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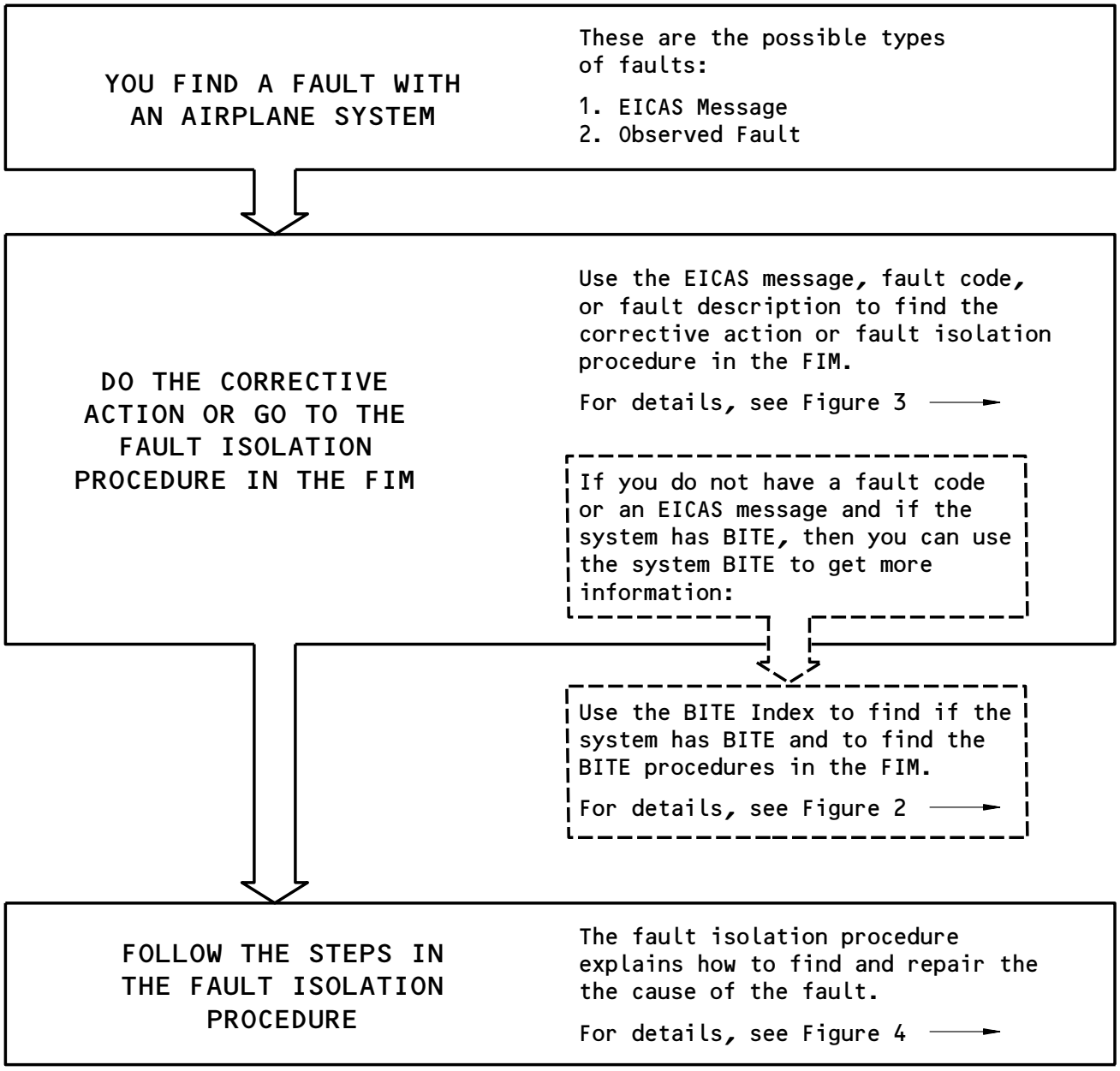
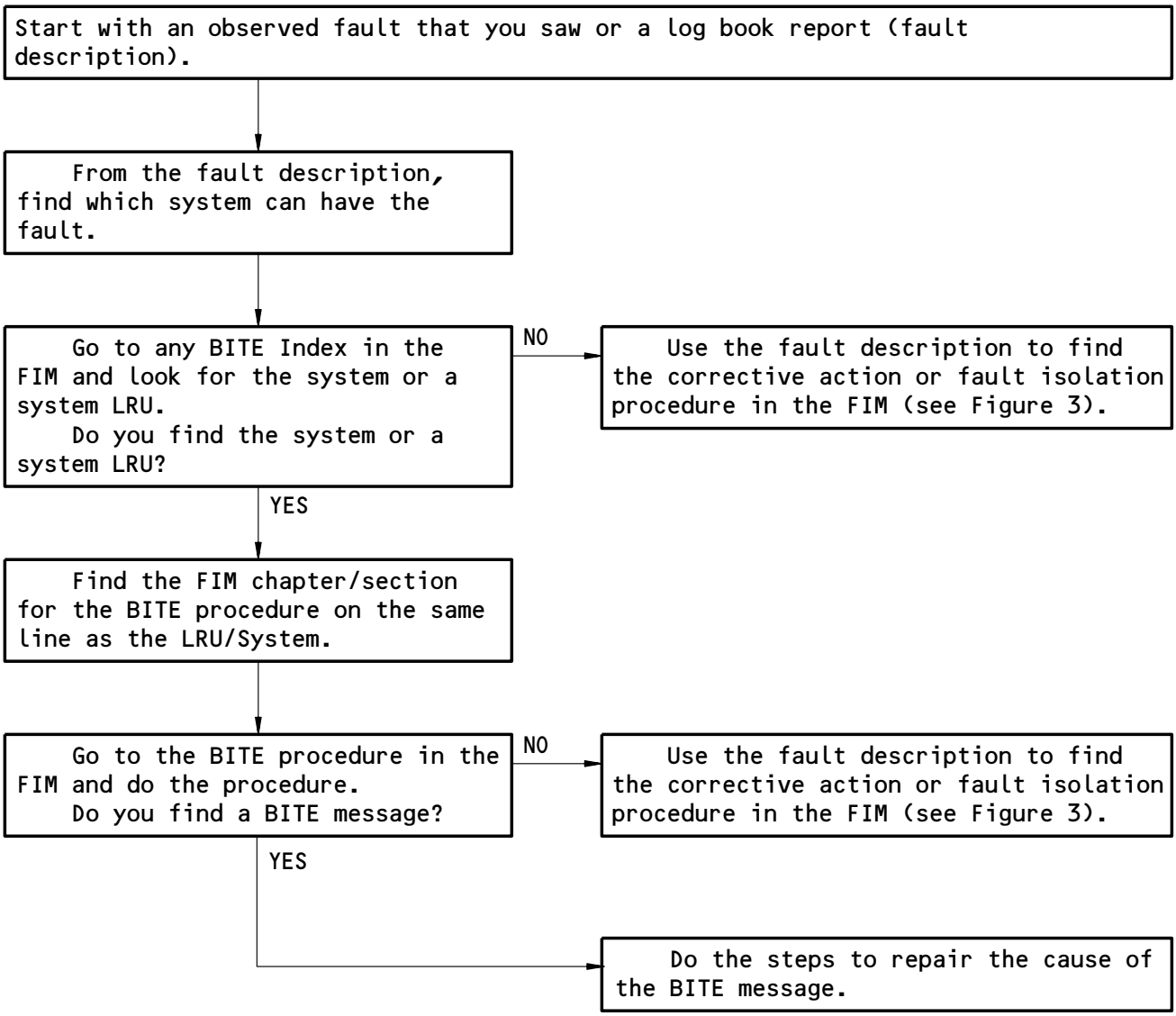


Basic Fault Isolation Process
Figure 1

H54363



How to Get Fault Information from BITE
Figure 2

H54364

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

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

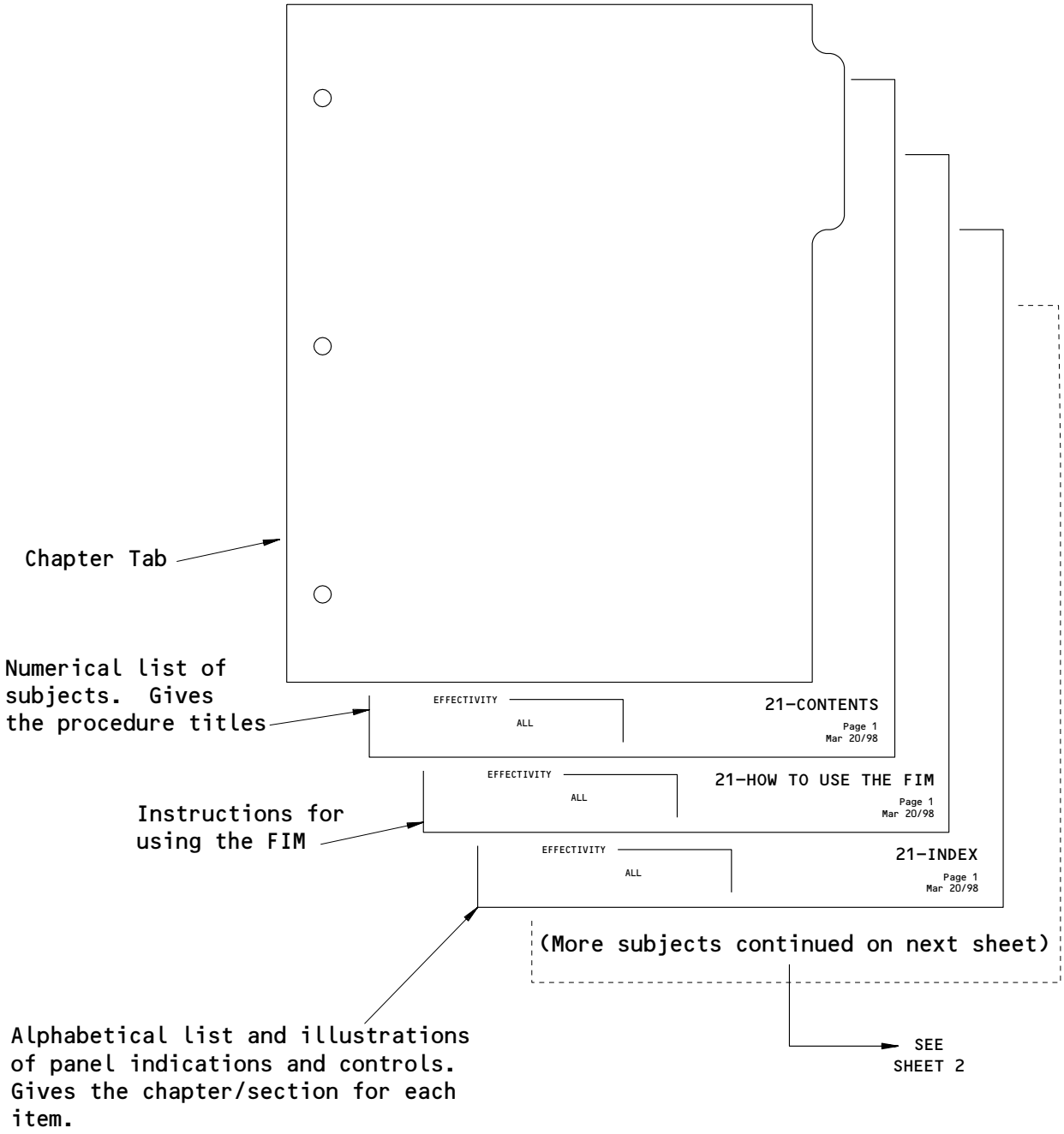
PREREQUISITES

- 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.

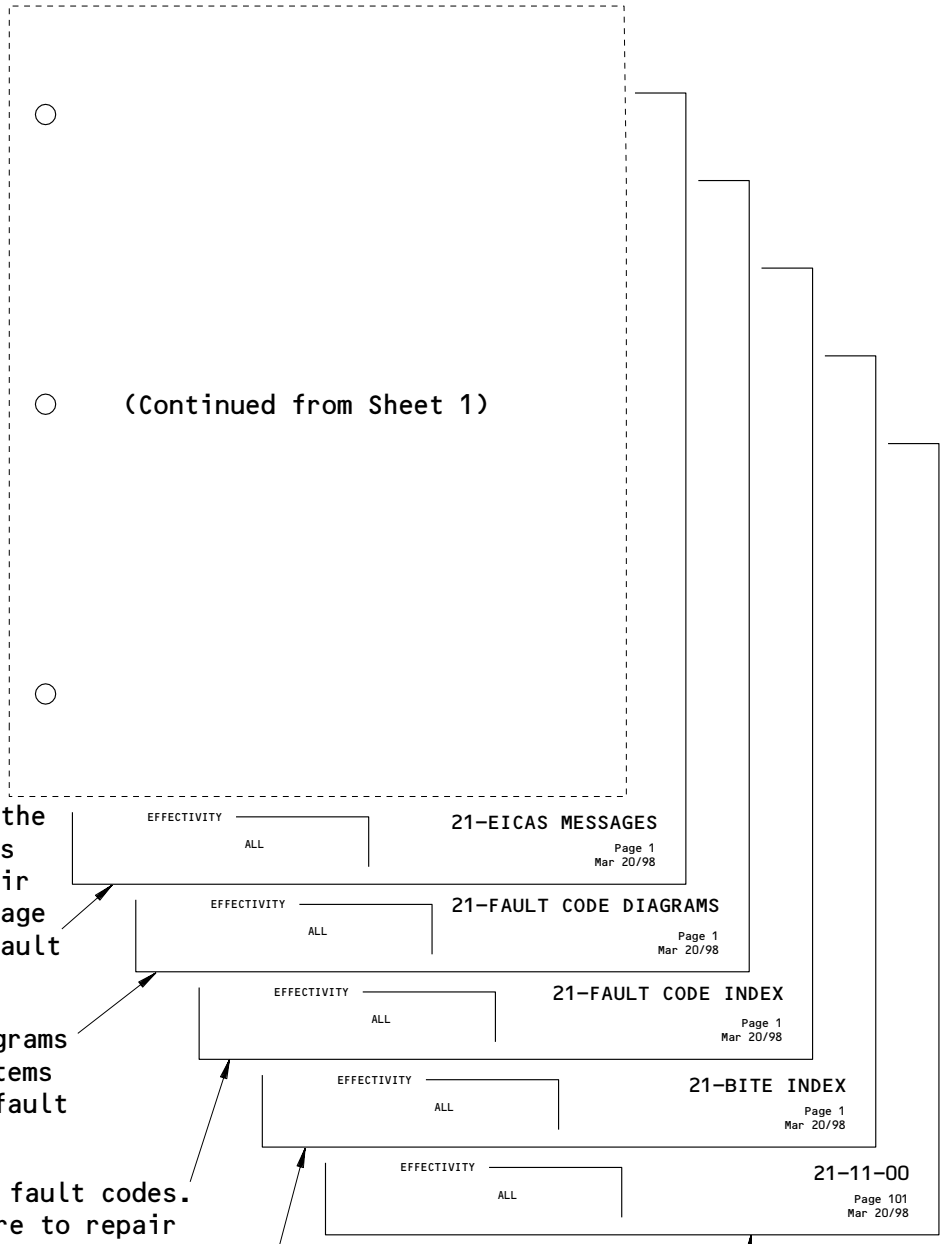
FAULT ISOLATION BLOCKS

- 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



Subjects in Each FIM Chapter
Figure 5 (Sheet 1)



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.

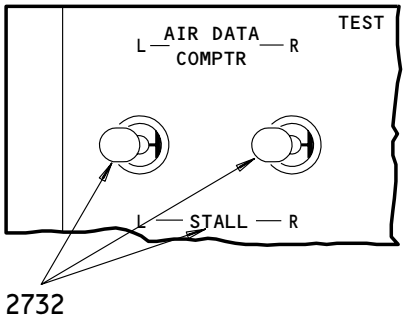
Component index, component location, and fault isolation procedures for the systems in the chapter.

Subjects in Each FIM Chapter
Figure 5 (Sheet 2)

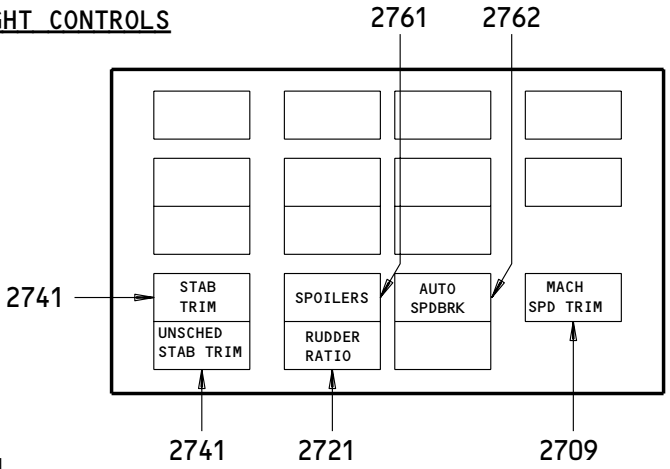
EFFECTIVITY
ALL

H54368

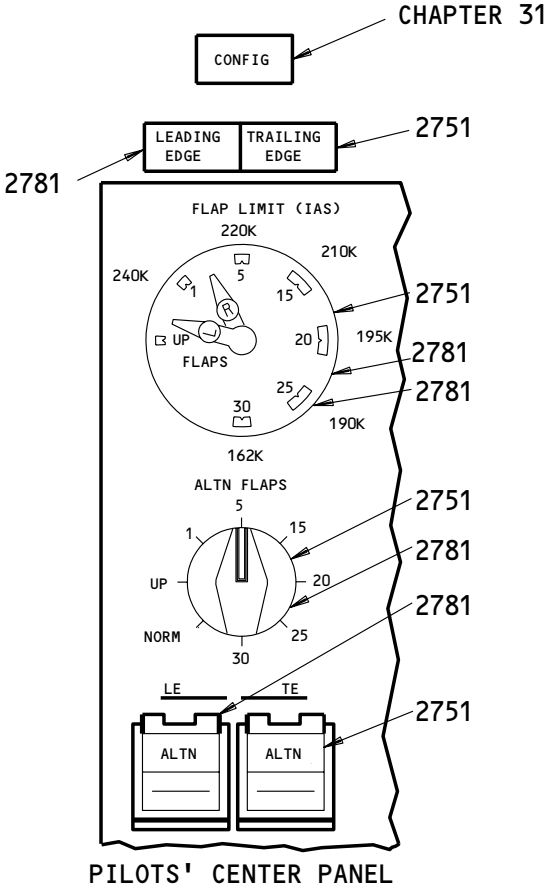
FLIGHT CONTROLS



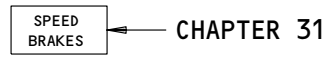
ACCESSORY PANEL



OVERHEAD PANEL



PILOTS' CENTER PANEL



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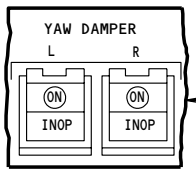
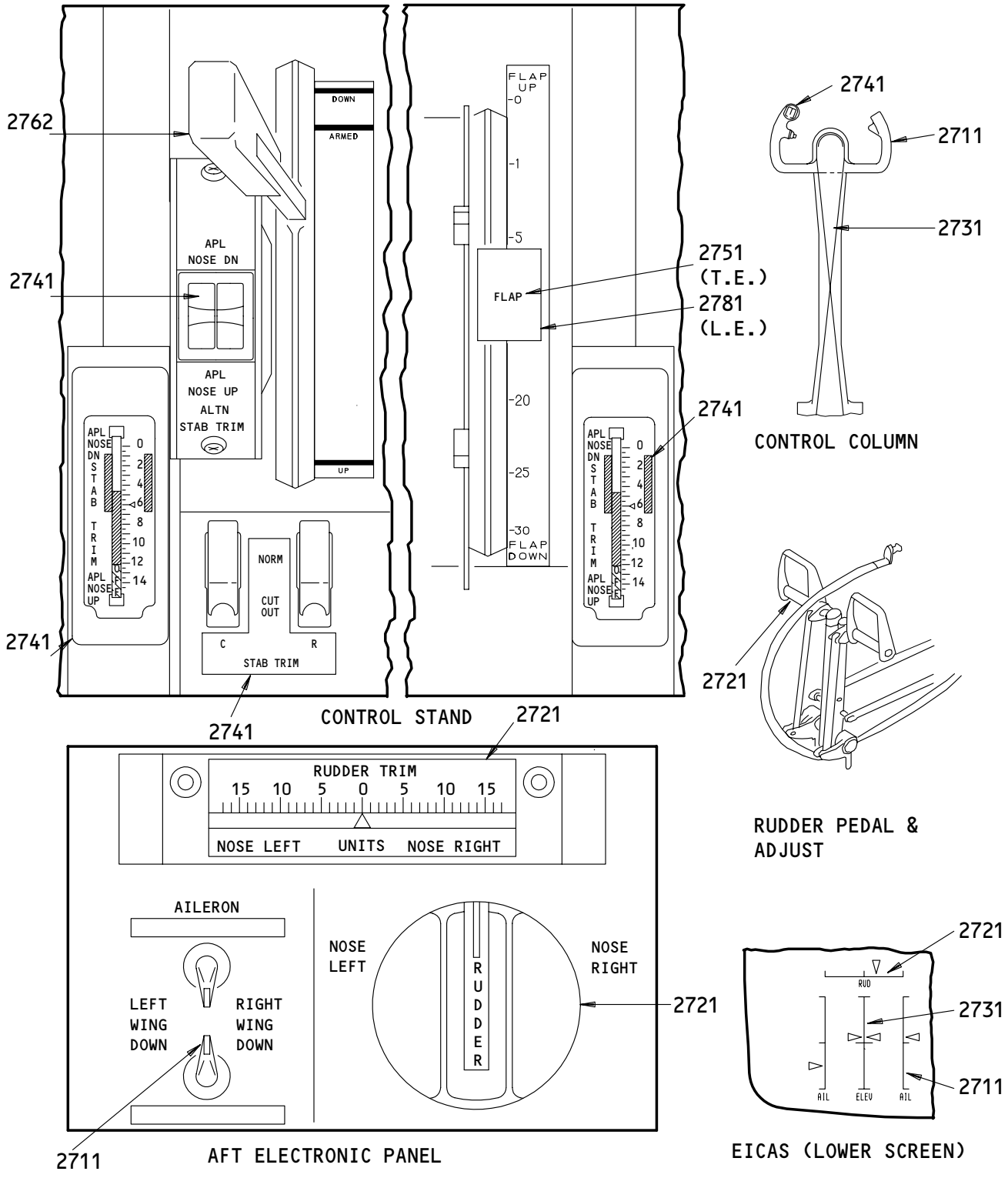


OVHD PANEL

FLIGHT CONTROLS – INDEX
Figure 1 (Sheet 1)



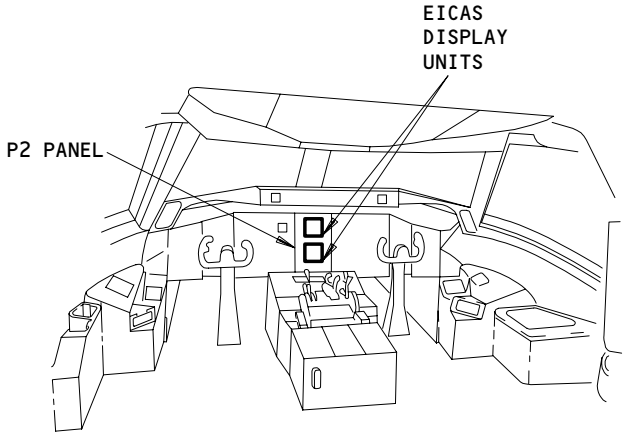
FLIGHT CONTROLS – INDEX
Figure 1 (Sheet 2)

EFFECTIVITY
ALL

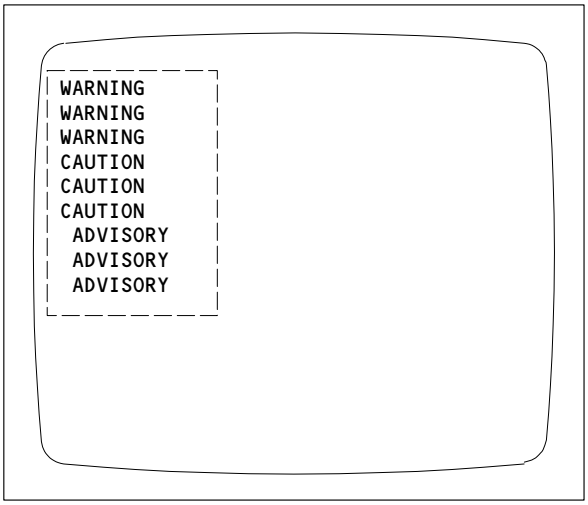
962969

FLIGHT CONTROLS - 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
            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



FLIGHT COMPARTMENT



ENGINE PRIMARY PAGE OR COMPACTED PAGE
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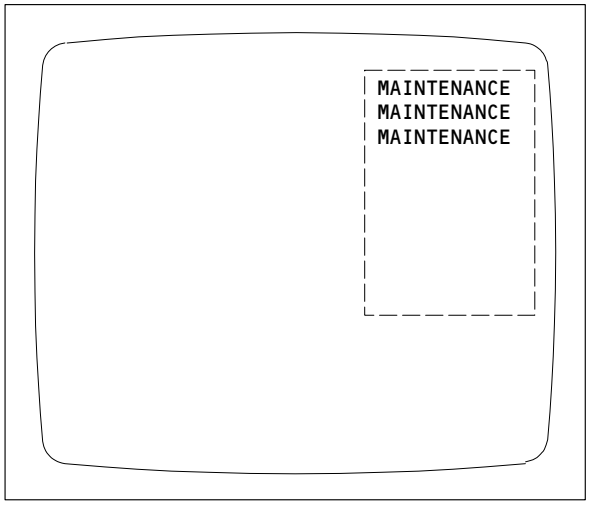

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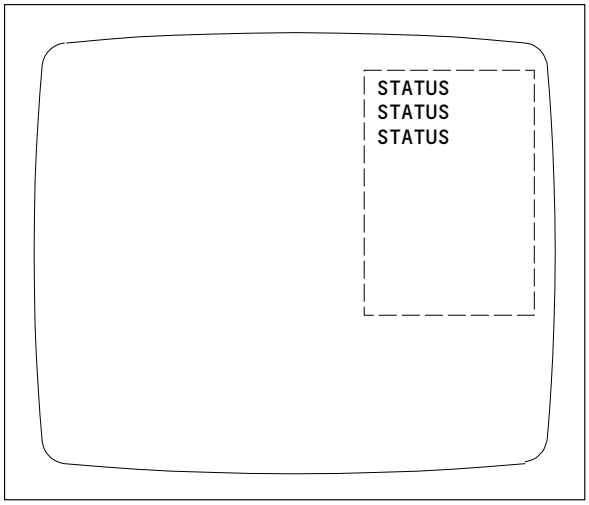


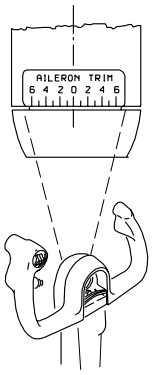
STATUS PAGE
(BOTTOM DISPLAY UNIT)

LEVEL	COLOR
A–WARNING	RED
B–CAUTION	YELLOW
C–ADVISORY	YELLOW
S–STATUS	WHITE
M–MAINTENANCE	WHITE

EICAS Message Locations
Figure 1

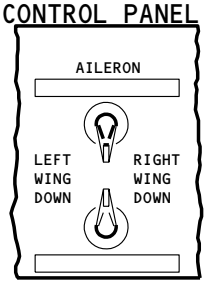
EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
AUTO SPEEDBRAKE	C	FIM 27-62-00/101, Fig. 105 FIM 27-62-00/101, Fig. 106 FIM 27-62-00/101, Fig. 107
ELEV ASYM	S, M	FIM 27-09-00/101, Fig. 106
ELEV FEEL	S, M	FIM 27-31-00/101, Fig. 106
ELEV (L, R, C) HYD PRESS	S, M	FIM 27-31-00/101, Fig. 109
FLAP ISLN VAL	S, M	FIM 27-51-00/101, Fig. 115
FLAP LD RELIEF	C,	FIM 27-51-00/101, Fig. 107
FLAP/SLAT BITE	M,	FIM 27-51-00/101, Fig. 111
FLAP/SLAT ELEC	S, M	FIM 27-51-00/101, Fig. 111
FLT CONT VALS	C	FIM 27-23-00/101, Fig. 103
LE SLAT ASYM	B	FIM 27-81-00/101, Fig. 105
(L, R) ELEV PCU	S, M	FIM 27-31-00/101, Fig. 108
(L, R) FLT CONT ELEC	M	FIM 27-09-00/101, Fig. 103
L FLT CONT HYD	C	Replace the rudder/elevator hydraulic shutoff valve, V103.
C FLT CONT HYD	C	Replace the rudder/elevator hydraulic shutoff valve, V102.
R FLT CONT HYD	C	Replace the rudder/elevator hydraulic shutoff valve, V101.
LE SLAT DISAGREE	B	FIM 27-81-00/101, Fig. 104 FIM 27-81-00/101, Fig. 107 FIM 27-81-00/101, Fig. 108

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
MACH/SPD TRIM	B	FIM 27-09-00/101, Fig. 106
PCU MONITOR	M	FIM 27-23-00/101, Fig. 104
RUDDER PCU	S, M	FIM 27-21-00/101, Fig. 109
RUDDER RATIO	C, M	FIM 27-21-00/101, Fig. 110
SPOILERS	C, M	FIM 27-09-00/101, Fig. 103
STAB TRIM	C, M	FIM 27-09-00/101, Fig. 103
TE FLAP ASYM	B	FIM 27-51-00/101, Fig. 106
TE FLAP DISAGREE	B	FIM 27-51-00/101, Fig. 105 FIM 27-51-00/101, Fig. 108 FIM 27-51-00/101, Fig. 112
UNSCHED STAB TRIM	B	FIM 27-09-00/101, Fig. 106A
WARN ELEX	S, M	Energize the IRUs (AMM 34-21-00/501). Do the Stall Warning System Operational Test (AMM 27-32-00/501). If the message stays, go to 31-EICAS MESSAGES.



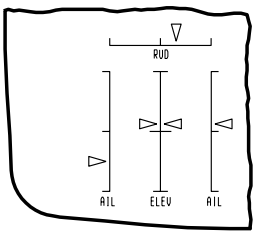
CONTROL WHEEL OPERATION WAS?

AFT ELECTRONIC CONTROL PANEL



TRIM RESPONSE WAS?

EICAS



INDICATION WAS?

FAULT CODE/ LOCATION

L	01
R	02
CAPT	03
F/O	04
CAPT & F/O	05

NOT APPLY 00

CONTROL WHEEL OPERATION WAS?	TRIM RESPONSE WAS?	INDICATION WAS?	
NORMAL	NORMAL	NORMAL	NORMAL
		POINTER FAILS TO MOVE	27 18 01 _ _
		FAILS TO ZERO WITH CONTROL WHEEL ZERO	27 18 02 _ _
		LESS THAN FULL TRAVEL	27 18 03 _ _
	FAILS TO TRIM IN EITHER DIRECTION		27 11 01 00
	FAILS TO TRIM IN ONE DIRECTION ONLY		27 11 02 _ _
BINDING			27 11 03 _ _
JAMMED			27 11 04 _ _
LOST MOTION			27 11 05 _ _
BACKLASH			27 11 06 00
REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE			27 11 XA _ _

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11J14	AILERON POS (L, LEFT)
11J15	AILERON TRIM
11J22	AILERON POS RIGHT
11J23	AILERON POS (R, RIGHT)

AILERON - FAULT CODES

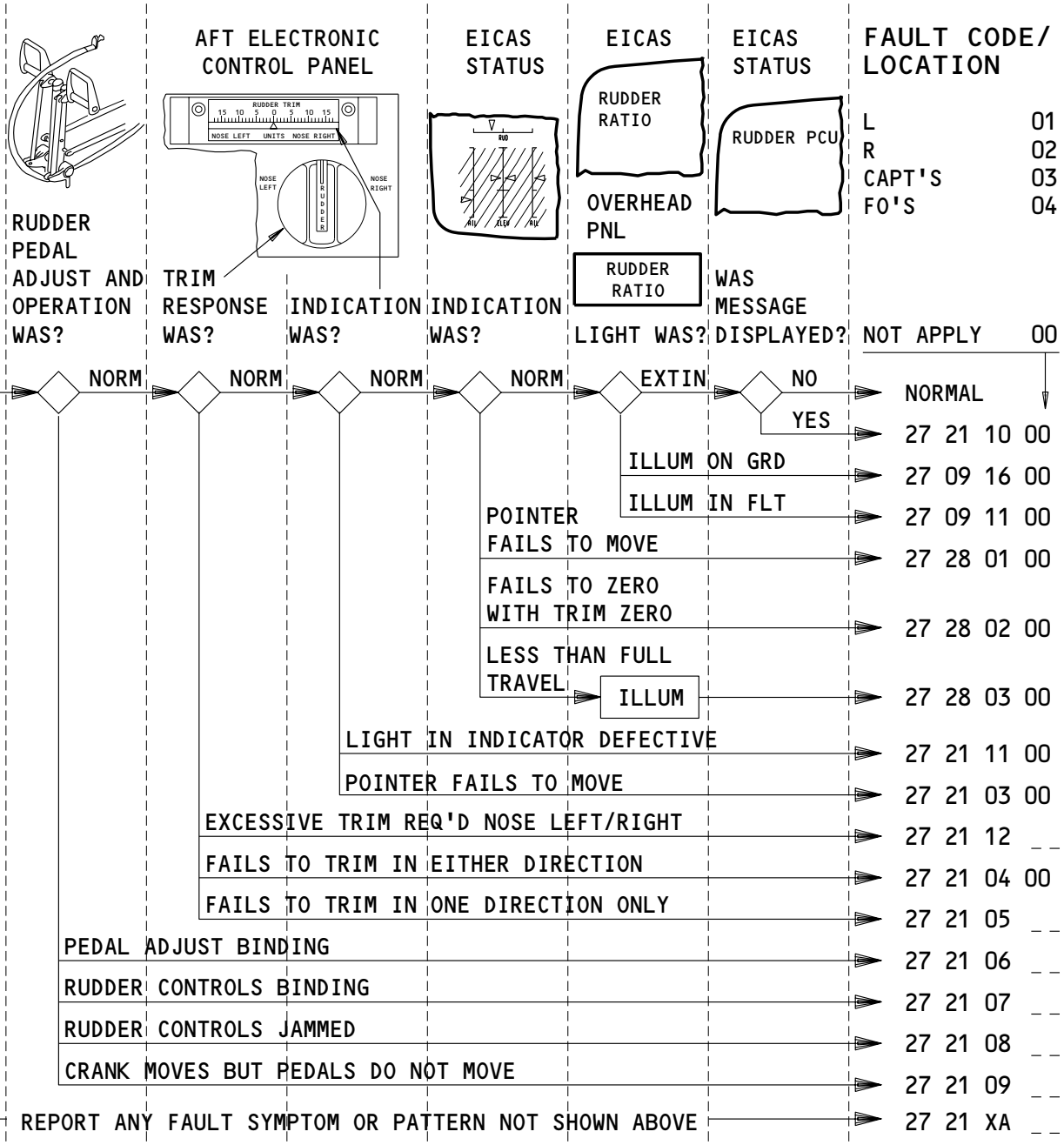
EFFECTIVITY

ALL

27-FAULT CODE DIAGRAM

01

318898



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11C10	RUD TRIM	11J11	PCU MON MOD
11D18	RUD RATIO	11J16	RUDDER POS
11G10	RUD RATIO	11J17	RUDDER TRIM POS
11J10	PCU MON SENSOR		

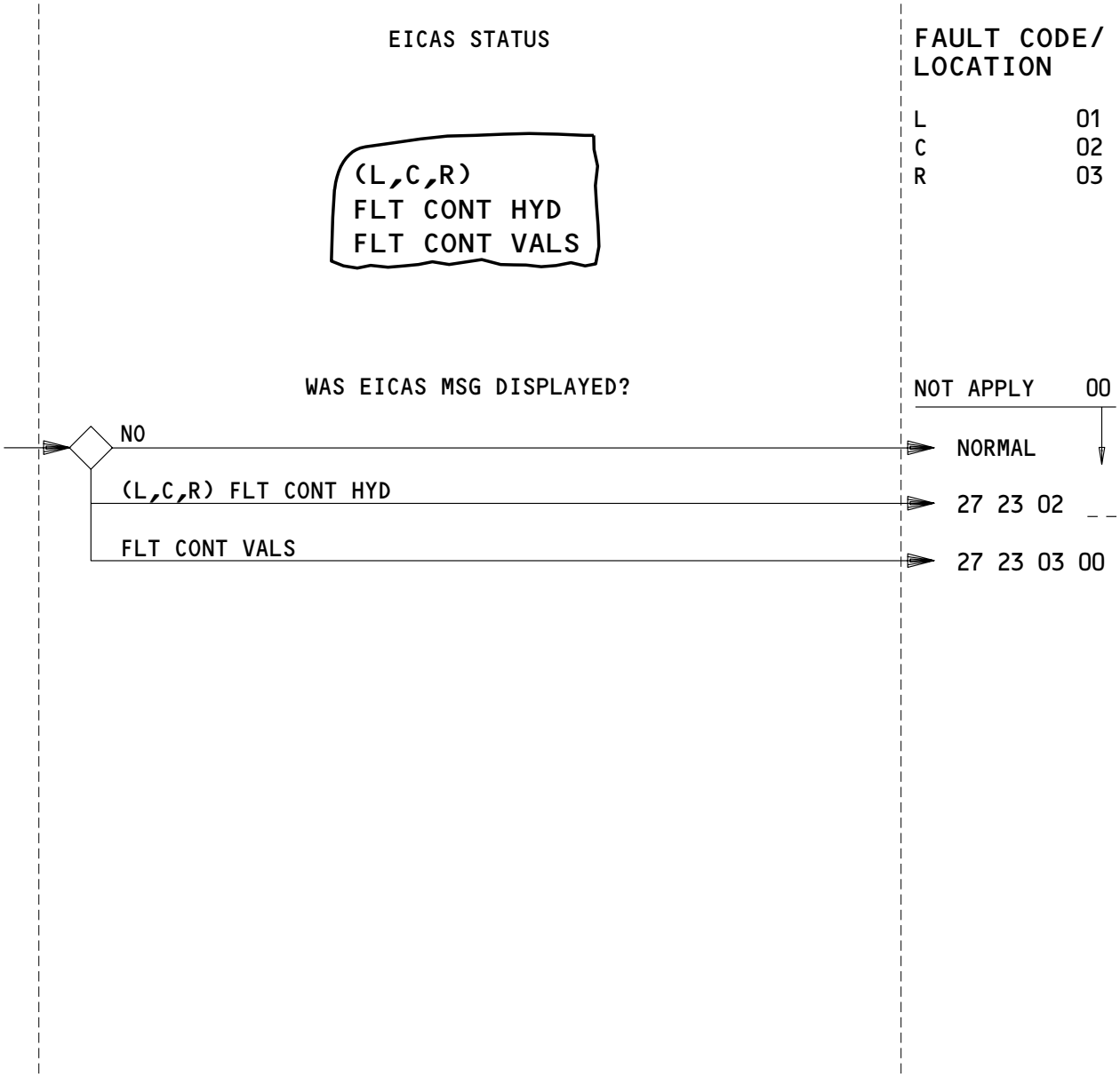
RUDDER - FAULT CODES

EFFECTIVITY

ALL

27-FAULT CODE DIAGRAM

C09614



APPLICABLE CIRCUIT BREAKERS

NONE

FLIGHT CONTROL EICAS MESSAGES – FAULT CODES

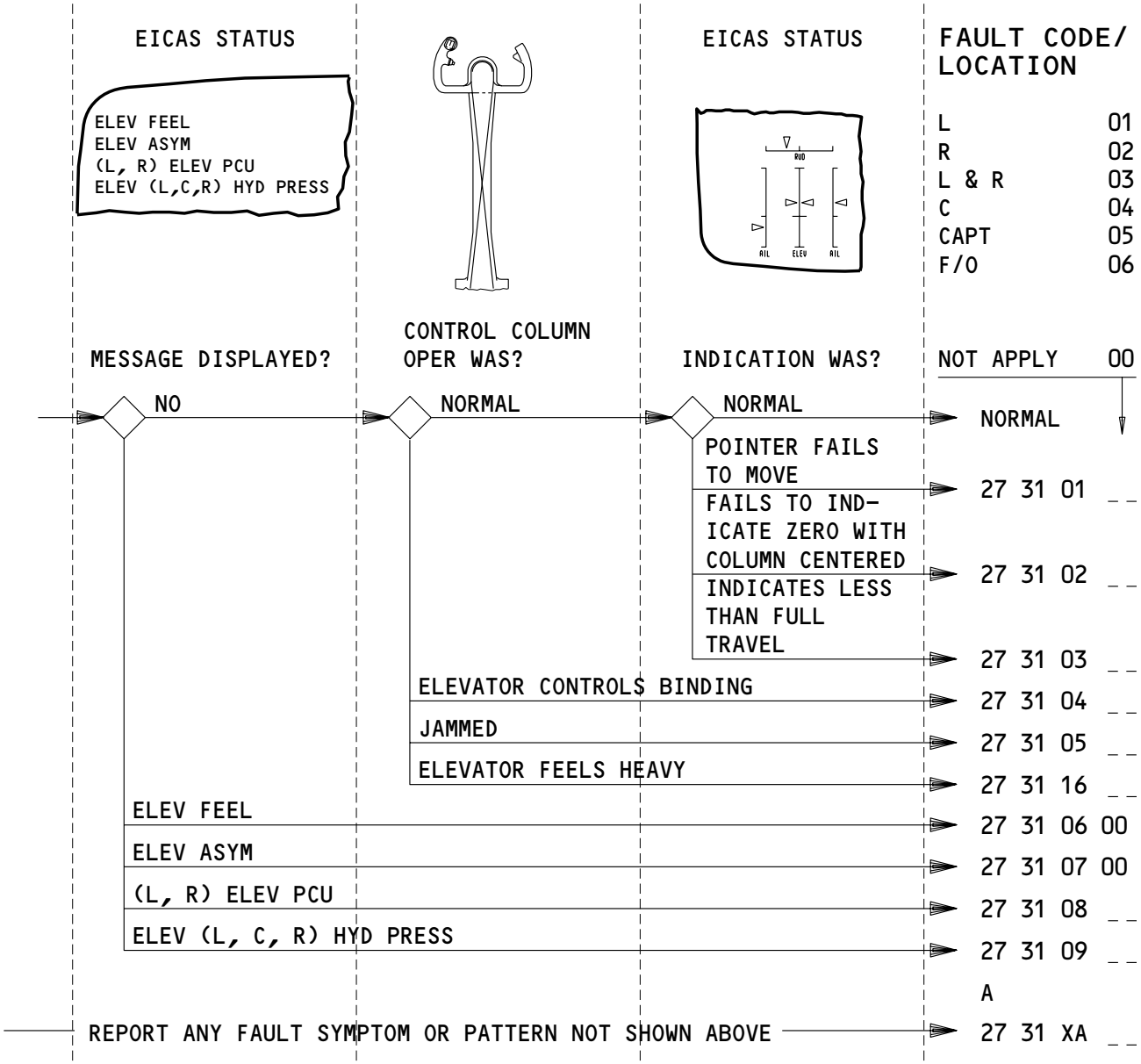
EFFECTIVITY

ALL

27-FAULT CODE DIAGRAM

01

763909



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11J12	ELEVATOR LIMIT
11J13	ELEVATOR POS (L, LEFT)
11J22	ELEVATOR POS (R, RIGHT)

ELEVATOR – FAULT CODES

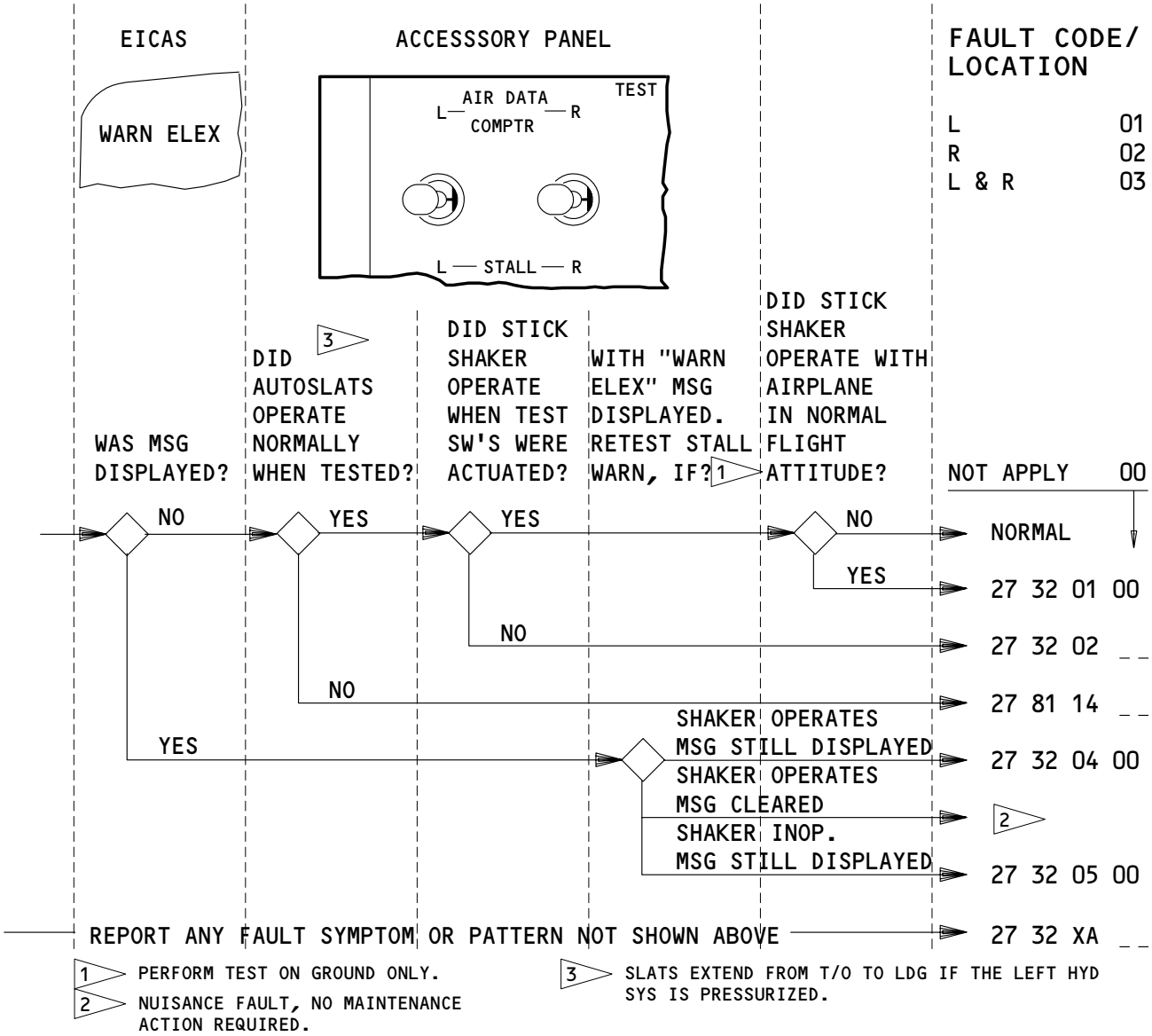
EFFECTIVITY

ALL

27-FAULT CODE DIAGRAM

01

56135



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

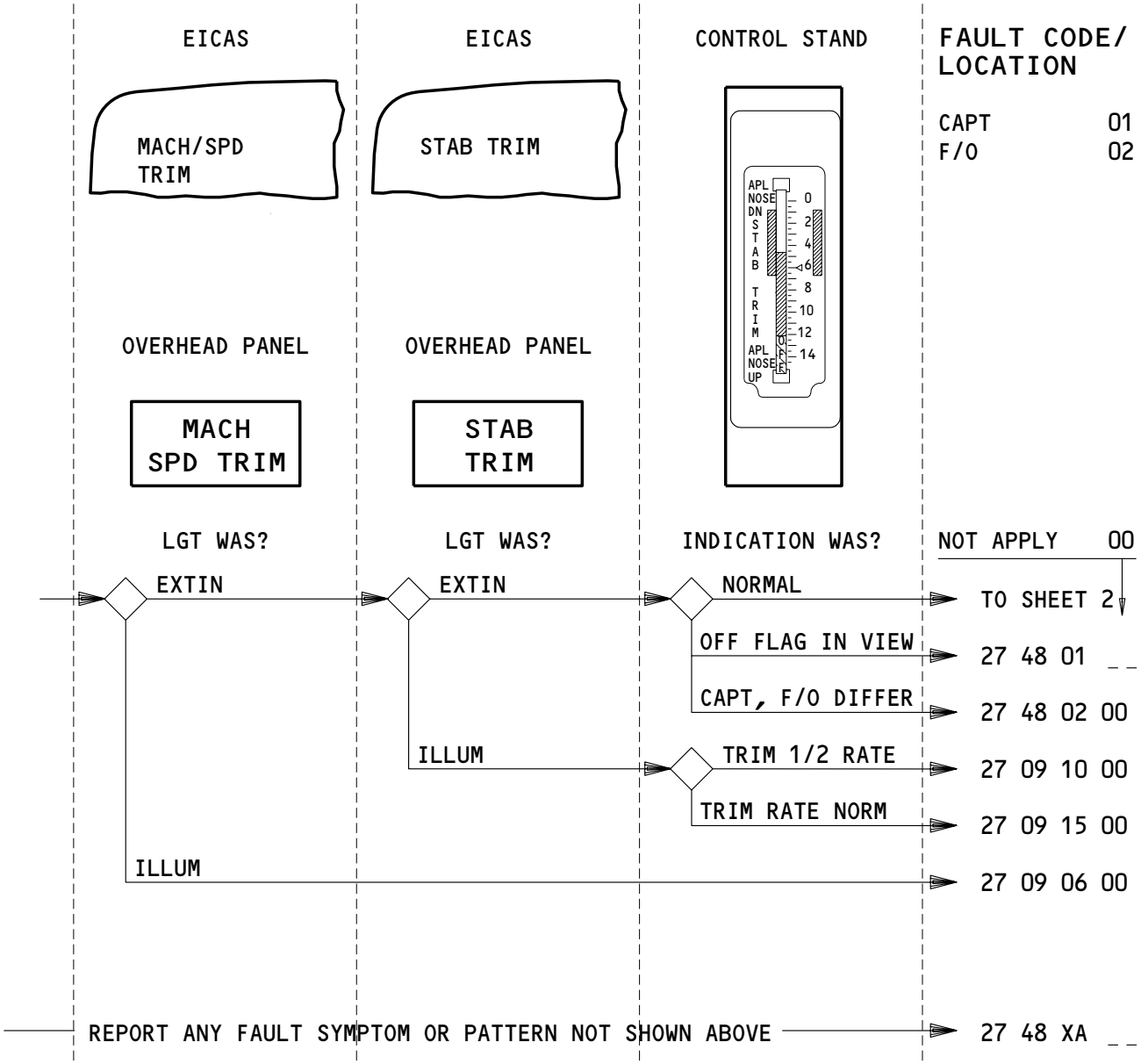
11B18	WARN ELEX B	11G12	FLAP/SLAT ELEC UNIT 1 POWER
11C11	STICK SHAKER (L, LEFT)	11G12	FSEU - 1 PWR
11C14	FLAP/SLAT ELEC UNIT 2 POWER	11G13	FLAP/SLAT ELEC UNIT 1 CONT
11C14	FSEU - 2 PWR	11G13	FSEU - 1 CONT
11C15	FLAP/SLAT ELEC UNIT 2 CONT	11G14	FLAP/SLAT ELEC UNIT 1 SENSOR
11C15	FSEU - 2 CONT	11G14	FSEU - 1 SENSOR
11C16	FLAP/SLAT ELEC UNIT 2 SENSOR	11J21	STICK SHAKER (R, RIGHT)
11C16	FSEU - 2 SENSOR	11J33	WARN ELEX A

STALL WARNING - FAULT CODES

EFFECTIVITY
ALL

27-FAULT CODE DIAGRAM

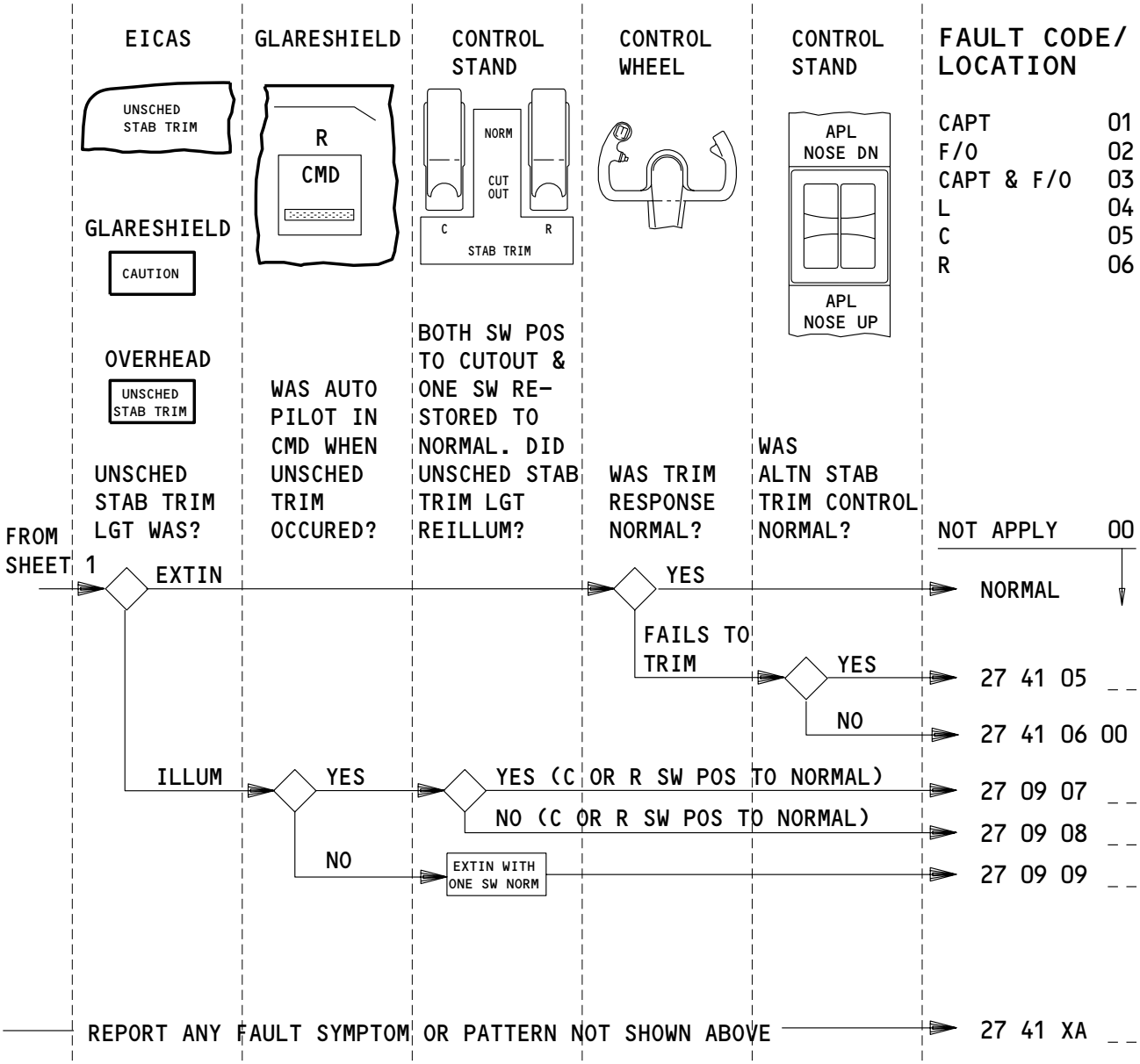
206453



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11C5	STAB TRIM CONT LEFT	11H10	STAB TRIM POS IND (L, LEFT)
11C12	STAB TRIM SHUTOFF (L, LEFT)	11H10	STAB TRIM LEFT POS IND
11C13	STAB TRIM SHUTOFF (R, RIGHT)	11H11	STAB TRIM LEFT CONT
11F19	STAB POS MOD (C, CENTER)	11H11	STAB TRIM CONT L
11G15	STAB POS MOD (L, LEFT)	11H19	STAB TRIM POS IND (R, RIGHT)
11G24	STAB POS MOD (R, RIGHT)	11H20	STAB TRIM CONT (R, RIGHT)

STABILIZER TRIM (SHEET 1) - FAULT CODES



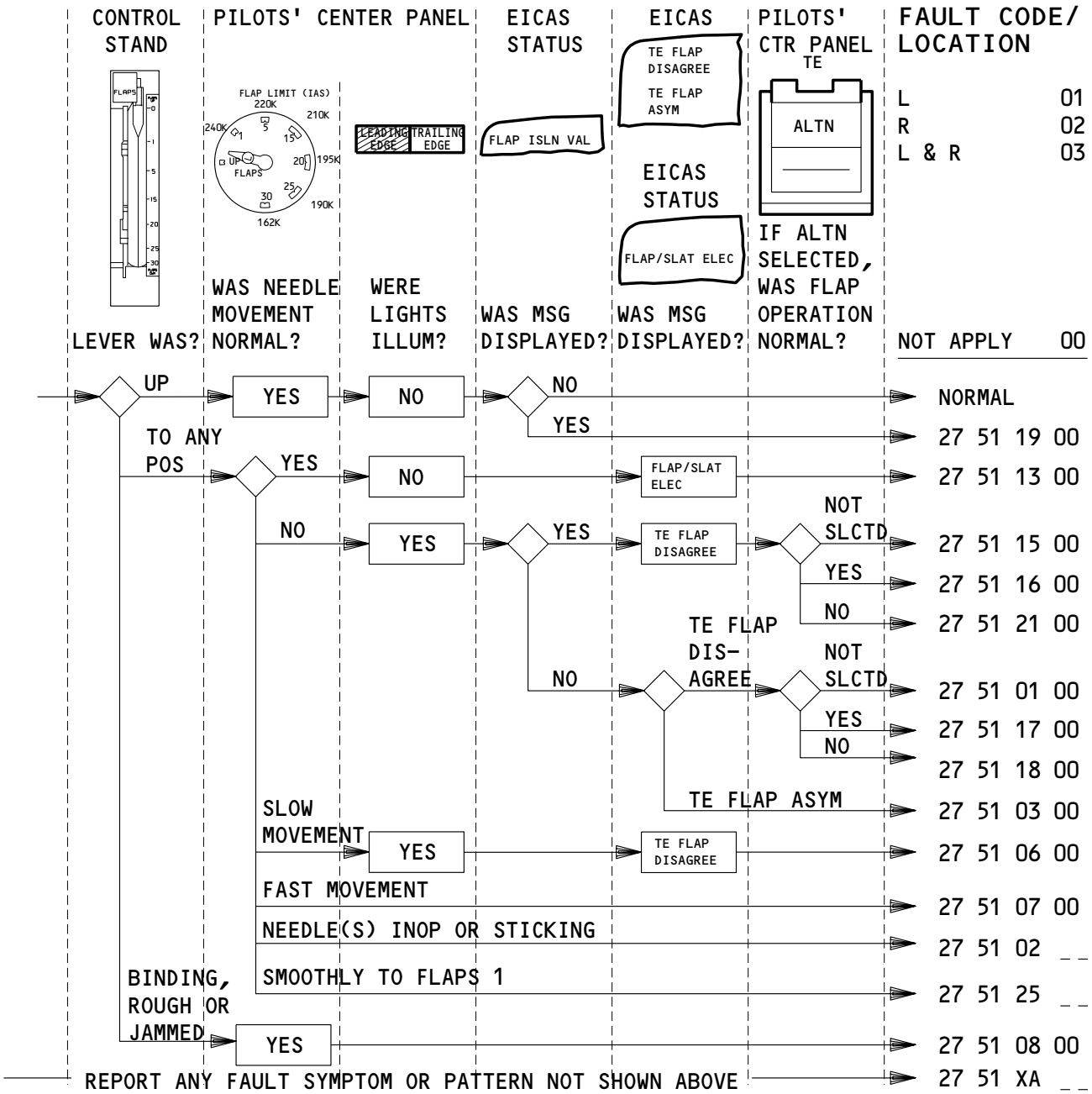
APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11B19	ALTN STAB TRIM	11H10	STAB TRIM LEFT POS IND
11C5	STAB TRIM CONT LEFT	11H10	STAB TRIM POS IND LEFT
11C12	STAB TRIM SHUTOFF LEFT	11H11	STAB TRIM CONT LEFT
11C13	STAB TRIM SHUTOFF RIGHT	11H11	STAB TRIM LEFT CONT
11F19	STAB POS MOD CENTER	11H19	STAB TRIM POS IND RIGHT
11G15	STAB POS MOD LEFT	11H20	STAB TRIM CONT RIGHT
11G24	STAB POS MOD RIGHT		

STABILIZER TRIM (SHEET 2) - FAULT CODES

EFFECTIVITY
WITH ALT STAB TRIM SWITCHES.

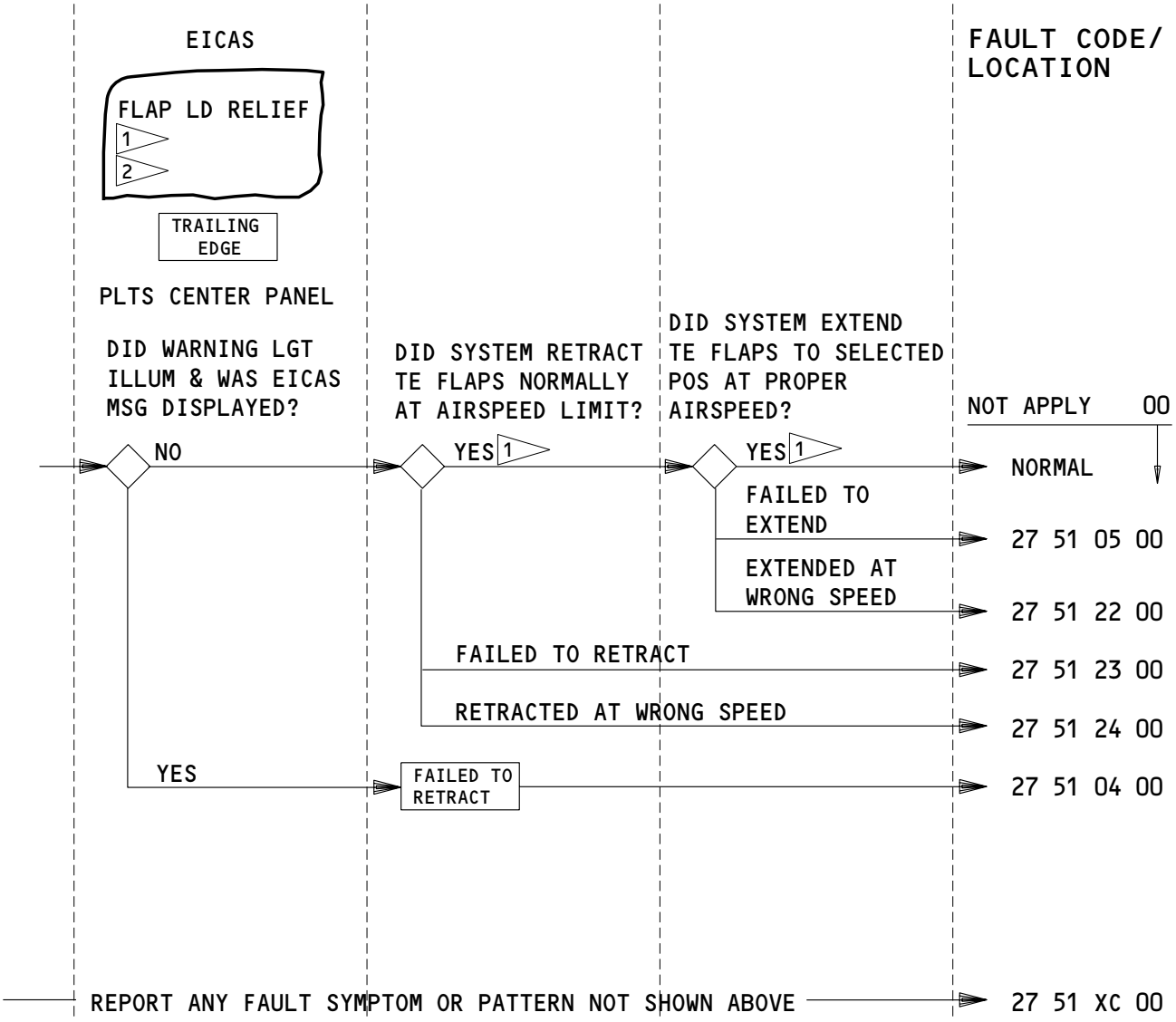
27-FAULT CODE DIAGRAM



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11C14	FLAP SLAT ELEC UNIT-2 PWR
11C14	FSEU-2 PWR
11C15	FLAP SLAT ELEC UNIT-2 CONT
11C15	FSEU-2 CONT
11C16	FLAP SLAT ELEC UNIT-2 SENSOR
11C16	FSEU-2 SENSOR
11C17	FLAP/SLAT ELEC UNIT 1 CONT
11C17	FLAP/SLAT SHUTOFF 1
11C18	FLAP/SLAT SHUTOFF 1
11C18	FLAP/SLAT SHUTOFF
11G12	FLAP SLAT ELEC UNIT-1 (PWR, POWER)
11G12	FSEU-1 PWR
11G13	FLAP SLAT ELEC UNIT-1 CONT
11G13	FSEU-1 CONT
11G14	FLAP SLAT ELEC UNIT-1 SENSOR
11G14	FSEU-1 SENSOR
11G21	FLAP SLAT ELEC UNIT-3 (PWR, POWER
11G21	FSEU-3 PWR
11G22	FLAP SLAT ELEC UNIT-3 CONT
11G22	FSEU-2 CONT
11G23	FLAP SLAT ELEC UNIT-3 SENSOR
11G23	FSEU-3 SENSOR
11H12	FLAP POS IND (L, LEFT)
11H13	FLAP POS IND (R, RIGHT)
11H14	FLAP SLAT SHUTOFF 1
11H23	FLAP/SLAT ALTN DR ARM
11H24	FLAP/SLAT SHUTOFF 2
11J18	FLAP LOAD RELIEF

TRAILING EDGE FLAPS - FAULT CODES



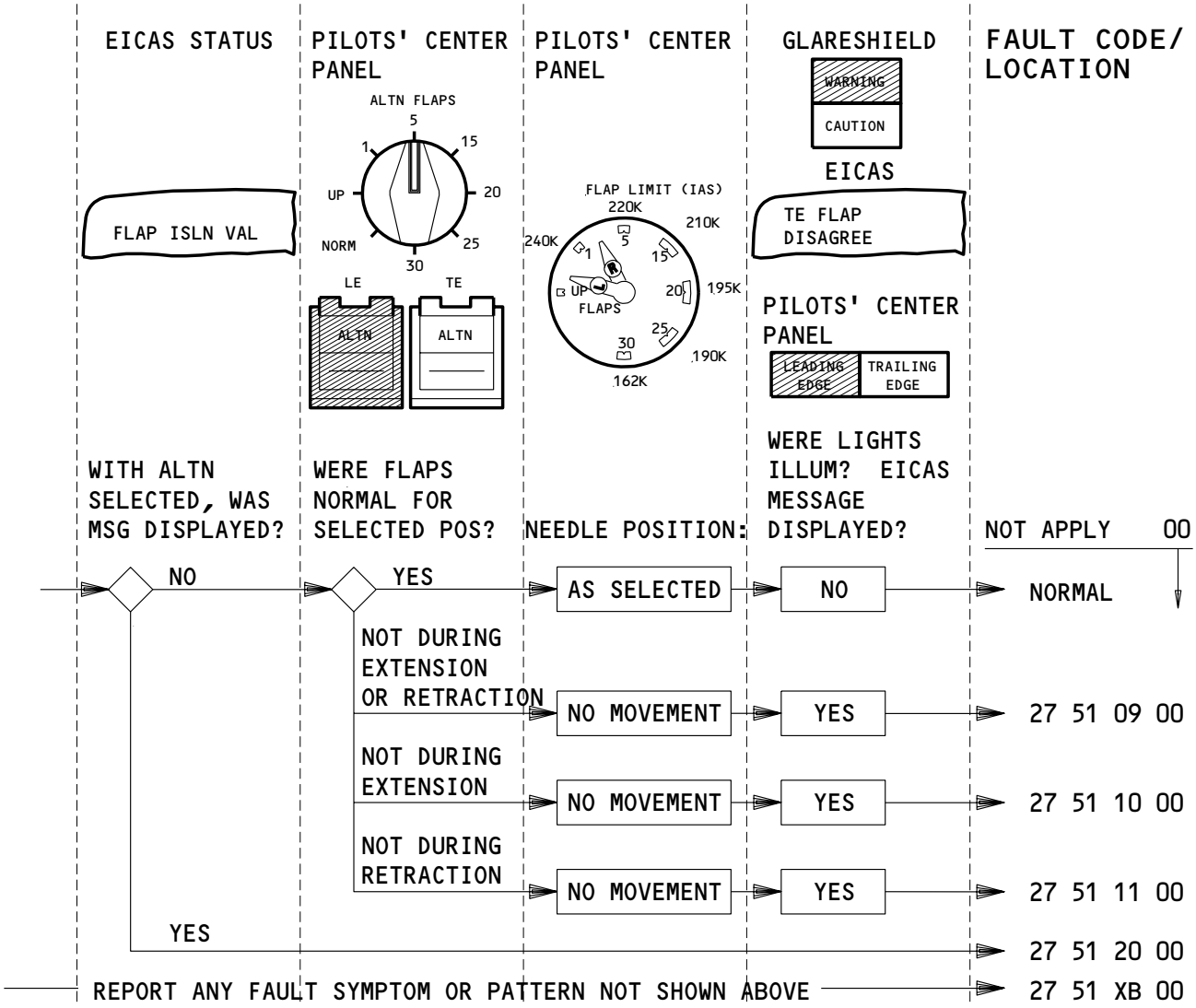
1 FLAP LOAD RELIEF OCCURS 2 TO 5 KNOTS ABOVE FLAP PLACARD SPEED AND FLAPS RESET TO SELECTED POSITION WHEN AIRSPEED DECREASES 4 KNOTS BELOW LOAD RELIEF SPEED.

2 FLAP LOAD RELIEF PROTECTION IS NOT AVAILABLE WHEN USING ALTERNATE FLAPS.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11C14	FLAP/SLAT ELEC UNIT 2 (POWER, PWR)
11C14	FSEU – 2 PWR
11C15	FLAP/SLAT ELEC UNIT 2 CONT
11C15	FSEU – 2 CONT
11C16	FLAP/SLAT ELEC UNIT 2 SENSOR
11C16	FSEU – 2 SENSOR
11G12	FLAP/SLAT ELEC UNIT 1 (POWER, PWR)
11G12	FSEU – 1 PWR
11G13	FLAP/SLAT ELEC UNIT 1 CONT
11G13	FSEU – 1 CONT
11G14	FLAP/SLAT ELEC UNIT 1 SENSOR
11G14	FSEU – 1 SENSOR
11J18	FLAP LOAD RELIEF

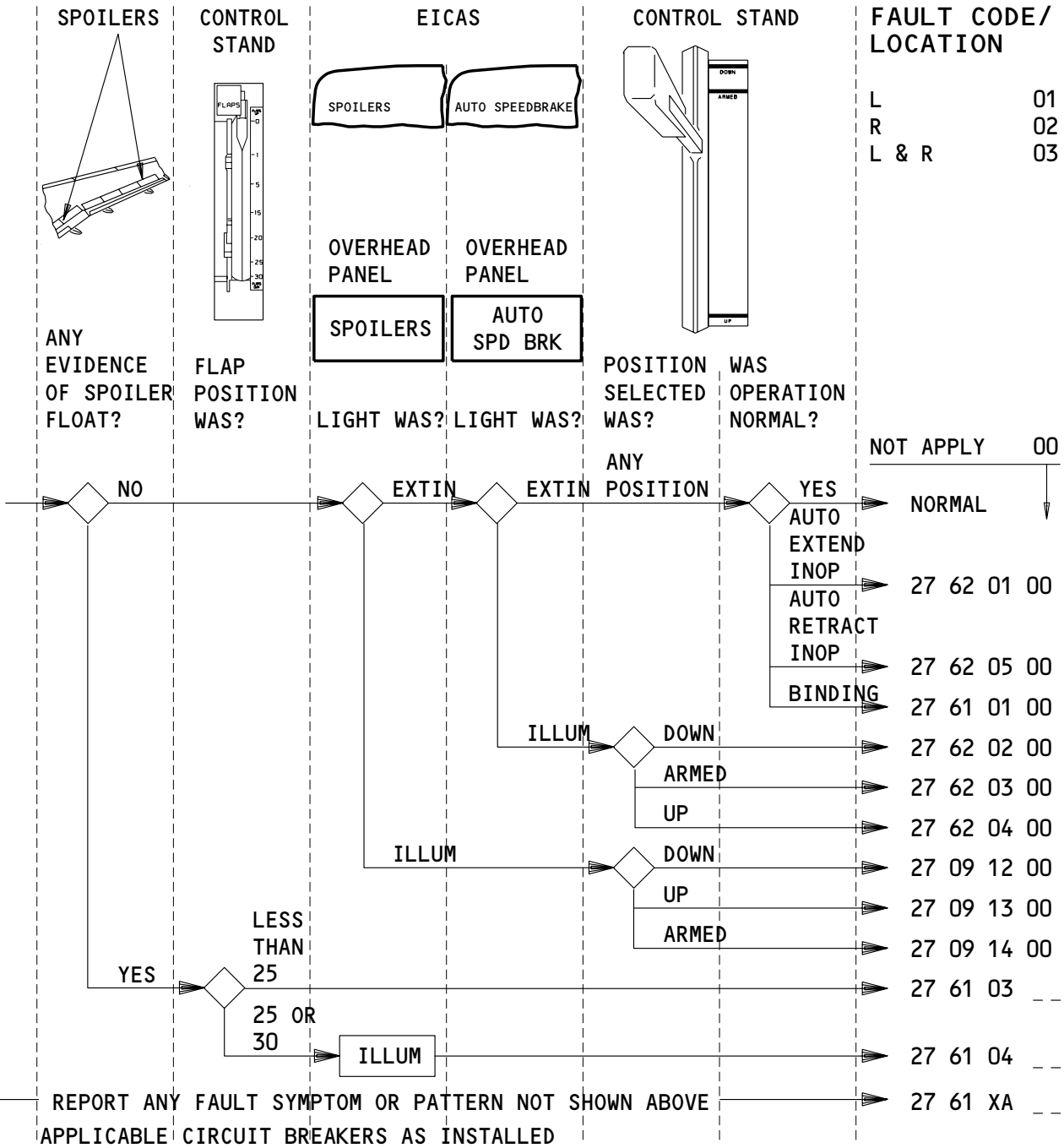
FLAP LOAD RELIEF – FAULT CODES



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D23	ALTN FLAP PWR
11C17	FLAP/SLAT SHUTOFF 1
11C18	FLAP/SLAT SHUTOFF 1
11G21	FLAP/SLAT ELEC UNIT 3 (POWER, PWR)
11G21	FSEU-3 PWR
11G22	FLAP/SLAT ELEC UNIT 3 CONT
11G22	FSEU-3 CONT
11G23	FLAP/SLAT ELEC UNIT 3 SENSOR
11G23	FSEU-3 SENSOR
11H12	FLAP POS IND (L, LEFT)
11H13	FLAP POS IND (R, RIGHT)
11H14	FLAP SLAT SHUTOFF 1
11H23	FLAP/SLAT ALTN DR ARM
11H24	FLAP/SLAT SHUTOFF 2

ALTERNATE TRAILING EDGE FLAPS - FAULT CODES



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11C6	FLT CONT ELEC 1L AC	11C9	FLT CONT ELEC 2L DC	11G18	FLT CONT ELEC 1R DC
11C6	CSEU 1L AC	11C9	CSEU 2L DC	11G18	CSEU 1R DC
11C7	FLT CONT ELEC 1L DC	11G11	AUTO SPEED BRAKE	11G27	FLT CONT ELEC 2R AC
11C7	CSEU 1L DC	11G11	AUTO SPEEDBRAKE	11G27	CSEU 2R AC
11C8	FLT CONT ELEC 2L AC	11G17	FLT CONT ELEC 1R AC	11G28	FLT CONT ELEC 2R DC
11C8	CSEU 2L AC	11G17	CSEU 1R AC	11G28	CSEU 2R DC

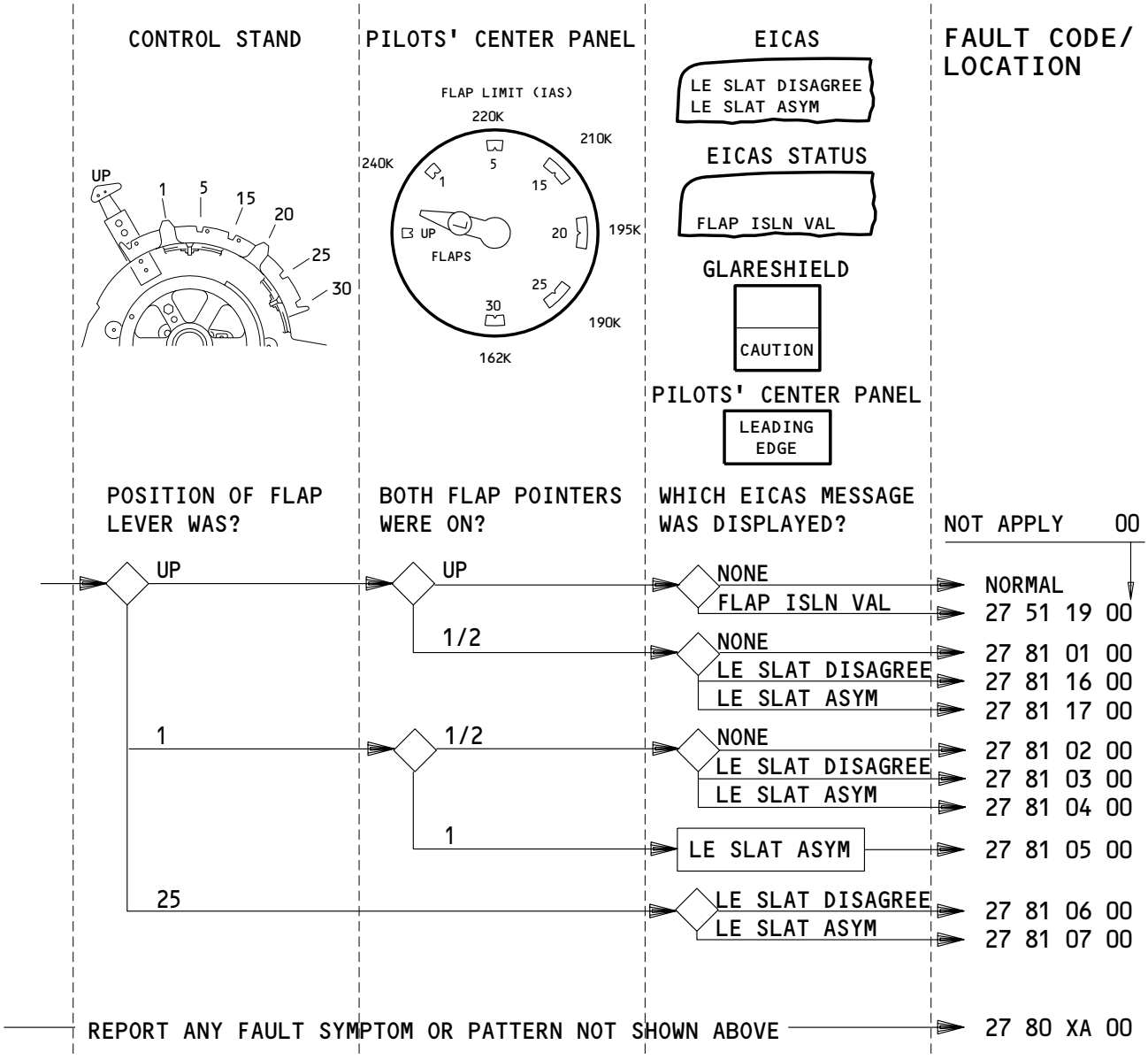
SPOILERS/SPEEDBRAKE – FAULT CODES

EFFECTIVITY

ALL

27-FAULT CODE DIAGRAM

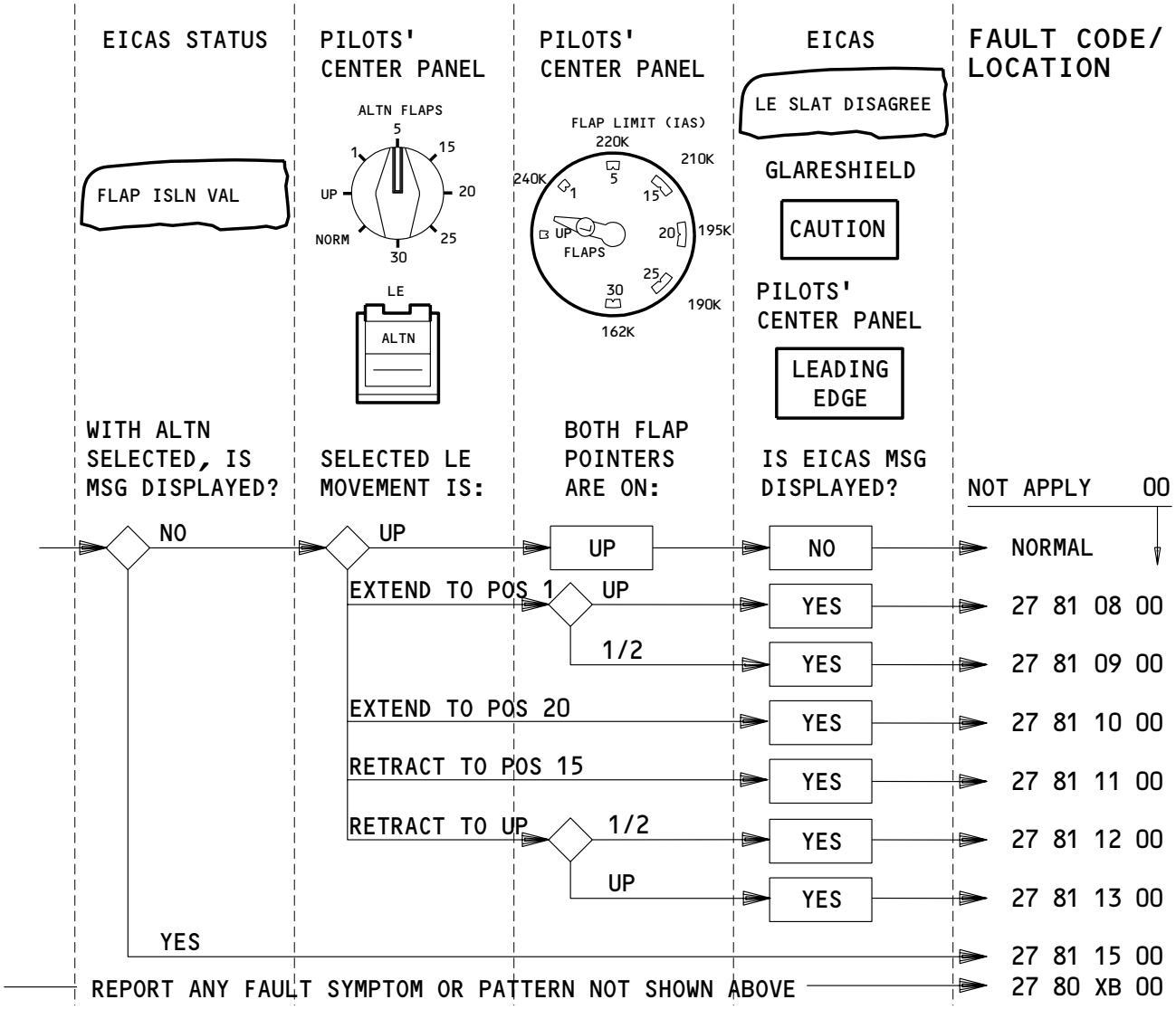
56143



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

11C14	FLAP/SLAT ELEC UNIT 2 (POWER, PWR)	11C18	FLAP/SLAT SHUTOFF 1	11G22	FLAP/SLAT ELEC UNIT 3 CONT
11C14	FSEU-2 PWR	11G12	FLAP/SLAT ELEC UNIT 1 (POWER, PWR)	11G22	FSEU-3 CONT
11C15	FLAP/SLAT ELEC UNIT 2 CONT	11G12	FSEU-1 PWR	11G23	FLAP/SLAT ELEC UNIT 3 SENSOR
11C15	FSEU-2 CONT	11G13	FLAP/SLAT ELEC UNIT 1 CONT	11G23	FSEU-3 SENSOR
11C16	FLAP/SLAT ELEC UNIT 2 SENSOR	11G13	FSEU-1 CONT	11H12	FLAP POS IND (L, LEFT)
11C16	FSEU-2 SENSOR	11G14	FLAP/SLAT ELEC UNIT 1 SENSOR	11H13	FLAP POS IND (R, RIGHT)
11C17	FLAP/SLAT ELEC UNIT 1 CONT	11G14	FSEU-1 SENSOR	11H14	FLAP SLAT SHUTOFF 1
11C17	FSEU-1 CONT	11G21	FLAP/SLAT ELEC UNIT 3 (POWER, PWR)	11H23	FLAP/SLAT ALTN DR ARM
11C17	FLAP/SLAT SHUTOFF 1	11G21	FSEU-3 PWR	11H24	FLAP/SLAT SHUTOFF 2

LEADING EDGE SLATS – FAULT CODES



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6D20	ALTN SLAT PWR
6D23	ALTN FLAP PWR
11C17	FLAP/SLAT SHUTOFF 1
11C18	FLAP/SLAT SHUTOFF 1
11G21	FLAP/SLAT ELEC UNIT 3 (POWER, PWR)
11G21	FSEU-3 PWR
11G22	FLAP/SLAT ELEC UNIT 3 CONT
11G22	FSEU-3 CONT
11G23	FLAP/SLAT ELEC UNIT 3 SENSOR
11G23	FSEU-3 SENSOR
11H12	FLAP POS IND (L, LEFT)
11H13	FLAP POS IND (R, RIGHT)
11H14	FLAP SLAT SHUTOFF 1
11H23	FLAP/SLAT ALT DR ARM
11H24	FLAP/SLAT SHUTOFF 2

ALTERNATE LEADING EDGE SLATS – FAULT CODES

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 11 XA --	An (01=L,02=R,03=L&R) aileron problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-10-01
27 21 XA --	A (01=L,02=R) rudder or a (03=CAPT's,04=F/O's) rudder pedal problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-20-01, SSM 27-20-02
27 31 XA --	An (01=L,02=R,03=L&R) elevator, a (05=CAPT,06=F/O) control column, or an (01=L,02=R,04=C) elevator EICAS message problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-30-01
27 32 XA --	A (01=L,02=R,03=L&R) stall warning problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-32-01, SSM 27-32-02
27 41 XA --	A (01=CAPT,02=F/O,03=CAPT & F/O) stabilizer trim problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-41-01
27 48 XA --	A (01=CAPT,02=F/O,03=CAPT & F/O) stabilizer trim and indications problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-48-01

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 51 XA --	A (01=LEFT,02=RIGHT,03=LEFT & RIGHT) trailing edge flaps problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-50-01, SSM 27-51-01 thru SSM 27-51-03, SSM 27-51-05, SSM 27-51-06, SSM 27-58-01
27 51 XB 00	An alternate trailing edge flaps problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-51-04
27 51 XC 00	A flap load relief problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-51-03
27 61 XA 00	A spoilers/speed brakes problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-61-01, SSM 27-62-01
27 80 XA 00	A leading edge slats problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-81-01, SSM 27-81-03 thru SSM 27-81-05
27 80 XB 00	An alternate leading edge slats problem was encountered by the flight crew which is not covered in the fault code diagrams.	SSM 27-81-02
27 09 01 00	EICAS message: L FLT CONT ELEC displayed.	FIM 27-09-00/101, Fig. 103, Block 1
27 09 02 00	EICAS message: R FLT CONT ELEC displayed.	FIM 27-09-00/101, Fig. 103, Block 1
27 09 03 00	EICAS message: RUDDER RATIO displayed.	FIM 27-09-00/101, Fig. 103, Block 1
27 09 04 00	EICAS message: SPOILERS displayed.	FIM 27-09-00/101, Fig. 103, Block 1
27 09 05 00	EICAS message: STAB TRIM displayed.	FIM 27-09-00/101, Fig. 103, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 09 06 00	EICAS message MACH/SPD TRIM displayed and MACH SPD TRIM light on.	FIM 27-09-00/101, Fig. 106, Block 1
27 09 07 __	UNSCHED STAB TRIM light on. Light off when both trim cutout switches positioned to CUTOUT. Light remained on when (O5=C, O6=R) switch returned to NORM. Other switch in NORM operated normal. Autopilot (L, C or R) was in CMD when unscheduled trim occurred.	FIM 27-09-00/101, Fig. 106A, Block 1
27 09 08 __	UNSCHED STAB TRIM light on. Light off when both trim cutout switches positioned to CUTOUT. Light remained off when (O5=C, O6=R) switch restored to NORM. Other switch was not positioned to NORM. Autopilot (L, C or R) was in CMD when unscheduled trim occurred.	FIM 27-09-00/101, Fig. 106A, Block 1
27 09 09 __	UNSCHED STAB TRIM light on. Light off when both trim cutout switches positioned to CUTOUT. Light remained off when (O5=C, O6=R) switch restored to NORM. Autopilot was off when unscheduled trim occurred.	FIM 27-09-00/101, Fig. 106A, Block 1
27 09 10 00	EICAS message: STAB TRIM displayed & STAB TRIM light on. Stabilizer trim operates at 1/2 rate.	FIM 27-09-00/101, Fig. 103, Block 1
27 09 11 00	RUDDER RATIO light on in flight. EICAS message: RUDDER RATIO displayed.	FIM 27-09-00/101, Fig. 103, Block 1
27 09 12 00	SPOILERS light on. EICAS msg SPOILERS displayed with spoilers selected down. Airplane was (inflight, on the ground).	FIM 27-09-00/101, Fig. 103, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 09 13 00	SPOILERS light on and EICAS msg SPOILERS displayed with speedbrakes selected up. Airplane was inflight, on the ground.	FIM 27-09-00/101, Fig. 103, Block 1
27 09 14 00	SPOILERS light on and EICAS msg SPOILERS displayed with speedbrakes selected to the armed position. Airplane was inflight, on the ground.	FIM 27-09-00/101, Fig. 103, Block 1
27 09 15 00	EICAS msg STAB TRIM displayed & STAB TRIM light on. Stabilizer trim rate was norm.	FIM 27-09-00/101, Fig. 103, Block 1
27 09 16 00	RUDDER RATIO light on, on the gnd. EICAS message: RUDDER RATIO displayed.	FIM 27-21-00/101, Fig. 110, Block 1
27 11 01 00	Aileron trim failed to trim in either direction.	FIM 27-11-00/101, Fig. 104, Block 1
27 11 02 --	Aileron trim failed to trim in (01=L,02=R) wing down direction.	FIM 27-11-00/101, Fig. 105, Block 1
27 11 03 --	(03=Capt,04=F/O,05=Capt & F/O) Aileron control wheel binding.	FIM 27-11-00/101, Fig. 106, Block 1
27 11 03 05	Captain's and F/O's aileron control wheel binding.	FIM 27-11-00/101, Fig. 107, Block 1
27 11 04 --	(03=Capt,04=F/O) Aileron control wheel jammed.	FIM 27-11-00/101, Fig. 108, Block 1
27 11 05 --	(03=Capt,04=F/O,05=Capt & F/O) Aileron control has lost motion.	Adjust the Aileron and Aileron Trim Control System (AMM 27-11-00/501).
27 11 06 00	Aileron control wheel has backlash.	Do the Lateral Control Wheel Inspection/Check (AMM 27-11-02/601).
27 18 01 --	(01=L,02=R) Ail ind pointer(s) failed to indicate aileron movement.	FIM 27-18-00/101, Fig. 104, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 18 02 --	(01=L,02=R) Ail ind pointer(s) failed to zero with control wheel zero.	FIM 27-18-00/101, Fig. 105, Block 1
27 18 03 --	(01=L,02=R) Ail ind pointer(s) indicate less than full travel.	FIM 27-18-00/101, Fig. 106, Block 1
27 21 03 00	Rudder trim pointer fails to move.	FIM 27-21-00/101, Fig. 105, Block 1
27 21 04 00	Rudder trim failed to trim in either direction.	FIM 27-21-00/101, Fig. 106, Block 1
27 21 05 --	Rudder trim failed to trim in (01=L,02=R) direction.	FIM 27-21-00/101, Fig. 106, Block 1
27 21 06 --	(03=CAPT's,04=F/O's) Rudder pedal adjustment binding.	FIM 27-21-00/101, Fig. 108, Block 1
27 21 07 --	(03=CAPT's,04=F/O's) Rudder control binding.	FIM 27-21-00/101, Fig. 107, Block 1
27 21 08 --	(03=CAPT's,04=F/O's) Rudder control jammed.	FIM 27-21-00/101, Fig. 107, Block 1
27 21 09 --	(03=CAPT's,04=F/O's) Rudder adjustment crank moves but pedals do not move.	FIM 27-21-00/101, Fig. 108, Block 2
27 21 10 00	EICAS message: RUDDER PCU displayed.	FIM 27-21-00/101, Fig. 109, Block 1
27 21 11 00	Light in rudder trim position indicator defective (out, intermittent etc.).	Replace the lamp for the light (AMM 33-13-00/201). If the problem continues, examine the wires (WDM 33-13-52).
27 21 12 --	_____ units rudder trim required in nose (01=L,02=R) direction while in climb, cruise, or descent, explain condition.	FIM 27-21-00/101, Fig. 106, Block 1
27 23 01 00	EICAS message: PCU MONITOR displayed.	FIM 27-23-00/101, Fig. 104, Block 1
27 23 02 --	EICAS msg (01=L,02=C,03=R) FLT CONT HYD displayed.	Replace the shutoff valve for the (01=L,02=C,03=R) hydraulic system (AMM 27-23-01/201).

