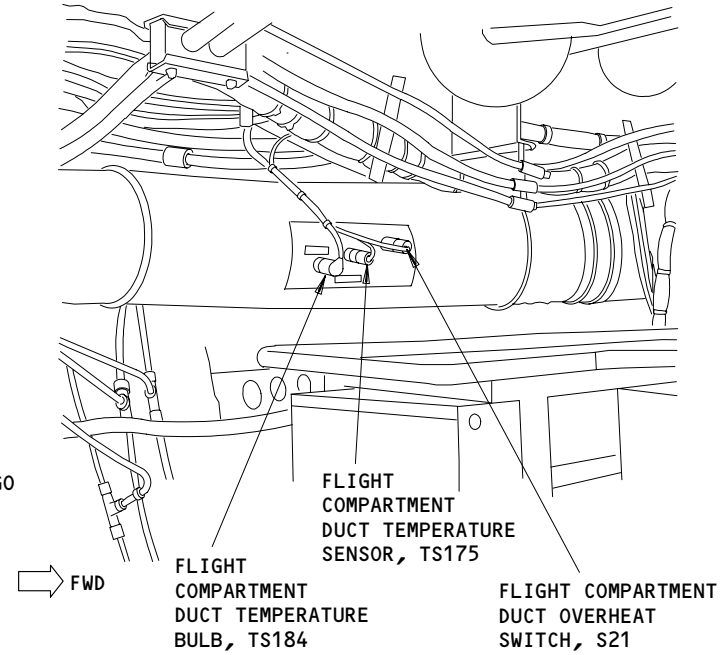
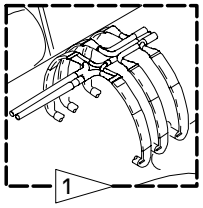
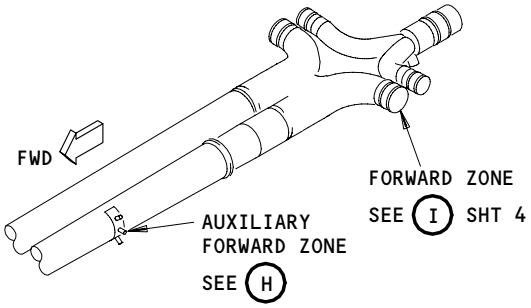




FLIGHT COMPARTMENT DISTRIBUTION DUCT

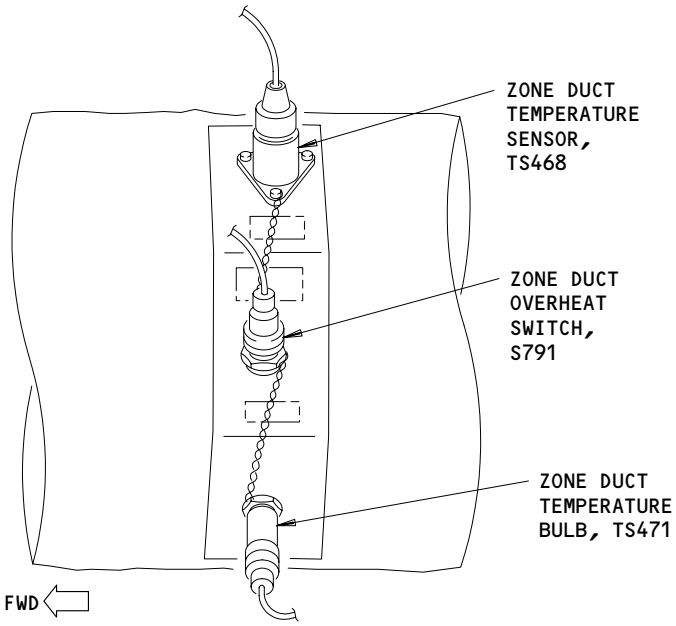
F





OVERHEAD DISTRIBUTION DUCT

G



AUXILIARY FORWARD ZONE DUCT SENSORS

H

1 767-200 AIRPLANES

2 767-300 AIRPLANES

Temperature Control - Component Location
Figure 102 (Sheet 3)

696436

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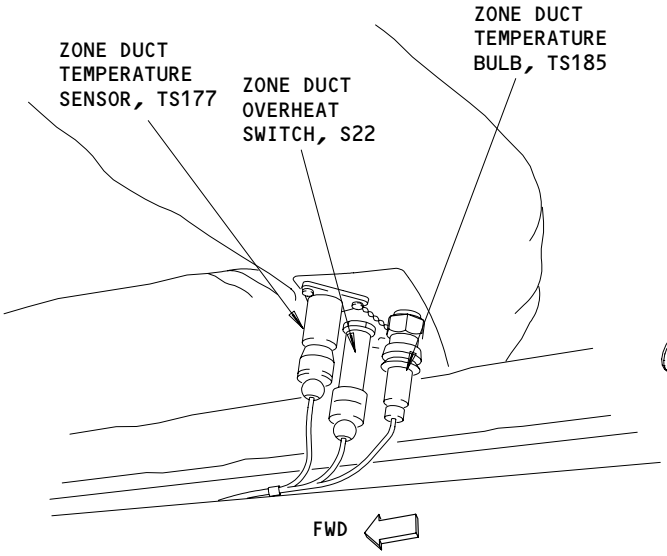
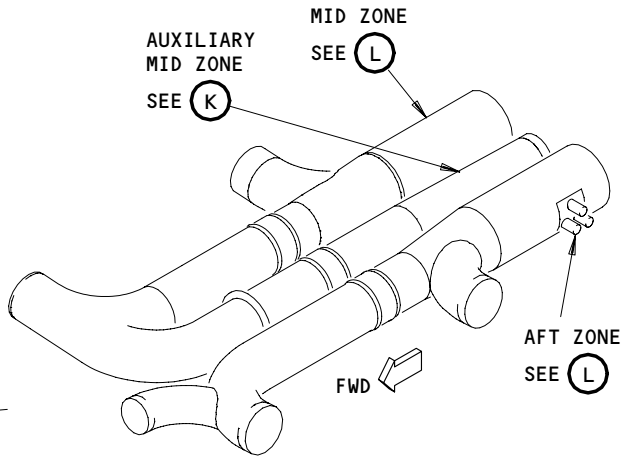


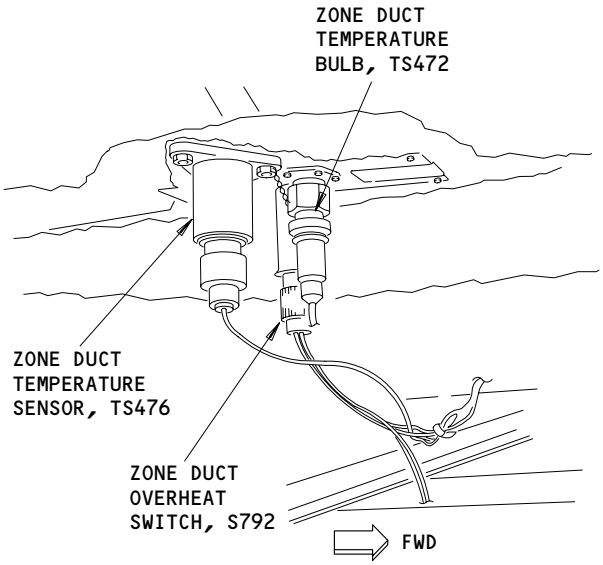
FORWARD ZONE DUCT SENSORS

(I) FROM SHT 3



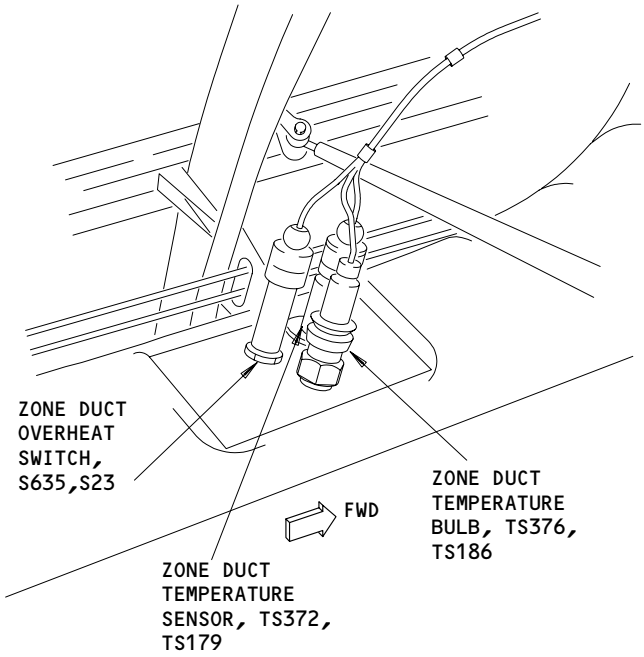
OVERHEAD DISTRIBUTION DUCT

(J)



AUXILIARY MID ZONE DUCT SENSORS

(K)



MID AND AFT ZONE DUCT SENSORS
(EXAMPLE – MID ZONE SHOWN)

(L)

Temperature Control – Component Location
Figure 102 (Sheet 4)

613195
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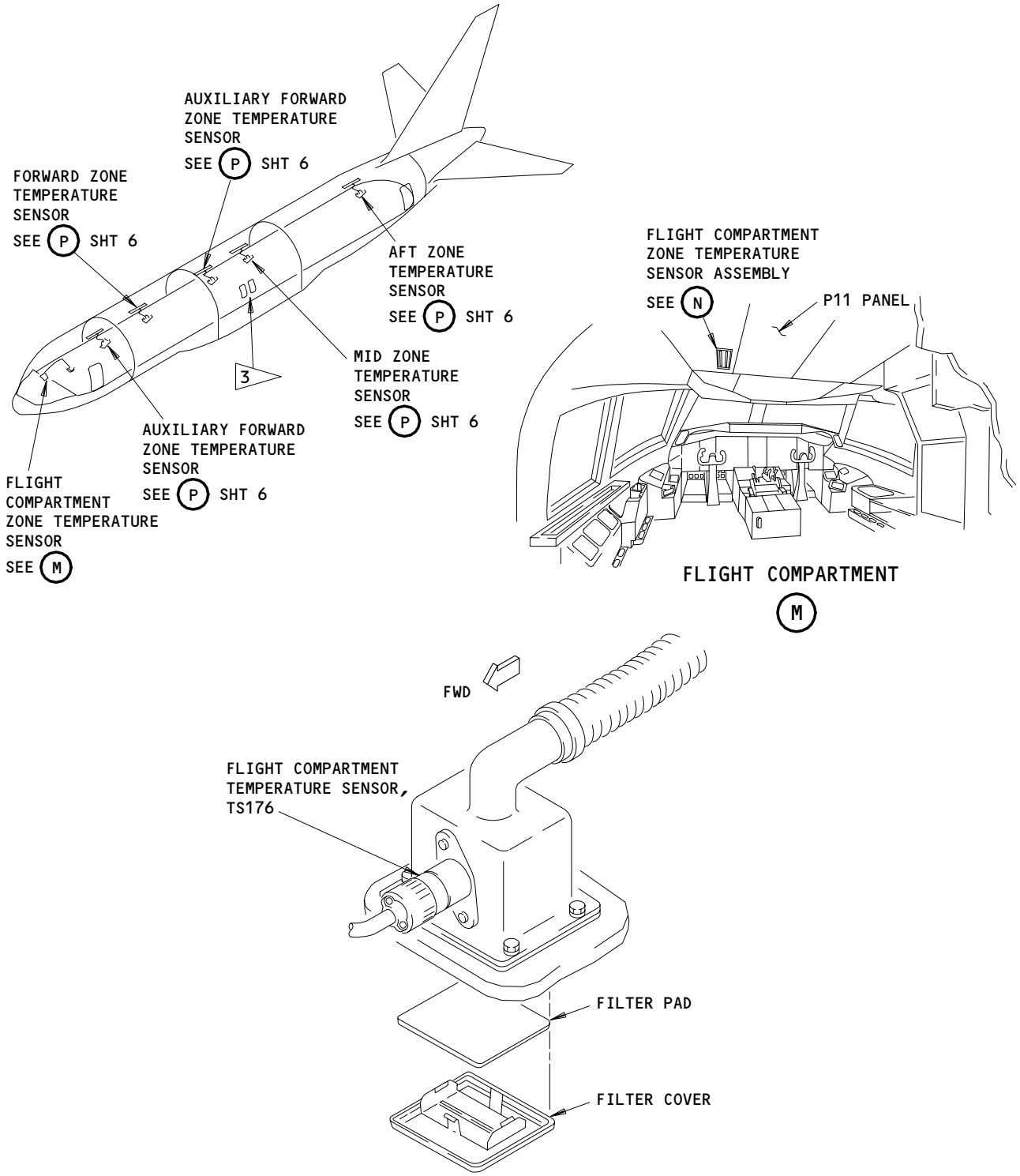

3 ON SAS 150-999; AND ALL MTH AIRPLANES, DUAL OVERWING ESCAPE HATCHES

Temperature Control - Component Location
Figure 102 (Sheet 5)

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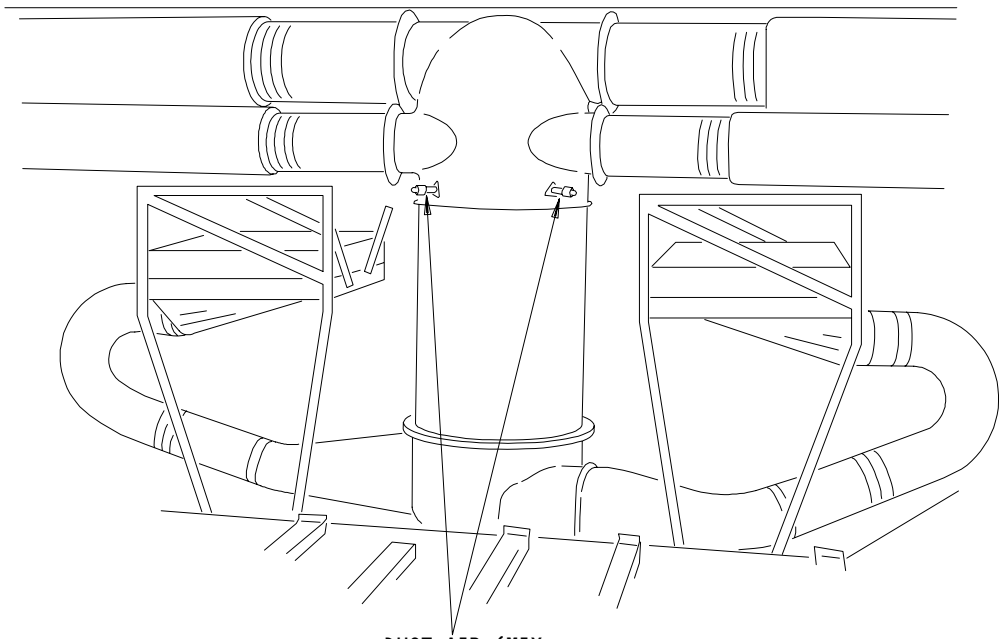

Temperature Control - Component Location
Figure 102 (Sheet 6)

613486

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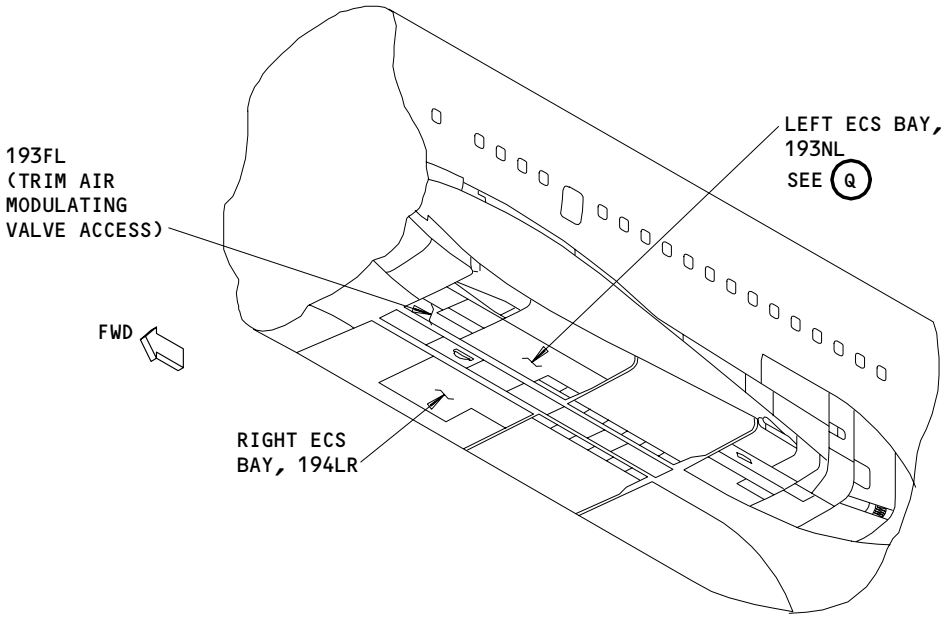

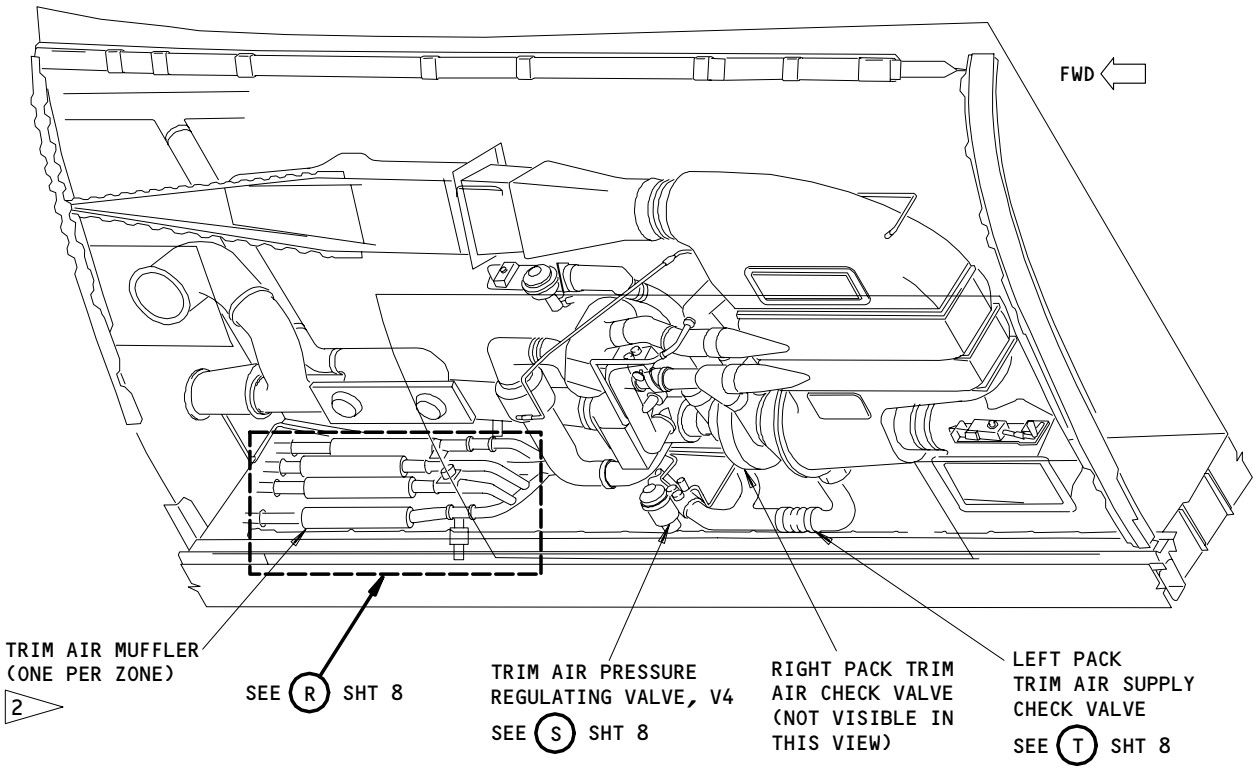

LEFT ECS BAY
Q

2 767-300 AIRPLANES

Temperature Control - Component Location
Figure 102 (Sheet 7)

696453

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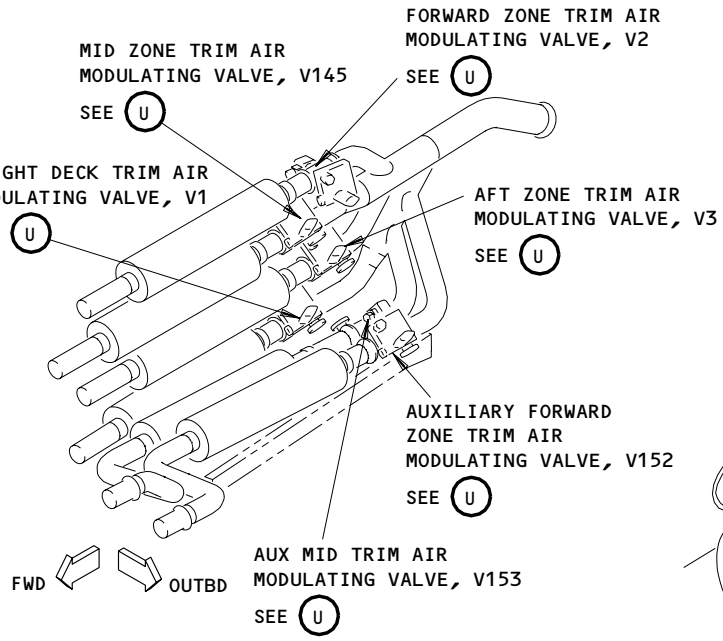
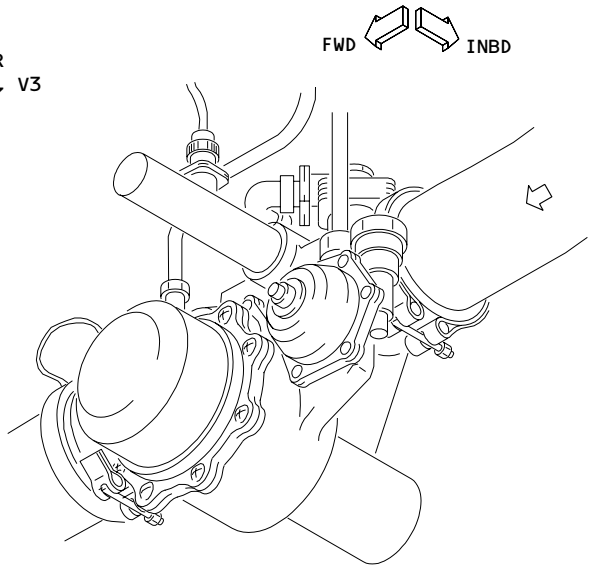


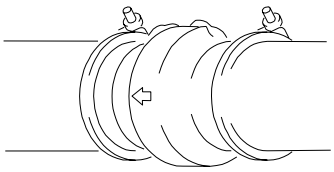
TRIM AIR MODULATING VALVES

R



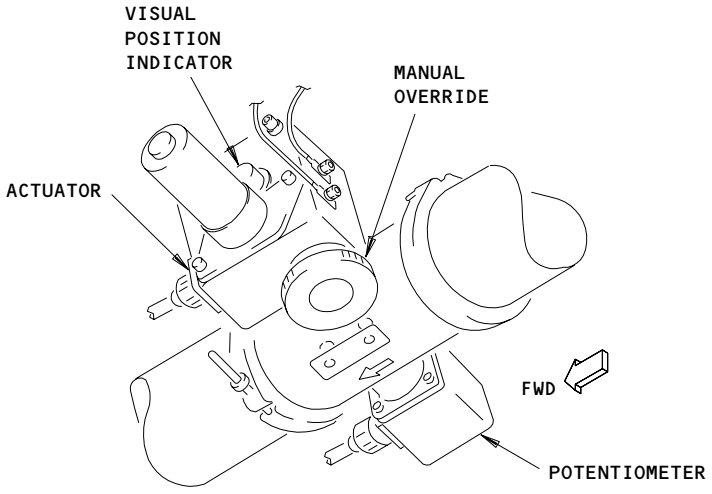
TRIM AIR PRESSURE REGULATING VALVE, V4

S



TRIM AIR SUPPLY CHECK VALVE (EXAMPLE)

T



TRIM AIR MODULATING VALVE (EXAMPLE)
V1,V2,V3,V145,V152,V153

U

Temperature Control - Component Location (Details from Sht 7)
Figure 102 (Sheet 8)

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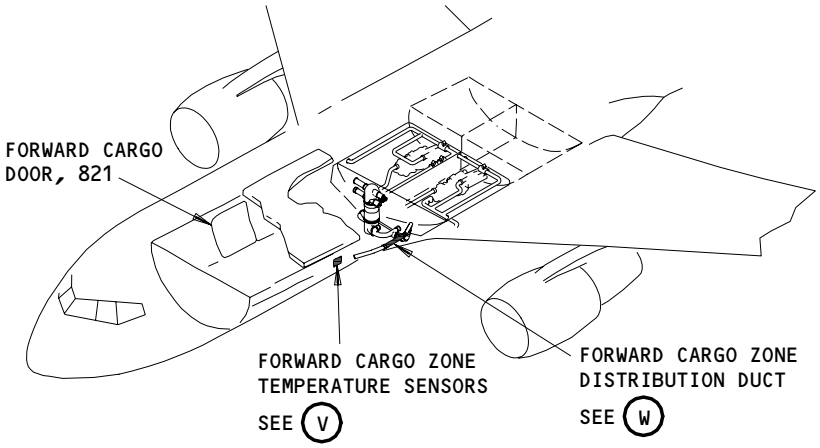
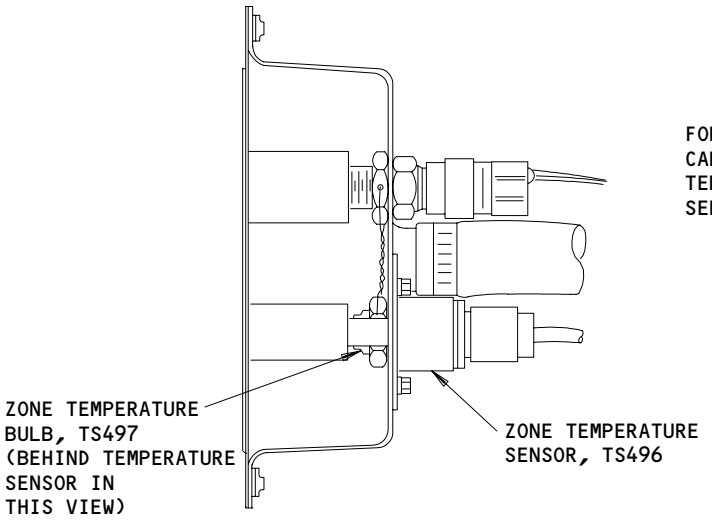
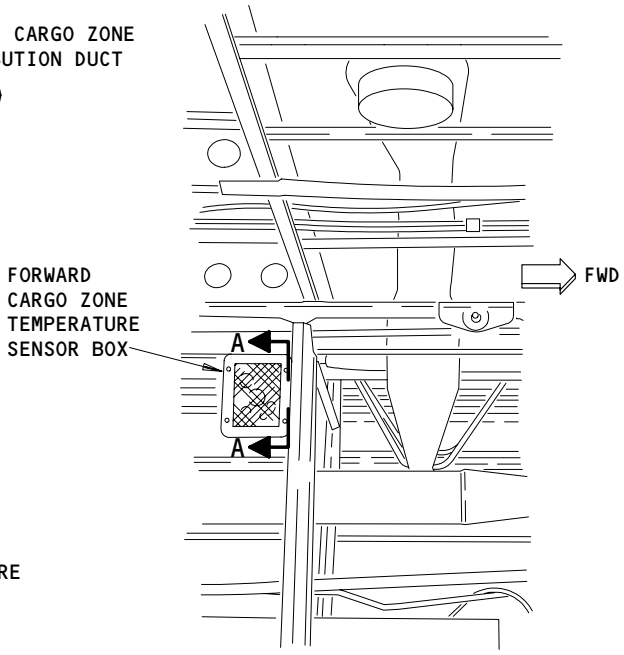
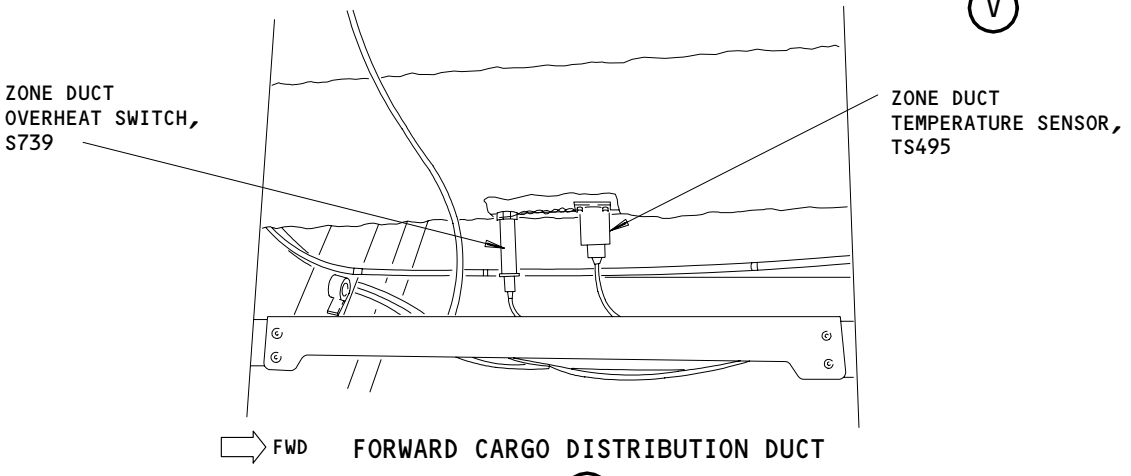