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 23 03 00	EICAS msg FLT CONT VALS displayed.	FIM 27-23-00/101, Fig. 103, Block 1
27 28 01 00	RUD pos ind fails to ind rudder movement.	FIM 27-28-00/101, Fig. 103, Block 1
27 28 02 00	RUD pos ind fails to ind zero with RUDDER TRIM zero.	FIM 27-28-00/101, Fig. 103, Block 1
27 28 03 00	RUD ind indicates less than full travel.	FIM 27-28-00/101, Fig. 103, Block 1
27 31 01 --	(01=L,02=R,03=L & R) Elevator position ind fails to move with control column movement.	FIM 27-31-00/101, Fig. 104, Block 2
27 31 02 --	(01=L,02=R,03=L & R) Elevator position ind fails to indicate zero with control column centered.	FIM 27-31-00/101, Fig. 104, Block 3
27 31 03 --	(01=L,02=R,03=L & R) Elevator position indicates less than full travel.	FIM 27-31-00/101, Fig. 104, Block 4
27 31 04 --	(05=Capt,06=F/O) Elevator control is binding.	FIM 27-31-00/101, Fig. 105, Block 1
27 31 05 --	(05=Capt,06=F/O) Elevator control is jammed.	FIM 27-31-00/101, Fig. 105, Block 1
27 31 06 00	EICAS message: ELEV FEEL DISPLAYED.	FIM 27-31-00/101, Fig. 106, Block 1
27 31 07 00	EICAS message: ELEV ASYM displayed.	FIM 27-09-00/101, Fig. 106, Block 1
27 31 08 --	EICAS message: (01=L,02=R) ELEV PCU displayed.	FIM 27-31-00/101, Fig. 108, Block 1
27 31 09 --	EICAS message: ELEV (01=L,04=C, 02=R) HYD PRESS displayed.	FIM 27-31-00/101, Fig. 109, Block 1
27 31 10 00	EICAS message: ELEV C HYD PRESS displayed.	FIM 27-31-00/101, Fig. 109, Block 1
27 31 11 00	EICAS message: ELEV L HYD PRESS displayed.	FIM 27-31-00/101, Fig. 109, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 31 12 00	EICAS message: ELEV R HYD PRESS displayed.	FIM 27-31-00/101, Fig. 109, Block 1
27 31 14 00	EICAS message: L ELEV PCU displayed.	FIM 27-31-00/101, Fig. 108, Block 1
27 31 14 00	EICAS message: L ELEV PCU displayed.	FIM 27-31-00/101, Fig. 108, Block 1
27 31 16 --	(05=Capt,06=F/O) Elevator feels heavy.	Adjust the Mechanical Linkage on the Feel and Centering Unit (AMM 27-31-00/501).
27 32 01 00	Stick shaker operates with airplane in normal flt attitude.	FIM 27-32-00/101, Fig. 103, Block 1
27 32 02 --	Stick shaker failed to operate when (01=L,02=R,03=L&R) stall warning test switch was actuated.	FIM 27-32-00/101, Fig. 103, Block 3
27 32 03 --	SPD LIM displayed on (01=Capt, 02=F/O) ADI.	FIM 27-32-00/101, Fig. 103
27 32 04 --	EICAS message: WARN ELEX displayed. Stick shaker operated when stall warning test switch was actuated, message did not clear.	FIM 27-32-00/101, Fig. 103, Block 1
27 32 05 --	EICAS message: WARN ELEX diplayed. Stick shaker inoperative when stall warning test switch was actuated, message did not clear.	FIM 27-32-00/101, Fig. 103, Block 1
27 41 01 00	Stab trim manual control lever binding.	FIM 27-41-00/101, Fig. 104, Block 1
27 41 02 --	Stab trim failed to operate using (01=Capt,02=F/O,03=Capt & F/O) control wheel sw(s). Manual control was normal.	FIM 27-09-00/101, Fig. 106, Block 1
27 41 03 00	Stab trim fails to operate using electric trim SWS. Manual control is also inoperative.	Replace the stabilizer ballscrew actuator (AMM 27-41-10/401).

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 41 04 00	Stab trim manual control levers split.	Adjust the Control Lever Rod on the Stabilizer Trim Control Module (AMM 27-41-00/501). Do the Horizontal Stabilizer Trim Control System Adjustment - Body Cables (AMM 27-41-00/501).
27 41 05 --	Stab trim failed to operate using (01=Capt,02=F/O,03=Capt & F/O) control wheel sw(s). ALTN control was normal.	Do the BITE procedure on the SAM, FIM 27-09-00/101, Fig.106, Block 1.
27 41 06 00	Stab trim fails to operate using electric trim SWS. ALTN control was also inoperative.	
27 48 01 --	(01=CAPT's,02=F/O's) control stand stab trim indicator OFF flag in view.	FIM 27-48-00/101, Fig. 104, Block 1
27 48 02 00	Control stand stab trim indicators differ.	FIM 27-48-00/101, Fig. 105, Block 1
27 51 01 00	EICAS message: TE FLAP DISAGREE when TE flap position selected. Flaps failed to move to selected position.	FIM 27-51-00/101, Fig. 104, Block 1
27 51 02 --	(01=Left,02=Right,03=Left & Right) Flap position indicator needle(s) (inoperative, stick) during TE flaps operation.	FIM 27-51-00/101, Fig. 109, Block 1
27 51 03 00	EICAS message: TE FLAP ASYM. No flap movement.	FIM 27-51-00/101, Fig. 104, Block 1
27 51 04 00	EICAS msg FLAP LD RELIEF displayed and TRAILING EDGE lgt on pilots' center panel on. Flaps failed to retract when flap placard speed was exceeded. Airspeed was ___ knots.	FIM 27-51-00/101, Fig. 107, Block 1
27 51 05 00	EICAS message: TE FLAP DISAGREE displayed. Flaps 30 selected. Flaps failed to extend to pos 30 with A/S less than 165 k.	FIM 27-51-00/101, Fig. 104, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 51 06 00	TE flaps very slow when moving to the selected position. EICAS message TE FLAP DISAGREE.	FIM 27-51-00/101, Fig. 104, Block 1
27 51 07 00	TE flaps move to selected position at a rate faster than normal.	Replace the flap/slat depressurization module (AMM 27-51-29/201).
27 51 08 00	Flap Lever jams, binds, or is rough when selecting any flap position.	FIM 27-51-00/101, Fig. 110, Block 1
27 51 09 00	TRAILING EDGE FLAPS will not extend or retract when using the alternate mode. EICAS msg TE FLAP DISAGREE displayed.	FIM 27-51-00/101, Fig. 112, Block 1
27 51 10 00	TRAILING EDGE FLAPS will not extend when using the alternate mode. EICAS msg TE FLAP DISAGREE displayed.	FIM 27-51-00/101, Fig. 112, Block 1
27 51 11 00	TRAILING EDGE FLAPS will not retract when using the alternate mode. EICAS msg TE FLAP DISAGREE displayed.	FIM 27-51-00/101, Fig. 112, Block 1
27 51 12 00	EICAS message: FLAP ISLN VAL displayed.	FIM 27-51-00/101, Fig. 115, Block 1
27 51 13 00	EICAS message: FLAP/SLAT ELEC displayed.	FIM 27-51-00/101, Fig. 111, Block 1
27 51 14 00	EICAS message: FLAP/SLAT BITE displayed.	FIM 27-51-00/101, Fig. 111, Block 1
27 51 15 00	Flaps failed to move. TRAILING EDGE light on and EICAS msgs TE FLAP DISAGREE and FLAP ISLN VAL displayed.	FIM 27-51-00/101, Fig. 104, Block 1
27 51 16 00	Flaps failed to move. TRAILING EDGE light on and EICAS msgs TE FLAP DISAGREE and FLAP ISLN VAL displayed. Flaps operate normal using TE ALTN system.	FIM 27-51-00/101, Fig. 104, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 51 17 00	Flaps fail to move. TRAILING EDGE light on and EICAS msgs TE FLAP DISAGREE displayed. Flaps operate normal using TE ALTN system.	FIM 27-51-00/101, Fig. 104, Block 1
27 51 18 00	Flaps fail to move. TRAILING EDGE light on and EICAS msg TE FLAP DISAGREE displayed. Flaps also inoperative on TE ALTN system.	FIM 27-51-00/101, Fig. 104, Block 1
27 51 19 00	EICAS status msg FLAP ISLN VAL displayed with flaps up.	FIM 27-51-00/101, Fig. 115, Block 1
27 51 20 00	EICAS msg FLAP ISLN VAL displayed when altn TE flaps selected.	FIM 27-51-00/101, Fig. 115, Block 1
27 51 21 00	Flaps failed to move. TRAILING EDGE light on and EICAS msgs TE FLAP DISAGREE and FLAP ISLN VAL displayed. Flaps also inoperative using TE ALTN system.	FIM 27-51-00/101, Fig. 112, Block 1
27 51 22 00	Trailing edge flaps extended to selected setting at the wrong airspeed following load relief. Airspeed was ____ knots.	FIM 27-51-00/101, Fig. 117, Block 1
27 51 23 00	Trailing edge flaps failed to retract to lower flap setting when flap placard speed was exceeded. Flap setting was ___. Airspeed was ___ knots.	FIM 27-51-00/101, Fig. 116, Block 1
27 51 24 00	Trailing edge flaps retracted to lower flap setting at wrong airspeed. Airspeed was ___ knots.	FIM 27-51-00/101, Fig. 116, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 51 25 --	(01=Left,02=Right,03=Left & Right) Flap position indicator needle(s) does not jump to a position halfway between flaps up and flaps 1 and does not jump from halfway position to flaps 1 position.	Replace LE/TE transfer relay K10244 in P36 (WDM 27-58-11).
27 61 01 00	Speedbrake lever is binding.	FIM 27-61-00/101, Fig. 104, Block 1
27 61 03 --	(01=Left,02-Right,03=Left and Right) Wing spoiler(s) float (state panel(s) and amount of float if known).	FIM 27-61-00/101, Fig. 104A, Block 1
27 61 04 --	SPOILERS light on and EICAS msg SPOILERS displayed with flaps selected (25, 30). Uncommanded airplane roll (01=L,02=R) encountered (if roll was not encountered, state none)(state panel(s) and amount of float, if known).	FIM 27-61-00/101, Fig. 103, Block 1
27 62 01 00	Speedbrake lever failed to extend automatically on ldg.	FIM 27-62-00/101, Fig. 104, Block 1
27 62 02 00	AUTO SPD BRK lgt on with speedbrake lever down. EICAS msg AUTO SPEEDBRAKE displayed. Airplane was inflight, on the ground.	FIM 27-62-00/101, Fig. 105, Block 1
27 62 03 00	AUTO SPD BRK lgt on with speedbrake lever armed. EICAS msg AUTO SPEEDBRAKE displayed. Airplane was inflight, on the ground.	FIM 27-62-00/101, Fig. 106, Block 1
27 62 04 00	AUTO SPD BRK lgt on with speedbrake lever armed. EICAS msg AUTO SPEEDBRAKE displayed. Airplane was inflight, on the ground.	FIM 27-62-00/101, Fig. 107, Block 1
27 62 05 00	Speedbrakes failed to auto retract during touch and go.	FIM 27-62-00/101, Fig. 104, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 81 01 00	Both flap pointers are on 1/2 with the flap lever in up. No leading edge EICAS messages are displayed.	FIM 27-88-00/101, Fig. 104, Block 1
27 81 02 00	Both flap pointers indicate 1/2 with the flap lever 1. No leading edge EICAS messages are displayed.	FIM 27-88-00/101, Fig. 105, Block 1
27 81 03 00	EICAS message: LE SLAT DISAGREE displayed with the flap lever in 1. Both flap pointers indicate 1/2.	FIM 27-81-00/101, Fig. 104, Block 1
27 81 04 00	EICAS message: LE SLAT ASYM displayed with the flap lever in 1. Both flap pointers indicate 1/2.	FIM 27-81-00/101, Fig. 105, Block 1
27 81 05 00	EICAS message: LE SLAT ASYM displayed with the flap lever 1. Both flap pointers indicate 1.	FIM 27-81-00/101, Fig. 105, Block 1
27 81 06 00	EICAS message: LE SLAT DISAGREE displayed with the flap lever in 25.	FIM 27-81-00/101, Fig. 104, Block 1
27 81 07 00	EICAS message: LE SLAT ASYM displayed with the flap lever in 25.	FIM 27-81-00/101, Fig. 105, Block 1
27 81 08 00	EICAS message: LE SLAT DISAGREE displayed when slat extension to pos 1 is selected with ALTN slat drive system. Both flap pointers stayed on UP.	FIM 27-81-00/101, Fig. 107, Block 1
27 81 09 00	EICAS message: LE SLAT DISAGREE displayed when slat extension to pos 1 is selected with ALTN slat drive system. Both flap pointers stayed halfway betwen UP and 1.	FIM 27-81-00/101, Fig. 107, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
27 81 10 00	EICAS message: LE SLAT DISAGREE displayed when slat extension to pos 20 is selected with ALTN slat drive system.	FIM 27-81-00/101, Fig. 107, Block 1
27 81 11 00	EICAS message: LE SLAT DISAGREE displayed when slat retraction to pos 15 is selected with ALTN slat drive system.	FIM 27-81-00/101, Fig. 108, Block 1
27 81 12 00	EICAS message: LE SLAT DISAGREE displayed when slat retraction to UP is selected with ALTN slat drive system. Both flap pointers stayed halfway betwen UP and 1.	FIM 27-81-00/101, Fig. 108, Block 1
27 81 13 00	EICAS message: LE SLAT DISAGREE displayed when slat retraction to UP is selected with ALTN slat drive system. Both flap pointers indicate UP.	FIM 27-81-00/101, Fig. 108, Block 1
27 81 14 --	(01=L,02=R,03=L & R) Autoslats failed to extend, retract when tested.	FIM 27-81-00/101, Fig. 109, Block 1
27 81 15 00	EICAS msg FLAP ISLN VAL displayed when altn LE slats armed.	FIM 27-51-00/101, Fig. 115, Block 1
27 81 16 00	Both flap pointers are on 1/2 with the flap lever in UP. LE SLAT DISAGREE displayed.	FIM 27-88-00/101
27 81 17 00	Both flap pointers are on 1/2 with the flap lever in UP. LE SLAT ASYM displayed.	FIM 27-88-00/101

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
Air Data Computer	ADC	34-12
Air Data Inertial Reference Unit	ADIRU	34-26
Air Traffic Control Transponder	ATC	34-53
Airborne Vibration Monitor Signal Conditioner	AVM	77-31
Antiskid/Autobrake Control Unit		32-42
APU Fire Detection System		26-15
Automatic Direction Finder Receiver	ADF	34-57
APU Control Unit	ECU	49-11
Brake Temperature Monitor Unit		32-46
Bus Power Control Unit	BPCU	24-20
Cabin Pressure Controller		21-30
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 Engine Control (RR Engines)	EEC	73-21
Electronic Engine Control Monitor Unit (PW Engines)	EECM	71-EPCS Message Index
Electronic Flight Instrument System	EFIS	34-22
Electronic Propulsion Control System (PW Engines)	EPCS	71-EPCS Message Index
Engine Fire/Overheat Detection System		26-11
Engine Indication and Crew Alerting System Computer	EICAS	31-41

Bite Index
Figure 1 (Sheet 1)

LRU/System Name	Acronym	FIM Reference
Engine Turbine Cooling Overheat Detection System (RR Engines)		26-13
Enhanced Ground Proximity Warning Computer	EGPWC	34-46
Flap/Slat Accessory Module	FSAM	27-51
Flap/Slat Electronic Unit	FSEU	27-51
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
Inertial Reference Unit	IRU	34-21
Instrument Comparator Unit	ICU	34-25
Instrument Landing System Receiver	ILS	34-31
Lower Cargo Compartment Smoke Detection System		26-16
Maintenance Control Display Panel	MCDP	22-00
PA (Passenger Address) Amplifier		23-31
Pack Standby Temperature Controller		21-51
Pack Temperature Controller		21-51
Passenger Entertainment System	PES	23-34
Power Supply Module (Control System Electronics Units)	PSM	27-09
Propulsion Discrete Interface Unit (PW Engines)	PDIU	73-21
Proximity Switch Electronics Unit	PSEU	32-09
Radio Altimeter Transmitter/Receiver	RA	34-33
Rudder Ratio Changer Module	RRCM	27-09
Spoiler Control Module	SCM	27-09
Stabilizer Position Module	SPM	27-48
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

Bite Index
Figure 1 (Sheet 2)

LRU/System Name	Acronym	FIM Reference
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		21-60

Bite Index
Figure 1 (Sheet 3)

FLIGHT CONTROL SYSTEM ELECTRONICS UNIT

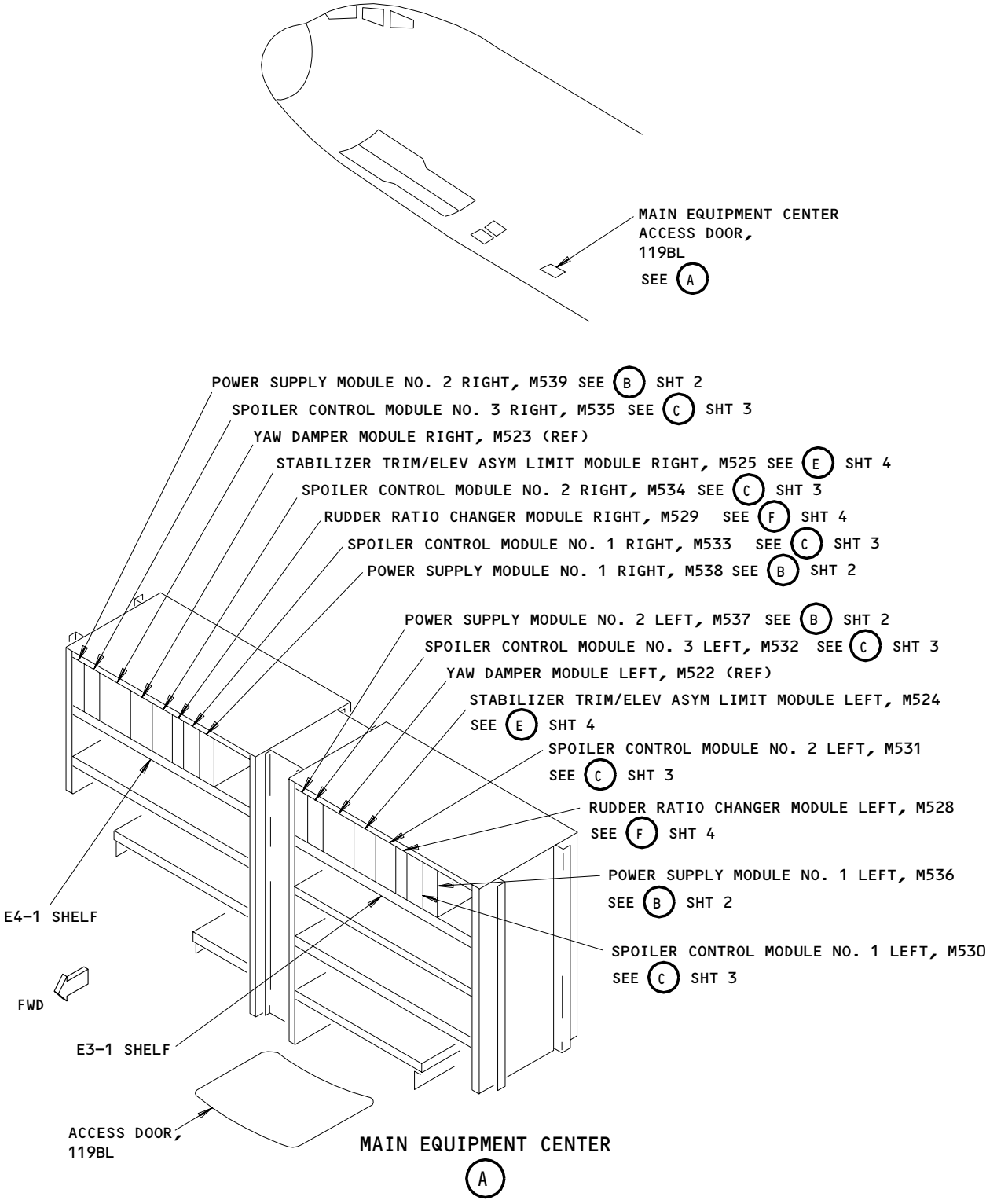
1. Flight Control System Electronics Unit
   A. General
      (1) This section contains EICAS message troubleshooting and BITE procedures for the Control System Electronics Units.

CONTROL SYSTEM ELECTRONICS UNIT

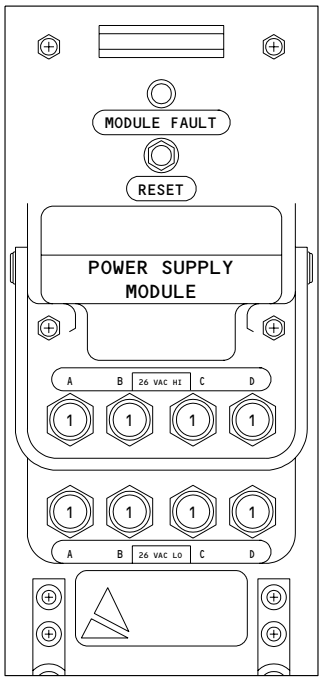
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	--		FLT COMPT, P11	*
FLT CONT ELEC 1L AC, C1538		1	11C6	*
FLT CONT ELEC 1L DC, C1534		1	11C7	*
FLT CONT ELEC 1R AC, C1536		1	11G17	*
FLT CONT ELEC 1R DC, C1531		1	11G18	*
FLT CONT ELEC 2L AC, C1537		1	11C8	*
FLT CONT ELEC 2L DC, C1533		1	11C9	*
FLT CONT ELEC 2R AC, C1535		1	11G27	*
FLT CONT ELEC 2R DC, C1532		1	11G28	*
MODULE – POWER SUPPLY NO. 1 LEFT, M536	1	1	119BL, MAIN EQUIP CTR E3-1	27-09-00
MODULE – POWER SUPPLY NO. 1 RIGHT, M538	1	1	119BL, MAIN EQUIP CTR E4-1	27-09-00
MODULE – POWER SUPPLY NO. 2 LEFT, M537	1	1	119BL, MAIN EQUIP CTR E3-1	27-09-00
MODULE – POWER SUPPLY NO. 2 RIGHT, M539	1	1	119BL, MAIN EQUIP CTR E4-1	27-09-00
MODULE – RUDDER RATIO CHANGER LEFT, M528	1	1	119BL, MAIN EQUIP CTR E3-1	27-09-00
MODULE – RUDDER RATIO CHANGER RIGHT, M529	1	1	119BL, MAIN EQUIP CTR E4-1	27-09-00
MODULE – SPOILER CONTROL NO. 1 LEFT, M530	1	1	119BL, MAIN EQUIP CTR E3-1	27-09-00
MODULE – SPOILER CONTROL NO. 1 RIGHT, M533	1	1	119BL, MAIN EQUIP CTR E4-1	27-09-00
MODULE – SPOILER CONTROL NO. 2 LEFT, M531	1	1	119BL, MAIN EQUIP CTR E3-1	27-09-00
MODULE – SPOILER CONTROL NO. 2 RIGHT, M534	1	1	119BL, MAIN EQUIP CTR E4-1	27-09-00
MODULE – SPOILER CONTROL NO. 3 LEFT, M532	1	1	119BL, MAIN EQUIP CTR E3-1	27-09-00
MODULE – SPOILER CONTROL NO. 3 RIGHT, M535	1	1	119BL, MAIN EQUIP CTR E4-1	27-09-00
MODULE – STABILIZER TRIM/ELEV ASYM LIMIT LEFT, M524	1	1	119BL, MAIN EQUIP CTR E3-1	27-09-00
MODULE – STABILIZER TRIM/ELEV ASYM LIMIT RIGHT, M525	1	1	119BL, MAIN EQUIP CTR E4-1	27-09-00
MODULE – YAW DAMPER LEFT, M522 (FIM 22-21-00/101)				
MODULE – YAW DAMPER RIGHT, M523 (FIM 22-21-00/101)				

* SEE THE WDM EQUIPMENT LIST

Control System Electronics Unit – Component Index
Figure 101



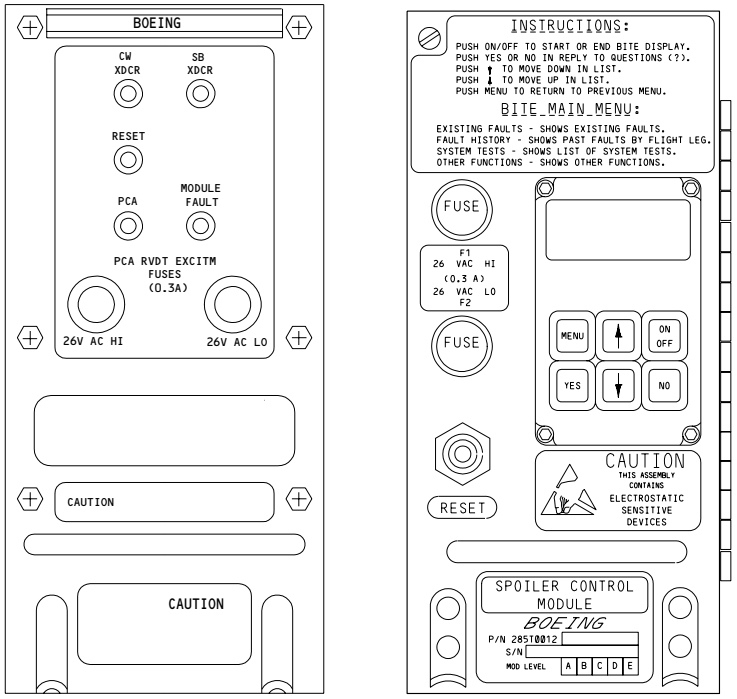
Control System Electronics Unit - Component Location
Figure 102 (Sheet 1)



POWER SUPPLY MODULE

B

Control System Electronics Unit - Component Location (Detail from Sht 1)
Figure 102 (Sheet 2)

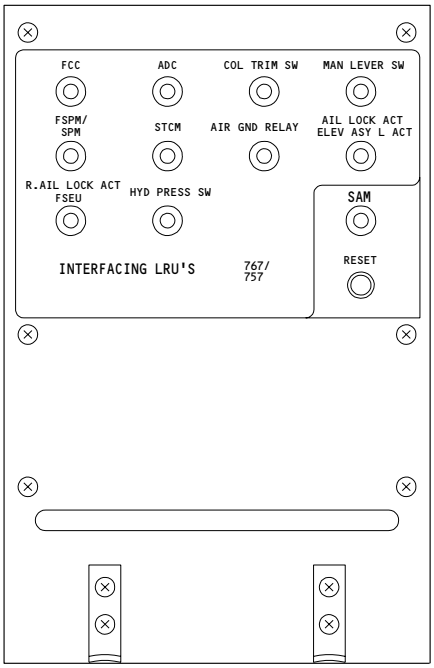


(-100 SERIES) (-200 SERIES)

SPOILER CONTROL MODULE

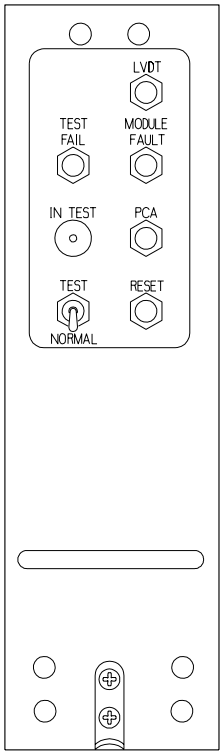
C

Control System Electronics Unit - Component Location (Detail from Sht 1)
Figure 102 (Sheet 3)



STABILIZER TRIM/ELEVATOR ASYMMETRY MODULE

(E)



RUDDER RATIO CHANGER MODULE
(EXAMPLE)

(F)

Control System Electronics Unit - Component Location (Details from Sht 1)
Figure 102 (Sheet 4)

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
- AUTOPILOT (FLIGHT CONTROL)(AMM 22-10-00/501)
- FLAP SYSTEM (AMM 27-51-00/201)
- SLAT SYSTEM (AMM 27-81-00/201)
- EICAS (AMM 31-41-00/201)
- AIR/GROUND SYSTEM (AMM 32-09-02/201)
- MASTER DIM AND TEST SYSTEM (AMM 33-16-00/501)
- AIR DATA COMPUTING SYSTEM (AMM 34-12-00/501)
- INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A18,11C5,11C6,11C7,11C8,11C9,11C12,11C13,11D10,
11F19,11F34,11G10,11G15,11G17,11G18,11G24,11G27,
11G28,11H10,11H11,11H19,11H20,11J12

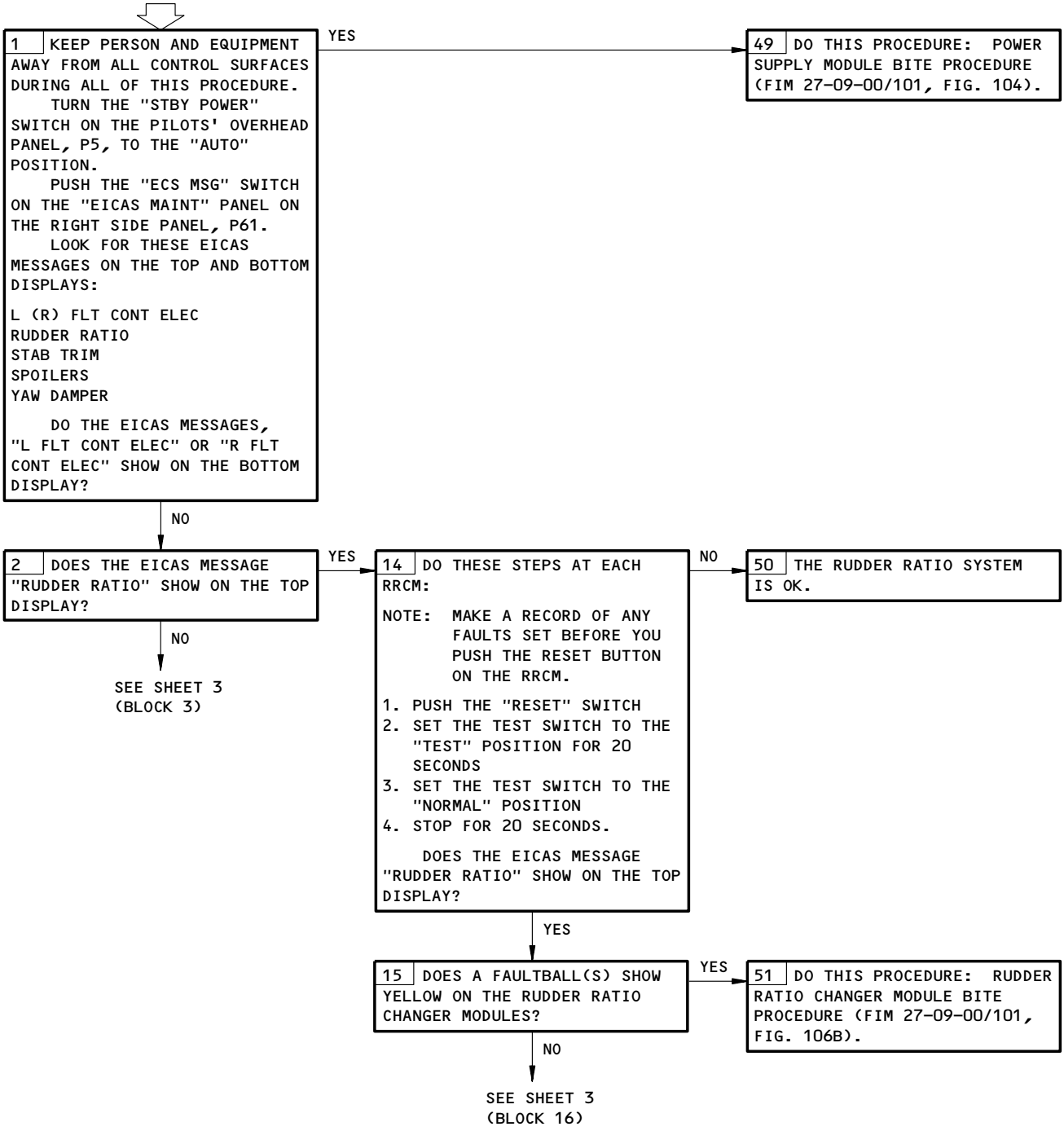
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
- ELECTRICAL POWER IS ON (AMM 24-22-00/201)
- HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

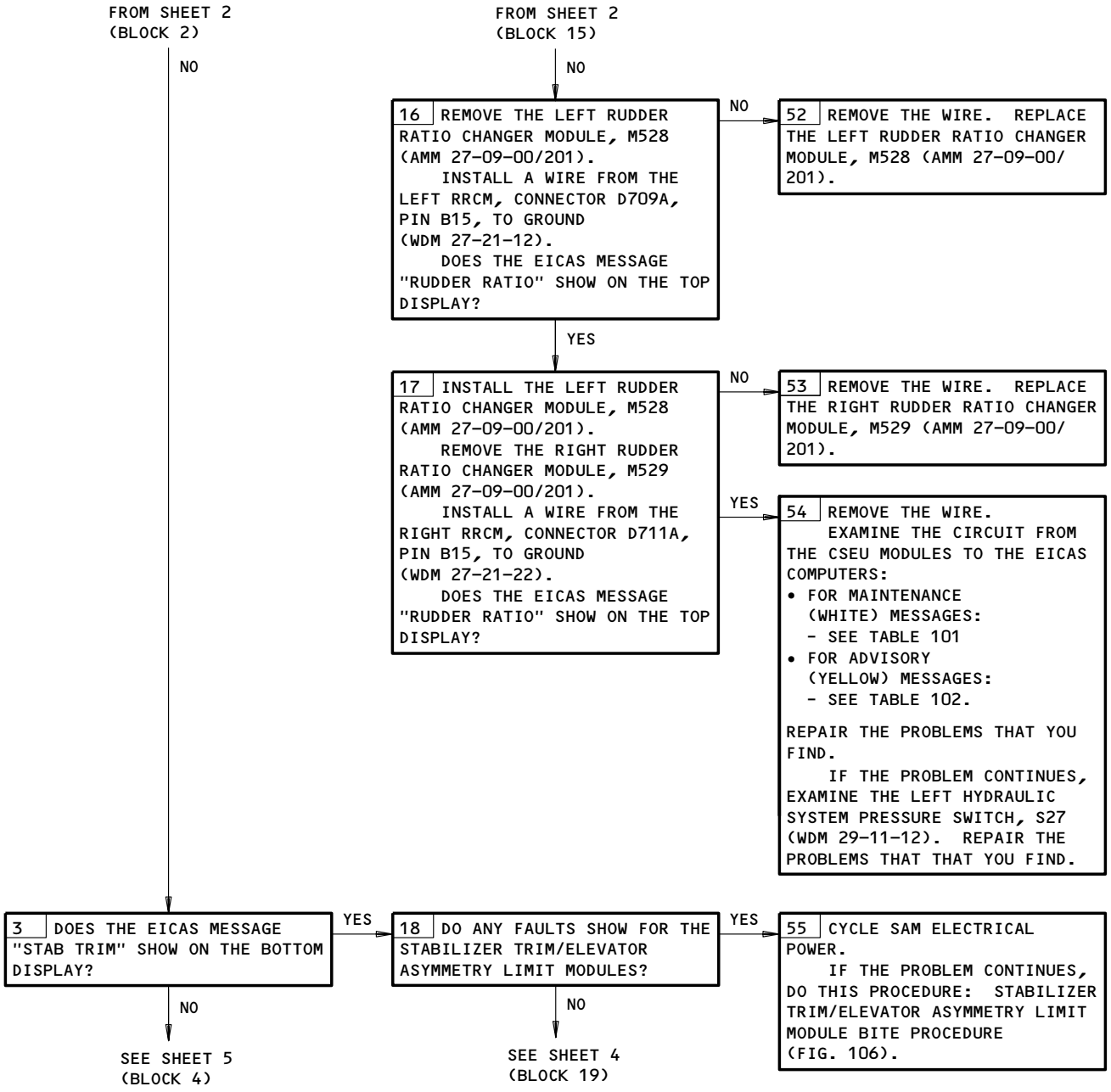
NOTE: THE CONTROL SYSTEM ELECTRONIC UNITS (CSEU) ARE THE POWER SUPPLY MODULES (PSM), SPOILER CONTROL MODULES (SCM), YAW DAMPER STABILIZER TRIM MODULE (YSM) OR YAW DAMPER MODULES (YDM), STABILIZER TRIM/ELEVATOR ASYMMETRY LIMIT MODULES (SAM), AND RUDDER RATIO CHANGER MODULES (RRCM).

Control System Electronic Units EICAS Message(s) Displayed
Figure 103 (Sheet 1)

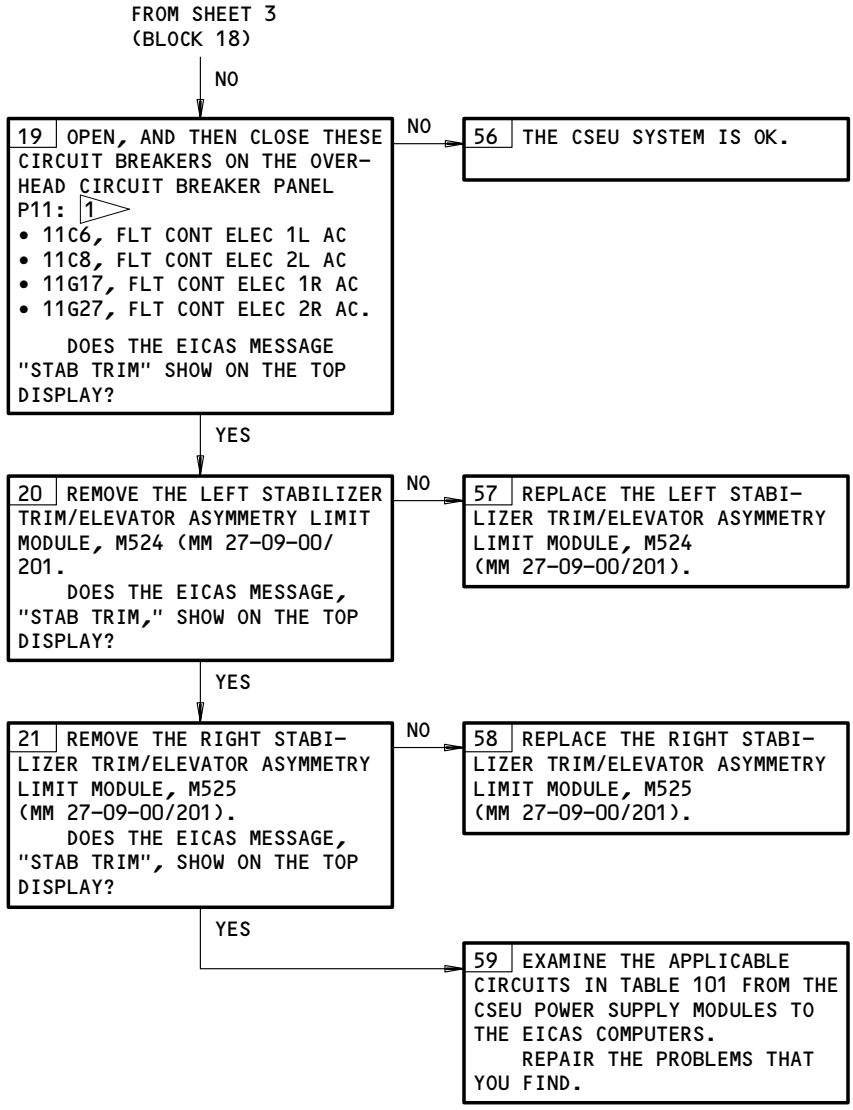
CONTROL SYSTEM ELECTRONIC UNITS EICAS MESSAGE(S) DISPLAYED



Control System Electronic Units EICAS Message(s) Displayed
Figure 103 (Sheet 2)

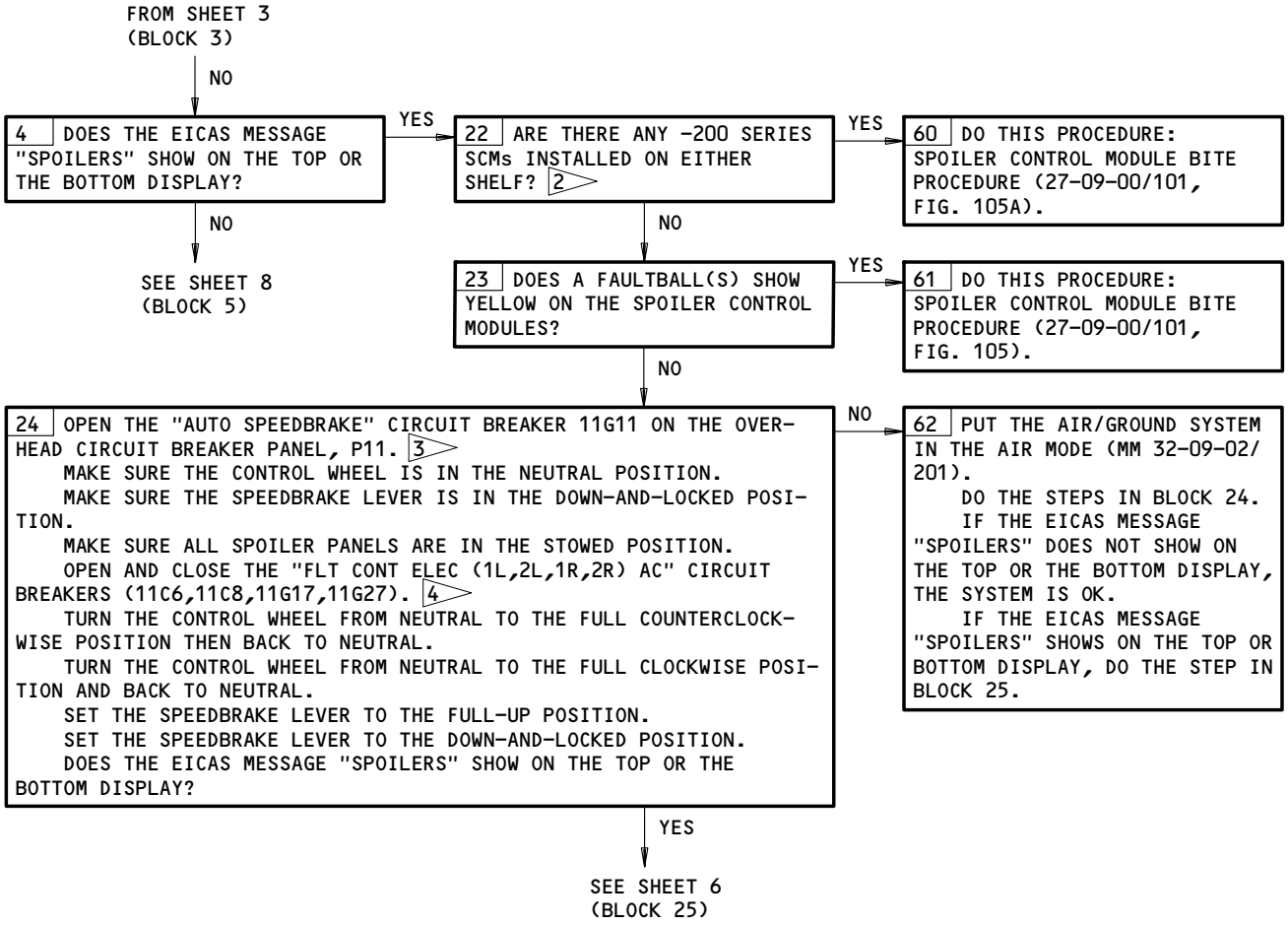


Control System Electronic Units EICAS Message(s) Displayed
Figure 103 (Sheet 3)



1 IF THE "ELEV ASY L ACT" FAULTBALL SHOWS YELLOW ON ONE OF THE SAMs, AND THE EICAS MESSAGE "ELEV ASYM" SHOWS ON THE TOP DISPLAY AFTER YOU OPEN THESE CIRCUIT BREAKERS, DO THIS STEP:
1. RESET THE FAULTBALL ON THE SAM (27-09-00/101, FIG. 106, BLOCK 2).

Control System Electronic Units EICAS Message(s) Displayed
Figure 103 (Sheet 4)

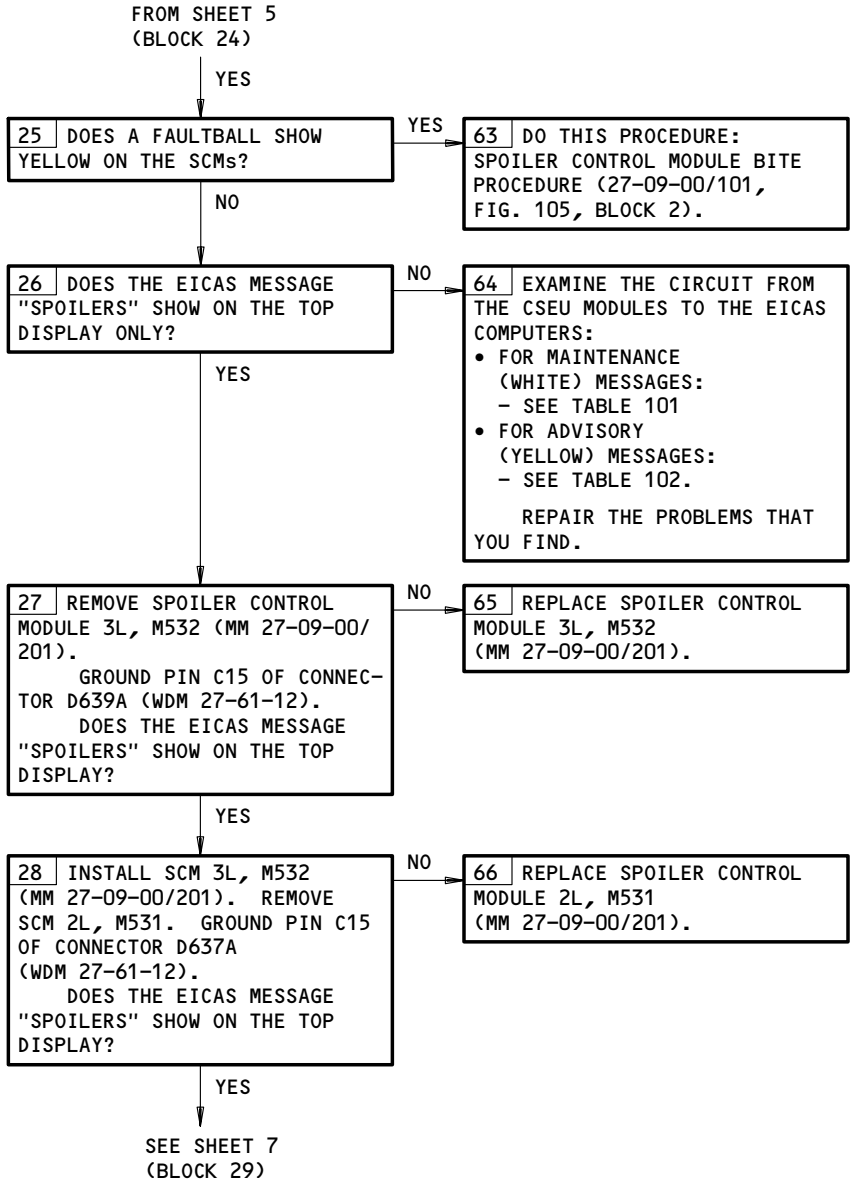


2 WHEN A -200 SERIES SCM IS AVAILABLE, IT IS RECOMMENDED FOR INSTALLATION AT A SHELF POSITION WHERE INTERMITTENT PROBLEMS OCCUR, OR WHEN IT IS NECESSARY TO REPLACE A SCM DURING THE PROCEDURE, TO MAKE USE OF ITS EXPANDED CAPACITY FOR FAULT DETECTION AND FAULT ISOLATION.

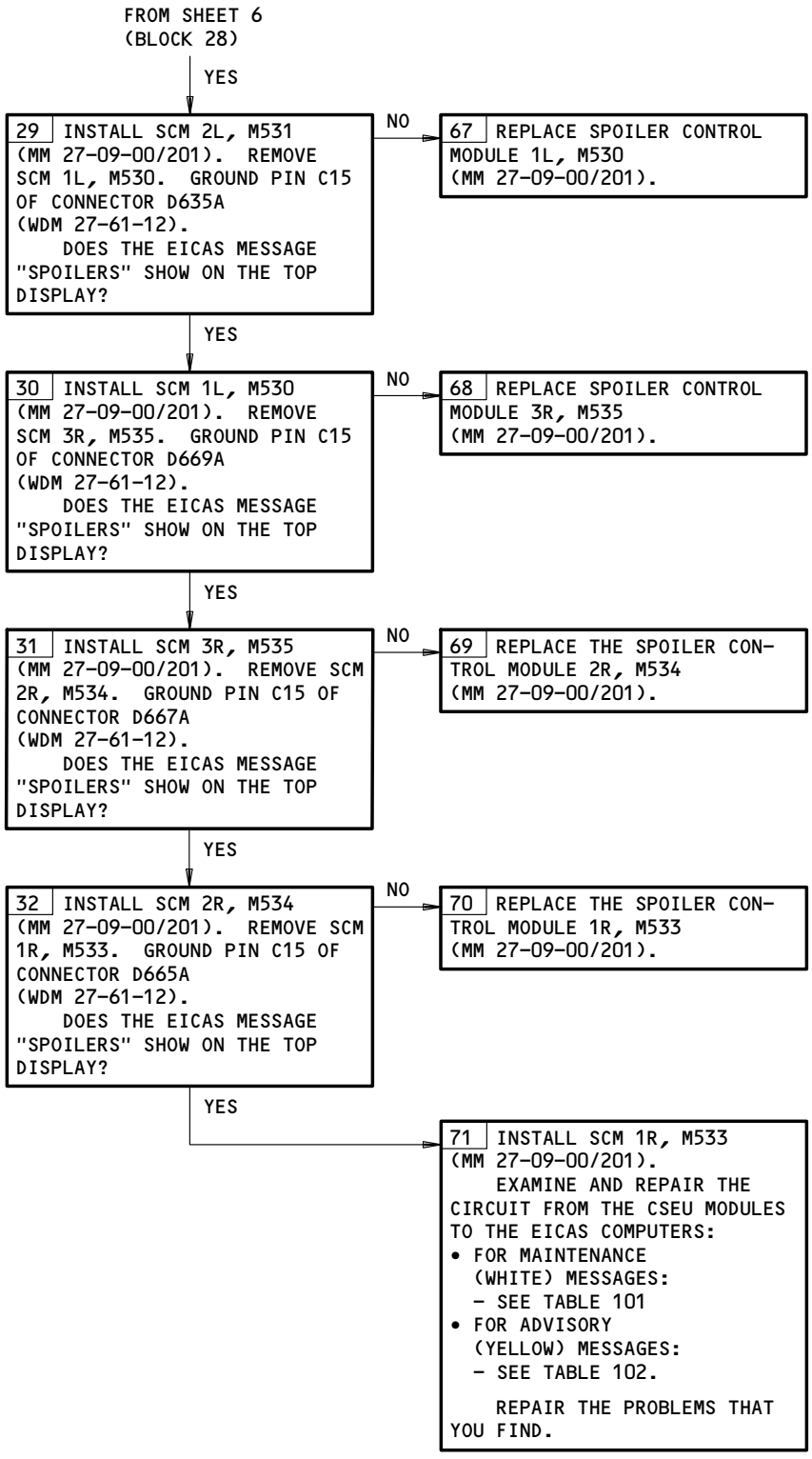
3 IF YOU DO NOT OPEN THE "AUTO SPEEDBRAKE" CIRCUIT BREAKER, IT CAN CAUSE AN INCORRECT "MODULE FAULT" WHEN THERE IS A "PCA" FAULT.

4 IN THE STEPS THAT FOLLOW, USE AT LEAST 10 SECONDS TO COMPLETE EACH MOVEMENT OF THE FLIGHT CONTROLS. BEFORE YOU BEGIN THE NEXT MOVEMENT, HOLD THE FLIGHT CONTROL IN ITS POSITION FOR 4 SECONDS.

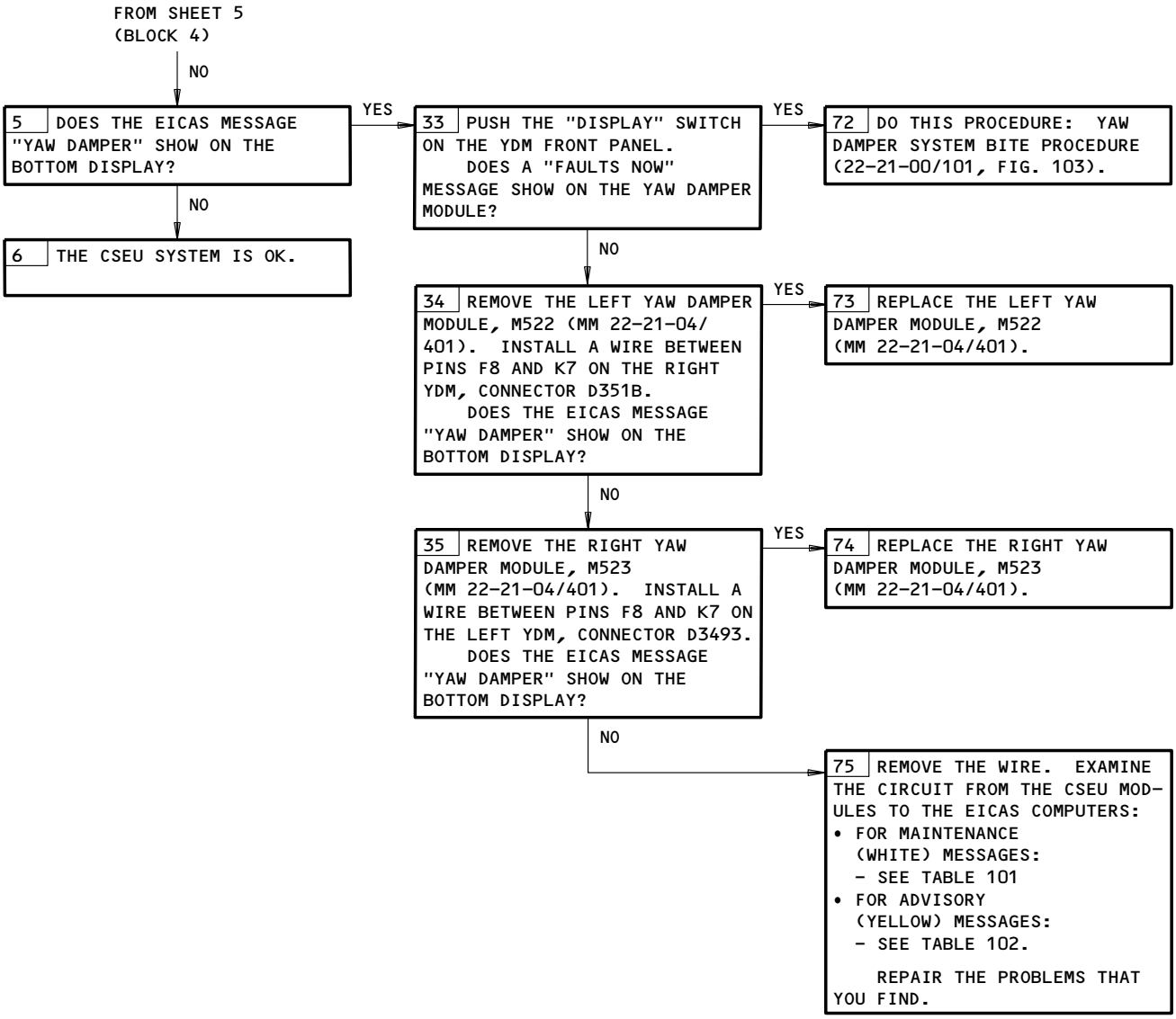
Control System Electronic Units EICAS Message(s) Displayed
Figure 103 (Sheet 5)



Control System Electronic Units EICAS Message(s) Displayed
Figure 103 (Sheet 6)



Control System Electronic Units EICAS Message(s) Displayed
Figure 103 (Sheet 7)



Control System Electronic Units EICAS Message(s) Displayed
Figure 103 (Sheet 8)

TABLE 101

CSEU TO EICAS MAINTENANCE MESSAGE INTERFACES - MAINTENANCE LEVEL (WHITE)

MODULE	CONNECTORS, PINS		MODULE	CONNECTORS, PINS	
	CSEU	EICAS		CSEU	EICAS
PSM M536 1L	D701B,A13	D319F,D3	PSM M538 1R	D671B,A13	D319E,A10
	D701B,K13	D321F,D3		D671B,K13	D321E,A10
PSM M537 2L	D703B,A13	D319F,D3	PSM M539 2R	D673B,A13	D319E,A10
	D703B,K13	D321F,D3		D673B,K13	D321E,A10
SCM M530 1L	D635A,H14	D321A,H14	SCM M533 1R	D665A,H14	D319A,H14
	D635A,C13	D319A,H14		D665A,C13	D321A,H14
SCM M531 2L	D637A,H14	D321A,H14	SCM M534 2R	D667A,H14	D319A,H14
	D637A,C13	D319A,H14		D667A,C13	D321A,H14
SCM M532 3L	D639A,H14	D319A,H14	SCM M535 3R	D669A,H14	D319A,H14
	D639A,C13	D319A,H14		D669A,C13	D321A,H14
SAM M524	D705B,A15	D319E,J11	SAM M525	D675B,A15	D319E,J11
	D705B,F4	D319E,J11		D675B,F4	D321E,J11
RRCM M528	D709B,D14	D319E,K9	RRCM M529	D711B,D14	D319E,K9
	D709A,C15	D321E,K9		D711A,C15	D321E,K9
YDM M522	D349B,G10	D319E,K13	YDM M523	D351B,G10	D319E,K13
	D349B,F4	D321E,K13		D351B,F4	D321E,K13

TABLE 102

CSEU TO EICAS MAINTENANCE MESSAGE INTERFACES - ADVISORY LEVEL (YELLOW)

MODULE	CONNECTORS, PINS		MODULE	CONNECTORS, PINS	
	CSEU	EICAS		CSEU	EICAS
SCM M530 1L	D635A,B13	D321D,C11	SCM M533 1R	D665A,B13	D321D,C11
(WDM 27-61-12)	D635A,H15	D319D,C11	(WDM 27-61-12)	D665A,H15	D319D,C11
SCM M531 2L	D637A,B13	D321D,C11	SCM M534 2R	D667A,B13	D321D,C11
	D637A,H15	D319D,C11		D667A,H15	D319D,C11
SCM M532 3L	D639A,B13	D321D,C11	SCM M535 3R	D669A,B13	D321D,C11
	D639A,H15	D319D,C11		D669A,H15	D319D,C11
SAM M524	D705A,C11	D321A,D11	SAM M525	D675B,C11	D319A,D11
(WDM 27-41-11)			(WDM 27-41-21)		
RRCM M528	D709B,A14	D319D,C13	RRCM M529	D711B,A14	D321D,C13
(WDM 27-21-12)			(WDM 27-21-12)		
YDM M522	D3498B,F7	D321D,A6	YDM M523	D351B,F7	D321D,A6
(WDM 22-21-11)	D3498B,F7	D319D,A6	(WDM 22-21-2)	D351B,F7	D319D,A6

Control System Electronic Units EICAS Message(s) Displayed
Figure 103 (Sheet 9)

POWER SUPPLY MODULE BITE PROCEDURE

PREREQUISITES

ELECTRICAL POWER (AMM 24-22-00/201)
HYDRAULIC POWER (AMM 29-11-00/201)
EICAS (AMM 31-41-00/201)

CB'S: 11C6, 11C7, 11C8, 11C9, 11G17, 11G18, 11G27, 11G28

1 ARE ANY OF THE CIRCUIT BREAKERS OPEN ON THE FRONT PANEL OF THE PSMs?
- YES → 10 IS CB4 OR CB8 ("D" COLUMN) OPEN?
  - YES → 21 MEASURE THE RESISTANCE FOR COMPONENTS IN THE YAW DAMPER MODULE AND THE RUDDER RATIO CHANGER MODULE (FIG. 106B, BLOCK 58).
  - NO → 22 MEASURE THE RESISTANCE FOR COMPONENTS IN THE SPOILER CONTROL SYSTEM (FIG. 105, BLOCK 41).
- NO → 2 TURN THE "STBY POWER" SWITCH ON THE PILOTS OVERHEAD PANEL, P5, TO THE "AUTO" POSITION.
  PUSH THE "RESET" SWITCH ON ALL POWER SUPPLY MODULES.
  DOES THE EICAS MESSAGE "L (R) FLT CONT ELEC" SHOW ON THE BOTTOM DISPLAY?
  - YES → 11 DOES THE "MODULE FAULT" SHOW ON A POWER SUPPLY MODULE?
    - YES → 23 REPLACE THE POWER SUPPLY MODULE THAT HAS A "MODULE FAULT" (AMM 27-09-00/201).
      IF THE PROBLEM CONTINUES, EXAMINE AND REPAIR THE CIRCUIT BETWEEN PIN A10 AND C10 ON THE TWO PSM CONNECTORS, D701B AND D703B (D671B AND D673B) (WDM 27-09-11).
    - NO → 12 FOR THE EICAS MESSAGE "L (R) FLT CONT ELEC", REMOVE THE POWER SUPPLY MODULE 1L (1R), M536 (M538) (AMM 27-09-00/201).
      INSTALL A WIRE BETWEEN PINS A10 AND C10 ON CONNECTOR D701B (D671B)(WDM 27-09-11).
      PUSH THE "RESET" SWITCH ON THE POWER SUPPPLY MODULES.
      DOES THE EICAS MESSAGE "L (R) FLT CONT ELEC" SHOW ON THE BOTTOM DISPLAY?
      - NO → 24 REPLACE THE POWER SUPPLY MODULE 1L (1R), M536 (M538) (AMM 27-09-00/201).
      - YES → 13 REMOVE THE WIRE FROM CONNECTOR D701B (D671B). INSTALL POWER SUPPLY MODULE 1L (1R), M536 (M538)(AMM 27-09-00/201).
        REMOVE POWER SUPPLY MODULE 2L (2R), M537 (M539).
        INSTALL A WIRE BETWEEN PIN A10 AND C10 ON CONNECTOR D703B (D673B)(WDM 27-09-11).
        PUSH THE "RESET" SWITCH ON THE POWER SUPPLY MODULES.
        DOES THE EICAS MESSAGE "L (R) FLT CONT ELEC" SHOW ON THE BOTTOM DISPLAY?
        - NO → 25 REPLACE THE POWER SUPPLY MODULE 2L (2R), M537 (M539) (AMM 27-09-00/201).
        - YES → 26 EXAMINE THE APPLICABLE CIRCUITS IN TABLE 101 FROM THE PSMs TO THE EICAS COMPUTER.
          REPAIR THE PROBLEMS THAT YOU FIND.
  - NO → 3 THE POWER SUPPLY MODULES ARE OK.

Power Supply Module BITE Procedure
Figure 104 (Sheet 1)

TABLE 101					
PSM	CONNECTOR	PIN	EICAS	CONNECTOR	PIN
M538	D671B	K13 A13	M10181 M10182	D319E D321E	A10 A10
M539	D673B	K13 A13	M10181 M10182	D319E D321E	A10 A10
M536	D701B	K13 A13	M10181 M10182	D319F D321F	D3 D3
M537	D703B	K13 A13	M10181 M10182	D319F D321F	D3 D3

Power Supply Module BITE Procedure
Figure 104 (Sheet 2)

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
AIR/GROUND SYSTEM (AMM 32-09-02/201)
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C6, 11C7, 11C8, 11C9, 11G17, 11G18, 11G27, 11G28

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

NOTE: THE SPOILERS HAVE NUMBERS 1-12 FROM THE LEFT WING TIP TO THE RIGHT WING TIP.

FOR SCM MODULES WITH FUSES, LOOK FOR A BLOWN FUSE.

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 1)

SPOILER CONTROL MODULE BITE PROCEDURE

1 KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES DURING THIS PROCEDURE. THE CONTROL SURFACES CAN MOVE QUICKLY AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

TURN THE "STBY POWER" SWITCH ON THE PILOTS' OVERHEAD PANEL, P5, TO THE "AUTO" POSITION.

OPEN THE "AUTO SPEEDBRAKE" CIRCUIT BREAKER 11G11 ON THE OVERHEAD CIRCUIT BREAKER PANEL, P11. 1

MAKE SURE THE CONTROL WHEELS ARE IN THE NEUTRAL POSITION. SET THE SPEEDBRAKE LEVER TO THE DOWN-AND-LOCKED POSITION. MAKE SURE ALL SPOILER PANELS ARE IN THE STOWED POSITION.

MAKE A RECORD OF ALL SCM FAULTBALLS THAT SHOW YELLOW. 2

CHECK AND REPLACE SCM FRONT PANEL FUSE, IF NECESSARY.

PUSH THE "RESET" SWITCH ON ALL SPOILER CONTROL MODULES IN THE MAIN EQUIPMENT CENTER. OPEN, AND THEN CLOSE THE "CSEU" OR THE "FLT CONT ELEC (1L,1R,2L,2R) AC" CIRCUIT BREAKERS, 11C6,11G17,11C8,11G27, IN LESS THAN 25 SECONDS. 3

TURN THE CONTROL WHEEL FROM THE NEUTRAL POSITION TO THE FULL COUNTER-CLOCKWISE POSITION, AND THEN BACK TO NEUTRAL.

TURN THE CONTROL WHEEL FROM THE NEUTRAL POSITION TO THE FULL CLOCK-WISE POSITION, AND THEN BACK TO NEUTRAL.

MOVE THE SPEEDBRAKE LEVER FROM THE DOWN-AND-LOCKED POSITION TO THE FULL-UP POSITION.

MOVE THE SPEEDBRAKE LEVER FROM THE FULL-UP POSITION TO THE DOWN-AND-LOCKED POSITION.

DOES A FAULTBALL SHOW YELLOW ON ANY SCM IN THE MAIN EQUIPMENT CENTER?

NO → SEE SHEET 3 (BLOCK 2)

YES → SEE SHEET 6 (BLOCK 6)

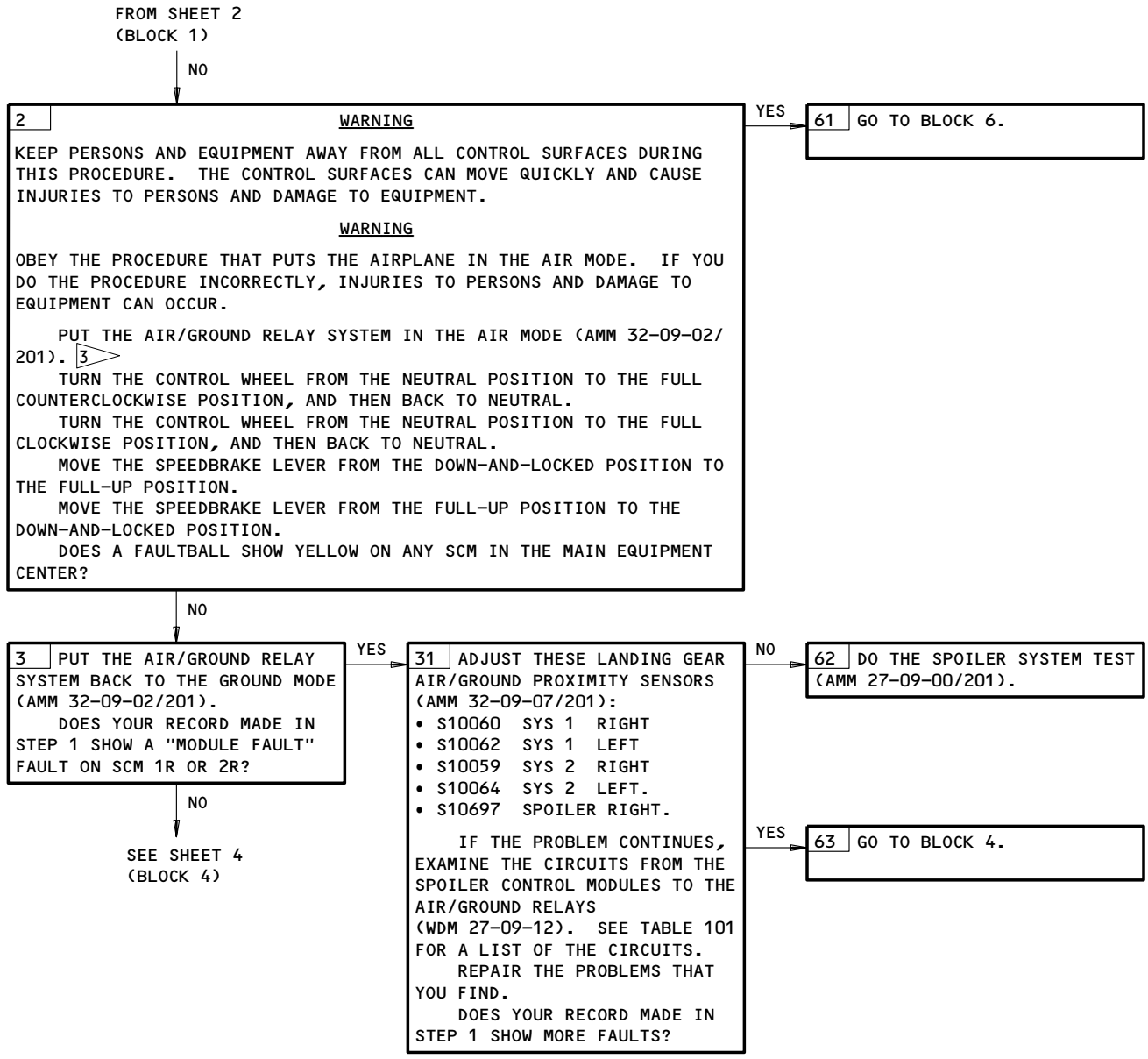
1 IF YOU DO NOT OPEN THE "AUTO SPEEDBRAKE" CIRCUIT BREAKER, AN ACCIDENTAL OPERATION OF THE AUTO SPEEDBRAKE CAN OCCUR. IF THE AUTO SPEEDBRAKE OPERATES WHEN THE HYDRAULIC SYSTEMS ARE DEPRESSURIZED, AND THERE IS AN ACTIVE "PCA" FAULTBALL, A "MODULE FAULT" FAULTBALL WILL OCCUR.

2 IF THE FAULT IS NOT ACTIVE, THE PROBLEM IS INTERMITTENT. IN THE NEXT STEP, THE FAULTBALLS WILL SHOW BLACK AND YOU MUST USE THIS FAULT RECORD TO TROUBLESHOOT THE SYSTEM.

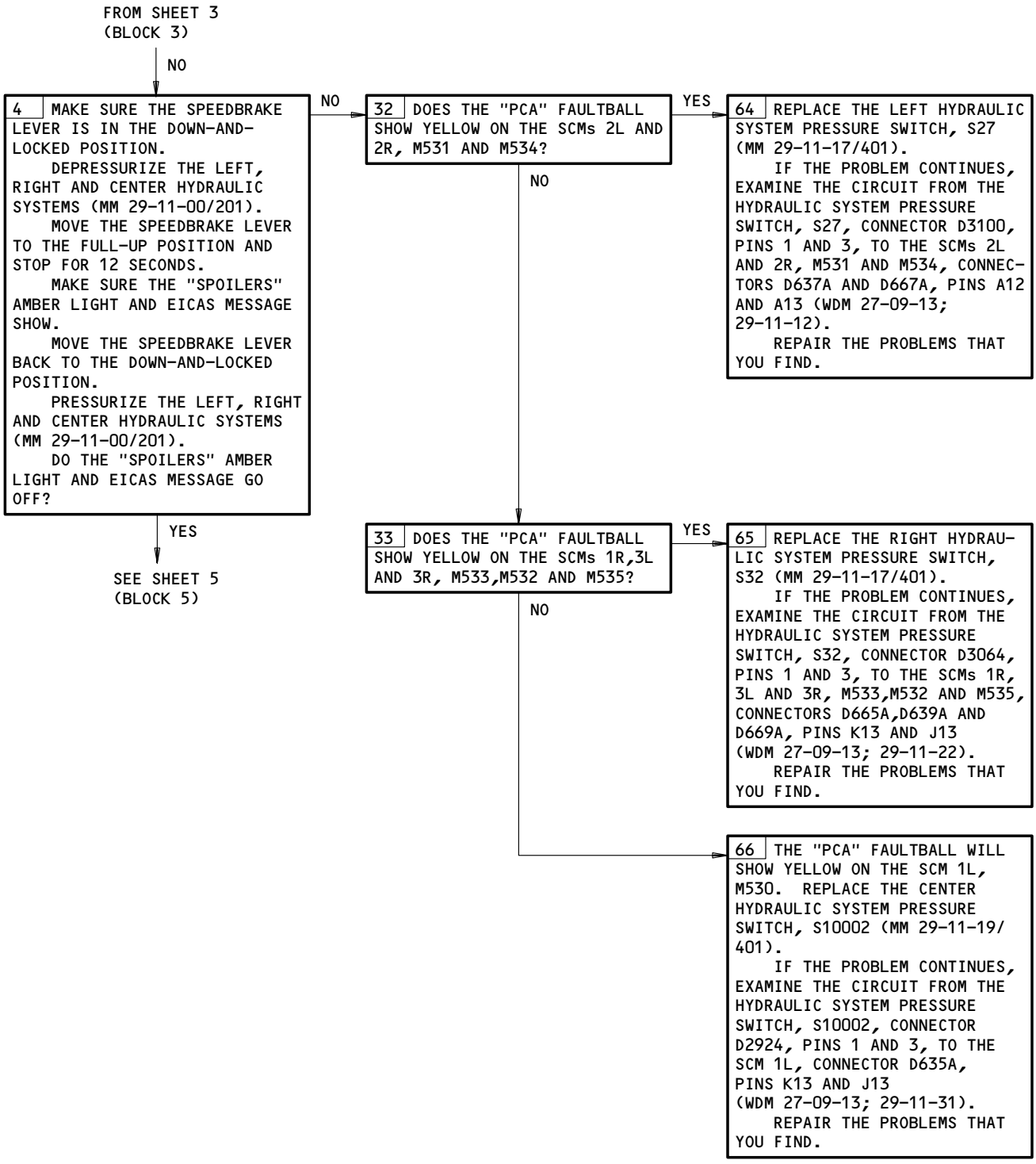
IF THE FAULT IS ACTIVE, THE APPLICABLE FAULTBALLS WILL SHOW YELLOW AGAIN AFTER YOU RELEASE THE RESET SWITCH.

3 IN THE STEPS THAT FOLLOW, USE AT LEAST 10 SECONDS TO COMPLETE EACH MOVEMENT OF THE FLIGHT CONTROLS. BEFORE YOU BEGIN THE NEXT MOVEMENT, HOLD THE FLIGHT CONTROL IN ITS POSITION FOR 4 SECONDS.

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 2)



Spoiler Control Module BITE Procedure
Figure 105 (Sheet 3)



Spoiler Control Module BITE Procedure
Figure 105 (Sheet 4)

EFFECTIVITY
-100 SERIES SCM'S

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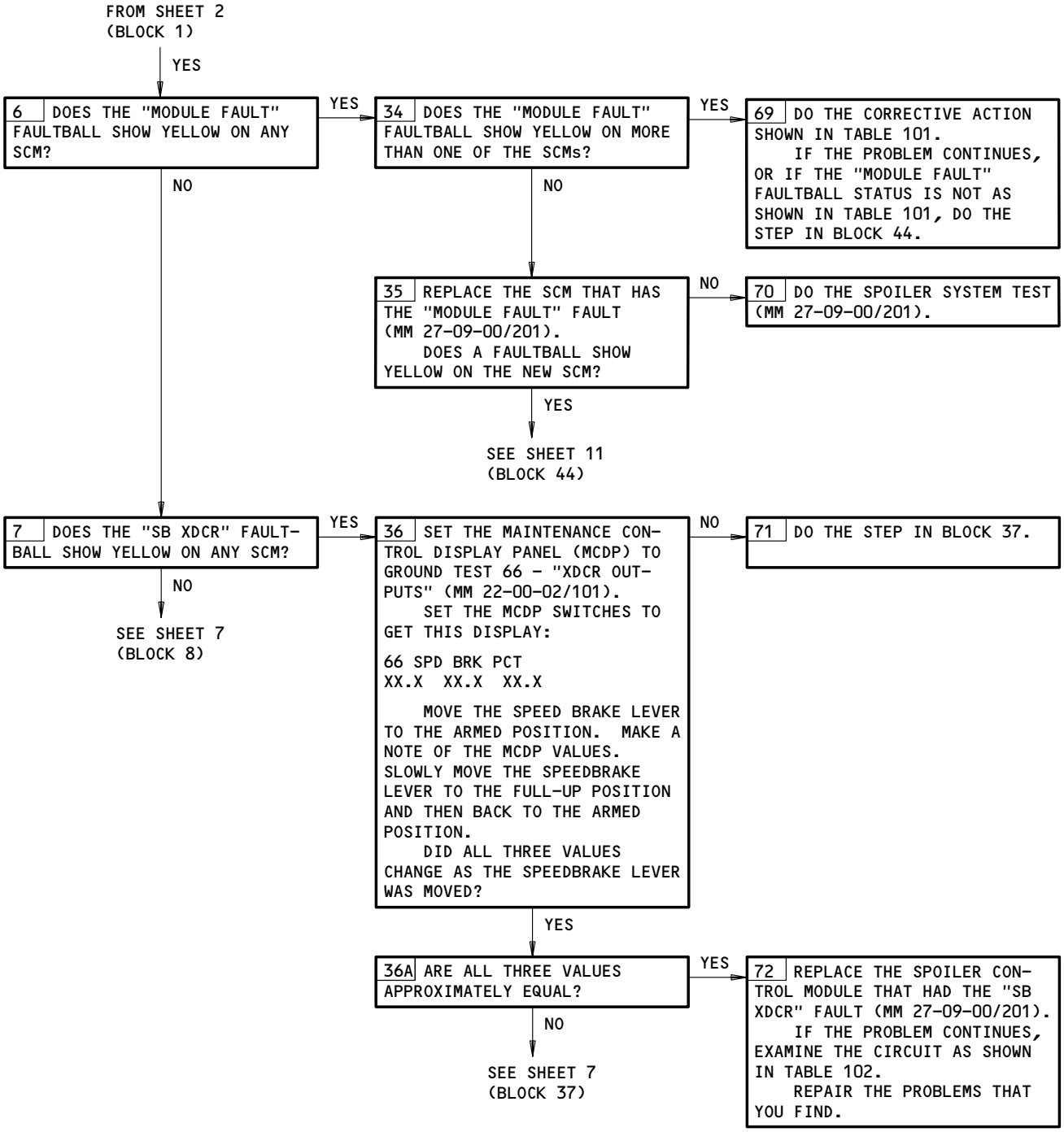
Spoiler Control Module BITE Procedure
Figure 105 (Sheet 5)



Spoiler Control Module BITE Procedure
Figure 105 (Sheet 6)

FROM SHEET 6
(BLOCK 36A,71)

NO

37 REMOVE THE APPLICABLE CONNECTOR ON THE SPEEDBRAKE LEVER LVDT (FOUND BELOW THE CONTROL STAND, P10) FOR THE SCM THAT HAS THE "SB XDCR" FAULTBALL THAT SHOWS YELLOW.

SCM	CONNECTOR NO. (FROM SHELF TO LVDT)	LVDT POSITION	COLOR CODE
1L/1R	D871/D875	LEFT	BLACK
2L/2R	D873/D879	RIGHT	SILVER
3L/3R	D877/D881	CENTER	CLEAR

(LEFT SCMs: WDM 27-61-13,-17,-18
RIGHT SCMs: WDM 27-61-14,-15,-16)

DO A TEST FOR CONTINUITY ON THE CONNECTOR FROM THE LVDT, BETWEEN THESE PINS:
- PINS 1 AND 2
- PINS 3 AND 4
- PINS 3 AND 5.

IS THERE CONTINUITY AT ALL OF THESE PIN PAIRS?

NO → 73 REPLACE THE SB LVDT THAT DID NOT HAVE CONTINUITY (MM 27-62-02/201).

YES → 74 DO A CHECK OF THE RIGGING FOR THE SPEEDBRAKE LEVER LVDTs (MM 27-62-02/201).

FROM SHEET 6
(BLOCK 7)

NO

8 DOES THE "CW XDCR" FAULT-BALL SHOW YELLOW ON ANY SCM ON THE E3-1 SHELF?

YES → 38 REMOVE ELECTRICAL CONNECTORS D623,D625, AND D627 ON THE CONTROL WHEEL RVDT UNIT, TS5081, ON THE LEFT AILERON DRUM ON THE CAPTAIN'S FORWARD QUADRANT (WDM 27-61-13,-17,-18).

DO A TEST FOR CONTINUITY ON ALL CONNECTORS BETWEEN THESE PINS:
- PINS 1 AND 2
- PINS 3 AND 5
- PINS 3 AND 4.

IS THERE CONTINUITY AT ALL OF THESE PIN PAIRS?

NO → 75 REPLACE THE CONTROL WHEEL RVDT UNIT, TS5081 (MM 27-61-04/201).

YES → 76 REPLACE THE SPOILER CONTROL MODULE THAT HAD THE "CW XDCR" FAULT (MM 27-09-00/201).

IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT AS SHOWN IN TABLE 103.

REPAIR THE PROBLEMS THAT YOU FIND.

NO

SEE SHEET 8
(BLOCK 9)

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 7)

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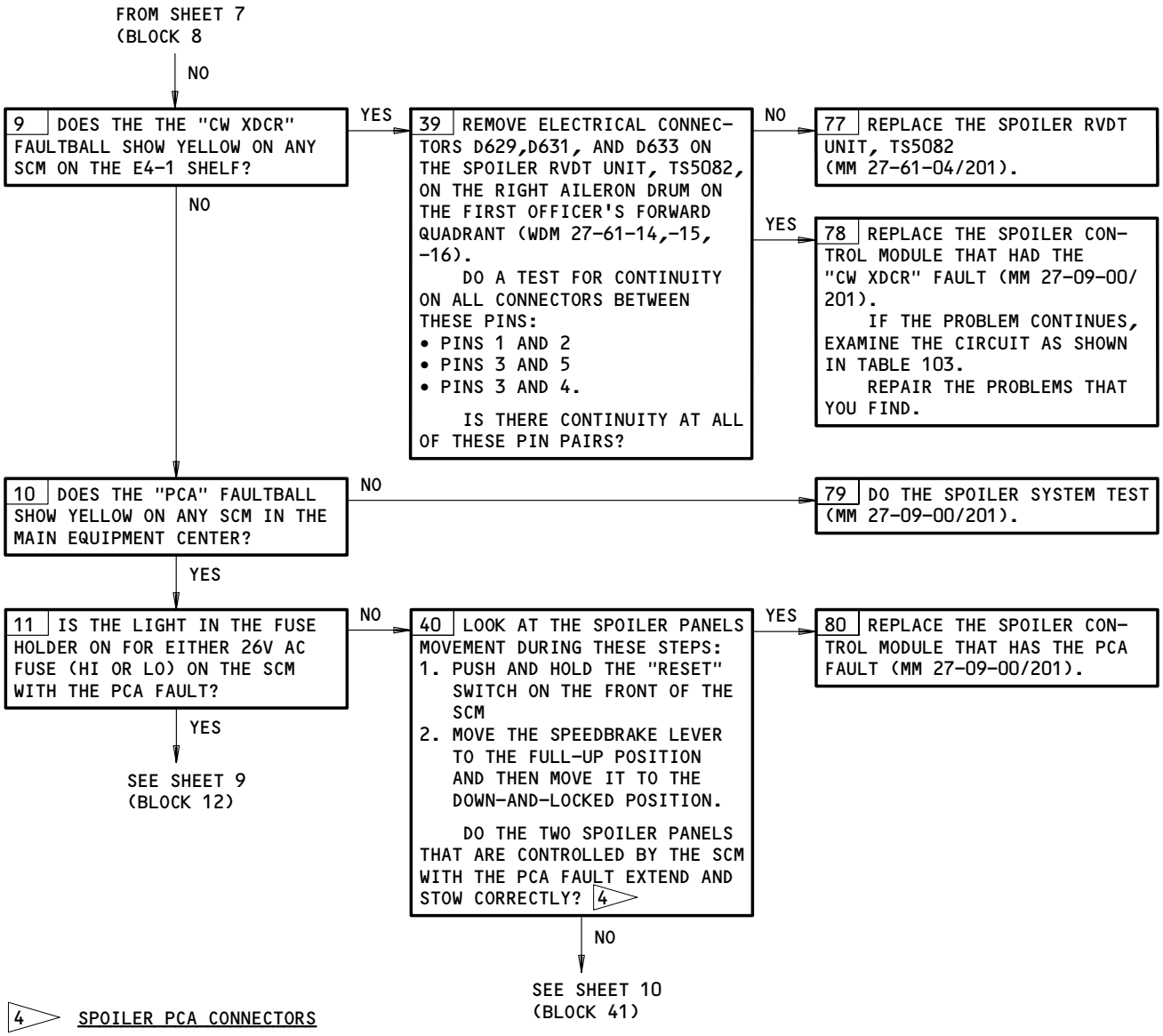
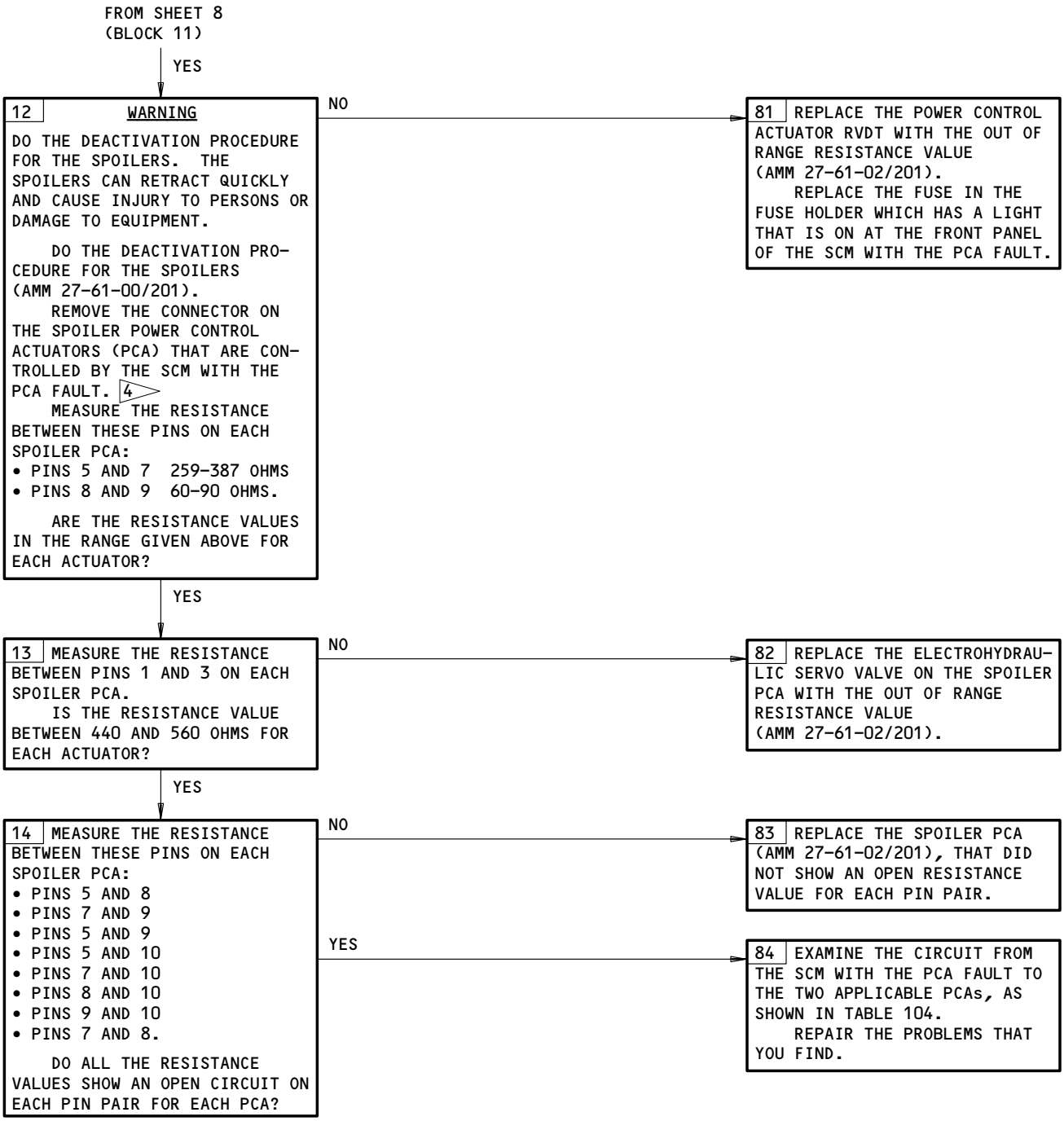


4 SPOILER PCA CONNECTORS

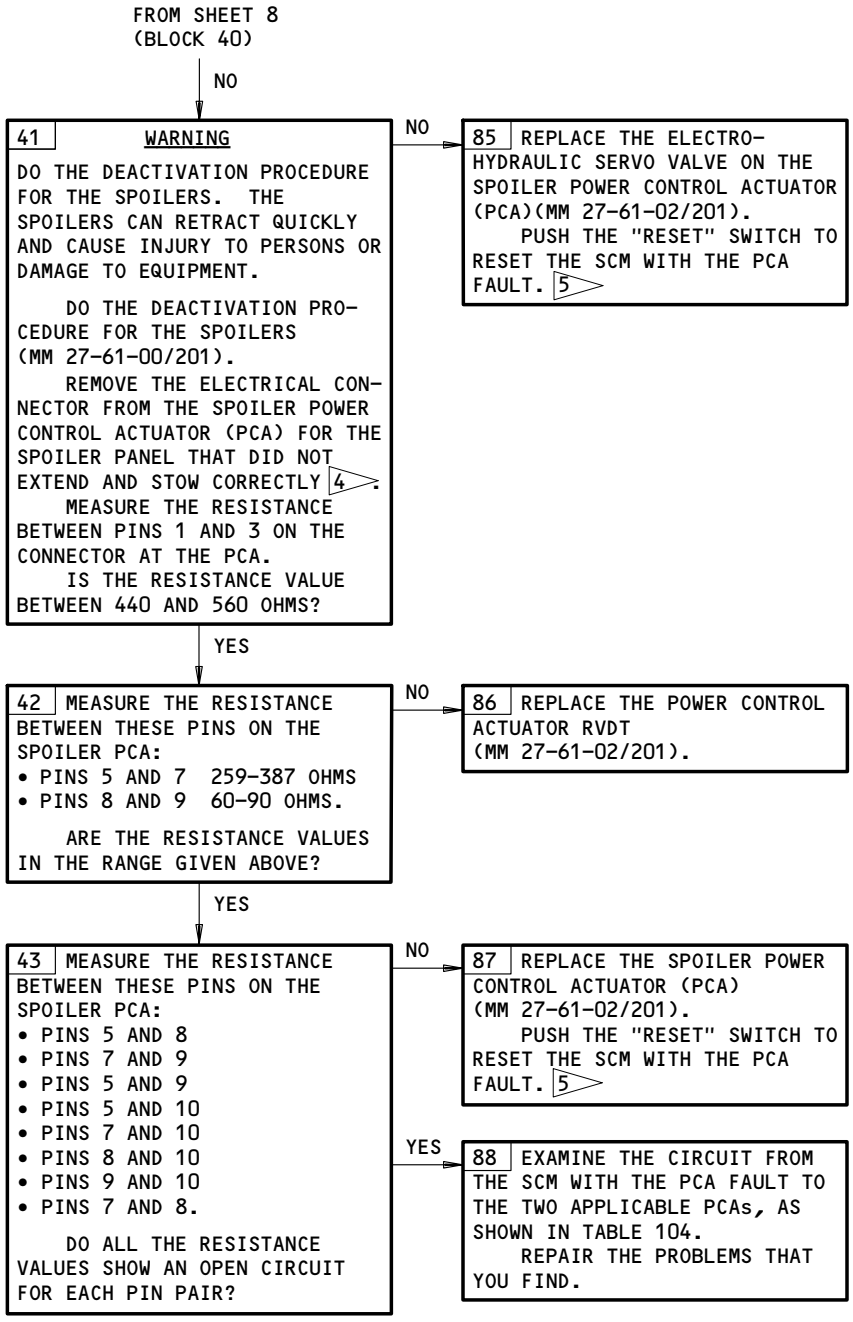
SCM NO.	SPOILER PANEL NO.	PCA CONN NO.	WDM REF NO.
1L	1/12	D641/D663	27-61-13
1R	2/11	D643/D661	27-61-14
2L	5/8	D649/D655	27-61-17
2R	3/10	D645/D659	27-61-15
3L	6/7	D651/D653	27-61-18
3R	4/9	D647/D657	27-61-16

5 IF THE PROBLEM HAS NOT BEEN CORRECTED, THE "PCA" FAULTBALL WILL SHOW YELLOW AGAIN WHEN THE "RESET" SWITCH IS RELEASED.

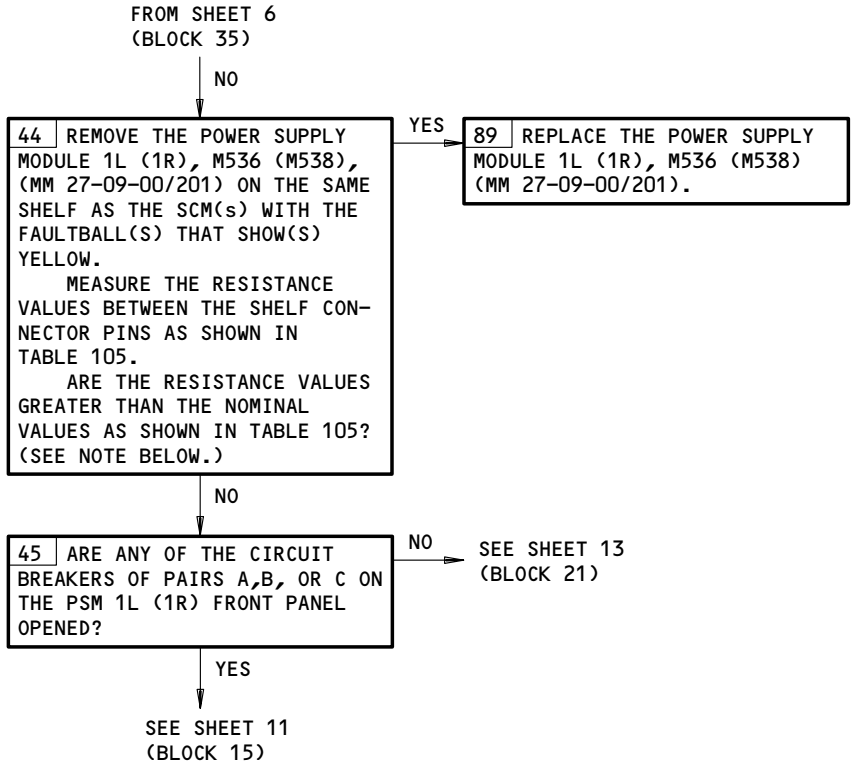
Spoiler Control Module BITE Procedure
Figure 105 (Sheet 8)



Spoiler Control Module BITE Procedure
Figure 105 (Sheet 9)



Spoiler Control Module BITE Procedure
Figure 105 (Sheet 10)



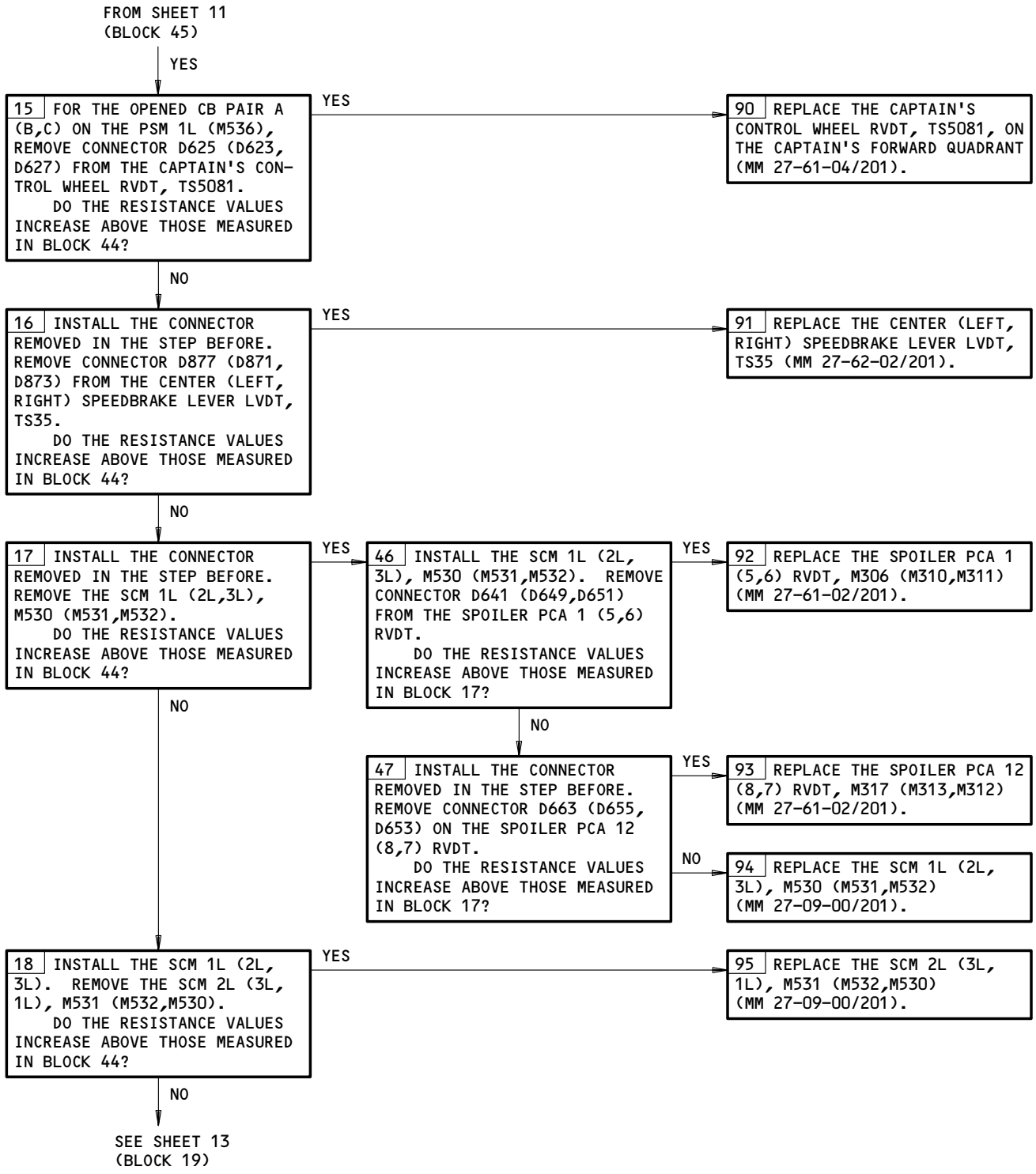
NOTE: THE 26V AC EXCITATION VOLTAGE IS SUPPLIED TO THE THREE SCMs ON THE SAME SHELF BY THREE CIRCUITS FROM THE PRIMARY PSM 1L (1R). THIS VOLTAGE IS SUPPLIED THROUGH THREE CONNECTORS ON THE E3-1 (E4-1) SHELF. FOR A CIRCUIT WITH THE PRIMARY PSM REMOVED, THE NOMINAL RESISTANCE VALUES AT THE SHELF CONNECTOR ARE AS SHOWN IN TABLE 105.

THESE STEPS WILL ISOLATE A SHORTED OR A LOW RESISTANCE PSM WHICH WOULD CAUSE THE POWER SUPPLY CIRCUIT BREAKER TO OPEN:

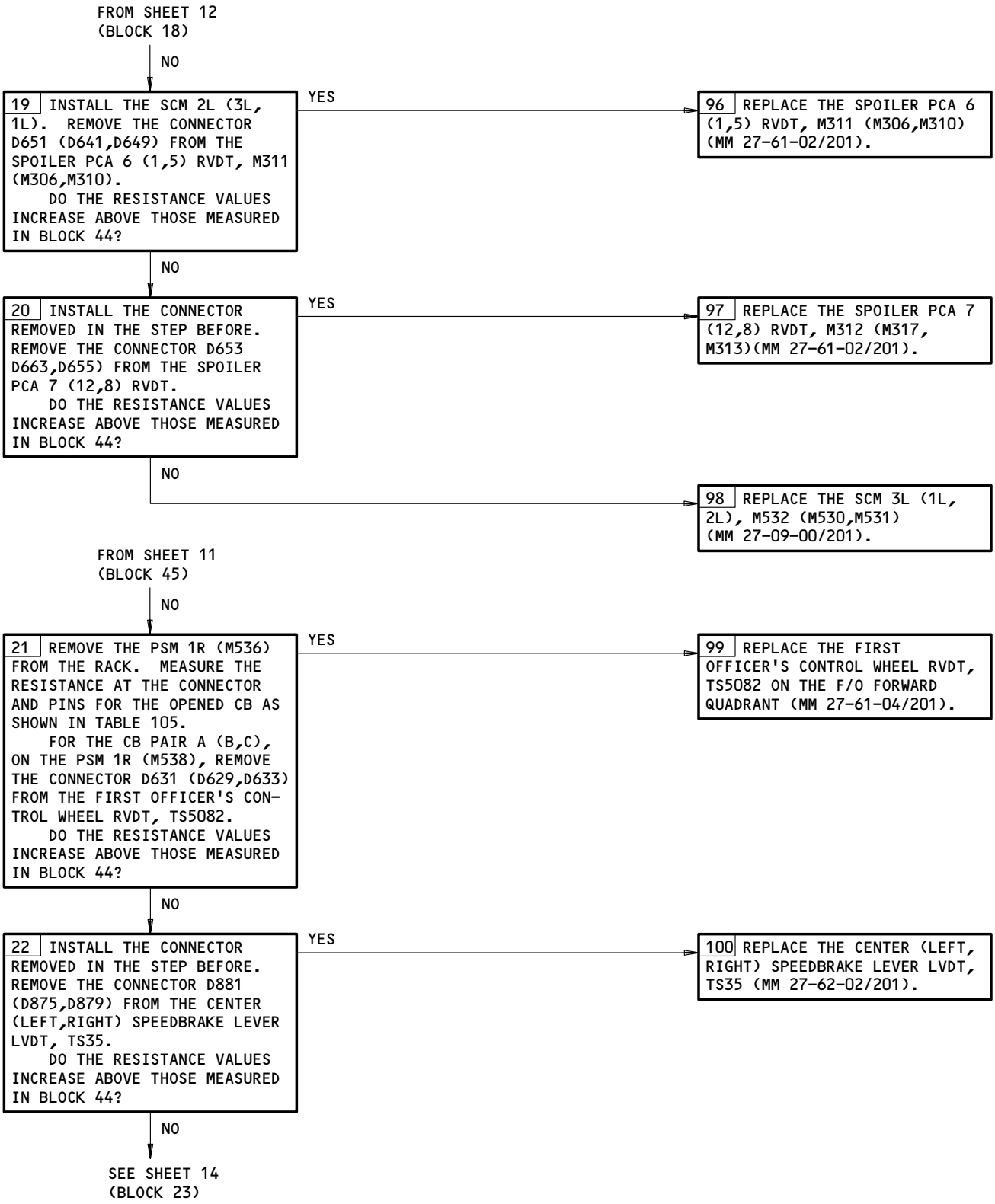
1. THE PSMs ARE REMOVED, ONE AT A TIME, AND THE RESISTANCE IS MEASURED AT EACH SHELF CONNECTOR AND THE VALUES ARE WRITTEN DOWN
2. IF THE RESISTANCE VALUES BETWEEN THE PINS OR FROM EITHER PIN TO GROUND ARE GREATER THAN OR EQUAL TO THE NOMINAL VALUES AS SHOWN IN TABLE 105, THE CIRCUIT IS OK BUT THE REMOVED PSM CONTAINS A SHORT OR IS DEFECTIVE.

WITH BOTH PSM 1L AND PSM 1R REMOVED, IF THE RESISTANCE VALUES FROM EITHER PIN TO GROUND ON EACH SHELF CONNECTOR ARE NOT INFINITE, WIRING CONTINUITY CHECKS ARE REQUIRED AS SHOWN IN TABLE 106.

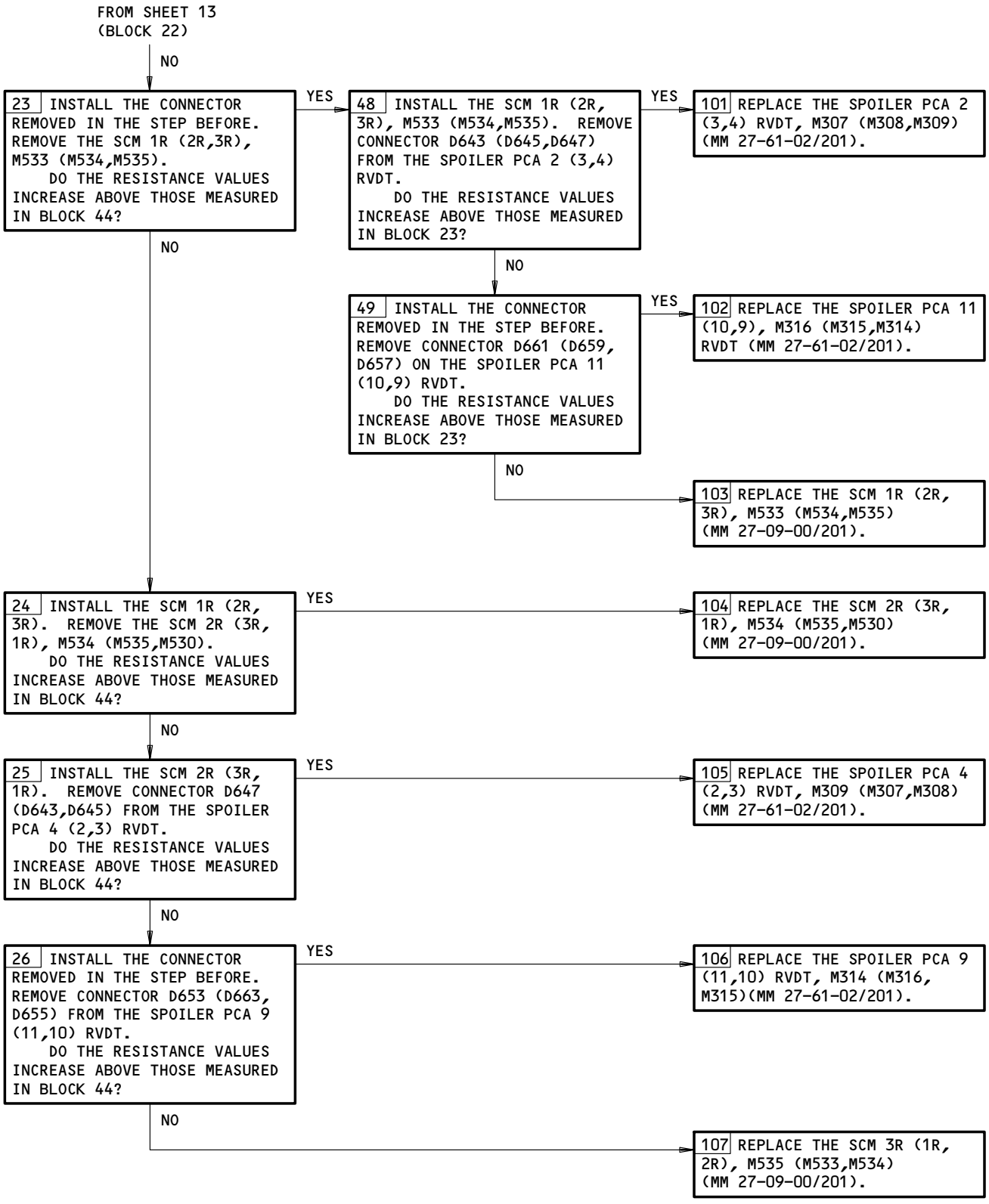
Spoiler Control Module BITE Procedure
Figure 105 (Sheet 11)



Spoiler Control Module BITE Procedure
Figure 105 (Sheet 12)



Spoiler Control Module BITE Procedure
Figure 105 (Sheet 13)



Spoiler Control Module BITE Procedure
Figure 105 (Sheet 14)

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SYSTEM COMMAND	DOES THE EICAS MAINT MSG "SPOILERS" SHOW?	AIRPLANE – ON THE GROUND								CORRECT SPOILER PANEL POSITION	FAULT CAUSE AND CORRECTION
		SCM "MODULE FAULT" BALL STATUS						SPOILER PNL POS			
		1L	2L	3L	1R	2R	3R	5&8	6&7		
CONTROL WHEEL FULL CW OR CCW	NO	___	___	___	___	___	___		15°	6 OR 7 SHOULD BE AT 30°	AIR/GND SYS 1 BAD. DO THIS PROCEDURE: EICAS MSG AIR/GND DISAGREE DISPLAYED ON GND PROCEDURE (FIM 32-09-00/101, FIG. 105).
SPEEDBRAKE LEVER FULL UP	YES	SET	SET	___	SET	SET	SET		15°	6 AND 7 SHOULD BE AT 30°	
CONTROL WHEEL FULL CW OR CCW	YES	___	___	SET	___	___	___		15°	6 OR 7 SHOULD BE AT 30°	AIR/GND SYS 2 BAD. DO THIS PROCEDURE: EICAS MSG AIR/GND DISAGREE DISPLAYED ON GND PROCEDURE (FIM 32-09-00/101, FIG. 105).
SPEEDBRAKE LEVER FULL UP	YES	SET	___	SET	SET	SET	SET	20°	15°	6 AND 7 SHOULD BE AT 30° 5 AND 8 SHOULD BE AT 45°	
CONTROL WHEEL FULL CW OR CCW	YES	___	___	SET	___	___	___				RELAY K10384 BAD. DO THIS PROCEDURE: AIR/GND RELAY PROBLEM PROCEDURE (FIM 32-09-00/101, FIG. 103).
SPEEDBRAKE LEVER FULL UP	YES	SET	___	SET	SET	SET	SET				
CONTROL WHEEL FULL CW OR CCW	NO	___	___	___	___	___	___				RELAY K10387 BAD. DO THIS PROCEDURE: AIR/GND RELAY PROBLEM PROCEDURE (FIM 32-09-00/101, FIG. 103).
SPEEDBRAKE LEVER FULL UP	YES	SET	SET	___	SET	SET	SET				
CONTROL WHEEL FULL CW OR CCW	YES	___	___	SET	___	___	___		15°	6 OR 7 SHOULD BE AT 30°	RELAY K10385 OR K10386 BAD. DO THIS PROCEDURE: THE AIR/GND RELAY PROBLEM PROCEDURE (FIM 32-09-00/101, FIG. 103).
SPEEDBRAKE LEVER FULL UP	YES	___	SET	SET	___	___	___	20°	15°	6 AND 7 SHOULD BE AT 30° 5 AND 8 SHOULD BE AT 45°	

EFFECTS OF AIR/GROUND FAULTS ON THE SPOILER/SPEEDBRAKE CONTROL SYSTEM
TABLE 101

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 15)

SYSTEM COMMAND	DOES THE EICAS MAINT MSG "SPOILERS" SHOW?	AIRPLANE – SIMULATED IN AIR								CORRECT SPOILER PANEL POSITION	FAULT CAUSE AND CORRECTION
		SCM "MODULE FAULT" BALL STATUS						SPOILER PNL POS			
		1L	2L	3L	1R	2R	3R	1&12 2&11 3&10	4&9		
CONTROL WHEEL FULL CW OR CCW	YES	___	___	SET	___	___	___		15°		AIR/GND SYS 1 BAD. DO THIS PROCEDURE: EICAS MSG AIR/GND DISAGREE DISPLAYED ON GND PROCEDURE (FIM 32-09-00/101, FIG. 105).
SPEEDBRAKE LEVER FULL UP	YES	SET	___	SET	SET	SET	SET	45°	45°	1&12,2&11,3&10 SHOULD BE AT 30° 4&9 SHOULD BE AT 0°	
CONTROL WHEEL FULL CW OR CCW	NO	___	___	___	___	___	___			6 OR 7 SHOULD BE AT 30°	AIR/GND SYS 2 BAD. DO THIS PROCEDURE: EICAS MSG AIR/GND DISAGREE DISPLAYED ON GND PROCEDURE (FIM 32-09-00/101, FIG. 105).
SPEEDBRAKE LEVER FULL UP	YES	SET	SET	___	SET	SET	SET	45°	55°	1&12,2&11,3&10 SHOULD BE AT 30° 4&9 SHOULD BE AT 0°	
CONTROL WHEEL FULL CW OR CCW	YES	___	___	SET	___	___	___				RELAY K10384 BAD. DO THIS PROCEDURE: AIR/GND RELAY PROBLEM PROCEDURE (FIM 32-09-00/101, FIG. 103).
SPEEDBRAKE LEVER FULL UP	YES	SET	___	SET	SET	SET	SET				
CONTROL WHEEL FULL CW OR CCW	NO	___	___	___	___	___	___				RELAY K10387 BAD. DO THIS PROCEDURE: AIR/GND RELAY PROBLEM PROCEDURE (FIM 32-09-00/101, FIG. 103).
SPEEDBRAKE LEVER FULL UP	YES	SET	SET	___	SET	SET	SET				
CONTROL WHEEL FULL CW OR CCW	NO	___	___	___	___	___	___				RELAY K10385 OR K10386 BAD. DO THIS PROCEDURE: THE AIR/GND RELAY PROBLEM PROCEDURE (FIM 32-09-00/101, FIG. 103).
SPEEDBRAKE LEVER FULL UP	YES	SET	___	___	SET	SET	SET				

EFFECTS OF AIR/GROUND FAULTS ON THE SPOILER/SPEEDBRAKE CONTROL SYSTEM
TABLE 101

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 16)

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SPEEDBRAKE LVDT				TERMINAL BLOCK/PINS	SPOILER CONTROL MODULE				
POSITION	COLOR	CONNECTOR	PINS		NO.	MODULE	CHAN	CONNECTOR	PINS
LEFT	BLACK	D871	3 5	TB109 YA5 YC5	1L	M530 (WDM 27-61-13)	A	D635A	K3 K4
					2L	M531 (WDM 27-61-17)	B	D637B	K4 K5
					3L	M532 (WDM 27-61-18)	C	D639B	K12 K13
CENTER	CLEAR	D877	3 5	TB109 YA43 YC43	1L	M530 (WDM 27-61-13)	B	D635B	K4 K5
					2L	M531 (WDM 27-61-17)	C	D637B	K12 K13
					3L	M532 (WDM 27-61-18)	A	D639A	K3 K4
RIGHT	SILVER	D873	3 5	TB109 YA82 YC82	1L	M530 (WDM 27-61-13)	C	D635B	K12 K13
					2L	M531 (WDM 27-61-17)	A	D637A	K3 K4
					3L	M532 (WDM 27-61-18)	B	D639B	K4 K5
LEFT	BLACK	D875	3 5	TB108 YC3 YA4	1R	M533 (WDM 27-61-14)	A	D665A	K3 K4
					2R	M534 (WDM 27-61-15)	B	D667B	K4 K5
					3R	M535 (WDM 27-61-16)	C	D669B	K12 K13
CENTER	CLEAR	D881	3 5	TB108 YC43 YA44	1R	M533 (WDM 27-61-14)	B	D665B	K4 K5
					2R	M534 (WDM 27-61-15)	C	D667B	K12 K13
					3R	M535 (WDM 27-61-16)	A	D669A	K3 K4
RIGHT	SILVER	D879	3 5	TB108 YA84 YC84	1R	M533 (WDM 27-61-14)	C	D665B	K12 K13
					2R	M534 (WDM 27-61-15)	A	D667A	K3 K4
					3R	M535 (WDM 27-61-16)	B	D669B	K4 K5

SPOILER CONTROL MODULE TO SPEEDBRAKE LVDT
TABLE 102

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 17)

CONTROL WHEEL RVDT				TERMINAL BLOCK/PINS	SPOILER CONTROL MODULE				
NO.	MODULE	CONNECTOR	PINS		NO.	MODULE	CHAN	CONNECTOR	PINS
1 CAPT	TS5081 (WDM 27-61-17)	D623	3 5	TB109 YA4 YC4	1L	M530 (WDM 27-61-13)	A	D635A	J3 J4
					2L	M531 (WDM 27-61-17)	B	D637B	J4 J5
					3L	M532 (WDM 27-61-18)	C	D639B	J12 J13
2 CAPT	TS5081 (WDM 27-61-13)	D625	3 5	TB109 YA41 YC41	1L	M530 (WDM 27-61-13)	B	D635B	J4 J5
					2L	M531 (WDM 27-61-17)	C	D637B	J12 J13
					3L	M532 (WDM 27-61-18)	A	D639A	J3 J4
3 CAPT	TS5081 (WDM 27-61-18)	D627	3 5	TB109 YA81 YC81	1L	M530 (WDM 27-61-13)	C	D635B	J12 J13
					2L	M531 (WDM 27-61-17)	A	D637A	J3 J4
					3L	M532 (WDM 27-61-18)	B	D639B	J4 J5
1 F/O	TS5082 (WDM 27-61-15)	D629	3 5	TB108 YC2 YA3	1R	M533 (WDM 27-61-14)	A	D665A	J3 J4
					2R	M534 (WDM 27-61-15)	B	D667B	J4 J5
					3R	M535 (WDM 27-61-16)	C	D669B	J12 J13
2 F/O	TS5082 (WDM 27-61-14)	D631	3 5	TB108 YC42 YA43	1R	M533 (WDM 27-61-14)	B	D665B	J4 J5
					2R	M534 (WDM 27-61-15)	C	D667B	J12 J13
					3R	M535 (WDM 27-61-16)	A	D669A	J3 J4
3 F/O	TS5082 (WDM 27-61-16)	D633	3 5	TB108 YA82 YC82	1R	M533 (WDM 27-61-14)	C	D665B	J12 J13
					2R	M534 (WDM 27-61-15)	A	D667A	J3 J4
					3R	M535 (WDM 27-61-16)	B	D669B	J4 J5

SPOILER CONTROL MODULE TO RVDT IN SPOILER RVDT UNIT
TABLE 103

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 18)

CONTINUITY BETWEEN		CONTINUITY BETWEEN	
SCM MODULE CONNECTOR, PIN	PCA MODULE CONNECTOR, PIN	SCM MODULE CONNECTOR, PIN	PCA MODULE CONNECTOR, PIN
SCM 1L M530 D635A, G9 (G10) D635A, G8 (G11) D635A, K8 (J8) D635A, K9 (J9) D635A, K11 D635A, J11 (WDM 27-61-13)	PCA 1 (12) M306 (M317) D641 (D663), 3 D641 (D663), 1 D641 (D663), 7 D641 (D663), 5 D641 (D663), 9 D641 (D663), 8	SCM 1R M533 D665A, G9 (G10) D665A, G8 (G11) D665A, K8 (J8) D665A, K9 (J9) D665A, K11 D665A, J11 (WDM 27-61-14)	PCA 2 (11) M307 (M316) D643 (D661), 3 D643 (D661), 1 D643 (D661), 7 D643 (D661), 5 D643 (D661), 9 D643 (D661), 8
SCM 2L M531 D637A, G9 (G10) D637A, G8 (G11) D637A, K8 (J8) D637A, K9 (J9) D637A, K11 D637A, J11 (WDM 27-61-17)	PCA 5 (8) M310 (M313) D649 (D655), 3 D649 (D655), 1 D649 (D655), 7 D649 (D655), 5 D649 (D655), 9 D649 (D655), 8	SCM 2R M534 D667A, G9 (G10) D667A, G8 (G11) D667A, K8 (J8) D667A, K9 (J9) D667A, K11 D667A, J11 (WDM 27-61-15)	PCA 3 (10) M308 (M315) D645 (D659), 3 D645 (D659), 1 D645 (D659), 7 D645 (D659), 5 D645 (D659), 9 D645 (D659), 8
SCM 3L M532 D639A, G9 (G10) D639A, G8 (G11) D639A, K8 (J8) D639A, K9 (J9) D639A, K11 D639A, J11 (WDM 27-61-18)	PCA 6 (7) M311 (M312) D651 (D653), 3 D651 (D653), 1 D651 (D653), 7 D651 (D653), 5 D651 (D653), 9 D651 (D653), 8	SCM 3R M535 D669A, G9 (G10) D669A, G8 (G11) D669A, K8 (J8) D669A, K9 (J9) D669A, K11 D669A, J11 (WDM 27-61-16)	PCA 4 (9) M309 (M314) D647 (D657), 3 D647 (D657), 1 D647 (D657), 7 D647 (D657), 5 D647 (D657), 9 D647 (D657), 8

SPOILER CONTROL MODULE TO POWER CONTROL ACTUATOR INTERFACES
TABLE 104

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 19)

E46993

MODULE	CB PAIR	CONNECTOR	RESISTANCE MEASUREMENT	
PSM 1L M536	B	D701A (WDM 27-61-17)	A1, C1 A1, GROUND C1, GROUND	20 OHMS NOMINAL 900 OHMS NOMINAL 900 OHMS NOMINAL
	A	D701B (WDM 27-61-13)	A1, C1 A1, GROUND C1, GROUND	20 OHMS NOMINAL 900 OHMS NOMINAL 900 OHMS NOMINAL
	C	D701B (WDM 27-61-18)	A5, C5 A5, GROUND C5, GROUND	20 OHMS NOMINAL 900 OHMS NOMINAL 900 OHMS NOMINAL
PSM 1R M538	B	D671A (WDM 27-61-15)	A1, C1 A1, GROUND C1, GROUND	20 OHMS NOMINAL 900 OHMS NOMINAL 900 OHMS NOMINAL
	A	D671B (WDM 27-61-14)	A1, C1 A1, GROUND C1, GROUND	20 OHMS NOMINAL 900 OHMS NOMINAL 900 OHMS NOMINAL
	C	D671B (WDM 27-61-16)	A5, C5 A5, GROUND C5, GROUND	20 OHMS NOMINAL 900 OHMS NOMINAL 900 OHMS NOMINAL

POWER SUPPLY MODULE OUTPUTS
TABLE 105

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 20)

CONTINUITY BETWEEN		CONTINUITY BETWEEN	
SCM MODULE CONNECTOR, PIN(S)	PSM, PCA MODULE CONNECTOR, PIN(S)	SCM MODULE CONNECTOR, PIN(S)	PSM, PCA MODULE CONNECTOR, PIN(S)
SCM 1L M530 D635B, K7 D635B, J7	PSM 1L M536 D701B, A1 D701B, C1 PSM 2L M537 D703B, C1	SCM 1R M533 D665B, K7 D665B, J7	PSM 1R M538 D671B, A1 D671B, C1 PSM 2R M539 D673B, C1
D635B, J7		D665B, J7	
D635A, K11 (J11)	PCA 1 M306 D641, 9 (8)	D665A, K11 (J11)	PCA 2 M307 D643, 9 (8)
D635A, K11 (J11)	PCA 12 M317 D663, 9 (8)	D665A, K11 (J11)	PCA 11 M316 D661, 9 (8)
(WDM 27-61-13)		(WDM 27-61-14)	
SCM 2L M531 D637B, K7 D637B, J7	PSM 1L M536 D701A, A1 D701A, C1 PSM 2L M537 D703A, C1	SCM 2R M534 D667B, K7 D667B, J7	PSM 1R M538 D671A, A1 D671A, C1 PSM 2R M539 D673A, C1
D637B, J7		D667B, J7	
D637A, K11 (J11)	PCA 5 M310 D649, 9 (8)	D667A, K11 (J11)	PCA 3 M308 D645, 9 (8)
D637A, K11 (J11)	PCA 8 M313 D655, 9 (8)	D667A, K11 (J11)	PCA 10 M315 D659, 9 (8)
(WDM 27-61-17)		(WDM 27-61-15)	
SCM 3L M532 D639B, K7 D639B, J7	PSM 1L M536 D701B, A5 D701B, C5 PSM 2L M537 D703B, C5	SCM 3R M535 D669B, K7 D669B, J7	PSM 1R M538 D671B, A5 D671B, C5 PSM 2R M539 D673B, C5
D639B, J7		D669B, J7	
D639A, K11 (J11)	PCA 6 M311 D651, 9 (8)	D669A, K11 (J11)	PCA 4 M309 D647, 9 (8)
D639A, K11 (J11)	PCA 7 M312 D653, 9 (8)	D669A, K11 (J11)	PCA 9 M314 D657, 9 (8)
(WDM 27-61-18)		(WDM 27-61-16)	

SPOILER CONTROL MODULE AC INTERFACES
TABLE 106

Spoiler Control Module BITE Procedure
Figure 105 (Sheet 21)

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
AIR/GROUND SYSTEM (AMM 32-09-02/201)
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C6, 11C7, 11C8, 11C9, 11G17, 11G18, 11G27, 11G28

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

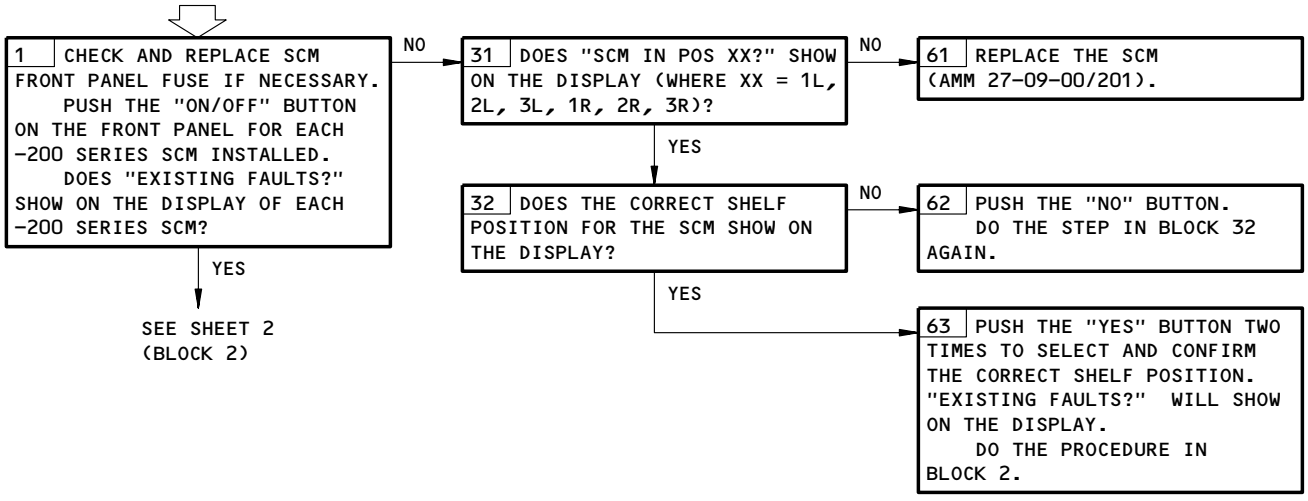
WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

NOTE: THE SPOILERS HAVE NUMBERS 1-12 FROM THE LEFT WING TIP TO THE RIGHT WING TIP, AS YOU FACE IN THE FORWARD DIRECTION.

USE THE PROCEDURE BELOW TO EXAMINE THE EXISTING FAULTS FOR EACH -200 SERIES SPOILER CONTROL MODULE (SCM) INSTALLED ON THE AIRPLANE. THE -200 SERIES SCMs HAVE A BITE DISPLAY. THE -100 SERIES SCMs HAVE FAULTBALLS.

FOR SCM MODULES WITH FUSES, LOOK FOR A BLOWN FUSE.

SPOILER CONTROL MODULE BITE PROCEDURE



Spoiler Control Module BITE Procedure
Figure 105A (Sheet 1)

EFFECTIVITY
-200 SERIES SCM'S

A15361

FROM SHEET 1
(BLOCK 1)

YES

2 PUSH THE "YES" BUTTON.
DOES A FAULT SHOW ON AT LEAST ONE -200 SERIES SCM?

NO → 33 ARE THERE -100 SERIES SCMs INSTALLED?

NO → 64 DO THE SPOILER SYSTEM TEST (AMM 27-09-00/201).
IF THE PROBLEM CONTINUES, GO TO BLOCK 66.

YES → 34 DO ANY OF THE -100 SERIES SCMs HAVE FAULTBALLS THAT SHOW YELLOW?

YES → 65 DO THIS PROCEDURE: SPOILER CONTROL MODULE BITE PROCEDURE (FIG. 105).

NOTE: TREAT THE -200 SERIES SCMs WITH NO EXISTING FAULTS AS -100 SERIES SCMs WITH NO FAULTBALLS THAT SHOW YELLOW.

NO → 66 GO TO FIG. 103, BLOCK 26.

YES → 3 MAKE A RECORD OF ALL THE FAULTS AND THE FAULT DETAILS FOR EACH OF THE -200 SERIES SCMs INSTALLED. IF THERE ARE NO EXISTING FAULTS, A "NO FAULTS" MESSAGE WILL SHOW.

PUSH THE DOWN ARROW BUTTON TO SCROLL THROUGH THE FAULT MESSAGES. AFTER EACH FAULT MESSAGE WILL BE THE OPTION TO VIEW THE FAULT DETAILS. PUSH THE "YES" BUTTON TO VIEW THE FAULT DETAILS. PUSH THE "NO" BUTTON OR THE DOWN ARROW BUTTON TO SKIP THE FAULT DETAILS.

NOTE: THE FAULT DETAILS WILL GIVE MORE SPECIFIC DATA ABOUT THE FAULT AS FOLLOWS:

1. THE EQUIPMENT NUMBER OF THE POSSIBLE BAD PART AND THE APPLICABLE WIRING DIAGRAM REFERENCE
2. "ACTIVE: YES" OR "ACTIVE: NO", IF THE SCM CURRENTLY DOES OR DOES NOT DETECT THE FAULT. AN EXAMPLE FOR A SCM FAULT DETAIL IS LISTED BELOW:

   M530 27-61-13

3. "TYPE: HARD", IF THE FAULT WAS ACTIVE SINCE IT WAS DETECTED; OR "TYPE: INTERMIT", IF THE FAULT WAS INACTIVE AT LEAST ONE TIME SINCE IT WAS DETECTED
4. THE FLIGHT PHASE WHEN THE FAULT OCCURRED. THE POSSIBLE INDICATIONS ARE:

TAXI	5 MINUTES OR LESS BEFORE A GROUND TO AIR TRANSITION
TAKEOFF	1 MINUTE OR LESS AFTER A GROUND TO AIR TRANSITION
CRUISE	AFTER TAKEOFF AND BEFORE DESCENT
DESCENT	5 MINUTES OR LESS BEFORE AN AIR TO GROUND TRANSITION
LANDING	1 MINUTE OR LESS AFTER AN AIR TO GROUND TRANSITION
ON GND	AFTER LANDING AND BEFORE TAXI
UNKNOWN	IF FLIGHT PHASE CANNOT BE DETERMINED BECAUSE OF MULTIPLE AIR/GROUND FAULTS.

AFTER THE LAST FAULT IS VIEWED, "PR RESET TO CLEAR" WILL SHOW. TO RETURN TO THE TOP OF THE FAULT LIST, PUSH THE DOWN ARROW BUTTON. TO VIEW THE FAULT LIST IN THE REVERSE DIRECTION, PUSH THE UP ARROW BUTTON.

DO THE PROCEDURE FOR THE FAULTS AS SHOWN IN THE TABLE OF CORRECTIVE ACTIONS THAT FOLLOWS.

Spoiler Control Module BITE Procedure
Figure 105A (Sheet 2)

FAULT MESSAGE	CORRECTIVE ACTION
SCM FAULT	REPLACE THE SCM THAT SHOWS THIS FAULT (AMM 27-09-00/201). 1
SCM 1L FAULT SCM 1R FAULT SCM 2L FAULT SCM 2R FAULT SCM 3L FAULT SCM 3R FAULT	1. MAKE SURE THE SCM SHOWN ON THE DISPLAY IS CORRECTLY INSTALLED IN THE EQUIPMENT RACK. PUSH THE RESET BUTTON ON THE SCM THAT SHOWS THIS FAULT. 2. IF THE PROBLEM CONTINUES, REPLACE THE SCM AT THE SHELF POSITION SHOWN ON THE DISPLAY (AMM 27-09-00/201). 1 3. IF THE PROBLEM CONTINUES, REMOVE THE SCM AT THE SHELF POSITION SHOWN ON THE DISPLAY, AND REMOVE THE SCM THAT SHOWS THIS FAULT (AMM 27-09-00/201). DO A CONTINUITY CHECK ON THE WIRE BETWEEN THE APPLICABLE SHELF CONNECTORS FROM PIN C15 OF THE SCM THAT WAS SHOWN ON THE DISPLAY, TO PIN C14 OF THE SCM THAT SHOWED THIS FAULT (WDM 27-61-12): SCM: 1L 1R 2L 2R 3L 3R CONNECTOR: D635A D665A D637A D667A D639A D669A EQUIPMENT NUMBER: M530 M533 M531 M534 M532 M535 4. REPAIR THE WIRE IF IT IS NECESSARY. INSTALL THE SCMs REMOVED IN THIS STEP (AMM 27-09-00/201). 1 5. IF THE PROBLEM CONTINUES, REPLACE THE SCM THAT SHOWS THIS FAULT (AMM 27-09-00/201). 1
26 VAC 27-61-13 26 VAC 27-61-14 26 VAC 27-61-15 26 VAC 27-61-16 26 VAC 27-61-17 26 VAC 27-61-18	GO TO BLOCK 10. NOTE: USE THE WDM REFERENCE GIVEN IN THE FAULT MESSAGE TO FIND THE APPLICABLE CIRCUIT. THE EQUIPMENT NUMBERS ARE: 1L 1R 2L 2R M536 M538 M537 M539
A/G SYS1 FAULT A/G SYS2 FAULT AIR/GND FAULT	1. PUSH THE RESET BUTTON ON THE SCM THAT SHOWS THIS FAULT. STOP FOR 25 SECONDS. 2. IF THE PROBLEM CONTINUES, REPLACE THE RELAY SHOWN IN THE FAULT DETAILS (AMM 32-09-02/201)(WDM 27-09-12). 1 3. IF THE PROBLEM CONTINUES, DO A CONTINUITY CHECK ON THE APPLICABLE WIRES ON THE CONNECTORS BETWEEN THE RELAY SHOWN IN THE FAULT DETAILS, AND THE SCM THAT SHOWS THIS FAULT (WDM 27-09-12) 1 : K10384, K10385, K10386, K10387 NOTE: WHEN YOU CHANGE THE AIR/GROUND STATE OF THE AIRPLANE, AN AIR/GROUND SYSTEM FAULT WILL OCCUR IF THE AIR/GROUND SIGNALS DISAGREE FOR MORE THA 25 SECONDS. WHEN YOU RESET THE SCMs, ALLOW 25 SECONDS TO MAKE SURE THE AIR/GROUND FAULT DOES NOT SHOW AGAIN.
SB LVDT FAULT	1. REPLACE THE SPEEDBRAKE LVDT ATTACHED TO THE CONNECTOR SHOWN IN THE FAULT DETAILS (AMM 27-62-02/201): 1R: WDM 27-61-14, D881, TS35 2R: WDM 27-61-15, D875, TS35 3R: WDM 27-61-16, D879, TS35 1L: WDM 27-61-13, D877, TS35 2L: WDM 27-61-17, D871, TS35 3L: WDM 27-61-18, D873, TS35 1 2. IF THE PROBLEM CONTINUES, DO A CONTINUITY CHECK ON THE WIRES BETWEEN THE CONNECTOR SHOWN IN THE FAULT DETAILS AND THE SCM THAT SHOWS THIS FAULT. 1

1 DO THE SYSTEM TEST PROCEDURE FOR THE SPOILER CONTROL MODULES (AMM 27-09-00/201).

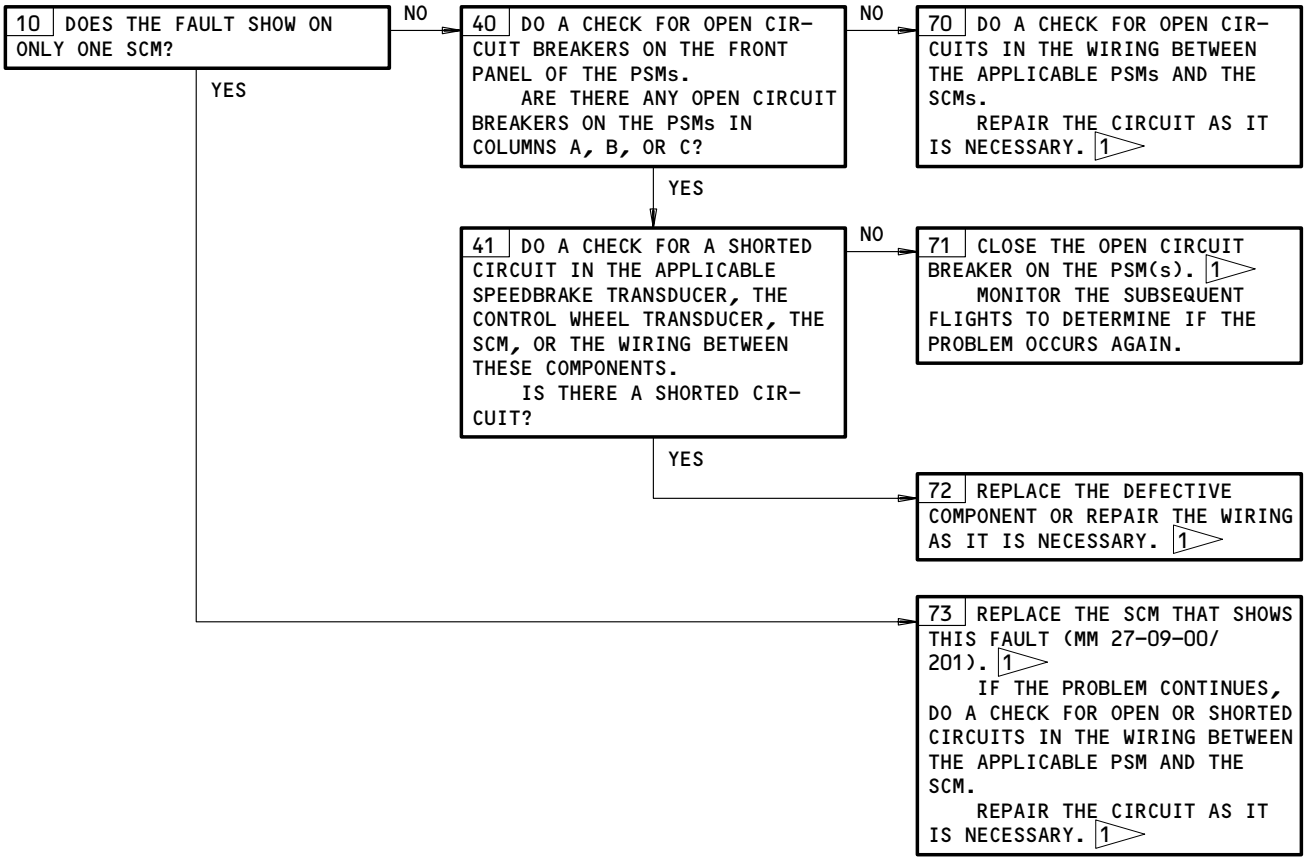
Spoiler Control Module BITE Procedure
Figure 105A (Sheet 3)

FAULT MESSAGE	CORRECTIVE ACTION
CW RVDT FAULT	1. REPLACE THE CONTROL WHEEL RVDT UNIT SHOWN IN THE FAULT DETAILS (AMM 27-61-04/401). 1 2. IF THE PROBLEM CONTINUES, DO A CONTINUITY CHECK ON THE WIRES OF THE CONNECTORS BETWEEN THE CONTROL WHEEL RVDT UNIT SHOWN IN THE FAULT DETAILS, AND THE SCM THAT SHOWS THIS FAULT. 1
PSM 1 FAULT PSM 2 FAULT	1. REPLACE THE PSM SHOWN IN THE FAULT DETAILS (AMM 27-09-00/201). 1 2. IF THE PROBLEM CONTINUES, DO A CONTINUITY CHECK ON THE PSM VALID WIRES OF THE CONNECTORS BETWEEN THE PSM SHOWN IN THE FAULT DETAILS, AND THE SCM THAT SHOWS THIS FAULT. 1 3. IF THE PROBLEM CONTINUES, REPLACE THE SCM THAT SHOWS THIS FAULT (AMM 27-09-00/201). 1
PCA 1 FAULT PCA 12 FAULT PCA 2 FAULT PCA 11 FAULT PCA 3 FAULT PCA 10 FAULT PCA 4 FAULT PCA 9 FAULT PCA 5 FAULT PCA 8 FAULT PCA 6 FAULT PCA 7 FAULT	1. IF A FUSE ON THE SCM FRONT PANEL IS OPEN, DO THE FAULT ISOLATION PROCEDURE IN FIG. 105, BLOCK 11, FOR THE LEFT PCA AND THE RIGHT PCA THAT THE SCM CONTROLS. NOTE: WITH THE FRONT PANEL FUSE OPEN, THE SCM WILL ONLY SHOW THE LEFT WING PCA AS BAD EVEN IF THE RIGHT WING PCA IS THE PROBLEM. YOU MUST USE THE ABOVE PROCEDURE TO ISOLATE THE BAD LEFT OR RIGHT PCA OR ITS RELATED WIRING. 2. PUSH THE SCM RESET BUTTON. STOP FOR 10 SECONDS. 3. IF THE FAULT RETURNS, USE THE PCA NUMBER SHOWN TO IDENTIFY THE WING LOCATION, AND REPLACE THE BAD PCA SHOWN IN THE FAULT DETAILS (AMM 27-61-02/201). NOTE: • THE FAULTS "PCA 1" TO "PCA 6" CORRESPOND TO THE SPOILERS 1 (OUTBOARD) TO 6 (INBOARD) ON THE LEFT WING. • THE FAULTS "PCA 7" TO "PCA 12" CORRESPOND TO THE SPOILERS 7 (INBOARD) TO 12 (OUTBOARD) ON THE RIGHT WING. 4. IF THE PROBLEM CONTINUES, USE THE WDM REFERENCE SHOWN IN THE FAULT DETAILS TO EXAMINE THE WIRING FROM THE SCM THAT SHOWS THIS FAULT TO THE PCA THAT IT CONTROLS. 5. REPAIR THE PROBLEMS THAT YOU FIND.
L HYD PRESS SW R HYD PRESS SW	1. REPLACE THE HYDRAULIC SYSTEM PRESSURE SWITCH SHOWN IN THE FAULT DETAILS (AMM 29-11-17/401)(WDM 27-09-13). 1 2. IF THE PROBLEM CONTINUES, DO A CONTINUITY CHECK ON THE WIRES OF THE CONNECTORS BETWEEN THE HYDRAULIC SYSTEM PRESSURE SWITCH SHOWN IN THE FAULT DETAILS, AND THE SCM THAT SHOWS THIS FAULT (WDM 27-09-13). 1

Spoiler Control Module BITE Procedure
Figure 105A (Sheet 4)

FAULT MESSAGE	CORRECTIVE ACTION
C HYD PRESS SW	REPLACE THE HYDRAULIC SYSTEM PRESSURE SWITCH, S10002, SHOWN IN THE FAULT DETAILS (WDM 29-11-31)(AMM 29-11-19/401). 1
	IF THE PROBLEM CONTINUES, DO A CONTINUITY CHECK ON THE WIRES OF THE CONNECTORS BETWEEN THE HYDRAULIC SYSTEM PRESSURE SWITCH SHOWN IN THE FAULT DETAILS, AND THE SCM THAT SHOWS THIS FAULT. 1
L HYD PRESS LO R HYD PRESS LO C HYD PRESS LO	LOOK FOR OTHER HYDRAULIC SYSTEM AMBER LIGHTS AND EICAS MESSAGES IN ADDITION TO THIS FAULT MESSAGE, AND DO THE PROCEDURE FOR LOW HYDRAULIC PRESSURE (FIM 29-11-00/101).
SPOILER SHUTDOWN	LOOK FOR OTHER EXISTING FAULTS IN ADDITION TO THIS FAULT MESSAGE. DO A CHECK OF THE WIRING BETWEEN THE SCM WITH A FAULT AND THE POWER CONTROL ACTUATOR (WDM 27-61-XX). DO THE APPLICABLE PROCEDURE AND RESET THE SCM.
AMBR DUE TO HYD	PUSH THE "RESET" BUTTON. IF THE PROBLEM CONTINUES, DO THE SYSTEM TEST FOR THE SPOILER CONTROL MODULES (AMM 27-09-00/201).
27-09-13 WIRING	REPLACE THE SCM THAT SHOWS THIS FAULT (AMM 27-09-00/201). 1 IF THE PROBLEM CONTINUES, DO A CONTINUITY CHECK ON THE WIRES OF THE CONNECTORS BETWEEN THE APPLICABLE HYDRAULIC SYSTEM PRESSURE SWITCH AND THE SCM THAT SHOWS THIS FAULT (WDM 27-09-13). 1
SCM ERROR	MAKE SURE THE SCM SHOWS THE CORRECT SHELF POSITION: PUSH THE "MENU" BUTTON, AND THEN PUSH THE "NO" BUTTON UNTIL "OTHER FUNCTNS?" SHOWS. PUSH THE "YES" BUTTON TWO TIMES TO SELECT THE "SYSTEM CONFIG?" DISPLAY, AND THEN PUSH THE DOWN ARROW BUTTON TO SEE THE DISPLAY. IF THE CORRECT SHELF POSITION DOES NOT SHOW, REPLACE THE SCM THAT SHOWS THIS FAULT (AMM 27-09-00/201). 1
NO CSEU POWER	MAKE SURE ALL EIGHT OF THE FLT CONT ELEC (OR CSEU) CIRCUIT BREAKERS ON THE P11 PANEL ARE CLOSED (SEE PREREQUISITES BLOCK). 1 IF THE PROBLEM CONTINUES, DO THIS PROCEDURE: POWER SUPPLY MODULE BITE PROCEDURE (FIM 27-09-00/101, FIG. 104). 1
NO FAULTS	NO ACTION NECESSARY. THE MESSAGE "NO FAULTS" APPEARS TO TELL YOU THAT THE BITE TEST HAS FOUND NO PROBLEMS WITH THE SCM OR OTHER SYSTEMS COMPONENTS. NOTE: IF A SPOILERS EICAS MESSAGE APPEARS WITH NO EXISTING FAULTS ON REPEATED FLIGHTS, THERE MAY BE A PROBLEM WITH THE PCA THAT IS CAUSED BY COLD TEMPERATURES IN FLIGHT. REFER TO THE MANUFACTURER'S CMM TO PERFORM A COLD SOAK TEST ON THE PCA.
NVM DATA ERROR	RESET THE SCM (AMM 27-09-00/201). IF THE PROBLEM CONTINUES, REPLACE THE SCM (AMM 27-09-00/201).

Spoiler Control Module BITE Procedure
Figure 105A (Sheet 5)



Spoiler Control Module BITE Procedure
Figure 105A (Sheet 6)

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
- AUTOPILOT (FLIGHT CONTROL)(AMM 22-10-00/501)
- YAW DAMPER SYSTEM (AMM 22-21-00/501) 1
- FLAP SYSTEM (AMM 27-51-00/201)
- SLAT SYSTEM (AMM 27-81-00/201)
- ENGINE INDICATING CREW ALERTING SYSTEM (EICAS) (AMM 31-41-00/201)
- AIR/GROUND SYSTEM (AMM 32-09-02/201)
- AIR DATA COMPUTING SYSTEM (AMM 34-12-00/501)
- INERTIAL REFERENCE SYSTEM (AMM 34-21-00/501) 1

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C5,11C6,11C7,11C8,11C9,11C12,11C13,11C17,11C18, 11F19,11G15,11G17,11G18,11G27,11G28,11H10,11H11, 11H19,11H20,11J12

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
- ELECTRICAL POWER IS ON (AMM 24-22-00/201)
- HYDRAULIC POWER IS ON (AMM 29-11-00/201)

NOTE: FOR FAULTBALLS THAT HAVE DUAL NOMENCLATURE, ONLY THE NOMENCLATURE THAT IS APPLICABLE TO 757 SYSTEMS IS USED.

NOTE: IF YOU ARE OPERATING ON GROUND ELECTRICAL POWER AND THE AIRPLANE HAS A -32,-32A,-37 OR -37A FSEU INSTALLED, YOU CAN HAVE A NUISANCE EICAS MESSAGE "MACH/SPD TRIM" APPEAR. IF THE MESSAGE APPEARS ON THE GROUND, REFER TO SERVICE LETTER 757-SL-27-63.

STABILIZER TRIM/ ELEVATOR ASYMMETRY LIMIT MODULE (SAM) BITE PROCEDURE

1 SET THE STBY POWER SWITCH TO THE "AUTO" POSITION (AMM 24-22-00/201).
SET THE C AND R STAB TRIM SWITCHES ON THE P10 PANEL TO THE "NORM" POSITION.

WARNING

MAKE SURE ALL PERSONS AND EQUIPMENT ARE CLEAR OF ALL CONTROL SURFACES BEFORE YOU SUPPLY HYDRAULIC POWER. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

PRESSURIZE THE CENTER AND RIGHT HYDRAULIC SYSTEMS (AMM 29-11-00/201).
MOVE THE FLAPS TO THE FULL UP POSITION (AMM 27-51-00/201)
ARE ALL FAULTBALLS "BLACK" ON THE LEFT AND THE RIGHT STABILIZER TRIM/ELEVATOR ASYMMETRY LIMIT MODULES, M524 AND M525?

YES → SEE SHEET 2 (BLOCK 101)

NO

1A DID THE CAUTION MESSAGES "MACH/SPD TRIM" AND "ELEV ASYM" SHOW ON THE UPPER EICAS DISPLAY AND DO BOTH SAMS DISPLAY A YELLOW "ADC" FAULTBALL?

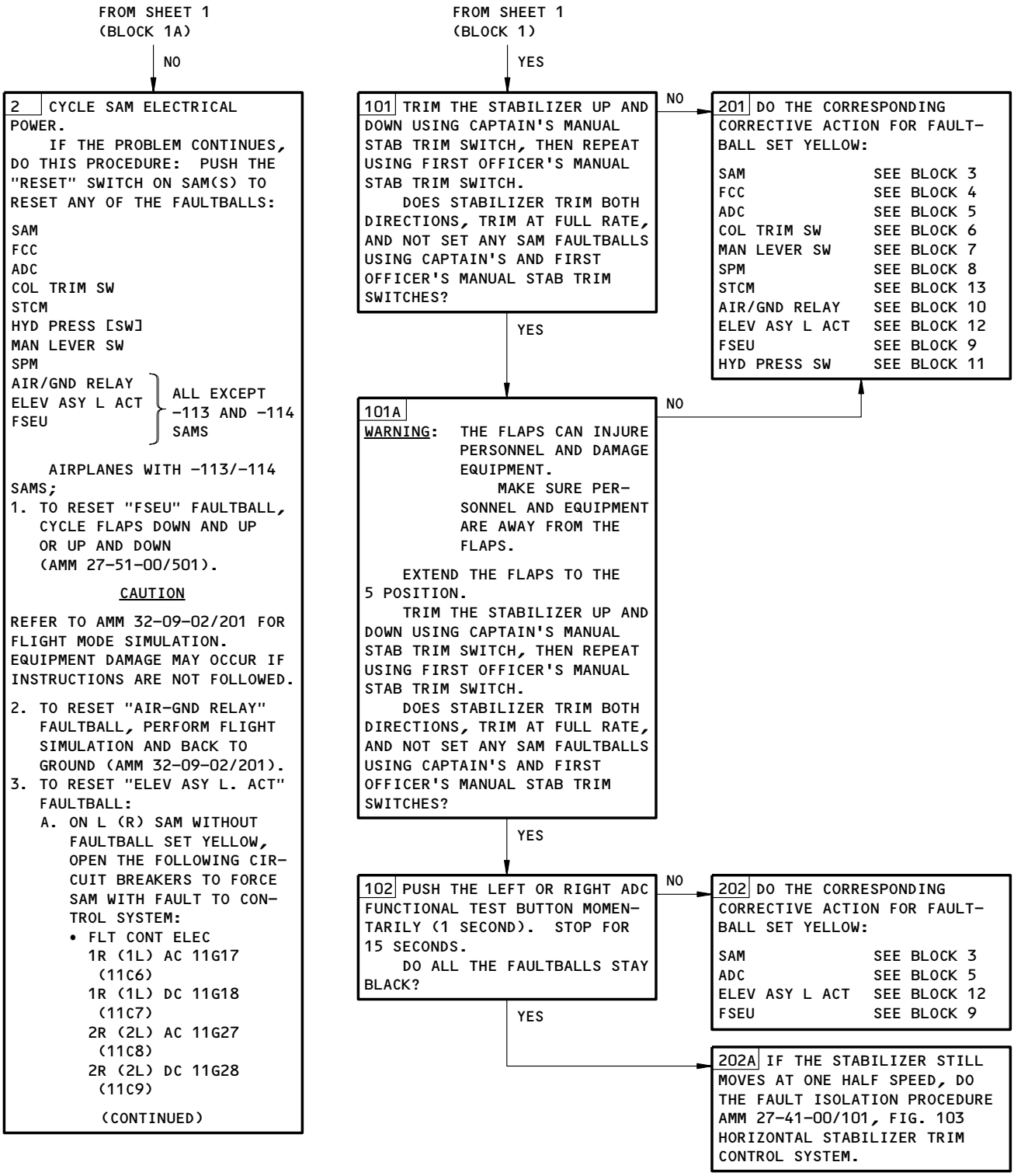
YES → 100 GO TO BLOCK 5.