FORWARD CARGO ZONE TEMPERATURE SENSORS
A-A



FORWARD CARGO COMPARTMENT
V



FORWARD CARGO DISTRIBUTION DUCT
W

Temperature Control - Component Location
Figure 102 (Sheet 9)

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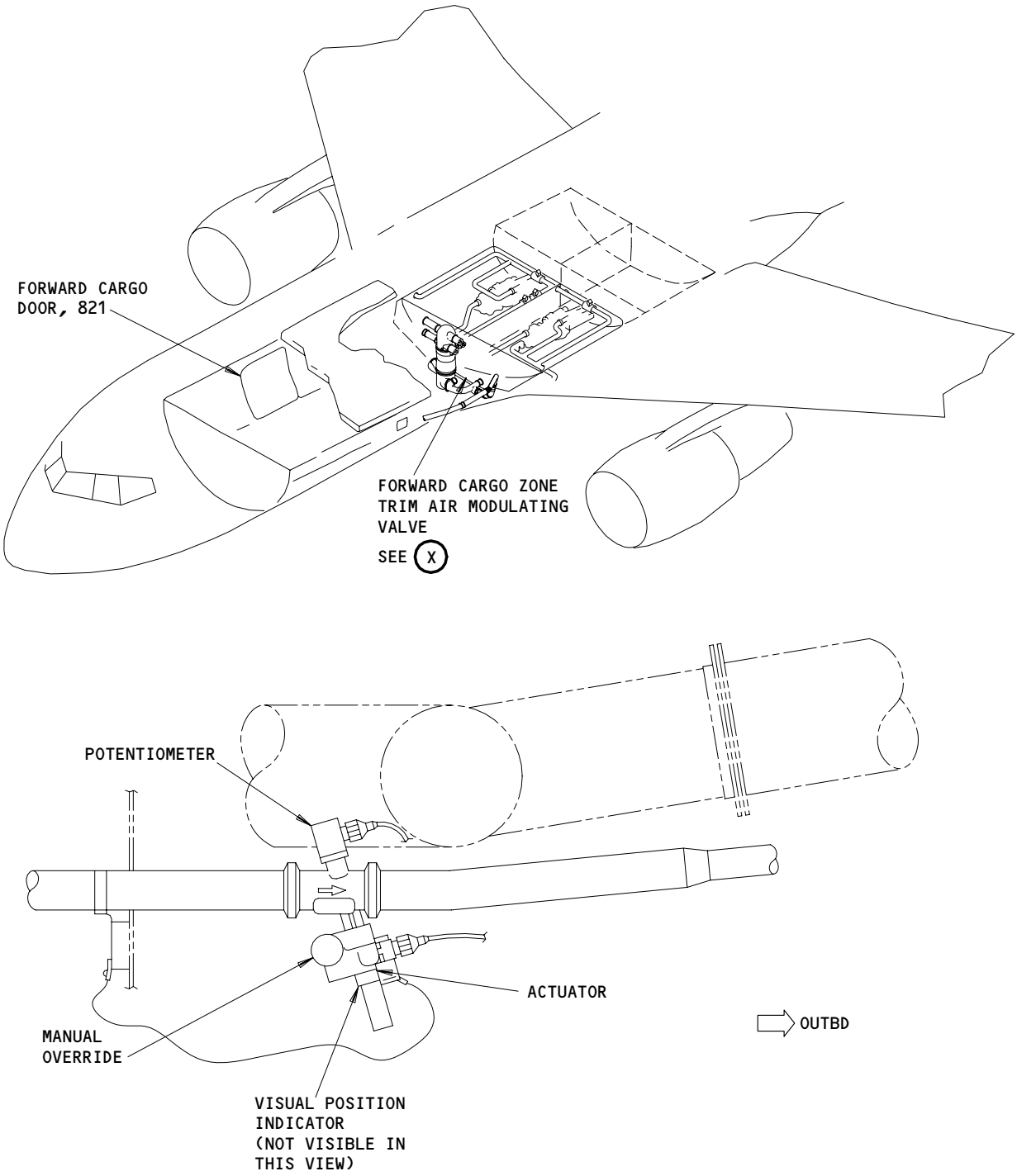

TRIM AIR MODULATING VALVE, V385
(VIEW IN THE AFT DIRECTION)

(X)

Temperature Control - Component Location
Figure 102 (Sheet 10)

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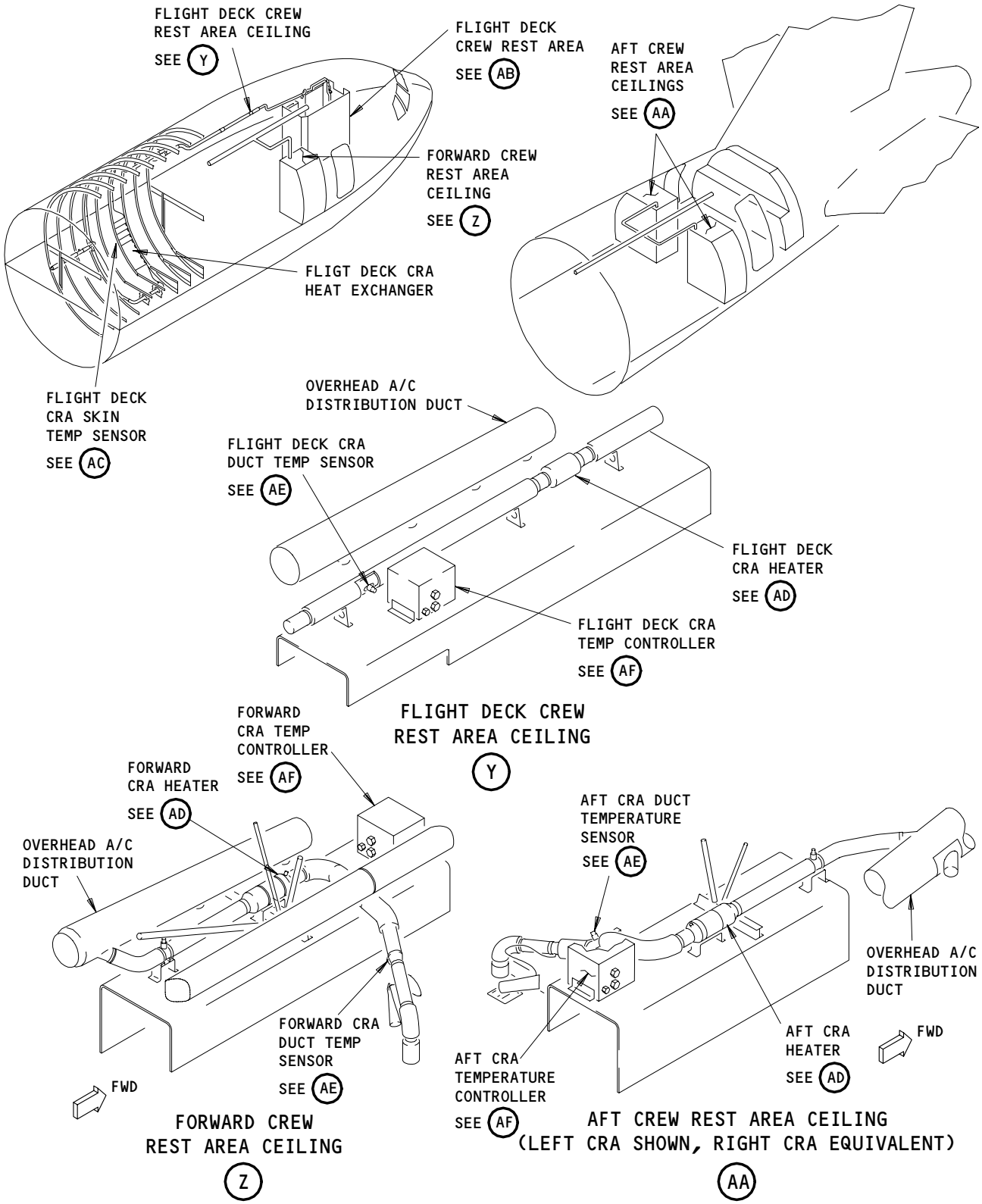

Temperature Control – Component Location
Figure 102 (Sheet 11)

746187
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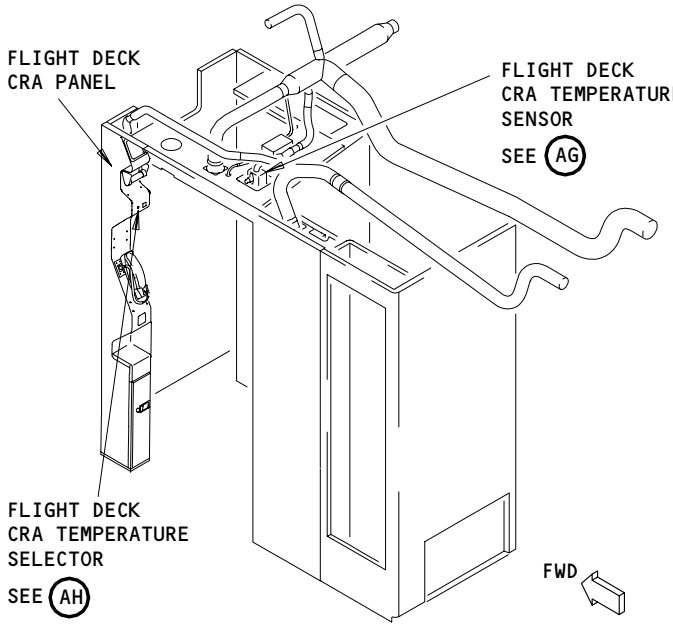
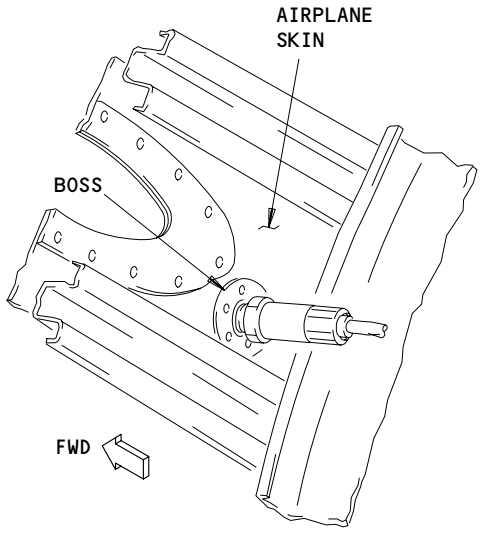


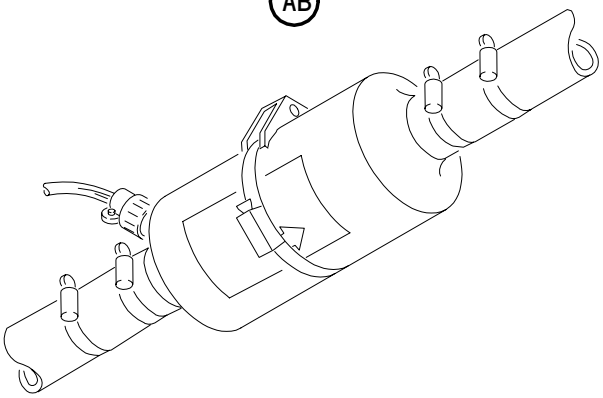
FLIGHT DECK CREW REST AREA

AB



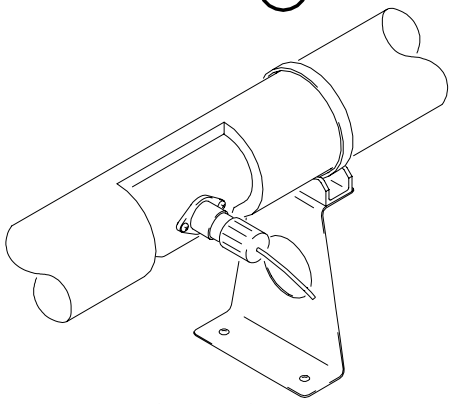
FLIGHT DECK CRA
SKIN TEMPERATURE SENSOR

AC



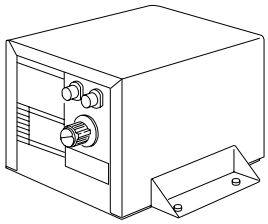
CRA HEATER

AD



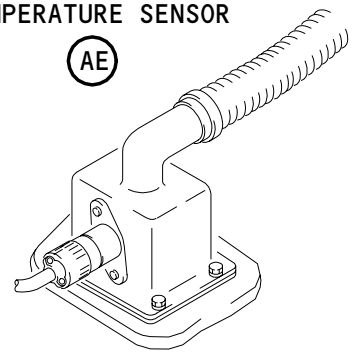
CRA DUCT
TEMPERATURE SENSOR

AE



CRA TEMPERATURE CONTROLLER

AF



FLIGHT DECK CRA
TEMPERATURE SENSOR

AG

Temperature Control - Component Location
Figure 102 (Sheet 12)

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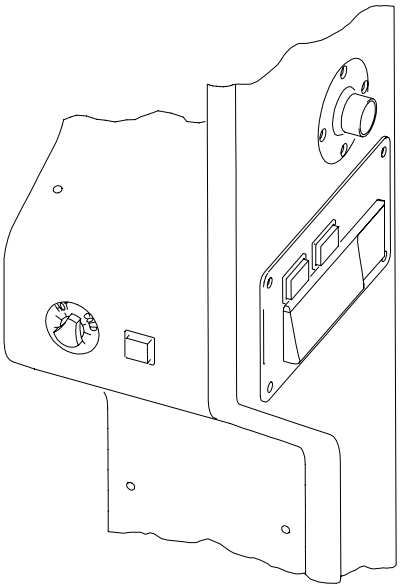
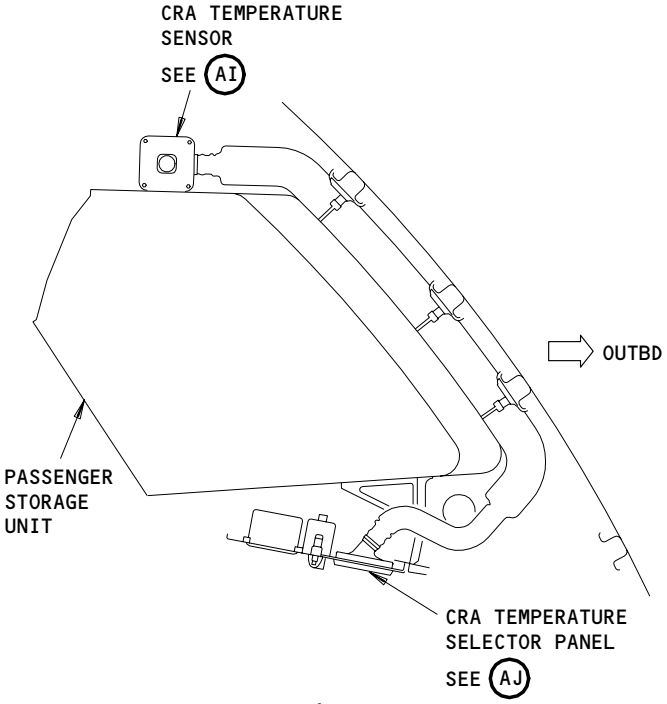
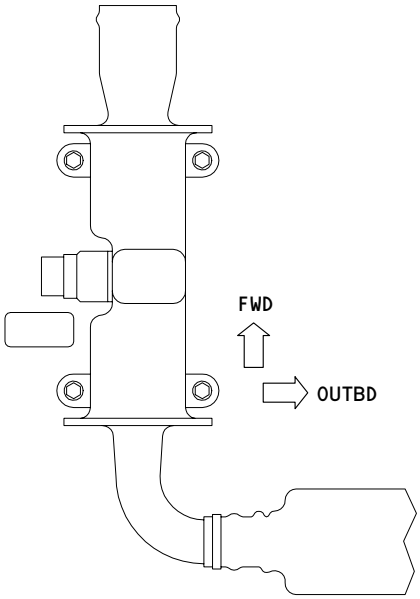


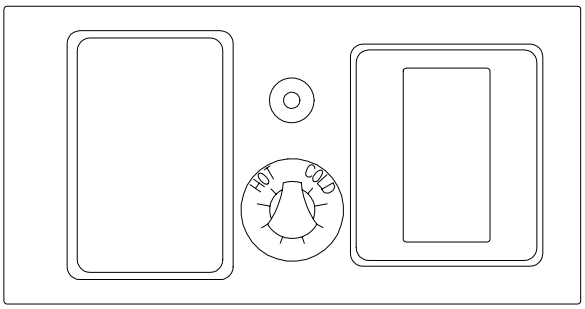
FLIGHT DECK CRA
TEMPERATURE SELECTOR
(AH)



FORWARD/AFT CREW
REST AREA CEILING



FORWARD/AFT CRA
TEMPERATURE SENSOR
(AI)



FORWARD/AFT CRA
TEMPERATURE SELECTOR PANEL
(AJ)

Temperature Control – Component Location
Figure 102 (Sheet 13)

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EICAS FWD/MID/AFT TRIM VALVE POSITION INDICATION OFF SCALE/FLUCTUATES

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (MM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11P25,11P26,11P27,11R15,11R25,11R26,11R27

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)

1 DO THE ZONE TEMPERATURE CONTROLLER BITE PROCEDURE, FIG. 104 BLOCK 1.
DID THE BITE PROCEDURE IDENTIFY THE DEFECTIVE COMPONENT?

YES → 21 REPLACE THE INDICATED DEFECTIVE COMPONENT.

NO

2 PUSH THE ECS/MSG PUSHBUTTON ON THE "EICAS MAINT" MODULE ON THE P61 PANEL.
DID THE FORWARD, MIDDLE OR AFT EICAS "TRIM VALVE" INDICATION MOVE?

YES → 11 OPEN THE LEFT ECS ACCESS, BAY 193NL (MM 06-41-00/201) AND LOCATE THE FORWARD, MIDDLE OR AFT TRIM AIR MODULATING VALVE.
EXAMINE THE VISUAL VALVE POSITION INDICATOR.
DOES THE VISUAL POSITION INDICATOR MOVE?

YES → SEE SHEET 2 (BLOCK 3)

NO → 22 REPLACE THE FORWARD, MIDDLE OR AFT TRIM AIR MODULATING VALVE, V2,V3 OR V145 (MM 21-61-07/401).

NOTE: THE VALVE POTENTIOMETER IS DEFECTIVE.

IF THE PROBLEM CONTINUES, REMOVE THE EICAS COMPUTER (MM 31-41-02/401) AS FOLLOWS:

FORWARD, V2 - LEFT EICAS, M10181
MIDDLE, V145 - RIGHT EICAS, M10182
AFT, V3 - RIGHT EICAS, M10182

EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE APPROPRIATE TRIM AIR MODULATING VALVE POTENTIOMETER AND THE EICAS COMPUTER (WDM 21-61-21, -31,-41). INSTALL THE EICAS COMPUTER.
CLOSE THE LEFT ECS ACCESS BAY, 193NL.

NO → SEE SHEET 2 (BLOCK 3)

EICAS Fwd/Mid/Aft Trim Valve Position Indications Off Scale/Fluctuates
Figure 103 (Sheet 1)

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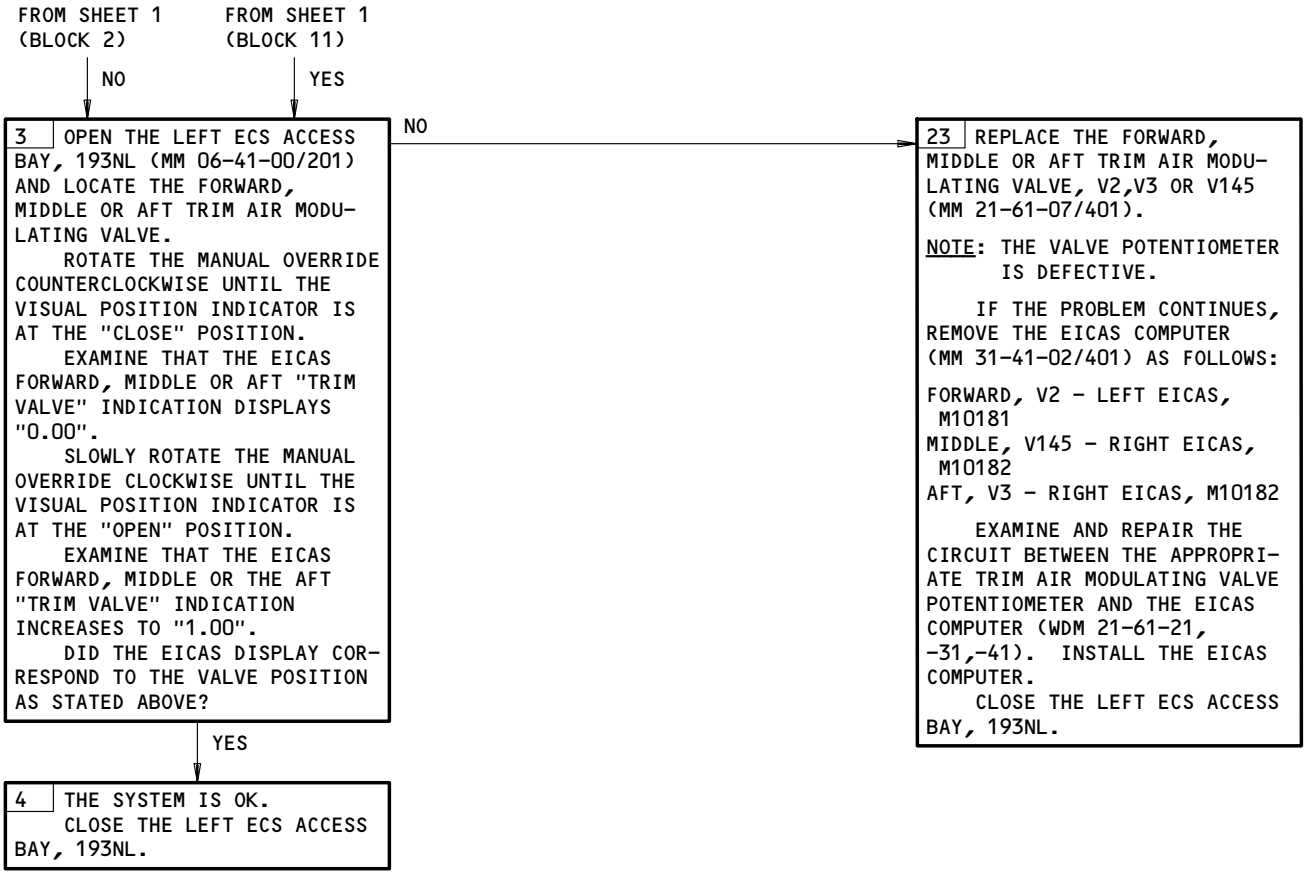

EICAS Fwd/Mid/Aft Trim Valve Position Indication Off Scale/Fluctuates
Figure 103 (Sheet 2)

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EICAS AUX FORWARD/AUX MIDDLE TRIM VALVE POSITION INDICATION OFF SCALE/FLUCTUATES

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (MM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11H2,11H3,11H5,11H6,11R11

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)

1 DO THE AUX ZONE TEMPERATURE CONTROLLER BITE PROCEDURE, FIG. 104A BLOCK 1.
DID THE BITE PROCEDURE IDENTIFY THE DEFECTIVE COMPONENT?

YES → 21 REPLACE THE INDICATED DEFECTIVE COMPONENT.

NO ↓

2 PUSH THE ECS/MSG PUSHBUTTON ON THE "EICAS MAINT" MODULE ON THE P61 PANEL.
DID THE AUX FORWARD OR AUX MIDDLE "TRIM VALVE" INDICATION MOVE?

YES → 11 OPEN THE LEFT ECS ACCESS, BAY 193NL (MM 06-41-00/201) AND LOCATE THE AUX FORWARD OR AUX MIDDLE TRIM AIR MODULATING VALVE.
EXAMINE THE VISUAL VALVE POSITION INDICATOR.
DOES THE VISUAL POSITION INDICATOR MOVE?

NO → 22 REPLACE THE AUX FORWARD OR AUX MIDDLE TRIM AIR MODULATING VALVE V145 OR V153 (MM 21-61-07/401).

NOTE: THE VALVE POTENTIOMETER IS DEFECTIVE.

IF THE PROBLEM CONTINUES, REMOVE EICAS COMPUTER (MM 31-41-02) AS FOLLOWS:

AUX FORWARD, - RIGHT EICAS, M10182 V152
AUX MIDDLE, - LEFT EICAS, M10181 V153

EXAMINE AND REPAIR THE CIRCUIT BETWEEN THE APPROPRIATE TRIM AIR MODULATING VALVE POTENTIOMETER AND THE EICAS COMPUTER (WDM 21-61-61,-71).
INSTALL THE EICAS COMPUTER.
CLOSE THE LEFT ECS ACCESS, BAY 193NL.