NO

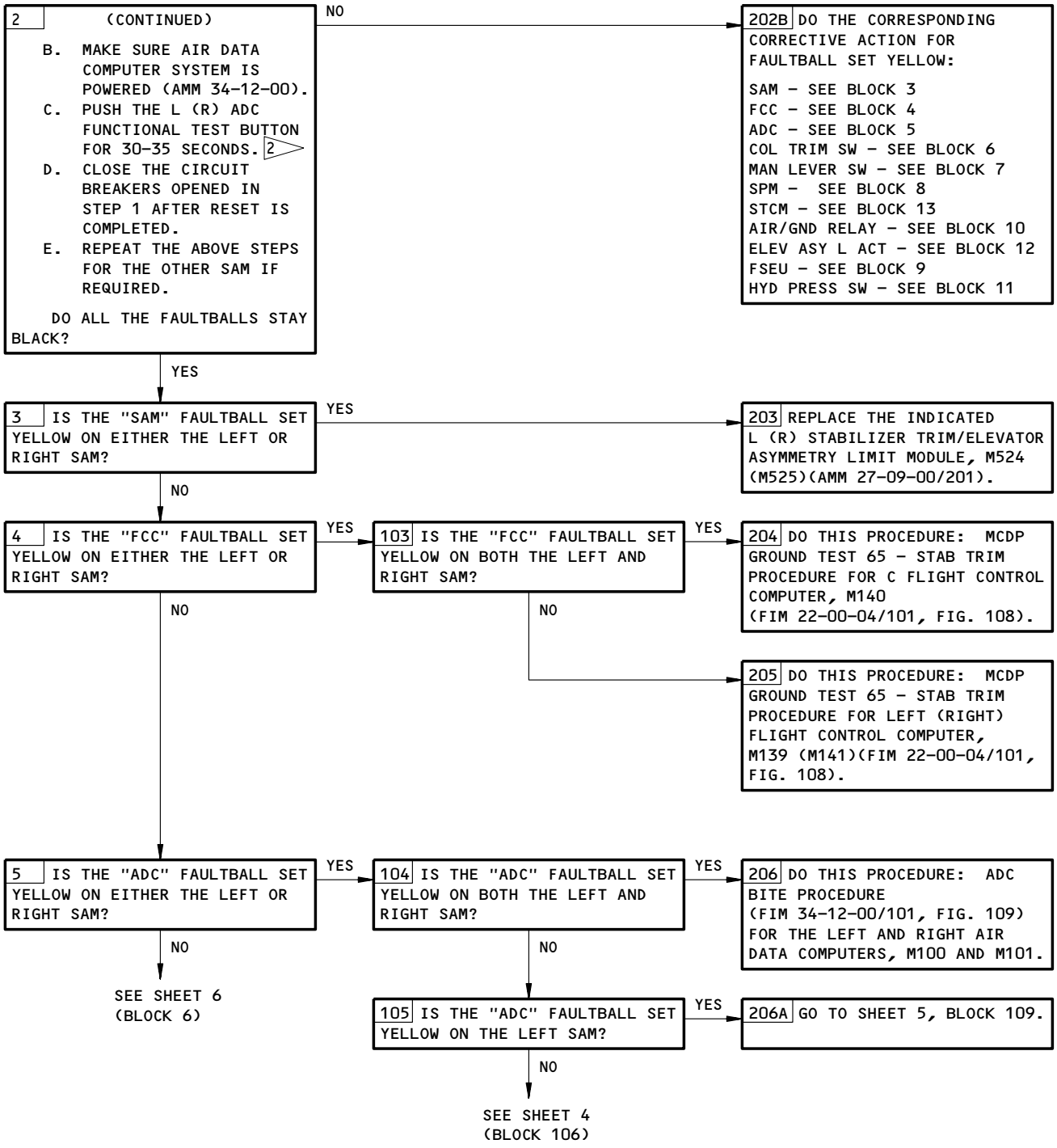
SEE SHEET 2 (BLOCK 2)

1 THESE SYSTEMS ARE USED TO COMPARE THE AIR DATA COMPUTER, AIR/GROUND, AND HYDRAULIC PRESSURE INTERFACES.

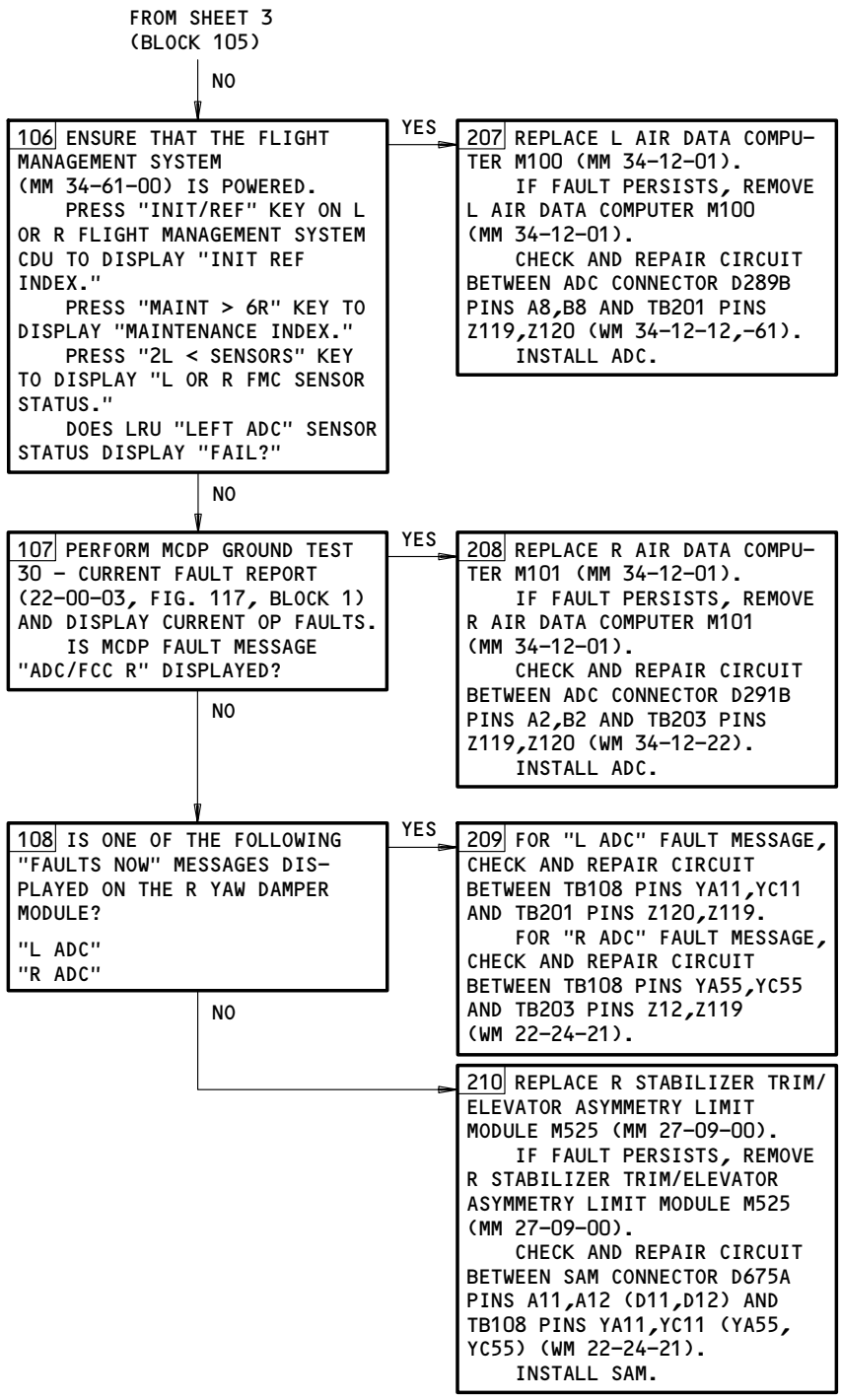
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 1)



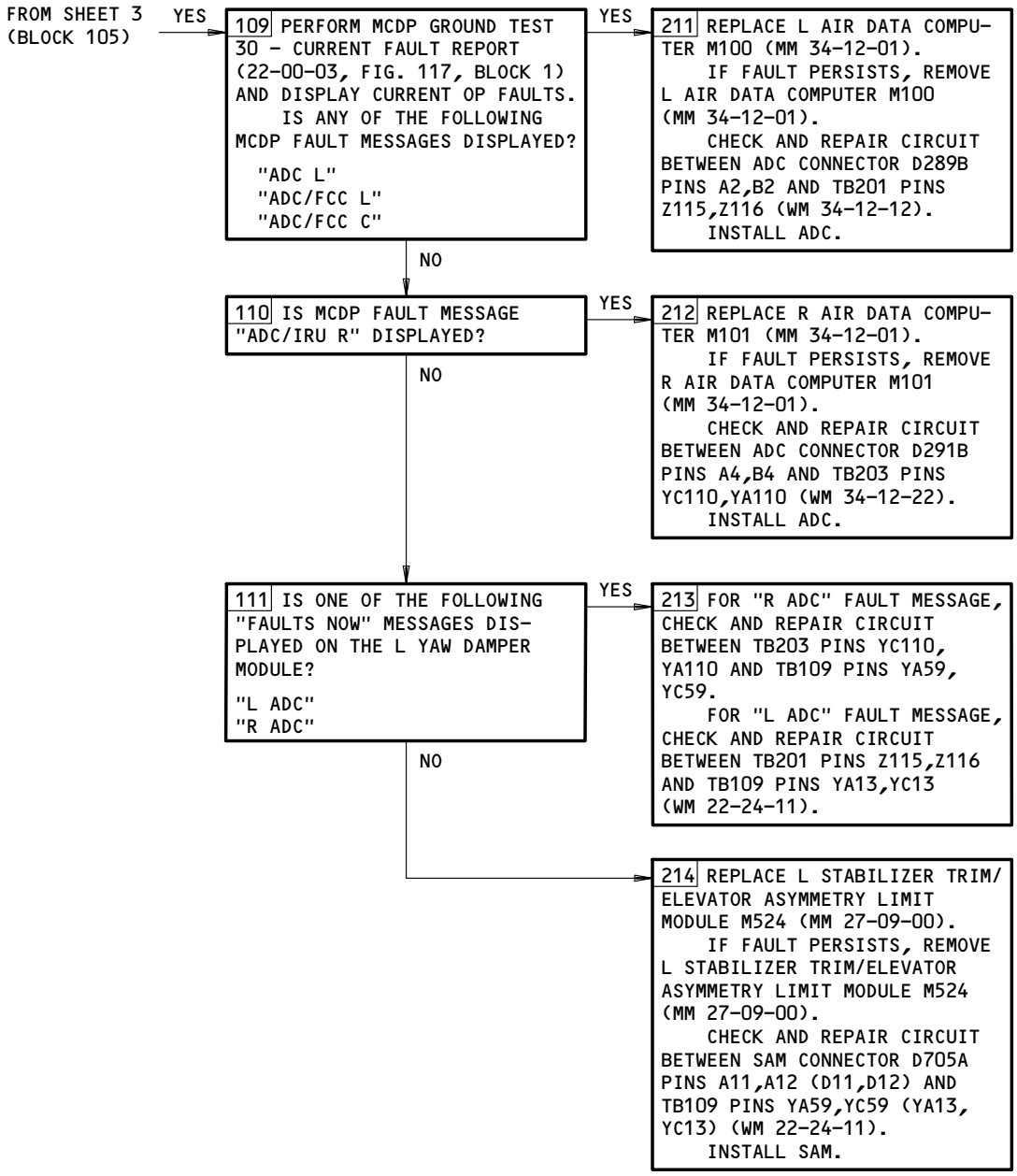
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 2)



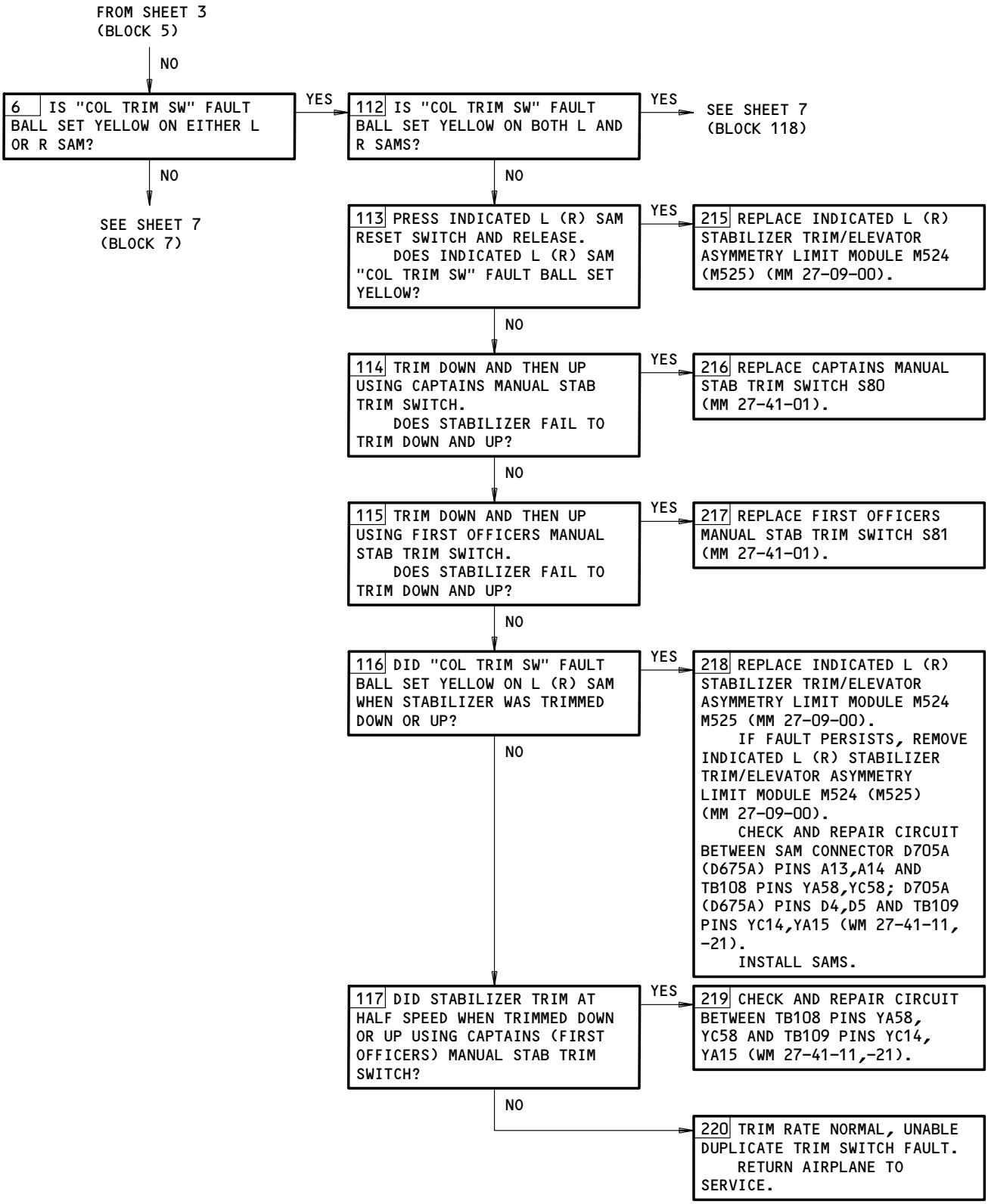
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 3)



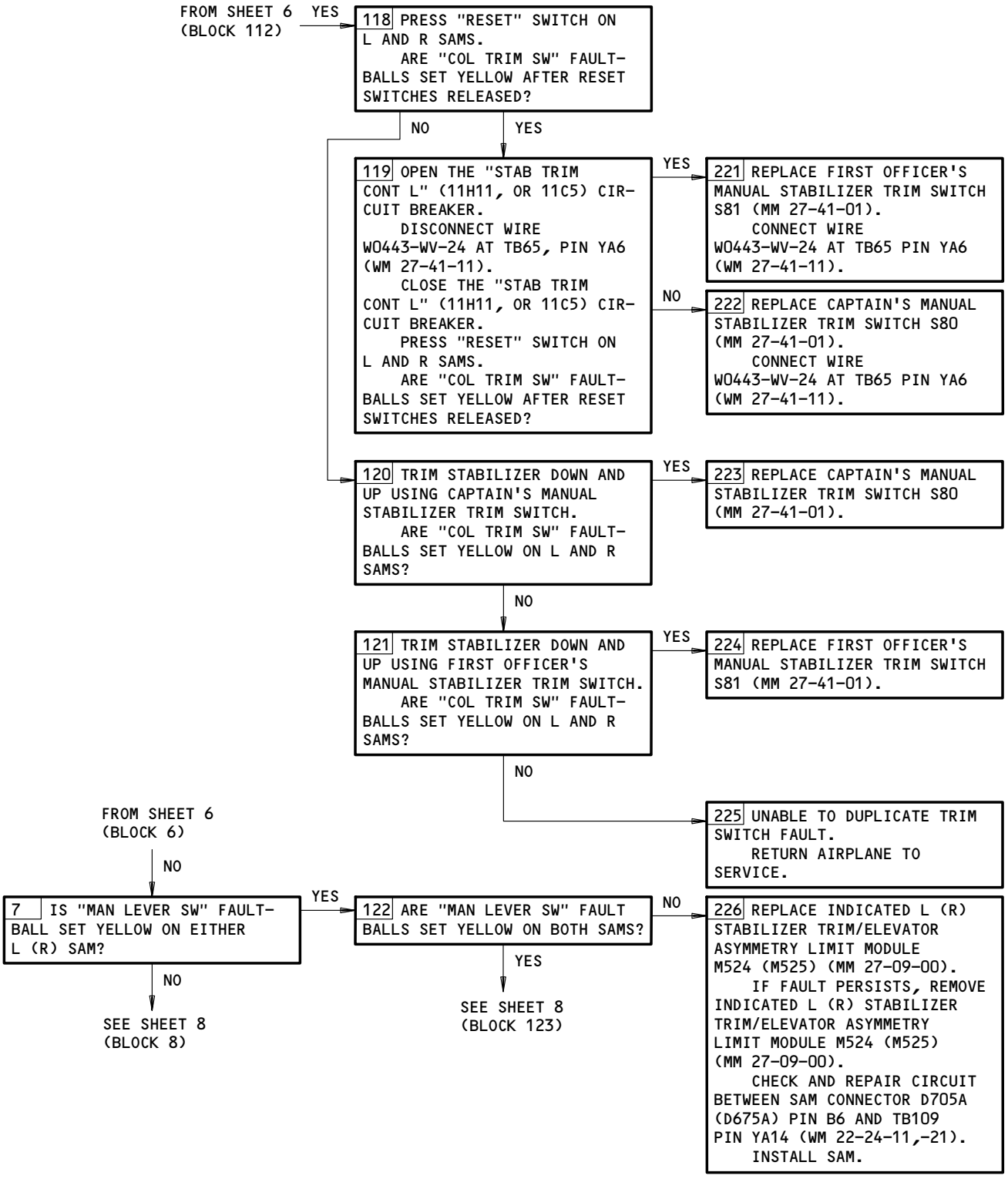
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 4)



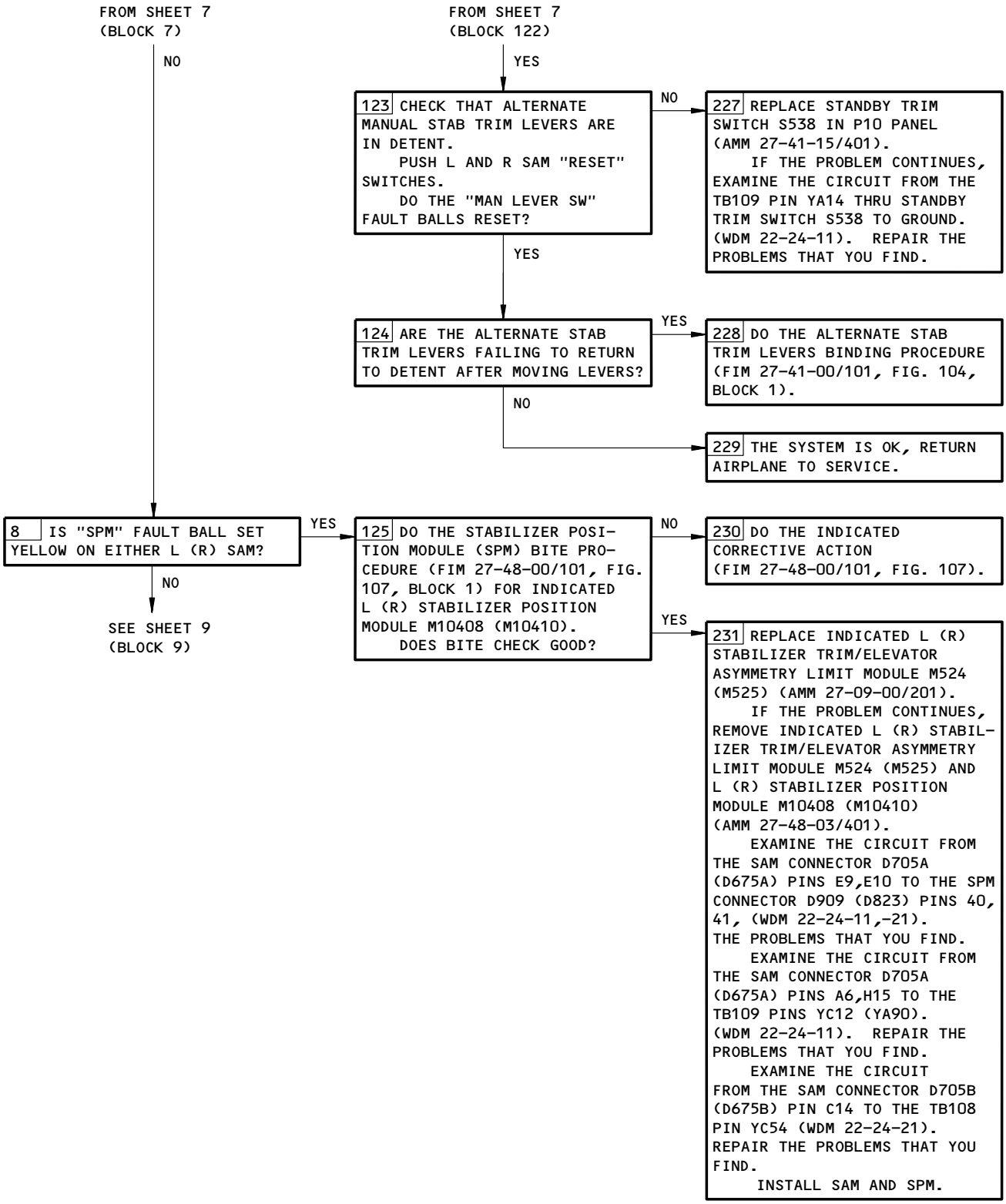
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 5)



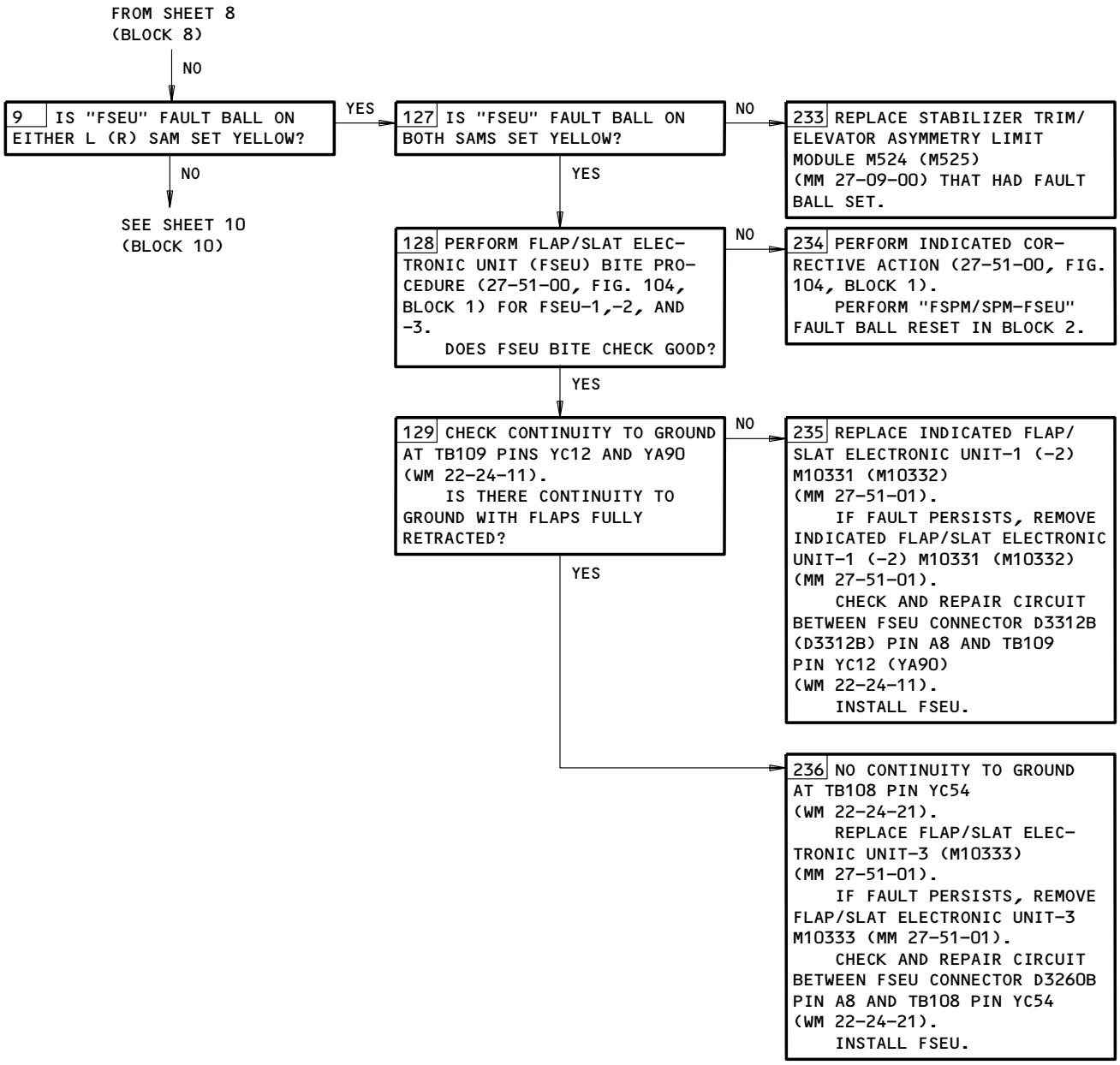
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 6)



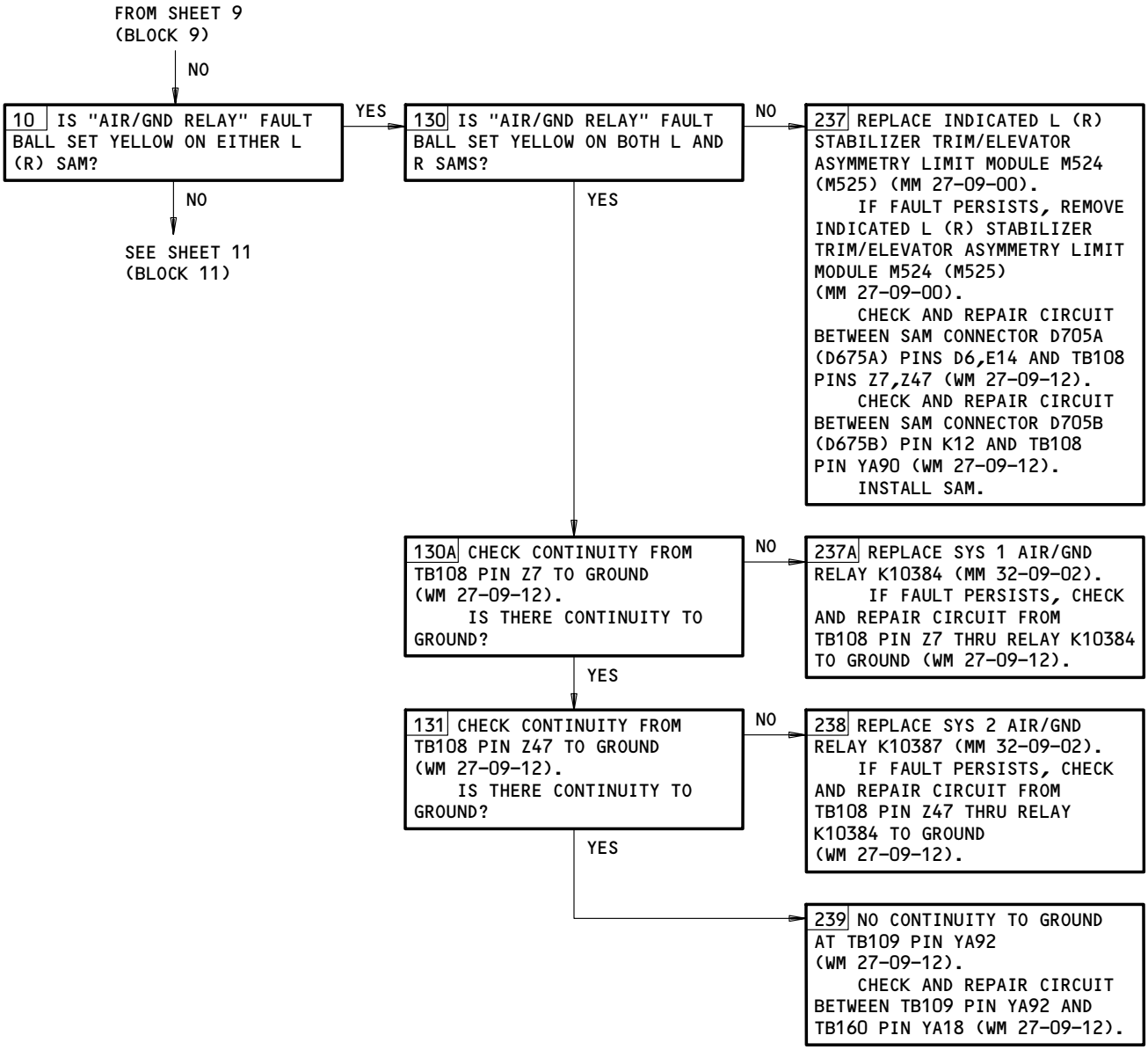
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 7)



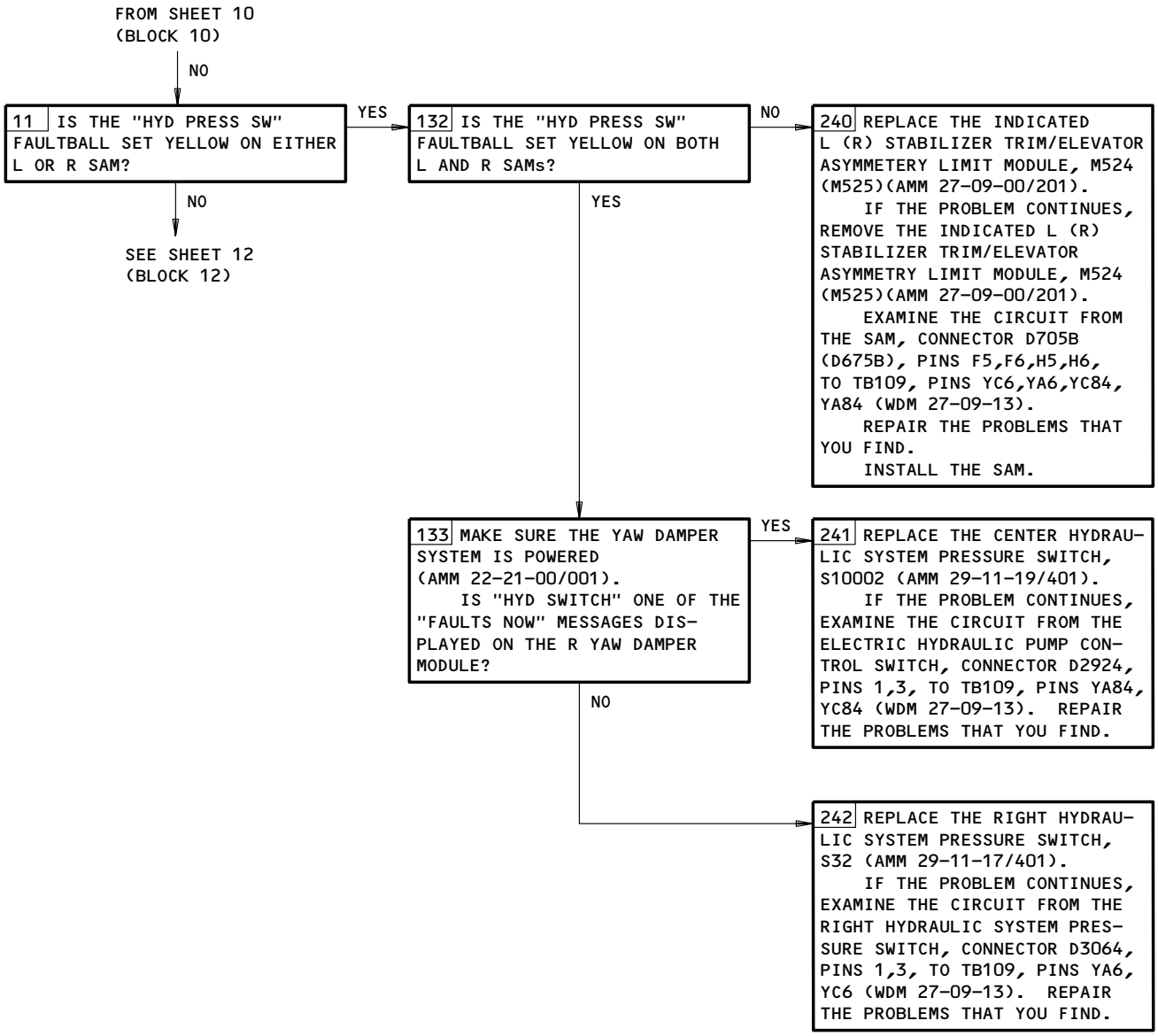
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 8)



Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 9)



Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 10)



Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 11)

FROM SHEET 11
(BLOCK 11)

NO

12 DO THE FOLLOWING STEPS:

1. OPEN THE FOLLOWING CIRCUIT BREAKERS TO FORCE CONTROL TO THE LEFT SAM:

   1R AC 11G17
   2R AC 11G27

2. MAKE SURE THE AIR DATA COMPUTER SYSTEM IS POWERED (AMM 34-12-00).
3. PUSH THE L ADC FUNCTIONAL TEST BUTTON FOR 30-35 SECONDS. (WAIT UNTIL THE ALTIMETER READS 10,000 FT. AND THE AIRSPEED INDICATOR READS 137 KNOTS, THEN RELEASE IT.)
4. MONITOR WHETHER THE "ELEV ASY L ACT" FAULTBALL IS YELLOW ON THE LEFT SAM OR NOT.
5. CLOSE THE FOLLOWING CIRCUIT BREAKERS:

   1R AC 11G17
   2R AC 11G27

6. OPEN THE FOLLOWING CIRCUIT BREAKERS TO FORCE CONTROL TO THE RIGHT SAM:

   1L AC 11C6
   2L AC 11C8

7. PUSH THE R ADC FUNCTIONAL TEST BUTTON FOR 30-35 SECONDS. (WAIT UNTIL THE ALTIMETER READS 10,000 FT. AND THE AIRSPEED INDICATOR READS 137 KNOTS, THEN RELEASE IT.)
8. MONITOR WHETHER THE "ELEV ASY L ACT" FAULTBALL IS YELLOW ON THE RIGHT SAM OR NOT.
9. CLOSE THE FOLLOWING CIRCUIT BREAKERS:

   1L AC 11C6
   2L AC 11C8

DID BOTH SAMs SHOW A YELLOW FAULTBALL AFTER THEIR RESPECTIVE TESTS?

YES

243 REPLACE ELEVATOR ASYMMETRY LIMIT ACTUATOR.

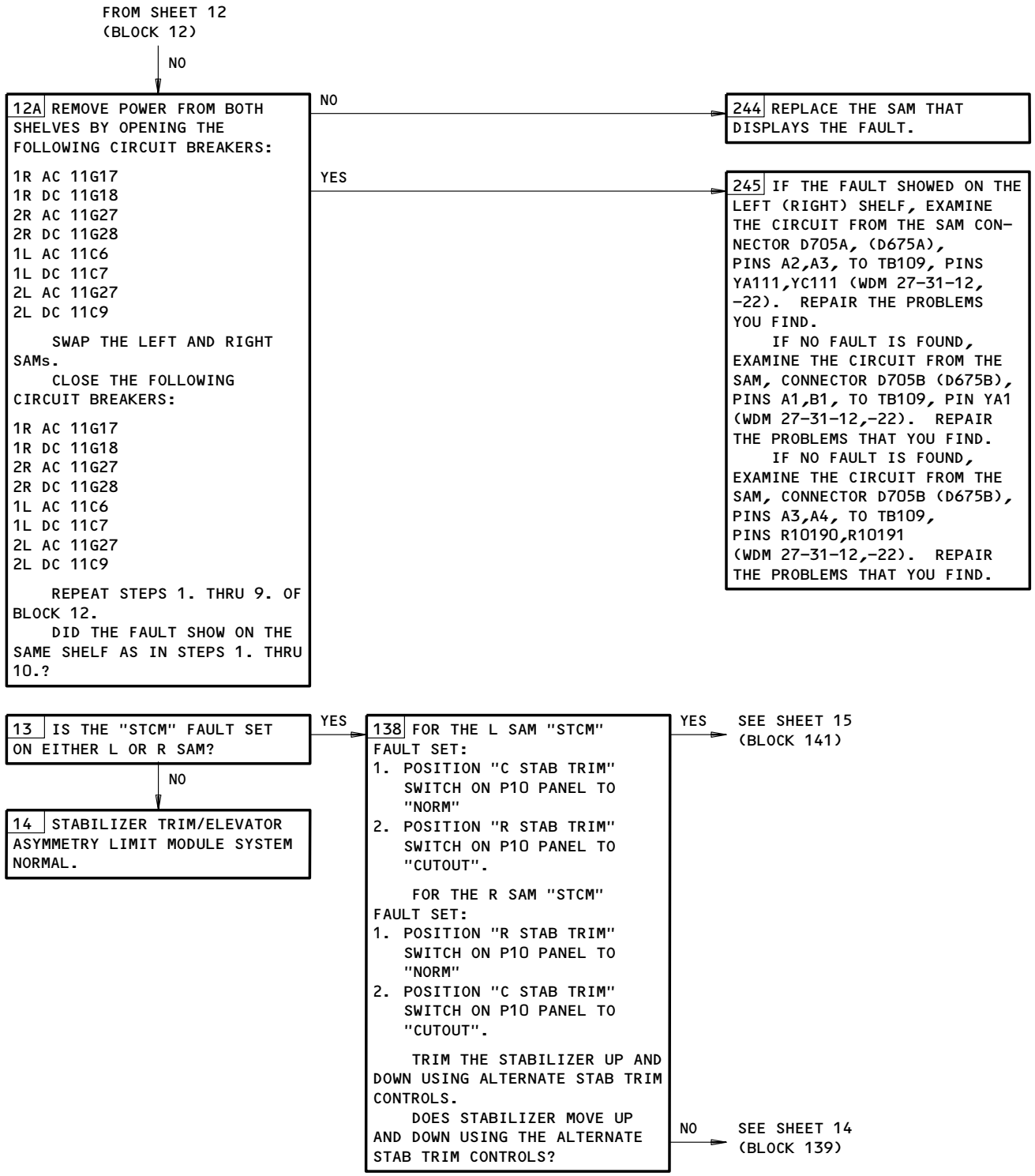
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE ELEVATOR ASYMMETRY LIMIT ACTUATOR, CONNECTOR D689, PINS 1, 5,6, TO GROUND; PINS 2,3,4, TO TB109, PINS R10191,R10190, YA111,YC111.

REPAIR THE PROBLEMS THAT YOU FIND.

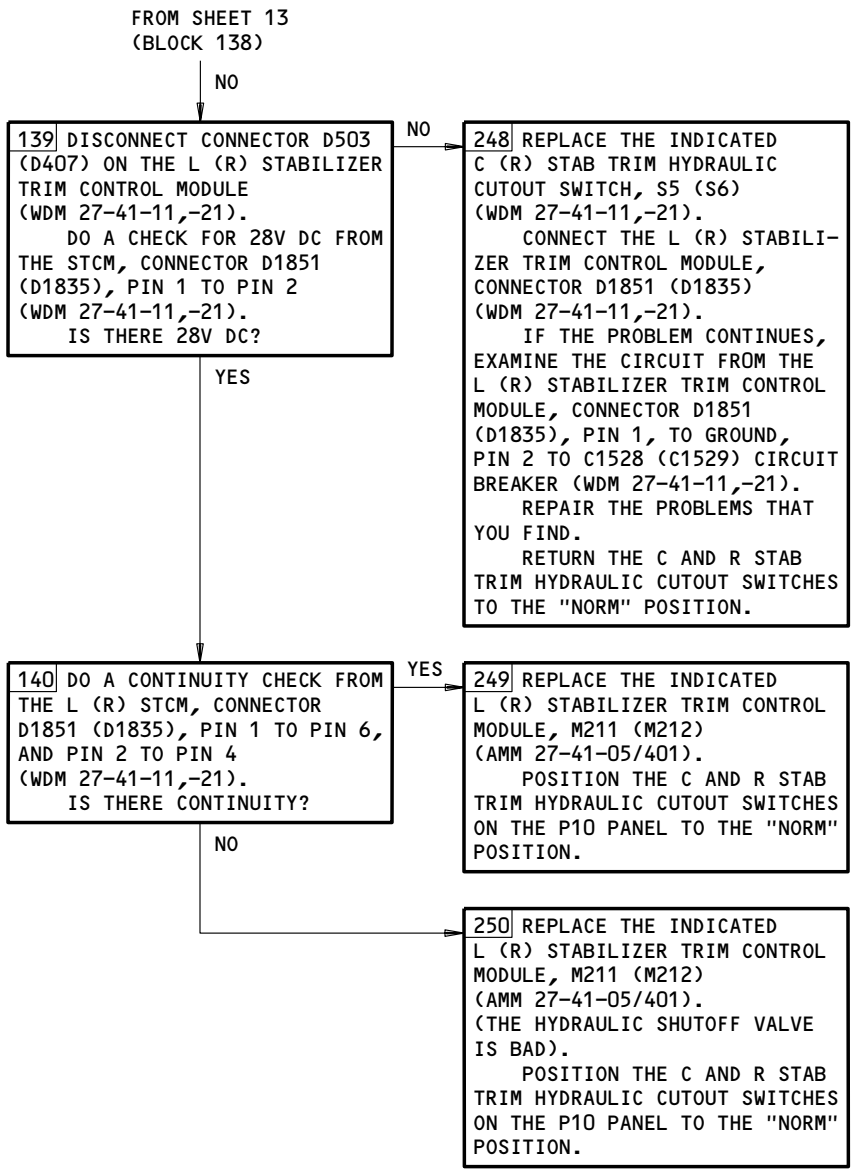
NO

SEE SHEET 13
(BLOCK 13)

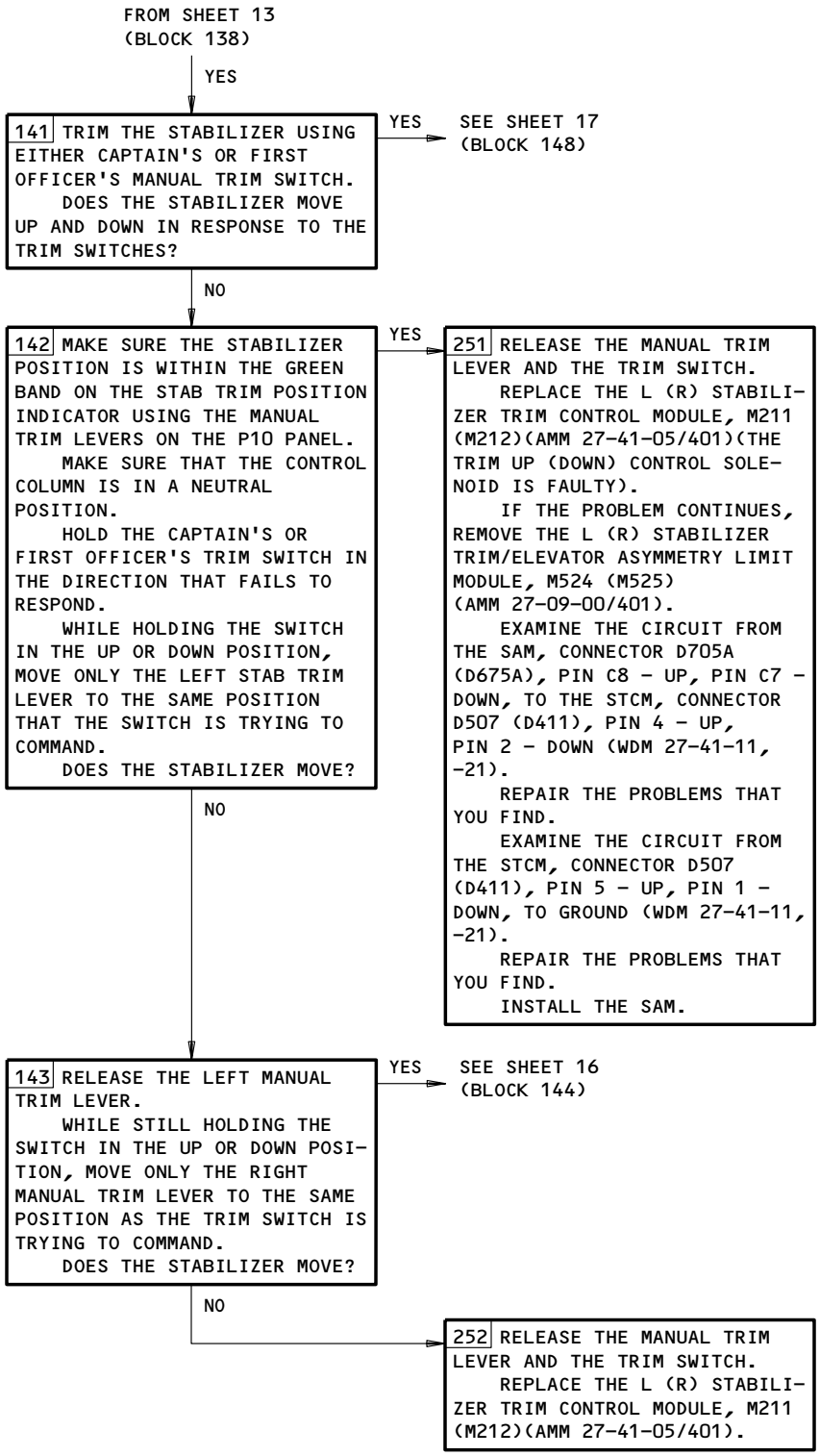
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 12)



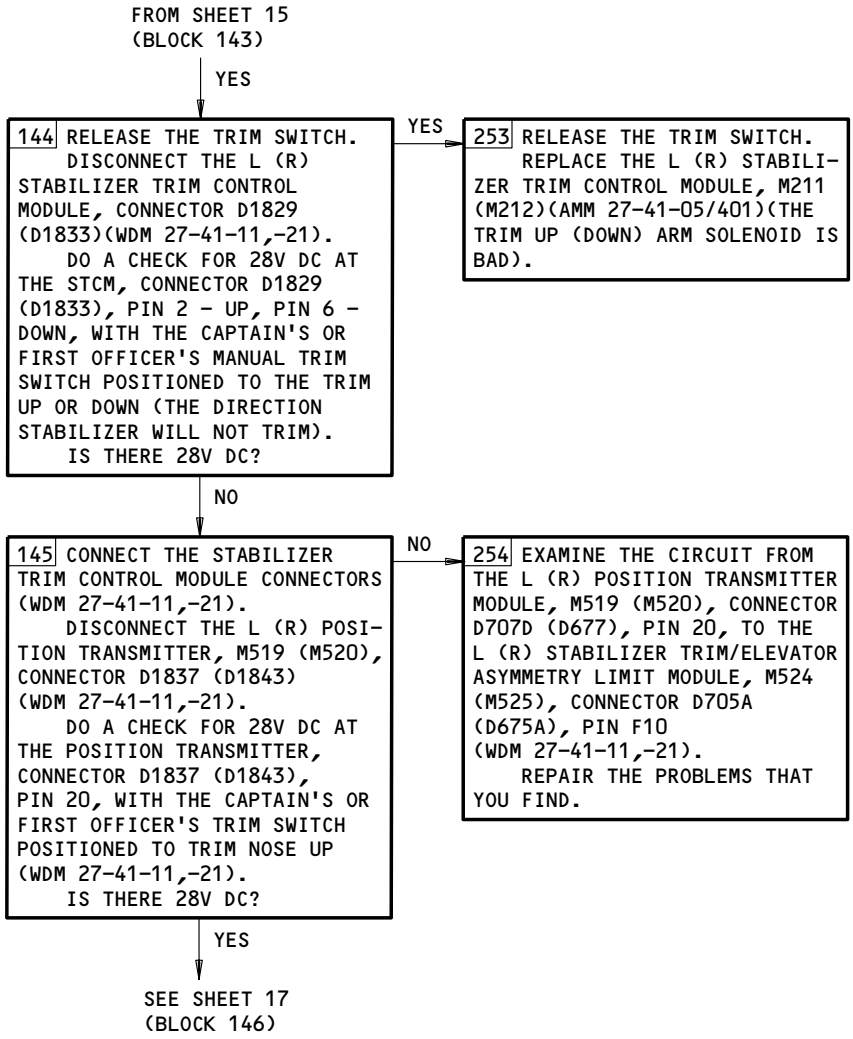
Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 13)



Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 14)



Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 15)



Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 16)

FROM SHEET 16
(BLOCK 145)

YES

146 MAKE SURE THE FLAPS ARE RETRACTED AND DO A CHECK FOR 28V DC AT THE POSITION TRANSMITTER, CONNECTOR D707 (D677), PIN 18, WITH THE CAPTAIN'S OR FIRST OFFICER'S TRIM SWITCH POSITIONED TO TRIM NOSE DOWN (WDM 27-41-11,-21).
SET THE FLAPS TO THE FULLY EXTENDED POSITION AND DO A CHECK FOR 28V DC AT THE POSITION TRANSMITTER, CONNECTOR D707 (D677), PIN 19, WITH THE CAPTAIN'S OR FIRST OFFICER'S TRIM SWITCH POSITIONED TO TRIM NOSE (WDM 27-41-11,-21).
IS THERE 28V DC AT THE INDICATED PINS FOR BOTH FLAP POSITIONS ABOVE?

YES → 255 REPLACE THE L (R) STABILIZER TRIM LIMIT SWITCH AND POSITION TRANSMITTER, M519 (M520)(AMM 27-48-01/401).

NO

147 CONNECT THE L (R) POSITION TRANSMITTER, M519 (M520), CONNECTOR D707 (D677) (WDM 27-41-11,-21).
DISCONNECT THE L (R) RELAY TRIM UNIT SELECT, K574 (K575), CONNECTOR D787 (D809) (WDM 27-41-11,-21).
DO A CHECK FOR 28V DC AT THE RELAY TRIM UNIT SELECT, CONNECTOR D787 (D809), PIN A2, WITH THE CAPTAIN'S OR FIRST OFFICER'S TRIM SWITCH POSITIONED TO TRIM NOSE DOWN (WDM 27-41-11,-21).
IS THERE 28V DC?

YES → 256 REPLACE THE L (R) RELAY TRIM UNIT SELECT, K574 (K575) (WDM 27-41-11,-21).

NO → 257 EXAMINE THE CIRCUIT FROM THE L (R) RELAY TRIM UNIT SELECT, K594 (K575), CONNECTOR D787 (D809), PIN A2, TO THE L (R) STABILIZER TRIM/ELEVATOR ASYMMETRY LIMIT MODULE, M524 (M525), CONNECTOR D705A (D675A), PIN F9 (WDM 27-41-11, -21).
REPAIR THE PROBLEMS THAT YOU FIND.

FROM SHEET 15
(BLOCK 141)

YES

148 DO A CONTINUITY CHECK TO GROUND AT TB109, PIN YC91 (TB108 PIN YC44), WHILE TRIMMING THE STABILIZER UP OR DOWN (WDM 27-41-11,-21).
IS THERE CONTINUITY WHILE TRIMMING?

NO → 258 REPLACE THE INDICATED L (R) STCM HYDRAULIC BRAKE PRESSURE SWITCH, S1 (AMM 27-41-07/401).
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM TB109, PIN YC91 (TB108, PIN YC44), THRU THE PRESSURE SWITCH TO GROUND (WDM 27-41-11,-21).
REPAIR THE PROBLEMS THAT YOU FIND.

YES

259 REPLACE THE INDICATED L (R) STABILIZER TRIM/ELEVATOR ASYMMETRY LIMIT MODULE, M524 (M525)(AMM 27-09-00/201).

Stabilizer Trim/Elevator Asymmetry Limit Module (SAM) BITE Procedure
Figure 106 (Sheet 17)

"UNSCHED STAB TRIM" PROBLEMS

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C5,11C6,11C7,11C8,11C9,11C12,11C13,11G17,11G18,
11G27,11G28,11H11,11H20

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

1 RESET FAULTBALLS ON THE FRONT OF THE STABILIZER TRIM/ AILERON LOCKOUT MODULES (SAMs) M524 AND M525.
DO ANY FAULTBALLS SET AGAIN?

YES → 20 DO THIS PROCEDURE: SAM BITE PROCEDURE (FIG. 106).

NO

2 DO THIS PROCEDURE: MCDP GROUND TEST 65 - "STAB TRIM" (FIM 22-00-04/101, FIG. 108)
IF AUTOPILOT WAS ENGAGED WHEN THE "UNSCHED STAB TRIM" OCCURRED.
IF NOT, MOVE STANDBY MANUAL STABILIZER TRIM LEVERS WITH THE AUTOPILOT DISENGAGED.
DID "UNSCHED STAB TRIM" ANNUNCIATOR AND EICAS MESSAGE ILLUMINATE?

NO → 21 SYSTEM NORMAL.
RETURN TO SERVICE.

YES

3 POSITION BOTH "STAB TRIM CUTOUT" SWITCHES ON THE P10 PANEL TO "CUTOUT".
DO THE "UNSCHED STAB TRIM" ANNUNCIATOR AND MESSAGE EXTENGUISH?

NO → 10 WAS THE "UNSCHED STAB TRIM" ANNUNCIATOR FLASHING ON AND OFF AT IRREGULAR INTERVALS?

YES → 22 CHECK L (R) SAM FOR "STCM" FAULTBALL SET. REPLACE SAM MODULE THAT DOES NOT HAVE THE "STCM" FAULTBALL SET (AMM 27-09-00/401).
IF FAULT PERSISTS, REMOVE L AND R SAM M524,M525 (AMM 27-09-00/401):
- IF L SAM "STCM" FAULTBALL SET - CHECK AND REPAIR CIRCUIT BETWEEN L SAM CONNECTOR D705A(B) PINS J12,A9(E5) AND R SAM CONNECTOR D675A(B) PINS G12,E11(B5)(WDM 22-22-11, -21 AND WDM 22-24-11,-21)
- IF R SAM "STCM" FAULTBALL SET - CHECK AND REPAIR CIRCUIT BETWEEN L SAM CONNECTOR D705A(B) PINS G12,E11(B5) AND R SAM CONNECTOR D675A(B) PINS J12,A9(E5)(WDM 22-22-11,-21 AND WDM 22-24-11,-21).

INSTALL L AND R SAM.

YES

SEE SHEET 2
(BLOCK 4)

NO

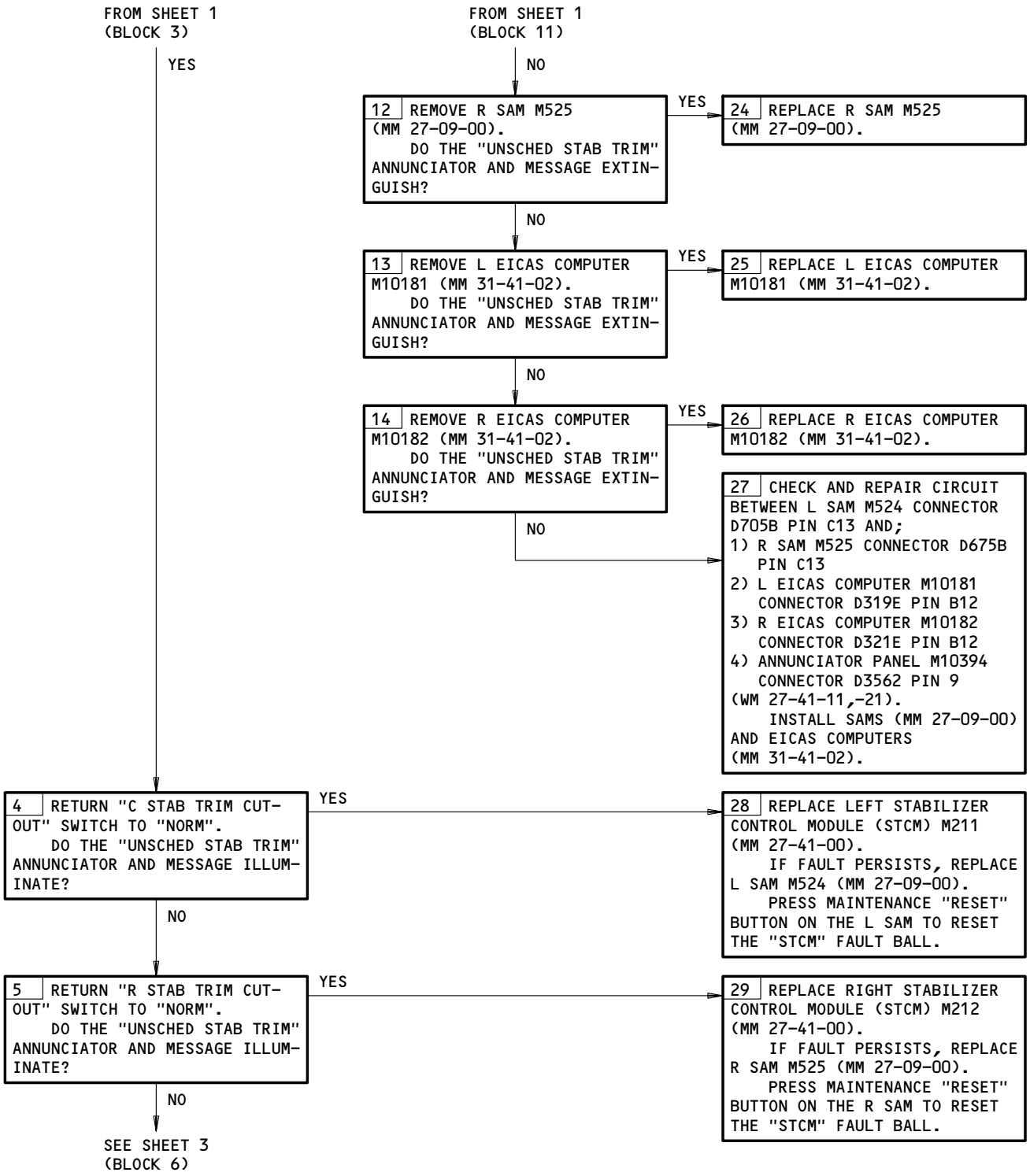
11 REMOVE L SAM, M524 (AMM 27-09-00/401).
DO THE "UNSCHED STAB TRIM" ANNUNCIATOR AND MESSAGE EXTINGUISH?

YES → 23 REPLACE L SAM, M524 (AMM 27-09-00).

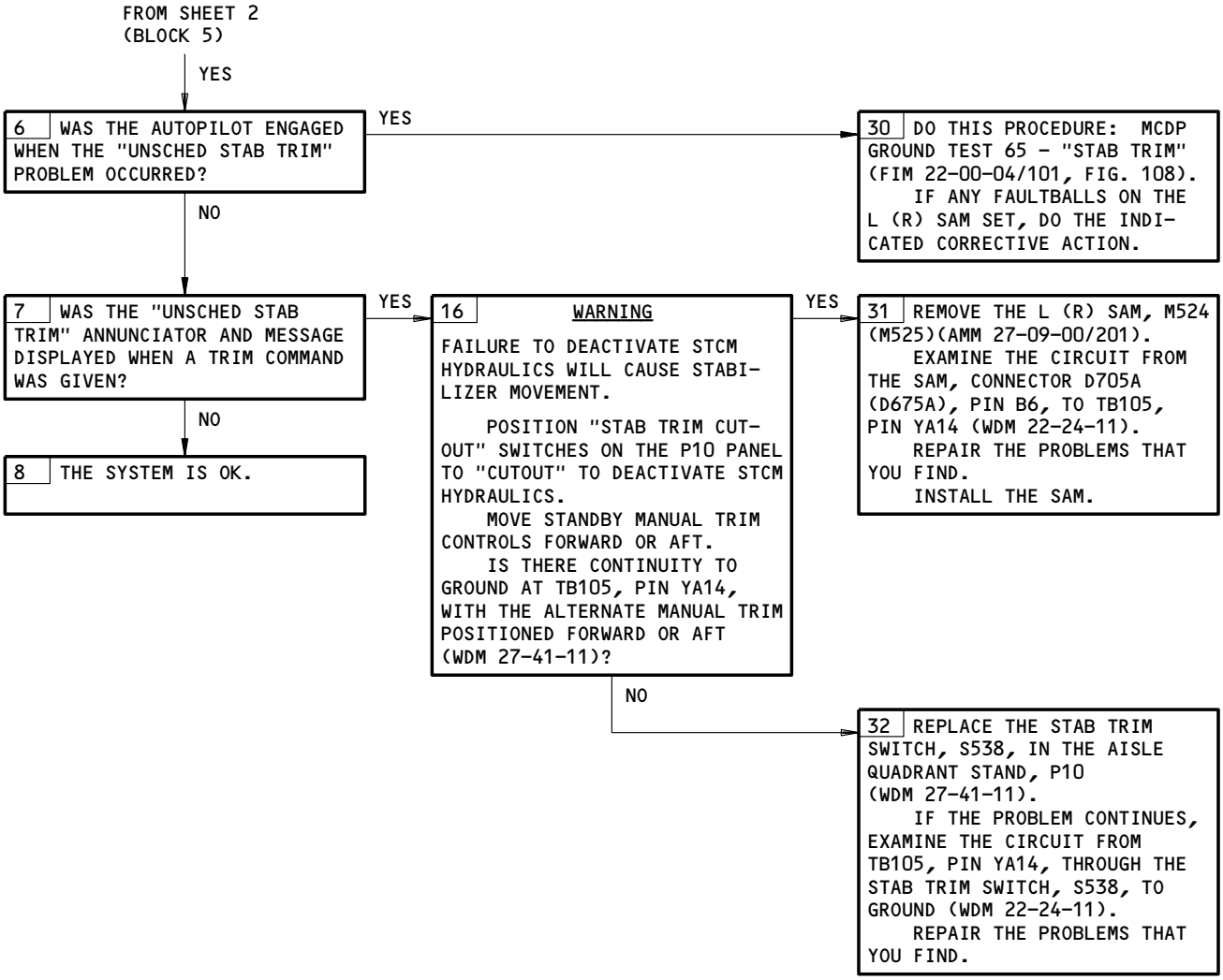
NO

SEE SHEET 2
(BLOCK 12)

UNSCHED STAB TRIM Problems
Figure 106A (Sheet 1)



UNSCHED STAB TRIM Problems
Figure 106A (Sheet 2)



UNSCHED STAB TRIM Problems
Figure 106A (Sheet 3)

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
- YAW DAMPER SYSTEM (MM 22-21-00/501)
- FLAP SYSTEM (MM 27-51-00/201)
- SLAT SYSTEM (MM 27-81-00/201)
- EICAS (MM 31-41-00/201)
- AIR/GROUND SYSTEM (MM 32-09-02/201)
- MASTER DIM AND TEST SYSTEM (MM 33-16-00/501)
- AIR DATA COMPUTING SYSTEM (MM 34-12-00/501)

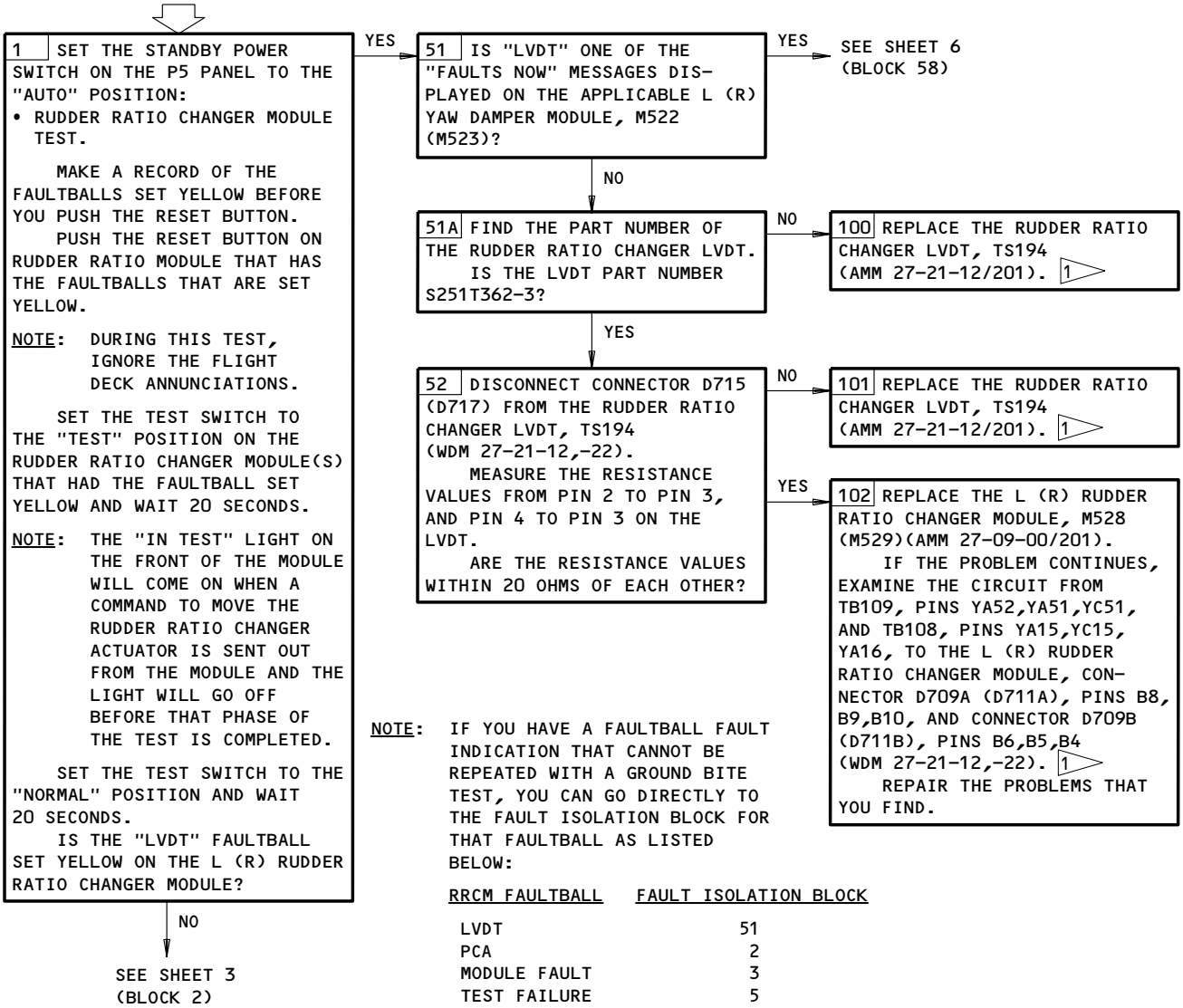
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A18,11C5,11C6,11C7,11C8,11C9,11C12,11C13,11C17, 11C18,11D18,11F19,11F34,11G10,11G15,11G17,11G18, 11G24,11G27,11G28,11H10,11H11,11H14,11H19,11H20, 11J12

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
- ELECTRICAL POWER IS ON (MM 24-22-00/201)
- HYDRAULIC POWER IS ON (MM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

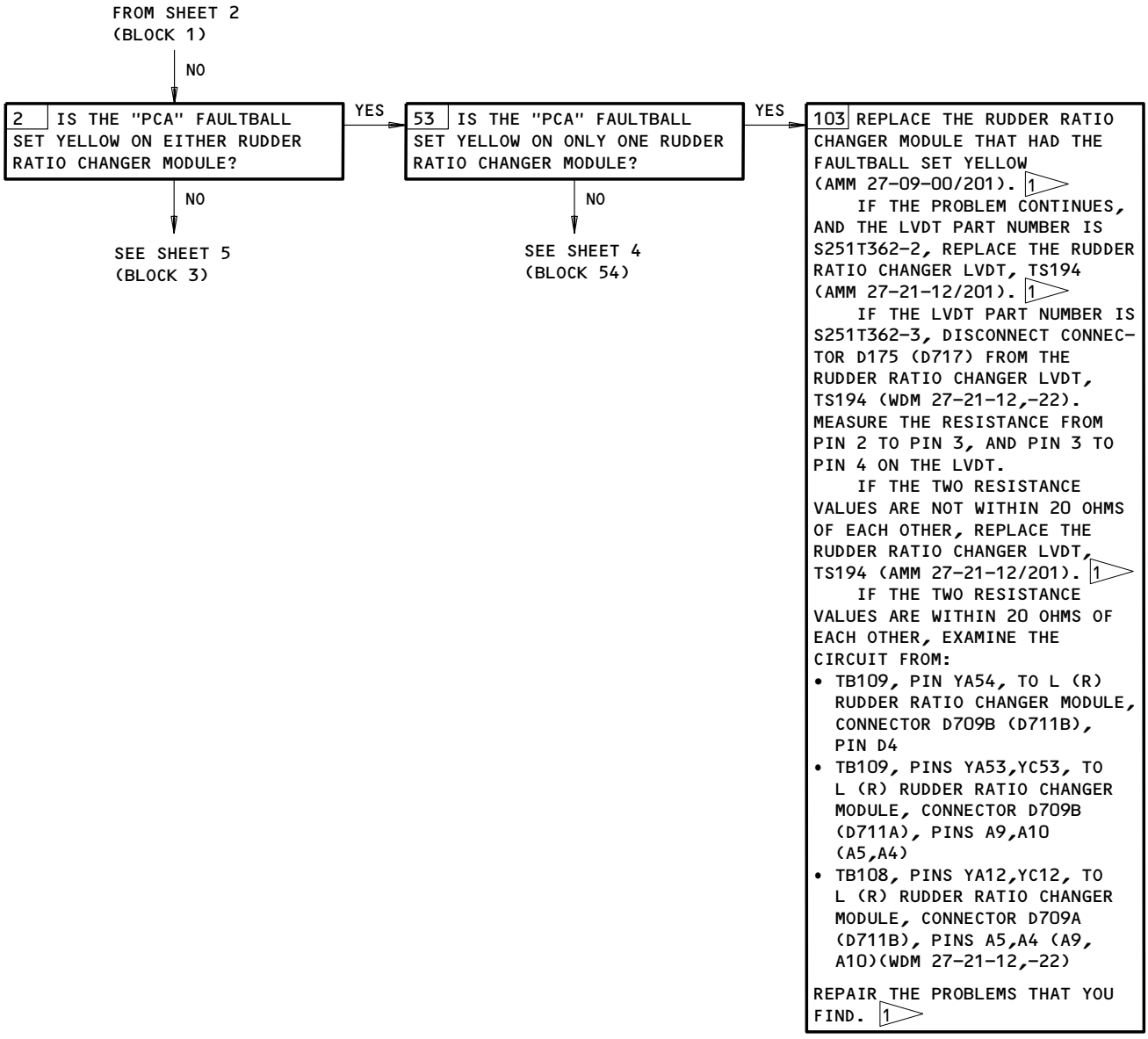
Rudder Ratio Changer Module BITE Procedure
Figure 106B (Sheet 1)

RUDDER RATIO CHANGER MODULE BITE PROCEDURE

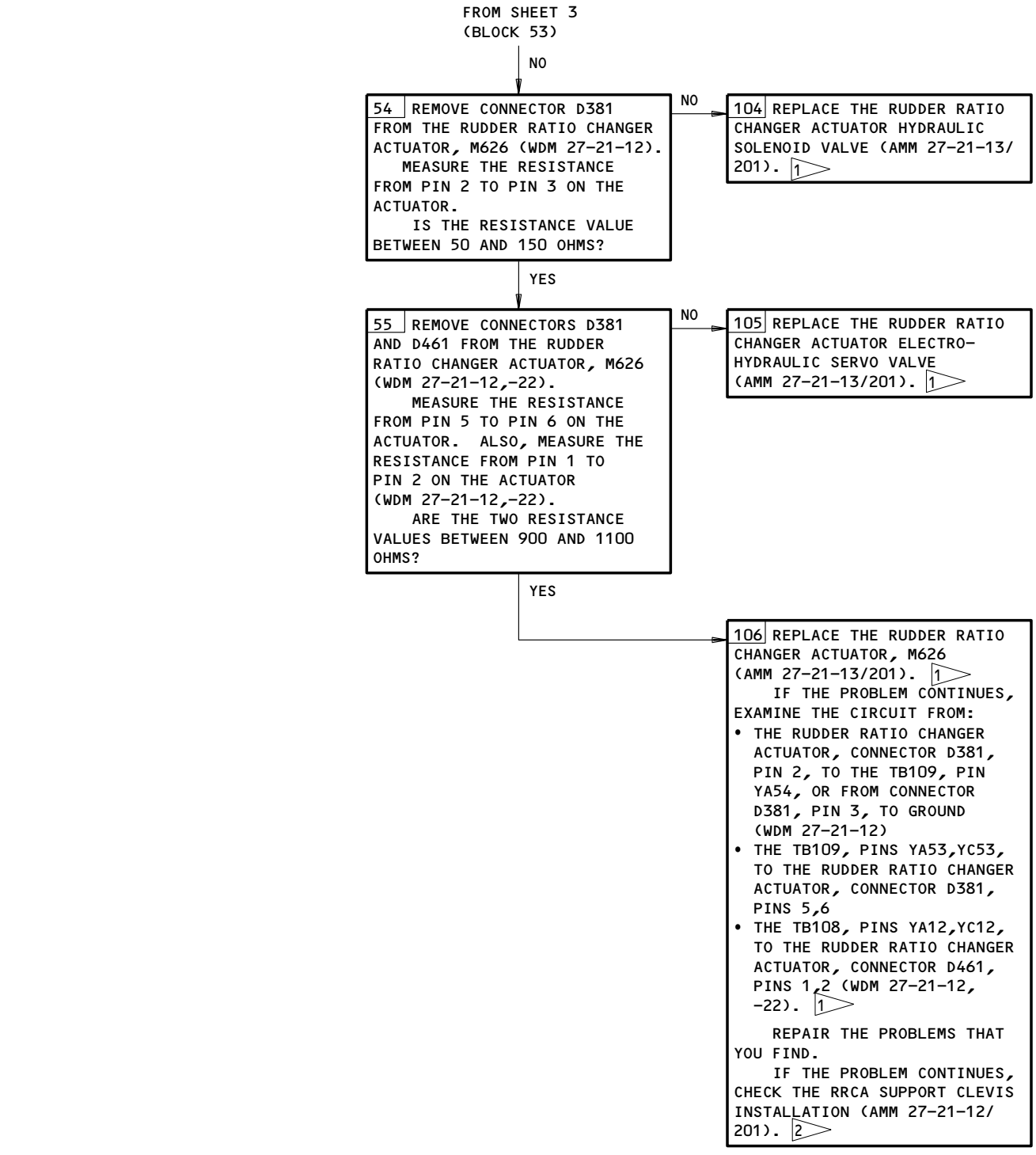


1 DO THE RUDDER RATIO CHANGER MODULE TEST IN BLOCK 1.

Rudder Ratio Changer Module BITE Procedure
Figure 106B (Sheet 2)

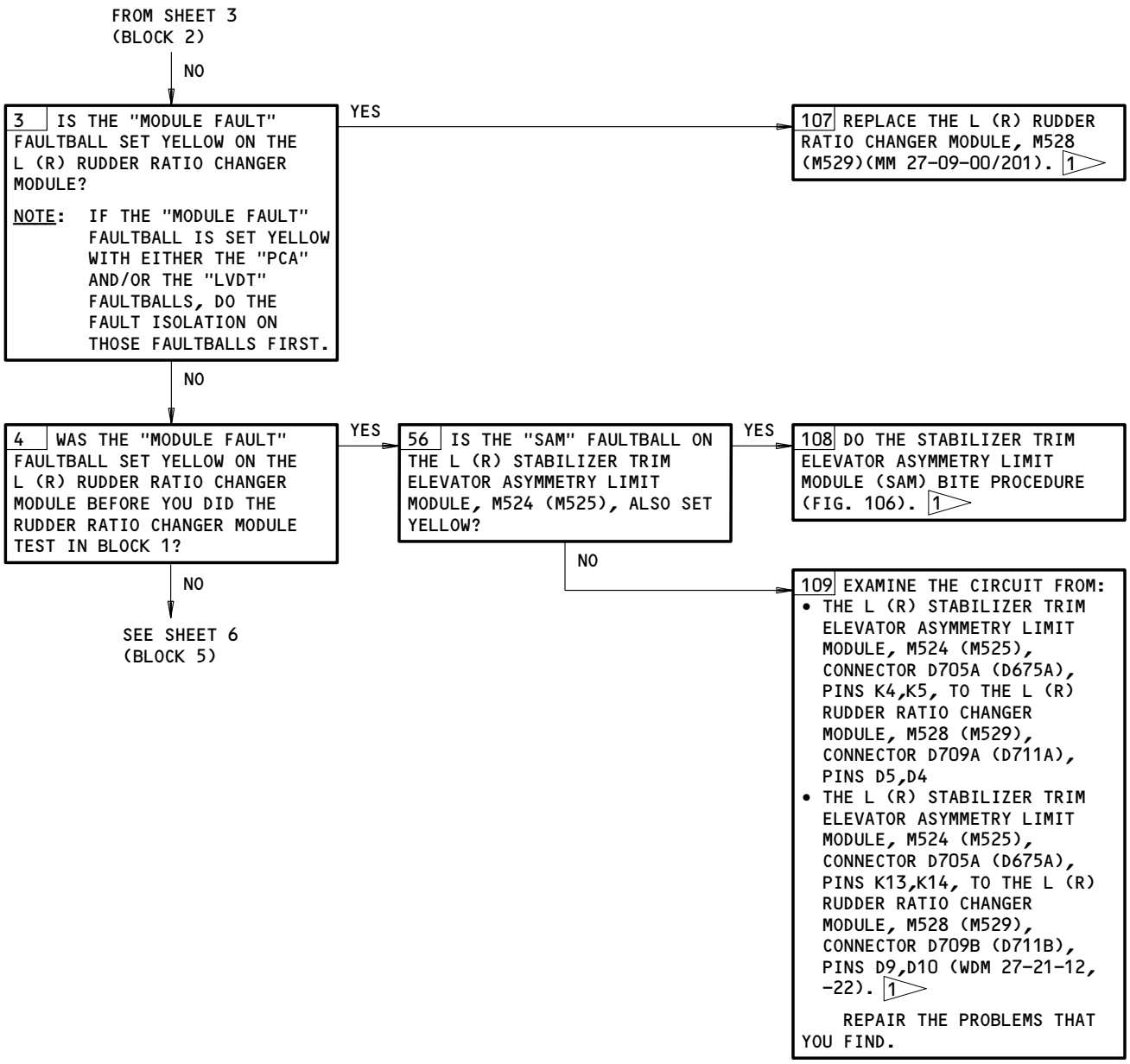


Rudder Ratio Changer Module BITE Procedure
Figure 106B (Sheet 3)

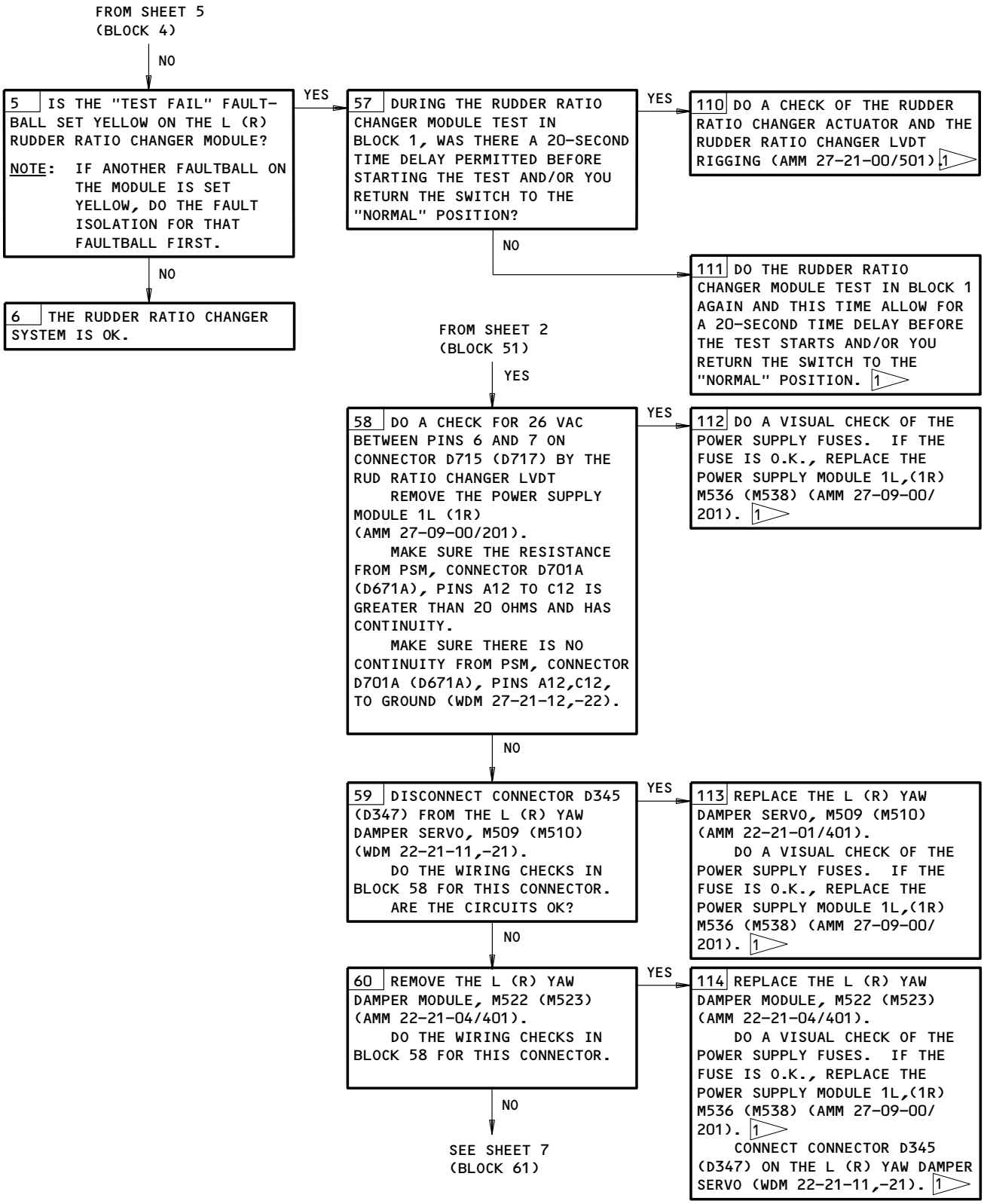


2 PCA FAULTBALL CAN BE SET BY IMPROPER SHIM INSTALLATION

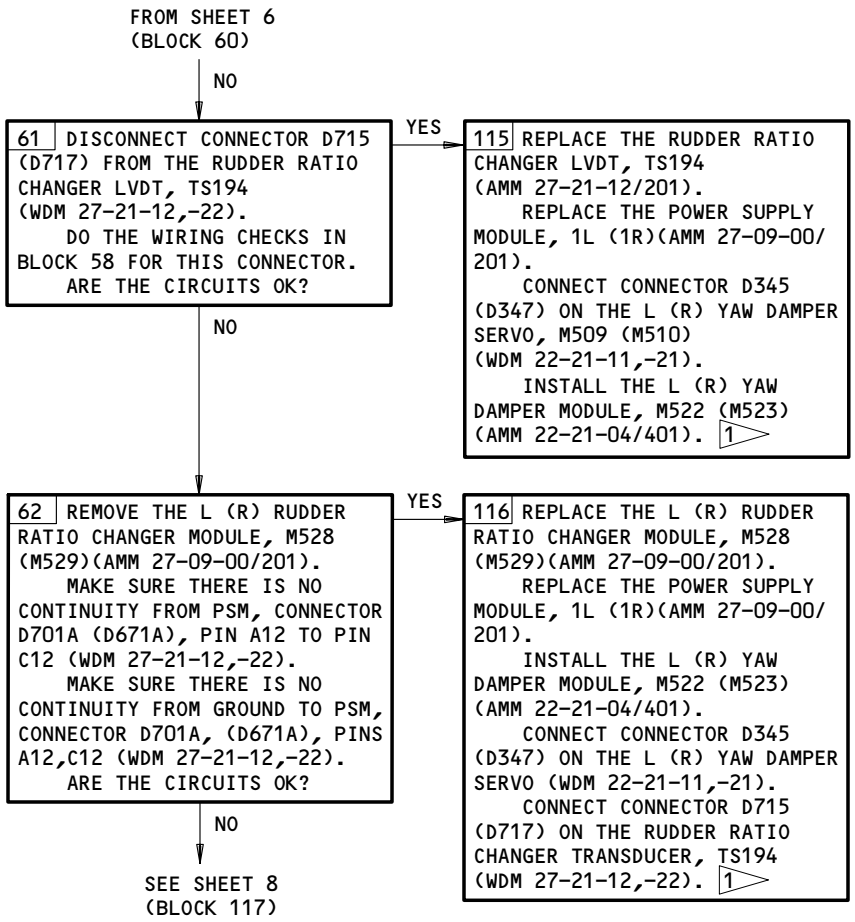
Rudder Ratio Changer Module BITE Procedure
Figure 106B (Sheet 4)



Rudder Ratio Changer Module BITE Procedure
Figure 106B (Sheet 5)



Rudder Ratio Changger Module BITE Procedure
Figure 106B (Sheet 6)



Rudder Ratio Changer BITE Procedure
Figure 106B (Sheet 7)

FROM SHEET 7
(BLOCK 62)

NO

117 EXAMINE THE CIRCUIT FROM PSM, CONNECTOR D701A (D671A), PINS A12,C12, TO:

- YDM, CONNECTOR D349A (D351A), PINS F14,E15 (WDM 22-21-11,-21; 27-21-12,-22)
- YAW DAMPER SERVO, CONNECTOR D345 (D347), PINS 5,6 (WDM 22-21-11,-21; 27-21-12, -22)
- RUDDER RATIO CHANGER MODULE, CONNECTOR D709A (D711A), PINS A10,A9; D709B (D711B), PINS A5,A4 (WDM 27-21-12, -22)
- RUDDER RATIO CHANGER LVDT, TS194, CONNECTOR D715 (D717), PINS 6,7 (WDM 27-21-12,-22)

REPAIR THE PROBLEMS THAT YOU FIND.

REPLACE THE POWER SUPPLY MODULE, 1L (1R)(AMM 27-09-00/201).

INSTALL THE L (R) YAW DAMPER MODULE, M522 (M523) (AMM 22-21-04/401).

CONNECT CONNECTOR D345 (D347) ON THE L (R) YAW DAMPER SERVO, M509 (M510) (WDM 22-21-11,-21).

CONNECT CONNECTOR D715 (D717) ON THE RUDDER RATIO CHANGER TRANSDUCER, TS194 (WDM 27-21-12,-22).

INSTALL THE L (R) RUDDER RATIO CHANGER MODULE, M528 (M529) (AMM 27-09-00/201).

1

Rudder Ratio Changer BITE Procedure
Figure 106B (Sheet 8)

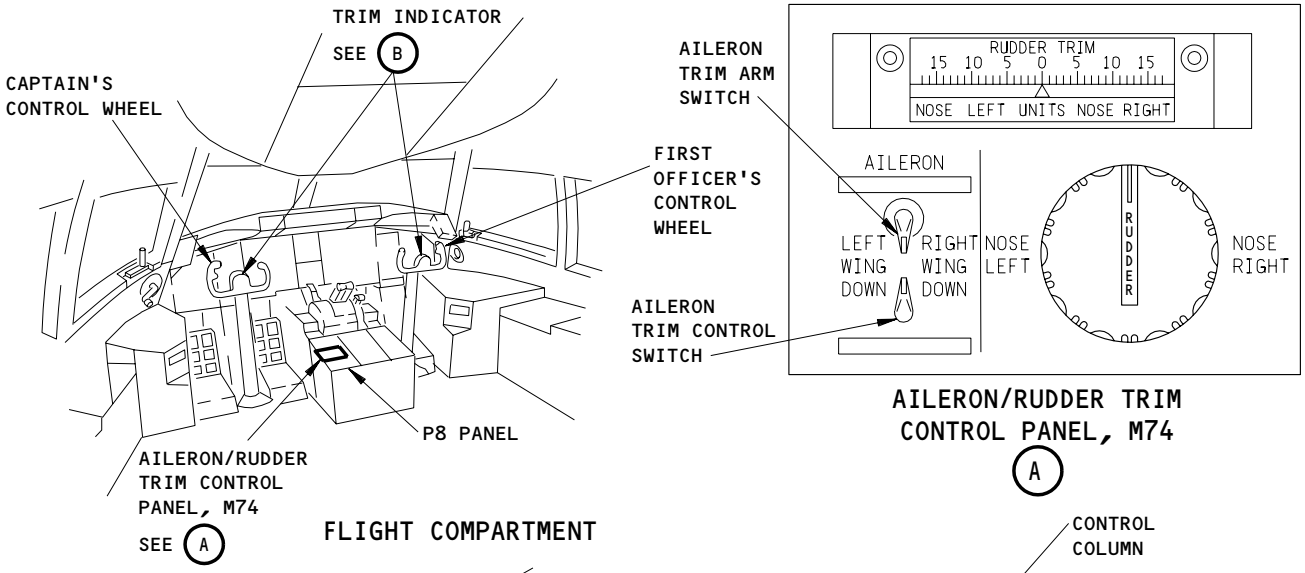
AILERON AND AILERON TRIM CONTROL SYSTEM

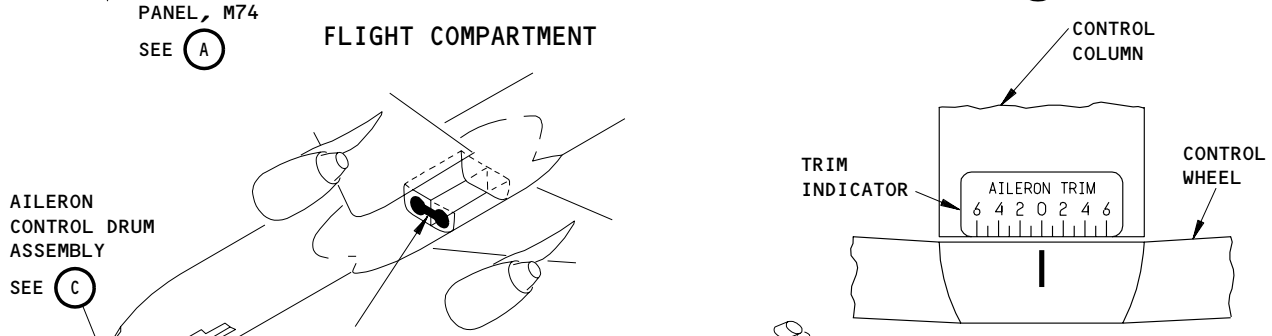
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ACTUATOR (PCA) - AILERON POWER CONTROL	3	4	561CB,661CB	27-11-20
ACTUATOR - LATERAL TRIM, M488	2	1	LEFT MAIN GEAR WHEEL WELL, LATERAL CONTROL FEEL, CENTERING AND TRIM MECHANISM	27-11-14
AILERON - 568,668	3	2	WING TRAILING EDGE	27-11-21
ASSEMBLY - AILERON CONTROL DRUM	1	2	113AL, FWD EQUIP COMPT	27-11-03
CABLES - CONTROL (REF MM 27-00-01/201)				
CIRCUIT BREAKER	1		FLT COMPT, P11	
AILERON POS L, C4099		1	11J14	*
AILERON POS R, C4100		1	11J23	*
AILERON TRIM, C1035		1	11J15	*
DAMPER - CONTROL WHEEL 1	1	2	113AL, FWD EQUIP COMPT	27-11-03
FILTER - AILERON PCA	3	4	561CB,661CB, AILERON PCA	27-11-20
INDICATOR - AILERON TRIM	1	2	FLT COMPT, CONTROL WHEEL	27-11-00
LIMITER - BUS FORCE	1	1	113AL, FWD EQUIP COMPT	27-11-03
MECHANISM - AILERON QUADRANT AND OVERRIDE	3	2	561AB,661AB	27-11-18
MECHANISM - LATERAL CONTROL FEEL, CENTERING, AND TRIM	2	1	LEFT MAIN GEAR WHEEL WELL, FWD BULKHEAD	27-11-14
MECHANISM - LATERAL CONTROL OVERRIDE	2	1	RIGHT MAIN GEAR WHEEL WELL, FWD BULKHEAD	27-11-16
PANEL - AILERON/RUDDER TRIM CONTROL, M74	1	1	FLT COMPT, P8	*
SERVO (ALCS) - (REF 22-13-00, FIG. 101)				
CENTER AUTOPILOT LATERAL CONTROL, M10041				
LEFT AUTOPILOT LATERAL CONTROL, M10040				
LEFT AUTOPILOT LATERAL CONTROL, M10042				
SWITCH - AILERON TRIM ARM	1	1	FLT COMPT, P8, AIL/RUD TRIM CONT PANEL, M74	*
SWITCH - AILERON TRIM CONTROL	1	1	FLT COMPT, P8, AIL/RUD TRIM CONT PANEL, M74	*
UNIT - (REF 27-61-00, FIG. 101)				
SPOILER TRANSDUCER (RVDT), TS5081,TS5082				
WHEEL - LATERAL CONTROL	1	2	FLT COMPT, CONTROL COLUMN	27-11-02

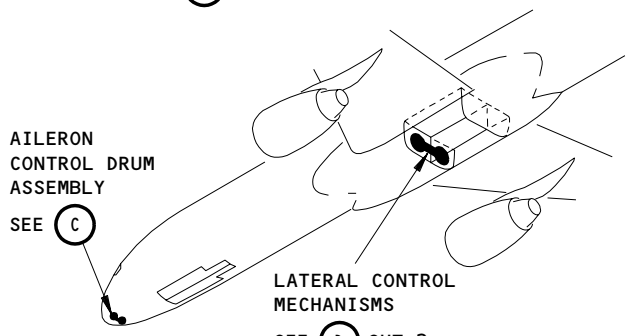
* SEE THE WDM EQUIPMENT LIST

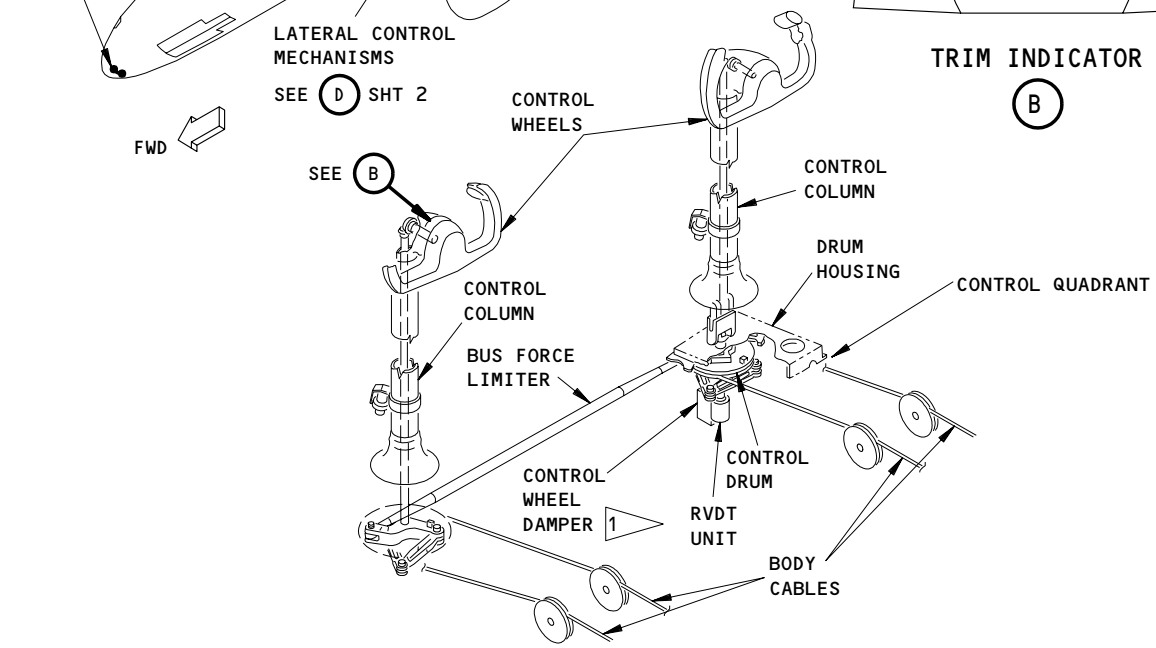
1 AIRPLANES WITH CONTROL WHEEL DAMPER (SB 27A0147 OR PRR 54530-257S)

Aileron and Aileron Trim Control System - Component Index
Figure 101



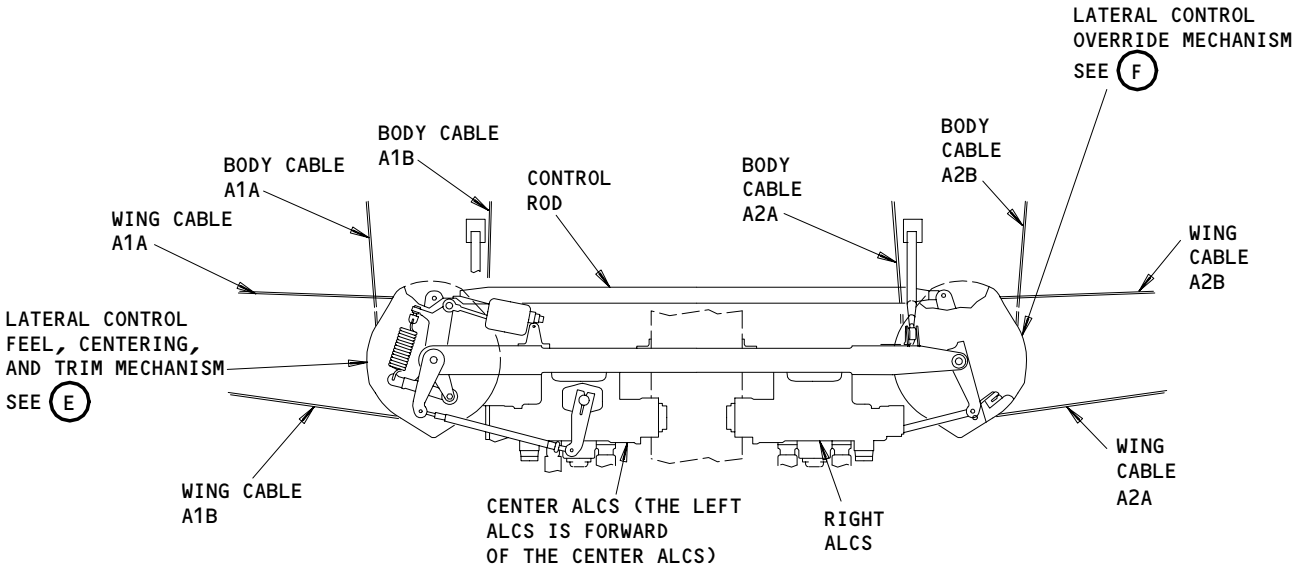






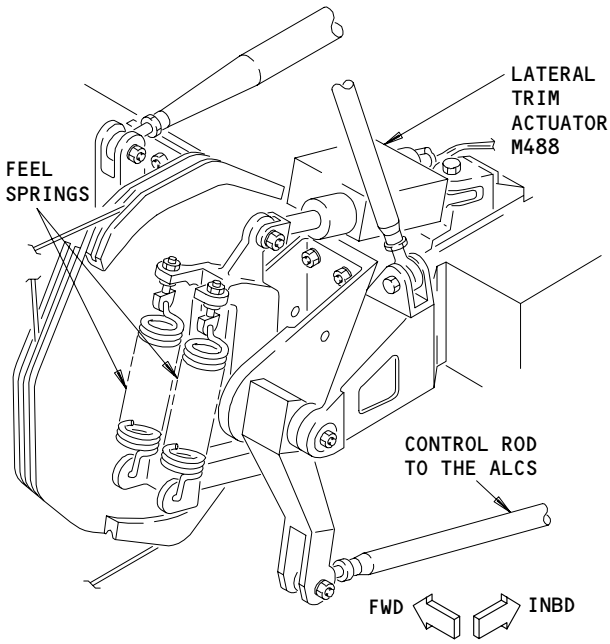
1 AIRPLANES WITH CONTROL WHEEL DAMPER (PRR 54530-257S, SB 757-27A0146 OR SB 757-27A0147)

Aileron and Aileron Trim Control - Component Location
Figure 102 (Sheet 1)



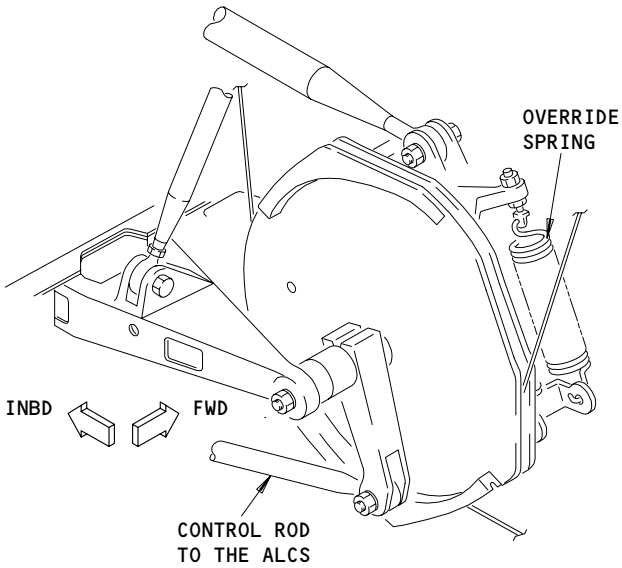
LATERAL CONTROL MECHANISMS

D FROM SHT 1



LATERAL CONTROL FEEL, CENTERING, AND TRIM MECHANISM

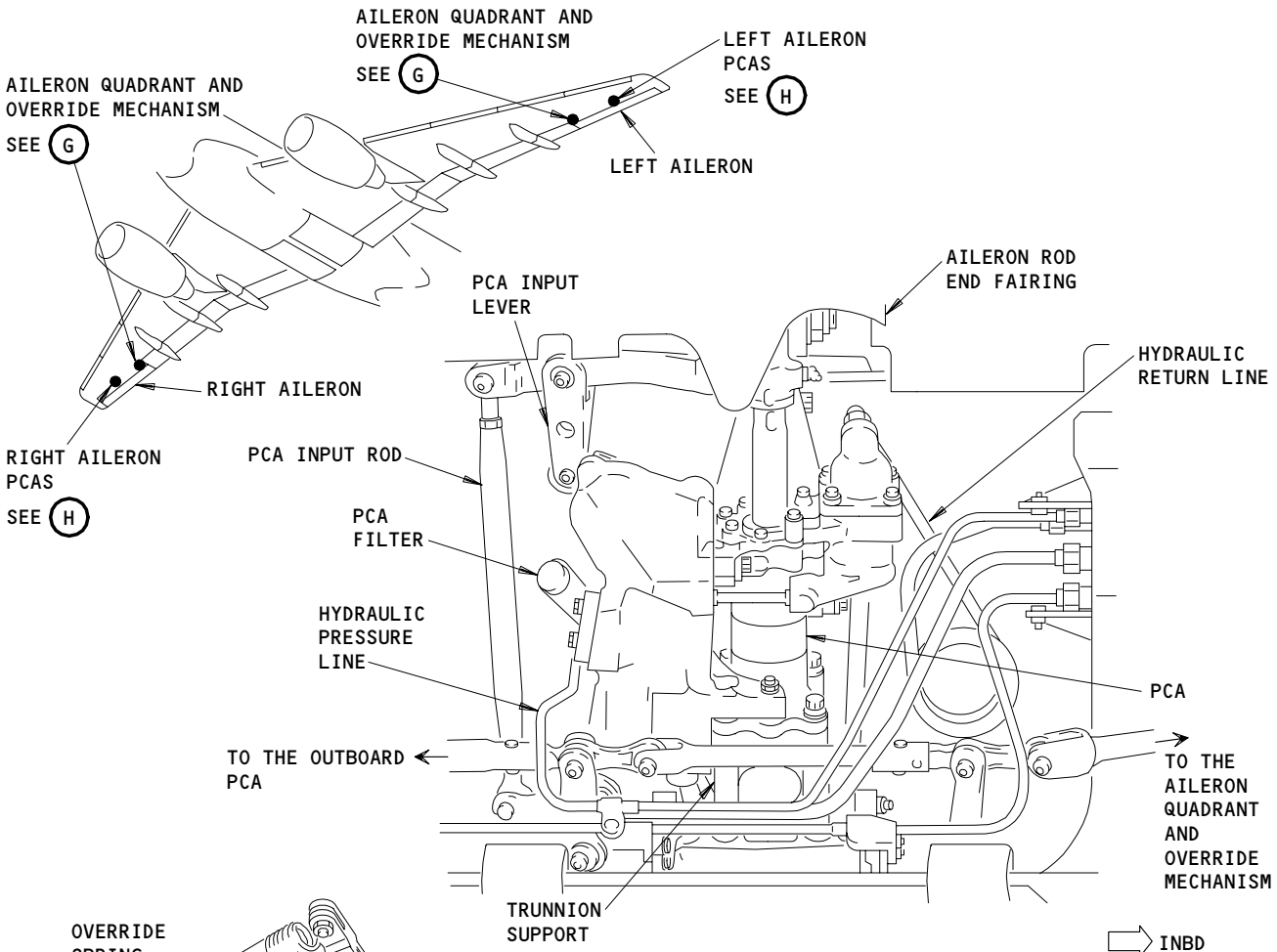
E



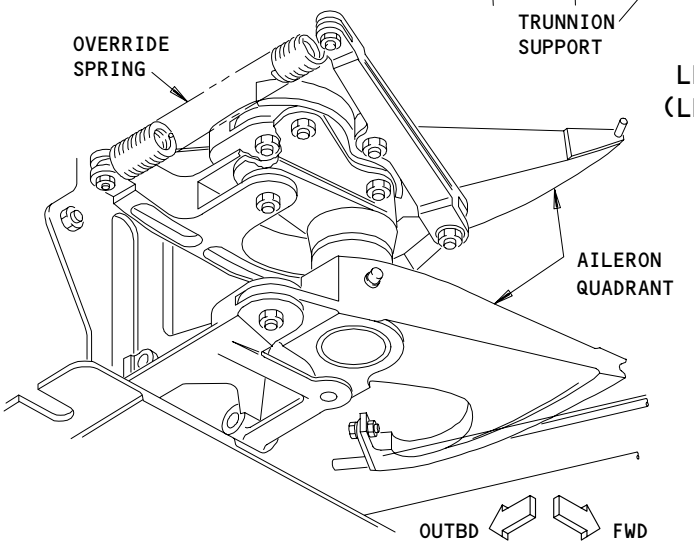
LATERAL CONTROL OVERRIDE MECHANISM

F

Aileron and Aileron Trim Control – Component Location
Figure 102 (Sheet 2)



LEFT OR RIGHT AILERON PCA
(LEFT INBOARD PCA IS SHOWN)
H



AILERON QUADRANT AND OVERRIDE MECHANISM
(LEFT SIDE SHOWN, RIGHT SIDE IS OPPOSITE)
G

Aileron and Aileron Trim Control - Component Location
Figure 102 (Sheet 3)

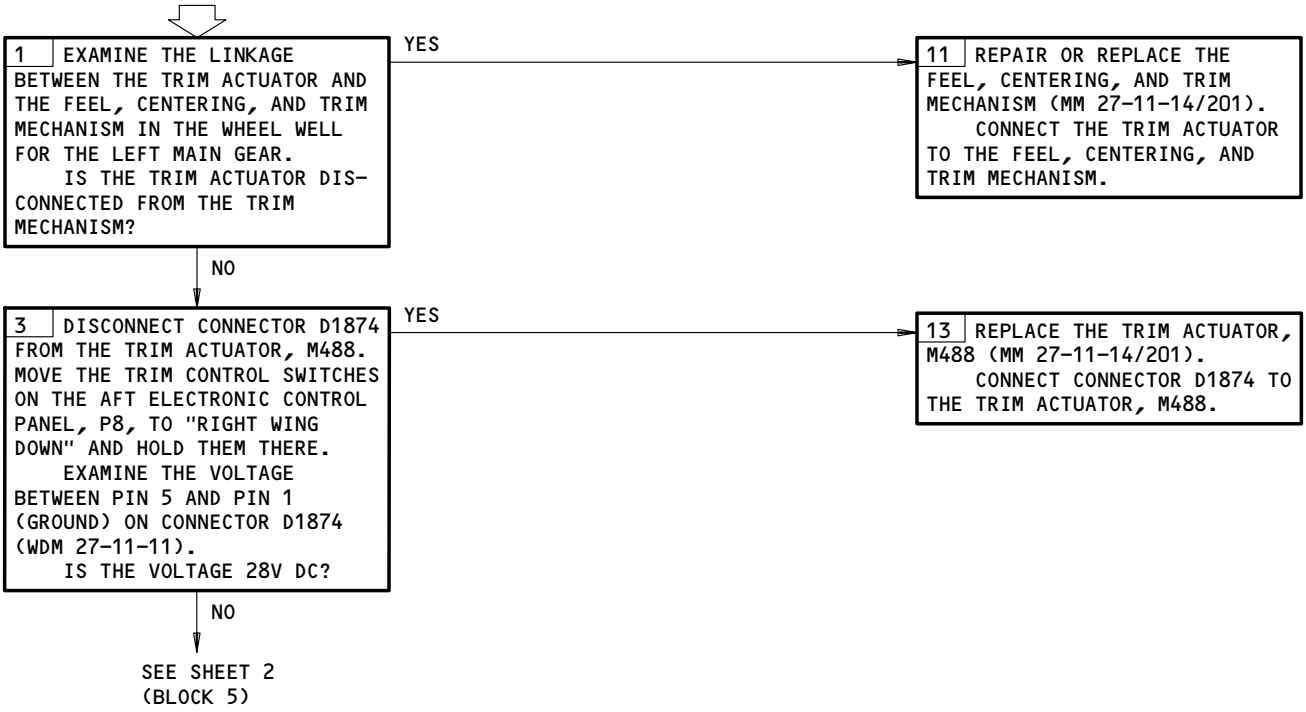
Not Used
Figure 103

PREREQUISITES

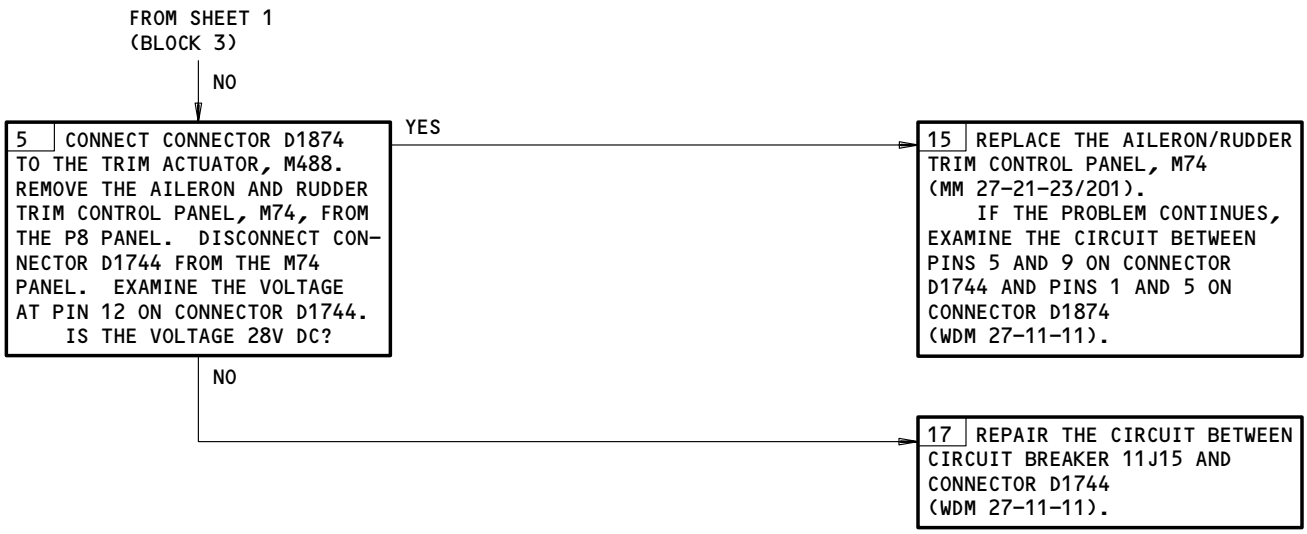
MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
11J15

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
THE DOOR LOCKS FOR THE MAIN LANDING GEAR DOORS ARE INSTALLED (MM 32-00-15/201)

AILERON TRIM FAILED TO TRIM IN EITHER DIRECTION



Aileron Trim Failed to Trim in Either Direction
Figure 104 (Sheet 1)



Aileron Trim Failed to Trim in Either Direction
Figure 104 (Sheet 2)

AILERON TRIM FAILED TO TRIM IN LEFT (RIGHT) WING DOWN DIRECTION

PREREQUISITES

NONE

1	REPLACE THE AILERON/RUDDER TRIM CONTROL PANEL, M74 (MM 27-21-23/201).

Aileron Trim Failed to Trim in Left (Right) Wing Down Direction
Figure 105

PREREQUISITES

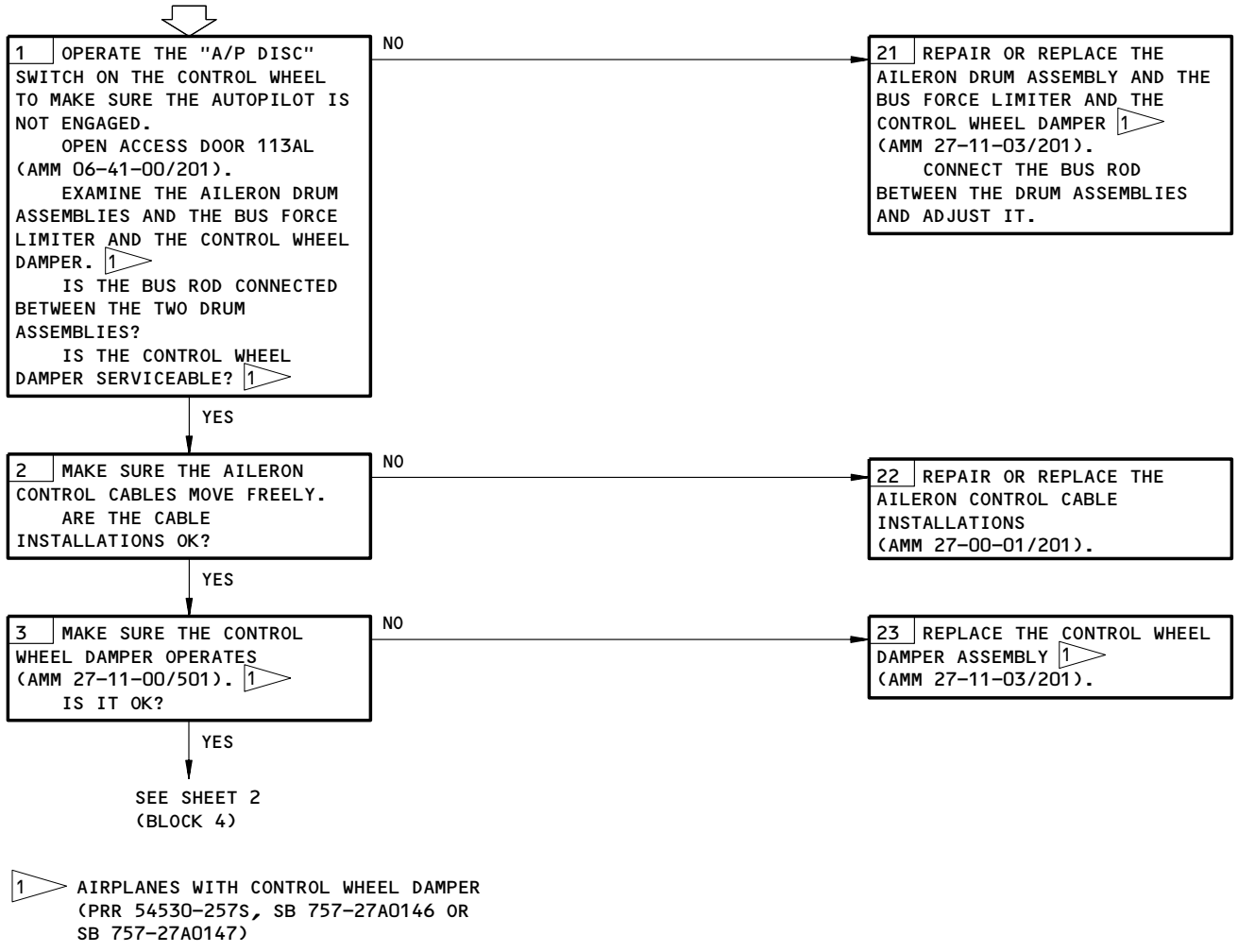
MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11J14, 11J23

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

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZERS ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAPTAIN'S (FIRST OFFICER'S) AILERON CONTROL WHEEL BINDING



1 AIRPLANES WITH CONTROL WHEEL DAMPER (PRR 54530-257S, SB 757-27A0146 OR SB 757-27A0147)

Captain's (First Officer's) Aileron Control Wheel Binding
Figure 106 (Sheet 1)

71156

FROM SHEET 1
(BLOCK 3)

YES

4 DISCONNECT THE WING CONTROL CABLES, A1A AND A1B (A2A AND A2B) FROM THE FEEL, CENTERING, AND TRIM MECHANISM (LATERAL CONTROL OVERRIDE MECHANISM).
DOES THE CONTROL WHEEL TURN FREELY?

NO → 11 DISCONNECT THE BODY CONTROL CABLES, A1A AND A1B FROM THE FEEL, CENTERING, AND TRIM MECHANISM AND A2A AND A2B FROM THE LATERAL CONTROL OVERRIDE MECHANISM.
DISCONNECT THE CONTROL ROD BETWEEN THE FEEL, CENTERING, AND TRIM MECHANISM AND THE LATERAL CONTROL OVERRIDE MECHANISM.
MANUALLY TURN THE FEEL, CENTERING, AND TRIM MECHANISM.
DOES THE MECHANISM TURN FREELY?

NO → 24 REPAIR OR REPLACE THE APPLICABLE MECHANISMS:
THE FEEL, CENTERING, AND TRIM MECHANISM (AMM 27-11-14/201)
THE LEFT AND CENTER AUTOPILOT LATERAL CONTROL SERVOs (ALCS) (AMM 22-13-03/401).
CONNECT THE CONTROL ROD BETWEEN THE FEEL, CENTERING, AND TRIM MECHANISM AND THE OVERRIDE MEHANISM.
CONNECT CONTROL CABLES A1A, A1B, A2A, AND A2B AND ADJUST THEM (AMM 27-11-00/501).

YES

25 REPAIR OR REPLACE THE APPLICABLE MECHANISMS:
THE LATERAL CONTROL OVERRIDE MECHANISM (AMM 27-11-16/401)
THE RIGHT AUTOPILOT LATERAL CONTROL SERVO (AMM 22-13-03/401).
CONNECT THE CONTROL ROD BETWEEN THE LATERAL CONTROL FEEL, CENTERING, AND TRIM MECHANISM AND THE OVERRIDE MECHANISM.
CONNECT CONTROL CABLES A1A, A1B, A2A, AND A2B AND ADJUST THEM (AMM 27-11-00/501).

YES

5 DISCONNECT THE PCA CONTROL ROD FROM THE AILERON QUADRANT AND OVERRIDE MECHANISM.
MANUALLY TURN THE QUADRANT AND OVERRIDE MECHANISM.
DOES THE MECHANISM TURN FREELY?

NO → 26 REPAIR OR REPLACE THE AILERON QUADRANT AND OVERRIDE MECHANISM (AMM 27-11-17/401).
CONNECT CONTROL CABLES A1A, A1B, A2A, AND A2B AND ADJUST THEM (AMM 27-11-00/501).

YES

6 CONNECT CONTROL CABLES A1A, A1B, A2A, AND A2B AND ADJUST THEM (AMM 27-11-00/501).
CLOSE ACCESS DOOR 113AL.
SUPPLY PRESSURE TO THE CENTER HYDRAULIC SYSTEM ONLY (AMM 29-11-00/201).
PUSH THE STATUS SWITCH ON THE DISPLAY SELECT PANEL, P9, TO SHOW THE AILERON POSITION INDICATOR ON THE BOTTOM EICAS DISPLAY.
TURN THE CONTROL WHEEL FULLY CLOCKWISE AND THEN FULLY COUNTERCLOCKWISE.
DOES THE LEFT (RIGHT) AILERON OPERATE CORRECTLY?

NO → 27 REPLACE THE INBOARD POWER CONTROL ACTUATOR FOR THE LEFT (RIGHT) AILERON (AMM 27-11-20/201).

YES → 28 REPLACE THE OUTBOARD POWER CONTROL ACTUATOR FOR THE LEFT (RIGHT) AILERON (AMM 27-11-20/201).

Captain's (First Officer's) Aileron Control Wheel Binding
Figure 106 (Sheet 2)

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11J14,11J23

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
DOOR LOCKS FOR THE MAIN LANDING GEAR DOORS ARE INSTALLED (MM 32-00-15/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZERS ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

CAPTAIN'S AND FIRST OFFICER'S AILERON CONTROL WHEELS BINDING

1 OPERATE THE "A/P DISC" SWITCH ON THE CONTROL WHEEL TO MAKE SURE THE AUTOPILOT IS NOT ENGAGED. EXTEND AND DEACTIVATE THE TRAILING EDGE FLAPS (MM 27-51-00/201).
MAKE SURE YOU REMOVED THE POWER FROM THE LEFT, RIGHT, AND CENTER HYDRAULIC SYSTEMS (MM 29-11-00/201). OPEN ACCESS PANELS 561AB,561BB, 561CB,661AB,661BB AND 661CB (MM 06-44-00/201).
EXAMINE THE CABLE INSTALLATIONS FOR LEFT WING CABLES A1A AND A1B AND RIGHT WING CABLES A2A AND A2B.
ARE THE CABLE INSTALLATIONS OK?

NO → 21 REPAIR OR REPLACE THE CABLE INSTALLATIONS FOR CABLES A1A,A1B,A2A OR A2B.
CLOSE ACCESS PANELS 561AB, 561BB,561CB,661AB,661BB, AND 661CB (MM 06-44-00/201).

YES ↓

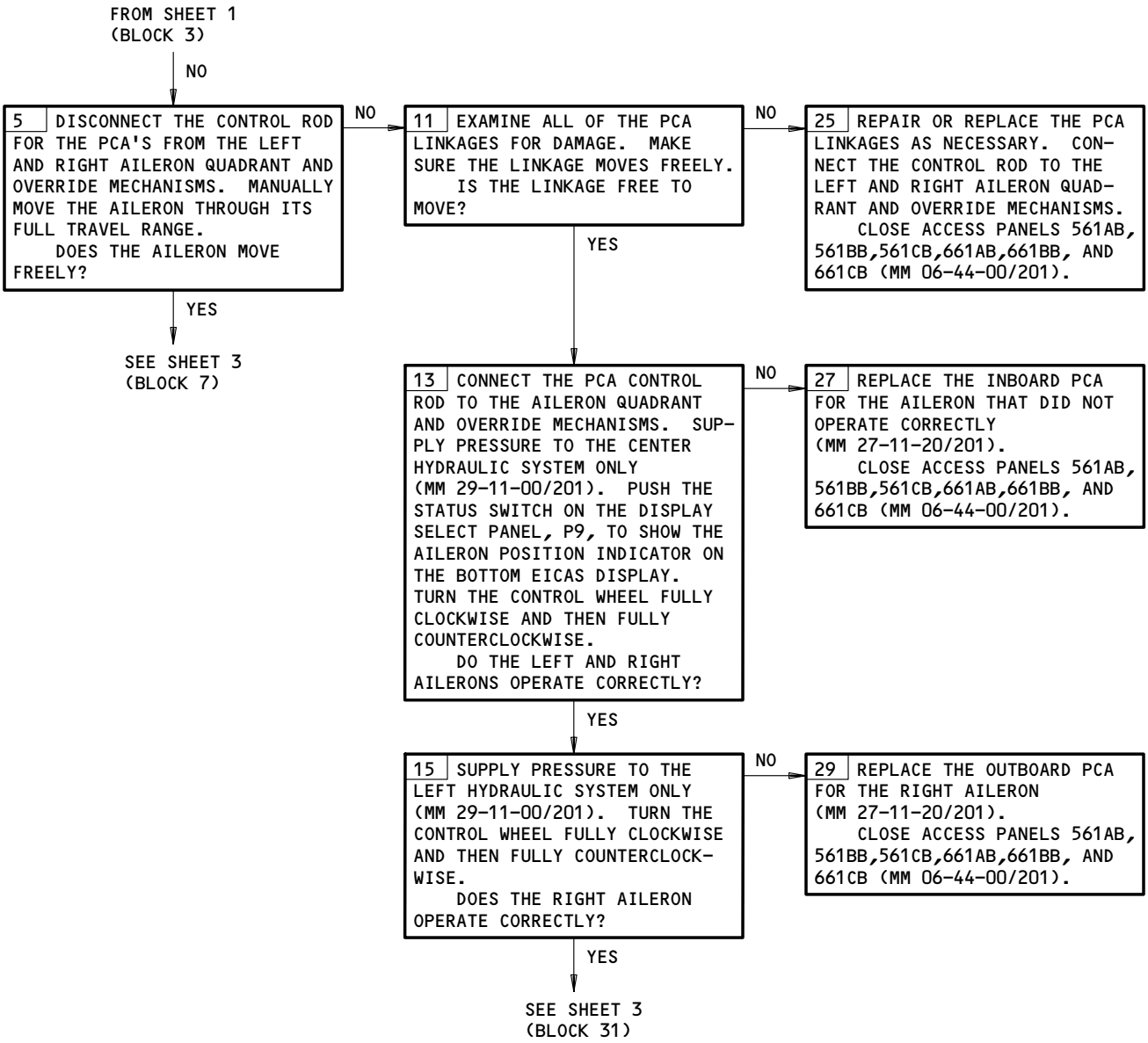
3 EXAMINE THE POWER CONTROL ACTUATORS (PCA) AND THEIR LINKAGES FOR DAMAGE AND CORRECT INSTALLATION.
ARE THE ACTUATORS DAMAGED OR DO THE LINKAGES NOT MOVE FREELY?

YES → 23 REPAIR OR REPLACE THE APPLICABLE COMPONENTS BELOW AND THEIR LINKAGES:
THE AILERON QUADRANT AND OVERRIDE MECHANISM (MM 27-11-17/401)
THE AILERON PCA (MM 27-11-20/201).
CLOSE ACCESS PANELS 561AB, 561BB,561CB,661AB,661BB, AND 661CB (MM 06-44-00/201).

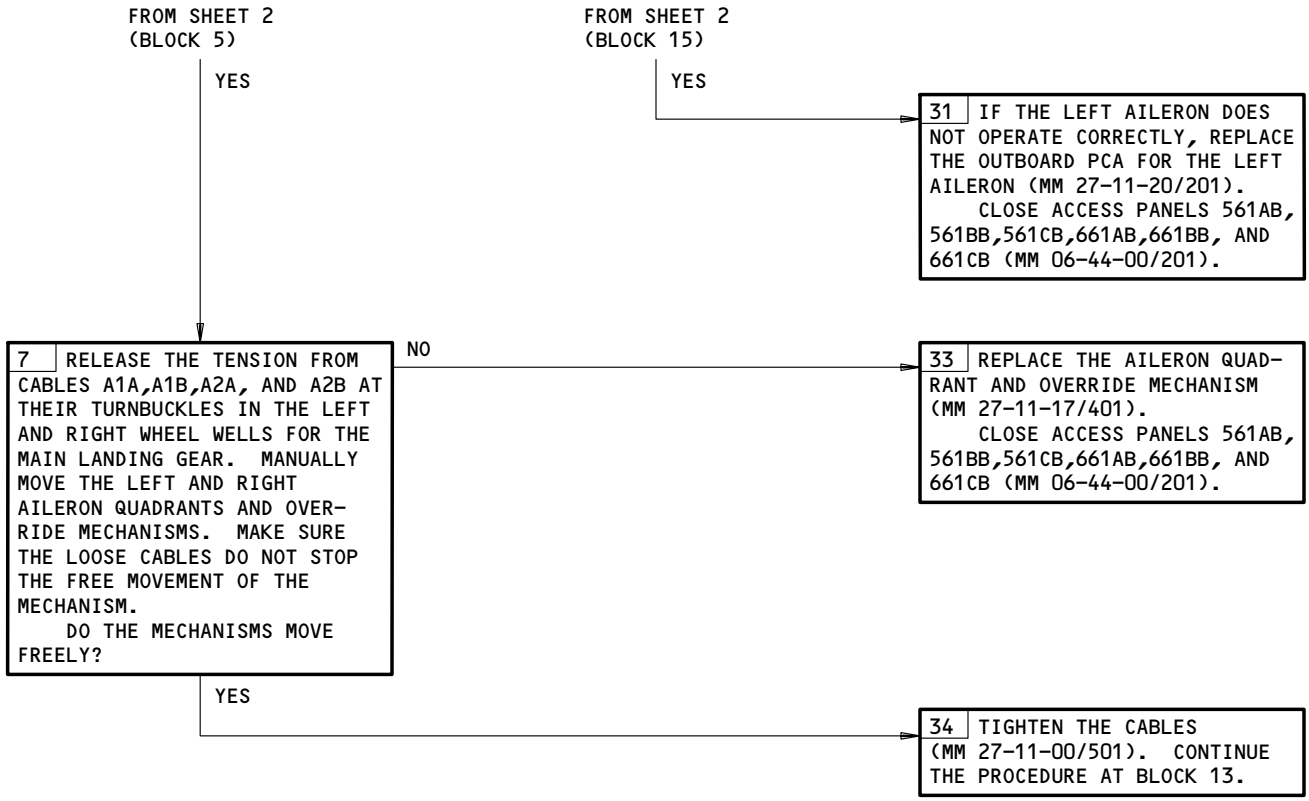
NO ↓

SEE SHEET 2 (BLOCK 5)

Captain's and First Officer's Aileron Control Wheels Binding
Figure 107 (Sheet 1)



Captain's and First Officer's Aileron Control Wheels Binding
Figure 107 (Sheet 2)



Captain's and First Officer's Aileron Control Wheels Binding
Figure 107 (Sheet 3)

PREREQUISITES

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
THE DOOR LOCKS FOR THE MAIN LANDING GEAR DOORS ARE INSTALLED (MM 32-00-15/201)

CAPTAIN'S (FIRST OFFICER'S) AILERON CONTROL WHEEL JAMMED

WARNING: MAKE SURE YOU REMOVED THE POWER FROM THE LEFT, RIGHT, AND CENTER HYDRAULIC SYSTEMS (MM 29-11-00/201). INJURY TO PERSON OR DAMAGE TO EQUIPMENT CAN OCCUR IF YOU DO THIS PROCEDURE WITH HYDRAULIC POWER SUPPLIED.

1 OPERATE THE "A/P DISC" SWITCH ON THE CONTROL WHEEL TO MAKE SURE THE AUTOPILOT IS NOT ENGAGED. EXTEND AND DEACTIVATE THE TRAILING EDGE FLAPS (MM 27-51-00/201).
MAKE SURE YOU REMOVED THE POWER FROM THE LEFT, RIGHT, CENTER HYDRAULIC SYSTEMS (MM 29-11-00/201). OPEN ACCESS PANEL 561AB (661AB) (MM 06-44-00/201). EXAMINE THE CABLE INSTALLATIONS FOR CABLES A1A AND A1B (A2A AND A2B).
ARE THE CABLE INSTALLATIONS OK?

NO → 11 REPAIR OR REPLACE THE CABLE INSTALLATIONS FOR CABLES A1A AND A1B (A2A AND A2B).
CLOSE ACCESS PANEL 561AB (661AB)(MM 06-44-00/201).

YES ↓

3 REMOVE THE CEILING PANELS IN THE FORWARD CARGO COMPARTMENT (MM 25-50-01/401).
EXAMINE THE CABLE INSTALLATIONS FOR CABLES A1A AND A1B (A2A AND A2B).
ARE THE CABLE INSTALLATIONS OK?

NO → 13 REPAIR OR REPLACE THE CABLE INSTALLATIONS FOR CABLES A1A AND A1B (A2A AND A2B).
CLOSE ACCESS PANEL 561AB (661AB)(MM 06-44-00/201).
INSTALL THE CEILING PANELS IN THE FORWARD CARGO COMPARTMENT (MM 25-50-01/401).

YES ↓

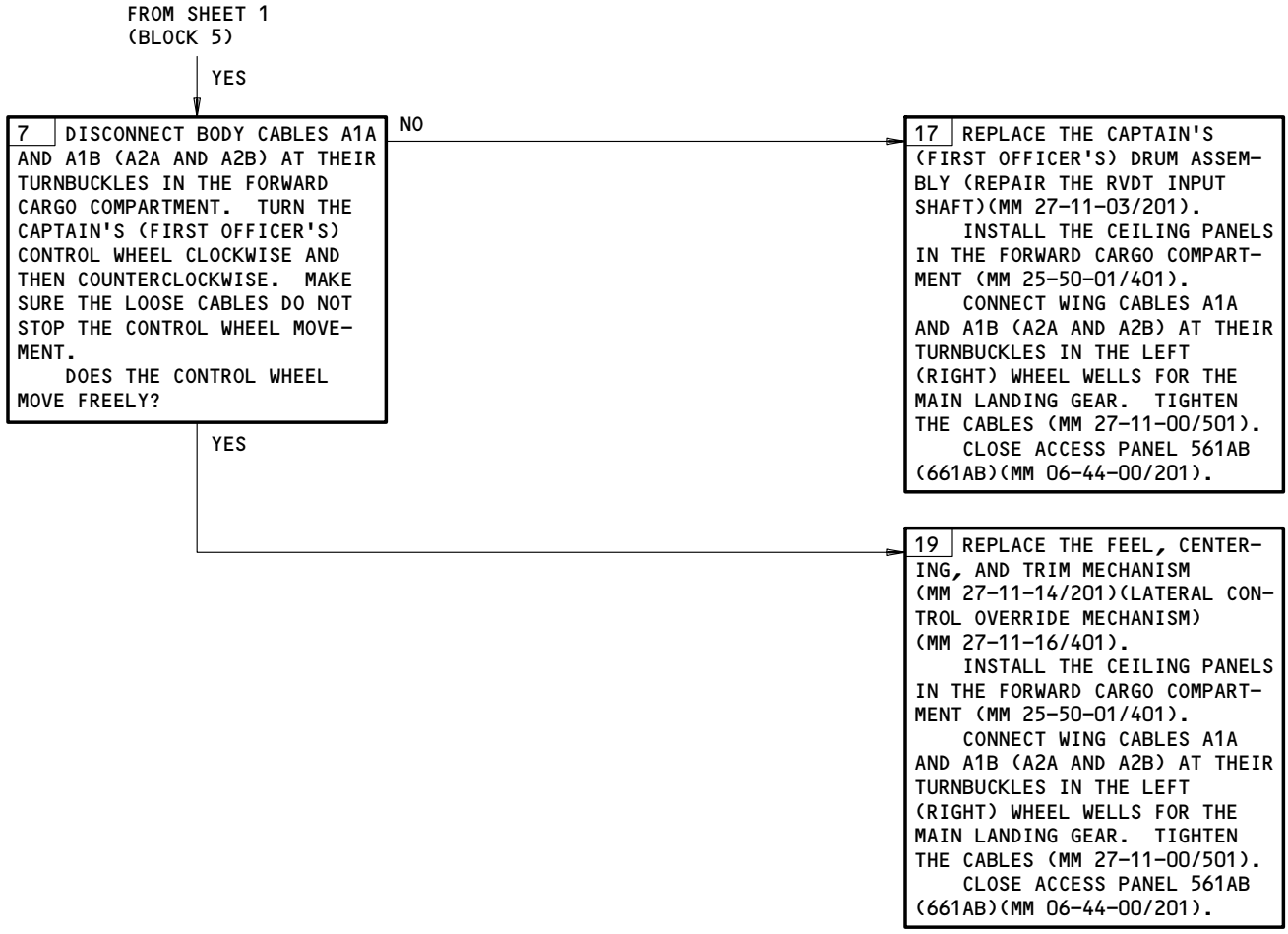
5 DISCONNECT WING CABLES A1A AND A1B (A2A AND A2B) AT THEIR TURNBUCKLES IN THE LEFT (RIGHT) WHEEL WELL FOR THE MAIN GEAR. TURN THE CAPTAIN'S (FIRST OFFICER'S) CONTROL WHEEL CLOCKWISE AND THEN COUNTERCLOCKWISE. MAKE SURE THE LOOSE CABLES DO NOT STOP THE CONTROL WHEEL MOVEMENT.
DOES THE CONTROL WHEEL MOVE FREELY?

YES → 15 REPLACE THE LEFT (RIGHT) AILERON QUADRANT AND OVERRIDE MECHANISM (MM 27-11-17/401).
INSTALL THE CEILING PANELS IN THE FORWARD CARGO COMPARTMENT (MM 25-50-01/401).
CONNECT WING CABLES A1A AND A1B (A2A AND A2B) AT THEIR TURNBUCKLES IN THE LEFT (RIGHT) WHEEL WELLS FOR THE MAIN LANDING GEAR. TIGHTEN THE CABLES (MM 27-11-00/501).
CLOSE ACCESS PANEL 561AB (661AB)(MM 06-44-00/201).

NO ↓

SEE SHEET 2
(BLOCK 7)

Captain's (First Officer's) Aileron Control Wheel Jammed
Figure 108 (Sheet 1)



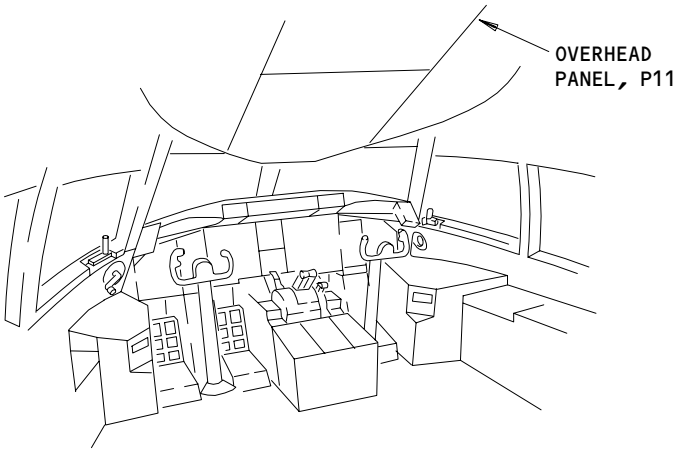
Captain's (First Officer's) Aileron Control Wheel Jammed
Figure 108 (Sheet 2)

AILERON POSITION INDICATING SYSTEM

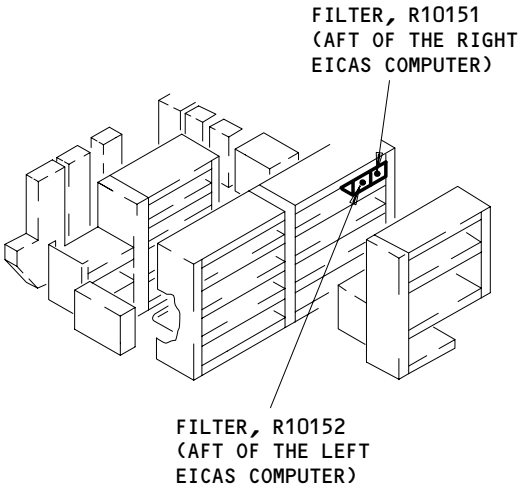
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER -	1		FLT COMPT, OVERHEAD PANEL, P11	*
AILERON POS L, C4099		1	11J14	*
AILERON POS R, C4100		1	11J23	*
AILERON TRIM, C1035		1	11J15	
COMPUTER - (FIM 31-41-00/101) L EICAS, M10181				
COMPUTER - (FIM 31-41-00/101) R EICAS, M10182				
FILTER, R10151,R10152	1	2	119BL, MAIN EQUIP CTR, E4-2	*
TRANSMITTER - LEFT AILERON POSITION, M10225	2	1	561AB, L OUTBD AILERON	27-18-01
TRANSMITTER - RIGHT AILERON POSITION, M101226	2	1	661AB, R OUTBD AILERON	27-18-01

* SEE THE WDM EQUIPMENT LIST

Aileron Position Indicating System - Component Index
Figure 101

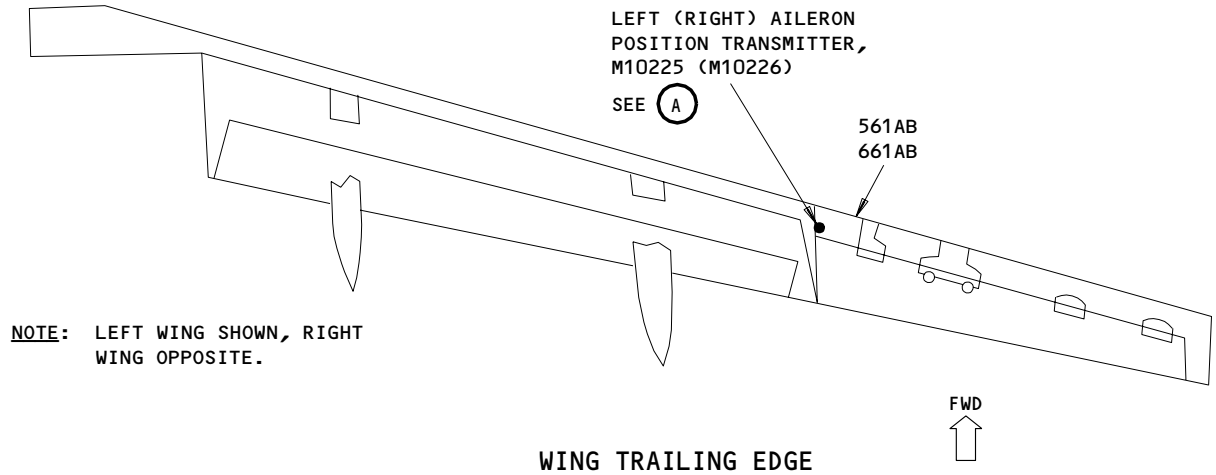


FLIGHT COMPARTMENT

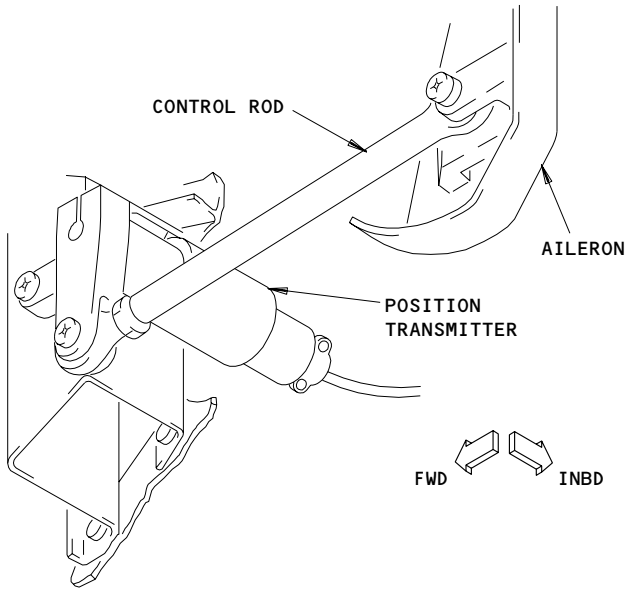


MAIN EQUIPMENT CENTER

Aileron Position Indicating System - Component Location
Figure 102 (Sheet 1)



WING TRAILING EDGE
BOTTOM VIEW



LEFT (RIGHT) AILERON POSITION TRANSMITTER,
M10225 (M10226)

A

Aileron Position Indicating System – Component Location
Figure 102 (Sheet 2)

Not Used
Figure 103

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11J14,11J23

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
HYDRAULIC POWER IS ON (MM 29-11-00/201)
MAIN LANDING GEAR DOOR LOCKS ARE INSTALLED (MM 32-00-15/201)

LEFT (RIGHT) AILERON INDICATOR POINTER FAILED TO INDICATE AILERON MOVEMENT

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILER, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN occur WHEN HYDRAULIC POWER IS SUPPLIED.

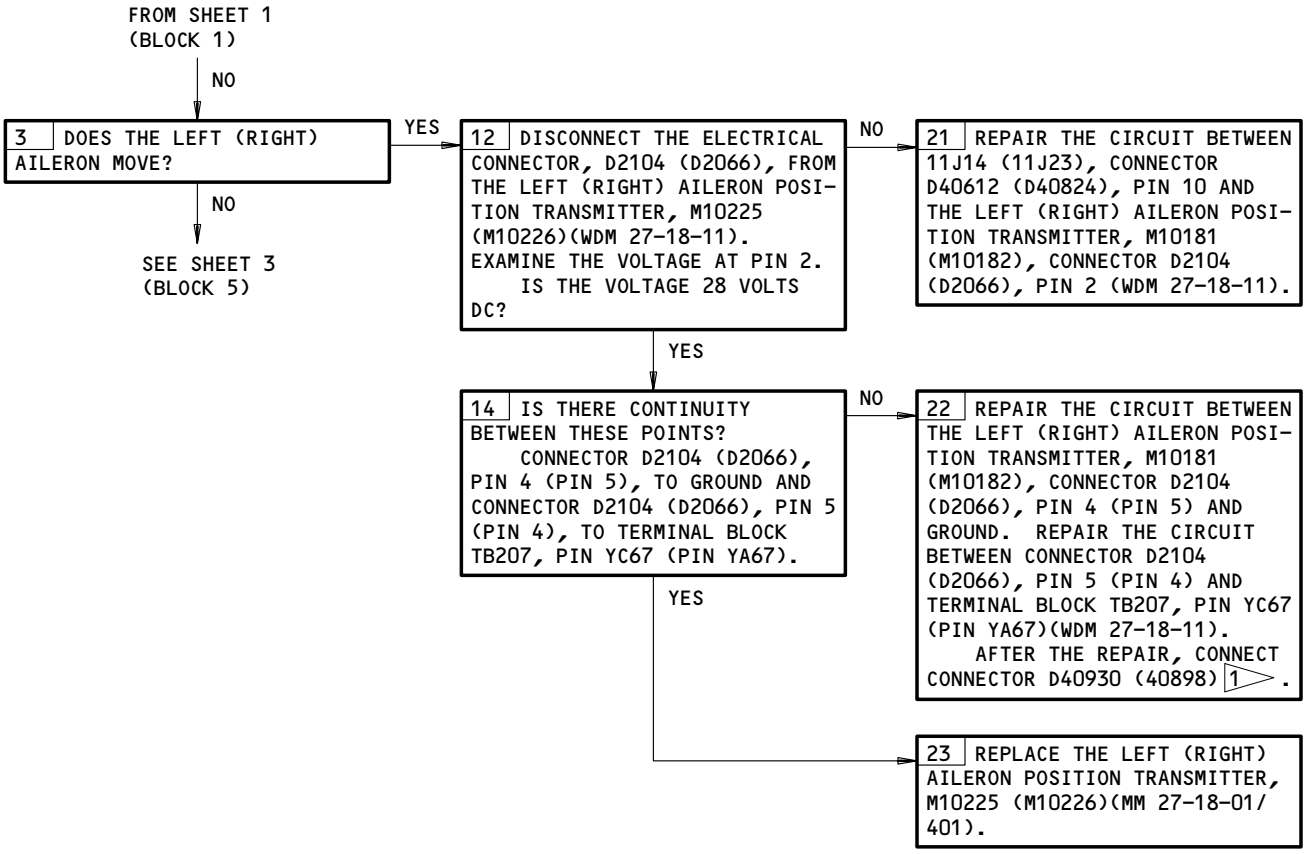
1 EXTEND THE TRAILING EDGE FLAPS. DO THE DEACTIVATION PROCEDURE FOR THE TRAILING EDGE FLAPS (MM 27-51-00/201).
PUSH THE "STATUS" SWITCH ON THE DISPLAY SELECT PANEL, P9, TO SHOW THE AILERON POSITION INDICATOR ON THE BOTTOM EICAS DISPLAY. TURN THE CAPTAIN'S CONTROL WHEEL FULLY CLOCKWISE AND THEN FULLY COUNTERCLOCKWISE. MOVE THE CONTROL WHEEL BACK TO ITS NEUTRAL POSITION. TURN THE FIRST OFFICER'S CONTROL WHEEL FULLY CLOCKWISE AND THEN FULLY COUNTERCLOCKWISE. MONITOR THE AILERONS AND THE POSITION INDICATOR MOVEMENT.
DOES THE LEFT (RIGHT) AILERON AND ITS POSITION INDICATOR MOVE FOR ONE CONTROL WHEEL ONLY?

YES → 20 EXAMINE THE CONTROL WHEEL (MM 27-11-02/401), THE DRUM ASSEMBLY (MM 27-11-03/201), AND THE CONTROL COLUMN (MM 27-31-10/401) FOR DAMAGED OR DISCONNECTED PARTS. REPAIR OR REPLACE THE ASSEMBLIES IF IT IS NECESSARY.

NO

SEE SHEET 2
(BLOCK 3)

Left (Right) Aileron Indicator Pointer Failed to Indicate Aileron Movement
Figure 104 (Sheet 1)

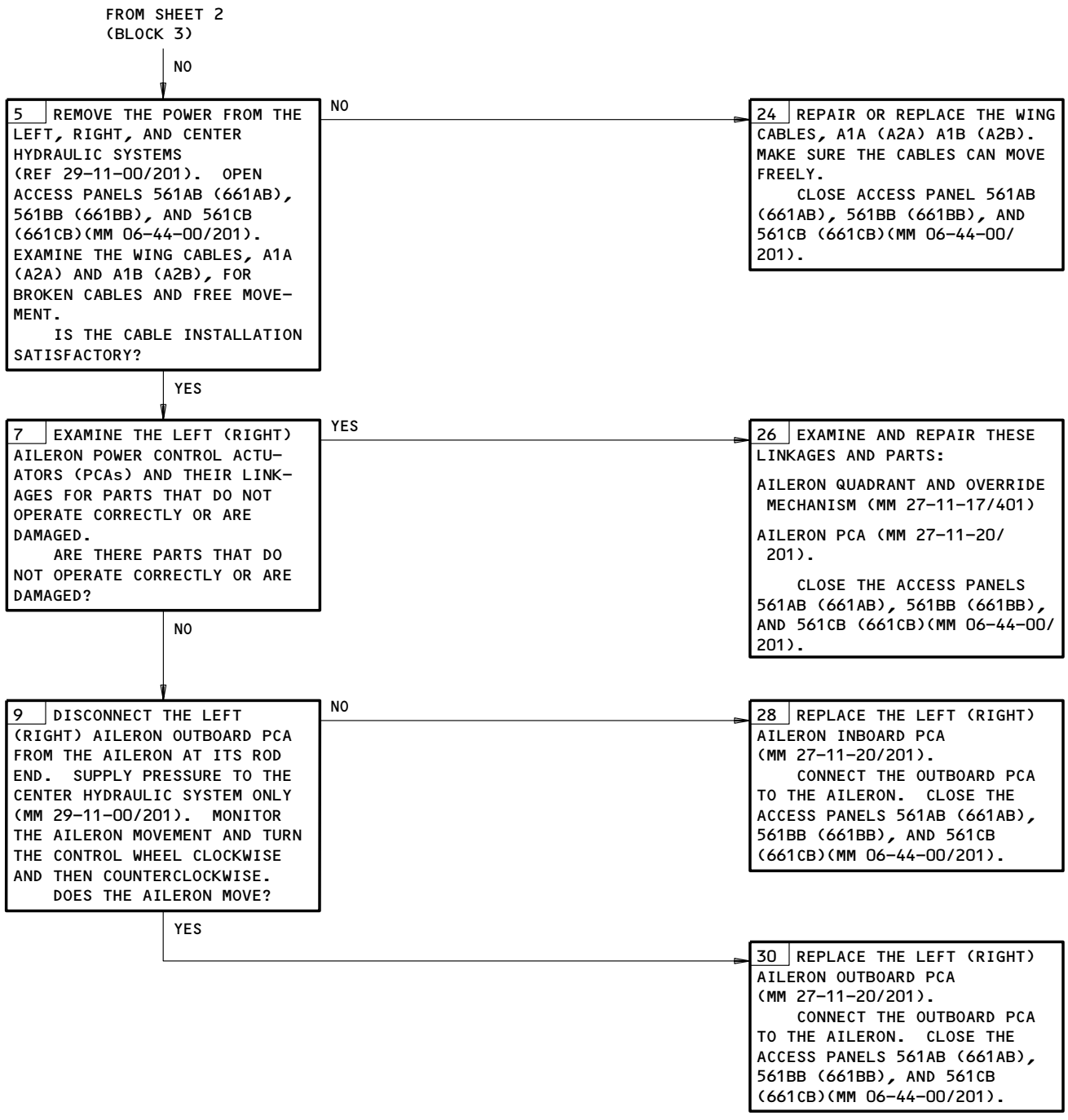


1 CAUTION: MAKE SURE YOU SET THE TORQUE WRENCH TO THE TORQUE SPECIFIED BELOW. IF THE TORQUE WRENCH IS SET INCORRECTLY, THE CONNECTOR CAN BECOME DAMAGED AND WILL NOT SUPPLY SUFFICIENT LIGHTNING PROTECTION FOR THE WIRES.

USE A 3/8 INCH DRIVE TORQUE WRENCH (SET TO THE SPECIFIED TORQUE) AND A BALMAR 76-101 OR A GLENAIR 76-70 STRAP WRENCH TO TIGHTEN THE CONNECTOR TO THE NECESSARY TORQUE.

CONNECTOR NUMBER	TORQUE WRENCH VALUE (POUND-INCHES)	CONNECTOR TORQUE (POUND-INCHES)
D40930	32 - 37	36 - 41
D40898	53 - 58	60 - 65

Left (Right) Aileron Indicator Pointer Failed to Indicate Aileron Movement
Figure 104 (Sheet 2)



Left (Right) Aileron Indicator Pointer Failed to Indicate Aileron Movement
Figure 104 (Sheet 3)

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11J14,11J15,11J23

MAKE SURE THE AIRPLANES IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
HYDRAULIC POWER IS ON (MM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

LEFT (RIGHT) AILERON INDICATOR POINTER FAILED TO ZERO WITH CONTROL WHEEL ZERO

1 DO THE DEACTIVATION PROCEDURE FOR THE TRAILING EDGE FLAPS (MM 27-51-00/201).
OPERATE THE AILERON TRIM SWITCHES ON THE AFT ELECTRONIC CONTROL PANEL, P8, UNTIL THE TRIM INDICATOR ON THE CONTROL WHEEL SHOWS ZERO UNITS OF TRIM. TURN ONE OF THE TWO CONTROL WHEELS CLOCKWISE, THEN COUNTERCLOCKWISE. MOVE THE CONTROL WHEEL TO ITS NEUTRAL POSITION. EXAMINE THE AILERON POSITION.
IS THE LEFT (RIGHT) AILERON TRAILING EDGE ALIGNED WITH THE WING TRAILING EDGE?

YES → 10 REMOVE THE POWER FROM THE LEFT, RIGHT, AND CENTER HYDRAULIC SYSTEMS (MM 29-11-00/201). OPEN ACCESS PANEL 561AB (661AB) (MM 06-44-00/201).
EXAMINE THE LINKAGE FOR THE AILERON POSITION TRANSMITTER FOR DAMAGE. MAKE SURE THE TRANSMITTER ADJUSTMENT IS CORRECT. ADJUST THE TRANSMITTER (MM 27-18-00/501) OR REPLACE THE LINKAGE AND/OR THE TRANSMITTER, M10225 (M10226) (MM 27-18-01/401).
CLOSE ACCESS PANEL 561AB (661AB).

NO → 12 REPAIR THE BODY OR WING CABLES, A1A (A2A) AND A1B (A2B) AND ADJUST THE AILERON NEUTRAL POSITION (MM 27-11-00/501).

Left (Right) Aileron Indicator Pointer Failed to Zero with Control Wheel Zero
Figure 105

PREREQUISITES

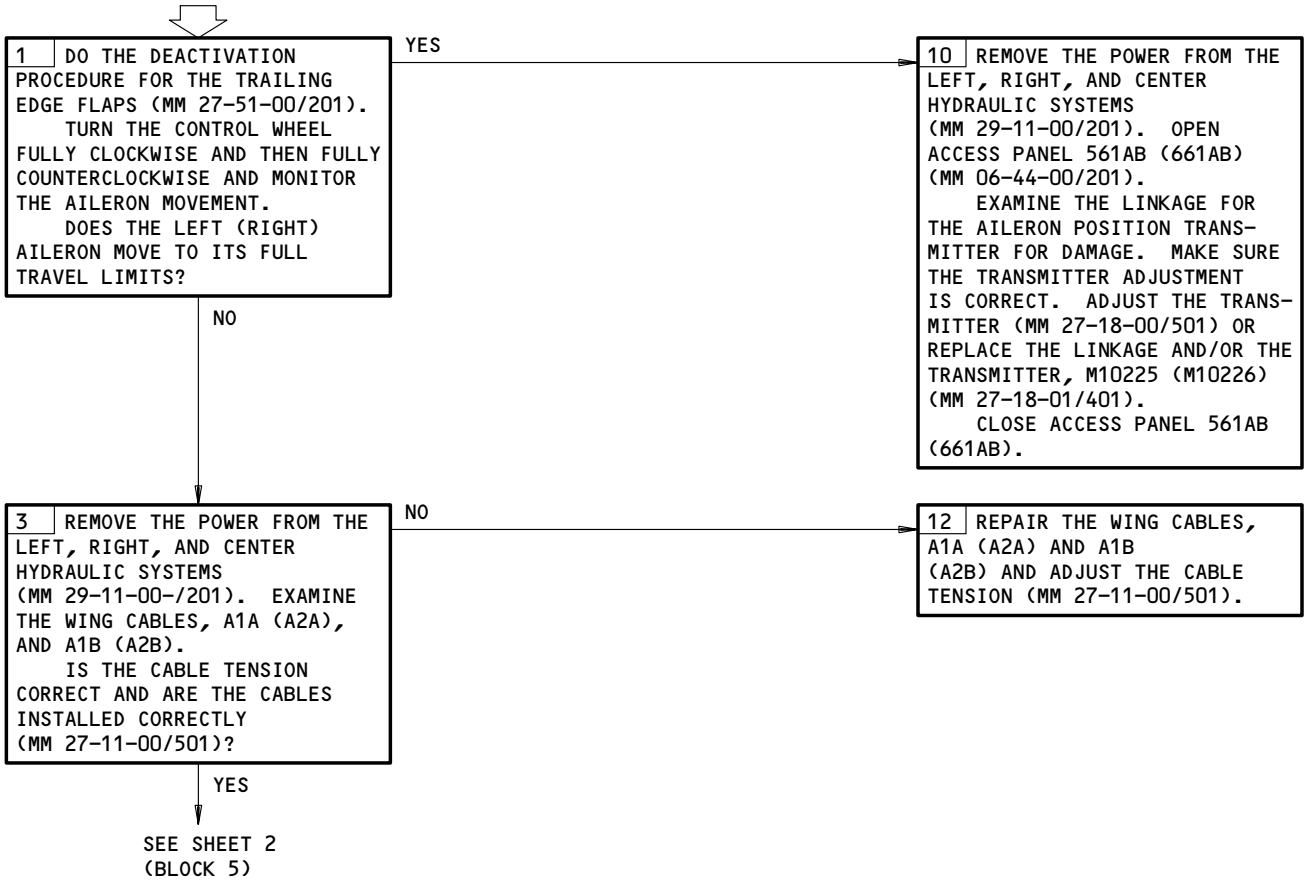
MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (MM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11J14,11J23

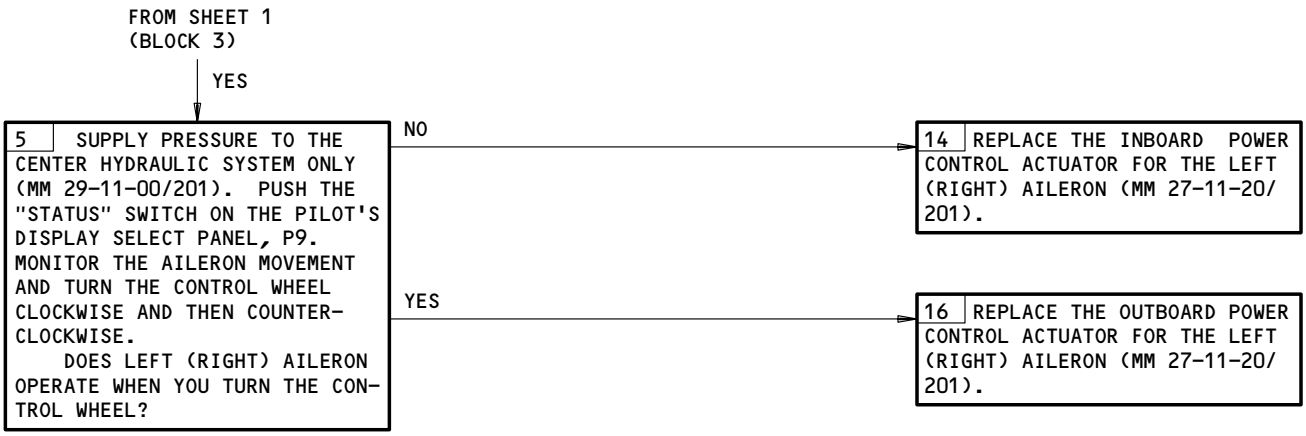
MAKE SURE THE AIRPLANES IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
HYDRAULIC POWER IS ON (MM 29-11-00/201)
MAIN LANDING GEAR DOOR LOCKS ARE INSTALLED (MM 32-00-15/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

LEFT (RIGHT) AILERON INDICATOR POINTER INDICATES LESS THAN FULL TRAVEL



Left (Right) Aileron Indicator Pointer Indicates Less than Full Travel
Figure 106 (Sheet 1)



Left (Right) Aileron Indicator Pointer Indicates Less than Full Travel
Figure 106 (Sheet 2)

RUDDER AND RUDDER TRIM CONTROL SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ACTUATOR - RUDDER TRIM, M515	3	1	324AL, RUDDER FEEL, CENTERING, AND TRIM MECHANISM	27-21-06
ACTUATOR (PCA) - RUDDER POWER CONTROL	4	3	324CL, MID VERT FIN	27-21-20
ACTUATOR (RRCA) - RUDDER RATIO CHANGER, M626	4	1	324BL, LWR VERT FIN	27-21-13
ASSEMBLY - AFT QUADRANT	3	1	324AL, RUDDER FEEL, CENTERING, AND TRIM MECHANISM	27-21-06
ASSEMBLY - RUDDER FORWARD QUADRANT AND JACKSHAFT	2	2	113AL, FWD EQUIP COMPT	27-21-05
ASSEMBLY - RUDDER PEDAL	2	2	FLT COMPT AND 113AL, FWD EQUIP COMPT	27-21-02
ASSEMBLY - YAW DAMPER SUMMING LEVER	4	1	324BL, LWR VERT FIN	27-21-17
CABLE - (AMM 27-00-01/201)				
RUDDER CONTROL				
CIRCUIT BREAKER -	1		FLT COMPT, P11	
ELEVATOR LIMIT, C4032		1	11J12	*
FLT CONT ELEC 1L AC, C1538		1	11C6	*
FLT CONT ELEC 1L DC, C1534		1	11C7	*
FLT CONT ELEC 1R AC, C1536		1	11G17	*
FLT CONT ELEC 1R DC, C1531		1	11G18	*
FLT CONT ELEC 2L AC, C1537		1	11C8	*
FLT CONT ELEC 2L DC, C1533		1	11C9	*
FLT CONT ELEC 2R AC, C1535		1	11G27	*
FLT CONT ELEC 2R DC, C1532		1	11G28	*
FLT CONT SHUTOFF TAIL LEFT, C4033		1	11H17	*
PCU MON SENSOR, C4283		1	11J10	*
PCU MON MOD, C4270		1	11J11	*
RUDDER POS, C1005		1	11J16	*
RUD RATIO, C1031		1	11G10 OR 11D18	*
RUD TRIM, C1033		1	11C10	*
RUDDER TRIM POS, C1034		1	11J17	*
STAB TRIM CONT L, C1017		1	11H11 OR 11C5	*
STAB TRIM CONT R, C1018		1	11H20	*
COMPUTER - (FIM 31-41-00/101)				
L EICAS, M10181				
R EICAS, M10182				
CRANK - RUDDER PEDAL ADJUSTMENT	1	2	FLT COMPT AND 113AL, FWD EQUIP COMPT	27-21-03
FILTER - RRCA		1	324BL, RRCA M626	27-21-13
INDICATOR - RUDDER TRIM, N83	1		FLT COMPT, P8, AIL/RUD TRIM CONT PANEL M74	*
LIGHT - RUDDER RATIO, L18	1		FLT COMPT, P5, AUX ANNUN PANEL M10394	*
LINKAGE - (FIM 32-41-00/101)				
BRAKE PEDAL BUS MECHANISM				
LINKAGE - (FIM 32-51-00/101)				
NOSE WHEEL STEERING INTERCONNECT MECHANISM				
LINKAGE - RUDDER TEMPERATURE COMPENSATING	5	1	324AL, LWR VERT FIN	27-21-19
LVDT - RUDDER RATIO CHANGER, TS194	4		324BL, RUDDER RATIO CHANGER MECHANISM	27-21-12
MECHANISM - FEEL, CENTERING AND TRIM	3		324AL, LWR VERT FIN	27-21-06
MECHANISM - RUDDER RATIO CHANGER	4		324BL, LWR VERT FIN	27-21-12
MODULE - (FIM 27-09-00/101)				
LEFT RUDDER RATIO CHANGER (L RRCM), M528				
RIGHT RUDDER RATIO CHANGER (R RRCM), M529				

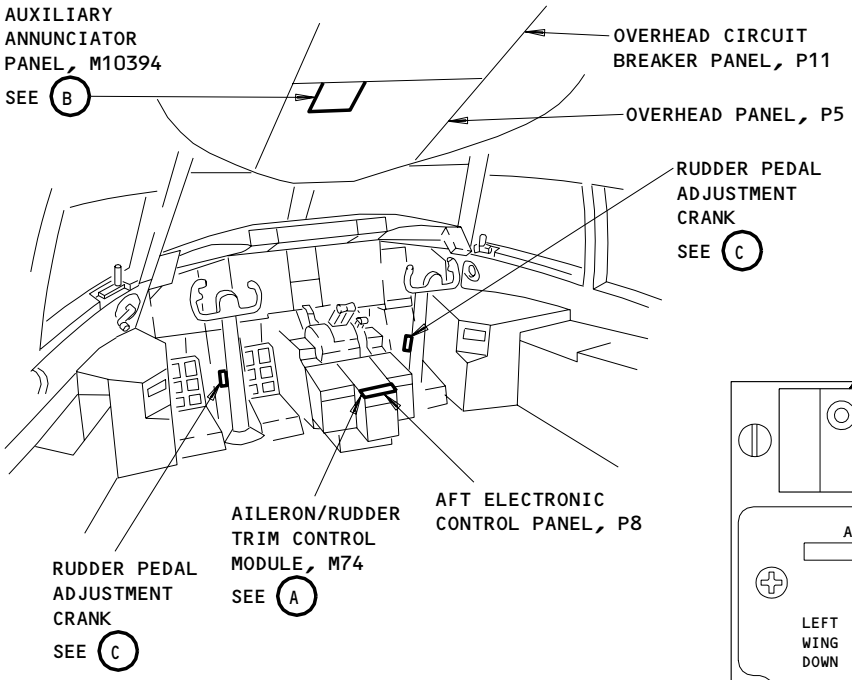
* SEE THE WDM EQUIPMENT LIST

Rudder and Rudder Trim Control System - Component Index
Figure 101 (Sheet 1)

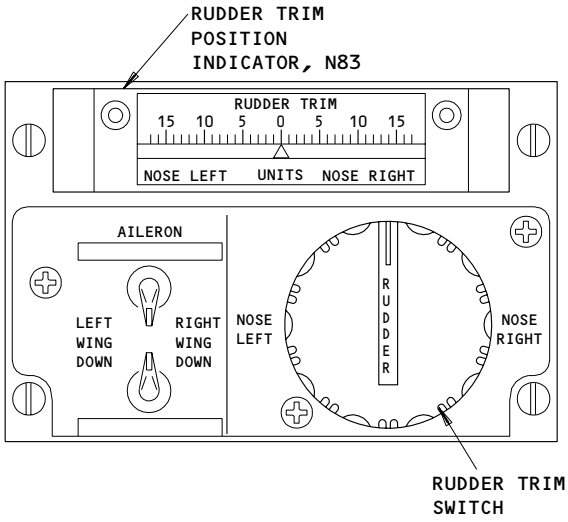
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
MODULES - (27-09-00/101)				
LEFT STAB TRIM/ELEVATOR ASSYMETRY (L SAM), M524				
POWER SUPPLY 1L (PSM 1L), M536				
POWER SUPPLY 1R (PSM 1R), M538				
POWER SUPPLY 2L (PSM 2L), M537				
POWER SUPPLY 2R (PSM 2R), M539				
RIGHT STAB TRIM/ELEVATOR ASSYMETRY (R SAM), M525				
PANEL - (27-11-00/101)				
AILERON/RUDDER TRIM CONTROL, M74				
PANEL - (30-31-00/101)				
AUXILIARY ANNUNCIATOR, M10394				
PIN - RUDDER RATIO CHANGER SHEAR	4	1	324BL, RUDDER RATIO CHANGER MECHANISM	27-21-12
RELAYS - (32-09-00/101)				
AIR/GND SYS 1, K10384				
AIR/GND SYS 2, K10387				
ROD - RUDDER RATIO CHANGER POGO	4	1	324BL, RUDDER RATIO CHANGER MECHANISM	27-21-00
RUDDER -	2	1	VERTICAL STABILIZER TRAILING EDGE, 325	27-21-21
SCREEN - RRCA	4	1	324BL, RRCA M626	27-21-13
SERVOS - (22-13-00/101)				
CENTER AUTOPILOT ROLLOUT GUIDANCE, M278				
LEFT AUTOPILOT ROLLOUT GUIDANCE, M277				
RIGHT AUTOPILOT ROLLOUT GUIDANCE, M279				
SERVOS - (22-21-00/101)				
LEFT YAW DAMPER, M509				
RIGHT YAW DAMPER, M510				
SWITCH - (29-11-00/101)				
LEFT HYDRAULIC PUMP PRESSURE, S27				
SWITCH - RUDDER TRIM	1	1	FLT COMPT, P8, AIL/RUD TRIM CONT PANEL, M74	*
VALVE - RRCA SOLENOID	4	1	324BL, RRCA M626	27-21-13
VALVE (EHSV) - RRCA ELECTROHYDRAULIC SERVO	4	1	324BL, RRCA M626	27-21-13

* SEE THE WDM EQUIPMENT LIST

Rudder and Rudder Trim Control System - Component Index
Figure 101 (Sheet 2)

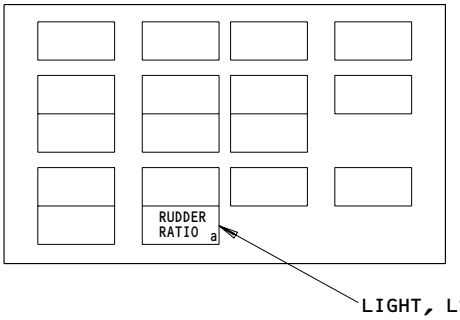


FLIGHT COMPARTMENT



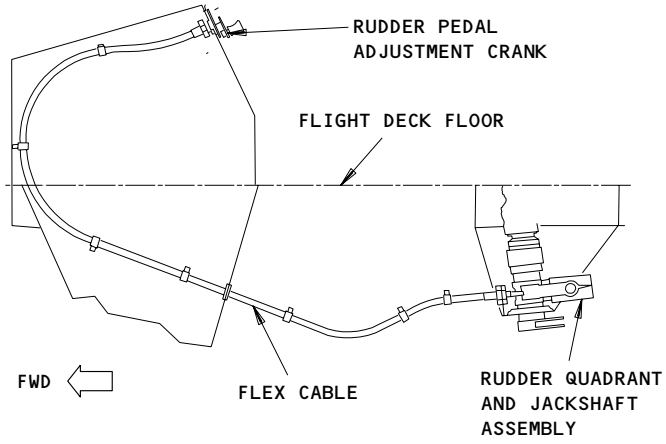
AILERON/RUDDER TRIM CONTROL MODULE, M74

A



AUXILIARY ANNUNCIATOR PANEL, M10394

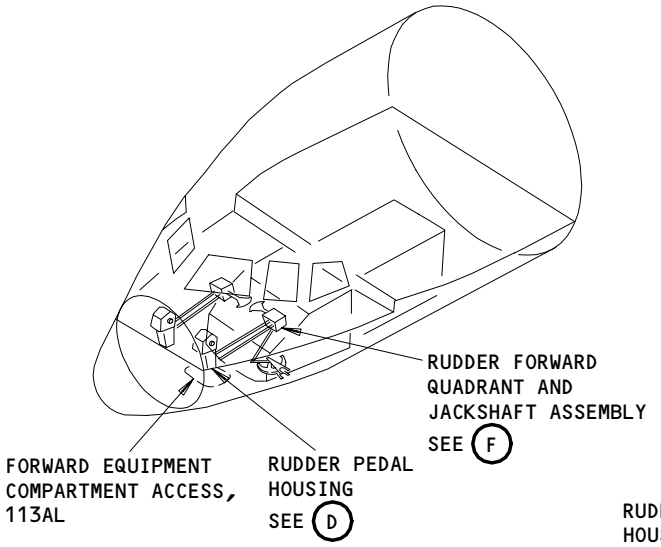
B

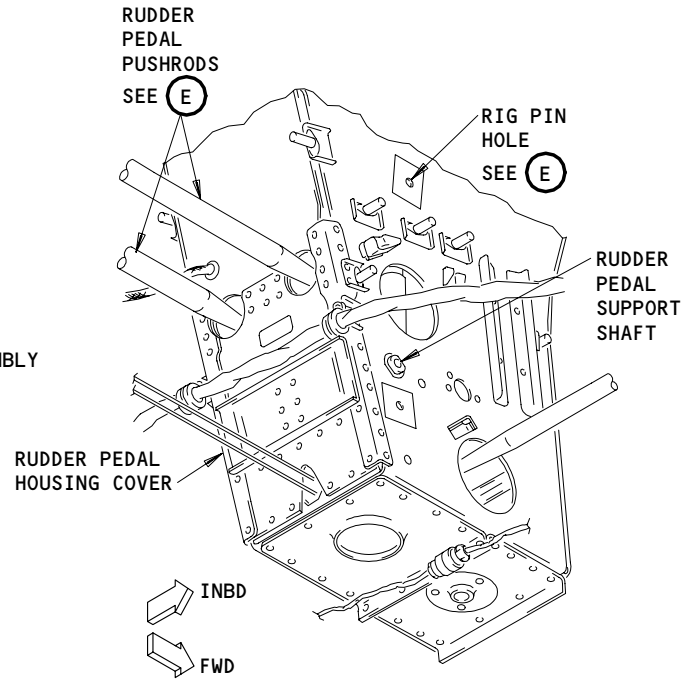


RUDDER PEDAL ADJUSTMENT CRANK

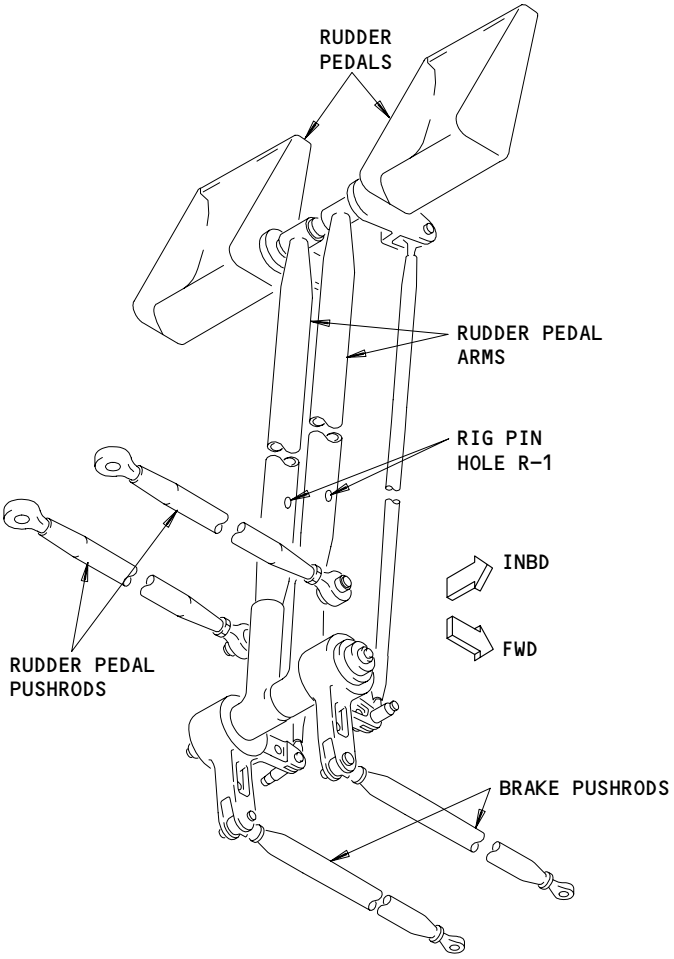
C

Rudder and Rudder Trim Control System – Component Location
Figure 102 (Sheet 1)