NO ↓

SEE SHEET 2 (BLOCK 3)

YES ↓

SEE SHEET 2 (BLOCK 3)

EICAS Aux Fwd/Aux Mid Trim Valve Position Indications Off Scale/Fluctuates
Figure 103A (Sheet 1)

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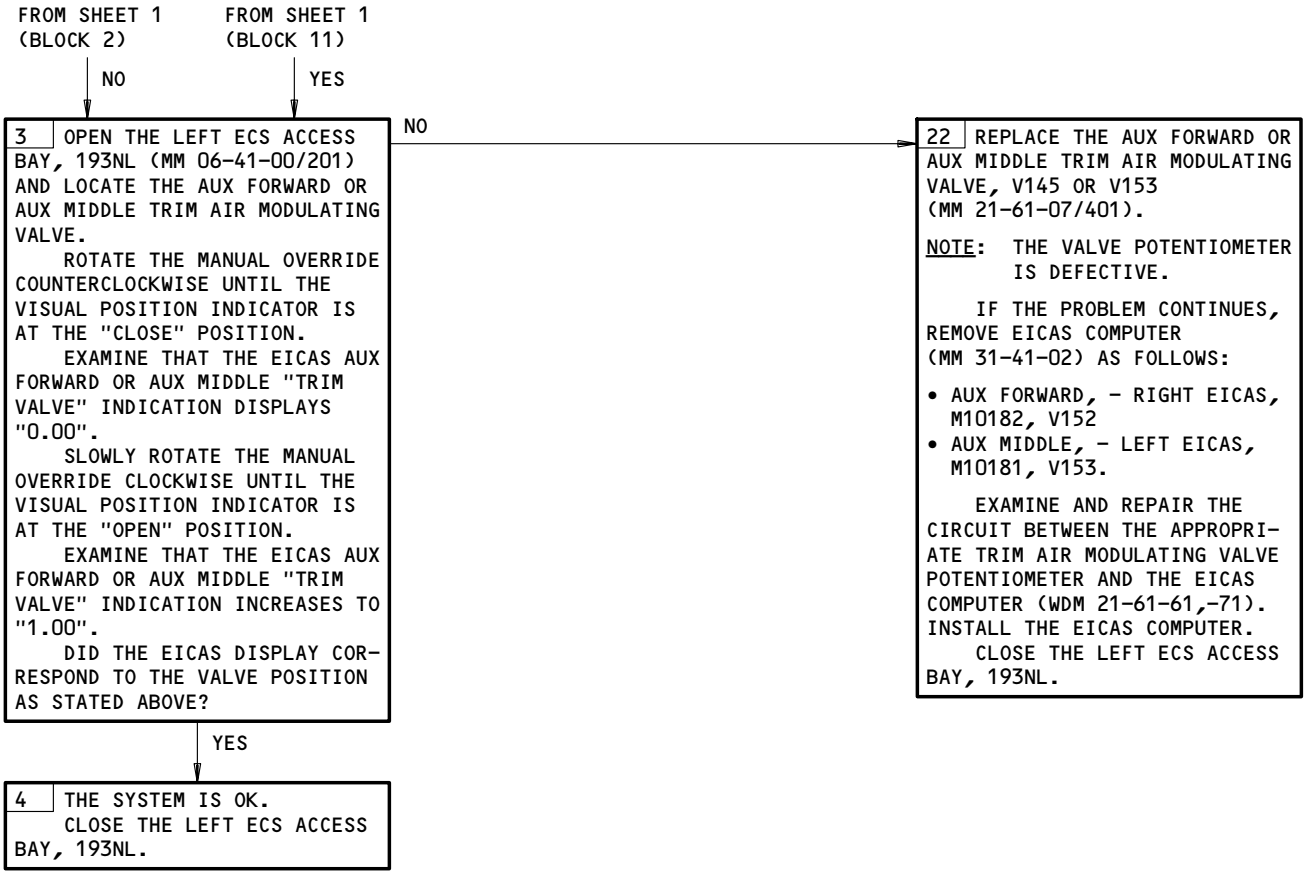

EICAS Aux Fwd/Aux Mid Trim Valve Position Indications Off Scale/Fluctuates
Figure 103A (Sheet 2)

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PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
PNEUMATICS (AMM 36-00-00/201)

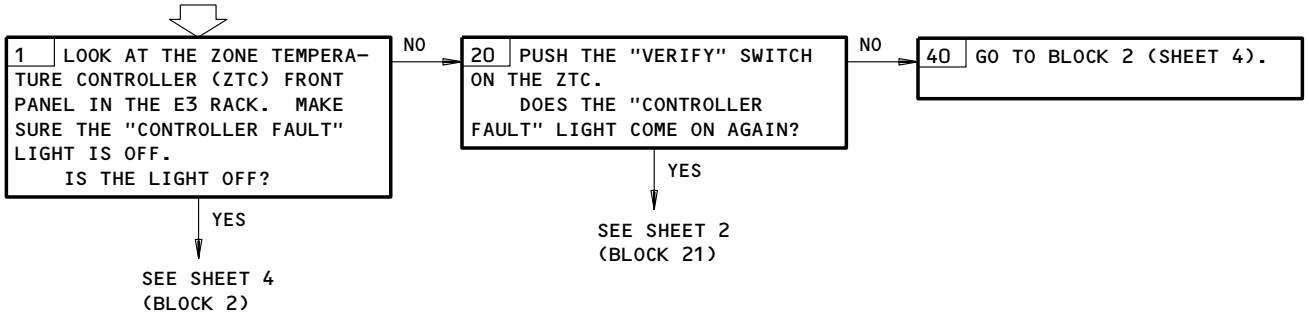
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C33,11P24,11P25,11P26,11P27,11R15,11R16,11R24,
11R25,11R26,11R27

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
PNEUMATIC SYSTEM IS OFF (AMM 36-00-00/201)
"L PACK" AND "R PACK" SELECTORS, ON THE P5 PANEL, ARE IN THE "AUTO" POSITION
"TRIM AIR" SWITCH-LIGHT, ON THE P5 PANEL, IS ON
ZONE TEMPERATURE SELECTORS, ON THE P5 PANEL, ARE IN THE AUTO (12 O'CLOCK) POSITION

NOTE: THE BUILT-IN-TEST EQUIPMENT (BITE) DOES AN ELECTRICAL CHECK OF THE ZONE TEMPERATURE CONTROLLER, TEMPERATURE SELECTORS, ZONE TEMPERATURE SENSORS, AND DUCT TEMPERATURE SENSORS. THE BITE DOES AN OPERATIONAL CHECK OF THE TRIM AIR MODULATING VALVES.

NOTE: BITE DOES NOT KNOW THE DIFFERENCE BETWEEN A COMPONENT FAULT AND AN AIRPLANE WIRING FAULT. MAKE SURE THE CIRCUIT IS CORRECT AND THE CONNECTOR IS IN GOOD CONDITION BEFORE YOU REPLACE A COMPONENT.

ZONE TEMPERATURE CONTROLLER BITE PROCEDURE



Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 1)

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FROM SHEET 1
(BLOCK 20)

YES

21 YOU WILL NEED TO REPLACE THE ZTC CONTROLLER BECAUSE IT PROBABLY HAS A BLOWN FUSE WHICH CAN BE CAUSED BY AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE TRIM AIR MODULATING VALVES.

NOTE

AIRPLANES WITH ZTC P/N S210T130-77 (3 ZONE)/-78 (4 ZONE) AND SUBSEQUENT ZTC DASH NUMBERS; THE "FLIGHT DECK" TRIM VALVE LIGHT, "FWD ZONE" TRIM VALVE LIGHT, "MID ZONE" TRIM VALVE LIGHT (4 ZONE CONTROLLERS ONLY), OR "AFT ZONE" TRIM VALVE LIGHT WILL ALSO COME ON IN ADDITION TO THE "CONTROLLER

FAULT" LIGHT WHEN THERE IS A BLOWN FUSE IN THE ZTC CONTROLLER CAUSED BY AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE FLIGHT DECK, FORWARD ZONE, MID ZONE (4 ZONE CONTROLLERS ONLY), OR AFT ZONE TRIM AIR MODULATING VALVES.

CAUTION

DO NOT INSTALL A NEW ZTC CONTROLLER UNTIL AFTER YOU DO AN ELECTRICAL RESISTANCE CHECK OF THE CIRCUIT WIRING FOR THE FLIGHT DECK, FORWARD ZONE, MID ZONE (4 ZONE CONTROLLERS ONLY), OR AFT ZONE TRIM AIR MODULATING VALVES.

IF YOU REPLACE THE ZTC CONTROLLER BEFORE YOU DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING WILL CAUSE ANOTHER BLOWN FUSE TO OCCUR IN THE NEW ZTC CONTROLLER, WHICH WILL THEN REQUIRE SUBSEQUENT REPLACEMENT OF THE NEW ZTC CONTROLLER.

DO THESE STEPS TO DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE FLIGHT DECK, FORWARD ZONE, MID ZONE (4 ZONE CONTROLLERS ONLY), OR AFT ZONE TRIM AIR MODULATING VALVES:

1. SET THE "L (R) PACK" SELECTOR TO THE "OFF" POSITION.
2. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "OFF" POSITION.
3. OPEN THE "ZONE CONTROLLER" CIRCUIT BREAKERS ON THE P11 PANEL.
4. REMOVE THE ZTC CONTROLLER, M195 (AMM 21-61-03/401).
5. CLOSE THE "ZONE CONTROLLER" CIRCUIT BREAKER.
6. SET THE "L (R) PACK" SELECTOR TO THE "AUTO" POSITION.
7. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "ON" POSITION.
8. USE "TABLE A" AND THE SIMPLIFIED CIRCUIT SCHEMATICS WITHIN THIS FIGURE TO DO A CHECK OF THE ELECTRICAL RESISTANCE IN THE CIRCUIT WIRING FOR THE FLIGHT DECK, FORWARD ZONE, MID ZONE (4 ZONE CONTROLLERS ONLY), OR AFT ZONE TRIM AIR MODULATING VALVES.
   A. IF THE ELECTRICAL RESISTANCE IS NOT WITHIN THE LIMITS GIVEN IN "TABLE A", THEN DO THESE STEPS:
      (1) REPLACE THE FAULTY COMPONENT AND/OR REPAIR THE CIRCUIT WIRING FOR THE COMPONENT (WDM 21-61-11,-21,-31,-41):
          (a) FLIGHT DECK TRIM AIR MODULATING VALVE, V1 (AMM 21-61-07/401).
          (b) FORWARD ZONE TRIM AIR MODULATING VALVE, V2 (AMM 21-61-07/401).
          (c) MID ZONE TRIM AIR MODULATING VALVE (4 ZONE CONTROLLERS ONLY), V145 (AMM 21-61-07/401).
          (d) AFT ZONE TRIM AIR MODULATING VALVE, V3 (AMM 21-61-07/401).
      (2) CONTINUE TO STEP 9.
   B. IF THE ELECTRICAL RESISTANCE IS WITHIN THE LIMITS GIVEN IN "TABLE A", THEN CONTINUE TO STEP 9.
9. SET THE "L (R) PACK" SELECTOR TO THE "OFF" POSITION.
10. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "OFF" POSITION.
11. OPEN THE "ZONE CONTROLLER" CIRCUIT BREAKER.
12. INSTALL A "NEW" ZTC CONTROLLER, M195 (AMM 21-61-03/401).
13. CLOSE THE "ZONE CONTROLLER" CIRCUIT BREAKER.
14. SET THE "L (R) PACK" SELECTOR TO THE "AUTO" POSITION.
15. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "ON" POSITION.
16. MAKE SURE THE "CONTROLLER FAULT" LIGHT DOES NOT COME ON ON THE FRONT PANEL OF THE NEW ZTC CONTROLLER.

DOES THE "CONTROLLER FAULT" LIGHT COME ON AGAIN?

YES

SEE SHEET 3
(BLOCK 22)

NO

41 CONTINUE THE AIRPLANE IN SERVICE.

Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 2)

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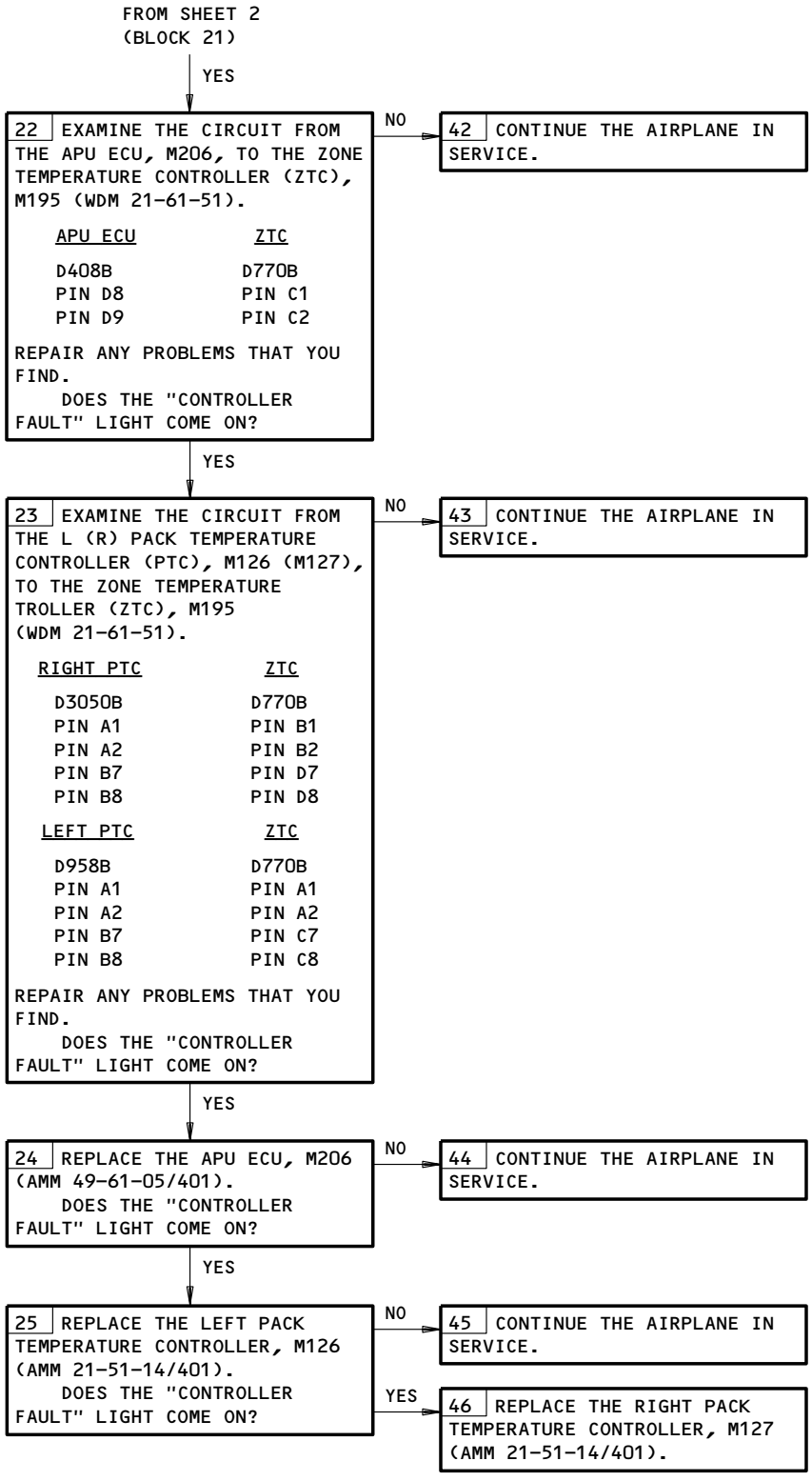

Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 3)

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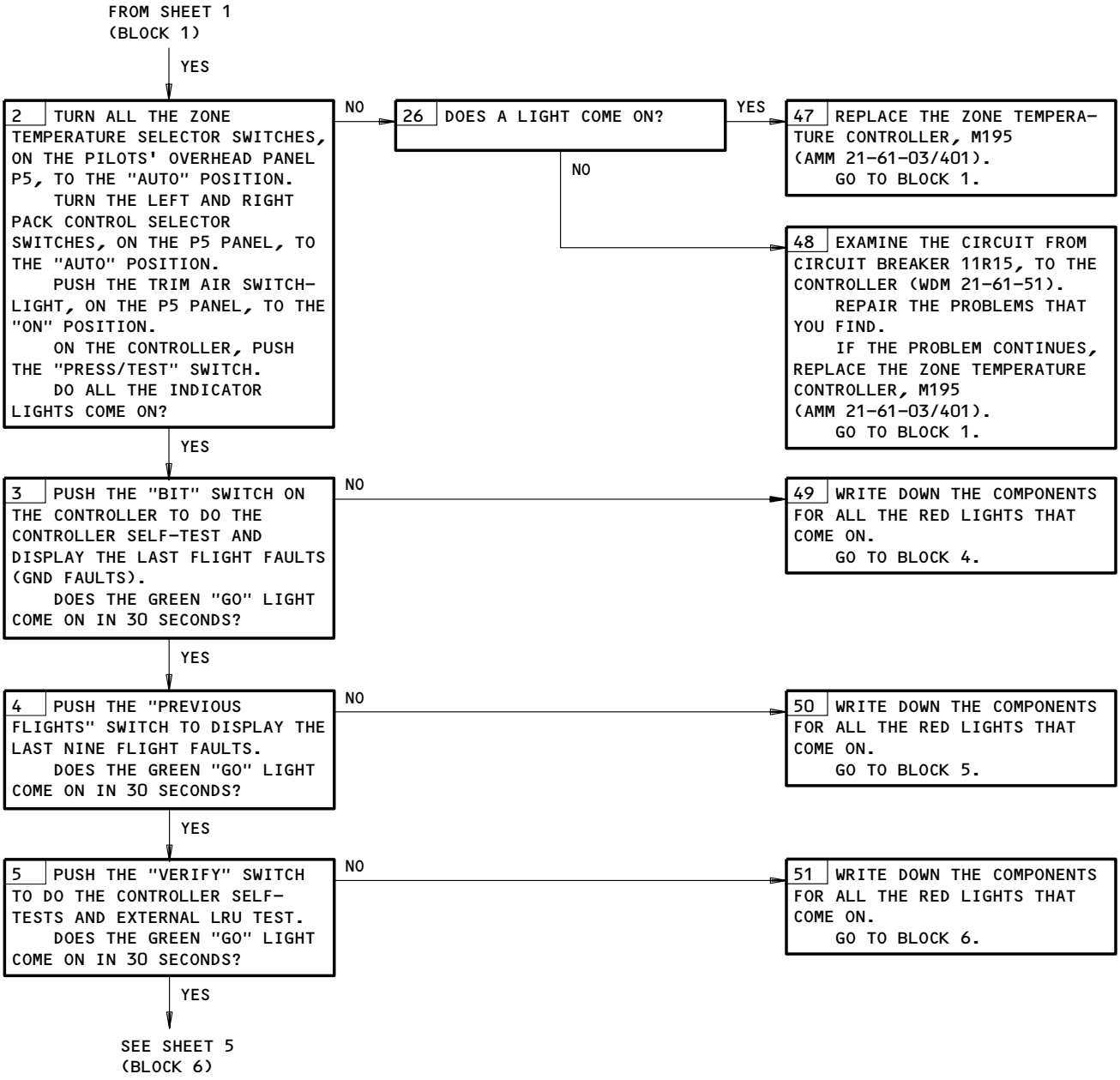

Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 4)

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Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 5)

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VALVE CHECKED	FROM CONNECTOR D770B	TO CONNECTOR D770C	ACCEPTABLE RESISTANCE (OHMS)
FLIGHT DECK TRIM AIR MODULATING VALVE, V1 (WDM 21-61-11)	PIN A13 PIN A15	PIN 4 PIN 4	70-105 70-105
FORWARD ZONE TRIM AIR MODULATING VALVE, V2 (WDM 21-61-21)	PIN B13 PIN B15	PIN 4 PIN 4	70-105 70-105
AFT ZONE TRIM AIR MODULATING VALVE, V3 (WDM 21-61-31)	PIN C13 PIN C15	PIN 4 PIN 4	70-105 70-105
MID ZONE TRIM AIR MODULATING VALVE, V145 (WDM 21-61-41)	PIN D13 PIN D15	PIN 4 PIN 4	70-105 70-105

ZONE TEMPERATURE CONTROLLER RESISTANCE CHECK
TABLE A

DO THESE STEPS TO DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE FLIGHT DECK, FORWARD ZONE, MID ZONE (4 ZONE CONTROLLERS ONLY), OR AFT ZONE TRIM AIR MODULATING VALVES:

1. SET THE "L (R) PACK" SELECTOR TO THE "OFF" POSITION.
2. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "OFF" POSITION.
3. OPEN THE "ZONE CONTROLLER" CIRCUIT BREAKERS ON THE P11 PANEL.
4. REMOVE THE ZTC CONTROLLER, M195 (AMM 21-61-03/401).
5. CLOSE THE "ZONE CONTROLLER" CIRCUIT BREAKER.
6. SET THE "L (R) PACK" SELECTOR TO THE "AUTO" POSITION.
7. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "ON" POSITION.
8. USE "TABLE A" AND THE SIMPLIFIED CIRCUIT SCHEMATICS WITHIN THIS FIGURE TO DO A CHECK OF THE ELECTRICAL RESISTANCE IN THE CIRCUIT WIRING FOR THE FLIGHT DECK, FORWARD ZONE, MID ZONE (4 ZONE CONTROLLERS ONLY), OR AFT ZONE TRIM AIR MODULATING VALVES.
   A. IF THE ELECTRICAL RESISTANCE IS NOT WITHIN THE LIMITS GIVEN IN "TABLE A", THEN DO THESE STEPS:
      (1) REPLACE THE FAULTY COMPONENT AND/OR REPAIR THE CIRCUIT WIRING FOR THE COMPONENT (WDM 21-61-11,-21,-31,-41):
          (a) FLIGHT DECK TRIM AIR MODULATING VALVE, V1 (AMM 21-61-07/401).
          (b) FORWARD ZONE TRIM AIR MODULATING VALVE, V2 (AMM 21-61-07/401).
          (c) MID ZONE TRIM AIR MODULATING VALVE (4 ZONE CONTROLLERS ONLY), V145 (AMM 21-61-07/401).
          (d) AFT ZONE TRIM AIR MODULATING VALVE, V3 (AMM 21-61-07/401).
      (2) CONTINUE TO STEP 9.
   B. IF THE ELECTRICAL RESISTANCE IS WITHIN THE LIMITS GIVEN IN "TABLE A:, THEN CONTINUE TO STEP 9.
9. SET THE "L (R) PACK" SELECTOR TO THE "OFF" POSITION.
10. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "OFF" POSITION.
11. OPEN THE "ZONE CONTROLLER" CIRCUIT BREAKER.
12. INSTALL A "NEW" ZTC CONTROLLER, M195 (AMM 21-61-03/401).
13. CLOSE THE "ZONE CONTROLLER" CIRCUIT BREAKER.
14. SET THE "L (R) PACK" SELECTOR TO THE "AUTO" POSITION.
15. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "ON" POSITION.
16. MAKE SURE THE "CONTROLLER FAULT" LIGHT DOES NOT COME ON ON THE FRONT PANEL OF THE NEW ZTC CONTROLLER.

DOES THE "CONTROLLER FAULT" LIGHT COME ON AGAIN?

Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 6)

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BITE MESSAGE	CORRECTIVE ACTION
CONTROLLER FAULT	1. DO THE ZTC RESISTANCE CHECK IN "TABLE A" TO DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE FLIGHT DECK, FORWARD ZONE, MID ZONE (4 ZONE CONTROLLERS ONLY), OR AFT ZONE TRIM AIR MODULATING VALVES. NOTE AIRPLANES WITH ZTC P/N S210T130-77 (3 ZONE)/-78 (4 ZONE) AND SUBSEQUENT ZTC DASH NUMBERS; THE "FLIGHT DECK" TRIM VALVE LIGHT, "FWD ZONE" TRIM VALVE LIGHT, "MID ZONE" TRIM VALVE LIGHT (4 CONTROLLERS ONLY), OR "AFT ZONE" TRIM VALVE LIGHT WILL ALSO COME ON IN ADDITION TO THE "CONTROLLER FAULT" LIGHT WHEN THERE IS A BLOWN FUSE IN THE ZTC CONTROLLER CAUSED BY AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE FLIGHT DECK, FORWARD ZONE, MID ZONE (4 ZONE CONTROLLERS ONLY), OR AFT ZONE TRIM AIR MODULATING VALVES.
SELECTOR	1. REPLACE THE ZONE TEMPERATURE SELECTOR, YBFR515,YBFR516,YBFR517,YBFR571 (AMM 21-61-04/401). 2. IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE CONTROLLER TO THE COMPONENT (WDM 21-61-11,-21,-31,-41). 3. REPAIR THE PROBLEMS THAT YOU FIND.
ZONE SENSOR	1. REPLACE THE ZONE TEMPERATURE SENSOR, TS176,TS178,TS180,TS373 (AMM 21-61-08/401). 2. IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE CONTROLLER TO THE COMPONENT (WDM 21-61-11,-21,-31,-41). 3. REPAIR THE PROBLEMS THAT YOU FIND.
DUCT SENSOR	1. REPLACE THE DUCT AIR TEMPERATURE SENSOR, TS175,TS177,TS179,TS372 (AMM 21-61-02/401). 2. IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE CONTROLLER TO THE COMPONENT (WDM 21-61-11,-21,-31,-41). 3. REPAIR THE PROBLEMS THAT YOU FIND.
TRIM VALVE	1. REPLACE THE TRIM AIR MODULATING VALVE, V1,V2,V3,V145 (AMM 21-61-07/401). 2. IF THE PROBLEM CONTINUES, DO A CONTINUITY CHECK FROM THE AIRPLANE SHELF CONNECTOR FOR THE ZONE TEMPERATURE CONTROLLER TO THE APPLICABLE VALVE (SEE TABLE C). SET THE TRIM AIR SWITCH TO THE "ON" POSITION. SET THE APPLICABLE ZONE SELECTOR TO "AUTO". IF YOU DO NOT FIND CONTINUITY, REPLACE THE RELAY.

ZONE TEMPERATURE CONTROLLER - FAULT LIGHT TROUBLESHOOTING
TABLE B

ZONE	AIRPLANE SHELF CONNECTOR	PIN	VALVE	CONNECTOR	PIN	RELAY TO REPLACE
FLIGHT DECK	D770B	A13	V1	D698	1	K238
FLIGHT DECK	D770B	A15	V1	D698	2	K238
FORWARD	D770B	B13	V2	D710	1	K239
FORWARD	D770B	B15	V2	D710	2	K239
AFT	D770B	C13	V3	D700	1	K240
AFT	D770B	C15	V3	D700	2	K240
MID	D770B	D13	V145	D10702	1	K833
MID	D770B	D15	V145	D10702	2	K833

TRIM AIR MODULATING VALVE RELAY CONTINUITY CHECK
TABLE C

Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 7)

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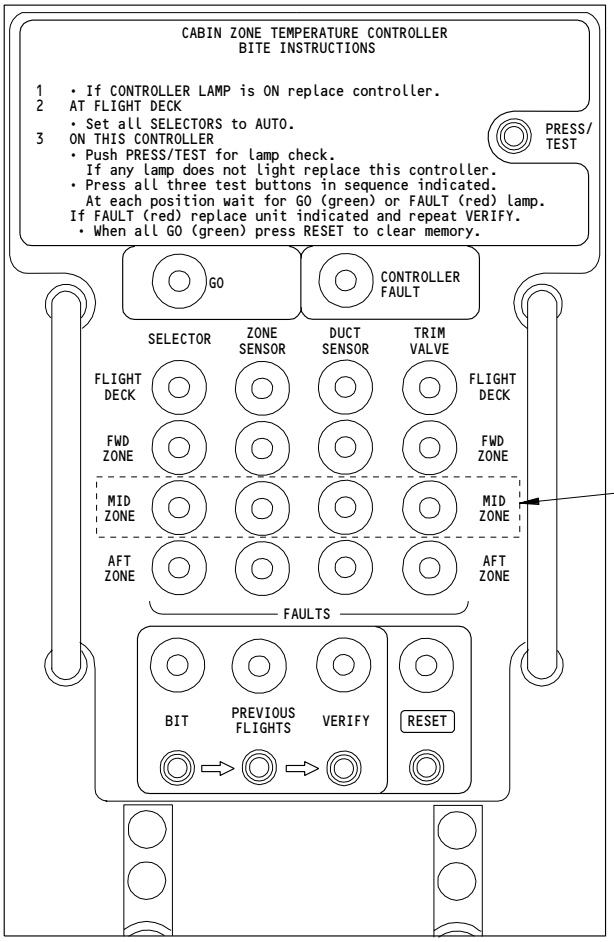

ZONE TEMPERATURE CONTROLLER, M195

Zone Temperature Controller BITE Prodedure
Figure 104 (Sheet 8)

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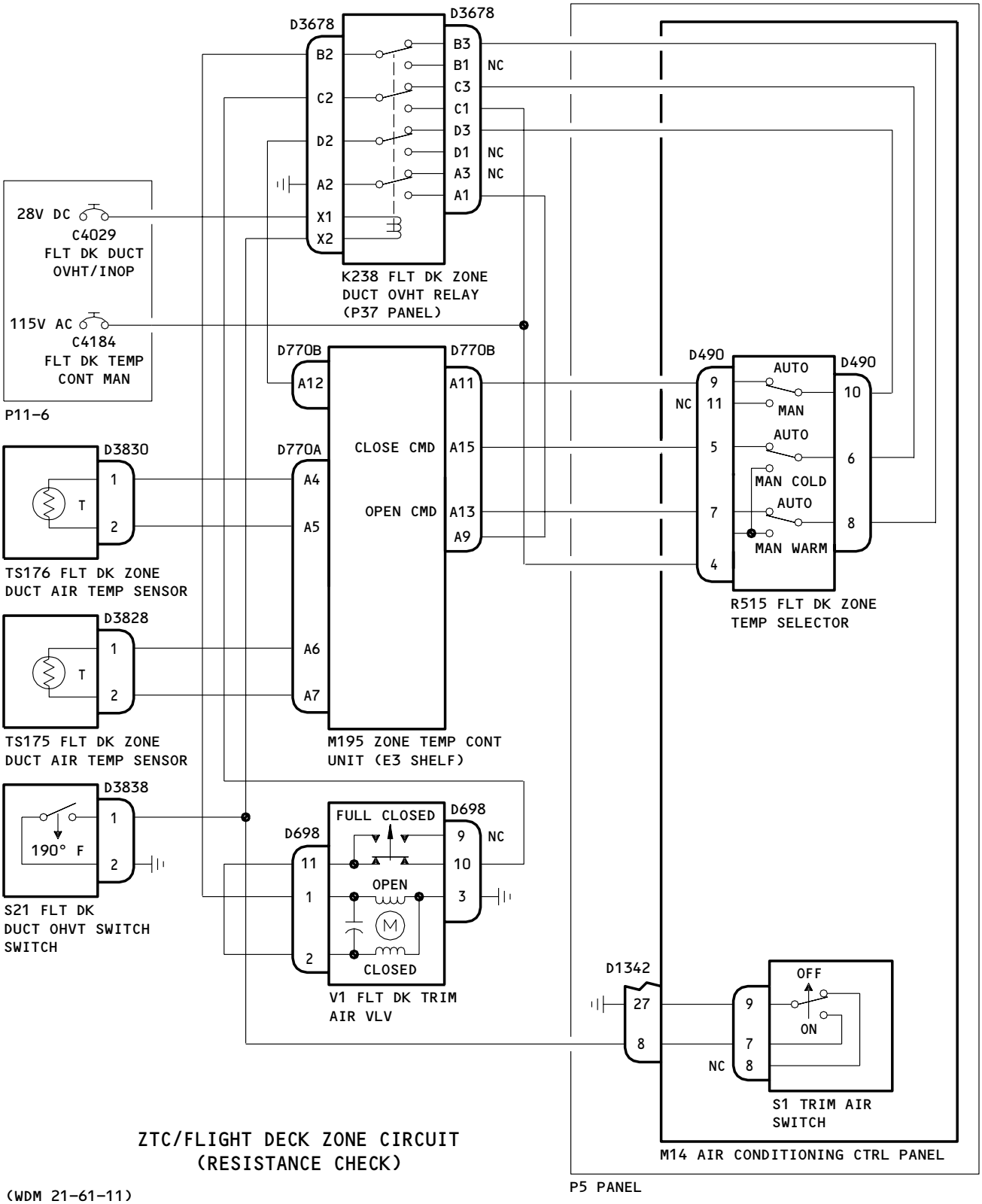