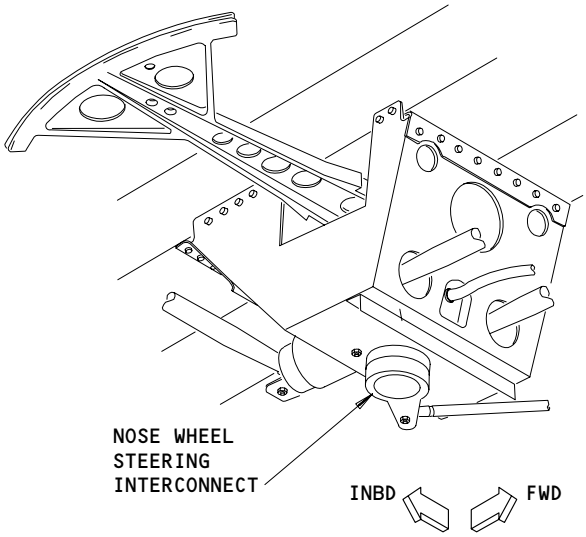




RUDDER PEDAL HOUSING
D

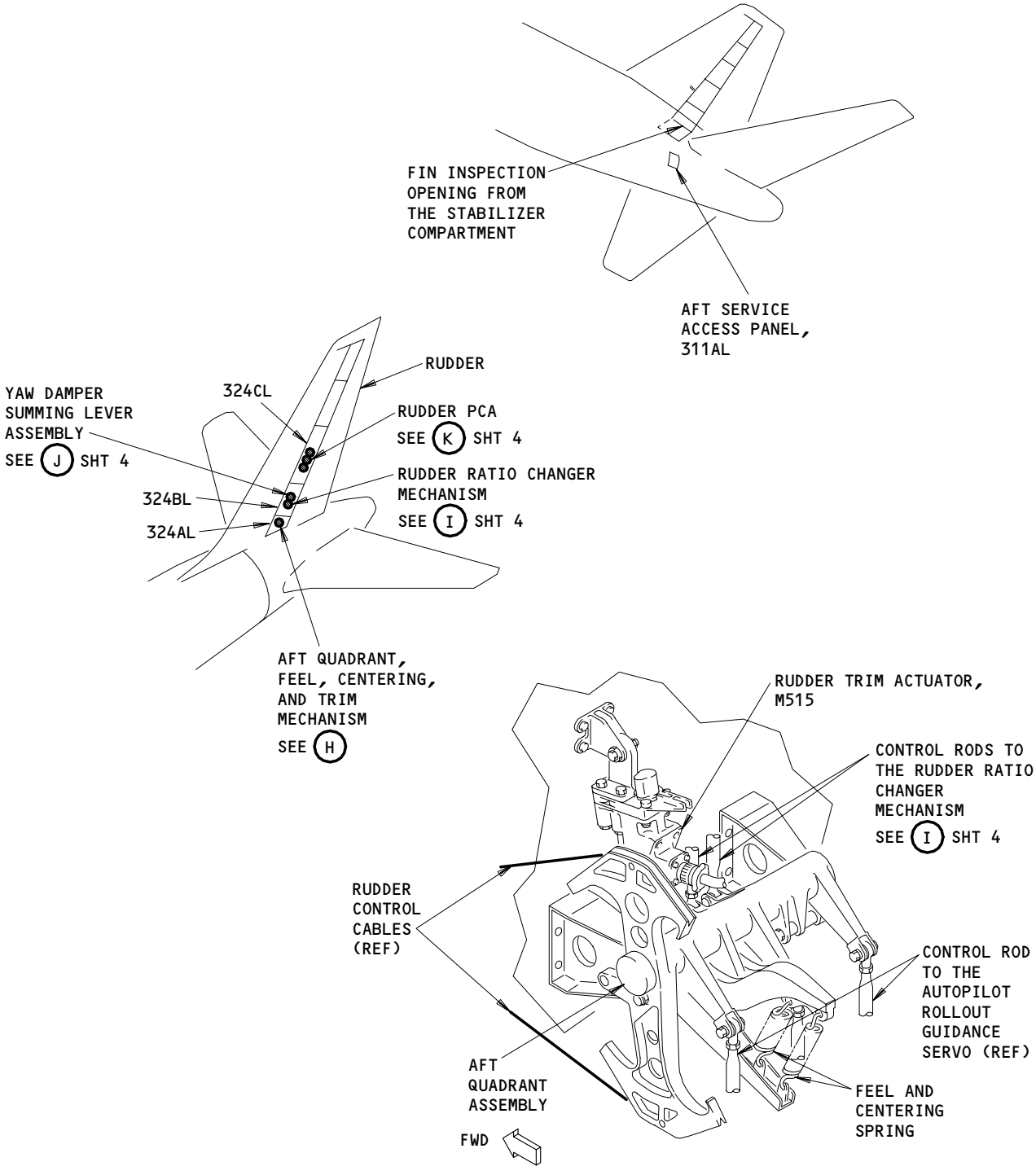


CAPTAIN'S RUDDER PEDALS
E



RUDDER FORWARD QUADRANT AND JACKSHAFT ASSEMBLY
F

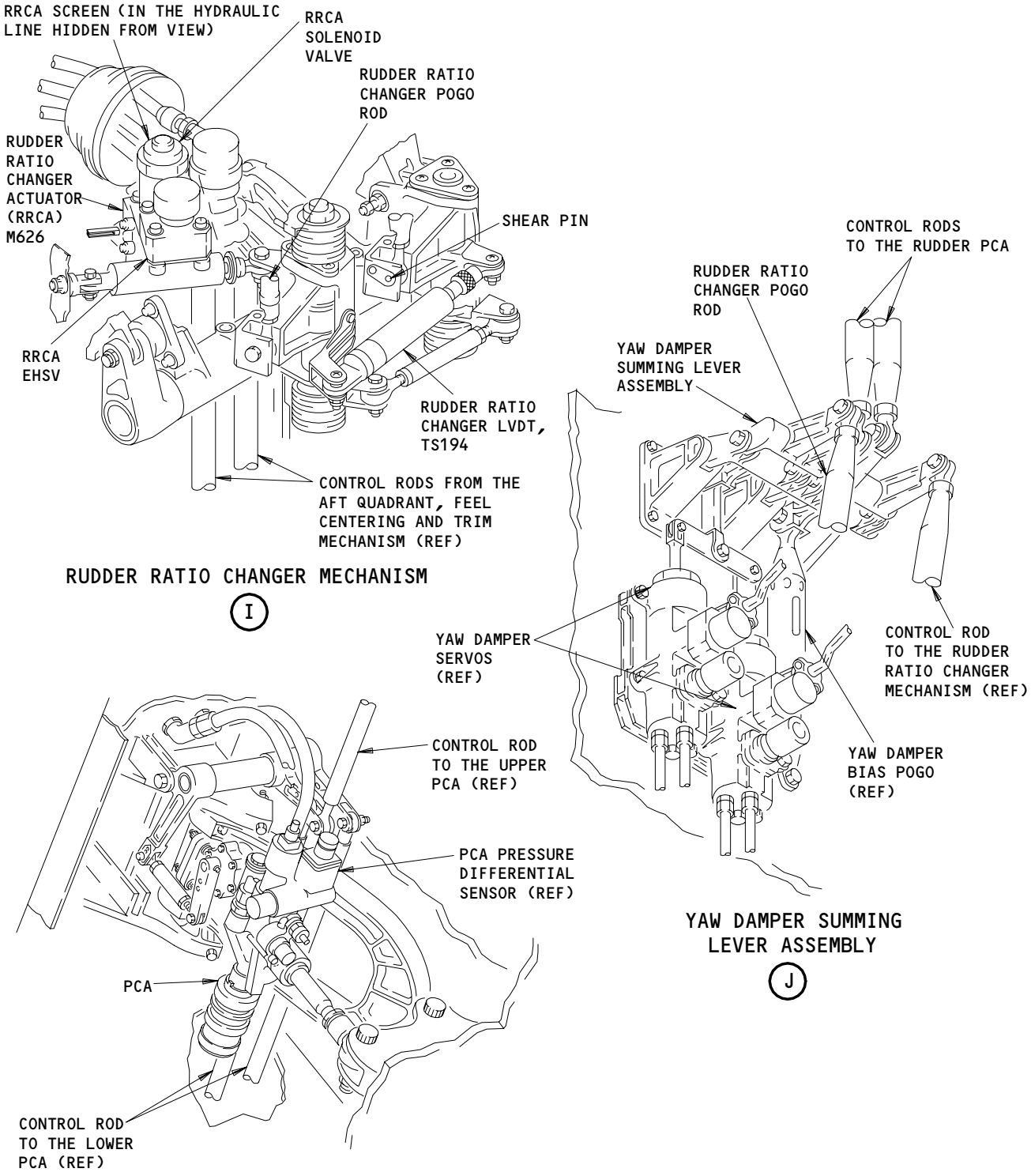
Rudder and Rudder Trim Control System – Component Location
Figure 102 (Sheet 2)



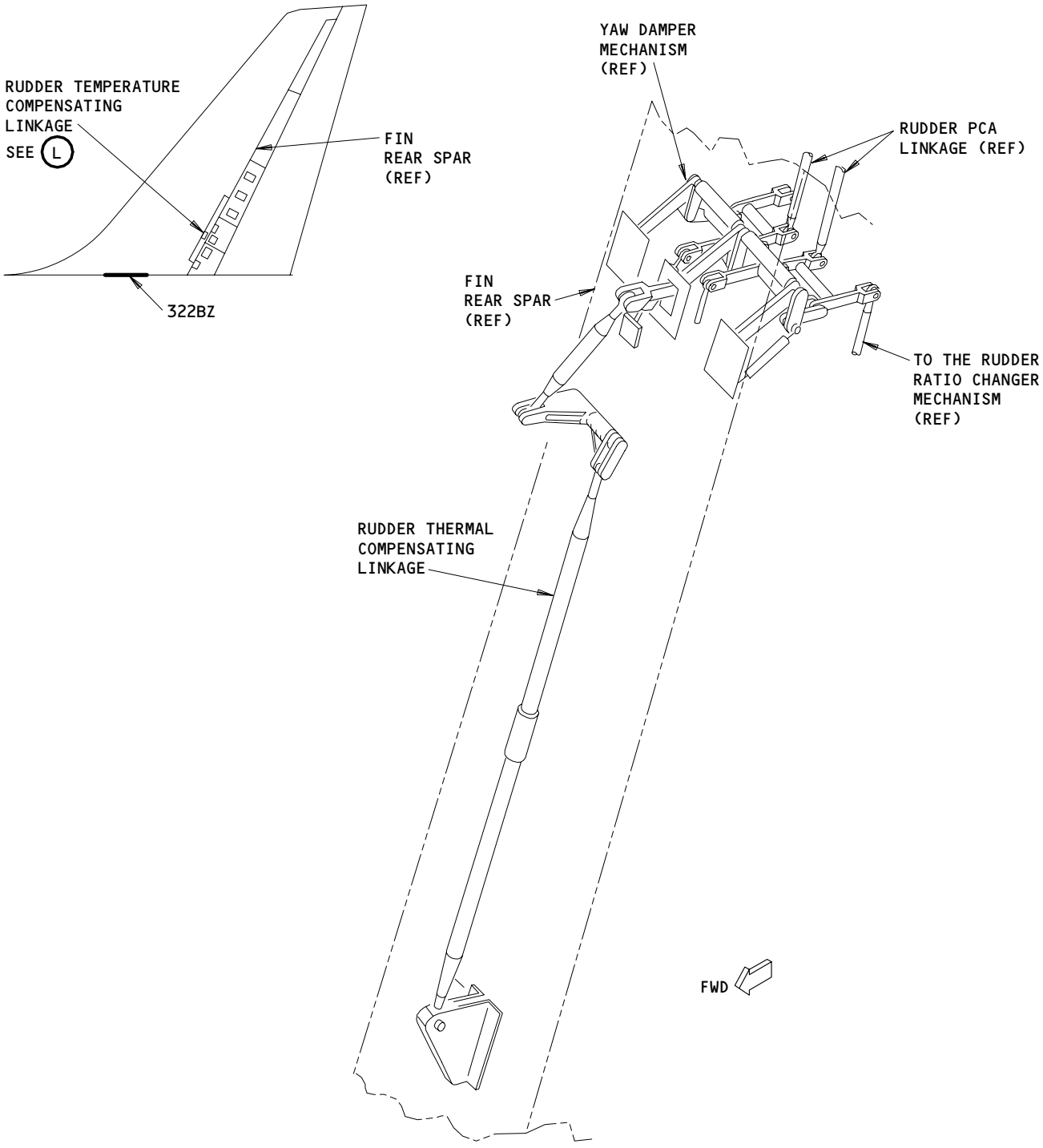
AFT QUADRANT, FEEL, CENTERING, AND TRIM MECHANISM

(H)

Rudder and Rudder Trim Control System – Component Location
Figure 102 (Sheet 3)



Rudder and Rudder Trim Control System - Component Location (Details from Sht 3)
Figure 102 (Sheet 4)



RUDDER TEMPERATURE COMPENSATING LINKAGE

(L)

Rudder and Rudder Trim Control System – Component Location
Figure 102 (Sheet 5)

Not Used
Figure 103

Not Used
Figure 104

PREREQUISITES

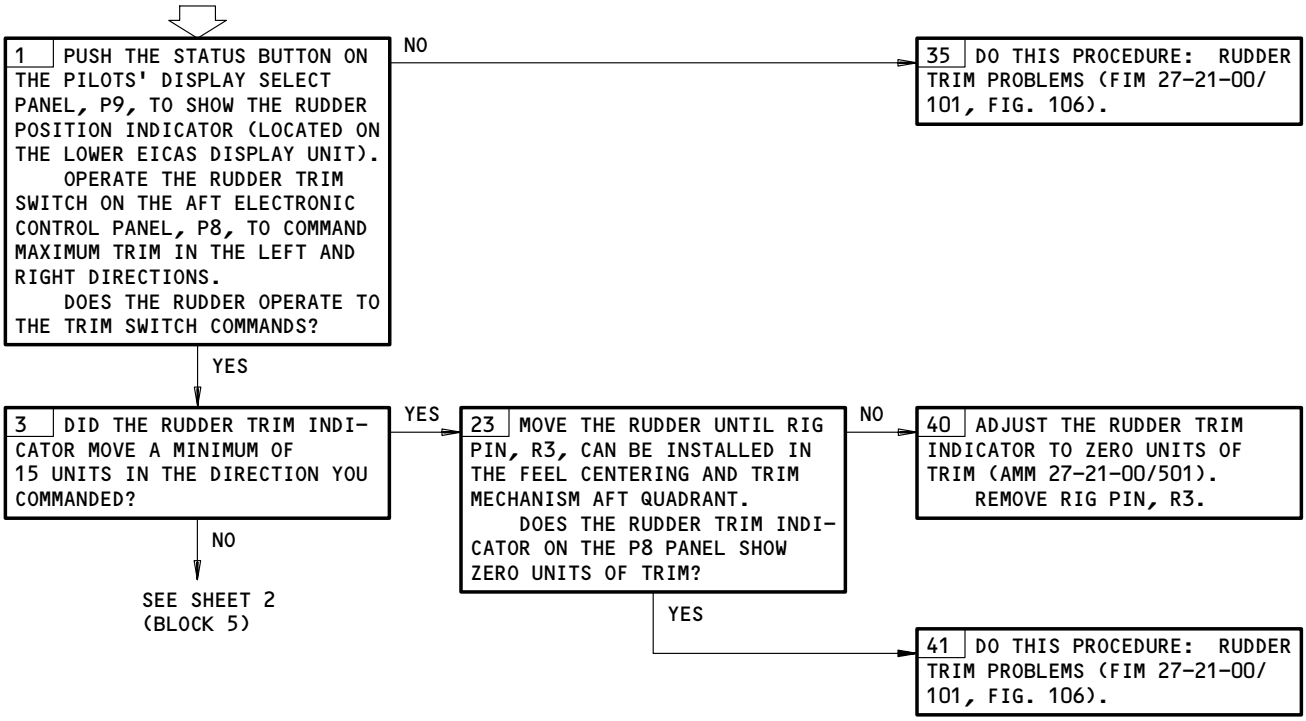
MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C6,11C7,11C8,11C9,11C10,11D18 OR 11G10,11G17, 11G18,11G27,11G28,11J16,11J17

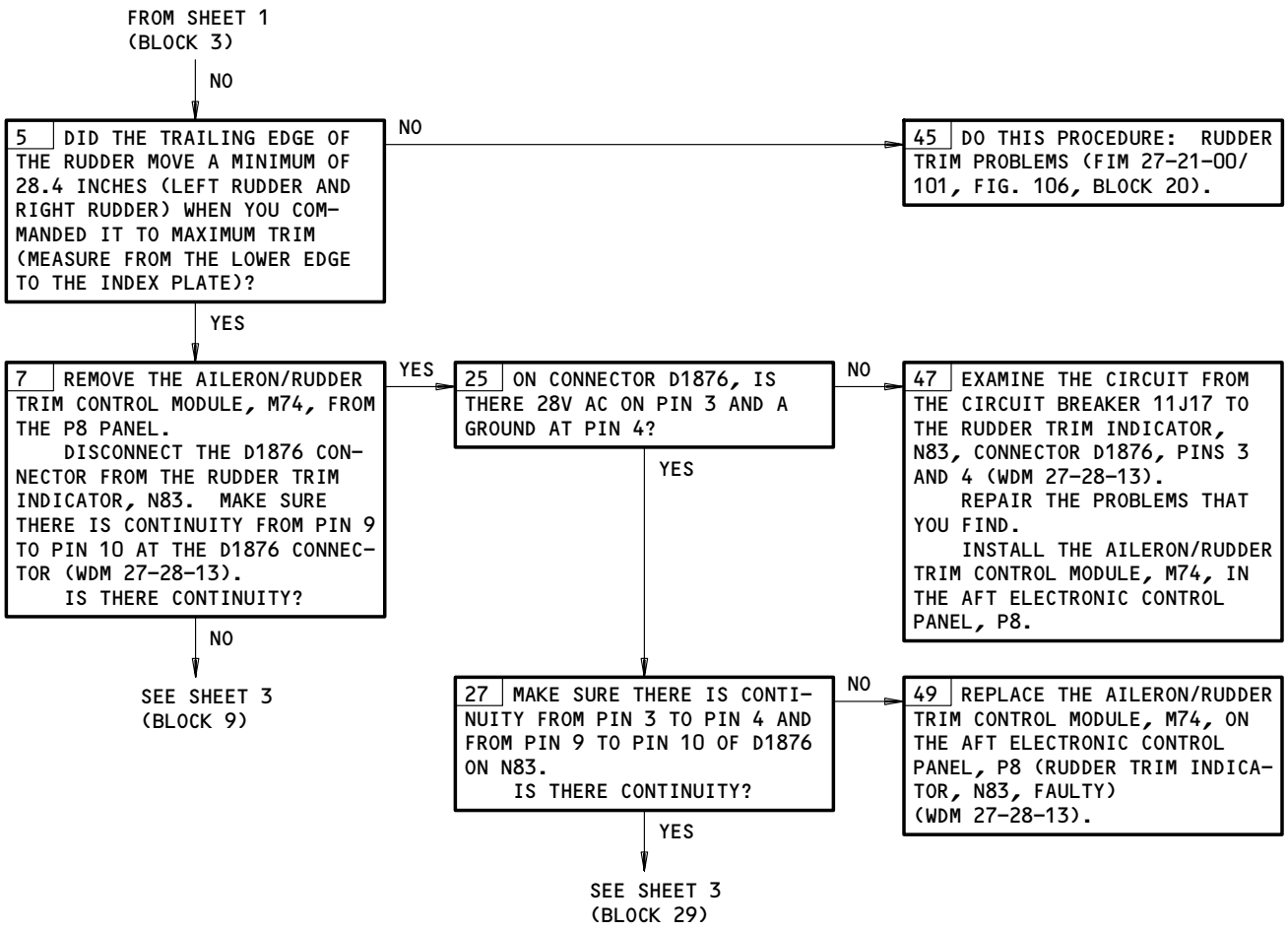
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

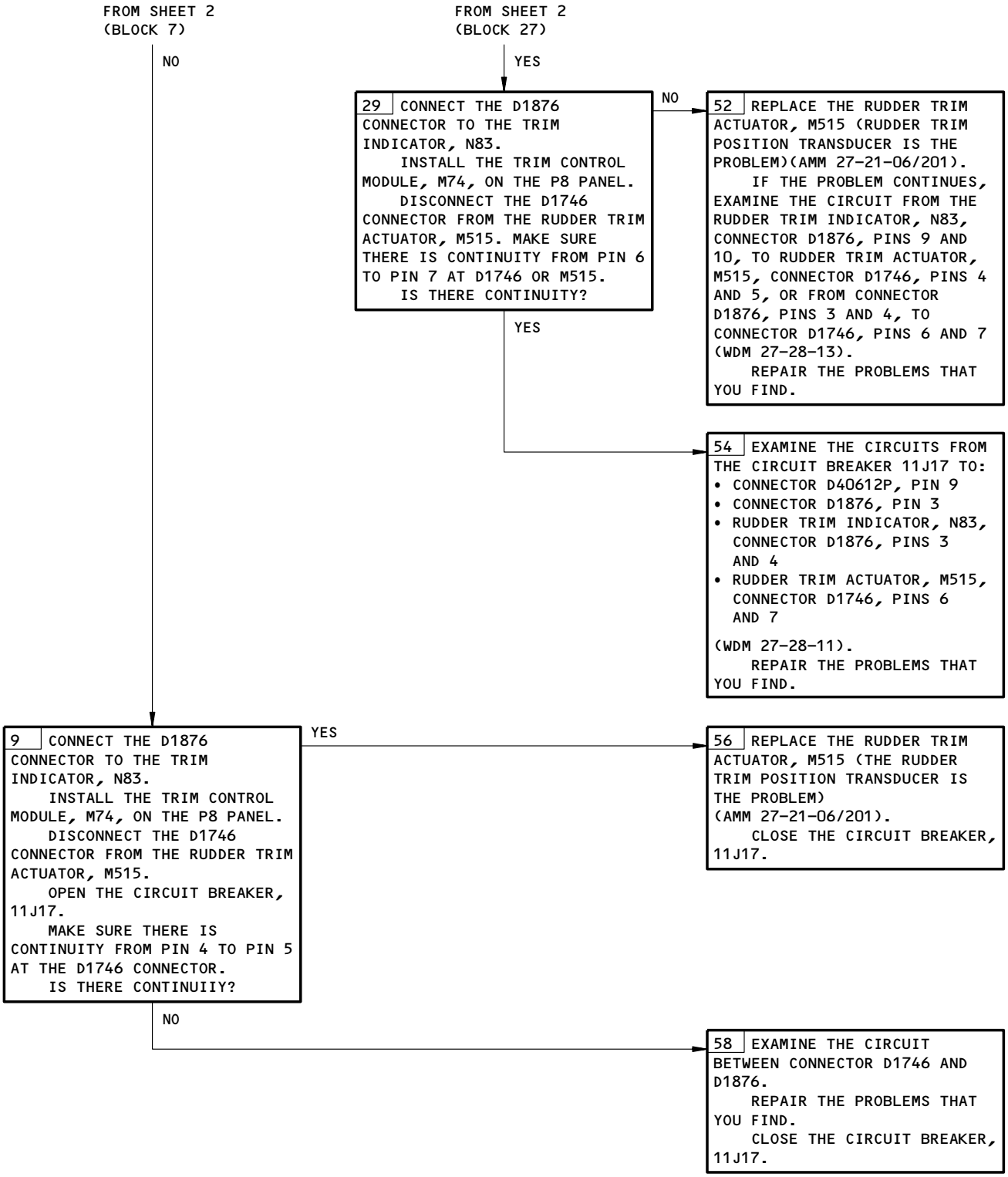
RUDDER TRIM INDICATION PROBLEMS



Rudder Trim Indication Problems
Figure 105 (Sheet 1)



Rudder Trim Indication Problems
Figure 105 (Sheet 2)



Rudder Trim Indication Problems
Figure 105 (Sheet 3)

PREREQUISITES

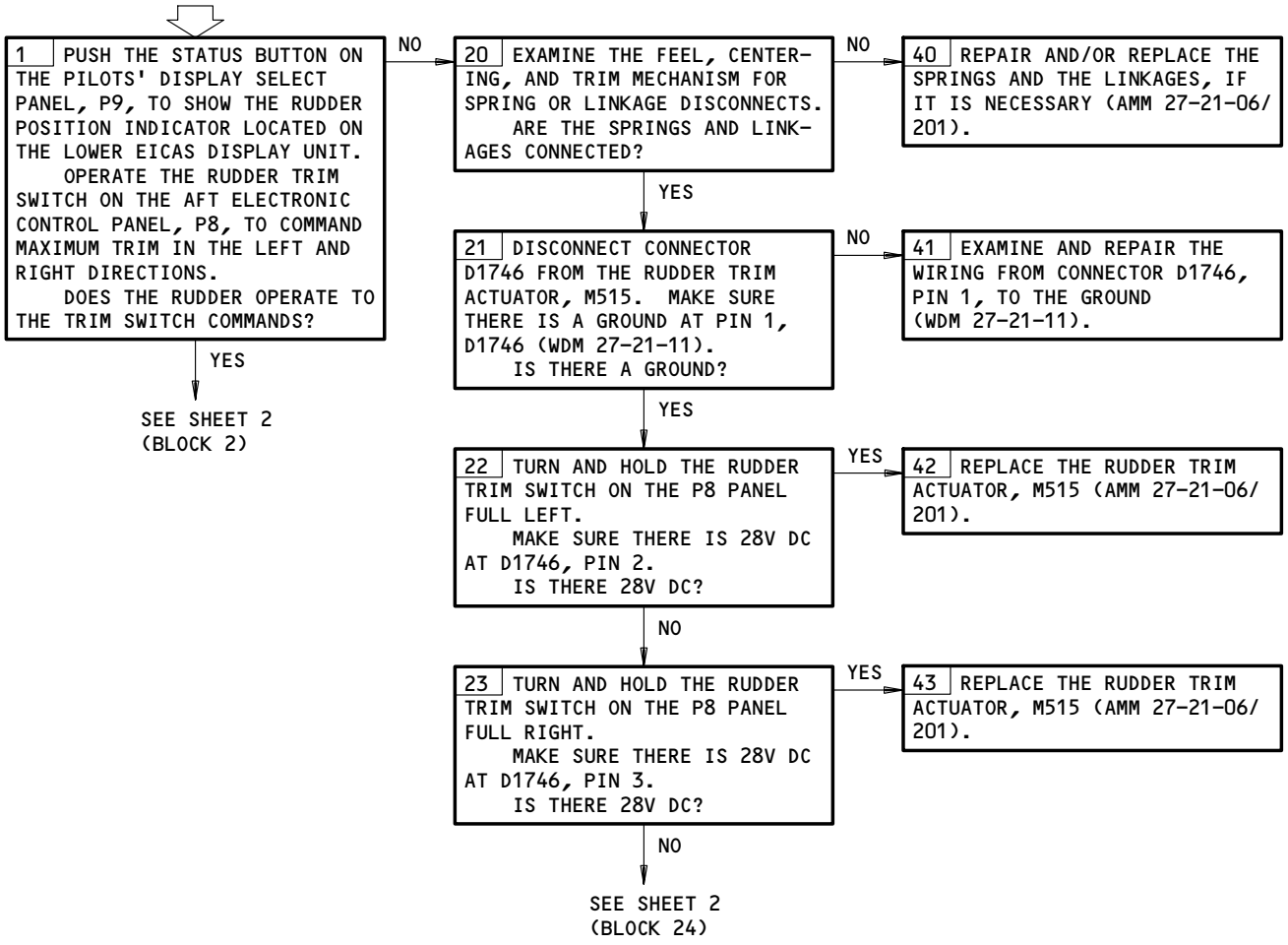
MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C6,11C7,11C8,11C9,11C10,11D18OR 11G10,11G17,
11G18,11G27,11G28,11J16,11J17

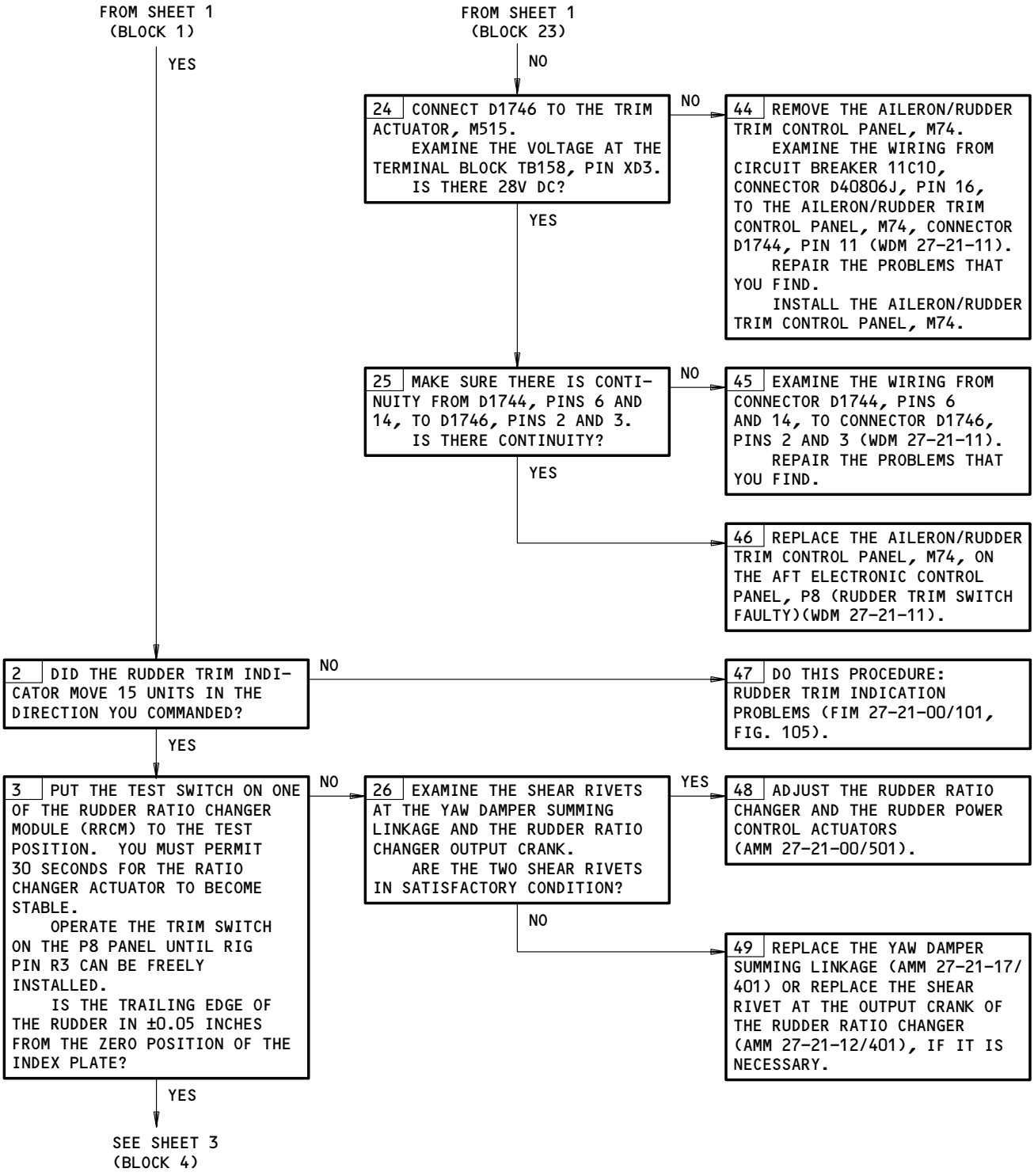
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

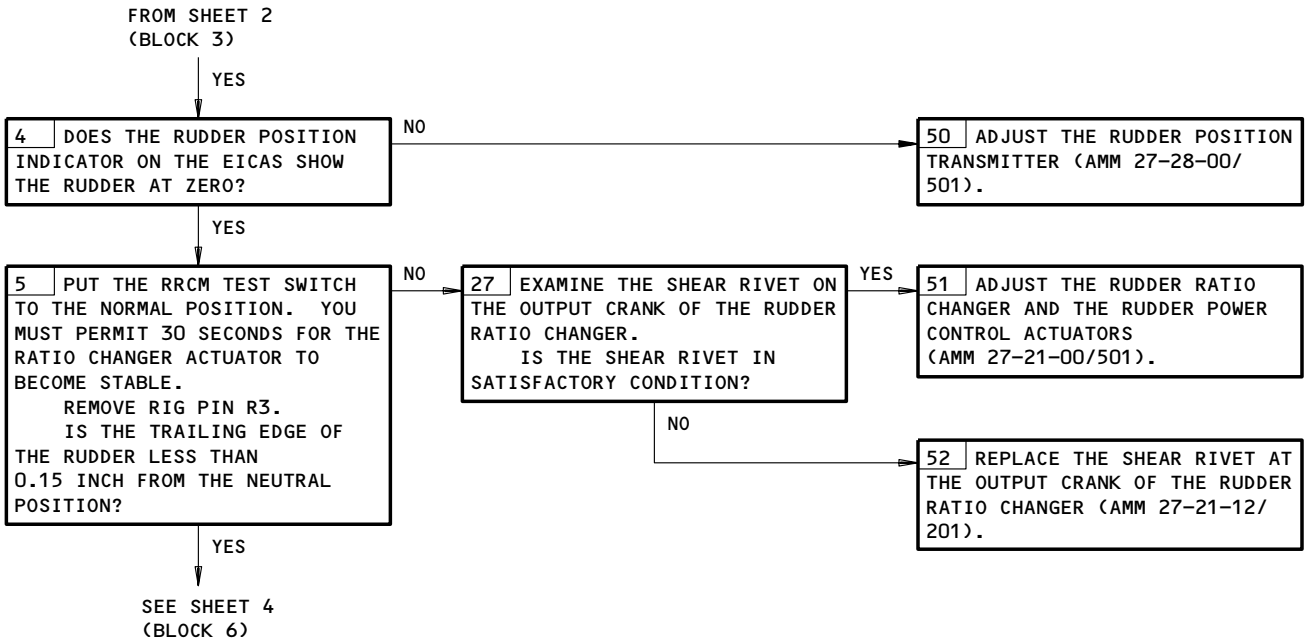
RUDDER TRIM PROBLEMS



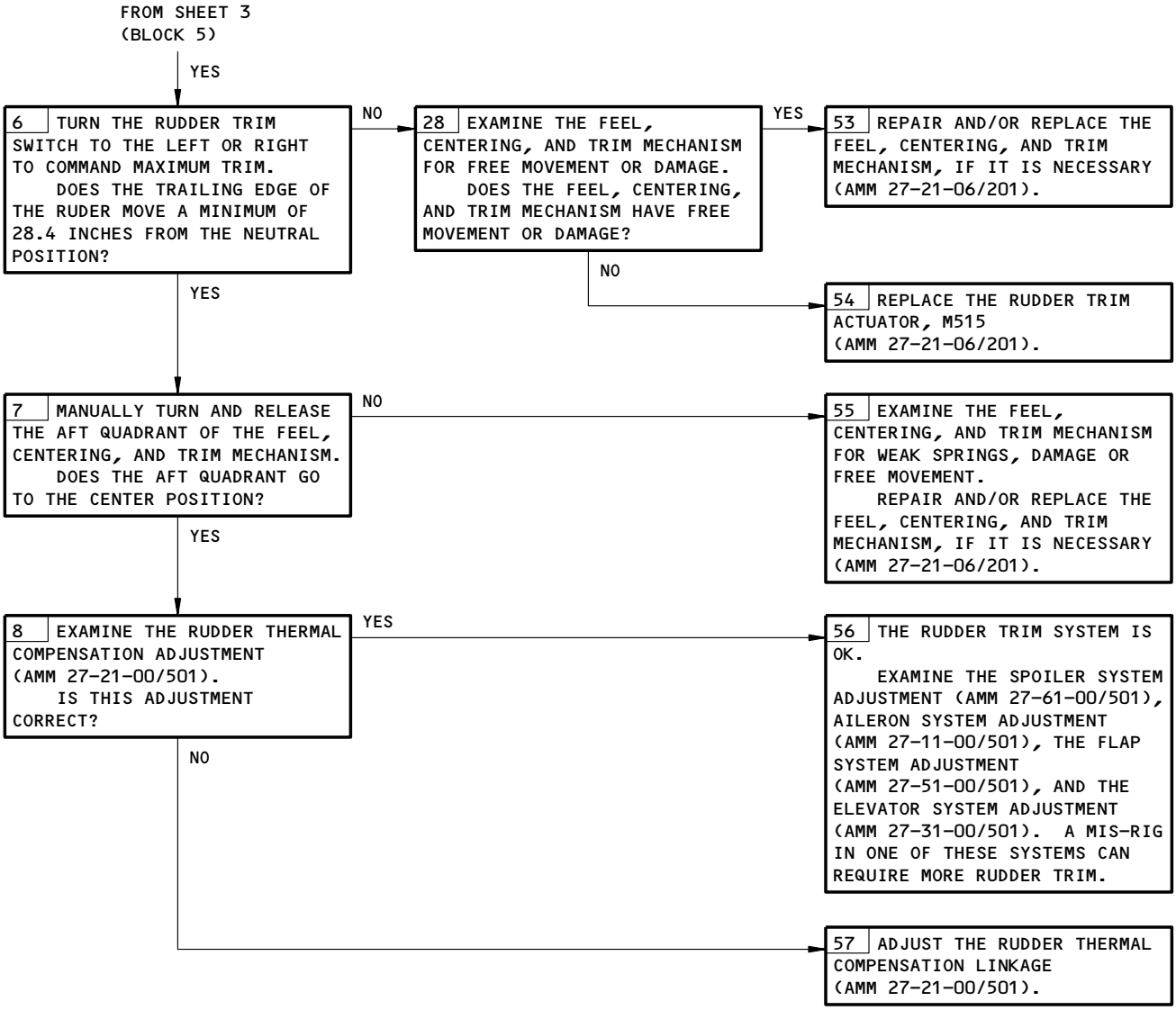
Rudder Trim Problems
Figure 106 (Sheet 1)



Rudder Trim Problems
Figure 106 (Sheet 2)



Rudder Trim Problems
Figure 106 (Sheet 3)



Rudder Trim Problems
Figure 106 (Sheet 4)

RUDDER CONTROLS BINDING OR JAMMED

PREREQUISITES

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
HYDRAULIC POWER IS REMOVED (AMM 29-11-00/201)

1 MAKE SURE THE AUTOPILOT IS DISENGAGED (AMM 22-10-00/201).
EXAMINE THE RA AND RB CABLE INSTALLATIONS.
IS THE ROUTING OF THE CABLE INSTALLATIONS CORRECT WITH THE CORRECT TENSION AND FREE MOVEMENT?

NO → 31 REPAIR, REPLACE, AND/OR ADJUST THE RA AND RB RUDDER CONTROL CABLE INSTALLATIONS, IF IT IS NECESSARY (AMM 27-00-01/201; AMM 27-21-00/501).

YES

3 EXAMINE THE RUDDER PEDALS AND LINKAGE (BUS ROD, FORWARD QUADRANT AND JACKSHAFT) FOR DAMAGE AND/OR FREE MOVEMENT.
DO THE PARTS HAVE FREE MOVEMENT OR DAMAGE?

YES → 33 REPAIR AND/OR REPLACE THE RUDDER PEDALS (AMM 27-21-02/401), THE RUDDER FORWARD QUADRANT AND THE JACKSHAFT (AMM 27-21-05/401), IF IT IS NECESSARY.

NO

5 EXAMINE THE LINKAGES BETWEEN THE AUTOPILOT ROLLOUT GUIDANCE SERVOS AND THE RUDDER POWER CONTROL ACTUATORS (PCAs) (INCLUDE THE SHEAROUTS) FOR DAMAGE AND/OR FREE MOVEMENT.
DO THE PARTS HAVE FREE MOVEMENT OR DAMAGE?

YES → 35 REPAIR AND/OR REPLACE THESE PARTS AND LINKAGES, IF IT IS NECESSARY:
- THE AUTOPILOT ROLLOUT GUIDANCE SERVOS (AMM 22-13-01/401; AMM 27-21-06/201)
- THE YAW DAMPER SUMMING LEVER (AMM 27-21-17/401)
- THE RUDDER RATIO CHANGER MECHANISM (AMM 27-21-12/201)
- THE RUDDER POWER CONTROL ACTUATORS (AMM 27-21-20/201).

NO

7 EXAMINE THE PCA ATTACH POINTS TO THE RUDDER SURFACE AND THE VERTICAL FIN REAR SPAR.
DO THE ATTACH POINTS HAVE FREE MOVEMENT AND NO DAMAGE?

NO → 37 REPAIR THE ATTACH POINTS FOR THE RUDDER POWER CONTROL ACTUATOR, IF IT IS NECESSARY.

YES

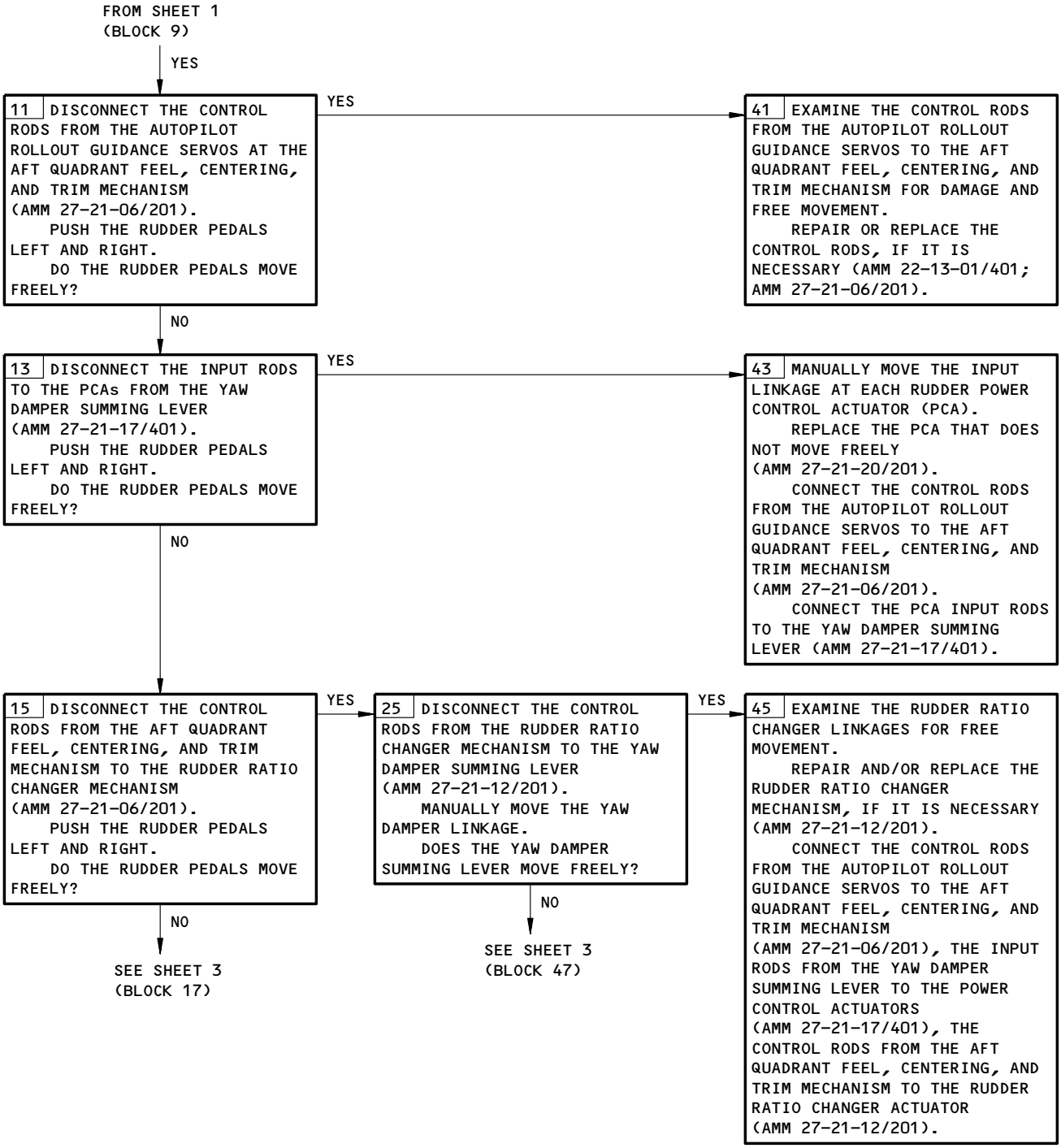
9 EXAMINE THE RUDDER SURFACE AT THE HINGES.
DO THE HINGES HAVE FREE MOVEMENT AND NO DAMAGE?

NO → 39 REPAIR AND/OR REPLACE THE RUDDER AND THE RUDDER HINGES, IF IT IS NECESSARY (AMM 27-21-21/401).

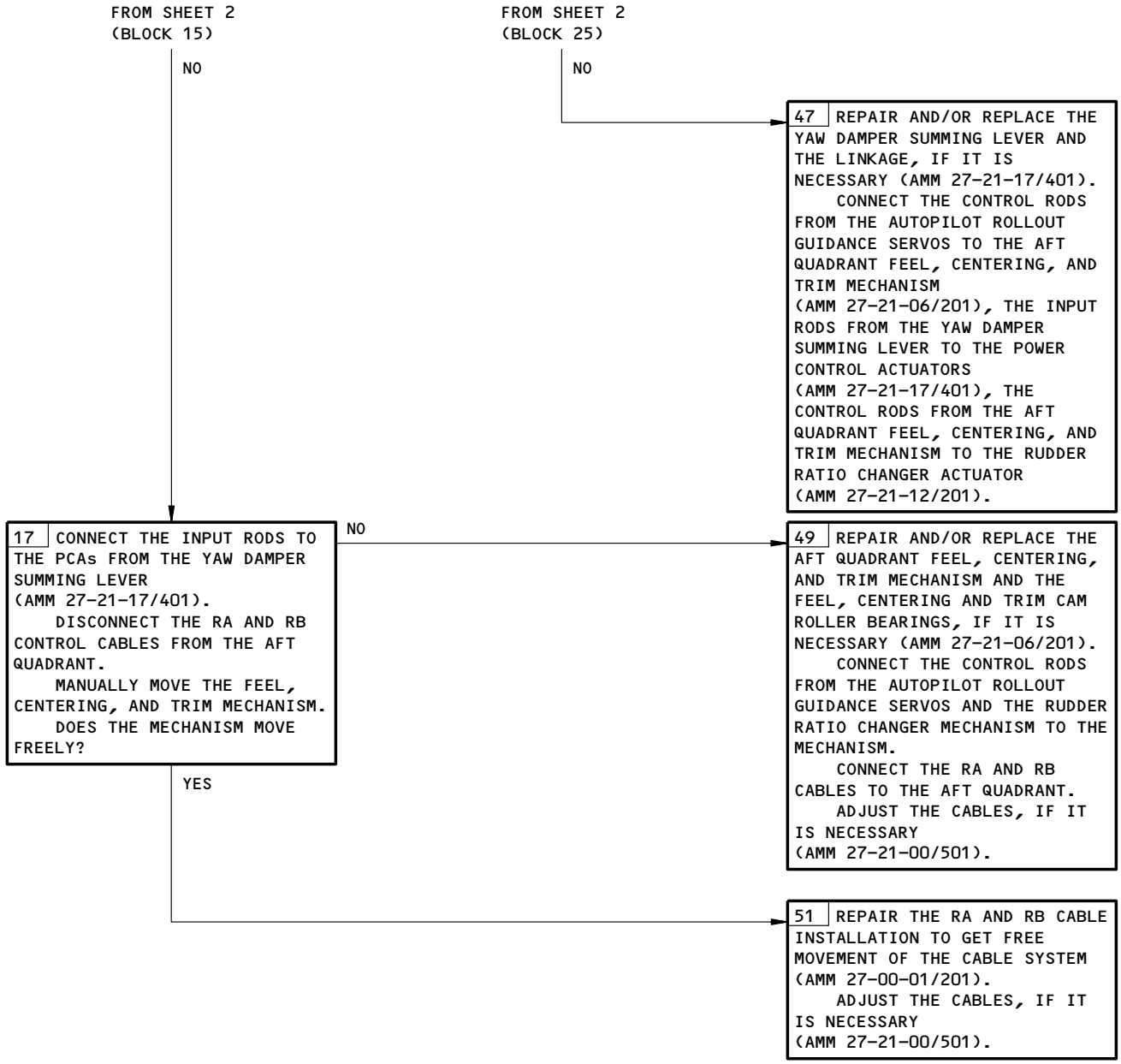
YES

SEE SHEET 2
(BLOCK 11)

Rudder Controls Binding or Jammed
Figure 107 (Sheet 1)



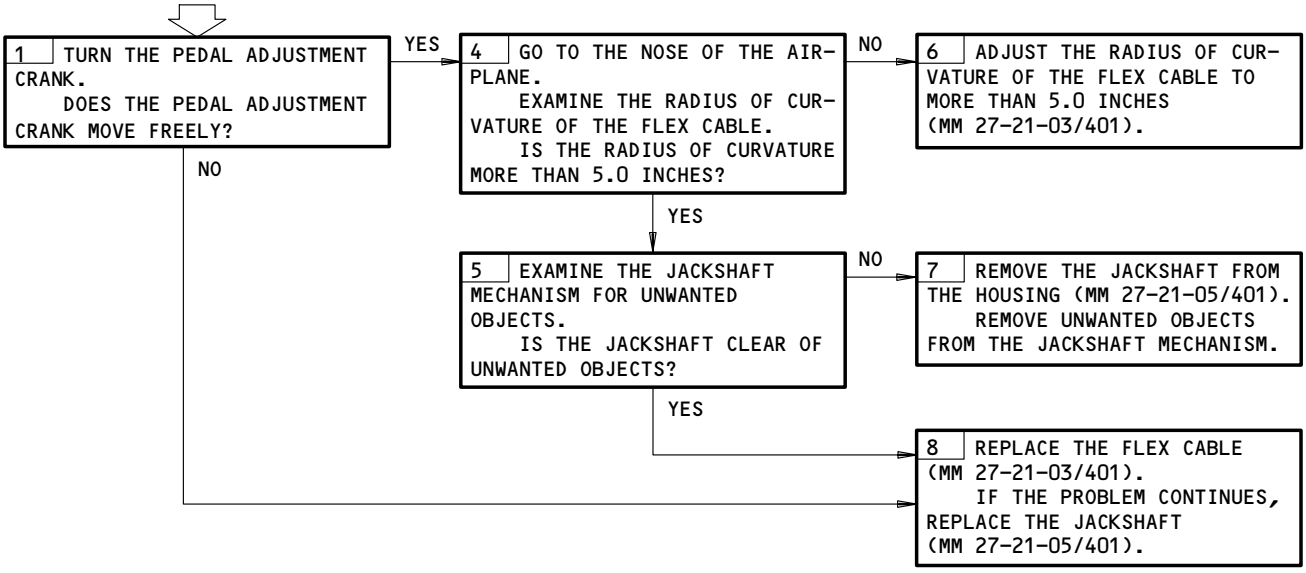
Rudder Controls Binding or Jammed
Figure 107 (Sheet 2)



Rudder Controls Binding or Jammed
Figure 107 (Sheet 3)

RUDDER PEDAL ADJUSTMENT PROBLEMS

PREREQUISITES
NONE



Rudder Pedal Adjustment Problems
Figure 108

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11D18 OR 11G10,11J10,11J11,11J16

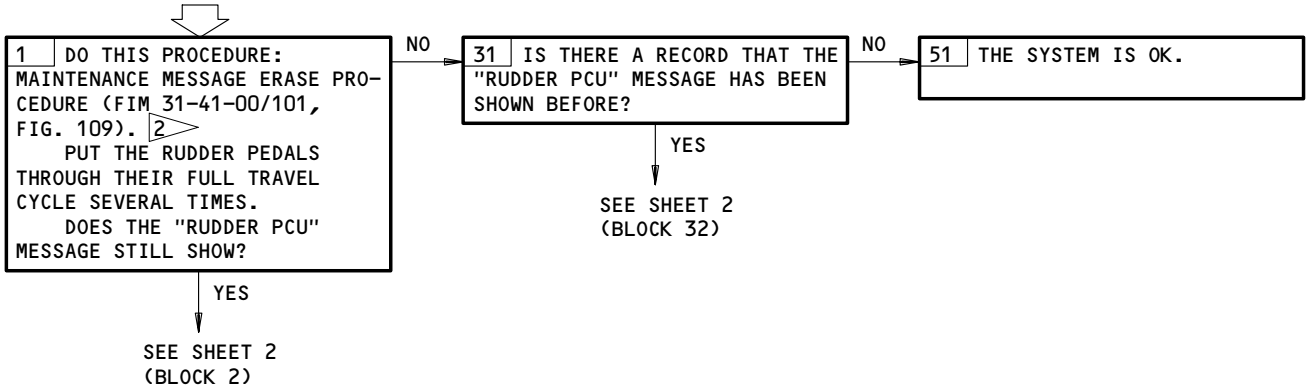
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

EQUIPMENT:
TEST BOX, RUDDER ELEVATOR PCU MONITOR SYSTEM - B27061

NOTE: IF THE TEST BOX IS NOT AVAILABLE, YOU CAN USE THREE 750-OHM, 10-WATT RESISTORS.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

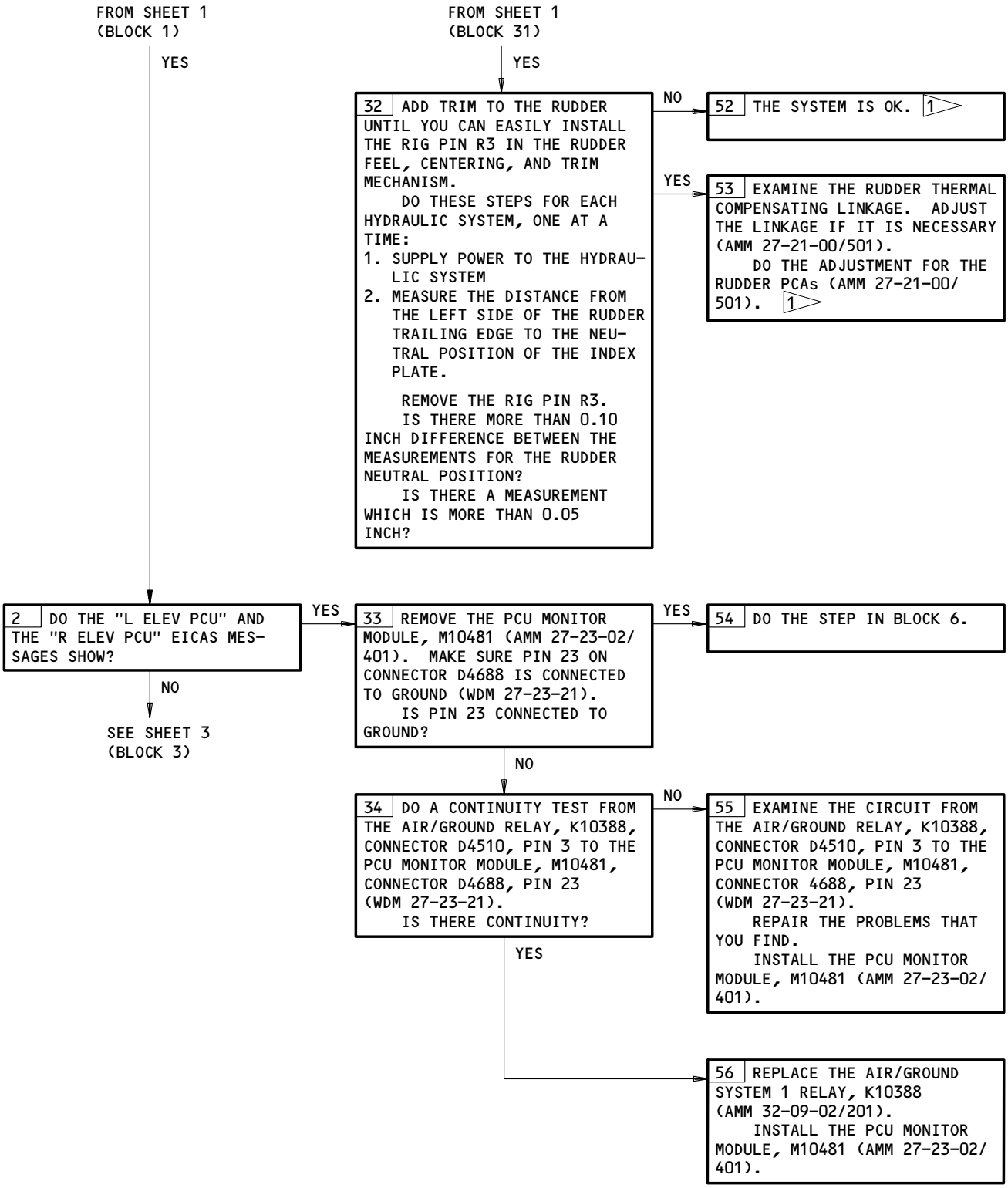
EICAS MESSAGE "RUDDER PCU" DISPLAYED



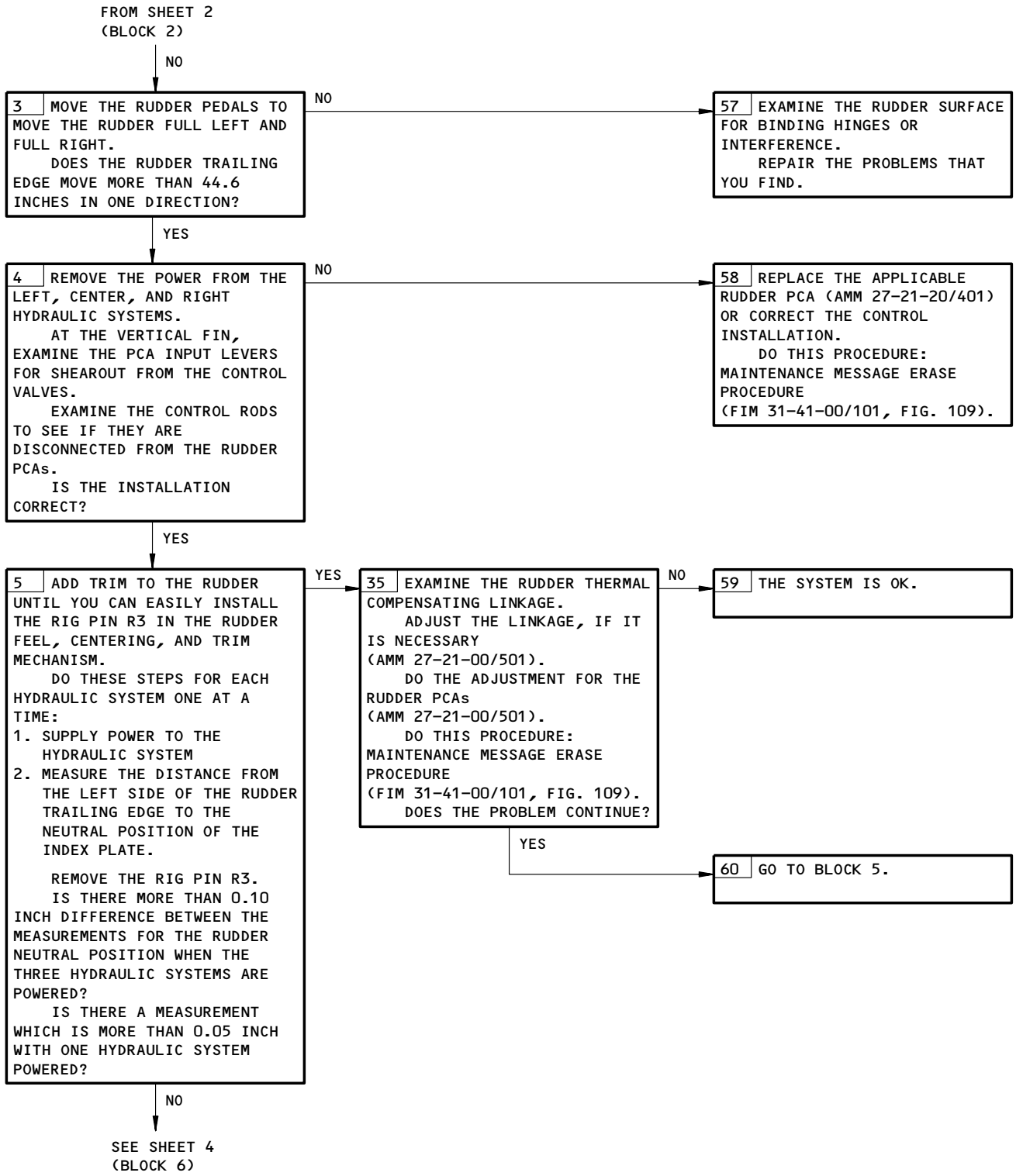
1 THERE CAN BE AN INTERMITTENT ELECTRICAL PROBLEM IN THE PCA SENSORS, PCU MONITOR MODULE, THE WIRING OR CONNECTORS. IF IT IS NECESSARY, YOU CAN DO CONTINUITY CHECKS (WDM 27-23-21).

2 IF A "RUDDER PCU" EICAS MESSAGE IS SHOWN AND A "YD ACT" FAULT ON THE RIGHT YAW DAMPER MODULE OCCUR DURING THE SAME FLIGHT, DO THE PROCEDURE FOR THE "YD ACT" MESSAGE FIRST (FIM 22-21-00/101). IF THE "YD ACT" MESSAGE GOES OFF WHEN YOU REPLACE THE RUDDER HYDRAULIC FUSE FOR THE CENTER HYDRAULIC SYSTEM, THE "RUDDER PCU" MESSAGE CAN GO OFF ALSO.

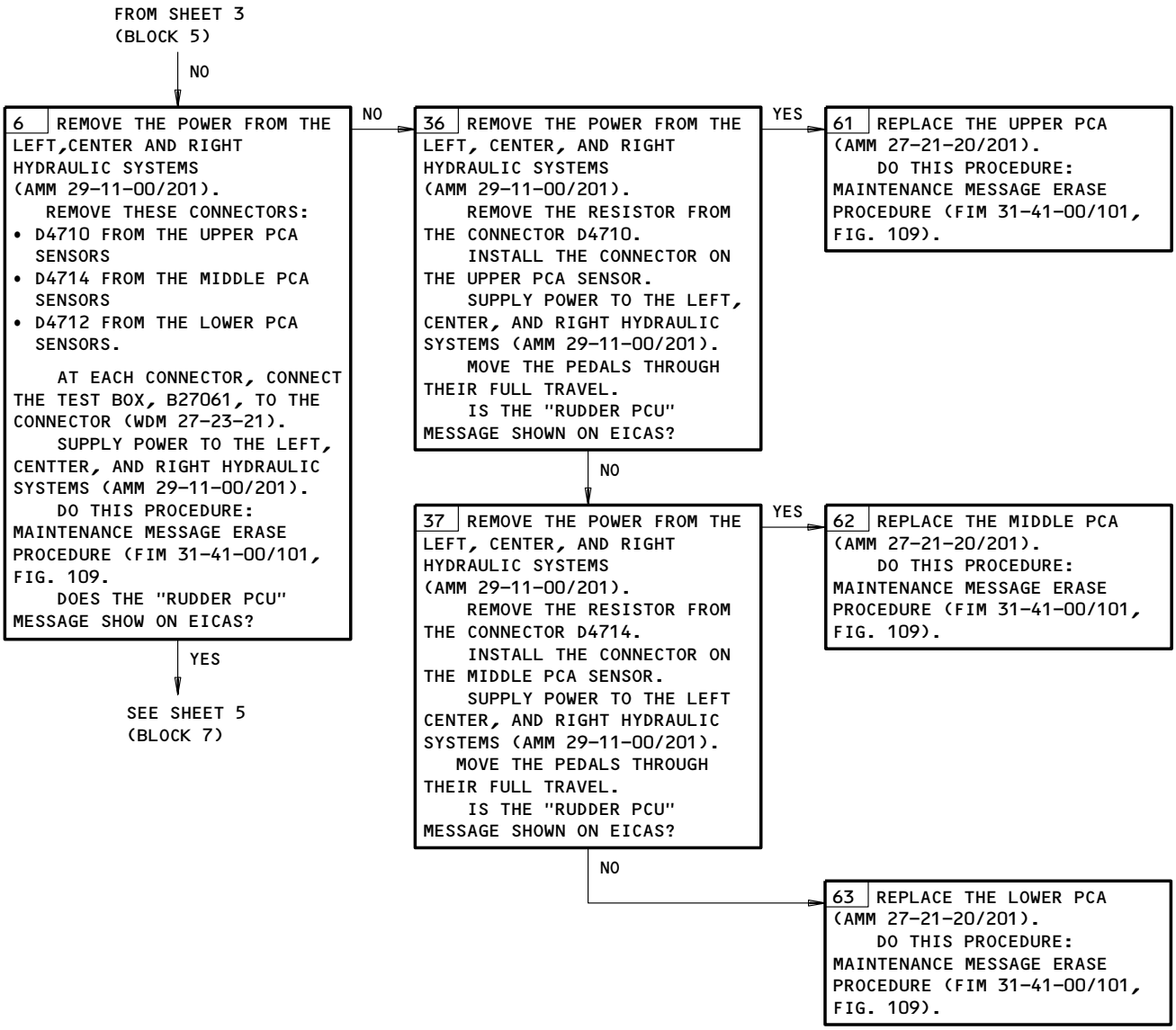
EICAS Message RUDDER PCU Displayed
Figure 109 (Sheet 1)



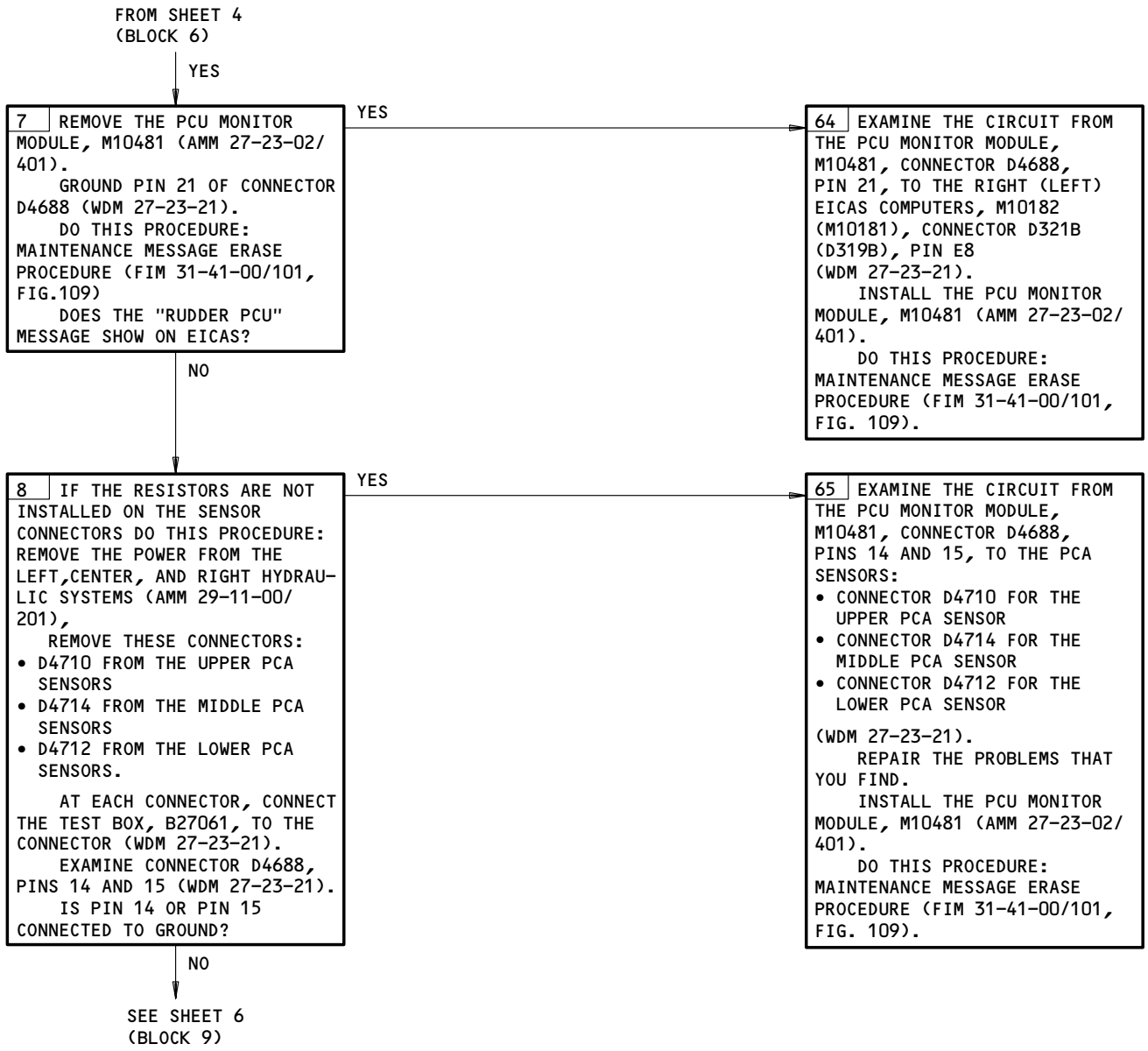
EICAS Message RUDDER PCU Displayed
Figure 109 (Sheet 2)



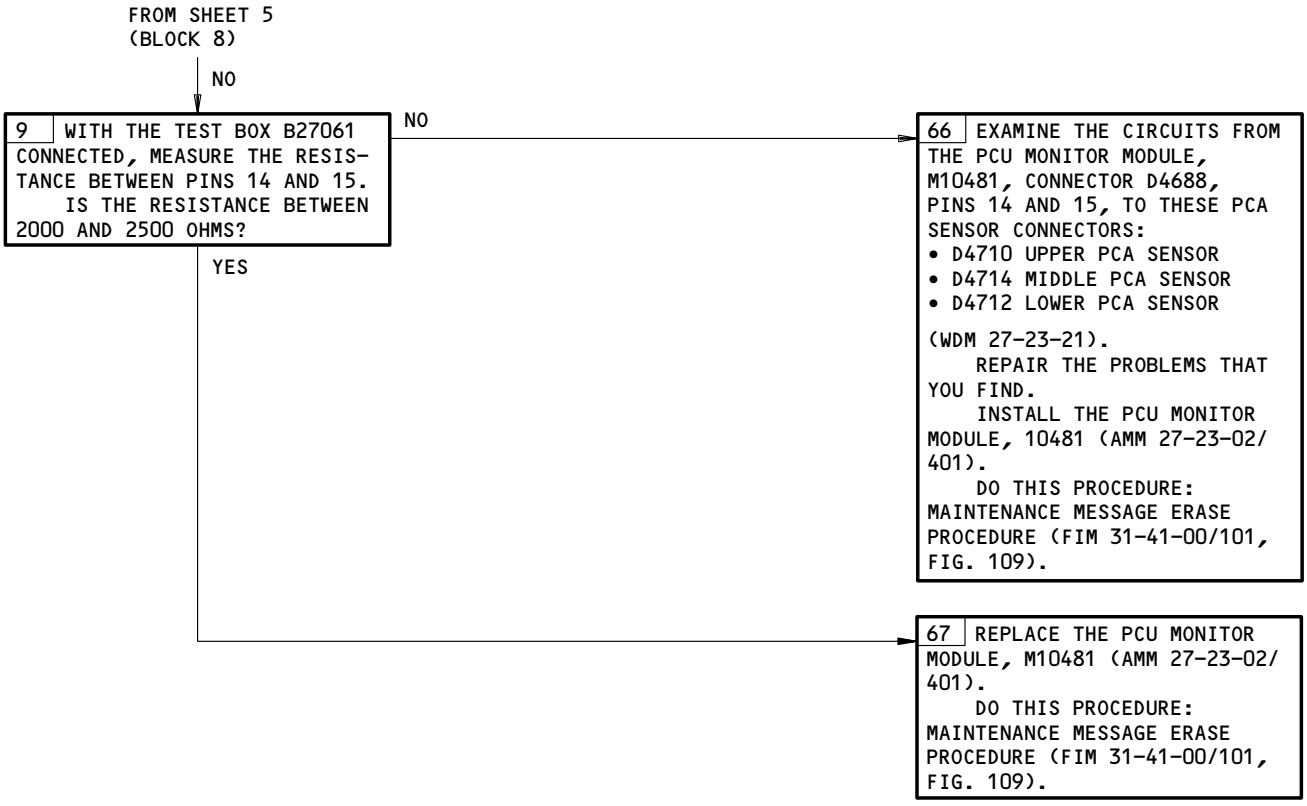
EICAS Message RUDDER PCU Displayed
Figure 109 (Sheet 3)



EICAS Message RUDDER PCU Displayed
Figure 109 (Sheet 4)



EICAS Message RUDDER PCU Displayed
Figure 109 (Sheet 5)



EICAS Message RUDDER PCU Displayed
Figure 109 (Sheet 6)

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C5 OR 11H11,11C6,11C7,11C8,11C9,11D18 OR 11G10,
11G17,11G18,11G27,11G28,11H20

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
LEFT HYDRAULIC POWER SYSTEM IS ON (AMM 29-11-00/201)

"RUDDER RATIO" LGT ILLUM ON THE GROUND/IN FLIGHT. EICAS MESSAGE "RUDDER RATIO" DISPLAYED.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

1 DO A CHECK OF THE RUDDER RATIO CHANGER MODULES (RRCM). IF THERE ARE FAULTBALLS SHOWN, RECORD FAULTS BEFORE YOU PUSH RESET BUTTON.
OPEN THEN CLOSE THE CIRCUIT BREAKERS THAT FOLLOW:

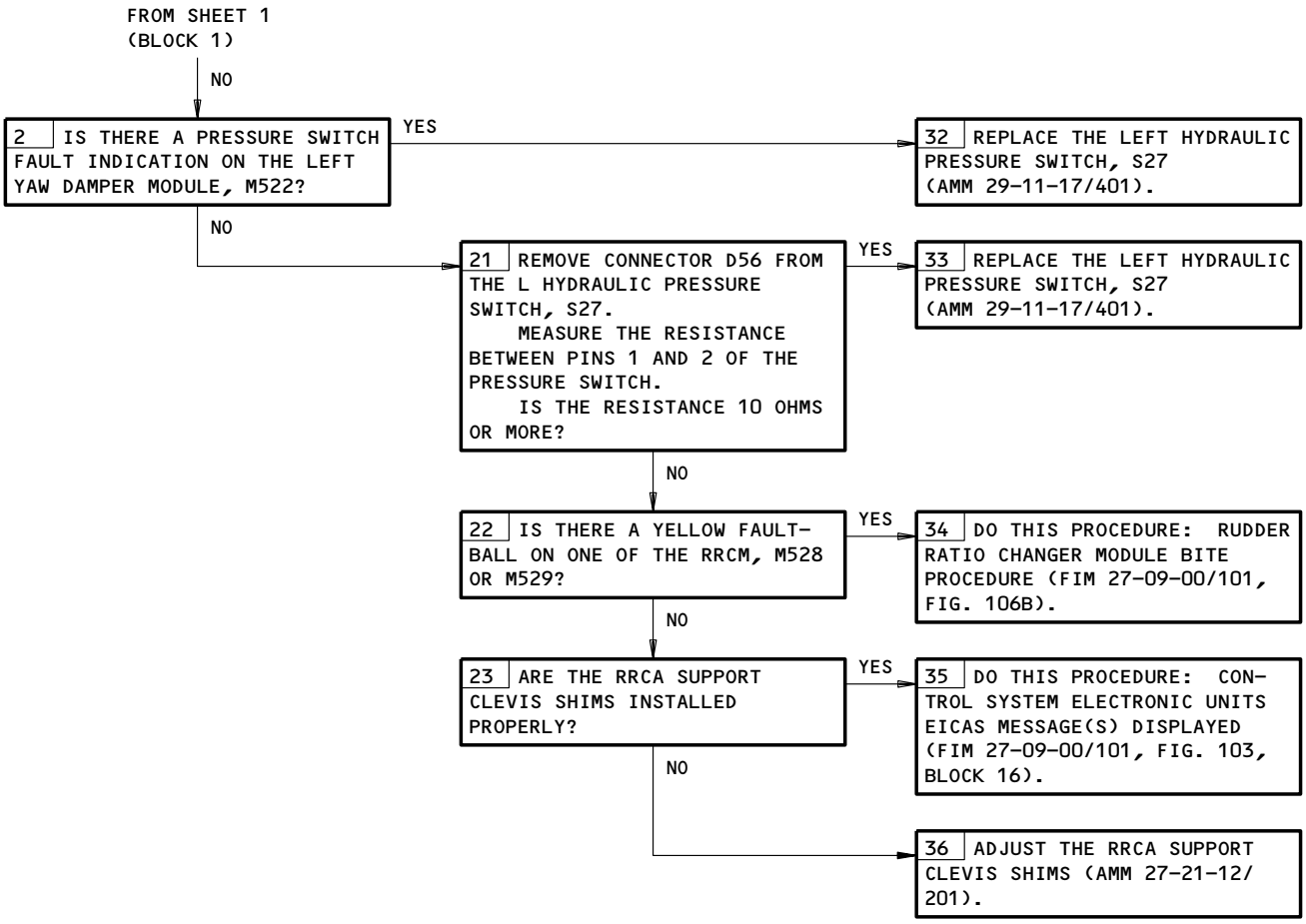
11C7, CSEU 1L-DC
11C9, CSEU 2L-DC
11D18 OR 11G10, RUD RATIO
11G18, CSEU 1R-DC
11G28, CSEU 2R-DC

PUSH THE RESET BUTTON ON THE TWO RRCM, M528 AND M529.
DO THE EICAS INDICATIONS GO OFF?

YES → 31 THE SYSTEM IS OK.

NO → SEE SHEET 2 (BLOCK 2)

RUDDER RATIO Light Illuminated on the Ground/In Flight.
EICAS Message RUDDER RATIO Displayed.
Figure 110 (Sheet 1)



RUDDER RATIO Light Illuminated on the Ground/In Flight.
EICAS Message RUDDER RATIO Displayed.
Figure 110 (Sheet 2)

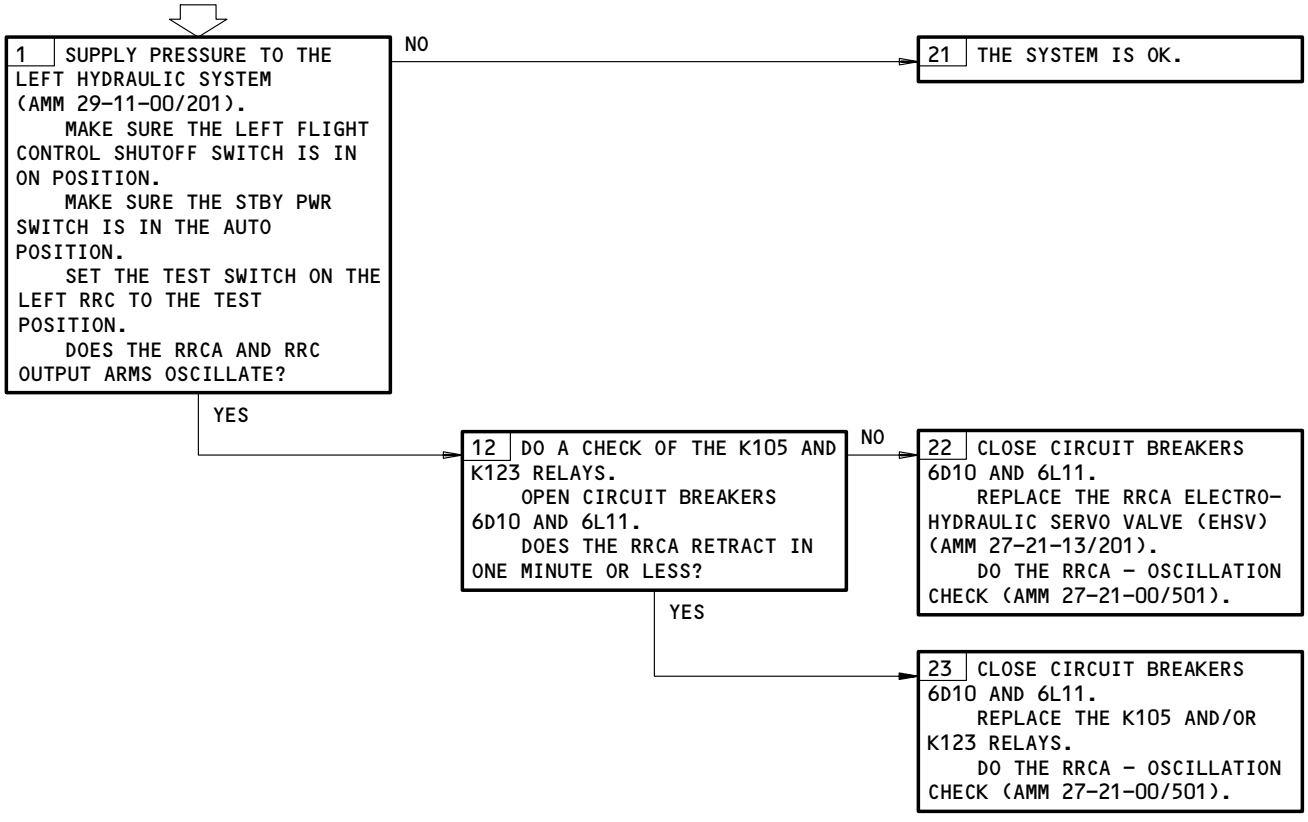
PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C6,11C7,11C8,11C9,11D18 OR 11G10,11G17,11G18,
11G27,11G28,11H17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN THE HYDRAULIC POWER IS SUPPLIED.