ZTC/FLIGHT DECK ZONE CIRCUIT
(RESISTANCE CHECK)

(WDM 21-61-11)

Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 9)

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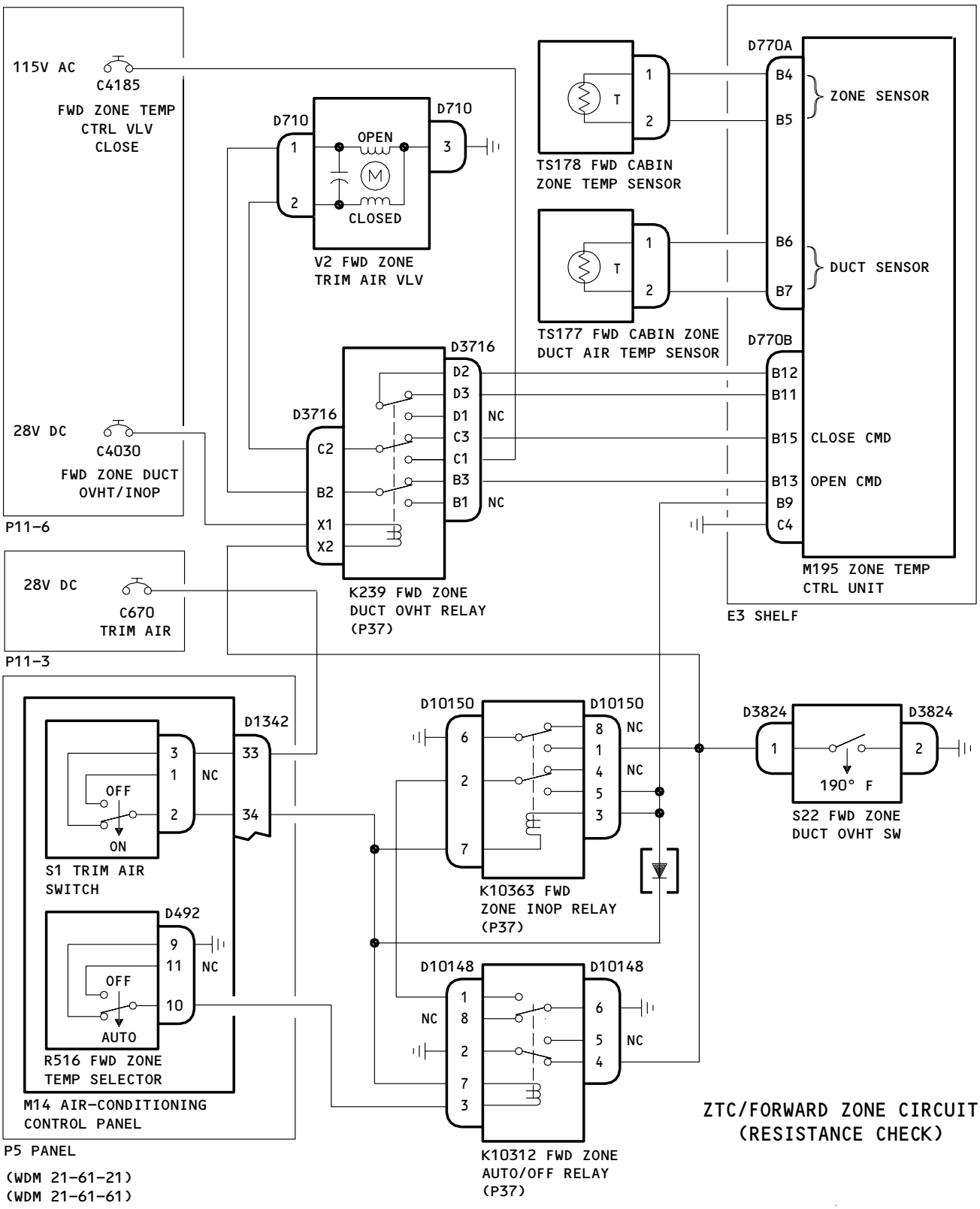

Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 10)

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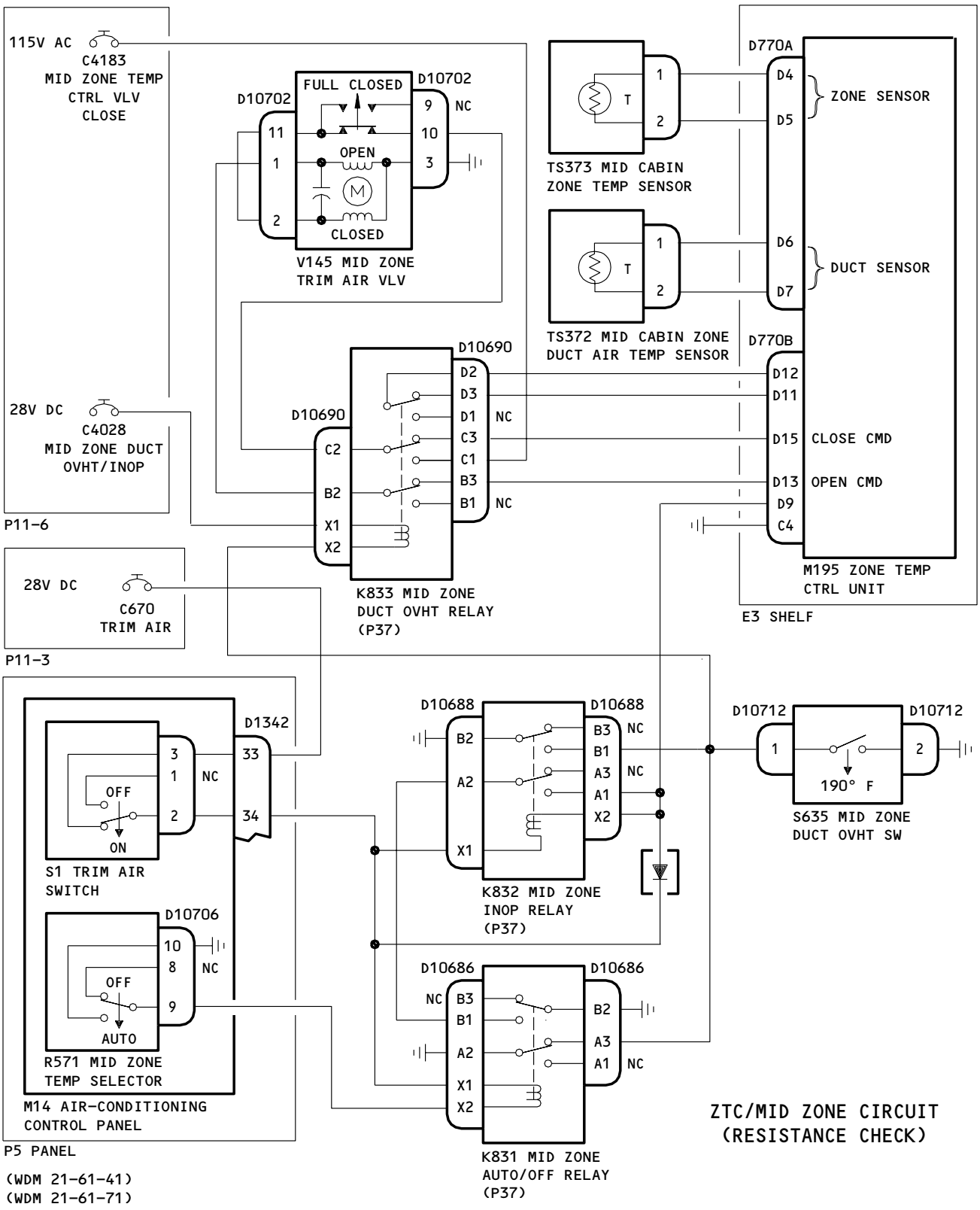

Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 11)

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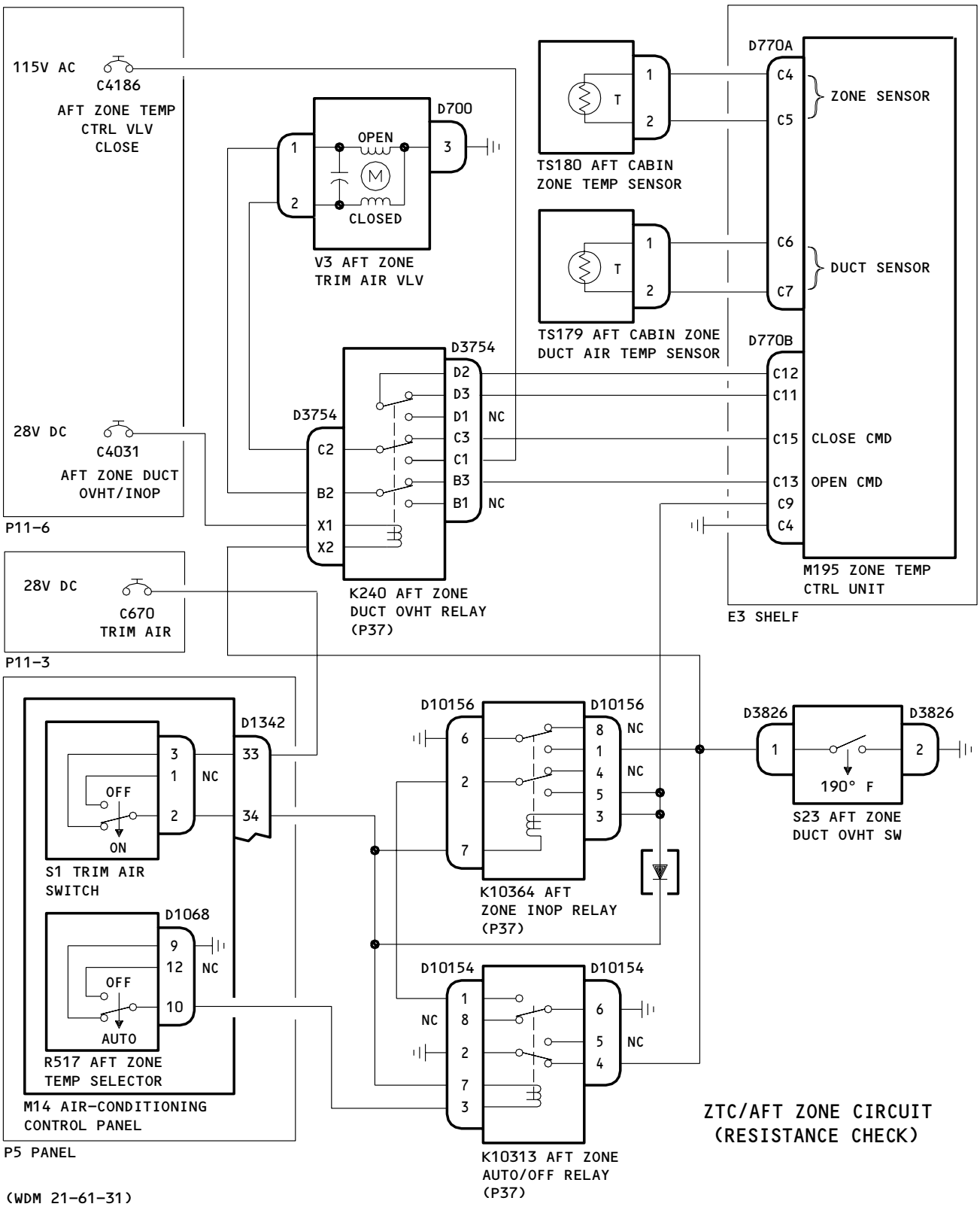

Zone Temperature Controller BITE Procedure
Figure 104 (Sheet 12)

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PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
PNEUMATICS (AMM 36-00-00/201)

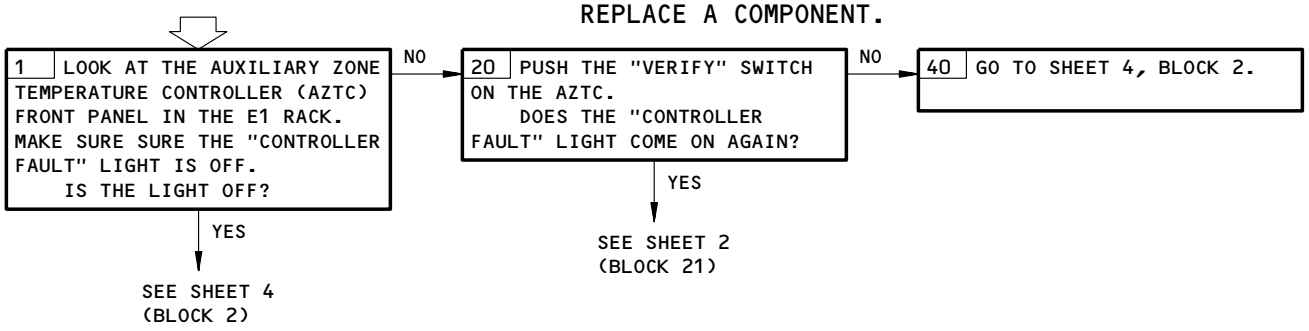
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C33, 11H2, 11H3, 11H5, 11H6, 11R11; 1 11N21, 11N22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
PNEUMATIC SYSTEM IS OFF (AMM 36-00-00/201)
"L PACK" AND "R PACK" SELECTORS, ON THE P5 PANEL, ARE IN THE "AUTO" POSITION
"TRIM AIR" SWITCH-LIGHT, ON THE P5 PANEL, IS ON
ZONE TEMPERATURE SELECTORS, ON THE P5 PANEL, ARE IN THE AUTO (12 O'CLOCK) POSITION
"FWD CARGO A/C" SWITCH-LIGHT, ON THE P5 PANEL IS ON 1
"FWD CARGO" ZONE TEMPERATURE SELECTOR, ON THE P5 PANEL, IS IN THE AUTO (12 O'CLOCK) POSITION 1

NOTE: THE BUILT-IN-TEST EQUIPMENT (BITE) DOES AN ELECTRICAL CHECK OF THE AUXILIARY ZONE TEMPERATURE CONTROLLER, TEMPERATURE SELECTORS, ZONE TEMPERATURE SENSORS, AND DUCT TEMPERATURE SENSORS. THE BITE DOES AN OPERATIONAL CHECK OF THE TRIM AIR MODULATING VALVES.

NOTE: BITE DOES NOT KNOW THE DIFFERENCE BETWEEN A COMPONENT FAULT AND AN AIRPLANE WIRING FAULT. MAKE SURE THE CIRCUIT IS CORRECT AND THE CONNECTOR IS IN GOOD CONDITION BEFORE YOU REPLACE A COMPONENT.

AUXILIARY ZONE TEMPERATURE CONTROLLER BITE PROCEDURE



1 AIRPLANES WITH FORWARD CARGO AIR CONDITIONING SYSTEM

Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 1)

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FROM SHEET 1
(BLOCK 20)

YES

21 YOU WILL NEED TO REPLACE THE AUXILIARY ZTC CONTROLLER BECAUSE IT PROBABLY HAS A BLOWN FUSE WHICH CAN BE CAUSED BY AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE TRIM AIR MODULATING VALVES.

NOTE

AIRPLANES WITH AUXILIARY ZTC P/N S210T130-80 AND SUBSEQUENT ZTC DASH NUMBERS;
THE "CARGO" TRIM VALVE LIGHT, "FWD AUX" TRIM VALVE LIGHT, OR "MID AUX" TRIM VALVE LIGHT WILL ALSO COME ON IN ADDITION TO THE "CONTROLLER FAULT" LIGHT WHEN THERE IS A BLOWN FUSE IN THE AUXILIARY ZTC CONTROLLER CAUSED BY AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE CARGO, FORWARD AUXILIARY, OR MID AUXILIARY TRIM AIR MODULATING VALVES.

CAUTION

DO NOT INSTALL A NEW AUXILIARY ZTC CONTROLLER UNTIL AFTER YOU DO AN ELECTRICAL RESISTANCE CHECK OF THE CIRCUIT WIRING FOR THE CARGO, FORWARD AUXILIARY, OR MID AUXILIARY TRIM AIR MODULATING VALVES.

IF YOU REPLACE THE AUXILIARY ZTC CONTROLLER BEFORE YOU DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING, THE HIDDEN ELECTRICAL SHORT IN THE CIRCUIT WIRING WILL CAUSE ANOTHER BLOWN FUSE TO OCCUR IN THE NEW AUXILIARY ZTC CONTROLLER, WHICH WILL THEN REQUIRE SUBSEQUENT REPLACEMENT OF THE NEW AUXILIARY ZTC CONTROLLER.

DO THESE STEPS TO DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE CARGO, FORWARD AUXILIARY, OR MID AUXILIARY TRIM AIR MODULATING VALVES:

1. SET THE "L (R) PACK" SELECTOR TO THE "OFF" POSITION.
2. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "OFF" POSITION.
3. OPEN THE "ZONE CONTROLLER" CIRCUIT BREAKERS ON THE P11 PANEL.
4. REMOVE THE AUXILIARY ZTC CONTROLLER, M1609(AMM 21-61-03/401).
5. CLOSE THE "ZONE CONTROLLER" CIRCUIT BREAKER.
6. SET THE "L (R) PACK" SELECTOR TO THE "AUTO" POSITION.
7. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "ON" POSITION.
8. USE "TABLE A" AND THE SIMPLIFIED CIRCUIT SCHEMATICS WITHIN THIS FIGURE TO DO A CHECK OF THE ELECTRICAL RESISTANCE IN THE CIRCUIT WIRING FOR THE CARGO, FORWARD AUXILIARY, OR MID AUXILIARY TRIM AIR MODULATING VALVES.
   A. IF THE ELECTRICAL RESISTANCE IS NOT WITHIN THE LIMITS GIVEN IN "TABLE A", THEN DO THESE STEPS:
      (1) REPLACE THE FAULTY COMPONENT AND/OR REPAIR THE CIRCUIT WIRING FOR THE COMPONENT (WDM 21-61-61,-71,-81):
          (a) AUXILIARY FORWARD ZONE TRIM AIR MODULATING VALVE, V152 (AMM 21-61-07/401).
          (b) AUXILIARY MID ZONE TRIM AIR MODULATING VALVE, V153 (AMM 21-61-07/401).
          (c) FORWARD CARGO ZONE TRIM AIR MODULATING VALVE, V385 (AMM 21-61-07/401).
      (2) CONTINUE TO STEP 9.
   B. IF THE ELECTRICAL RESISTANCE IS WITHIN THE LIMITS GIVEN IN "TABLE A", THEN CONTINUE TO STEP 9.
9. SET THE "L (R) PACK" SELECTOR TO THE "OFF" POSITION.
10. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "OFF" POSITION.
11. OPEN THE "ZONE CONTROLLER" CIRCUIT BREAKER.
12. INSTALL A "NEW" AUXILIARY ZTC CONTROLLER, M1609 (AMM 21-61-03/401).
13. CLOSE THE "ZONE CONTROLLER" CIRCUIT BREAKER.
14. SET THE "L (R) PACK" SELECTOR TO "AUTO" POSITION.
15. PUSH THE "TRIM AIR" SWITCH-LIGHT TO "ON" POSITION.
16. MAKE SURE THE "CONTROLLER FAULT" LIGHT DOES NOT COME ON ON THE FRONT PANEL OF THE NEW AUXILIARY ZTC CONTROLLER.

DOES THE "CONTROLLER FAULT" LIGHT COME ON AGAIN?

YES

SEE SHEET 3
(BLOCK 22)

NO

41 CONTINUE THE AIRPLANE IN SERVICE.

Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 2)

E96973

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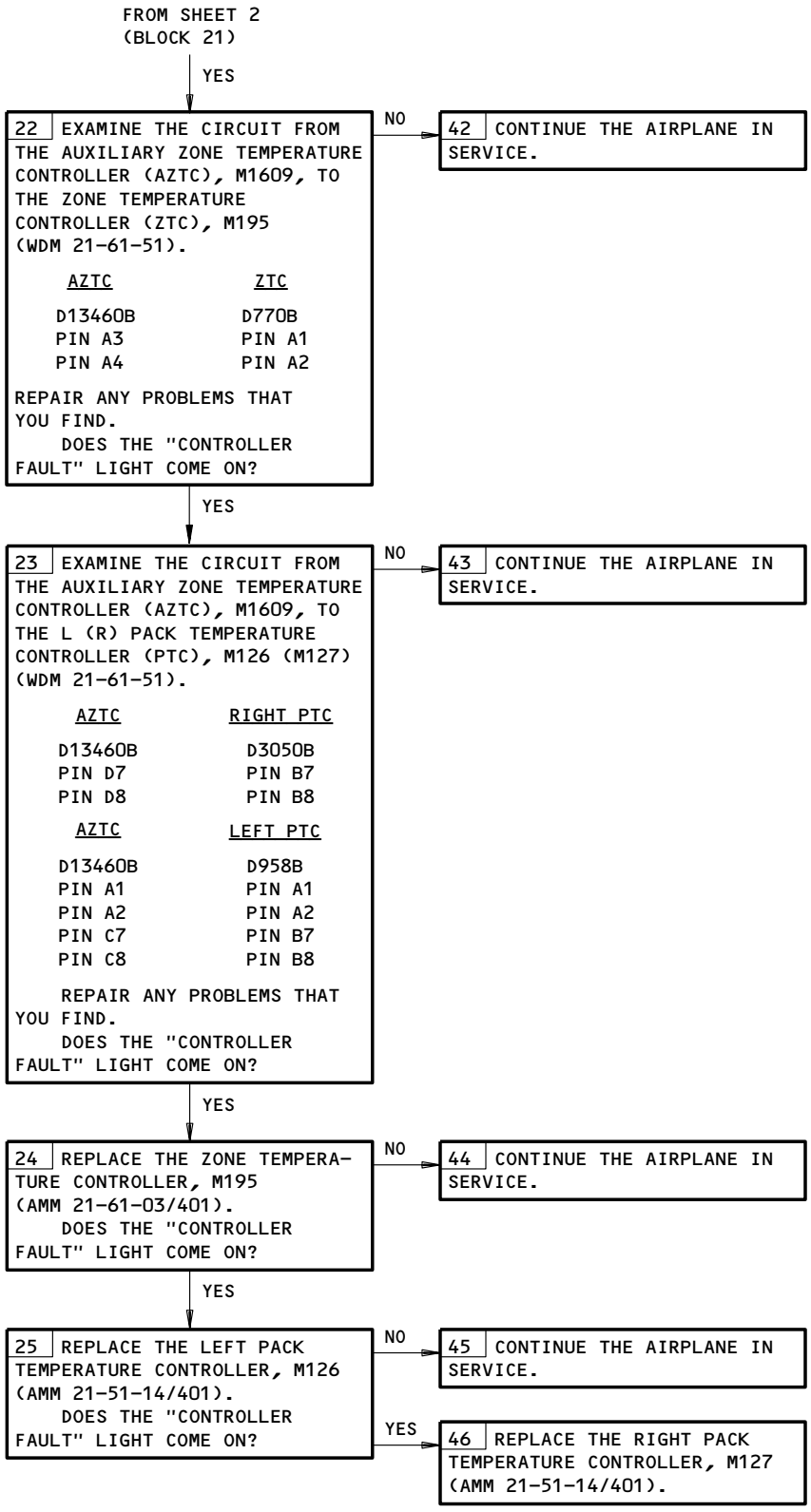

Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 3)

E96984

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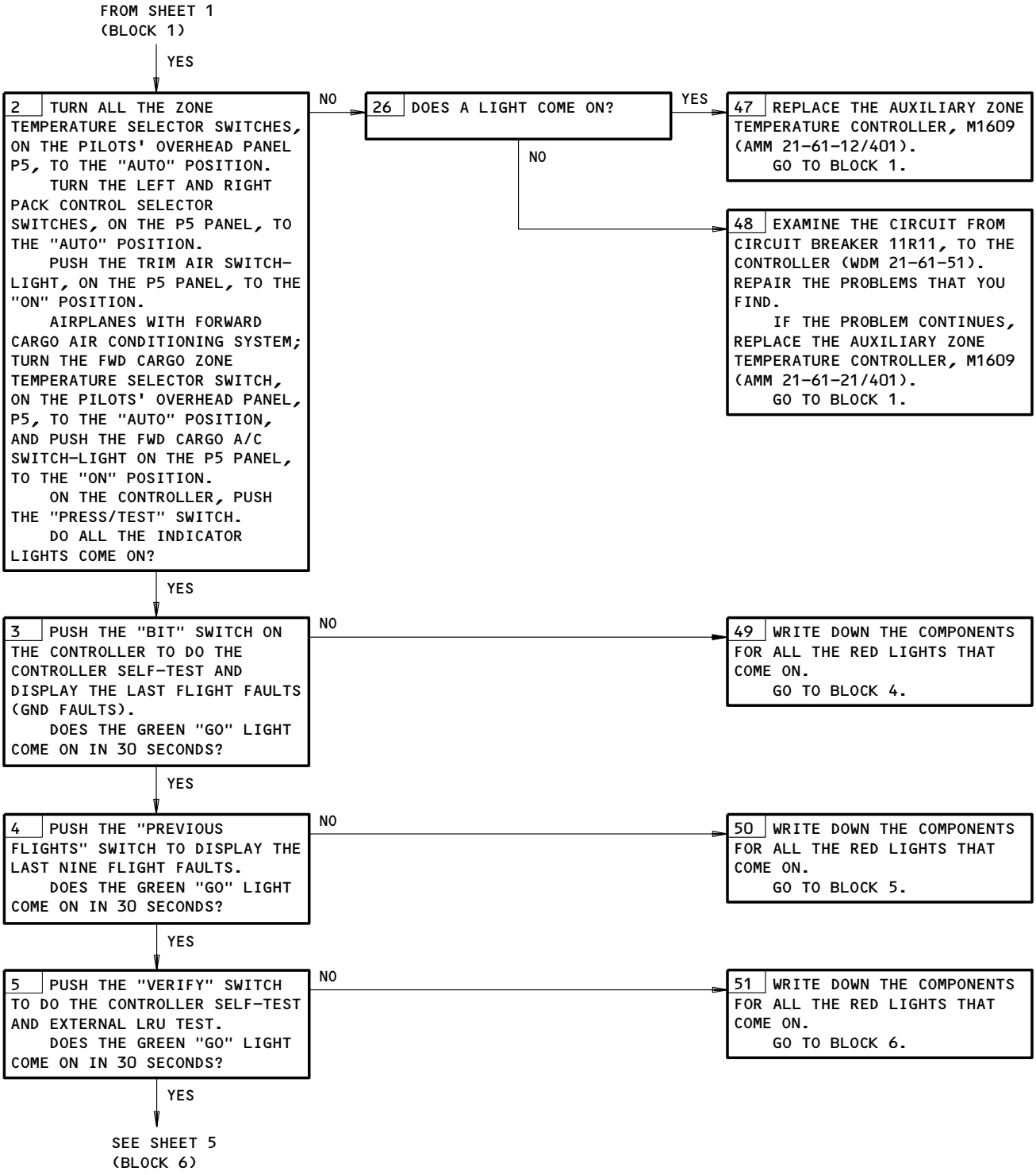

Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 4)

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Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 5)

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VALVE CHECKED	FROM CONNECTOR D13460B	TO CONNECTOR D13460C	ACCEPTABLE RESISTANCE (OHMS)
AUXILIARY FORWARD ZONE TRIM AIR MODULATING VALVE, V152 (WDM 21-61-61)	PIN B13 PIN B15	PIN 4 PIN 4	70-105 70-105
AUXILIARY MID ZONE TRIM AIR MODULATING VALVE, V153 (WDM 21-61-71)	PIN C13 PIN C15	PIN 4 PIN 4	70-105 70-105
FWD CARGO ZONE TRIM AIR MODULATING VALVE, V385 (WDM 21-61-81)	PIN A13 PIN A15	PIN 4 PIN 4	70-105 70-105

AUXILIARY ZONE TEMPERATURE CONTROLLER RESISTANCE CHECK
TABLE A

DO THESE STEPS TO DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE CARGO, FORWARD AUXILIARY, OR MID AUXILIARY TRIM AIR MODULATING VALVES:

1. SET THE "L (R) PACK" SELECTOR TO THE "OFF" POSITION.
2. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "OFF" POSITION.
3. OPEN THE "ZONE CONTROLLER" CIRCUIT BREAKERS ON THE P11 PANEL.
4. REMOVE THE AUXILIARY ZTC CONTROLLER, M1609(AMM 21-61-03/401).
5. CLOSE THE "ZONE CONTROLLER" CIRCUIT BREAKER.
6. SET THE "L (R) PACK" SELECTOR TO THE "AUTO" POSITION.
7. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "ON" POSITION.
8. USE "TABLE A" AND THE SIMPLIFIED CIRCUIT SCHEMATICS WITHIN THIS FIGURE TO DO A CHECK OF THE ELECTRICAL RESISTANCE IN THE CIRCUIT WIRING FOR THE CARGO, FORWARD AUXILIARY, OR MID AUXILIARY TRIM AIR MODULATING VALVES.
   A. IF THE ELECTRICAL RESISTANCE IS NOT WITHIN THE LIMITS GIVEN IN "TABLE A", THEN DO THESE STEPS:
      (1) REPLACE THE FAULTY COMPONENT AND/OR REPAIR THE CIRCUIT WIRING FOR THE COMPONENT (WDM 21-61-61,-71,-81):
          (a) AUXILIARY FORWARD ZONE TRIM AIR MODULATING VALVE, V152 (AMM 21-61-07/401).
          (b) AUXILIARY MID ZONE TRIM AIR MODULATING VALVE, V153 (AMM 21-61-07/401).
          (c) FORWARD CARGO ZONE TRIM AIR MODULATING VALVE, V385 (AMM 21-61-07/401).
      (2) CONTINUE TO STEP 9.
   B. IF THE ELECTRICAL RESISTANCE IS WITHIN THE LIMITS GIVEN IN "TABLE A", THEN CONTINUE TO STEP 9.
9. SET THE "L (R) PACK" SELECTOR TO THE "OFF" POSITION.
10. PUSH THE "TRIM AIR" SWITCH-LIGHT TO THE "OFF" POSITION.
11. OPEN THE "ZONE CONTROLLER" CIRCUIT BREAKER.
12. INSTALL A "NEW" AUXILIARY ZTC CONTROLLER, M1609 (AMM 21-61-03/401).
13. CLOSE THE "ZONE CONTROLLER" CIRCUIT BREAKER.
14. SET THE "L (R) PACK" SELECTOR TO "AUTO" POSITION.
15. PUSH THE "TRIM AIR" SWITCH-LIGHT TO "ON" POSITION.
16. MAKE SURE THE "CONTROLLER FAULT" LIGHT DOES NOT COME ON ON THE FRONT PANEL OF THE NEW AUXILIARY ZTC CONTROLLER.

    DOES THE "CONTROLLER FAULT" LIGHT COME ON AGAIN?

Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 6)

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BITE MESSAGE	CORRECTIVE ACTION
CONTROLLER FAULT	1. DO THE AUXILIARY ZTC RESISTANCE CHECK IN "TABLE A" TO DETERMINE IF THERE IS AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE CARGO, FORWARD AUXILIARY, OR MID AUXILIARY TRIM AIR MODULATING VALVES. NOTE AIRPLANES WITH AUXILIARY ZTC P/N S210T130-80 AND SUBSEQUENT AUXILIARY ZTC DASH NUMBERS; THE "CARGO" TRIM VALVE LIGHT, "FWD AUX" TRIM VALVE LIGHT, OR "MID AUX" TRIM VALVE LIGHT WILL ALSO COME ON IN ADDITION TO THE "CONTROLLER FAULT" LIGHT WHEN THERE IS A BLOWN FUSE IN THE AUXILIARY ZTC CONTROLLER CAUSED BY AN ELECTRICAL SHORT IN THE CIRCUIT WIRING FOR THE CARGO, FORWARD AUXILIARY, OR MID AUXILIARY TRIM AIR MODULATING VALVES.
SELECTOR	1. REPLACE THE ZONE TEMPERATURE SELECTOR, YBFR516,YBFR571,YBFR634 (AMM 21-61-04/401). 2. IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE CONTROLLER TO THE COMPONENT (WDM 21-61-61,-71,-81). 3. REPAIR THE PROBLEMS THAT YOU FIND.
ZONE SENSOR	1. REPLACE THE ZONE TEMPERATURE SENSOR, TS469,TS470,TS496 (AMM 21-61-08/401). 2. IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE CONTROLLER TO THE COMPONENT (WDM 21-61-61,-71,-81). 3. REPAIR THE PROBLEMS THAT YOU FIND.
DUCT SENSOR	1. REPLACE THE DUCT AIR TEMPERATURE SENSOR, TS468,TS476,TS495 (AMM 21-61-02/401). 2. IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE CONTROLLER TO THE COMPONENT (WDM 21-61-61,-71,-81). 3. REPAIR THE PROBLEMS THAT YOU FIND.
TRIM VALVE	1. REPLACE THE TRIM AIR MODULATING VALVE, V152,V153,V385 (AMM 21-61-07/401). 2. IF THE PROBLEM CONTINUES, DO A CONTINUITY CHECK FROM THE AIRPLANE SHELF CONNECTOR FOR THE ZONE TEMPERATURE CONTROLLER TO THE APPLICABLE VALVE (SEE TABLE C). SET THE TRIM, AIR SWITCH TO THE "ON" POSITION. SET THE APPLICABLE ZONE SELECTOR TO "AUTO". IF YOU DO NOT FIND CONTINUITY, REPLACE THE RELAY.

AUXILIARY ZONE TEMPERATURE CONTROLLER - FAULT LIGHT TROUBLESHOOTING
TABLE B

ZONE	AIRPLANE SHELF CONNECTOR	PIN	VALVE	CONNECTOR	PIN	RELAY TO REPLACE
AUX FORWARD	D13460B	B13	V152	D13580	1	K2059
AUX FORWARD	D13460B	B15	V152	D13580	2	K2059
AUX MID	D13460B	C13	V153	D13582	1	K2062
AUX MID	D13460B	C15	V153	D13582	2	K2062
FWD CARGO	D13460B	D13	V385	D13570	1	K1222
FWD CARGO	D13460B	D15	V385	D13570	2	K1222

TRIM AIR MODULATING VALVE RELAY CONTINUITY CHECK
TABLE C

Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 7)

H46327
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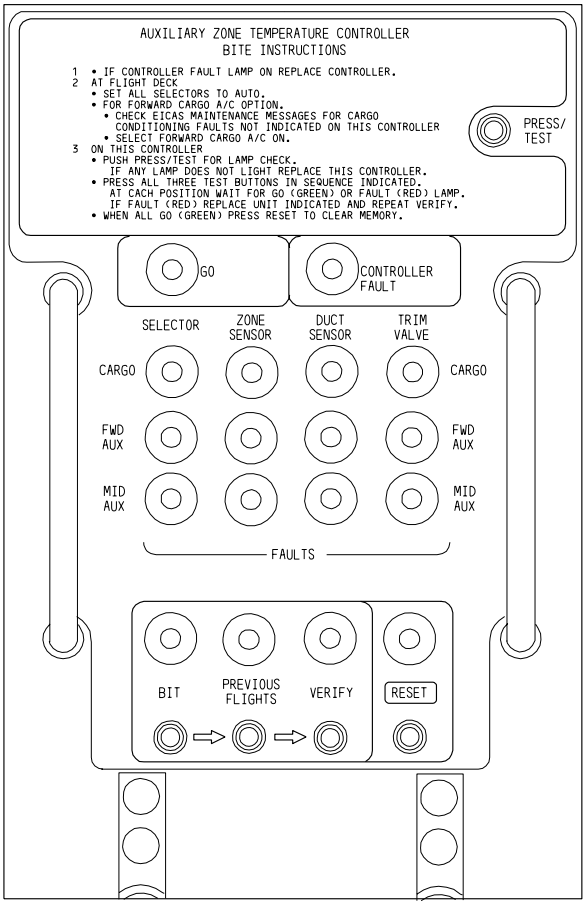

AUXILIARY ZONE TEMPERATURE CONTROLLER, M1609

Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 8)

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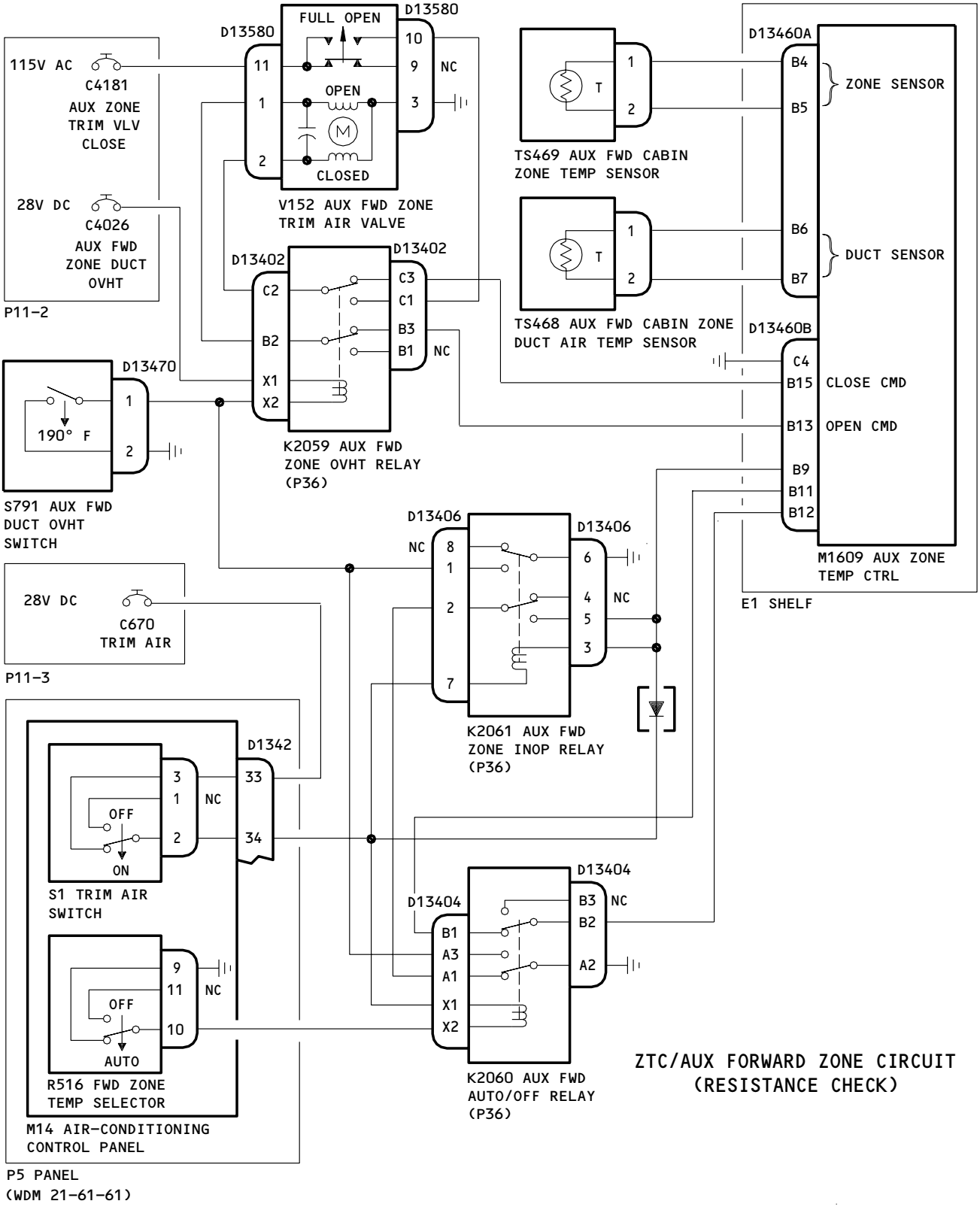

Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 9)

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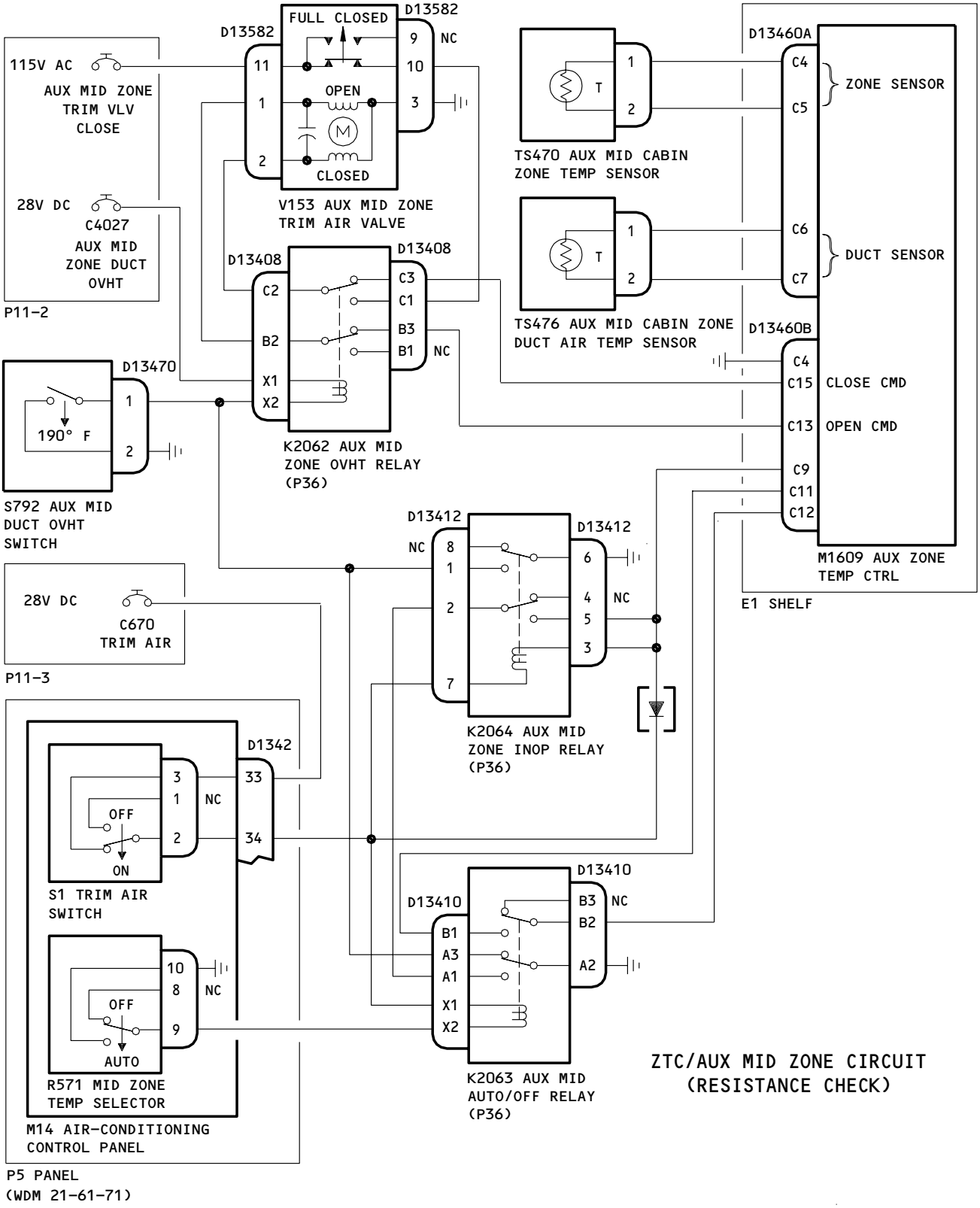

Auxiliary Zone Temperature Controller BITE Procedure
Figure 104A (Sheet 10)

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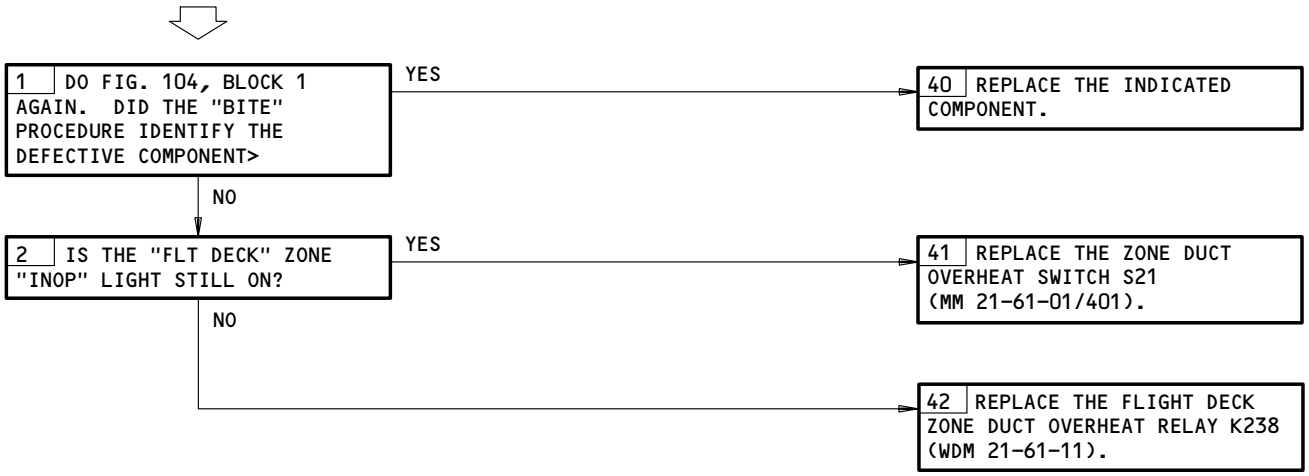
PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11R24,11R25,11R26,11R27,11P24,11P25,11P26,11P27

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)

FLT DECK ZONE INOP LIGHT ON IN AUTO MODE



Flt Deck Zone Inop Light On in Auto Mode
Figure 105

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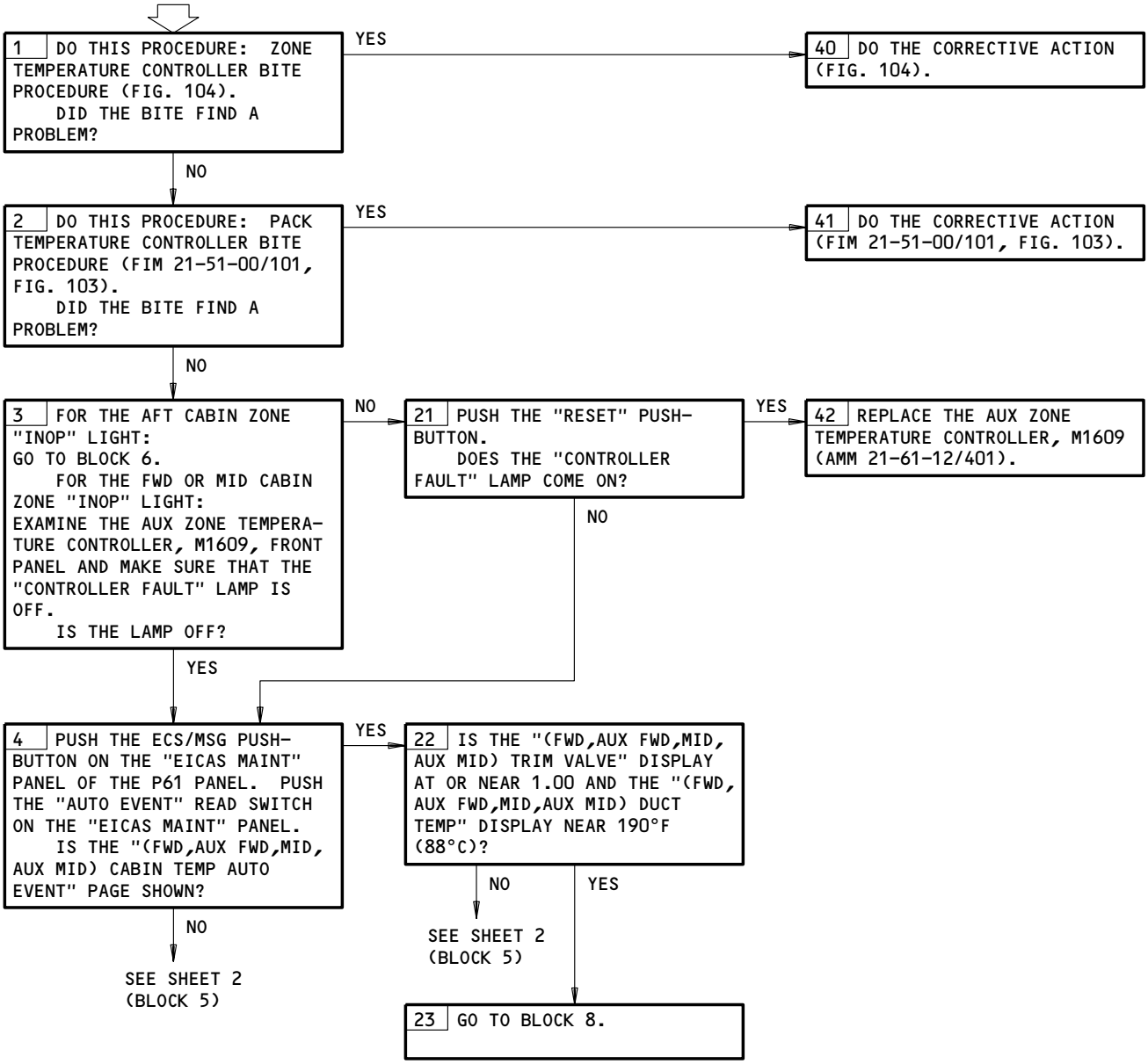
PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11P25,11P26,11P27,11R15,11R25,11R26,11R27,11H2,
11H3,11H5,11H6,11R11

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

FWD/MID/AFT ZONE INOP LIGHT ILLUMINATED



Fwd/Mid/Aft Zone Inop Light Illuminated
Figure 106 (Sheet 1)

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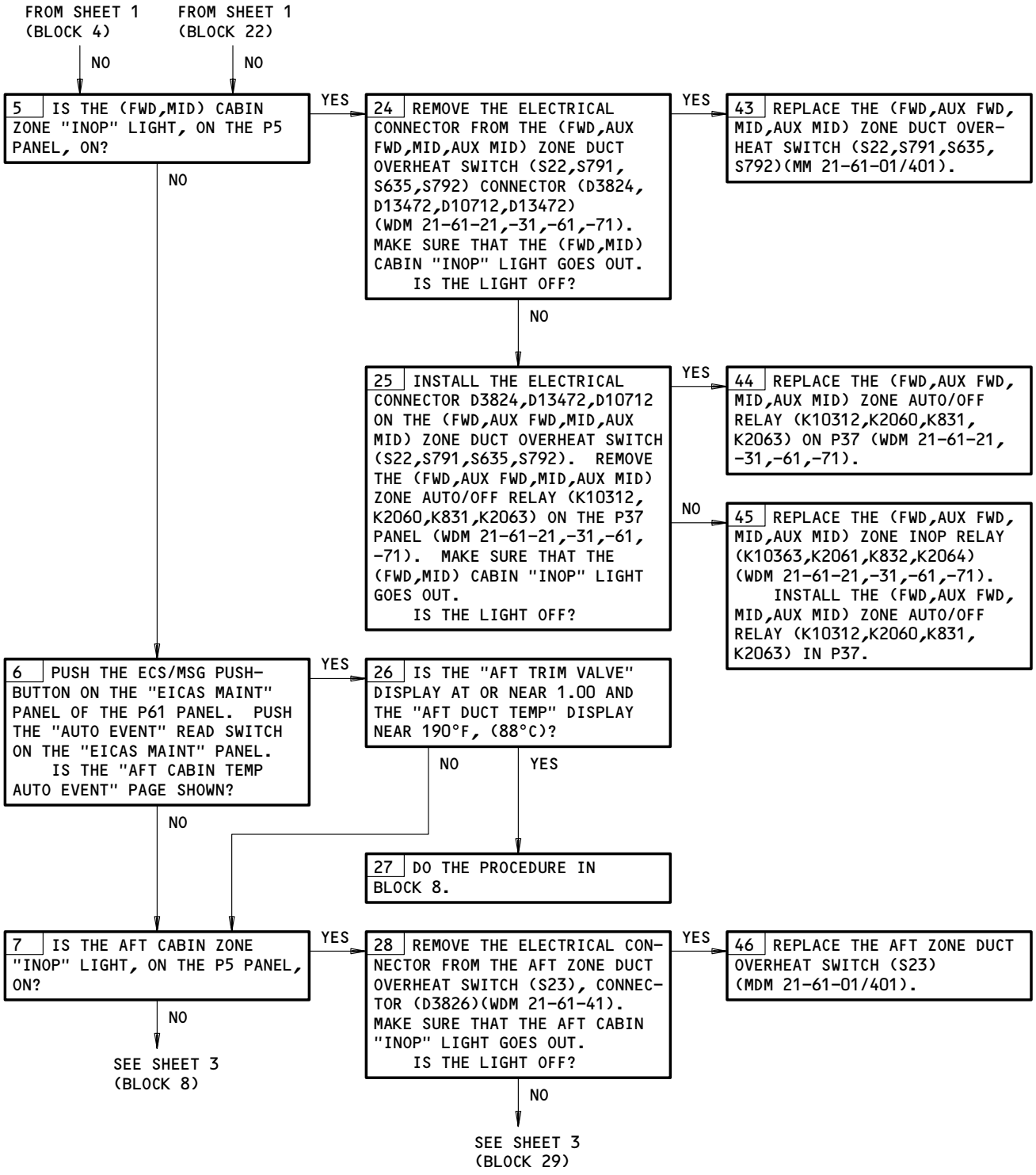

Fwd/Mid/Aft Zone Inop Light Illuminated
Figure 106 (Sheet 2)

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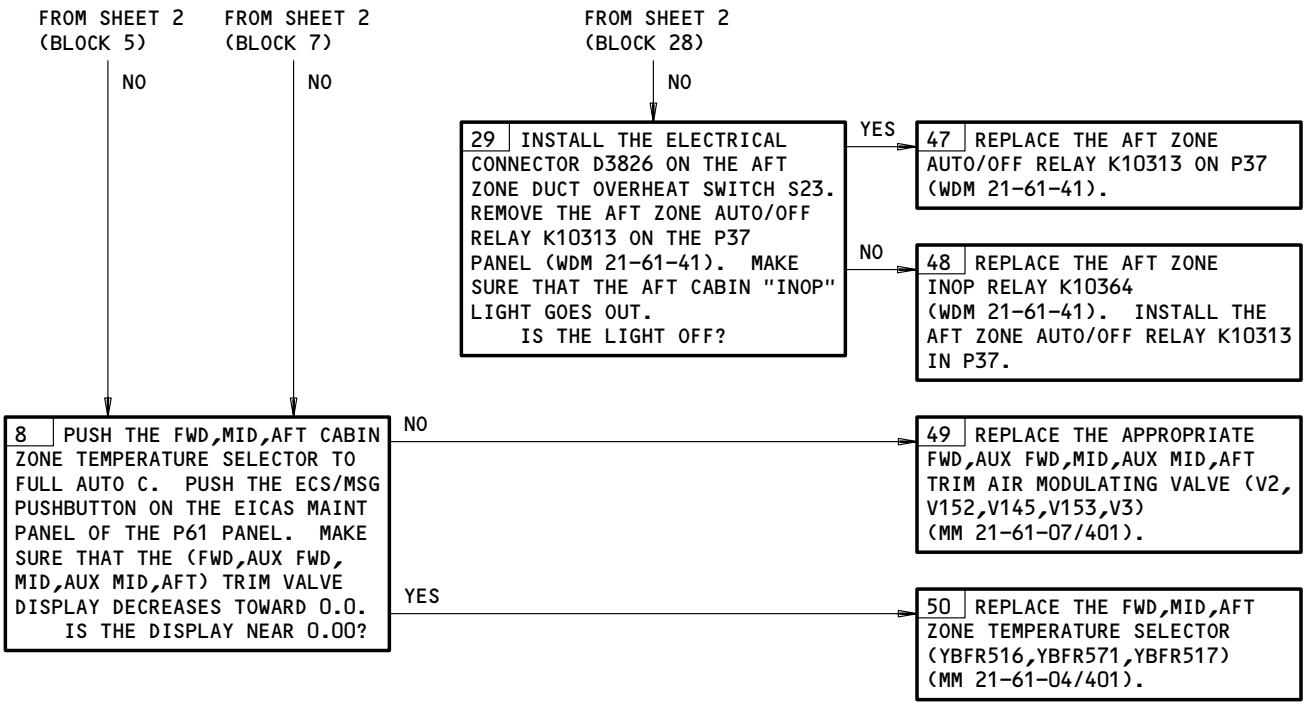