OSCILLATION OF THE RRCA OR RUDDER TRAILING EDGE



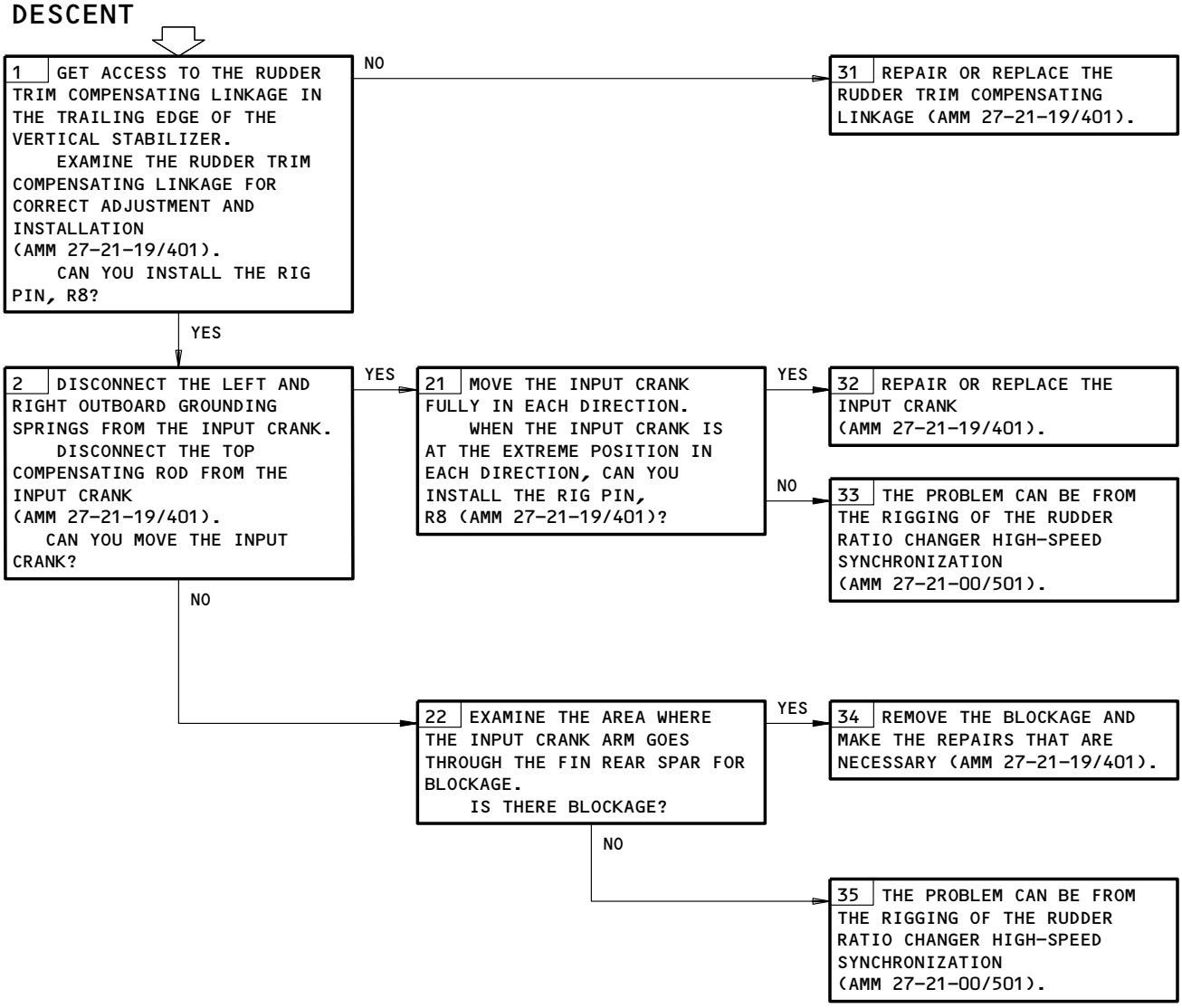
Oscillation of the RRCA or Rudder Trailing Edge
Figure 111

AIRPLANE HAS THE RUDDER TRIM COMPENSATING LINKAGE BUT TRIM ADJUSTMENT IS STILL NECESSARY DURING A CLIMB OR DESCENT

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11A18, 11F34, 11G10, 11H17, 11H18, 11H27

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



Airplane Has the Rudder Trim Compensating Linkage but Trim Adjustment Is Still Necessary During a Climb or Descent
Figure 112

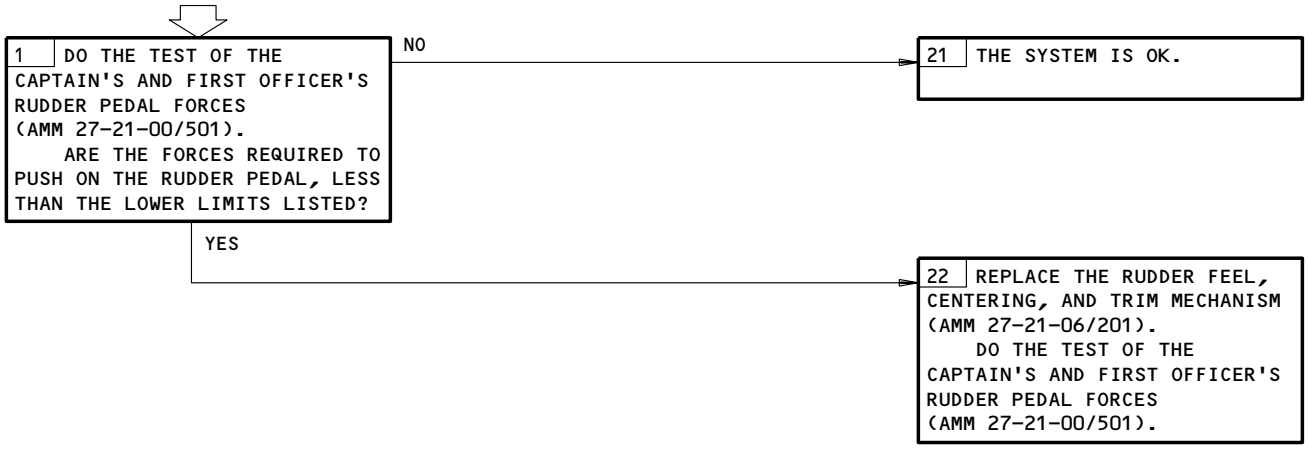
PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C6, 11C7, 11C8, 11C9, 11D18 OR 11G10, 11H17, 11H18, 11H27, 11G28, 11H17

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN THE HYDRAULIC POWER IS SUPPLIED.

RUDDER PEDAL FORCES LOW



Rudder Pedal Forces Low
Figure 113

L48929

RUDDER AND ELEVATOR HYDRAULIC SYSTEMS

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
CIRCUIT BREAKER	1		FLT COMPT, OVERHEAD PANEL (P11)	
AIR/GND SYS 1, C1182		1	11S15	*
AIR/GND SYS 2, C1170		1	11S19	*
FLT CONT SHUTOFF TAIL CTR, C4035		1	11H18	*
FLT CONT SHUTOFF TAIL LEFT, C4033		1	11H17	*
FLT CONT SHUTOFF TAIL RIGHT, C4034		1	11H28	*
LANDING GEAR POS SYS 1, C1175		1	11C30	*
PCU MON MOD, C4270		1	11J11	*
PCU MON SENSOR, C4283		1	11J10	*
POS SYS 2, C4279		1	11S23	*
COMPUTER - (REF 31-41-00, FIG. 101)				
L EICAS, M10181				
R EICAS, M10182				
FUSE - ELEVATOR CENTER HYDRAULIC SYSTEM	4	2	313AL, AFT FUSELAGE	*
FUSE - RUDDER CENTER HYDRAULIC SYSTEM	5	1	311AL, AFT FUSELAGE	*
MODULE - PCU MONITOR, M10481	1	1	119BL, MAIN EQUIP CTR, P50	27-23-02
PANEL - (REF 24-22-00, FIG. 101)				
GENERATOR FIELD AND HYDRAULIC CONTROL, M10191				
RELAY - (REF 32-09-00, FIG. 101)				
AIR/GND SYS 1, K199				
AIR/GND SYS 1, K10107				
AIR/GND SYS 1, K10388				
AIR/GND SYS 2, K203				
SENSOR - L ELEVATOR CENTER PCA PRESSURE DIFFERENTIAL, TS5208		1	335DB	27-31-05
SENSOR - L ELEVATOR INBOARD PCA PRESSURE DIFFERENTIAL, TS5207		1	335DB	27-31-05
SENSOR - L ELEVATOR OUTBOARD PCA PRESSURE DIFFERENTIAL, TS5206		1	335DB	27-31-05
SENSOR - LOWER RUDDER PCA PRESSURE DIFFERENTIAL, TS5204		1	324CL	27-21-20
SENSOR - MIDDLE RUDDER PCA PRESSURE DIFFERENTIAL, TS5205		1	324CL	27-21-20

* SEE THE WDM EQUIPMENT LIST

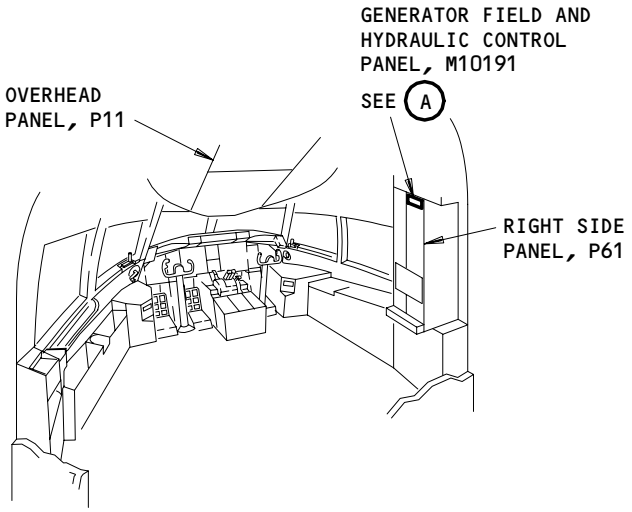
Rudder and Elevator Hydraulic Systems - Component Index
Figure 101 (Sheet 1)

599023

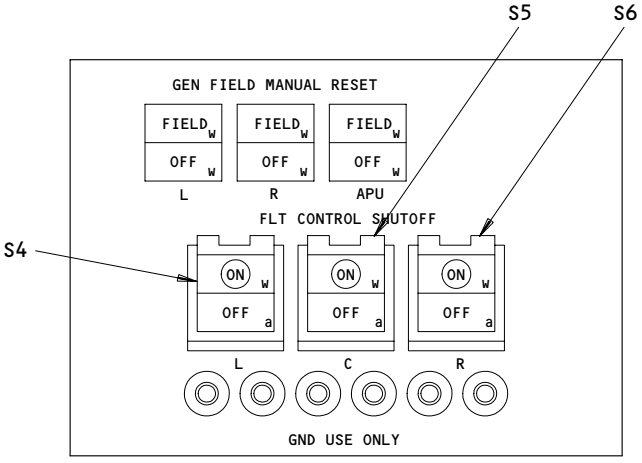
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
SENSOR - R ELEVATOR CENTER PCA PRESSURE DIFFERENTIAL, TS5202		1	345DB	27-31-05
SENSOR - R ELEVATOR INBOARD PCA PRESSURE DIFFERENTIAL, TS5201		1	345DB	27-31-05
SENSOR - R ELEVATOR OUTBOARD PCA PRESSURE DIFFERENTIAL, TS5200		1	345DB	27-31-05
SENSOR - UPPER RUDDER PCA PRESSURE DIFFERENTIAL, TS5203		1	324CL	27-21-20
SWITCH - FLT CONTROL SHUTOFF C, S5	1	1	FLT COMPT, RIGHT SIDE PANEL (P61), GEN FIELD & HYD CONT PANEL M10191	*
SWITCH - FLT CONTROL SHUTOFF L, S4	1	1	FLT COMPT, RIGHT SIDE PANEL (P61), GEN FIELD & HYD CONT PANEL M10191	*
SWITCH - FLT CONTROL SHUTOFF R, S6	1	1	FLT COMPT, RIGHT SIDE PANEL (P61), GEN FIELD & HYD CONT PANEL M10191	*
VALVE - C SYSTEM RUDDER/ELEVATOR HYDRAULIC SHUTOFF, V102	2	1	LEFT MAIN GEAR WHEEL WELL, AFT BULKHEAD	27-23-01
VALVE - L SYSTEM RUDDER/ELEVATOR HYDRAULIC SHUTOFF, V103	2	1	LEFT MAIN GEAR WHEEL WELL, AFT BULKHEAD	27-23-01
VALVE - R SYSTEM RUDDER/ELEVATOR HYDRAULIC SHUTOFF, V101	2	1	RIGHT MAIN GEAR WHEEL WELL, AFT BULKHEAD	27-23-01

* SEE THE WDM EQUIPMENT LIST

Rudder and Elevator Hydraulic Systems - Component Index
Figure 101 (Sheet 2)

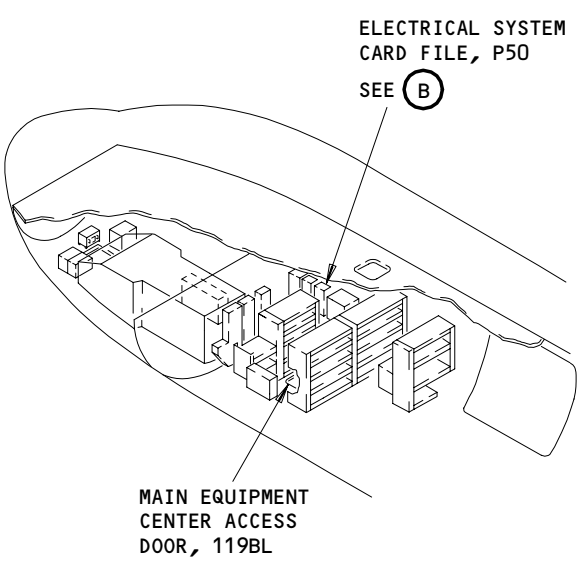


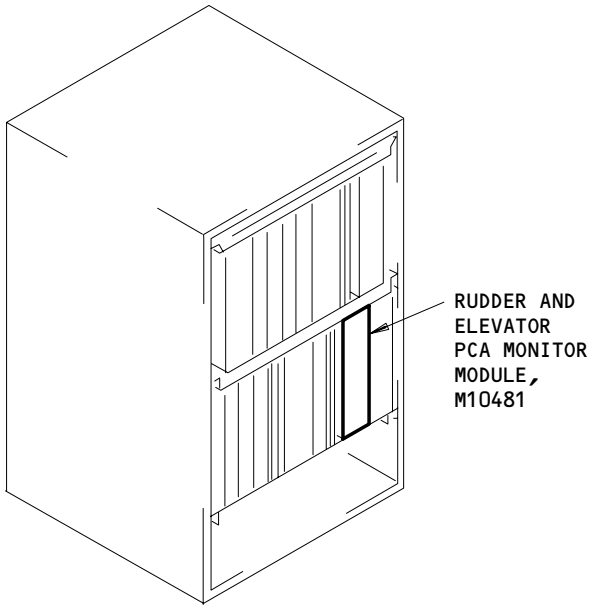
FLIGHT COMPARTMENT



GENERATOR FIELD AND HYDRAULIC
CONTROL PANEL, M10191

A

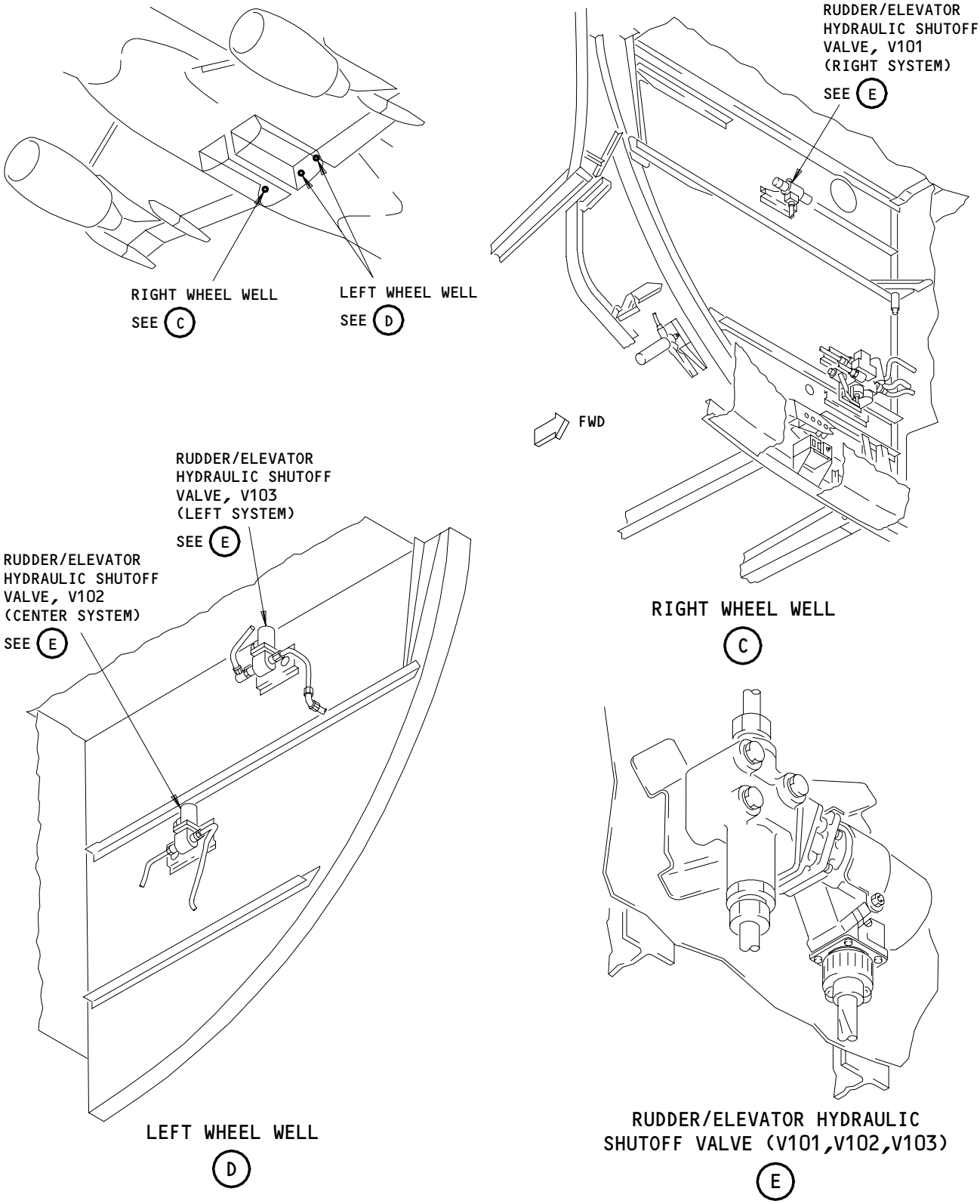




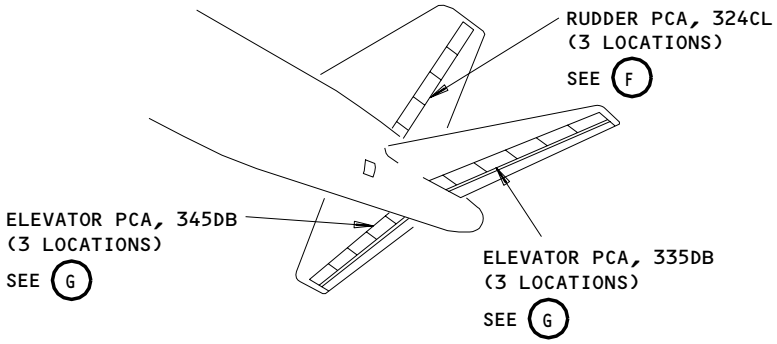
ELECTRIC SYSTEM CARD FILE, P50

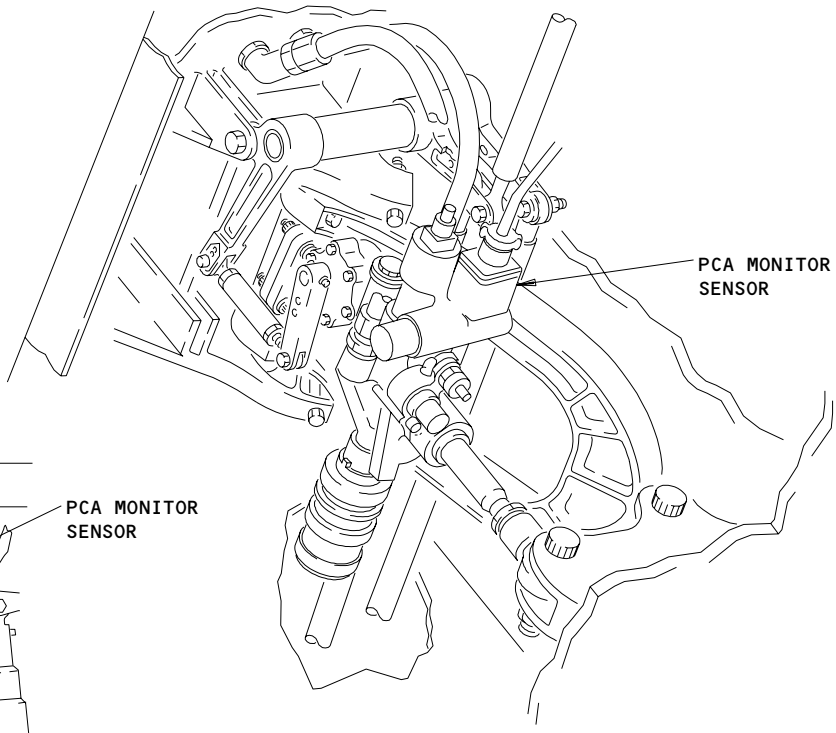
B

Rudder and Elevator Hydraulic Systems - Component Location
Figure 102 (Sheet 1)

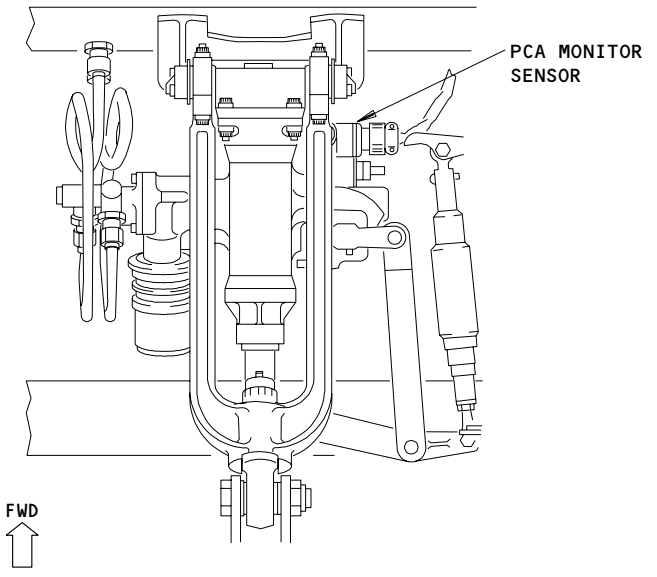


Rudder and Elevator Hydraulic Systems - Component Location
Figure 102 (Sheet 2)



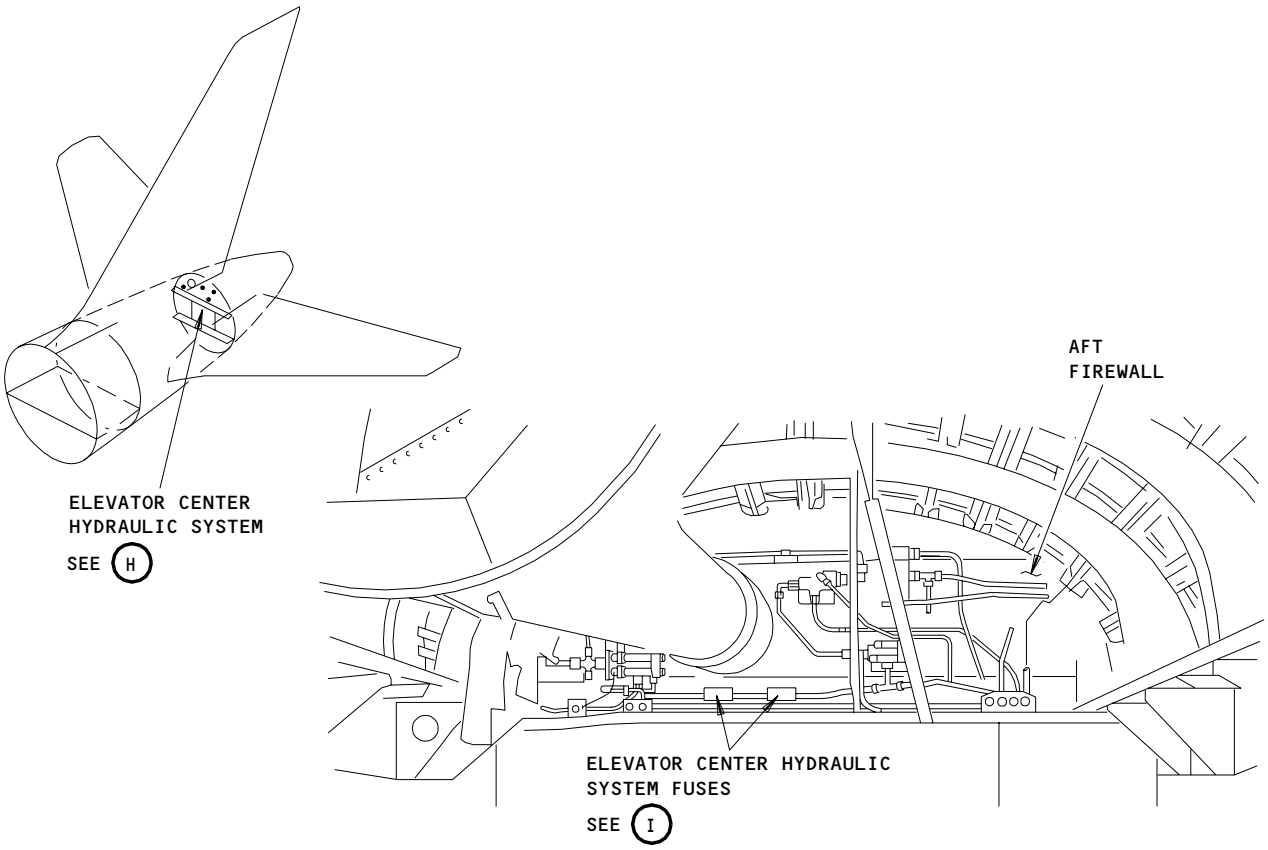


RUDDER PCA
(3 LOCATIONS)
F



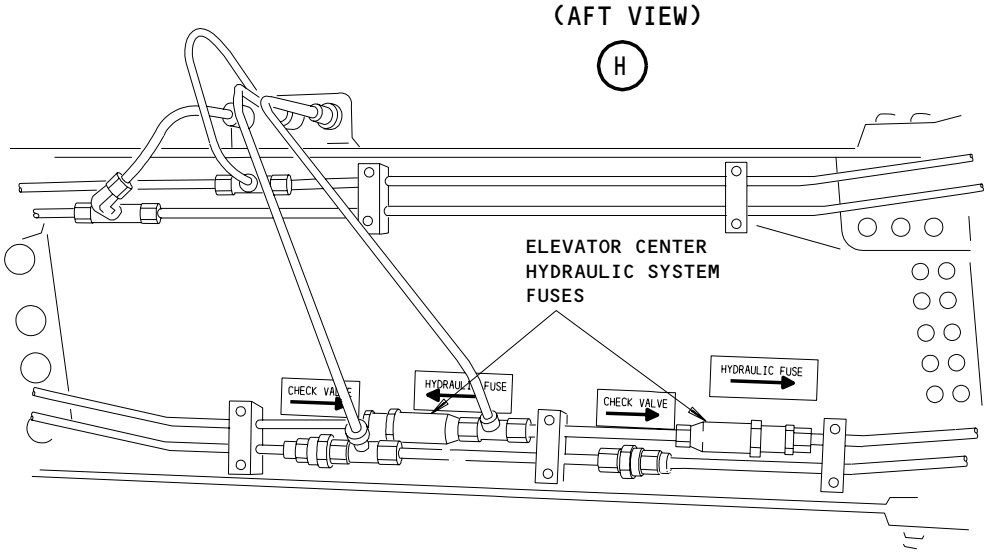
ELEVATOR PCA
(6 LOCATIONS)
G

Rudder and Elevator Hydraulic Systems – Component Location
Figure 102 (Sheet 3)



ELEVATOR CENTER HYDRAULIC SYSTEM
(AFT VIEW)

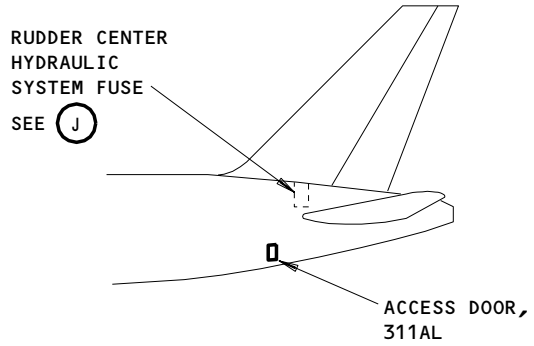
H

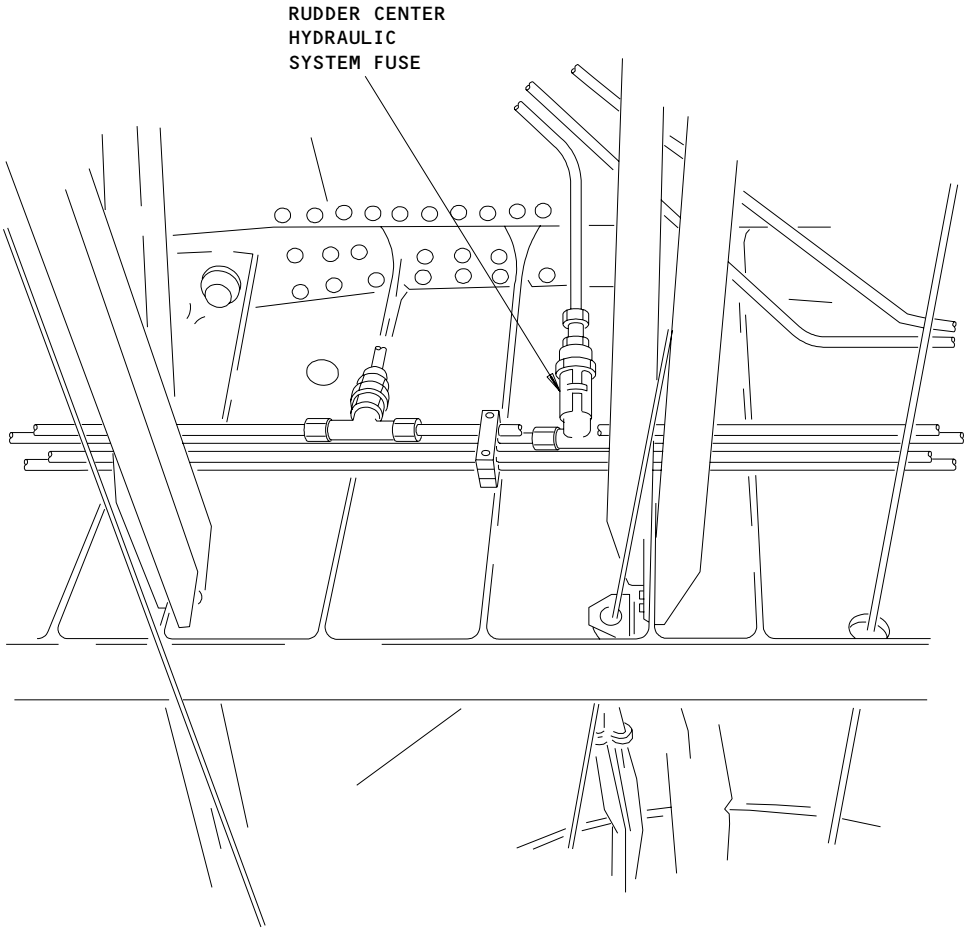


ELEVATOR CENTER HYDRAULIC
SYSTEM FUSES

I

Rudder and Elevator Hydraulic Systems – Component Location
Figure 102 (Sheet 4)





RUDDER CENTER HYDRAULIC SYSTEM FUSE
J

Rudder and Elevator Hydrualic Systems – Component Location
Figure 102 (Sheet 5)

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11H17,11H18,11H28

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

EICAS MESSAGE "FLT CONT VALS" DISPLAYED

1 MAKE SURE THE "FLT CONTROL SHUTOFF L, R, AND C" SWITCHES ARE IN THEIR "ON" POSITIONS.
ARE ALL THE SWITCHES IN THEIR "ON" POSITIONS?

NO → 41 MOVE THE "FLT CONTROL SHUTOFF L,R, AND C" SWITCHES TO "ON".

YES

2 EXAMINE THE SWITCH POSITION LIGHTS ON THE RIGHT SIDE PANEL, P61. DISCONNECT THE ELECTRICAL CONNECTORS SHOWN BELOW FROM THE VALVES WITH POSITION LIGHTS THAT ARE ON.

D2886 FOR THE RIGHT HYDRAULIC SYSTEM
D2916 FOR THE CENTER HYDRAULIC SYSTEM
D2918 FOR THE LEFT HYDRAULIC SYSTEM

DOES ONE OF THESE EICAS MESSAGES SHOW?

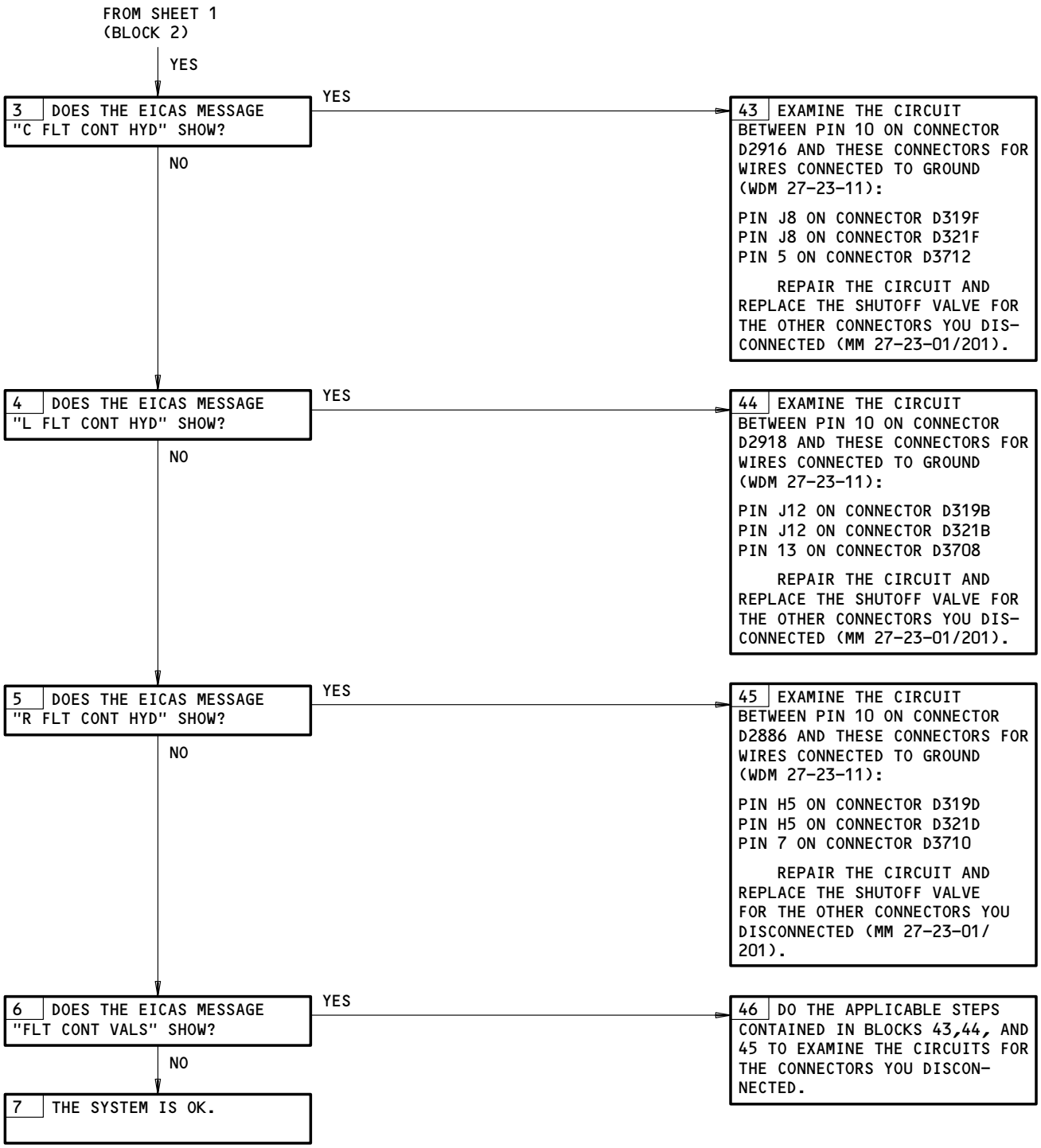
"FLT CONT VALS"
"C FLT CONT HYD"
"L FLT CONT HYD"
"R FLT CONT HYD"

NO → 42 REPLACE THE SHUTOFF VALVES FOR THE CONNECTORS YOU DISCONNECTED (MM 27-23-01/201).

YES

SEE SHEET 2
(BLOCK 3)

EICAS Message FLT CONT VALS Displayed
Figure 103 (Sheet 1)



EICAS Message FLT CONT VALS Displayed
Figure 103 (Sheet 2)

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C30, 11J10, 11J11, 11S15, 11S19, 11S23

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: REFER TO AMM 27-61-00/201 FOR THE SPOILER/ SPEEDBRAKE DEACTIVATION PROCEDURE. ACCIDENTAL SPOILER MOVEMENT CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

EICAS MESSAGE "PCU MONITOR" DISPLAYED

1 ERASE THE "PCU MONITOR" MESSAGE (FIM 31-41-00/101, FIG. 109).
SIMULATE THE AIR MODE (AMM 32-09-02/201).
DOES THE "PCU MONITOR" MESSAGE SHOW?

YES → 11 REMOVE THE PCU MONITOR MODULE, M10481 (AMM 27-23-02/401). EXAMINE PIN 23 ON CONNECTOR D4688 (WDM 27-23-21).
IS PIN 23 CONNECTED TO GROUND?

YES → 21 REPLACE THE AIR/GND SYS 1 RELAY, K10388 (AMM 32-09-02/201). INSTALL THE PCU MONITOR MODULE, M10481 (AMM 27-23-02/401). ERASE THE "PCU MONITOR" MESSAGE (FIM 31-41-00/101, FIG. 109).
IF THE PROBLEM CONTINUES, REMOVE THE PCU MONITOR MODULE, M10481, AND EXAMINE THE CIRCUIT FROM THE AIR/GND RELAY, K10388, CONNECTOR D4510, PIN 3 TO THE PCU MONITOR MODULE, M10481, CONNECTOR D4688, PIN 23 (WDM 27-23-21). INSTALL THE PCU MONITOR MODULE, M10481.
REMOVE THE AIR MODE SIMULATION (AMM 32-09-02/201).

NO → 22 REPLACE THE PCU MONITOR MODULE, M10481 (AMM 27-23-02/401). ERASE THE "PCU MONITOR" MESSAGE (FIM 31-41-00/101, FIG. 109).
IF THE PROBLEM CONTINUES, REMOVE THE PCU MONITOR MODULE, M10481, AND EXAMINE THE CIRCUIT FROM CONNECTOR D4688, PIN 20,PIN 21,PIN 22 TO THE RIGHT AND (LEFT) EICAS COMPUTERS, M10182 (M10181), CONNECTORS D321E (D319E), PIN D8; D321B (D319B), PIN E8, AND D321F (D319F), PIN D7 (WDM 27-23-21). INSTALL THE PCU MONITOR MODULE, M10481.
REMOVE THE AIR MODE SIMULATION (AMM 32-09-02/201).

NO → 2 THE SYSTEM IS OK.

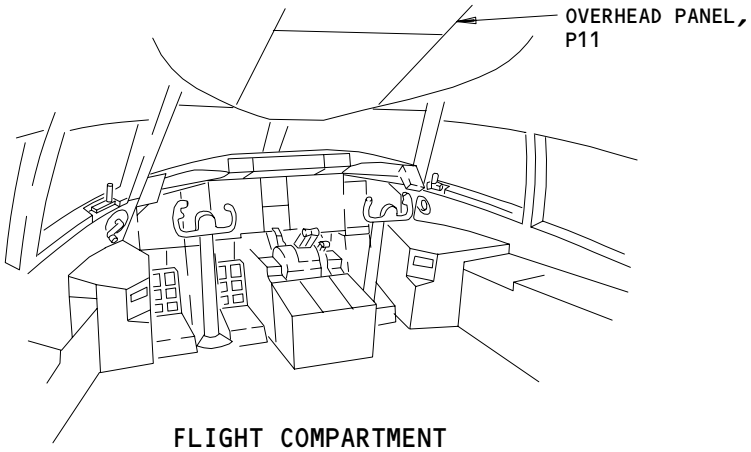
EICAS Message PCU MONITOR Displayed
Figure 104

RUDDER POSITION INDICATING SYSTEM

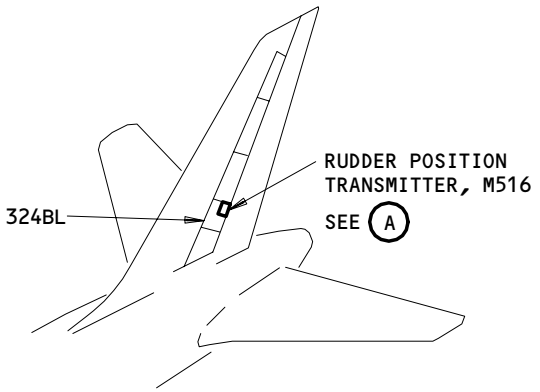
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER -	--		FLT COMPT, OVERHEAD PANEL, P11	
RUD TRIM, C1033		1	11C10	*
RUDDER POS, C1005		1	11J16	*
RUDDER TRIM POS, C1034		1	11J17	*
COMPUTER - (FIM 31-41-00/101) L EICAS, M10181				
COMPUTER - (FIM 31-41-00/101) R EICAS, M10182				
TRANSMITTER - RUDDER POSITION, M516	--	1	324BL, LWR VERT FIN	27-28-01

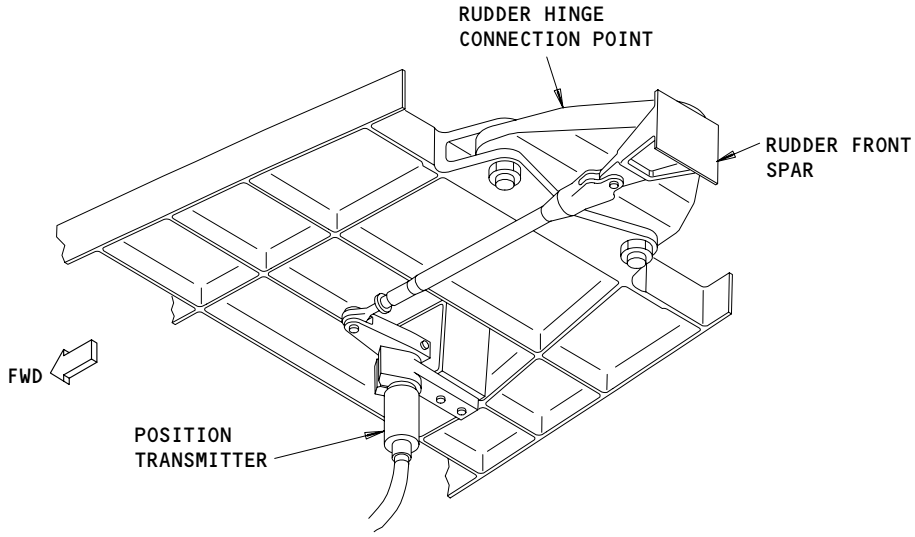
* SEE THE WDM EQUIPMENT LIST

Rudder Position Indicating System - Component Index
Figure 101



FLIGHT COMPARTMENT





RUDDER POSITION TRANSMITTER, M516
(A)

Rudder Position Indicating System - Component Location
Figure 102

PREREQUISITES

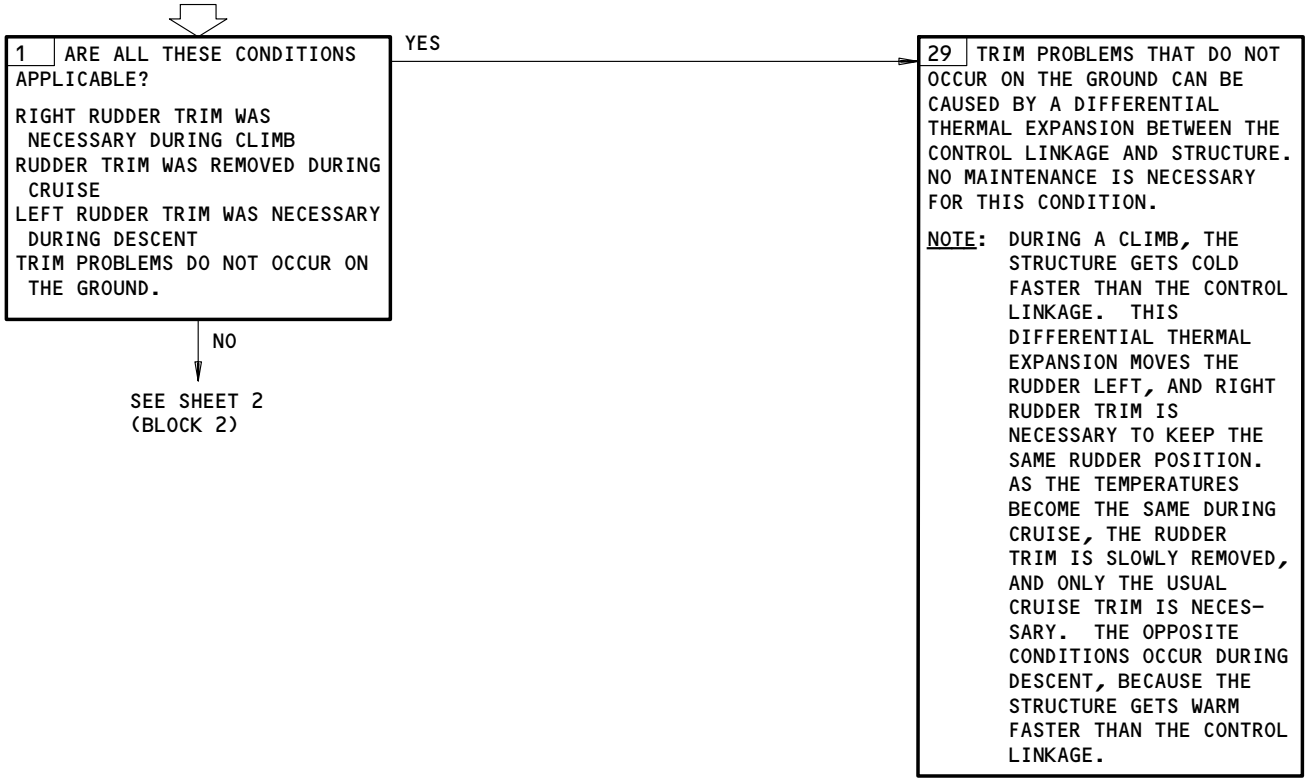
MAKE SURE THIS SYSTEM WILL OPERATE:
EICAS (MM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C10,11J16,11J17

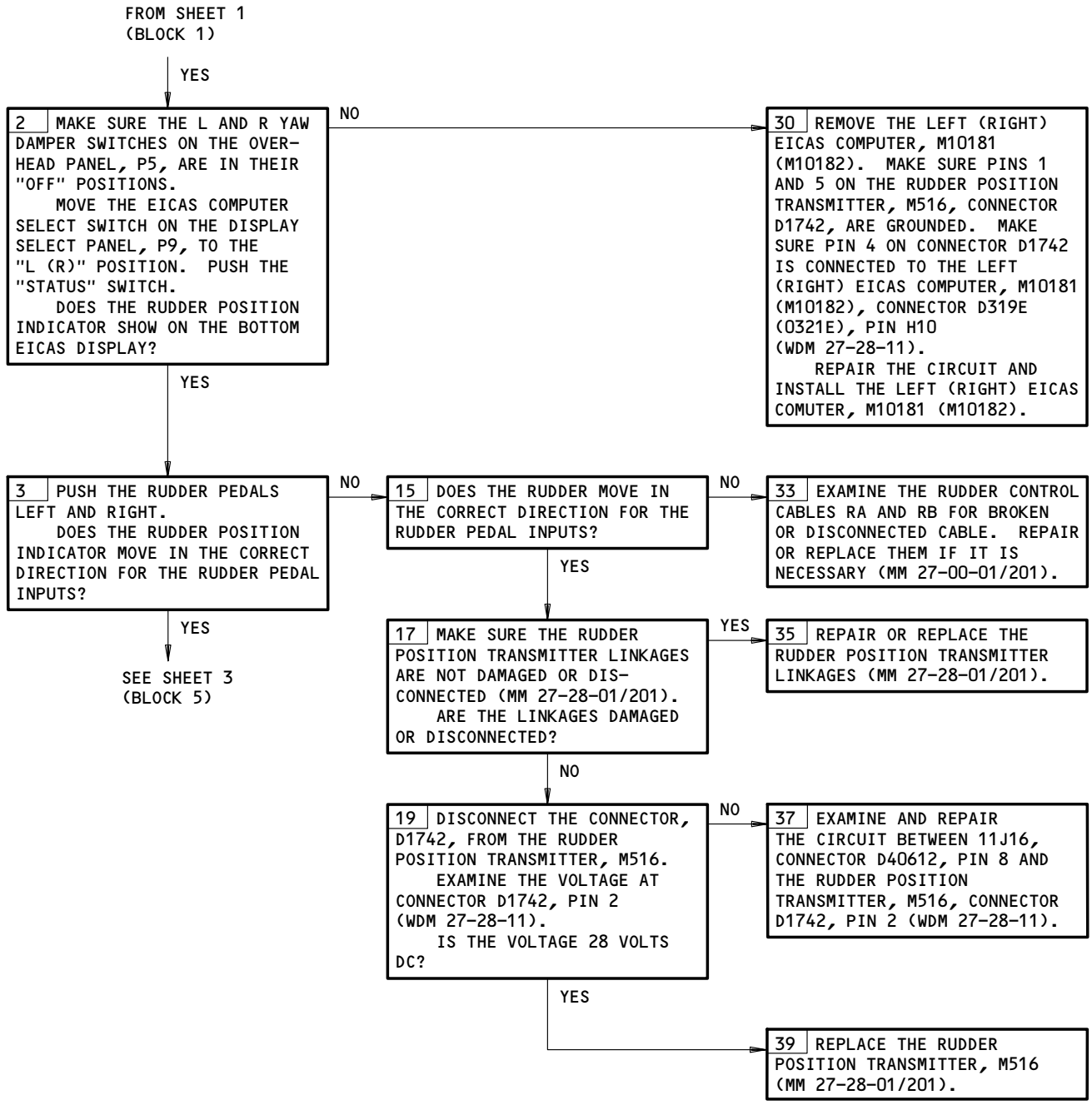
MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
HYDRAULIC POWER IS ON (MM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

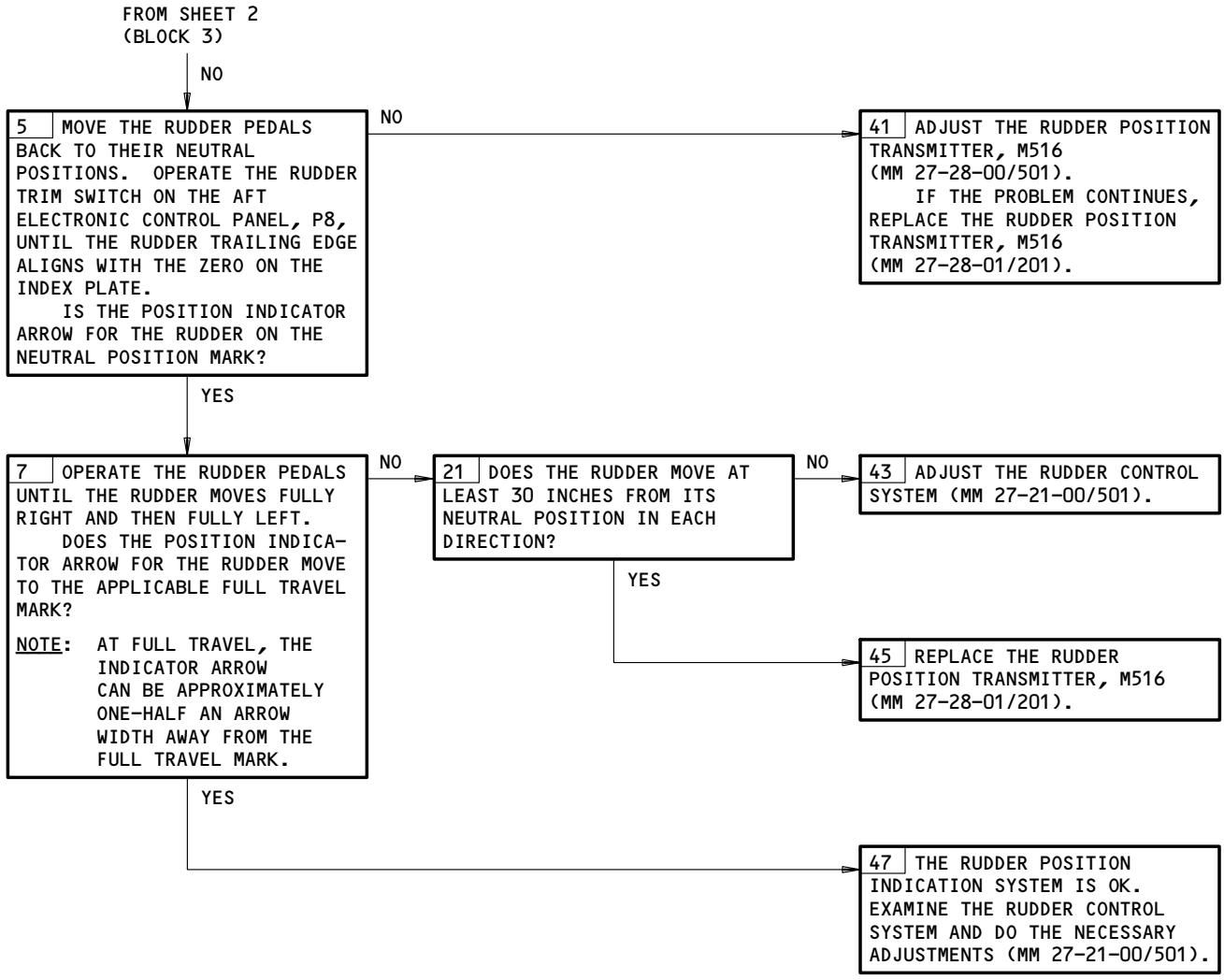
RUDDER POSITION INDICATION PROBLEMS



Rudder Position Indication Problems
Figure 103 (Sheet 1)



Rudder Position Indication Problems
Figure 103 (Sheet 2)



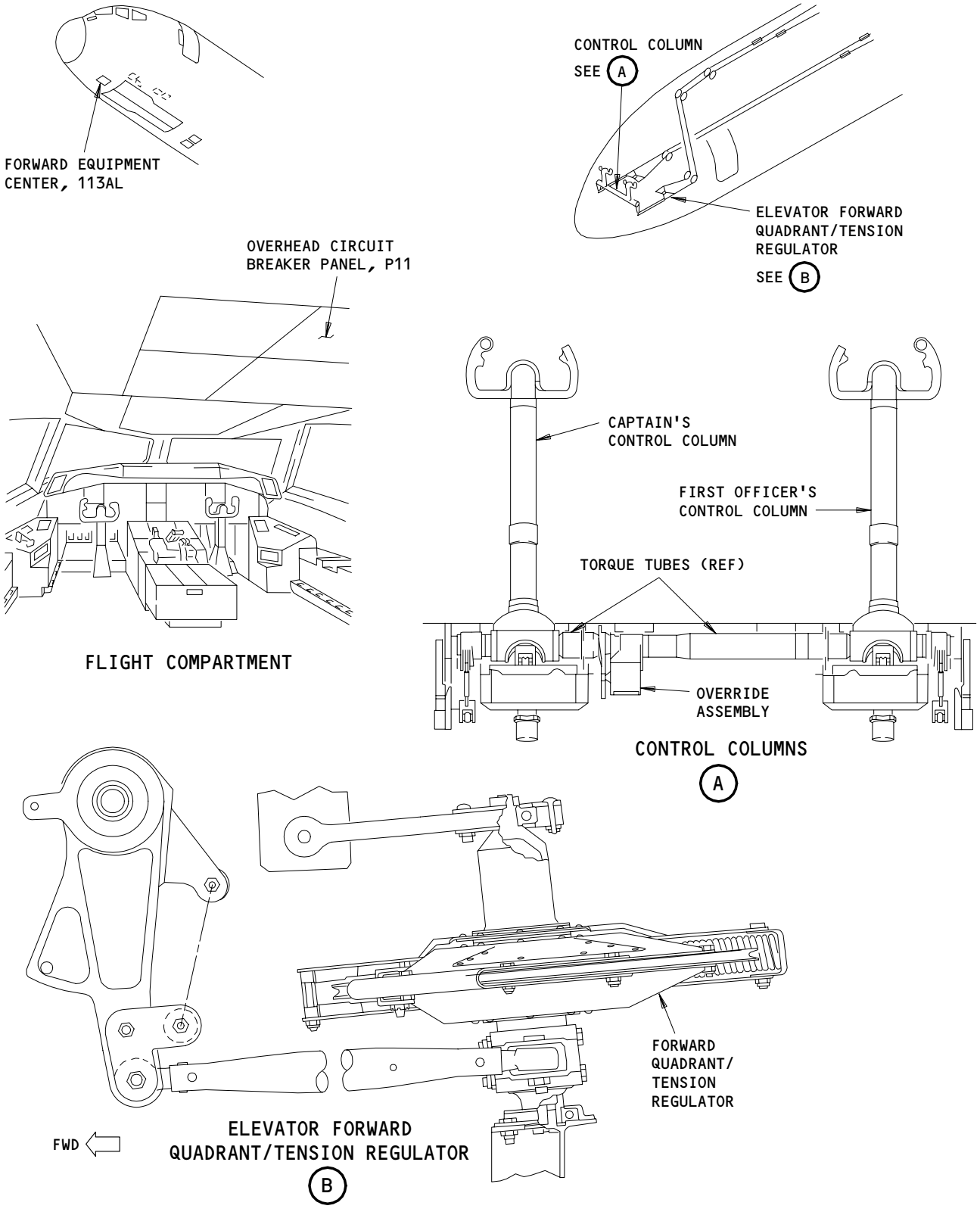
Rudder Position Indication Problems
Figure 103 (Sheet 3)

ELEVATOR CONTROL SYSTEM

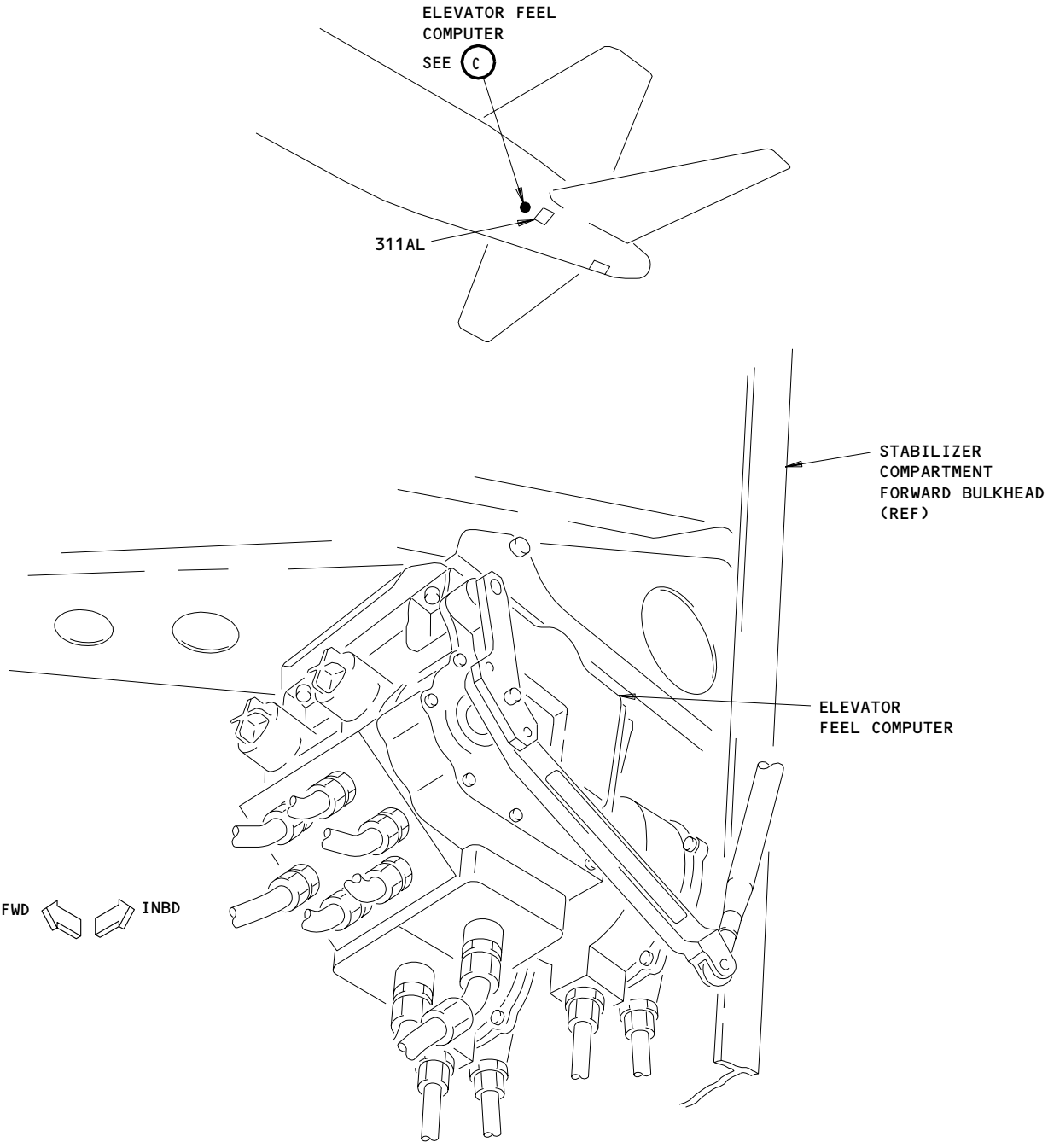
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
ACTUATOR – ELEVATOR ASYMMETRY LIMITER, M10048	3	1	313AL, AFT FUSELAGE	27-31-03
ACTUATOR – ELEVATOR FEEL	4	1	313AL, AFT FUSELAGE	27-31-18
ACTUATOR – ELEVATOR POWER CONTROL (PCA)	4	6	335DB (L PCAs),345DB (R PCAs)	27-31-05
CIRCUIT BREAKERS –	1		FLT COMPT, P11	
ELEVATOR LIMIT, C4032		1	11J12	*
ELEVATOR POSITION L, C4101		1	11J13	*
ELEVATOR POSITION R, C4102		1	11J22	*
PCU MON MOD, C4270		1	11J11	*
PCU MON SENSOR, C4283		1	11J10	*
COLUMN – CONTROL	1	2	113AL, FWD EQUIP CTR	27-31-10
COMPUTERS – (31-41-00/101)				
EICAS L, M10181				
EICAS R, M10182				
COMPUTER – ELEVATOR FEEL	2	1	311AL	27-31-19
ELEVATOR –	4	2	HORIZONTAL STAB REAR SPAR	27-31-01
FEEL AND CENTERING UNIT – ELEVATOR	3	1	311AL, AFT FUSELAGE	27-31-17
MECHANISM – NEUTRAL SHIFT AND OVERRIDE	4	1	313AL, AFT FUSELAGE	27-31-21
MODULES – (27-09-00/101)				
STABILIZER TRIM/ELEV ASYM LIMIT L, M524				
STABILIZER TRIM/ELEV ASYM LIMIT R, M525				
OVERRIDE – CONTROL COLUMN	1	1	113AL, FWD EQUIP CTR	27-31-23
QUADRANT – ELEV AFT	3	2	311AL,313AL, AFT FUSELAGE	27-31-15
QUADRANT – ELEV FWD/TENSION REGULATOR	1		113AL, FWD EQUIP CTR	27-31-12
SERVOS – (22-12-00/101)				
AUTOPILOT PITCH CONTROL C, M272				
AUTOPILOT PITCH CONTROL L, M271				
AUTOPILOT PITCH CONTROL R, M273				
TORQUE BOX – ELEV CONT AFT MECHANISM	3	1	311AL,313AL AFT FUSELAGE	27-31-16
TRANSDUCERS – (22-12-00/101)				
ELEV NEUTRAL SHIFT C, TS5135				
ELEV NEUTRAL SHIFT L, TS5151				
ELEV NEUTRAL SHIFT R, TS5152				
TRANSMITTERS – (27-38-00/101)				
ELEVATOR POS L, M517				
ELEVATOR POS R, M518				
VALVE – PRESSURE REDUCER BYPASS	5	1	311AL, AFT FUSELAGE	27-31-13
VALVE – PRESSURE REDUCING	5	3	311AL, AFT FUSELAGE	27-31-13

* SEE THE WDM EQUIPMENT LIST

Elevator Control System – Component Index
Figure 101

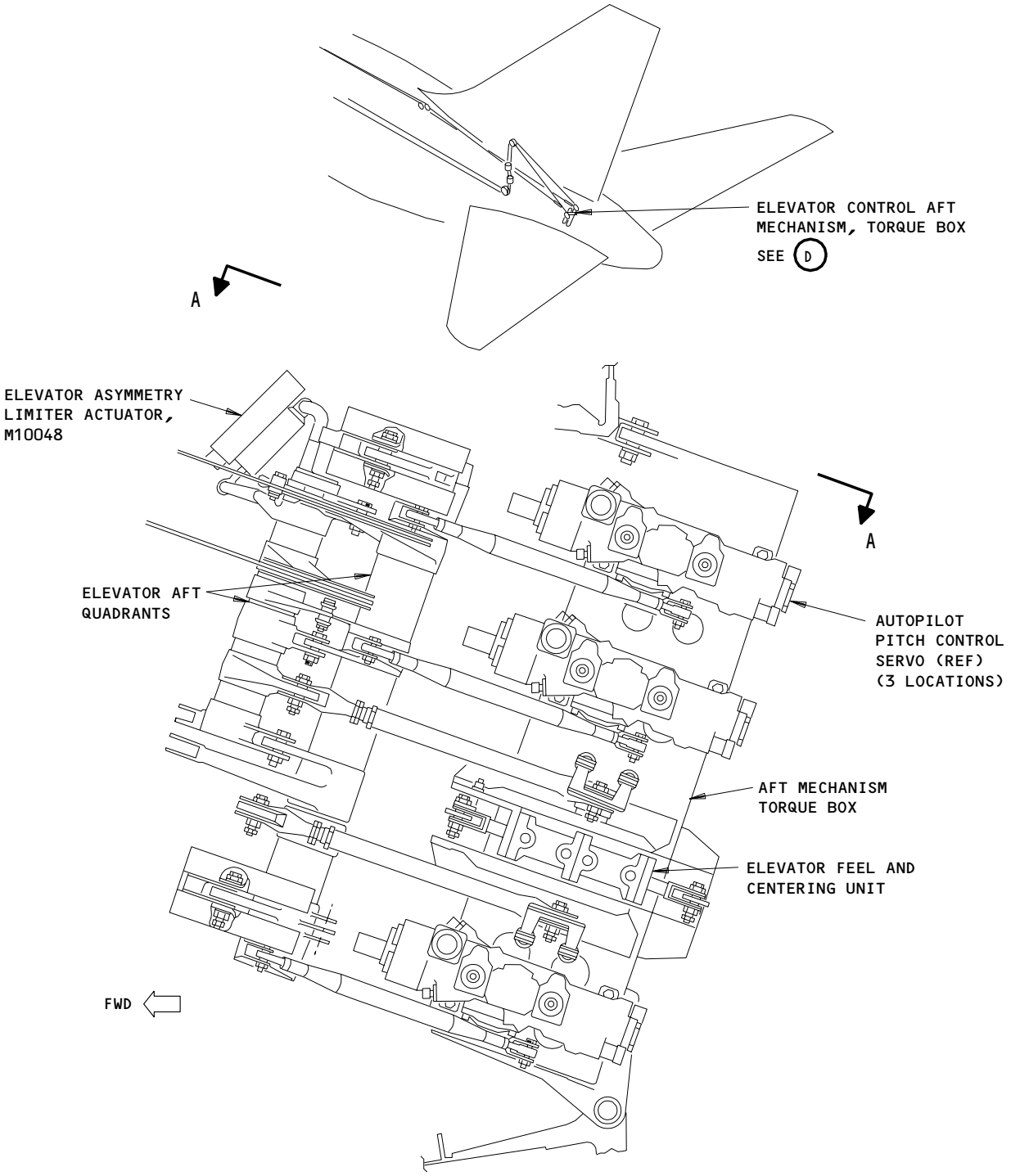


Elevator Control System – Component Location
Figure 102 (Sheet 1)



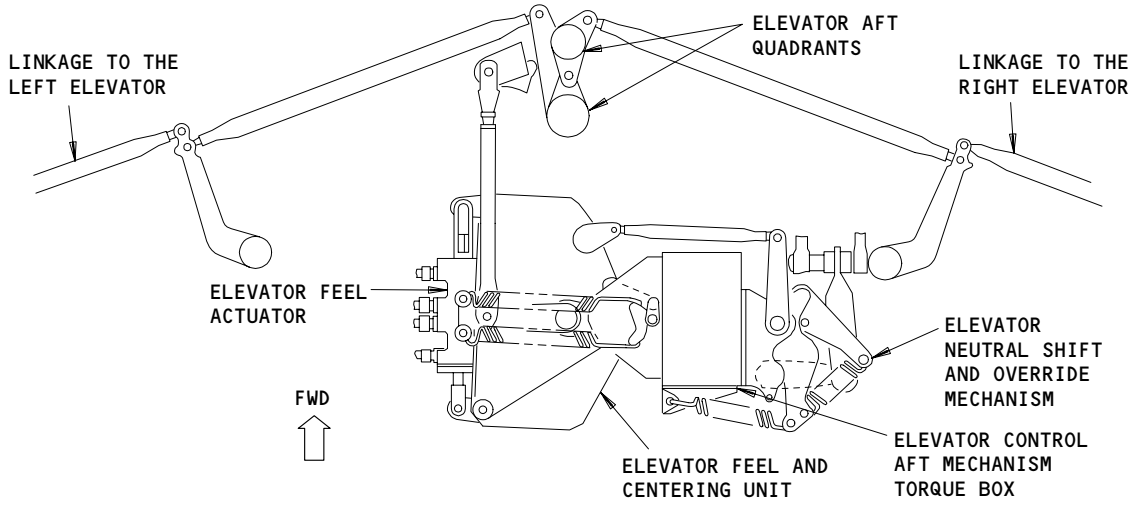
ELEVATOR FEEL COMPUTER
C

Elevator Control System – Component Location
Figure 102 (Sheet 2)



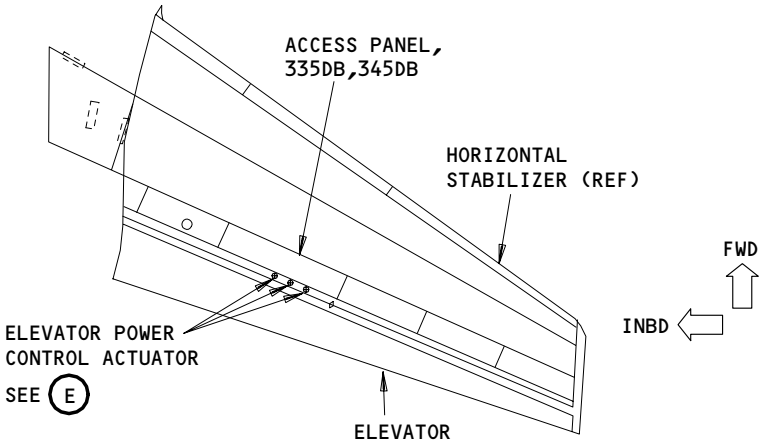
ELEVATOR CONTROL AFT MECHANISM, TORQUE BOX
(D)

Elevator Control System – Component Location
Figure 102 (Sheet 3)

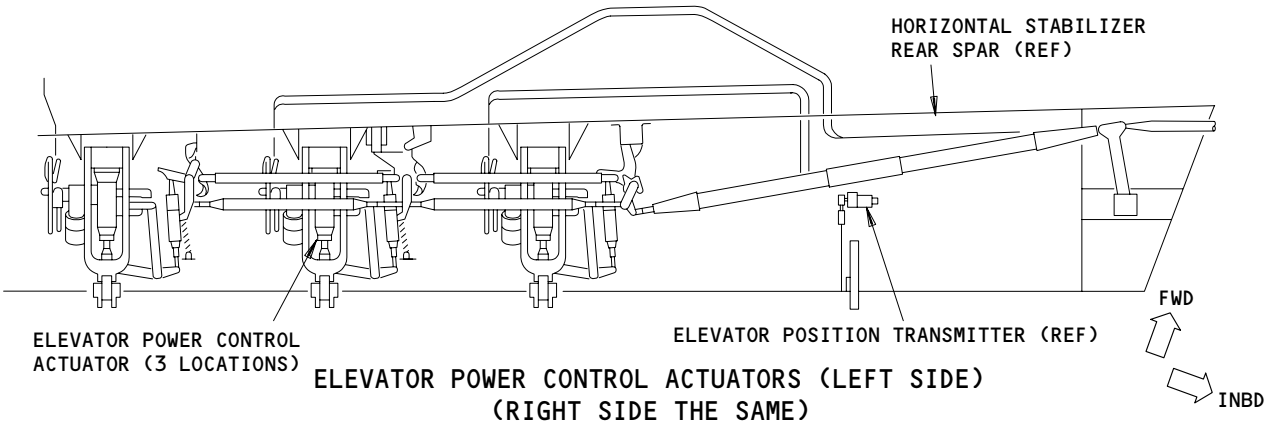


ELEVATOR CONTROL AFT MECHANISM, TORQUE BOX

A-A (FROM SHT 3)



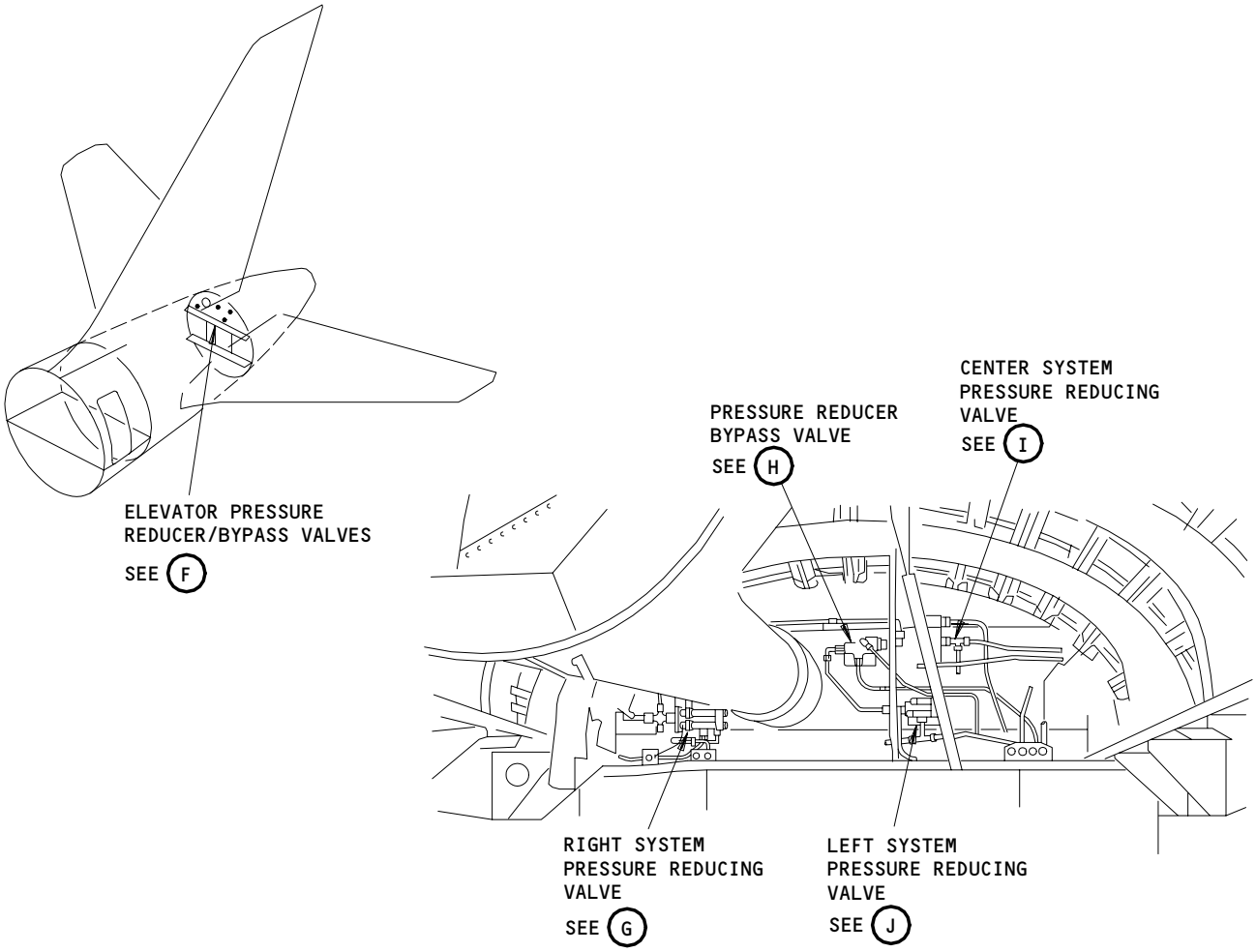
HORIZONTAL STABILIZER AND ELEVATOR (BOTTOM VIEW)



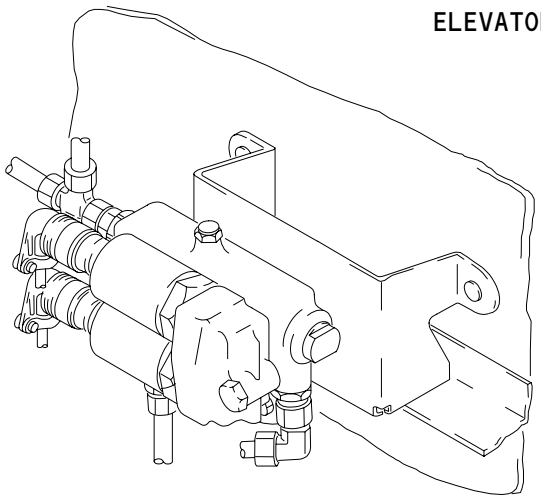
ELEVATOR POWER CONTROL ACTUATORS (LEFT SIDE)
(RIGHT SIDE THE SAME)

(E)

Elevator Control System - Component Location
Figure 102 (Sheet 4)

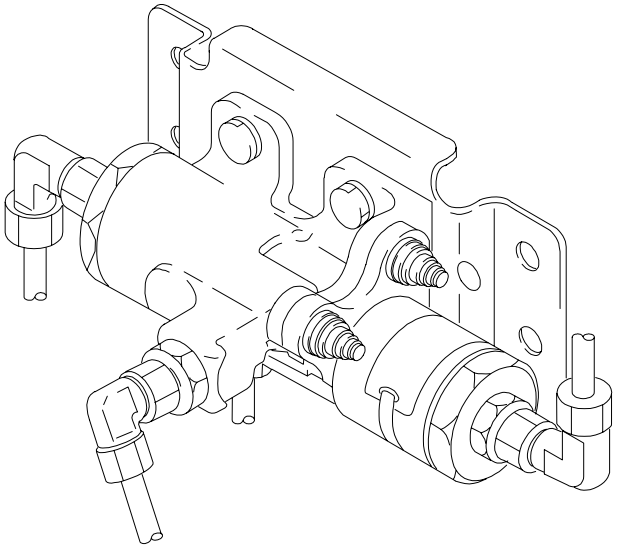


ELEVATOR PRESSURE REDUCER/BYPASS VALVES
F



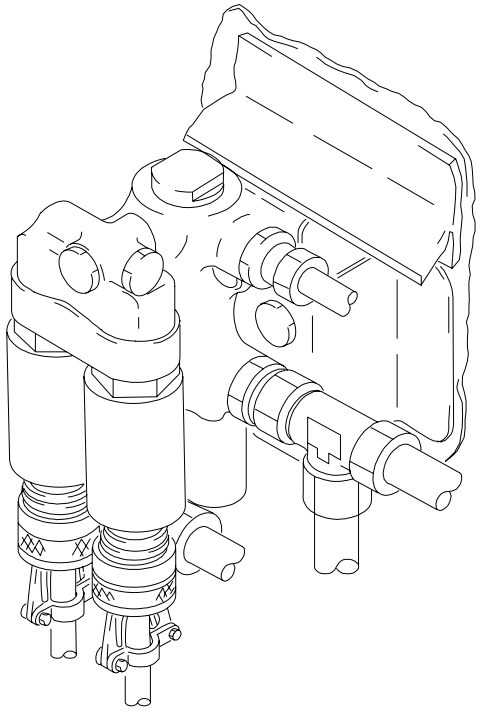
RIGHT SYSTEM PRESSURE REDUCING VALVE
G

Elevator Control System – Component Location
Figure 102 (Sheet 5)



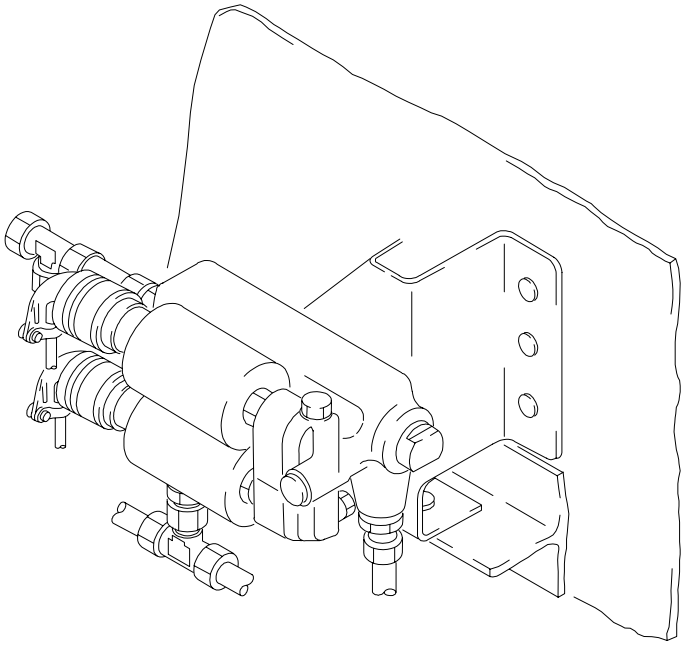
PRESSURE REDUCER BYPASS VALVE

(H)



CENTER SYSTEM PRESSURE REDUCING VALVE

(I)



LEFT SYSTEM PRESSURE REDUCING VALVE

(J)

Elevator Control System - Component Location (Details from Sht 5)
Figure 102 (Sheet 6)

Not Used
Figure 103

PREREQUISITES

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

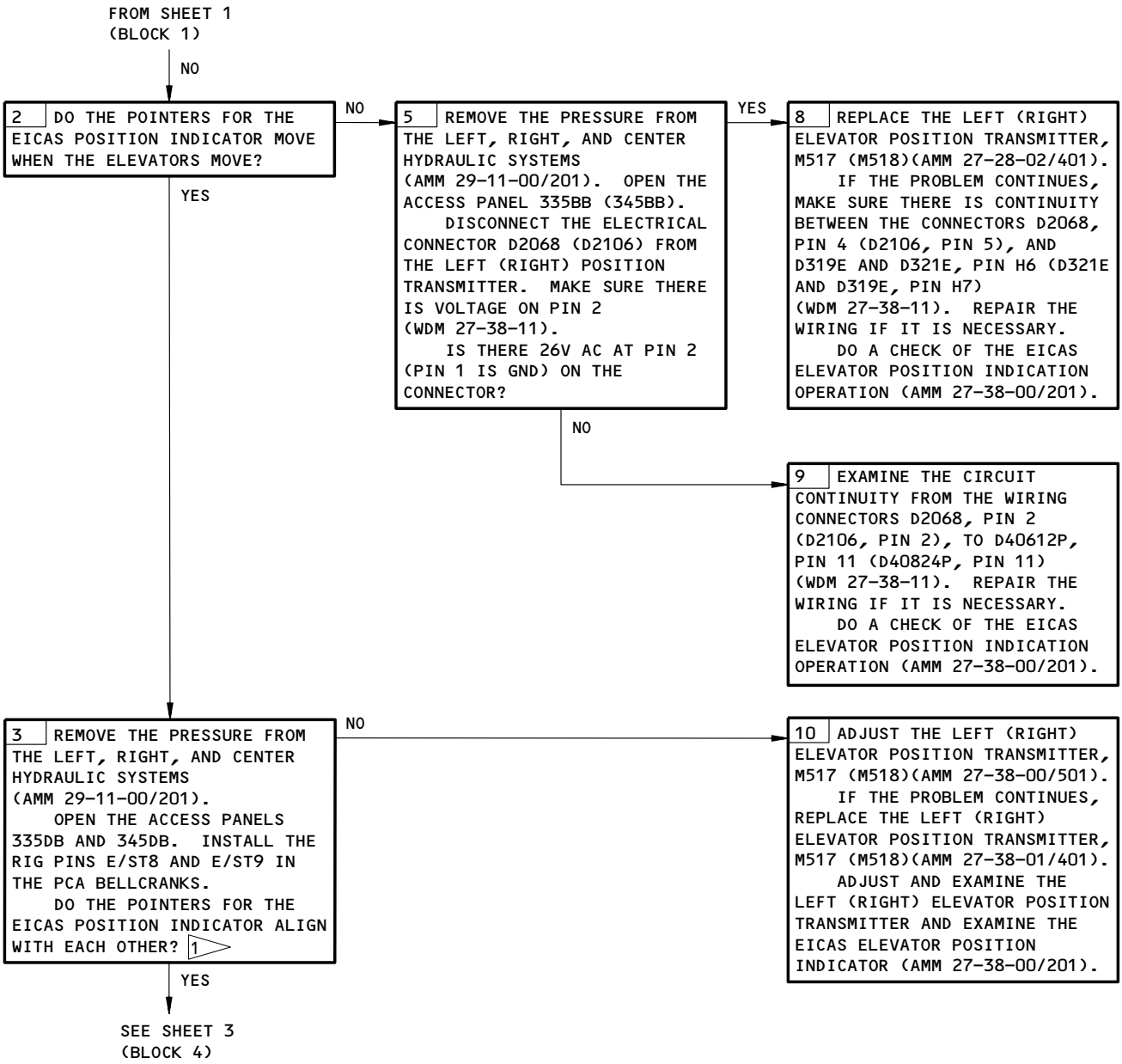
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11H17,11H18,11H28,11J13,11J22

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
HYDRAULIC POWER IS ON (MM 29-11-00/201)

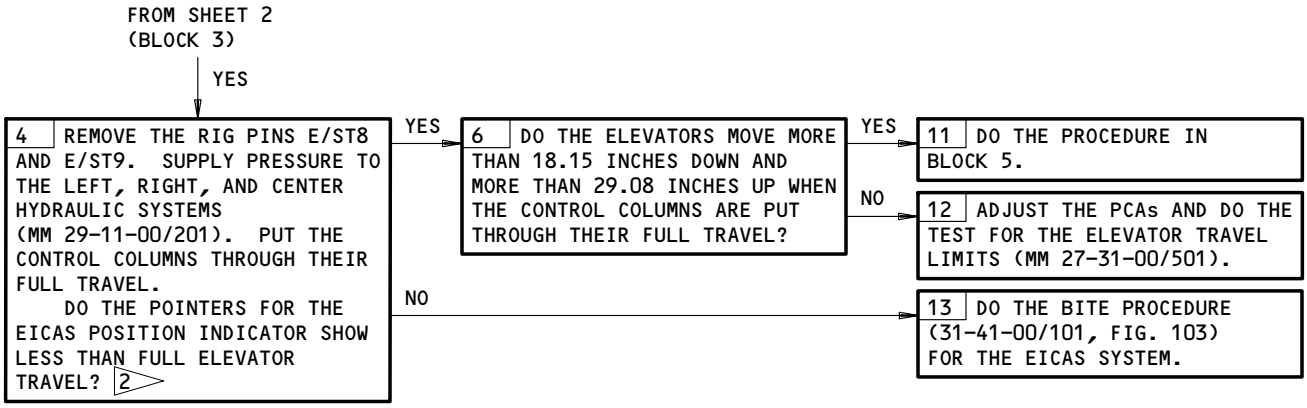
WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN THE HYDRAULIC POWER IS SUPPLIED.