Fwd/Mid/Aft Zone Inop Light Illuminated
Figure 106 (Sheet 3)

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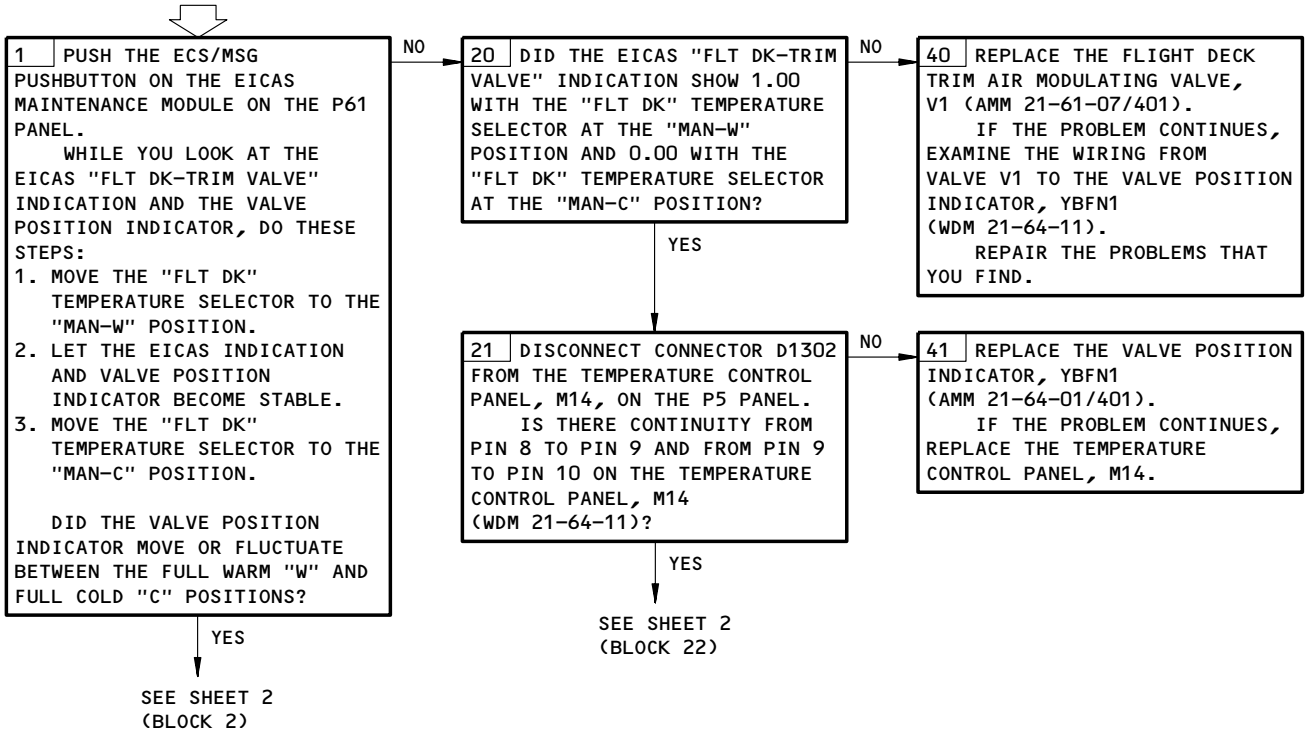
FLIGHT DECK TRIM VALVE POSITION INDICATOR OFF SCALE/FLUCTUATES

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11P24, 11R24

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



Valve Position Indicator Off Scale/Fluctuates
Figure 107 (Sheet 1)

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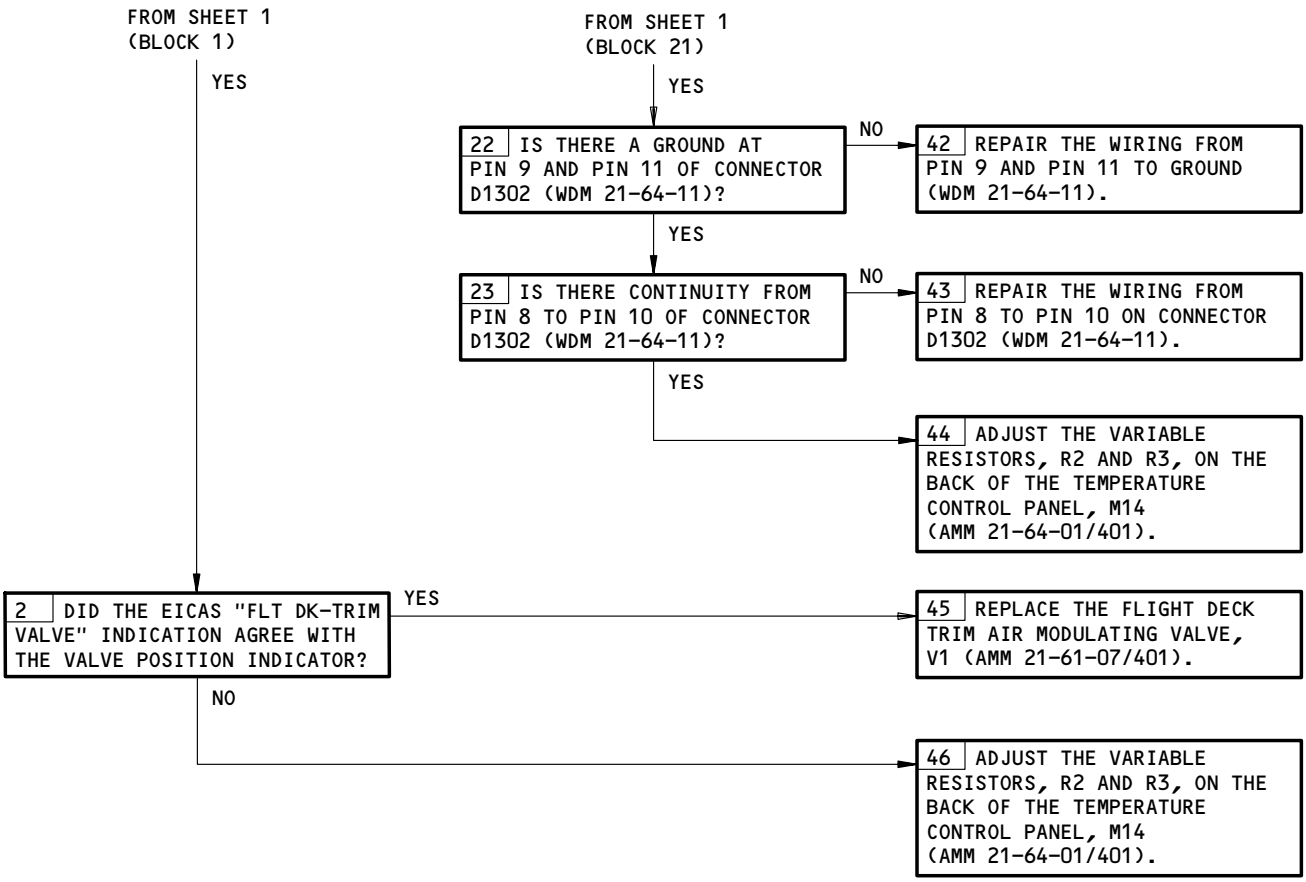

Valve Position Indicator Off Scale/Fluctuates
Figure 107 (Sheet 2)

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FLIGHT DECK TRIM VALVE POSITION INDICATOR FAILED TO MOVE WHEN AUTO OR MANUAL MODE SELECTED WARMER/ COOLER

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11P24, 11R24

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

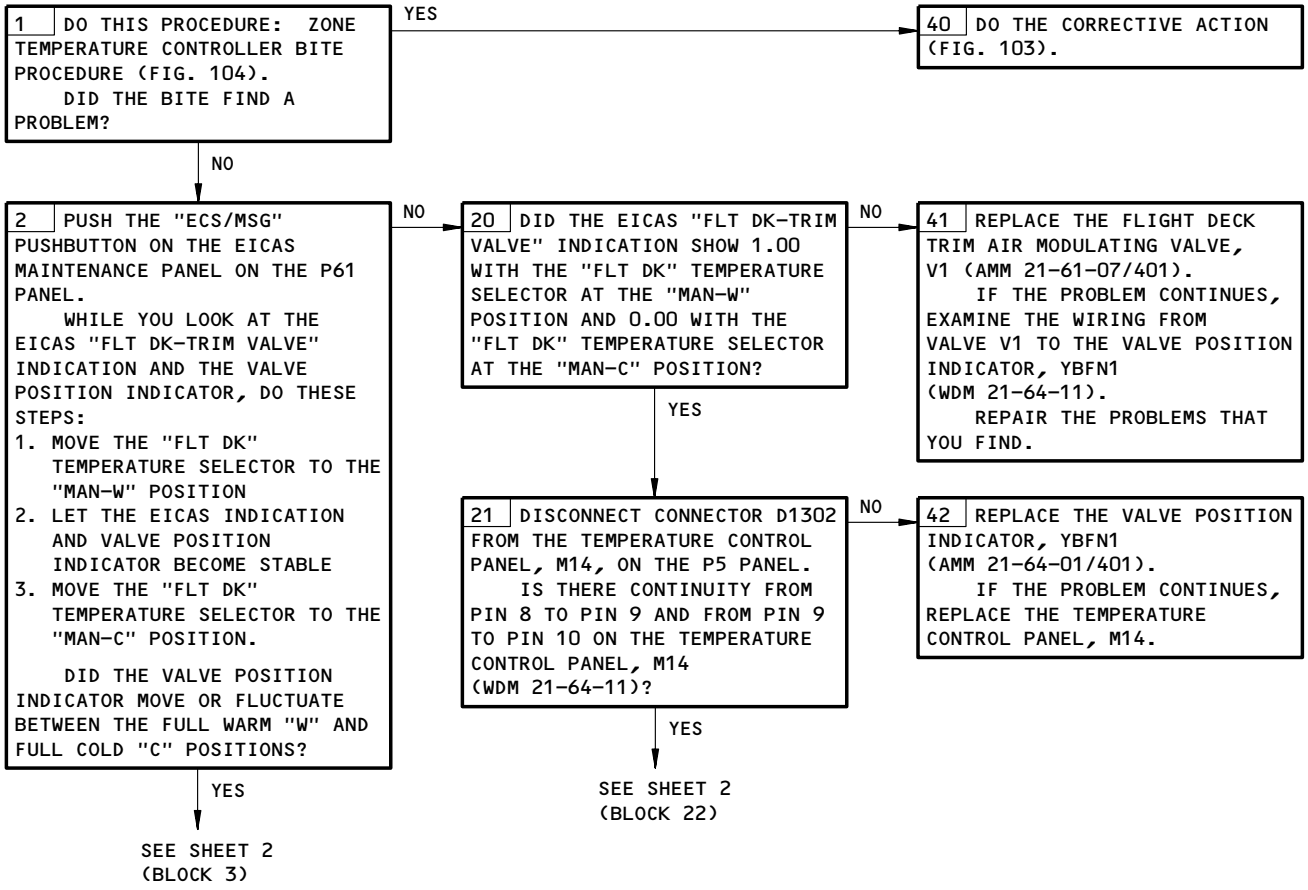
DESCRIPTION:

THE FLIGHT DECK VALVE POSITION INDICATOR, ON THE AIR CONDITIONING PANEL, P5, DOES NOT MOVE OR MOVES ERRATICALLY.

POSSIBLE CAUSES:

1. FLIGHT DECK TRIM AIR MODULATING VALVE, V1, IS FAILED (AMM 21-61-07/401)
2. FLIGHT DECK VALVE POSITION INDICATOR, YBFN1, IS FAILED (AMM 21-64-01/401)
3. WIRING (WDM 21-64-11).

FAULT ISOLATION:



Flight Deck Trim Valve Position Indicator Failed to Move
When Auto or Manual Mode Selected Warmer/Cooler
Figure 108 (Sheet 1)

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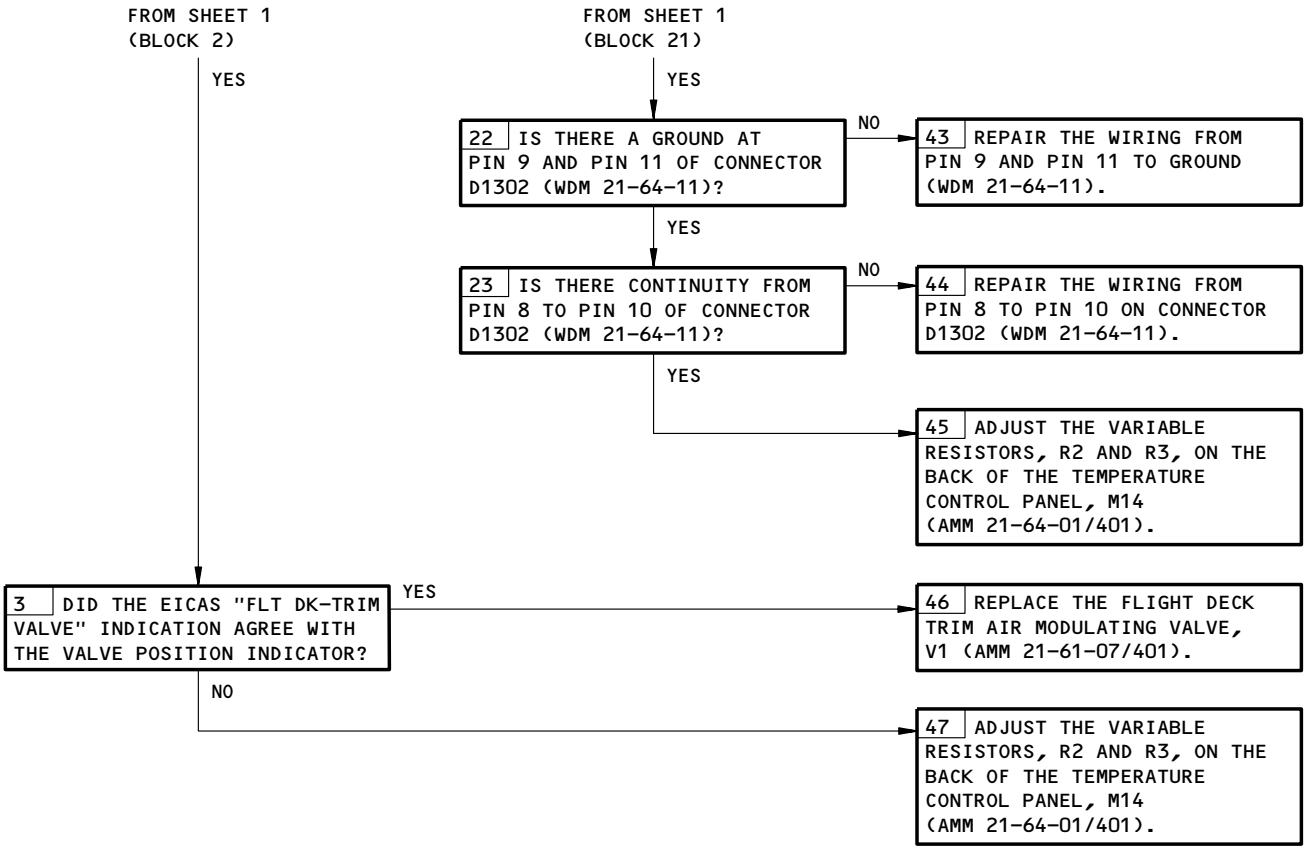

Flight Deck Trim Valve Position Indicator Failed to Move
When Auto or Manual Mode Selected Warmer/Cooler
Figure 108 (Sheet 2)

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AUTO MODE FAILED TO CONTROL FLIGHT DECK TEMPERATURE/ TRIM VALVE DID NOT OPERATE NORMAL IN MANUAL MODE

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11R24,11R25,11R26,11R27,11P24,11P25,11P26,11P27

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)

1 DO THE ZONE TEMPERATURE CONTROL BITE PROCEDURE (FIG. 104, BLOCK 1).
DID THE "BITE" PROCEDURE IDENTIFY THE DEFECTIVE COMPONENT?

YES → 40 REPLACE THE INDICATED COMPONENT.

NO → 41 REPLACE THE FLIGHT DECK ZONE DUCT OVERHEAT RELAY K238 (WDM 21-61-11).

Auto Mode Failed to Control Flight Deck Temperature/Trim Valve did not Operate Normal in Manual Mode
Figure 109

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PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
- LEFT AND RIGHT COOLING PACK SYSTEM (AMM 21-00-00/201)
- LAVATORY/GALLEY VENTILATION SYSTEM (AMM 21-26-00/501)
- EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11H2, 11H3, 11H5, 11H6, 11P24, 11P25, 11P26, 11P27, 11R11, 11R15, 11R24, 11R25, 11R26, 11R27

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

FWD/MID/AFT CABIN FAILED TO MAINTAIN DESIRED TEMPERATURE

1 EXAMINE THE ZONE TEMPERATURE SENSOR FILTERS FOR CLEANLINESS.
ARE THE FILTERS CLEAN?

NO → 41 CLEAN THE ZONE TEMPERATURE SENSOR FILTERS (AMM 21-61-00/701), OR REPLACE THE ZONE TEMPERATURE SENSOR FILTERS IF NEEDED (AMM 21-61-09/401).

YES ↓

2 CHECK FOR AIRFLOW MOVEMENT THROUGH THE ZONE TEMPERATURE SENSOR FILTERS. THE LAV/GALLEY VENTILATION FAN SHOULD BE IN OPERATION TO SUPPLY THE AIRFLOW MOVEMENT.
IS THERE AIRFLOW MOVEMENT THROUGH THE FILTERS?

NO → 21 EXAMINE THE FLEX HOSE THAT IS CONNECTED BETWEEN THE ZONE TEMPERATURE SENSOR HOUSING AND THE LAV/GALLEY VENTILATION DUCTS.
IS THE FLEX HOSE DISCONNECTED, KINKED, OR DAMAGED?

YES → 42 REPAIR/REPLACE THE FLEX HOSE TO RESTORE AIRFLOW TO THE ZONE TEMPERATURE SENSOR HOUSING.

NO → 43 EXAMINE THE LAV/GALLEY VENTILATION DUCTING FOR DAMAGE OR DISCONNECTED DUCT JOINTS AND REPAIR AS NEEDED.

YES ↓

3 DO THE BITE PROCEDURE FOR THE ZONE TEMPERATURE CONTROLLER (FIG. 104).
DO THE BITE PROCEDURE FOR THE AUXILIARY ZONE TEMPERATURE CONTROLLER (FIG. 104A).
DID THE BITE FIND ANY FAULTS WITH THE ZONE TEMPERATURE SENSORS, ZONE DUCT TEMPERATURE SENSORS, OR TRIM AIR MODULATING VALVES?

YES → 44 REPLACE THE APPLICABLE ZONE TEMPERATURE SENSOR (AMM 21-61-08/401), ZONE DUCT TEMPERATURE SENSOR (AMM 21-61-02/401), OR TRIM AIR MODULATING VALVE (AMM 21-61-07/401), THAT THE BITE FOUND.
IF THE PROBLEM CONTINUES, DO THE ELECTRICAL WIRING CHECKS FOR THE SENSORS AND VALVES IN THE BITE PROCEDURE (FIM 21-60-00/101, FIG. 104 AND 104A).

NO ↓

SEE SHEET 2 (BLOCK 4)

Fwd/Mid/Aft Cabin Failed to Maintain Desired Temperature
Figure 110 (Sheet 1)

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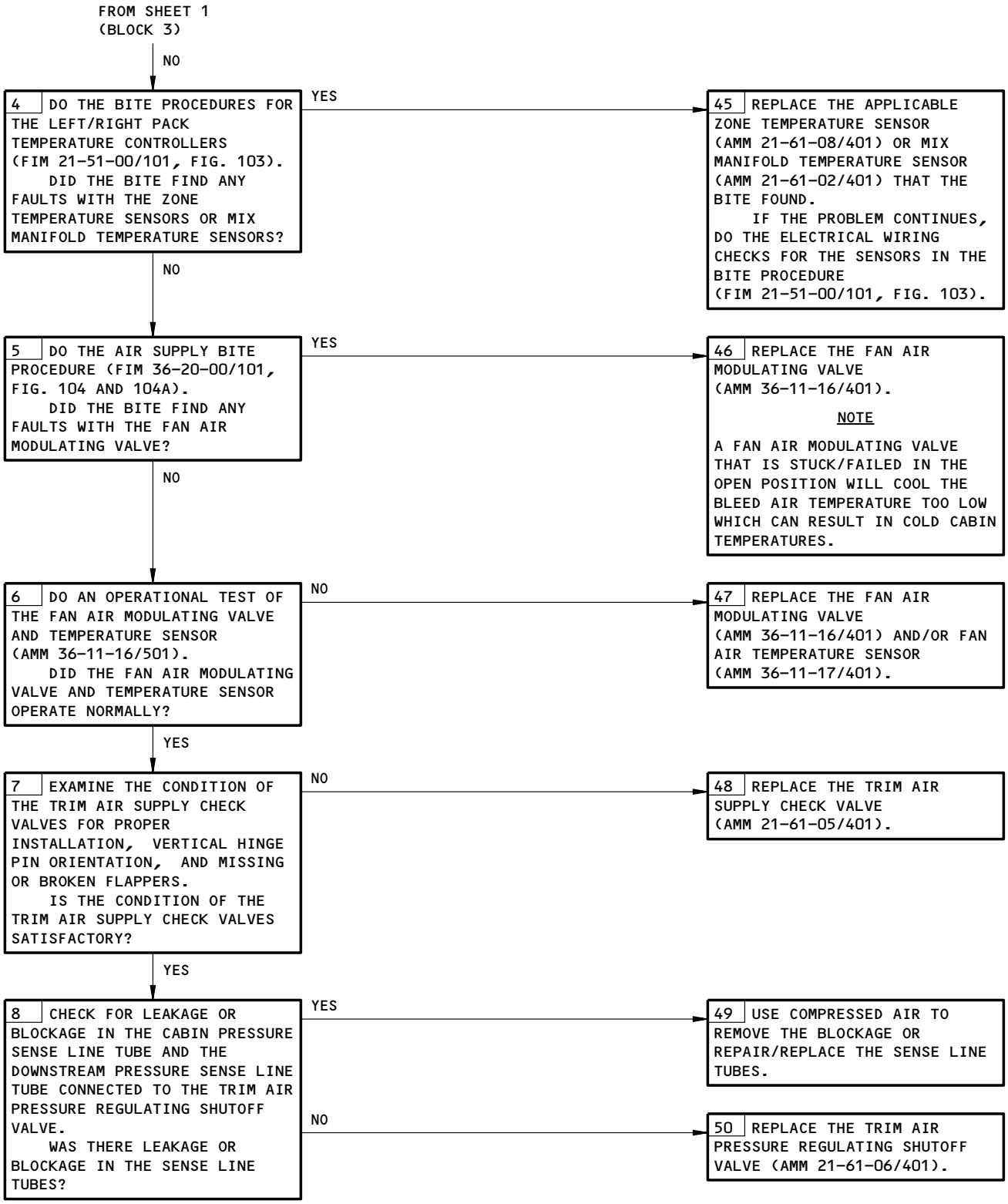

Fwd/Mid/Aft Cabin Failed to Maintain Desired Temperature
Figure 110 (Sheet 2)

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FLT DECK TEMP EICAS MESSAGE AND INOP LIGHT ILLUMI-NATED IN AUTO MANUAL OPERATION NOT NORMAL

PREREQUISITES
NONE

1	REPLACE THE TRIM AIR MODULATING VALVE, V1 (AMM 21-61-07/401).

Flt Deck Temp EICAS Message and Inop Light Illuminated in Auto;
Manual Operation Not Normal
Figure 111

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COMPT TEMP INDICATOR READS HIGH/LOW COMPT TEMP OK

PREREQUISITES
NONE

1	REPLACE THE APPROPRIATE (FLT DECK,FORWARD,MID,AFT) COMPARTMENT TEMPERATURE BULB (TS181,TS182,TS375, TS183)(AMM 21-65-03/401). IF THE PROBLEM CONTINUES, REPLACE THE COMPARTMENT TEMPERATURE INDICATOR, M10073 (AMM 21-65-01/401).

Compt Temp Indicator Reads High/Low/Compt Temp OK
Figure 112

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COMPT TEMPERATURE INDICATOR BLANK

PREREQUISITES
NONE

1 REPLACE THE APPROPRIATE (FLT DECK,FORWARD,MID,AFT) COMPARTMENT TEMPERATURE BULB (TS181,TS182, TS375,TS183)(AMM 21-65-03/401).

Compt Temperature Indicator Blank
Figure 113

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FLT DECK, FWD CABIN, AUX FWD CABIN, MID CABIN, AUX MID CABIN, AND AFT CABIN TEMP DOES NOT RESPOND WITH TRIM AIR SWITCH "ON" AND ALL ZONE TEMPERATURE SELECTORS IN "AUTO"

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C33,11H2,11H3,11H5,11H6,11P24,11P25,11P26,
11P27,11R11,11R15,11R16,11R24,11R25,11R26,11R27

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)

Flt Deck, Fwd Cabin, Aux Fwd Cabin, Mid Cabin, Aux Mid Cabin, and Aft Cabin Temp does not Respond with Switch ON and all Zone Temperature Selectors in AUTO
Figure 113A

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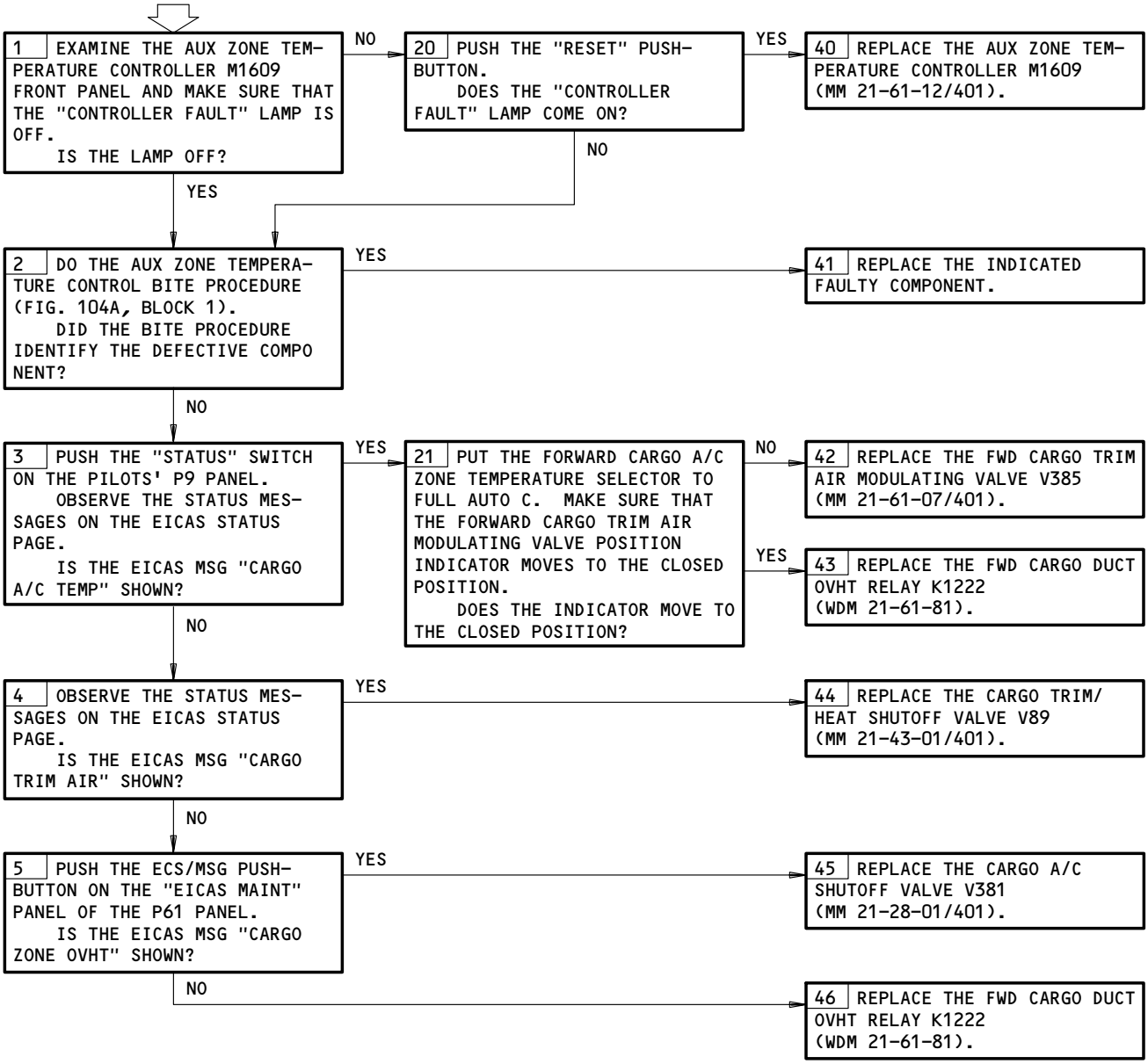
EICAS MSG "FWD CARGO BACKUP" DISPLAYED WITH FWD CARGO A/C SELECTED ON

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
- EICAS (MM 31-41-00/201)
- LEFT PACK OPERATING (MM 21-00-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
- 11N21,11N22,11R11

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
- ELECTRICAL POWER IS ON (MM 24-22-00/201)



EICAS Msg FWD CARGO BACKUP Displayed with Fwd Cargo A/C Selected On
Figure 114

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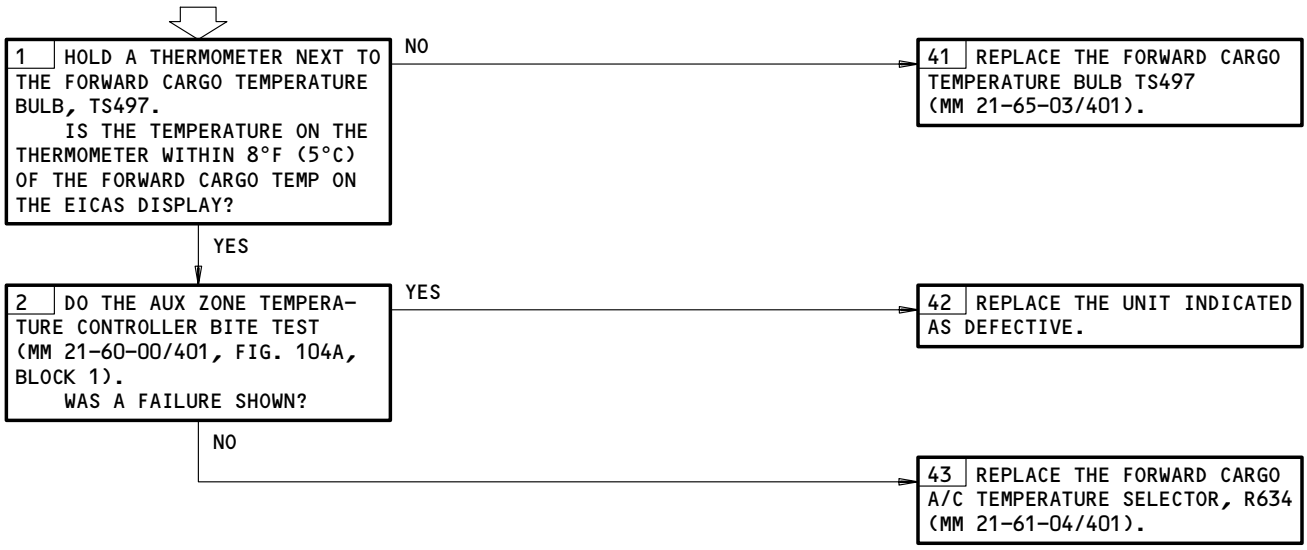
PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
EICAS (MM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
33B1,36G4

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
VENTILATION SYSTEM IS ON (MM 21-26-00/201)

FWD CARGO FAILED TO OBTAIN SELECTED TEMP IN "AUTO". NO SYSTEM EICAS MSGS DISPLAYED



Fwd Cargo Failed To Obtain Selected Temp in "AUTO". No System EICAS Msgs Displayed
Figure 115

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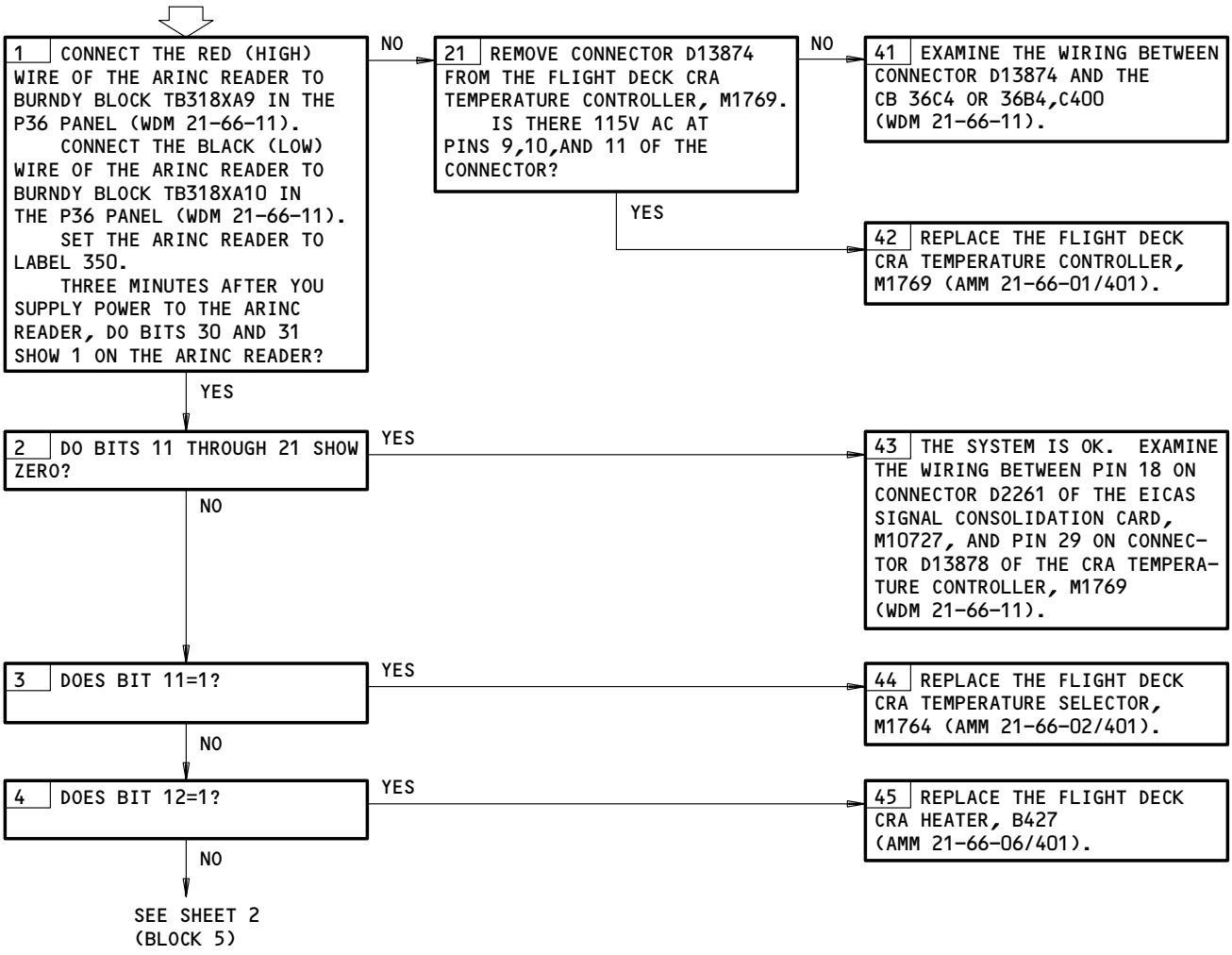
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)
FLIGHT MODE SIMULATION (AMM 32-09-02/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
36C4 OR 36B4,36C7 OR 36B1,36D2 OR 36L1,36D3 OR 36L2,36D4 OR 36L3

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

"FLT REST SYS"
EICAS MAINTENANCE
MESSAGE



FLT REST SYS EICAS Maintenance Message
Figure 116 (Sheet 1)

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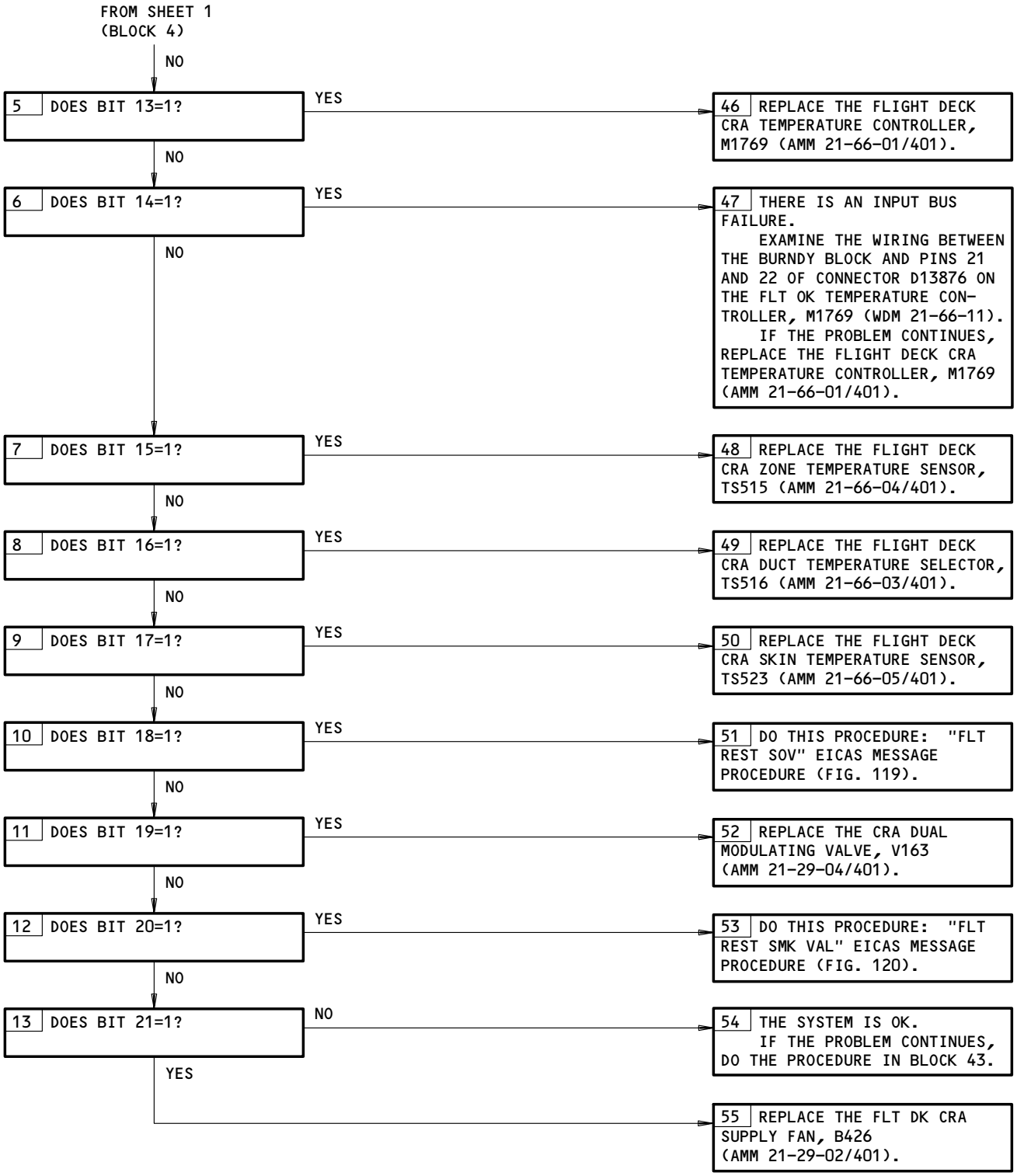

FLT REST SYS EICAS Maintenance Message
Figure 116 (Sheet 2)

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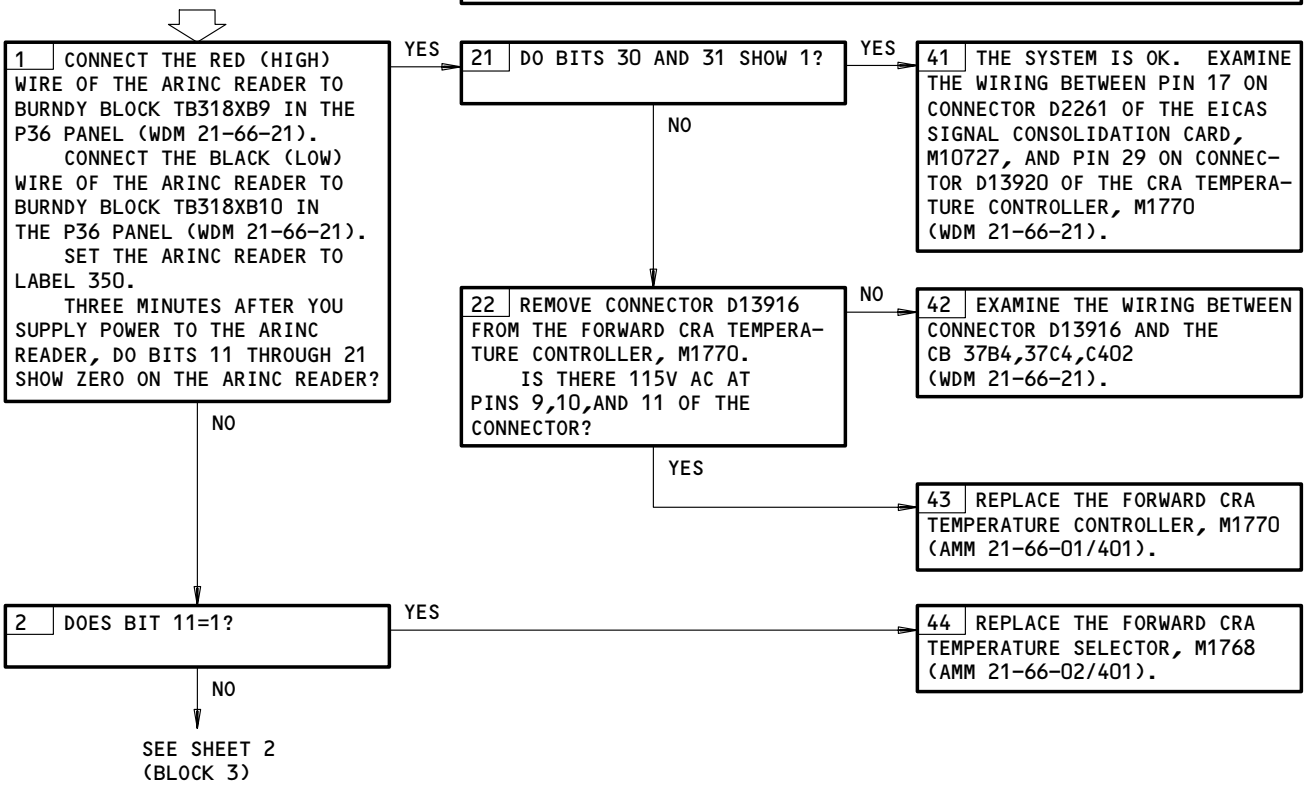
PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)
FLIGHT MODE SIMULATION (AMM 32-09-02/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
37B4,37C4 OR 37D2,37D6 OR 37K3,37H4 OR 37K5

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)

"FWD CAB REST SYS" EICAS MAINTENANCE MESSAGE



FWD CAB REST SYS EICAS Maintenance Message
Figure 117 (Sheet 1)

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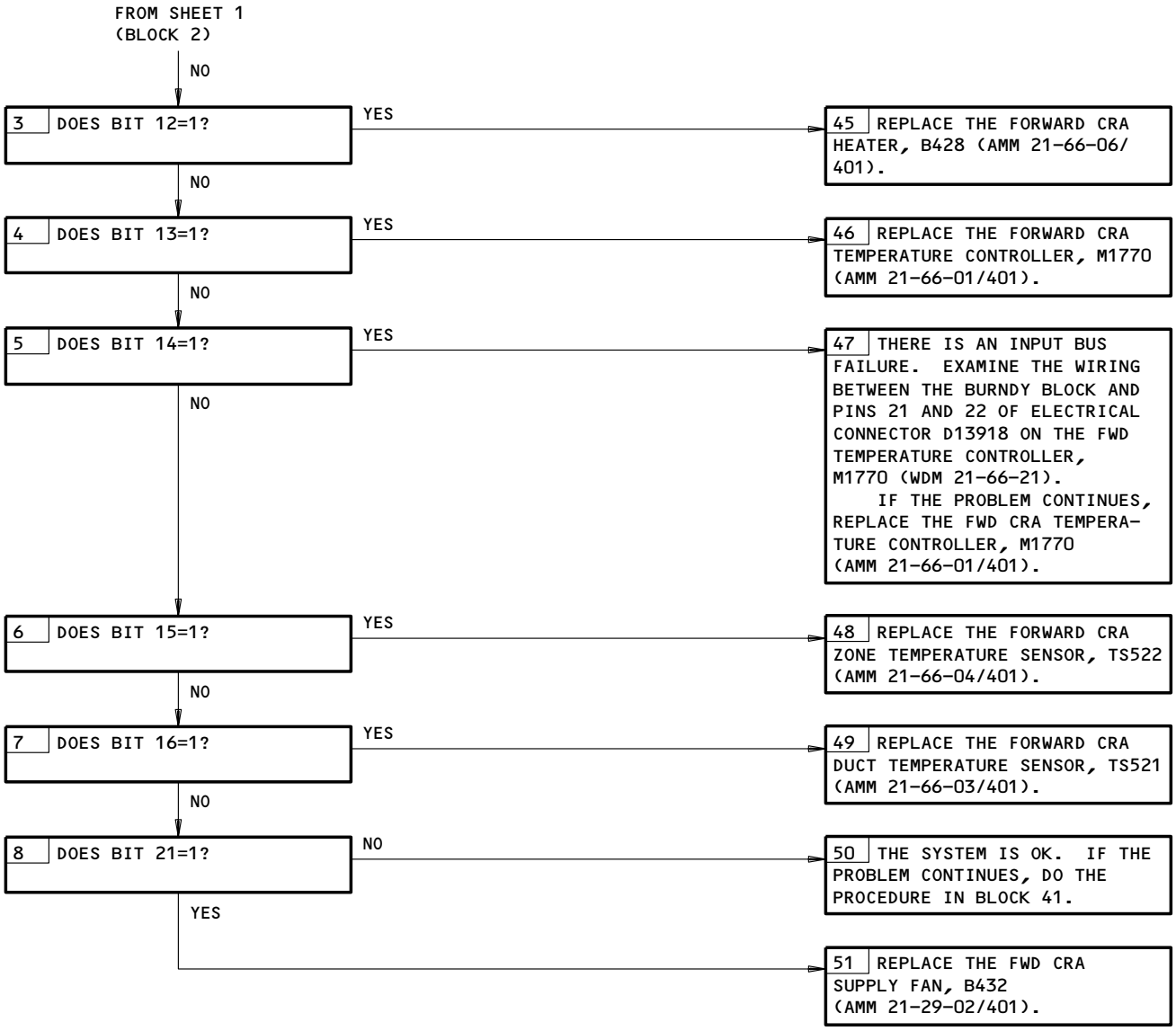

FWD CAB REST SYS EICAS Maintenance Message
Figure 117 (Sheet 2)

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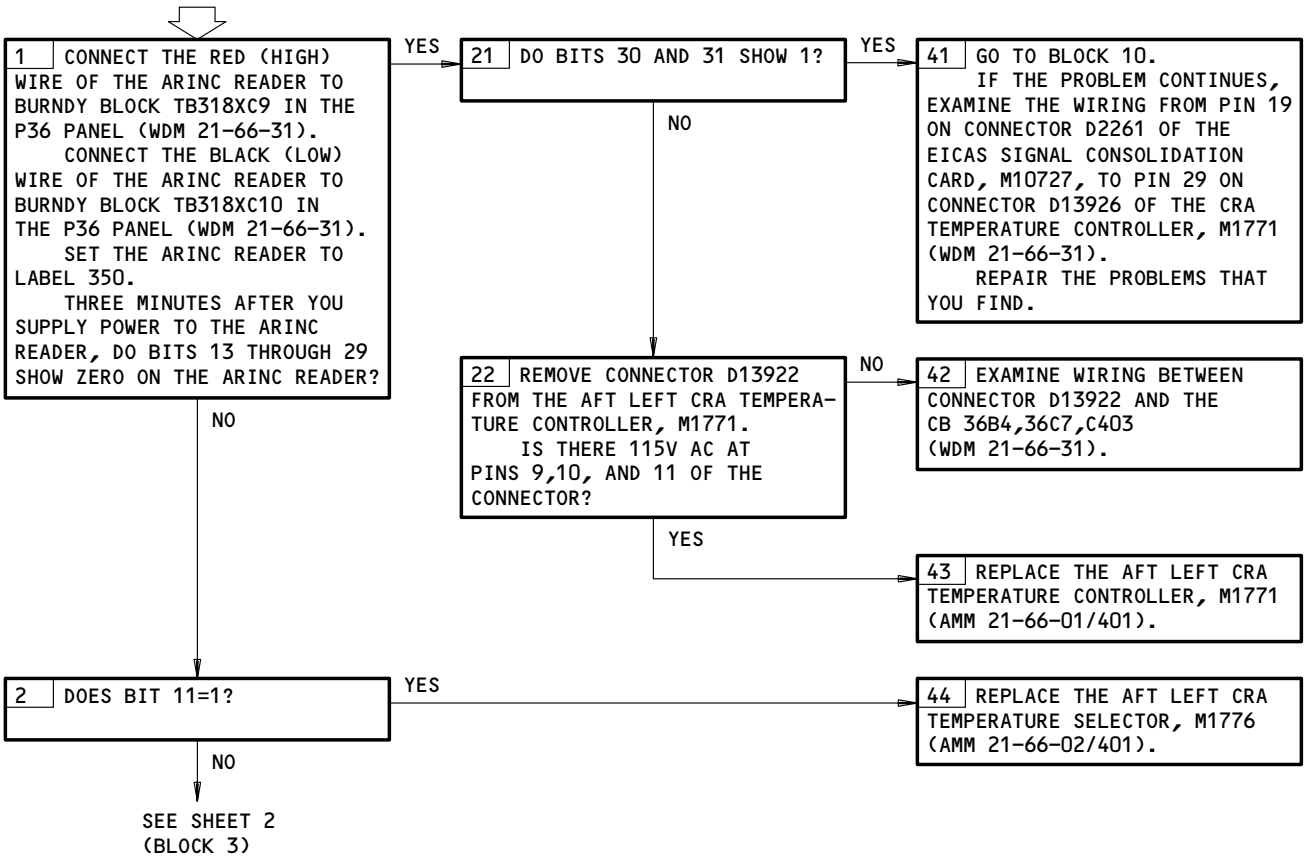
"AFT CAB REST SYS" EICAS MAINTENANCE MESSAGE

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)
FLIGHT MODE SIMULATION (AMM 32-09-02/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
36B2,36B4 OR 36C7,36D5 OR 36L4,36D6 OR 36K3,37B6, 37C7,37D7 OR 37K2,37H5 OR 37K4

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



AFT CAB REST SYS EICAS Maintenance Message
Figure 118 (Sheet 1)

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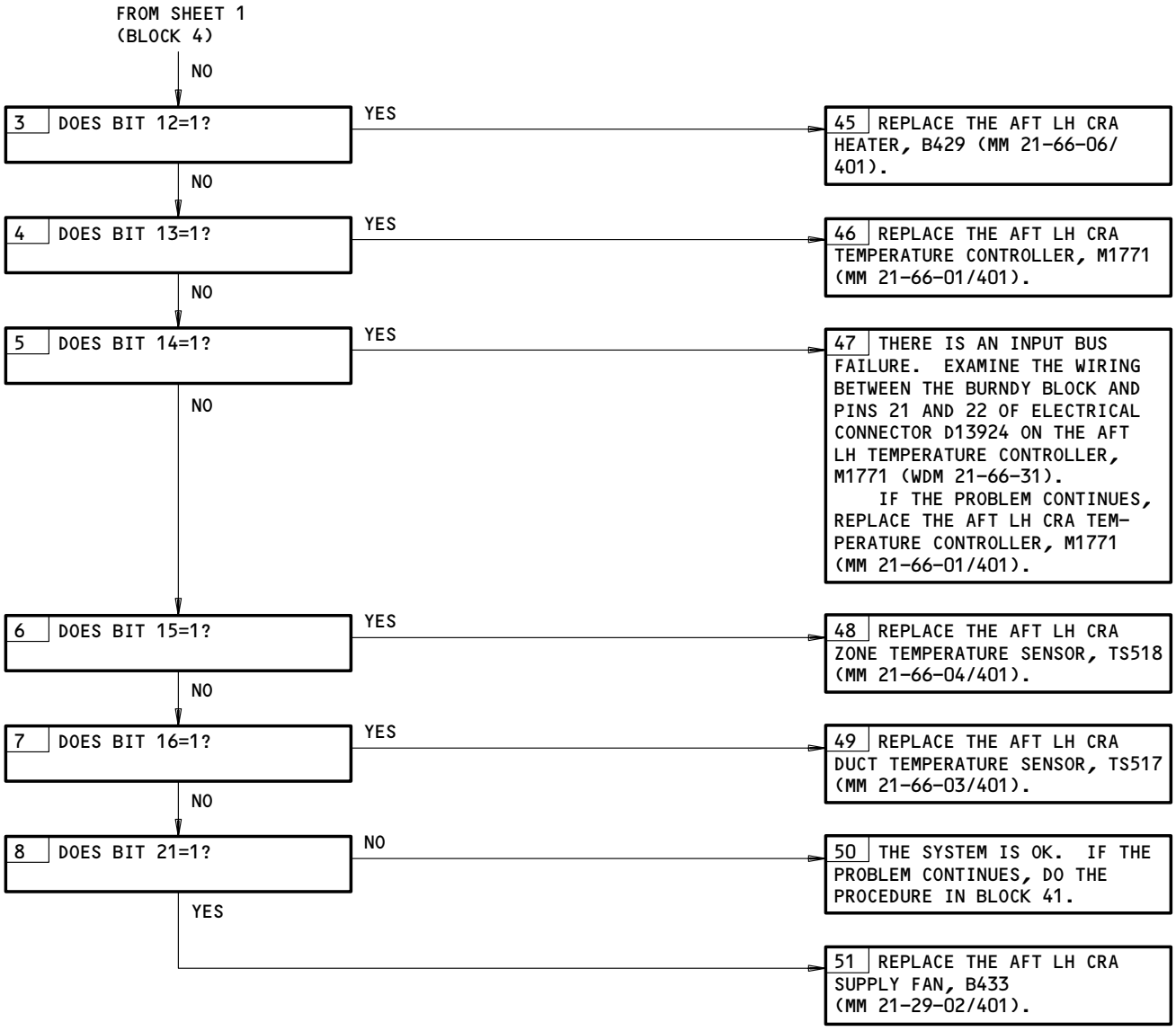

AFT CAB REST SYS EICAS Maintenance Message
Figure 118 (Sheet 2)

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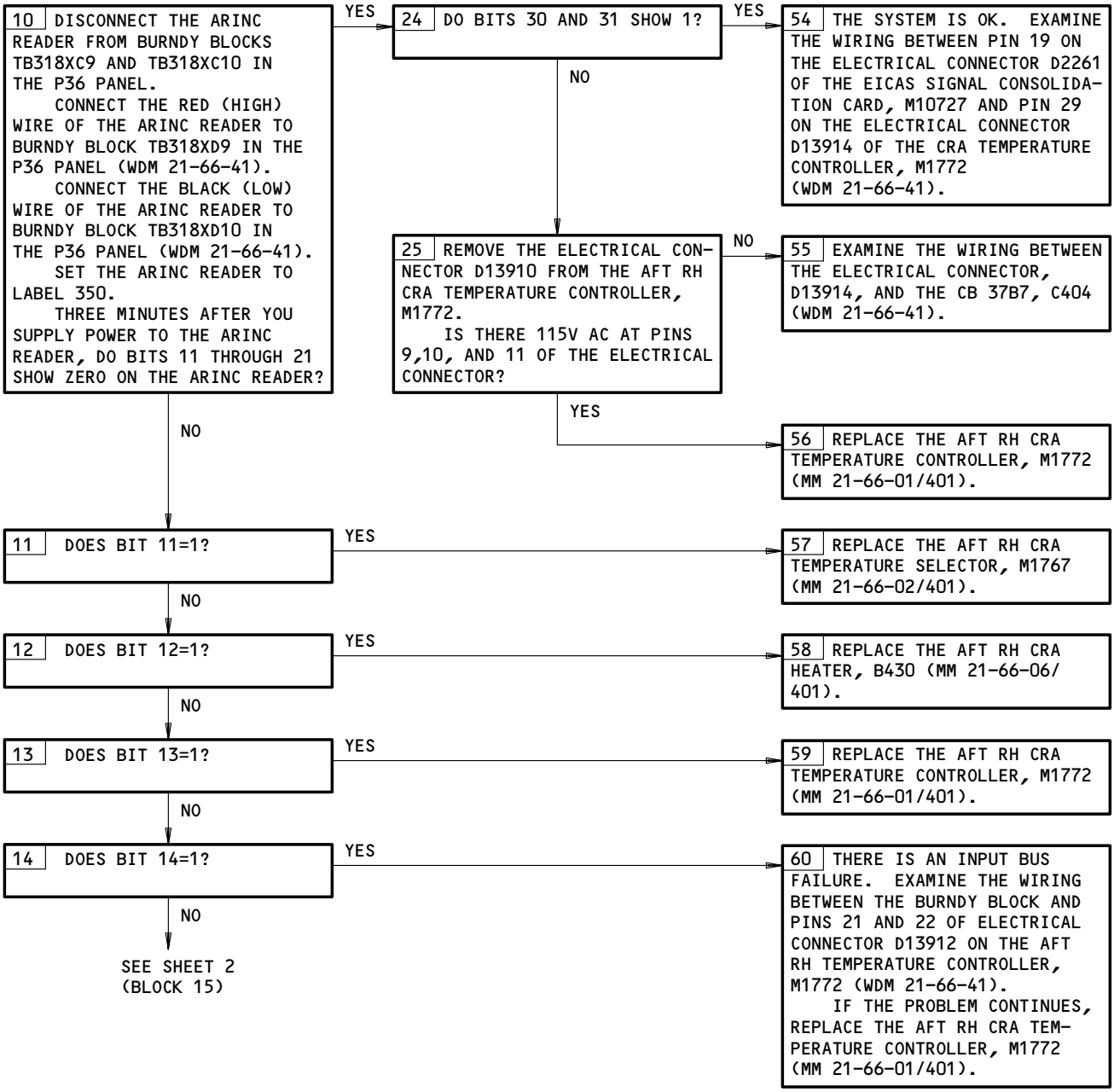

AFT CAB REST SYS EICAS Maintenance Message
Figure 118 (Sheet 3)

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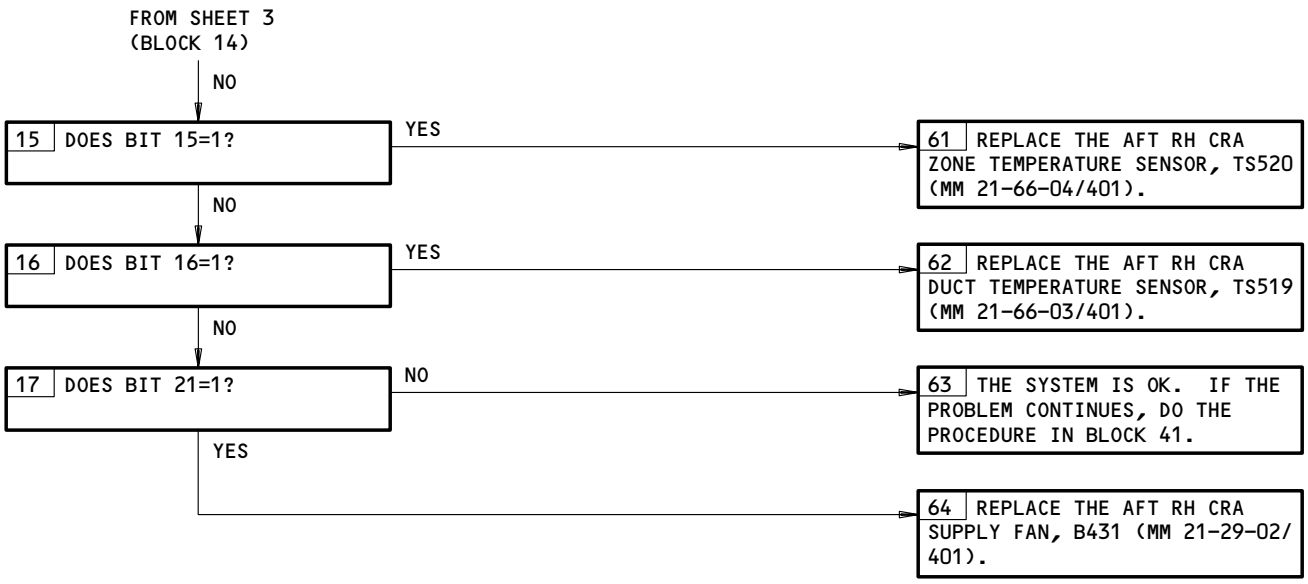

AFT CAB REST SYS EICAS Maintenance Message
Figure 118 (Sheet 4)

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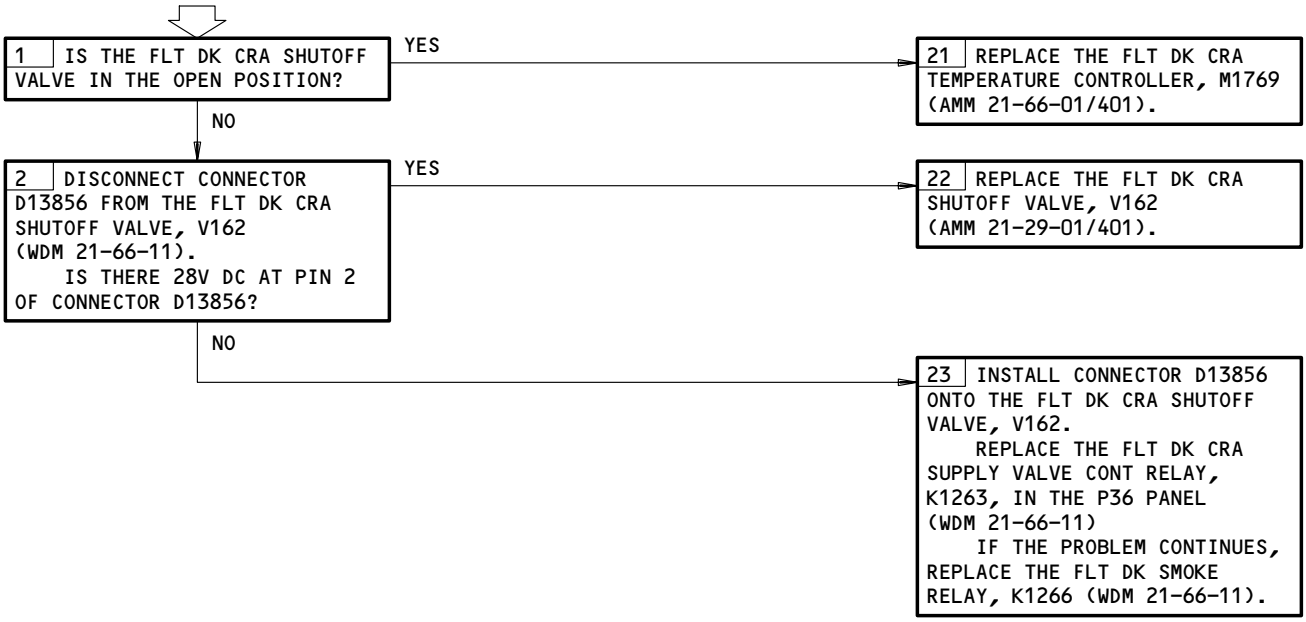
PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
EICAS (AMM 31-41-00/201)
FLIGHT MODE SIMULATION (AMM 32-09-02/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
36C4 OR 36B4,36C7 OR 36B1,36D2 OR 36L1,36D3 OR 36L2,36D4 OR 36L3

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
FWD AND AFT CARGO FIRE SW, ON P8 PANEL, NOT ARMED

"FLT REST SOV" EICAS STATUS MESSAGE



FLT REST SOV EICAS Status Message
Figure 119

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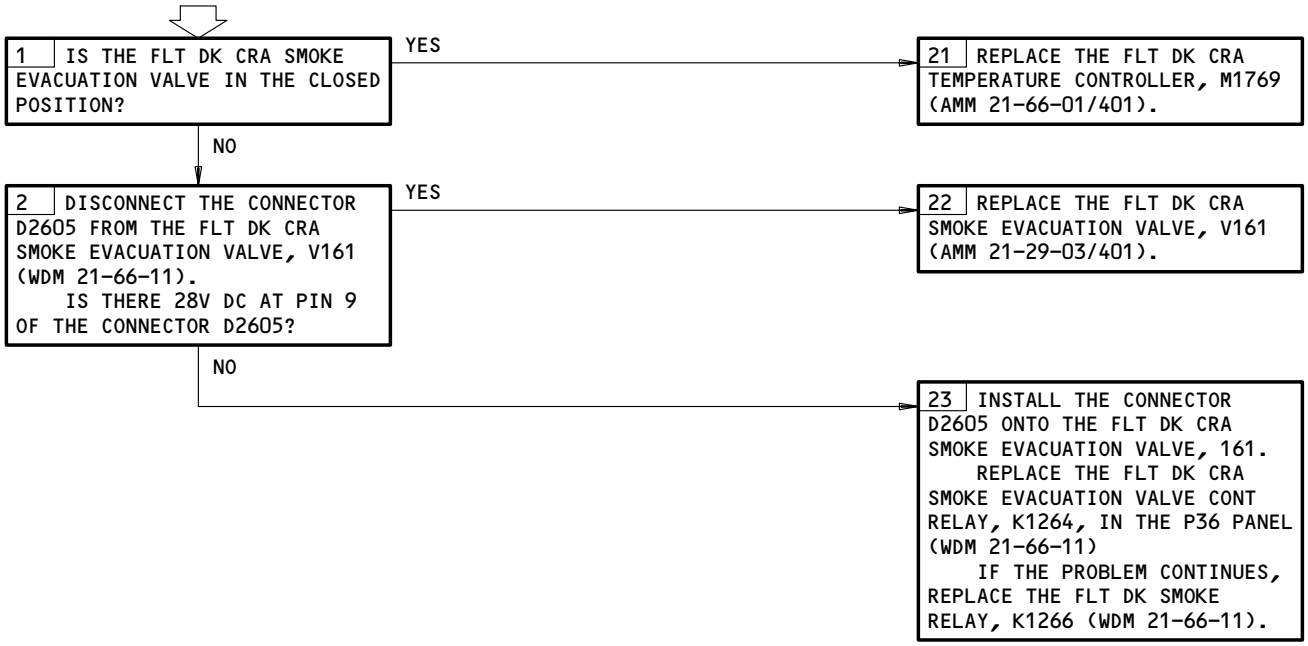
PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
EICAS (AMM 31-41-00/201)
FLIGHT MODE SIMULATION (AMM 32-09-02/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
36C4 OR 36B4,36C7 OR 36B1,36D2 OR 36L1,36D3 OR 36L2,36D4 OR 36L3

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
FWD AND AFT CARGO FIRE SW, ON P8 PANEL, NOT ARMED

"FLT REST SMK VAL" EICAS STATUS MESSAGE



FLT REST SMK VAL EICAS Status Message
Figure 120

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MTH

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Zonal Drying System – Component Index
Figure 101

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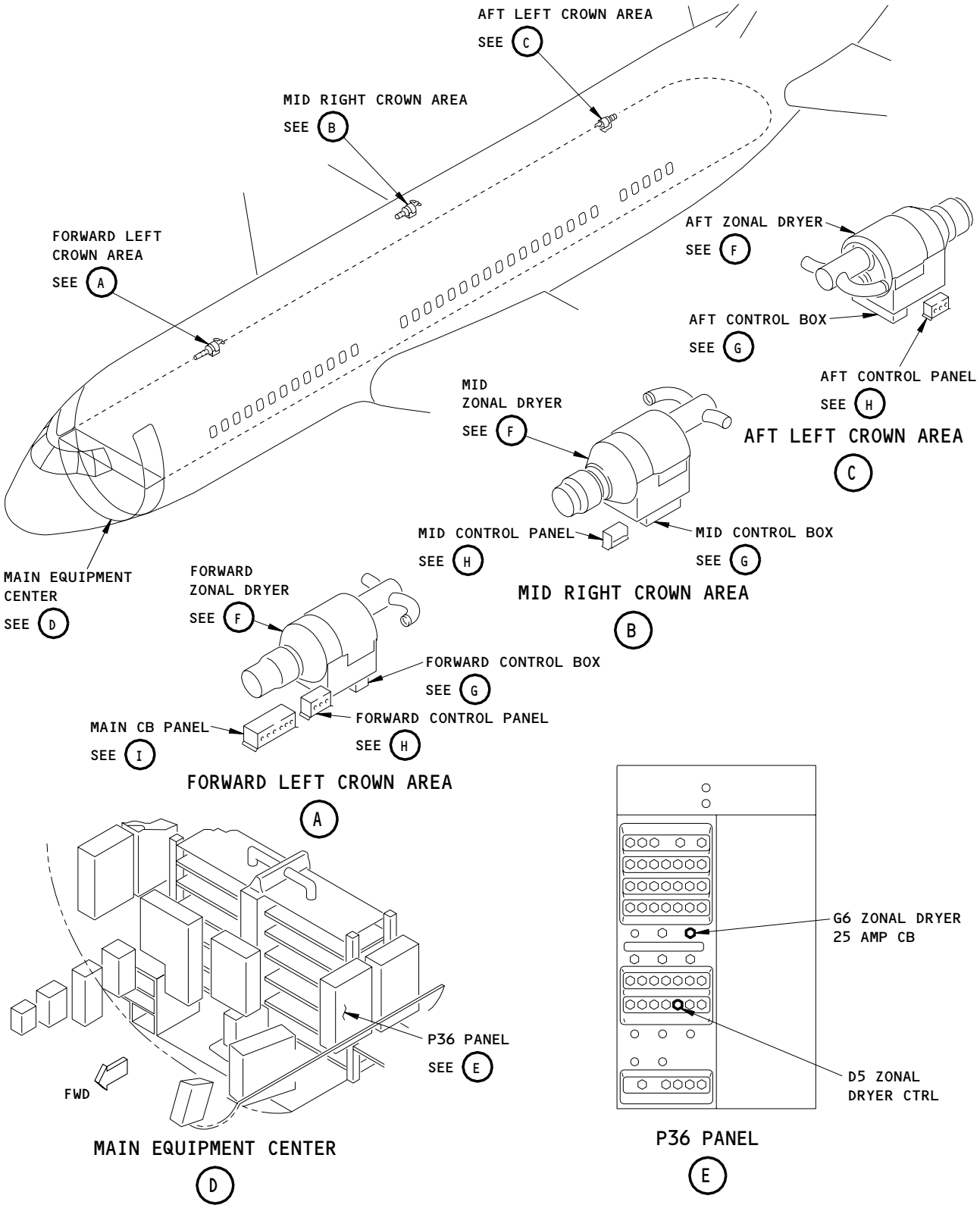
MTH



Zonal Drying System – Component Location
Figure 102 (Sheet 1)

H11674

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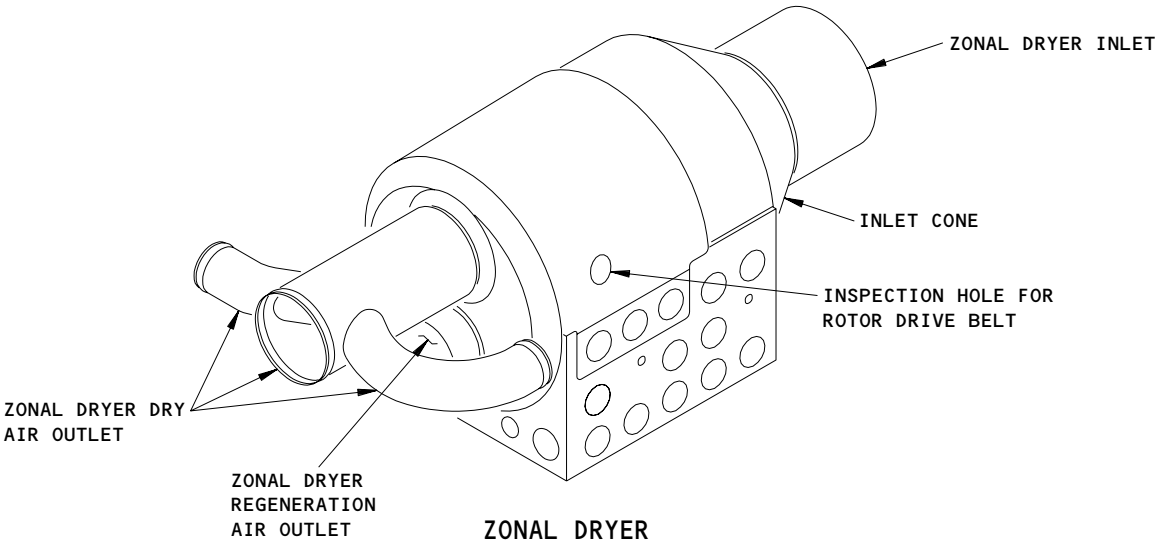
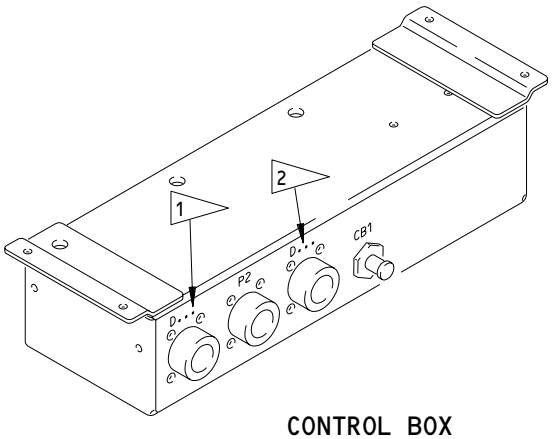
MTH



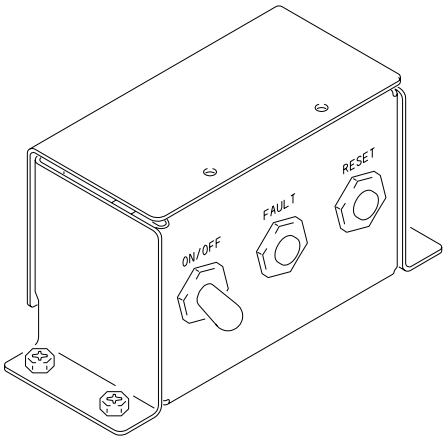
ZONAL DRYER

F



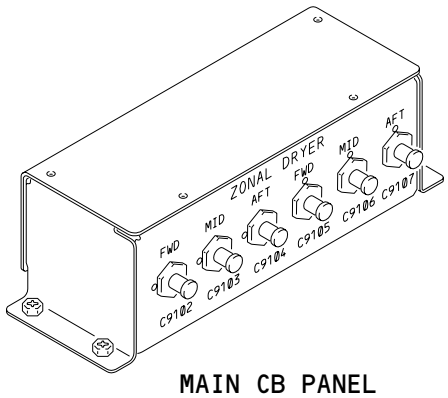
CONTROL BOX

G



CONTROL PANEL

H



MAIN CB PANEL

I

1 FWD D9101
MID D9102
AFT D9103

2 FWD D9104
MID D9105
AFT D9106

Zonal Drying System – Component Location
Figure 102 (Sheet 2)

MTH

H11736

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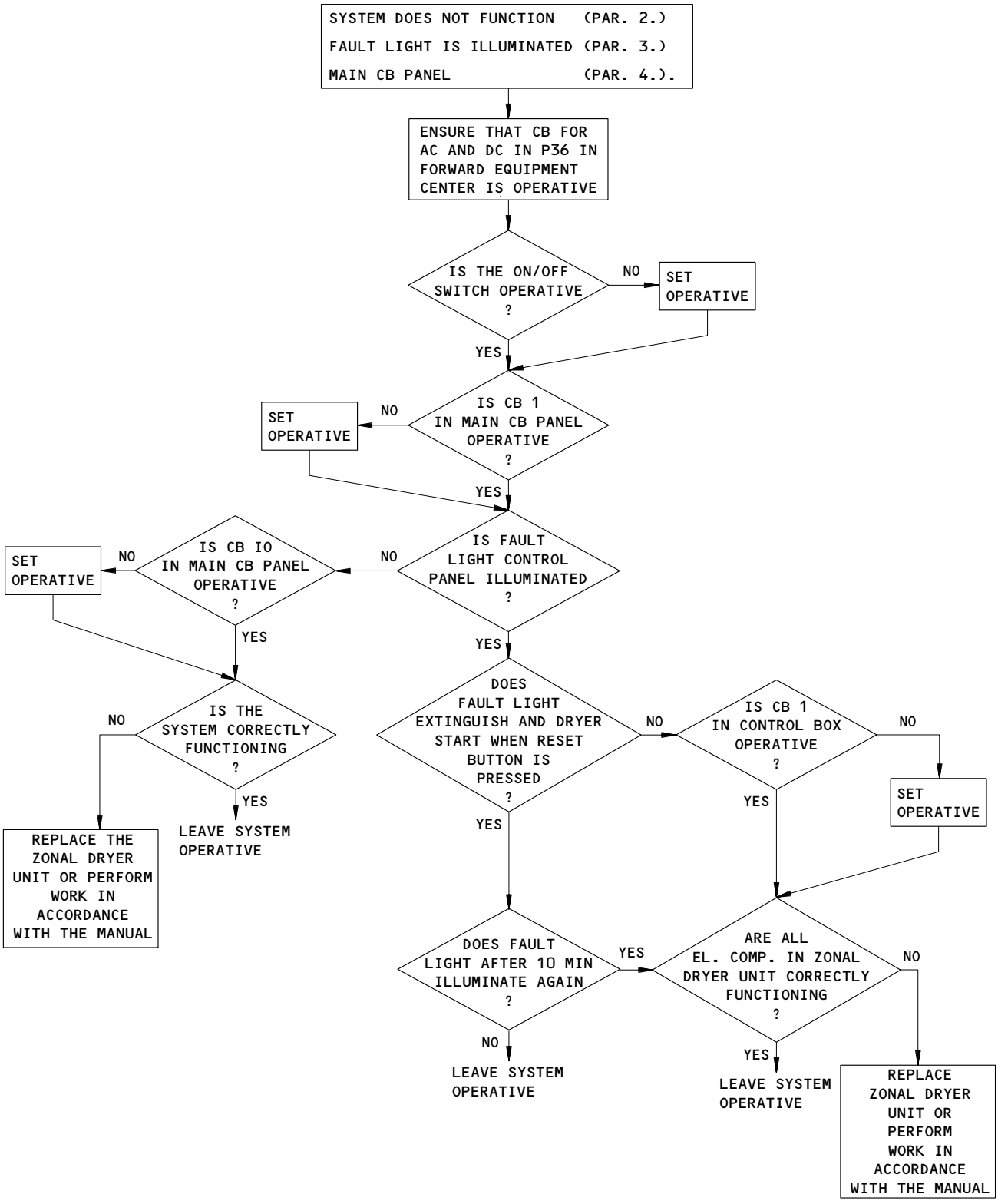
MTH



Zonal Drying System Troubleshooting
Figure 103

H32914

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MTH
MTH

ZONAL DRYING SYSTEM - FAULT ISOLATION

MTH 1. General
MTH A. The Zonal Dryer system electrical logic is designed so that at any fault of any component in the zonal dryer that may occur, or at external abnormalities, the zonal dryer will shut down. The zonal dryer can not be started again until the following maintenance actions are performed.
MTH 2. System Not Functioning (Fig. 103)
MTH A. On the control panel, if the ON/OFF switch is set operative, the fault indication lamp is not illuminated and the RESET button have been pressed and the zonal dryer not started, locate the ZONAL DRYER G6 circuit breaker and ZONAL DRYER CTRL D5 circuit breaker in the P36 panel in forward main equipment center and check if they are set operative, if not set operative.
MTH B. If any of the zonal dryers in the system are not functioning after you performed item 2.(A) or if the circuit breaker G6 and the circuit breaker D5 in P36 panel already are set operative, locate the main circuit breaker panel on top of left mid stowage bin close to FWD zonal dryer. For each zonal dryer that is not functioning, close the 10A circuit breaker and the 1A circuit breaker. The zonal dryer system is now operative. If any of the zonal dryers in the system should not start, the fault indication lamp on the control panel for that particular zonal dryer will illuminate.
MTH 3. Fault Indication Lamp Illuminated (Fig. 103)
MTH A. The Zonal Dryer has stopped and Fault Indication Light has illuminated
MTH (1) Do the steps that follow:
MTH (a) Make sure that circuit breaker CB1 on control box is closed, if not (see item (B)).
MTH (b) Push the RESET button and zonal dryer will start and fault indication light goes off.
MTH (c) The zonal dryer will within 10 minutes stop again and fault indication lights will come on. This indicates these conditions:
MTH 1) The thermal switches inside inlet cone in zonal dryer has closed, caused by inlet screen or the high efficiency filter is clogged with dust or covered with foreign object which results in reduced airflow and overheating of element.
MTH 2) The thermal switch inside the rotor drive motor case has closed, caused by mechanical overload and bearing overheating.
MTH (d) Perform these items:
MTH 1) Check and clean the inlet screen (AMM 21-74-06/701).
MTH 2) Replace the high-efficiency filter (AMM 21-74-05/401).

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MTH (e) Push the RESET button and zonal dryer will start and fault indication light goes off.
MTH (f) Check after 10 minutes if the zonal dryer has stopped and fault indication light comes on. If this occurs, it indicates that the rotor drive motor is overheated. Perform these maintenance items:
MTH 1) Remove the control box from the zonal dryer (AMM 21-74-02/401).
MTH 2) Remove the zonal dryer (AMM 21-74-01/401).
MTH 3) Install a spare zonal dryer (AMM 21-74-01/401).
MTH 4) Install the control box on the zonal dryer (AMM 21-74-02/401).
MTH 5) Perform the zonal dryer installation test (AMM 21-74-01/401).
MTH B. The Zonal Dryer has stopped, Fault Indication light has come on an circuit breaker CB1 on control box has opened
MTH (1) Do these steps:
MTH (a) Close the circuit breaker CB1 on the control box.
MTH (b) Press the RESET button on the control panel.
MTH (c) Circuit breaker CB1 will immediately open and fault indication lights will come on. This indicates that there is an electrical fault on the fan or rotor drive motor caused by electrical overloading. Perform these maintenance items:
MTH 1) Remove the control box from the zonal dryer (AMM 21-74-02/401).
MTH 2) Remove the zonal dryer (AMM 21-74-01/401).
MTH 3) Install a spare zonal dryer (AMM 21-74-01/401).
MTH 4) Install the control box on the zonal dryer (AMM 21-74-02/401).
MTH 5) Perform the zonal dryer installation test (AMM 21-74-01/401).
MTH 4. Main Circuit Breaker Panel (Fig. 103)
MTH A. The Zonal Dryer has stopped and Fault Indication light has not come on
MTH (1) Do these steps:
MTH (a) Locate the main circuit breaker panel on left MID stowage bin STA.
MTH (b) The 10A circuit breaker or the 1A circuit breaker (see item (7)) for the particular zonal dryer has opened.
MTH (c) Close the 10A circuit breaker.
MTH (d) The 10A circuit breaker will immediatley open which indicates that there is an electrical fault in the heater elements. Perform these maintenance items:
MTH 1) Remove the control box from the zonal dryer (AMM 21-74-02/401).
MTH 2) Remove the zonal dryer (AMM 21-74-01/401).
MTH 3) Install a spare zonal dryer (AMM 21-74-01/401).

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MTH 4) Install the control box on the zonal dryer
MTH (AMM 21-74-02/401).
MTH 5) Perform the zonal dryer installation test
MTH (AMM 21-74-01/401).
MTH (e) Close the 1A circuit breaker.
MTH (f) The 1A circuit breaker will immediately open which indicates
MTH that there is electrical fault in the 28V DC circuit in the
MTH control box. Perform these maintenance items:
MTH 1) Remove the control box from the zonal dryer
MTH (AMM 21-74-02/401).
MTH 2) Install a spare control box on the zonal dryer
MTH (AMM 21-74-02/401).
MTH 3) Perform the control box installation test
MTH (AMM 21-74-02/401).

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