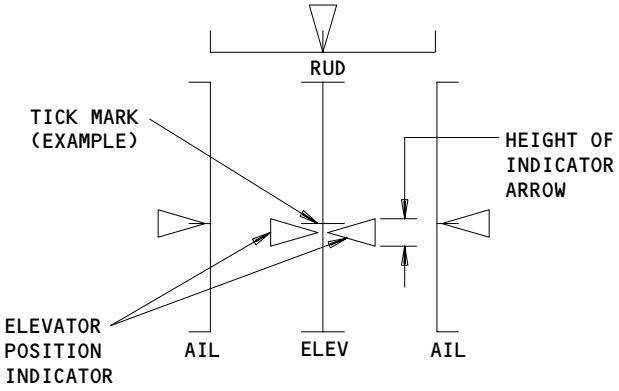
ELEVATOR POSITION INDICATION PROBLEMS

Elevator Position Indication Problems
Figure 104 (Sheet 1)



Elevator Position Indication Problems
Figure 104 (Sheet 2)





ELEVATOR POSITION INDICATION
ON EICAS SCREEN

1 THE LEFT AND RIGHT ELEVATOR POSITION INDICATORS WILL APPROXIMATELY ALIGN WITH THE MIDDLE TICK MARK OF THE EICAS SCREEN. THE POSITION INDICATORS MUST BE NO MORE THAN ONE-HALF THE HEIGHT OF AN INDICATOR ARROW FROM EACH OTHER.

2 THE ELEVATOR POSITION INDICATOR ARROWS MUST GO TO AND STAY VISIBLE AT THE FULL UP OR DOWN TICK MARKS ON THE EICAS SCREEN.

Elevator Position Indication Problems
Figure 104 (Sheet 3)

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11H17,11H18,11H28,11C12,11C13

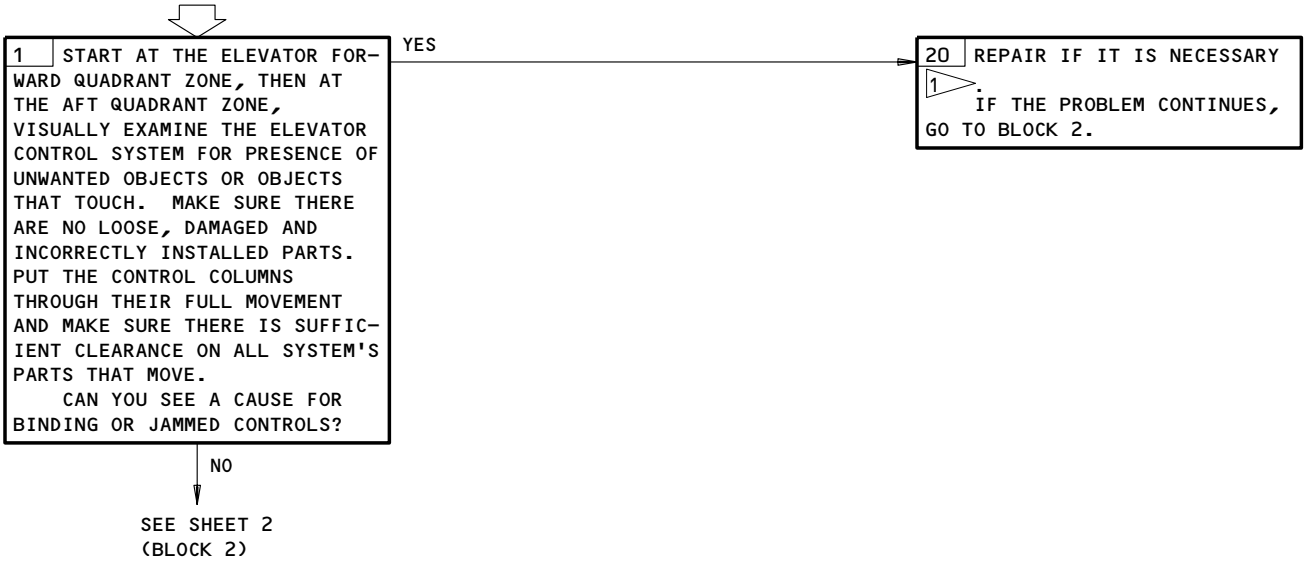
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

EQUIPMENT:
RIG PINS FROM SEJ B20003-XX (AMM 20-10-24/201)
AFT QUADRANT RIGGING BLOCK B27023-14
CABLE TENSION RELIEF HOLDER B27063-1

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN THE HYDRAULIC POWER IS SUPPLIED.

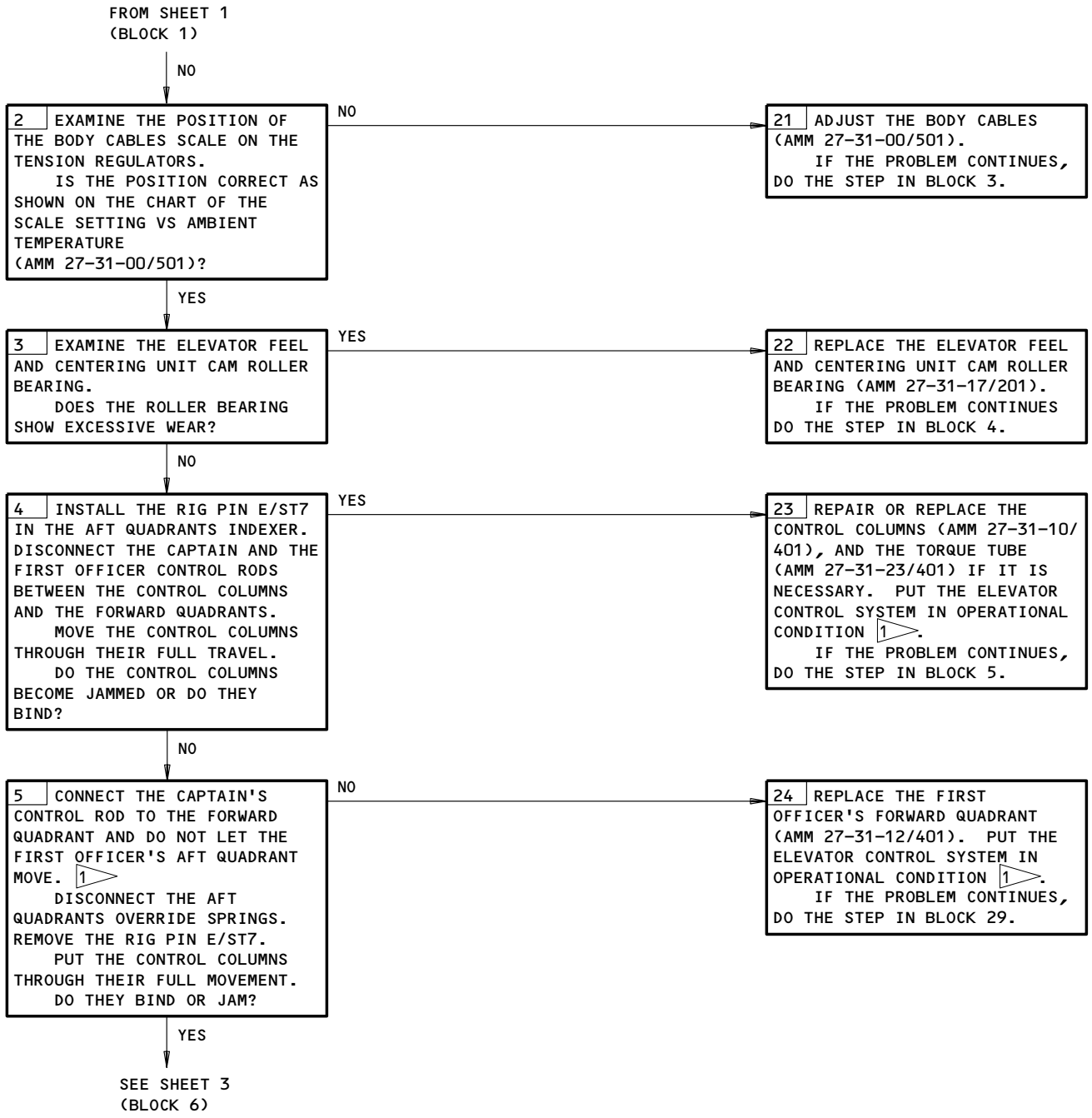
NOTE: WHEN YOU DO THE REMOVAL AND INSTALLATION PROCEDURES, DO NOT MOVE THE ADJUSTMENT FOR THE CONTROL RODS. IF YOU MOVE THE ADJUSTMENT, YOU MUST DO THE PROCEDURE TO ADJUST THE CONTROL RODS (AMM 27-31-00/501).

ELEVATOR CONTROLS BINDING OR JAMMED



1 IF THE RIGGING IS CHANGED, YOU MUST ADJUST AND TEST THE RIGGING. DO THE OPERATIONAL TEST (AMM 27-31-00/501).

Elevator Controls Binding or Jammed
Figure 105 (Sheet 1)



2 USE AFT QUADRANT RIGGING BLOCK B27023-14. RIG PINS ARE NOT SUITABLE BLOCKING TOOLS.

Elevator Controls Binding or Jammed
Figure 105 (Sheet 2)

FROM SHEET 2
(BLOCK 5)

YES

6 CONNECT THE FIRST OFFICER'S CONTROL ROD TO THE FORWARD QUADRANT AND DO NOT LET THE CAPTAIN'S ATF QUADRANT MOVE.
LET THE FIRST OFFICER'S AFT QUADRANT MOVE. DISCONNECT THE CAPTAIN'S CONTROL ROD TO THE FORWARD QUADRANT.
PUT THE CONTROL COLUMNS THROUGH THEIR FULL MOVEMENT.
DO THEY BIND OR JAM?

NO → 25 REPLACE THE CAPTAIN'S FORWARD QUADRANT (AMM 27-31-12/401). PUT THE ELEVATOR CONTROL SYSTEM IN OPERATIONAL CONDITION 1.
IF THE PROBLEM CONTINUES, DO THE STEP IN BLOCK 30.

YES

7 LET THE CAPTAINS AFT QUADRANT MOVE. INSTALL THE AFT QUADRANTS OVERRIDE SPRINGS. CONNECT THE CAPTAIN'S CONTROL ROD TO THE FORWARD QUADRANT. REMOVE THE FOUR PCA CENTERING SPRINGS. HOLD THE LEFT AND RIGHT AFT QUADRANTS OUTPUT CONTROL RODS AND DISCONNECT THEM. SUPPLY PRESSURE TO THE LEFT HYDRAULIC SYSTEM AND MAKE SURE THE FLIGHT CONTROL SHUTOFF SWITCH IS IN THE ON POSTION. SLOWLY MOVE THE LEFT ELEVATOR LINKAGE OUT BOARD UNTIL A PCA GETS TO THE BOTTOM. MOVE THE LINKAGE INBOARD UNTIL A PCA GET TO THE BOTTOM. DO THE MOVEMENT AGAIN WITH THE RIGHT ELEVATOR LINKAGE.
DO THE LEFT AND RIGHT ELEVATORS MOVE THEIR FULL TRAVELS UPWARD AND DOWNWARD WITH NO BINDS OR JAMS?

NO → 26 DISCONNECT THE PCAs INPUT POGO RODS IF IT IS NECESSARY TO SEE THE BAD PCA.
REPLACE THE PCA (AMM 27-31-05/401). PUT THE ELEVATOR CONTROL SYSTEM TO ITS OPERATIONAL CONDITION 1.
DO THE TEST FOR THE ELEVATOR TRAVEL LIMITS (AMM 27-31-00/501).

YES

SEE SHEET 4
(BLOCK 8)

3 USE A SUITABLE TOOL. RIG PINS ARE NOT SUITABLE BLOCKING TOOLS.

Elevator Controls Binding or Jammed
Figure 105 (Sheet 3)

FROM SHEET 3
(BLOCK 7)

YES

8 REMOVE THE PRESSURE FROM THE LEFT HYDRAULIC SYSTEM. DISCONNECT THE FEEL AND CENTERING UNIT UPPER AND LOWER CONTROL RODS TO THE AFT QUADRANTS.
MOVE THE CONTROL COLUMNS THROUGH THEIR FULL MOVEMENT.
DO THEY BIND OR JAM?

NO → 27 REPLACE THE FEEL AND CENTERING UNIT (AMM 27-31-17/401).
PUT THE ELEVATOR CONTROL SYSTEM TO ITS OPERATIONAL CONDITION 1 .
IF THE PROBLEM CONTINUES, REPLACE THE NEUTRAL SHIFT AND OVERRIDE MECHANISM (AMM 27-31-21/401).

YES

9 DISCONNECT THE THREE AUTO-PILOT SERVO RODS TO THE AFT QUADRANTS.
MOVE THE CONTROL COLUMNS THROUGH THEIR FULL MOVEMENT.
DO THEY BIND OR JAM?

NO → 28 MOVE THE AUTOPILOT SERVO'S OUTPUT CRANKS AND IDENTIFY THE DEFECTIVE SERVO. REPLACE THE AUTOPILOT SERVO (AMM 22-12-01/401).
PUT THE ELEVATOR CONTROL SYSTEM TO ITS OPERATIONAL CONDITION 1 .

YES

10 INSTALL THE CABLE TENSION RELIEF HOLDER TOOL TO THE CAPTAIN'S TENSION REGULATOR 4 .
DISCONNECT THE BODY CABLES E1A AND E1B AT THE TURNBUCKLES IN THE STABILIZER COMPARTMENT WHILE YOU KEEP THEM TIGHT. DISCONNECT THE AFT QUADRANTS OVERRIDE SPRINGS AND THE FIRST OFFICER'S CONTROL ROD TO THE FORWARD QUADRANT.
MOVE THE CONTROL COLUMNS THROUGH THEIR FULL MOVEMENT.
DO THEY BIND OR JAM?

NO → 29 REPAIR OR REPLACE THE CABLES E1A AND E1B TO ITS OPERATIONAL CONDITION (AMM 27-00-01/201). PUT THE ELEVATOR CONTROL SYSTEM TO ITS OPERATIONAL CONDITION 1 . ADJUST THE CABLES (AMM 27-31-00/501).
IF THE PROBLEM CONTINUES, REPLACE THE AFT QUADRANTS (AMM 27-31-15/401).

YES → 30 REPAIR OR REPLACE THE CABLES E2A AND E2B (AMM 27-00-01/201). PUT THE ELEVATOR CONTROL SYSTEM TO ITS OPERATIONAL CONDITION. 1 ADJUST THE CABLES (AMM 27-31-00/501).
IF THE PROBLEM CONTINUES, REPLACE THE AFT QUADRANTS (AMM 27-31-15/401).

4 USE THE TOOL B27063-1 BEFORE YOU REMOVE THE CABLE TENSION.

Elevator Controls Binding or Jammed
Figure 105 (Sheet 4)

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
EICAS (MM 31-41-00/201)
PITOT-STATIC SYSTEM (MM 34-11-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11H17,11H18,11H28,

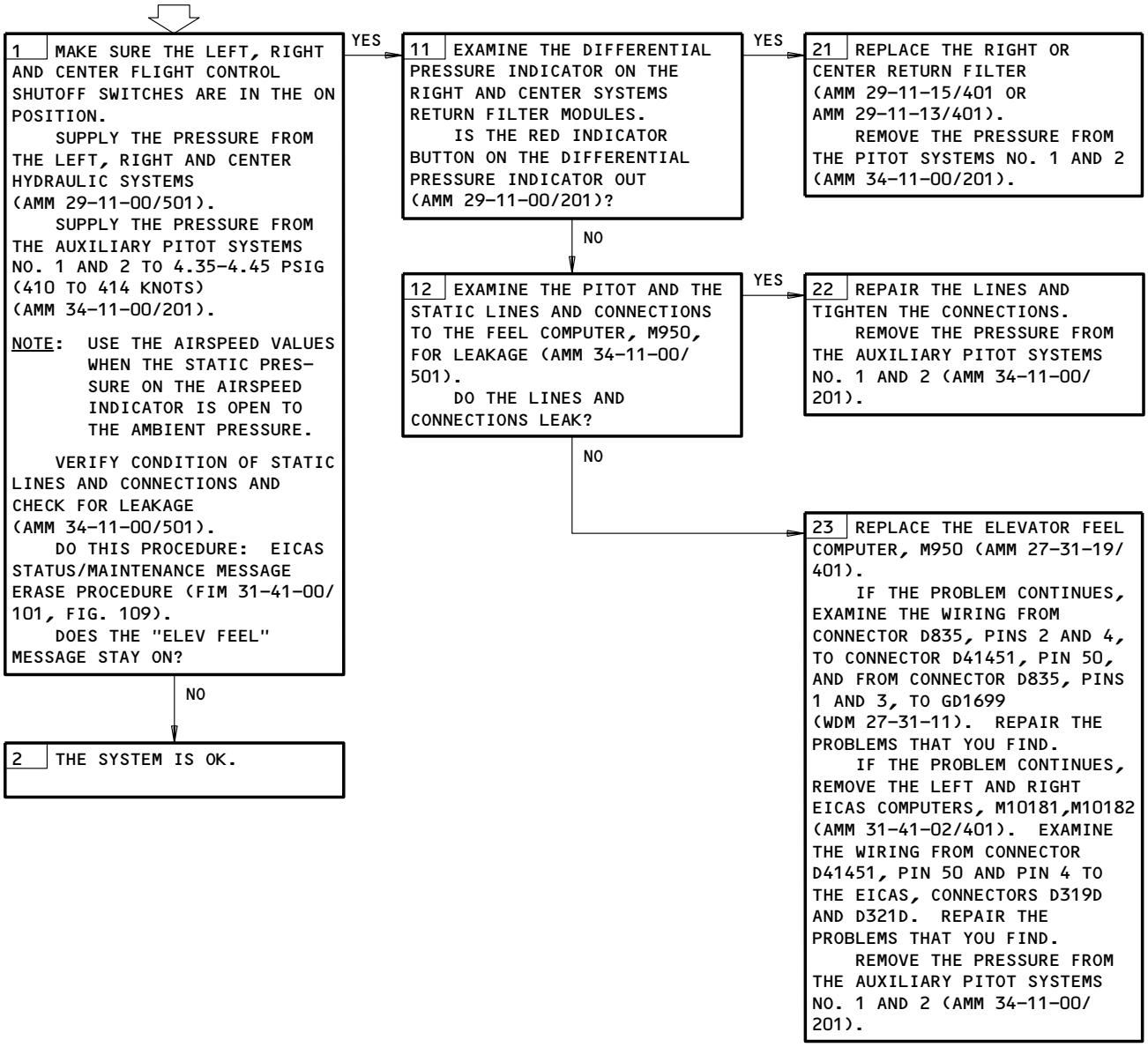
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
HYDRAULIC POWER IS ON (MM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN THE HYDRAULIC POWER IS SUPPLIED.

NOTE: DO NOT LET THE PRESSURE GO ABOVE 4.75 PSIG (426 KNOTS). THIS WILL PREVENT DAMAGE TO THE FEEL COMPUTER. MAKE PRESSURE CHANGES SUCH THAT THE INDICATED RATE OF CLIMB (OR DESCENT) IS LESS THAN 5000 FEET PER MINUTE FOR THE STATIC SYSTEM AND 300 KNOTS PER MINUTE FOR THE PITOT SYSTEM. APPLICABLE GAUGE SAVER RESTRICTIONS OR EQUIVALENT DEVICES MUST BE USED.

EICAS Message ELEV FEEL Displayed
Figure 106 (Sheet 1)

EICAS MESSAGE "ELEV FEEL" DISPLAYED



EICAS Message ELEV FEEL Displayed
Figure 106 (Sheet 2)

Not Used
Figure 107

EICAS MESSAGE "(L, R) ELEV PCU" DISPLAYED

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11J10,11J11

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

EQUIPMENT:
TEST BOX, RUDDER ELEVATOR PCU MONITOR SYSTEM - B27061

NOTE: IF THE TEST BOX IS NOT AVAILABLE, YOU CAN USE THREE 750-OHM, 10-WATT RESISTORS.

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN THE HYDRAULIC POWER IS SUPPLIED.

1 SUPPLY PRESSURE TO THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS (AMM 29-11-00/201).
MAKE SURE THE RIGHT FLIGHT CONTROL SWITCH IS IN THE ON POSITION WHILE THE OTHER TWO SWITCHES ARE OFF.

NOTE: THIS CAN BE AN INTERMITTENT PROBLEM. IF YOU HAVE FOUND THIS TO BE AN INTERMITTENT PROBLEM, YOU CAN DO THE UNIFORMITY OF POWERED TRAVEL BETWEEN THE PCAs TEST IN BLOCK 10.

DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109).
MOVE THE ELEVATOR CONTROL COLUMNS THROUGH THEIR FULL TRAVEL SEVERAL TIMES. USE THE CAPTAIN'S COLUMN, THEN USE THE FIRST OFFICER'S COLUMN.
MAKE SURE THE ELEVATOR MOVEMENTS CORRESPOND CLOSELY TO THE CONTROL COLUMN MOVEMENTS.
DO THE ABOVE TEST WITH THE LEFT AND THEN THE CENTER FLIGHT CONTROL SHUTOFF SWITCHES IN THE ON POSITION, WHILE THE OTHER TWO SWITCHES ARE OFF.
DOES THE "(L, R) ELEV PCU" MESSAGE STAY ON, OR DO THE ELEVATOR MOVEMENTS NOT CLOSELY CORRESPOND TO THE CONTROL COLUMN MOVEMENTS?

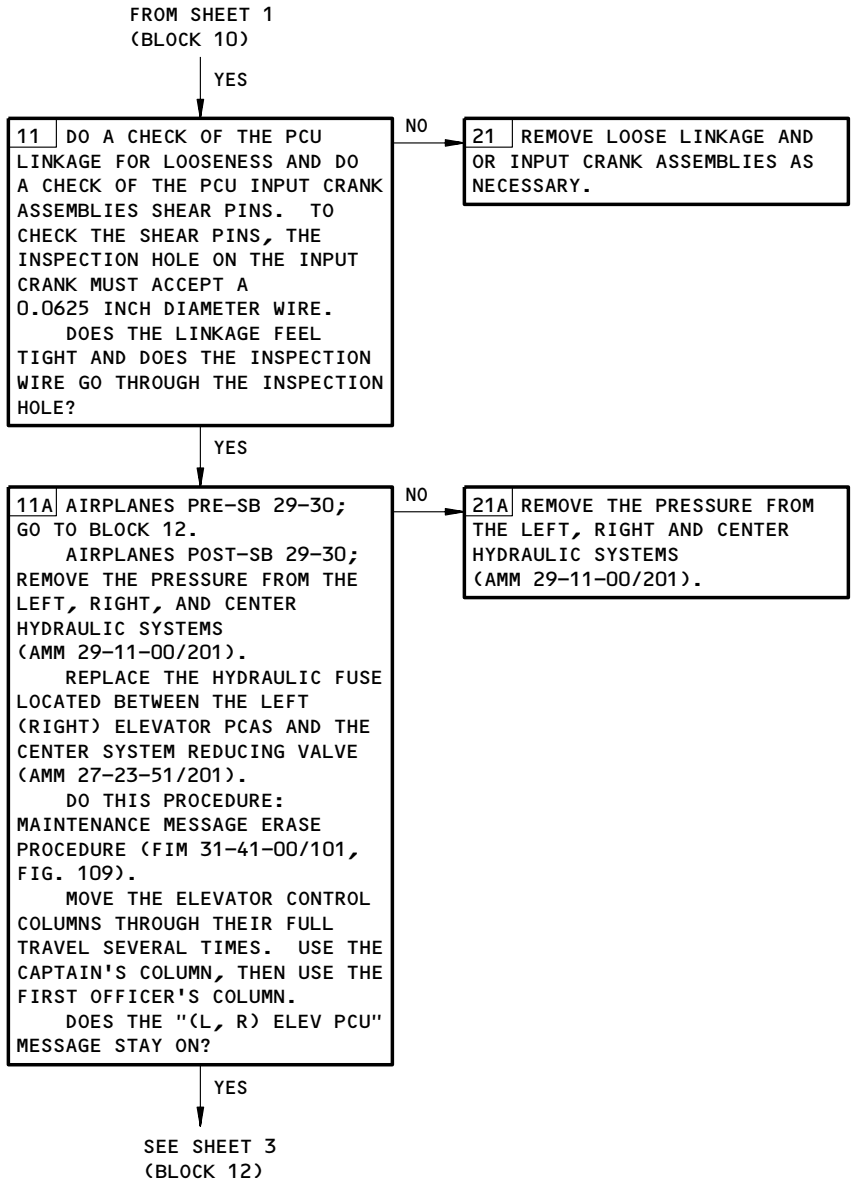
YES → 10 DO THE UNIFORMITY OF POWERED TRAVEL BETWEEN THE PCAs TEST SECTION OF THE ELEVATOR TRAVEL LIMITS TEST (AMM 27-31-00/501).
DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109).
MOVE THE ELEVATOR CONTROL COLUMNS THROUGH THEIR FULL TRAVEL SEVERAL TIMES. USE THE CAPTAIN'S COLUMN, THEN USE THE FIRST OFFICER'S COLUMN.
DOES THE "(L, R) ELEV PCU" MESSAGE STAY ON?

YES → SEE SHEET 2 (BLOCK 11)

NO → 20 REMOVE THE PRESSURE FROM THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS (AMM 29-11-00/201).

NO → 2 REMOVE THE PRESSURE FROM THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS.
THE SYSTEM IS OK.

EICAS Message (L, R) ELEV PCU Displayed
Figure 108 (Sheet 1)



EICAS Message (L, R) ELEV PCU Displayed
Figure 108 (Sheet 2)

FROM SHEET 2
(BLOCK 11A)

YES

12 REMOVE CONNECTORS D4716 FROM THE LEFT OUTBOARD PCA SENSOR, D4720 FROM LEFT CENTER PCA SENSOR, AND D4718 FROM THE LEFT INBOARD PCA SENSOR (FOR RIGHT SYSTEM: D4690, D4694, D4692). AT EACH CONNECTOR, CONNECT THE TEST BOX, B27061, TO THE CONNECTOR.
SUPPLY POWER TO THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS. DO THE EICAS MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109).
DOES THE "(L, R) ELEV PCU" SHOW ON THE EICAS SCREEN?

YES → 22 EXAMINE THE CIRCUIT FROM THE PCU MONITOR MODULE, M10481, CONNECTOR D4688, PINS 16 AND 17 (FOR THE RIGHT SYSTEM: PINS 12 AND 13), TO THE PCU SENSOR, CONNECTORS D4716, D4718, D4720 (FOR THE RIGHT SYSTEM: D4690, D4692, AND D4694)(WDM 27-23-21). REPAIR THE PROBLEMS THAT YOU FIND.
DO THIS PROCEDURE: MAINTENANCE MESSAGE ERASE PROCEDURE (FIM 31-41-00/101, FIG. 109).
IF THE PROBLEM CONTINUES, REPLACE THE PCU MONITOR MODULE, M10481 (AMM 27-23-02/401).
REMOVE THE PRESSURE FROM THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS.

NO

13 REMOVE THE POWER FROM THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS. REMOVE THE RESISTOR FROM CONNECTOR D4716 (D4690) AND INSTALL THE CONNECTOR ON THE OUTBOARD PCA SENSOR. SUPPLY POWER TO THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS.
DOES THE "(L, R) ELEV PCU" MESSAGE SHOW ON THE EICAS SCREEN?

YES → 23 EXAMINE THE SUMMING LINKAGE FOR A SHEARED RIVET.
IF THE PROBLEM CONTINUES, REPLACE THE OUTBOARD PCA (AMM 27-31-05/401).
IF THE PROBLEM CONTINUES, REPLACE THE PCU MONITOR MODULE, M10481 (AMM 27-23-02/401).
REMOVE THE PRESSURE FROM THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS.

NO

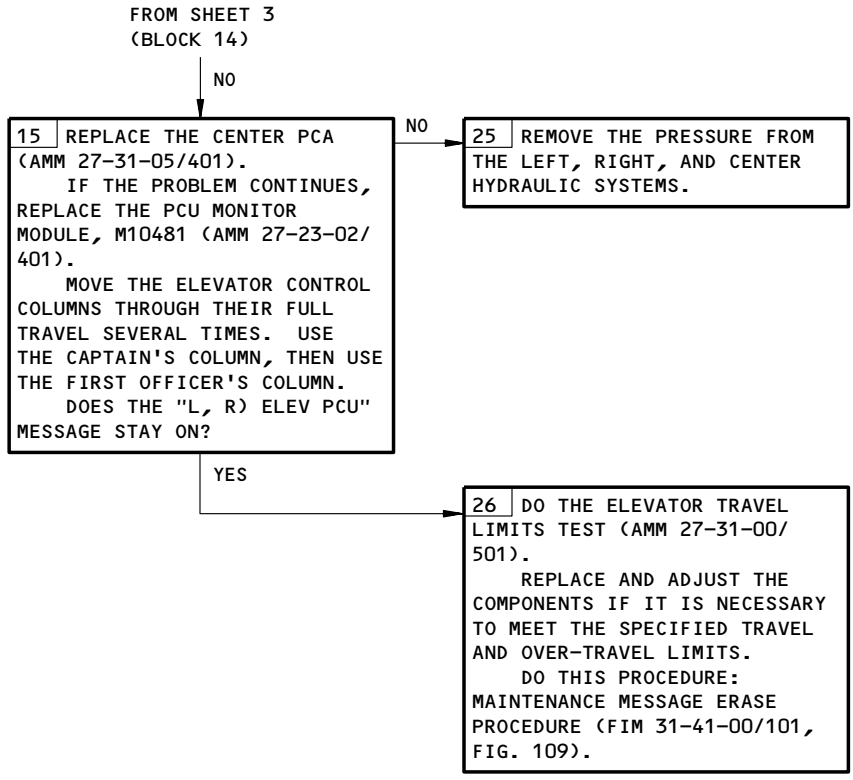
14 REMOVE THE POWER FROM THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS. REMOVE THE RESISTOR FROM CONNECTOR D4718 (D4692) AND INSTALL THE CONNECTOR ON THE INBOARD PCA SENSOR. SUPPLY POWER TO THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS.
DOES THE "(L, R) ELEV PCU" MESSAGE SHOW ON THE EICAS SCREEN?

YES → 24 REPLACE THE INBOARD PCA (AMM 27-31-05/401).
IF THE PROBLEM CONTINUES, REPLACE THE PCU MONITOR MODULE, M10481 (AMM 27-23-02/401).
REMOVE THE PRESSURE FROM THE LEFT, RIGHT AND CENTER HYDRAULIC SYSTEMS.

NO

SEE SHEET 4
(BLOCK 15)

EICAS Message (L, R) ELEV PCU Displayed
Figure 108 (Sheet 3)



EICAS Message (L, R) ELEV PCU Displayed
Figure 108 (Sheet 4)

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11H17,11H18,11H28

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN THE HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN THE HYDRAULIC POWER IS SUPPLIED.

NOTE: WHEN THE HYDRAULIC POWER IS SUPPLIED WITH THE ELECTRIC PUMPS AND THERE IS A HIGH NEED FOR HYDRAULIC POWER, AN EICAS MESSAGE CAN BE SHOWN. IF YOU DO THE PROCEDURE IN BLOCK 1 TO ERASE THE MESSAGE AND THE MESSAGE STAYS OFF, THEN THE MESSAGE IS A NUISANCE MESSAGE AND THE SYSTEM IS NORMAL.

EICAS Message (L,R,C) ELEV HYD PRESS Displayed
Figure 109 (Sheet 1)

EICAS MESSAGE "(L,R,C) ELEV HYD PRESS" DISPLAYED

1 MAKE SURE THE LEFT, RIGHT AND CENTER FLIGHT CONTROL SHUTOFF SWITCHES ARE IN THE ON POSITION.

DO THE EICAS STATUS/ MAINTENANCE MESSAGE ERASE PROCEDURE (31-41-00/101, FIG. 109).

DOES THE "(L,R,C) ELEV HYD PRESS" MESSAGE STAY ON?

YES

11 REMOVE THE (LEFT, RIGHT, CENTER) ELEVATOR PRESSURE REDUCER LOW PRESSURE SWITCH (S10267,S10265,S10266) (WDM 27-23-11). ERASE THE "(L,R,C) ELEV HYD PRESS" MESSAGE (31-41-00/101, FIG. 109).

DOES THE MESSAGE STAY ON?

YES

SEE SHEET 3 (BLOCK 12)

NO

21 REPLACE THE (LEFT, RIGHT, CENTER) PRESSURE REDUCER LOW PRESSURE SWITCH (S10267, S10265,S10266)(WDM 27-23-11). ERASE THE "(L,R,C)" ELEV HYD PRESS" MESSAGE (31-41-00/101, FIG. 109).

IF THE PROBLEM CONTINUES, REMOVE THE LEFT AND RIGHT EICAS COMPUTERS, M10181,M10182 (MM 31-41-02/401). EXAMINE THE WIRING (WDM 27-23-11) AS FOLLOWS:

- FOR THE "L ELEV HYD PRESS" MESSAGE, EXAMINE THE CIRCUIT FROM CONNECTOR D4106, PIN 3, TO CONNECTOR D321B, PIN H9
- FOR THE "R ELEV HYD PRESS" MESSAGE, EXAMINE THE CIRCUIT FROM CONNECTOR D3434, PIN 3, TO CONNECTOR D321D, PIN H2
- FOR THE "C ELEV HYD PRESS" MESSAGE, EXAMINE THE CIRCUIT FROM CONNECTOR D3436, PIN 3, TO CONNECTOR D321F, PIN K8.

REPAIR THE PROBLEMS THAT YOU FIND.

INSTALL THE LEFT AND RIGHT EICAS COMPUTERS, M10181, M10182.

ERASE THE "(L,R,C) ELEV HYD PRESS" MESSAGE (31-41-00/ 101, FIG. 109).

NO

SEE SHEET 4 (BLOCK 2)

EICAS Message (L,R,C) ELEV HYD PRESS Displayed
Figure 109 (Sheet 2)

FROM SHEET 2
(BLOCK 11)

YES

12 INSTALL THE (LEFT, RIGHT, CENTER) ELEVATOR PRESSURE REDUCER LOW PRESSURE SWITCH. REMOVE THE (LEFT, RIGHT, CENTER) ELEVATOR PRESSURE REDUCER HIGH PRESSURE SWITCH (S10264,S10262,S10263) (WDM 27-23-11). ERASE THE "(L,R,C) ELEV HYD PRESS" MESSAGE (FIM 31-41-00/101, FIG. 109).

DOES THE MESSAGE STAY ON?

YES

22 REPLACE THE (LEFT, RIGHT, CENTER) ELEVATOR PRESSURE REDUCER (AMM 27-31-13/401). INSTALL THE (LEFT, RIGHT, CENTER) ELEVATOR PRESSURE REDUCER HIGH PRESSURE SWITCH (S10264,S10262,S10263) (WDM 27-23-11).

ERASE THE "(L,R,C) ELEV HYD PRESS" MESSAGE (FIM 31-41-00/101, FIG. 109).

NOTE: IF THE "L ELEV HYD PRESS" MESSAGE STAYS ON, REPLACE THE ELEVATOR PRESSURE REDUCER BYPASS VALVE (AMM 27-31-13/401).

ERASE MESSAGE (FIM 31-41-00/101, FIG. 109).

IF THE PROBLEM CONTINUES, REMOVE THE LEFT AND RIGHT EICAS COMPUTERS, M10181,M10182 (AMM 31-41-02/401). EXAMINE THE WIRING (WDM 27-23-11) AS FOLLOWS:

- FOR THE "ELEV HYD PRESS" MESSAGE, EXAMINE CIRCUIT FROM CONNECTOR D4104, PIN 1, TO CONNECTOR D321A, PIN H9, AND FROM CONNECTOR D4106, PIN 3, AND TO CONNECTOR D321B, PIN H9
- FOR THE "R ELEV HYD PRESS" MESSAGE, EXAMINE CIRCUIT FROM CONNECTOR D3430, PIN 1, AND CONNECTOR D321D, PIN K4, AND FROM CONNECTOR D3434, PIN 3, TO CONNECTOR D321D, PIN H2
- FOR THE "C ELEV HYD PRESS" MESSAGE, EXAMINE CIRCUIT FROM CONNECTOR D3432, PIN 1, TO CONNECTOR D321F, PIN J6, AND FROM CONNECTOR D3436, PIN 3, TO CONNECTOR D321F, PIN K8.

REPAIR THE PROBLEMS THAT YOU FIND.

INSTALL THE LEFT AND RIGHT EICAS COMPUTERS, M10181, M10182.

ERASE THE "(L,R,C) ELEV HYD PRESS" MESSAGE (FIM 31-41-00/101, FIG. 109).

NO

SEE SHEET 4
(BLOCK 23)

EICAS Message (L,R,C) ELEV HYD PRESS Displayed
Figure 109 (Sheet 3)

FROM SHEET 2
(BLOCK 1)

NO

FROM SHEET 3
(BLOCK 12)

NO

23 REPLACE THE (LEFT, RIGHT, CENTER) PRESSURE REDUCER HIGH PRESSURE SWITCH (S10264, S10262, S10263)(WDM 27-23-11).
ERASE THE "(L, R, C) ELEV HYD PRESS" MESSAGE (FIM 31-41-00/101, FIG. 109).
IF THE PROBLEM CONTINUES, REMOVE THE LEFT AND RIGHT EICAS COMPUTERS, M10181, M10182 (AMM 31-41-02/401).
EXAMINE THE WIRING (WMD 27-23-11) FOLLOWS:
- FOR THE "L ELEV HYD PRESS" MESSAGE:
  EXAMINE CIRCUIT FROM CONNECTOR D4104, PIN 1, TO CONNECTOR D321A, PIN H9
- FOR THE "R ELEV HYD PRESS" MESSAGE:
  EXAMINE CIRCUIT FROM CONNECTOR D3430, PIN 1, TO CONNECTOR D321D, PIN K4
- FOR THE "C ELEV HYD PRESS" MESSAGE:
  EXAMINE CIRCUIT FROM CONNECTOR D3432, PIN 1, TO CONNECTOR D321F, PIN J6.

REPAIR THE PROBLEMS THAT YOU FIND.
INSTALL THE LEFT AND RIGHT EICAS COMPUTERS, M10181, M10182.
ERASE THE "(L, R, C) ELEV HYD PRESS" MESSAGE (FIM 31-41-00/101, FIG 109).

2 IS THERE A RECORD THAT THE EICAS MESSAGE "(L, R, C) ELEV HYD PRESS" HAS BEEN SHOWN BEFORE?

NO

24 THE ELEVATOR SYSTEM IS OK.

YES

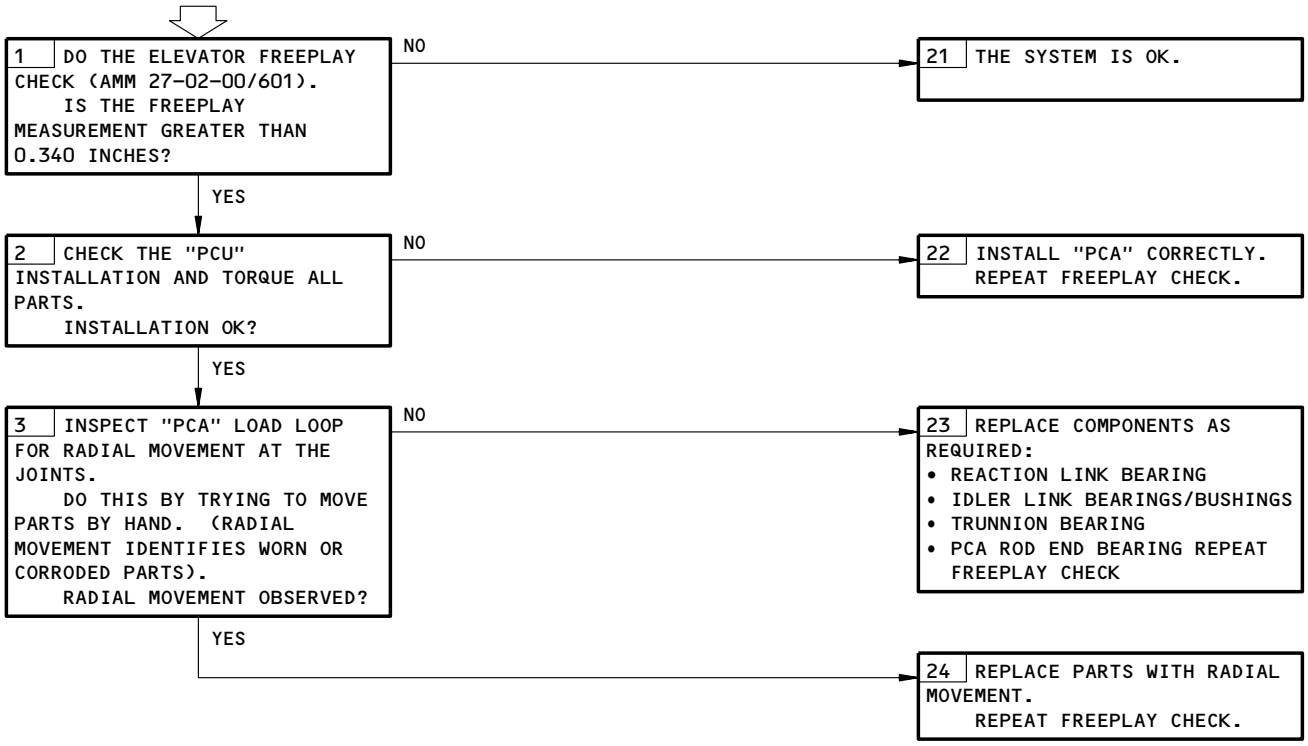
25 THE MESSAGE MAY BE AN INTERMITTENT FAULT. REPLACE THE PRESSURE SENSING SWITCH THAT CORRESPONDS TO THE EICAS MESSAGE (L, R, C) L=S27, R=S32, C=S10002.

EICAS Message (L, R, C) ELEV HYD PRESS Displayed
Figure 109 (Sheet 4)

EXCESSIVE ELEVATOR FREEPLAY

PREREQUISITES

NONE



Excessive Elevator Freeplay
Figure 110

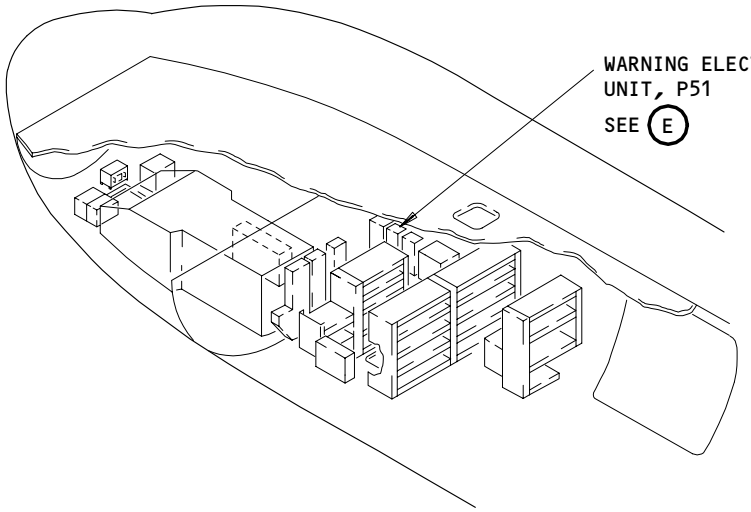
STALL WARNING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER –	1		FLT COMPT, P11	
LEFT STICK SHAKER, C1039		1	11C11	*
RIGHT STICK SHAKER, C4209		1	11J21	*
COMPUTER – (FIM 31-41-00/101)				
L EICAS, M10181				
R EICAS, M10182				
COMPUTER – (FIM 34-12-00/101)				
L AIR DATA, M100				
R AIR DATA, M101				
COMPUTER – (FIM 34-61-00/101)				
FLIGHT MANAGEMENT-LEFT, M134 } 1				
FLIGHT MANAGEMENT-RIGHT, M135 } 1				
COMPUTER – LEFT STALL WARNING, M615	2	1	119BL, MAIN EQUIP CTR, P51	27-32-01
COMPUTER – RIGHT STALL WARNING, M938	2	1	119BL, MAIN EQUIP CTR, P51	27-32-01
GENERATOR – (FIM 34-22-00/101)				
CENTER EFIS SYMBOL, M149				
LEFT EFIS SYMBOL, M148				
RIGHT EFIS SYMBOL, M150				
MODULE – (FIM 31-51-00/101)				
POWER SUPPLY A, M616				
POWER SUPPLY B, M621				
MODULE – WEU BITE, M1411	2	1	119BL, MAIN EQUIP CTR, P51	27-32-02
PANEL – (FIM 30-32-00/101)				
MISC TEST, M10398				
RELAY – (FIM 31-01-36/101)				
MAIN GEAR SYS 1, K149				
SYSTEM 1 AIR/GROUND, K135				
RELAY – (FIM 31-01-37/101)				
MAIN GEAR SYS 1, K207				
SYSTEM 2 AIR/GROUND, K215				
SHAKER – LEFT STICK, M240	1	1	FLT COMPT	27-32-05
SHAKER – RIGHT STICK, M952	1	1	FLT COMPT	27-32-05
SWITCH – L STALL TEST (S1)	1	1	FLT COMPT, P61, MISC TEST PNL, M10398	*
SWITCH – R STALL TEST (S2)	1	1	FLT COMPT, P61, MISC TEST PNL, M10398	*
UNIT – (FIM 27-51-00/101)				
FLAP/SLAT ELECTRONIC 1, M10331				
FLAP/SLAT ELECTRONIC 2, M10332				
FLAP/SLAT ELECTRONIC 3, M10333				
UNIT – (FIM 34-21-00/101)				
CENTER INERTIAL REFERENCE, M160				
LEFT INERTIAL REFERENCE, M159				
RIGHT INERTIAL REFERENCE, M161				

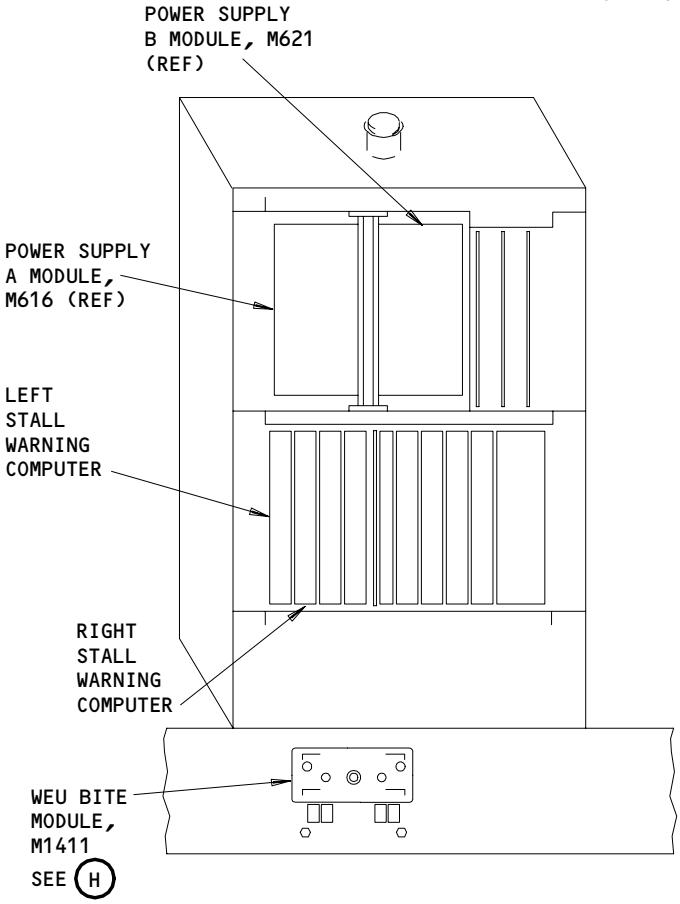
* SEE THE WDM EQUIPMENT LIST

1 AIRPLANES WITH SPEED TAPE

Stall Warning System – Component Index
Figure 101

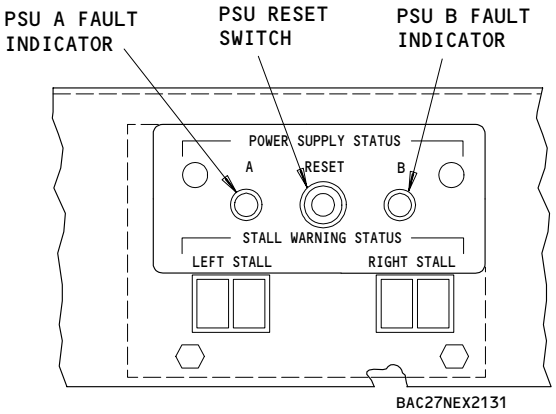


MAIN EQUIP CTR



WARNING ELECTRONICS UNIT, P51

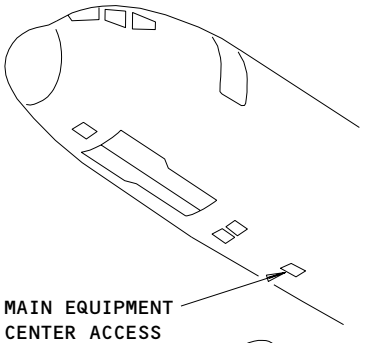
(E)

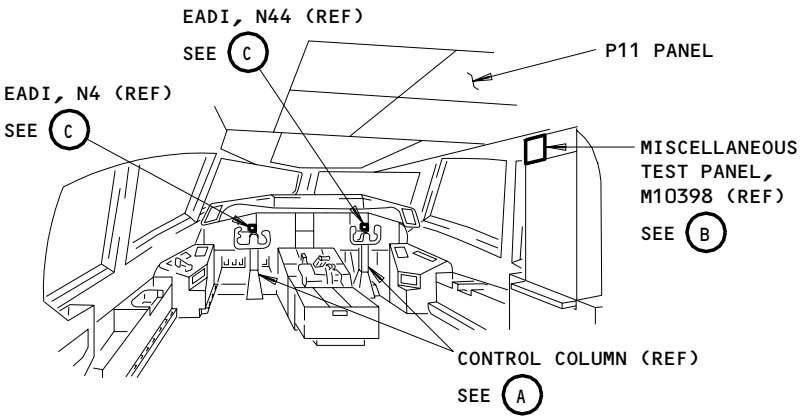


WEU BITE MODULE, M1411

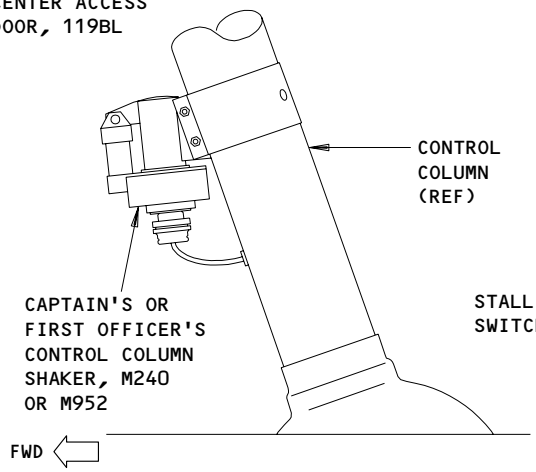
(H)

Component Location
Figure 102 (Sheet 1)



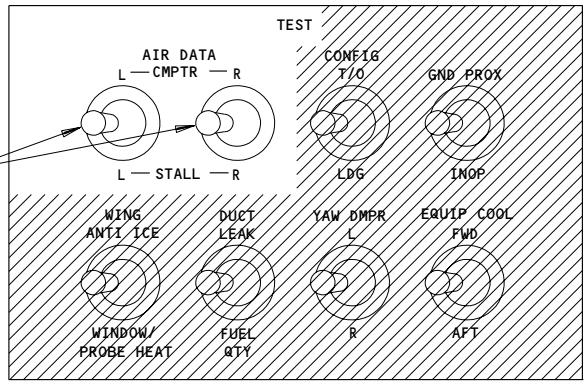


FLIGHT COMPARTMENT



CONTROL COLUMN (REF)

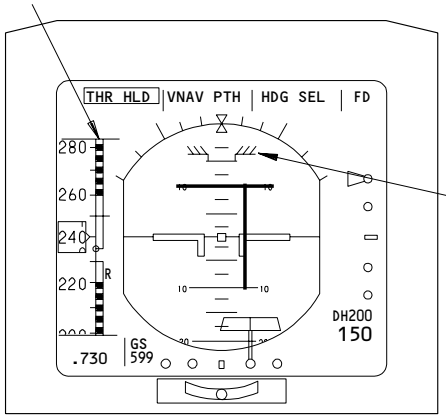
A



STALL TEST
SWITCH, S1,S2

MISCELLANEOUS TEST PANEL, M10398 (REF)

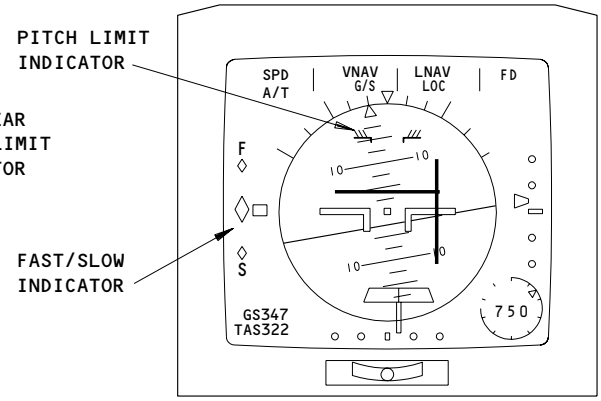
B



WINDSHEAR
PITCH LIMIT
INDICATOR

LEFT (RIGHT) ELEX ATTITUDE DIRECTION
INDICATOR (EADI), N4 (N44) (REF)

C 1



LEFT (RIGHT) ELEX ATTITUDE DIRECTION
INDICATOR (EADI), N4 (N44) (REF)

C 2

1 AIRPLANES WITH SPEED TAPE

2 AIRPLANES WITH FAST/SLOW INDICATOR

Stall Warning System – Component Location
Figure 102 (Sheet 2)

STALL WARNING COMPUTER (SWC) BITE PROCEDURE

PREREQUISITES

ELECTRICAL POWER (AMM 24-22-00)
FLAP/SLAT ELECTRONIC UNIT (AMM 27-51-00)
AIR DATA COMPUTER SYSTEM (AMM 34-12-00)
AIR/GROUND SYSTEM (AMM 32-09-02)
ENGINE INDICATING/CREW ALERTING SYSTEM (EICAS) (AMM 31-41-00)
INERTIAL REFERENCE SYSTEM (AMM 34-21-00)
FLIGHT MANAGEMENT COMPUTER SYSTEM (AMM 34-61-00) 1

CB'S: 11B18,11C11,11J21,11J33

1 SET STBY POWER SWITCH TO "AUTO". ALIGN L,C AND R IRUs IN NAV MODE (AMM 34-21-00).
CHECK THAT PITOT-STATIC SYSTEM IS NOT PRESSURIZED. (AMM 34-11-00).
SELECT AND HOLD L (R) STALL TEST SWITCH ON MISC TEST PANEL AT P61.

NOTE: DO NOT RELEASE SWITCHES UNTIL FAULT ISOLATION IS COMPLETED.

DOES L (R) STICK SHAKER OPERATE?

NO → 50 IS "WARN ELEX" MESSAGE DISPLAYED ON EICAS?

NO → 101 REPLACE MISC TEST PANEL L (R) "STALL" TEST SWITCH, S1 (S2)(WDM 27-32-11,-21).
IF FAULT PERSISTS, REMOVE L (R) STALL WARNING COMPUTER, M615 (M938)(AMM 27-32-01).
CHECK AND REPAIR CIRCUIT BETWEEN MISC TEST PANEL, CONNECTOR D3704 (D3702), PIN 16 (8) AND L (R) STALL WARNING COMPUTER, CONNECTOR D121 (D589), PIN 39; MISC TEST PANEL, CONNECTOR D3704 (D3702), PIN 3 AND GROUND (WDM 27-32-11,-21).
INSTALL STALL WARNING COMPUTER.

YES → 102 RECORD FAULT CODE DISPLAYED ON WEU BITE MODULE.
FOR CODE A0 THRU C5, REPLACE INDICATED L (R) STALL WARNING COMPUTER, M615 (M938) (AMM 27-32-01). 2
FOR ALL OTHER CODES, PERFORM CORRECTIVE ACTION PER TABLE 101.

YES → 2 IS "WARN ELEX" MESSAGE DISPLAYED ON EICAS?

NO → 51 RELEASE L (R) STALL TEST SWITCH.
OPEN WARN ELEX B (A) 11B18 (11J33) CIRCUIT BREAKER.
IS "WARN ELEX" MESSAGE DISPLAYED ON EICAS?

YES → 103 REPLACE L (R) STALL WARNING COMPUTER, M615 (M938) (AMM 27-32-01).
IF FAULT PERSISTS, REMOVE L (R) STALL WARNING COMPUTER, M615 (M938)(AMM 27-32-01).
CHECK AND REPAIR CIRCUIT BETWEEN SWC, CONNECTOR D121 (D589), PIN 58 AND PSU A (B) FAULT RELAY, CONNECTOR D817 (D819), PIN A1; PSU A (B) FAULT RELAY, CONNECTOR D817 (D819), PIN A2 AND EICAS, CONNECTOR D319B,D321B, PIN C8 (WDM 27-32-12,-22; 31-51-11, -21).

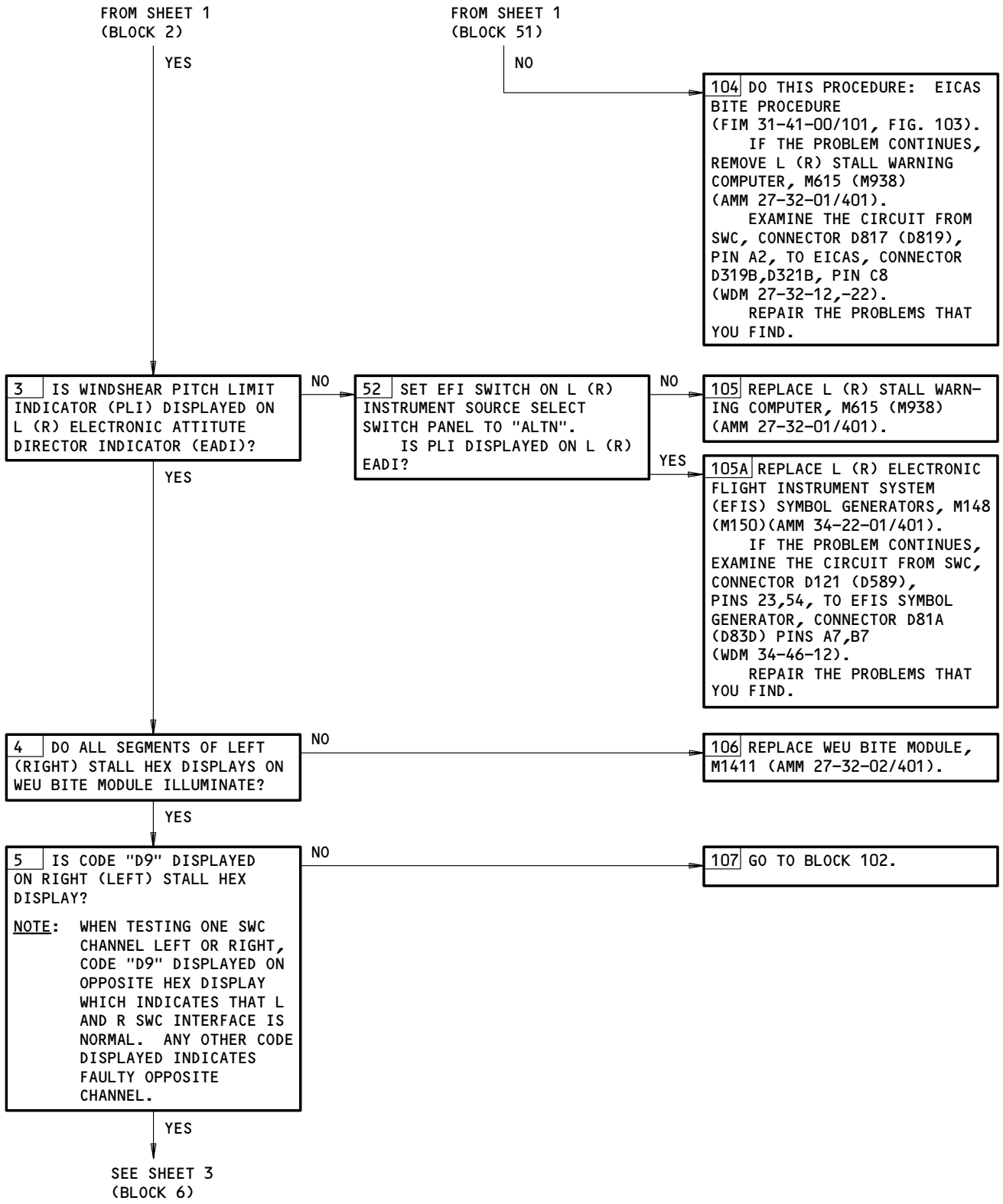
NO → SEE SHEET 2 (BLOCK 104)

YES → SEE SHEET 2 (BLOCK 3)

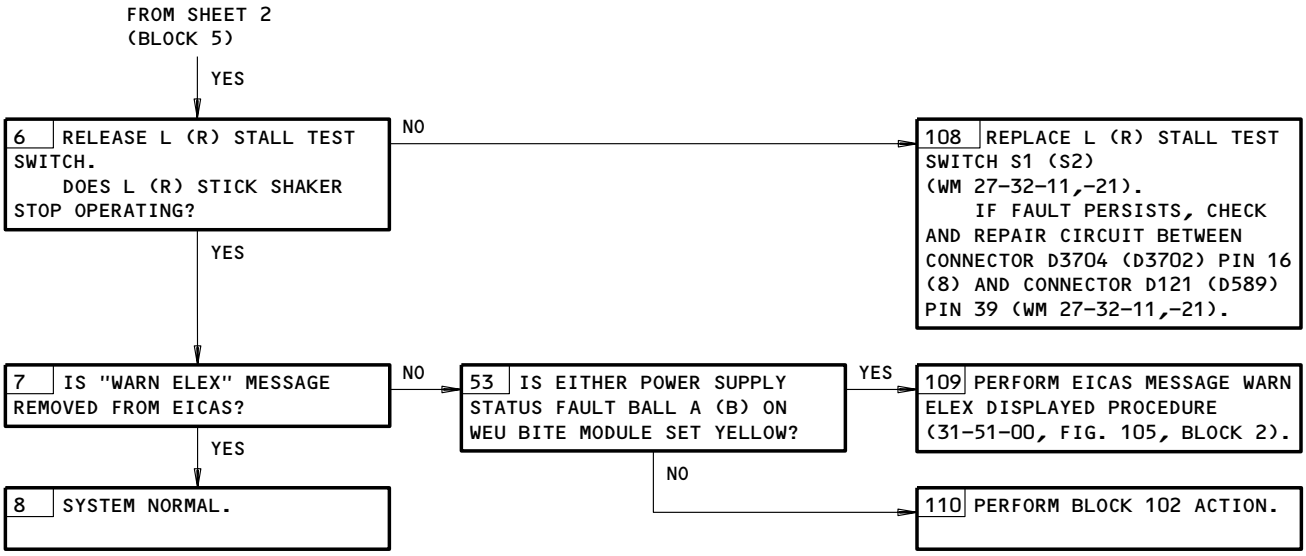
1 AIRPLANES WITH SPEED TAPE

2 SEE AMM 27-32-00/001 FOR MORE INFORMATION ABOUT FAULT CODES A0 THRU C5. THESE CODES SHOW WHEN THERE ARE INTERNAL FAULTS DETECTED IN THE STALL WARNING COMPUTER.

Stall Warning Computer (SWC) BITE Procedure
Figure 103 (Sheet 1)



Stall Warning Computer (SWC) BITE Procedure
Figure 103 (Sheet 2)



Stall Warning Computer (SWC) BITE Procedure
Figure 103 (Sheet 3)

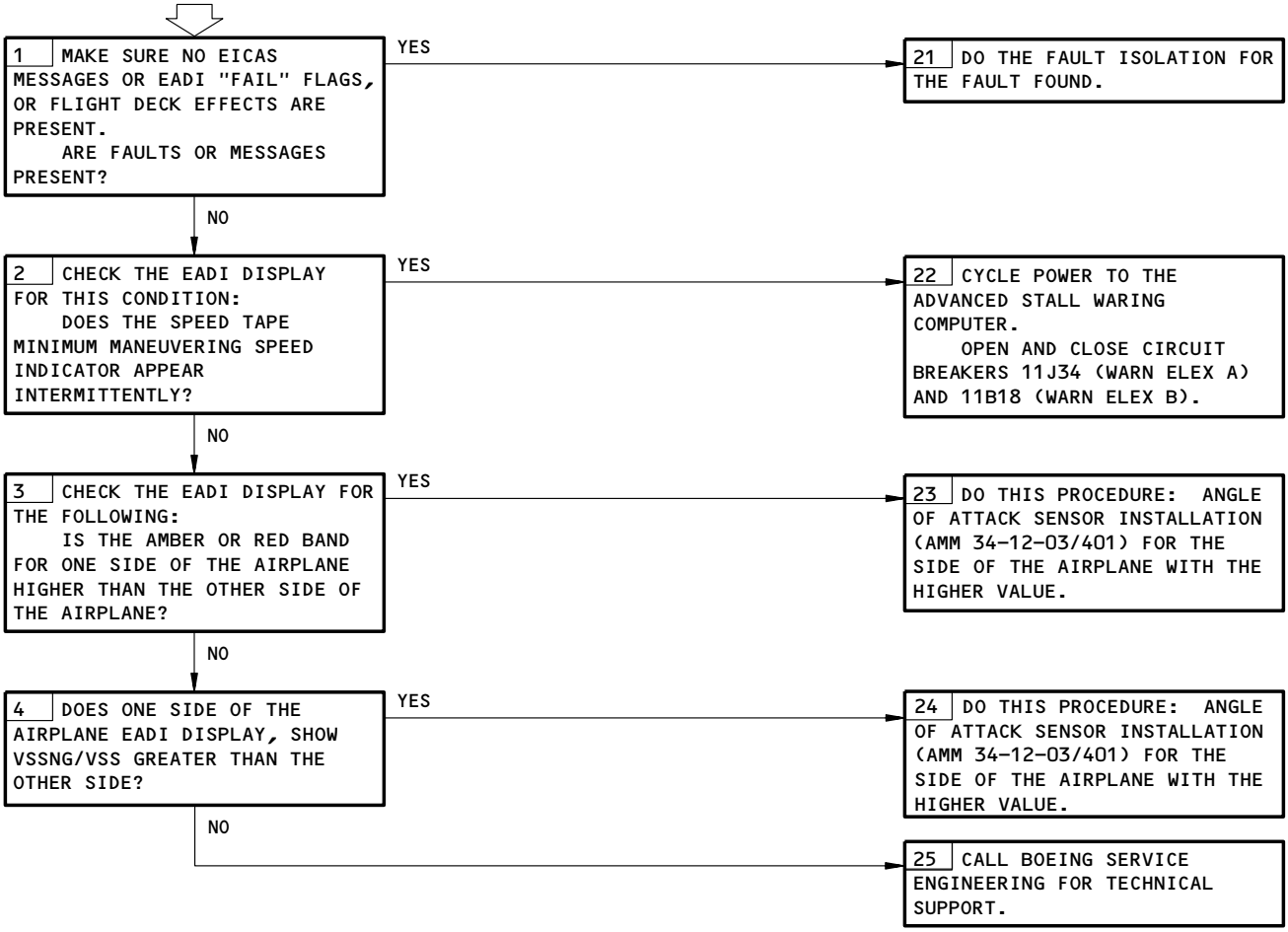
TABLE 101	
FAULT CODE	CORRECTIVE ACTION
D0	REPLACE L (R) STICK SHAKER M240 (M952)(MM 27-32-05). IF FAULT PERSISTS, CHECK AND REPAIR CIRCUIT BETWEEN L (R) STICK SHAKER CB C1039 (C4209) AND CONNECTOR D121 (D589) PIN 34 (WM 27-32-11,-21).
D1	PERFORM L (R) ADC BITE PROCEDURE (34-12-00, FIG. 109, BLOCK 1).
D2	PERFORM FLAPS/SLATS ELECTRONIC UNIT BITE PROCEDURE (27-51-00, FIG. 104, BLOCK 1). IF FAULT PERSISTS, CHECK AND REPAIR CIRCUIT BETWEEN L (R) SWC CONNECTOR D121 (D589) PIN 31 AND FSEU-2 (FSEU-3) CONNECTOR D3258B (D3260B) PIN 13 (WM 27-32-11,-21).
D4	PERFORM FSEU BITE PROCEDURE (27-51-00, FIG. 104, BLOCK 1). REPEAT STALL WARNING BITE PROCEDURE. IF FAULT PERSISTS, CHECK AND REPAIR CIRCUIT BETWEEN L (R) SWC CONNECTOR D121 (D589) PINS 38,4, 37 (4,7,37) AND FSEU-2 (FSEU-3,FSEU-1) CONNECTOR D3258B (D3260B,D3312A) PINS H10,E10,A10 (E10,H11,A10)(WM 27-32-11,-21).
D5	PERFORM FSEU BITE PROCEDURE (27-51-00, FIG. 104, BLOCK 1). REPEAT STALL WARNING BITE PROCEDURE. IF FAULT PERSISTS, CHECK AND REPAIR CIRCUIT BETWEEN L (R) SWC CONNECTOR D121 (D589) PINS 38,4, 37 (4,7,37) AND FSEU-2 (FSEU-3,FSEU-1) CONNECTOR D3258B (D3260B,D3312A) PINS H10,E10,A10 (E10,H11,A10)(WM 27-32-11,-21).
D6	PERFORM IRS BITE TEST (34-21-00, FIG. 107, BLOCK 1).
D7	PERFORM FLIGHT MANAGEMENT COMPUTER SYSTEM BITE PROCEDURE (34-61-00, FIG. 109, BLOCK 1). IF FAULT PERSISTS, CHECK AND REPAIR CIRCUIT BETWEEN L (R) SWC CONNECTOR D121 (D589) PINS 19,20 AND TB201 PINS Z104,Z103 (TB203 PINS Z83,Z82)(WM 27-32-11,-21).
D8	SET L (R) IRS SOURCE SELECT SWITCH TO "ALTN". IF FAULT CODE D8 REMAINS, PERFORM ADC BITE PROCEDURE (34-12-00, FIG. 109, BLOCK 1). IF FAULT CODE D8 IS CLEARED, PERFORM IRS BITE TEST (34-21-00, FIG. 107, BLOCK 1).
D9	REPLACE THE OTHER STALL WARNING COMPUTER (MM 27-32-01). IF FAULT PERSISTS, CHECK AND REPAIR CIRCUIT BETWEEN L (R) STALL WARNING COMPUTER CONNECTOR D121 (D589) PIN 56 AND CONNECTOR D589 (D121) PIN 11 (WM 27-32-12).
FX	CHECK AND REPAIR CIRCUIT BETWEEN L (R) SWC CONNECTOR D589 (D121) PINS 42,44, AND GROUND (WM 27-32-12,-22).

NOTE: FAULT CODES NOT LISTED ARE NOT USED.

Stall Warning Computer (SWC) BITE Procedure
Figure 103 (Sheet 4)

EXCESSIVE DIFFERENCES BETWEEN AMBER OR RED BAND VALUES ON THE SPEED TAPE EICAS DISPLAY

PREREQUISITES
NONE



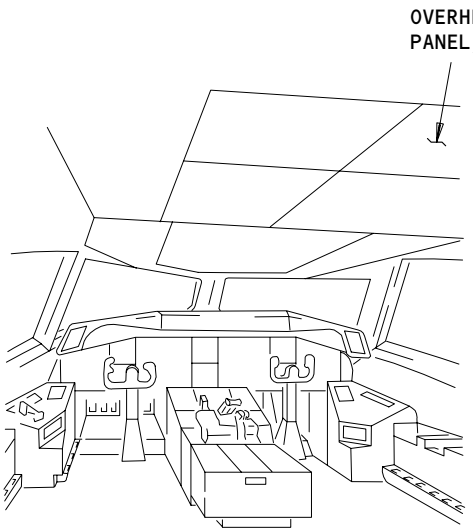
Excessive Differences Between AMBER or RED BAND Values
On the Speed Tape EICAS Display
Figure 104

ELEVATOR POSITION INDICATING SYSTEM

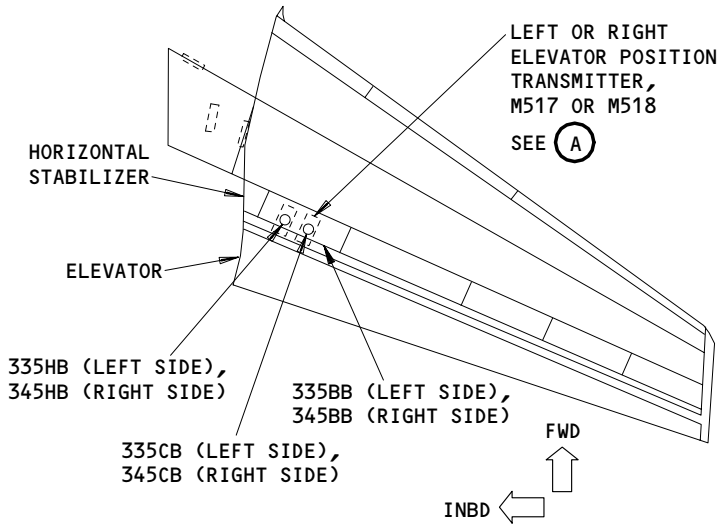
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
CIRCUIT BREAKER -	--		FLIGHT COMPARTMENT, P11 PANEL	
ELEVATOR POS L, C4101		1	11J13	*
ELEVATOR POS R, C4102		1	11J22	*
COMPUTER - (FIM 31-41-00/101)				
EICAS L, M10181				
EICAS R, M10182				
TRANSMITTER - ELEVATOR POSITION LEFT, M517	--	1	335CB,335HB,335BB, STABILIZER	27-38-02
TRANSMITTER - ELEVATOR POSITION RIGHT, M518	--	1	345CB,345HB,345BB, STABILIZER	27-38-02

* SEE THE WDM EQUIPMENT LIST

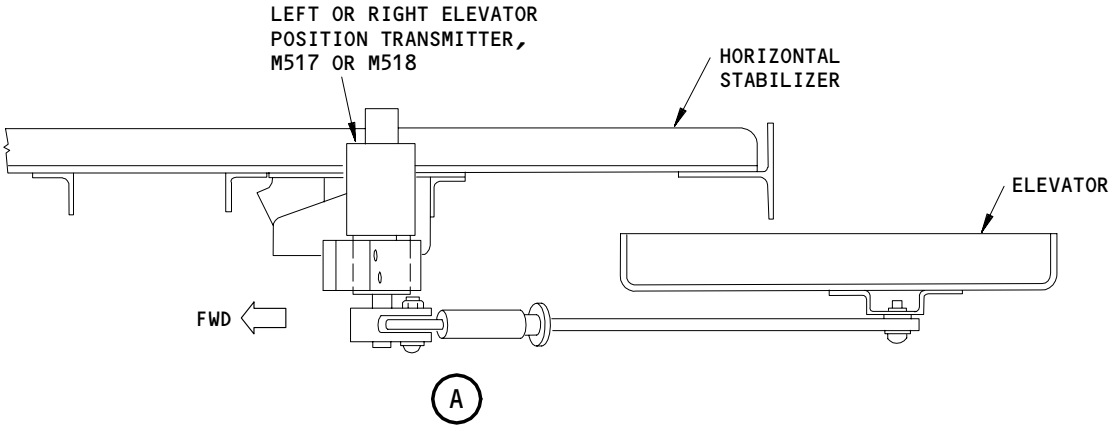
Elevator Position Indicating System - Component Index
Figure 101



FLIGHT COMPARTMENT



HORIZONTAL STABILIZER AND ELEVATOR
(BOTTOM VIEW)



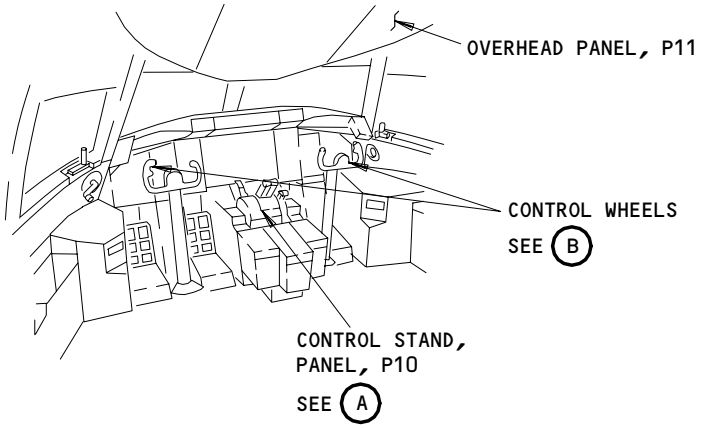
Elevator Position Indicating System - Component Location
Figure 102

HORIZONTAL STABILIZER TRIM CONTROL SYSTEM

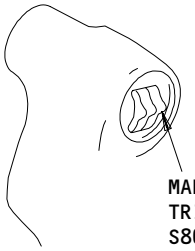
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ACTUATOR – STAB TRIM BALLSCREW	3	1	311AL, AFT FUSELAGE	27-41-10
BRAKE – STAB TRIM SECONDARY	3	4	311AL, AFT FUSELAGE	27-41-13
CIRCUIT BREAKER –			FLIGHT COMPARTMENT, P11 PANEL	
STAB TRIM CONT L, C1017		1	11H11 OR 11C5	*
STAB TRIM CONT R, C1018		1	11H20	*
STAB TRIM POS IND L, C1002		1	11H10	*
STAB TRIM POS IND R, C1009		1	11H19	*
STAB TRIM SHUTOFF L, C1528		1	11C12	*
STAB TRIM SHUTOFF R, C1529		1	11C13	*
COMPUTER – (FIM 31-41-00/101)				
EICAS L, M10181				
EICAS R, M10182				
GIMBAL – STAB TRIM	3	2	311AL, AFT FUSELAGE	27-41-14
INDICATOR – (FIM 27-48-00/101)				
STAB TRIM POSITION, N68,N69				
MODULE – (FIM 27-09-00/101)				
STABILIZER TRIM/ELEV ASYM LIMIT L, M524				
STABILIZER TRIM/ELEV ASYM LIMIT R, M525				
MODULE – STAB TRIM CONTROL LEFT, M10897	3	1	311AL, AFT FUSELAGE	27-41-05
MODULE – STAB TRIM CONTROL RIGHT, M10898	3	1	311AL, AFT FUSELAGE	27-41-05
MODULE – (FIM 27-48-00/101)				
STAB TRIM LIMIT SWITCH AND POSITION TRANSMITTER, M10899,M10896,M10895				
MOTOR – STAB TRIM, HYDRAULIC	3	2	311AL, AFT FUSELAGE	27-41-11
PANEL – (FIM 30-31-00/101)				
LIGHT – STAB TRIM, L13				
LIGHT – UNSCHED STAB TRIM, L17				
PANEL – (FIM 76-11-00/101)				
FUEL CONTROL, M73				
RELAY – TRIM LIMIT SELECT LEFT, K574		1	119BL, MAIN EQUIPMENT CENTER, E3-1 SHELF	*
RELAY – TRIM LIMIT SELECT RIGHT, K575		1	119BL, MAIN EQUIPMENT CENTER, E4-1 SHELF	*
SWITCH – ALTERNATE STAB TRIM, S10580	1	1	FLIGHT COMPARTMENT, P10 PANEL	27-41-03
SWITCH – MANUAL STAB TRIM, S80,S81	1	2	FLIGHT COMPARTMENT, CONTROL WHEELS	27-41-01
SWITCH – STAB TRIM BRAKE PRESSURE, YB4S1, YB5S1	3	2	311AL, AFT FUSELAGE, STABILIZER TRIM CONTROL MODULES, M211,M212	*
SWITCH – STAB TRIM CUTOFF, S334,S335,S337, S338,S10234,S10235,S10236,S10237	2	8	113AL, FORWARD EQUIPMENT CENTER, CONTROL COLUMNS BASE	
SWITCH – STAB TRIM SHUTOFF CENTER, S5	1	1	FLIGHT COMPARTMENT, P10 PANEL, FUEL CONTROL PANEL M73	*
SWITCH – STAB TRIM SHUTOFF RIGHT, S6	1	1	FLIGHT COMPARTMENT, P10 PANEL, FUEL CONTROL PANEL M73	*
SWITCH – (FIM 29-31-00/101)				
HYD SYST C – ACMP PRESS, S10002				
HYD SYST R – ACMP PRESS, S32				
UNIT – (FIM 27-51-00/101)				
FLAP/SLAT ELECTRONIC, M10331,M10333				

* SEE THE WDM EQUIPMENT LIST

Horizontal Stabilizer Trim Control System – Component Index
Figure 101

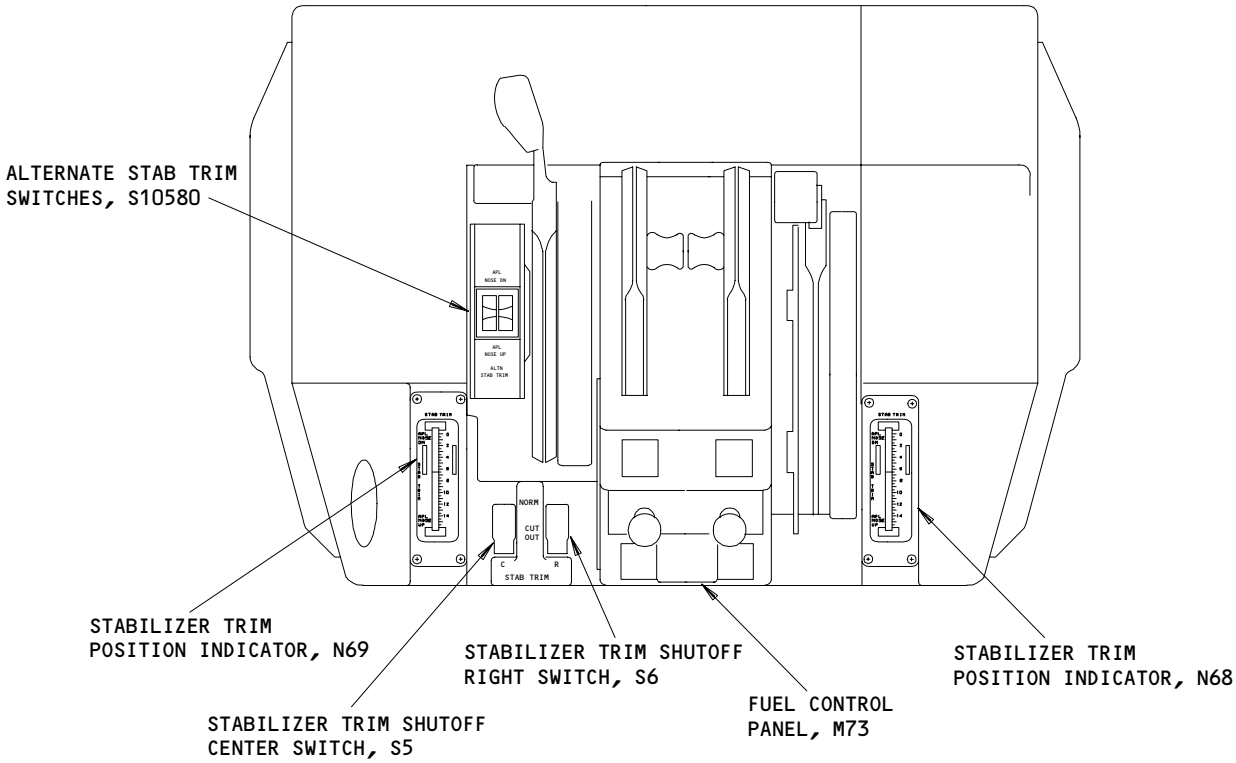


FLIGHT COMPARTMENT



CONTROL WHEEL
(EXAMPLE)

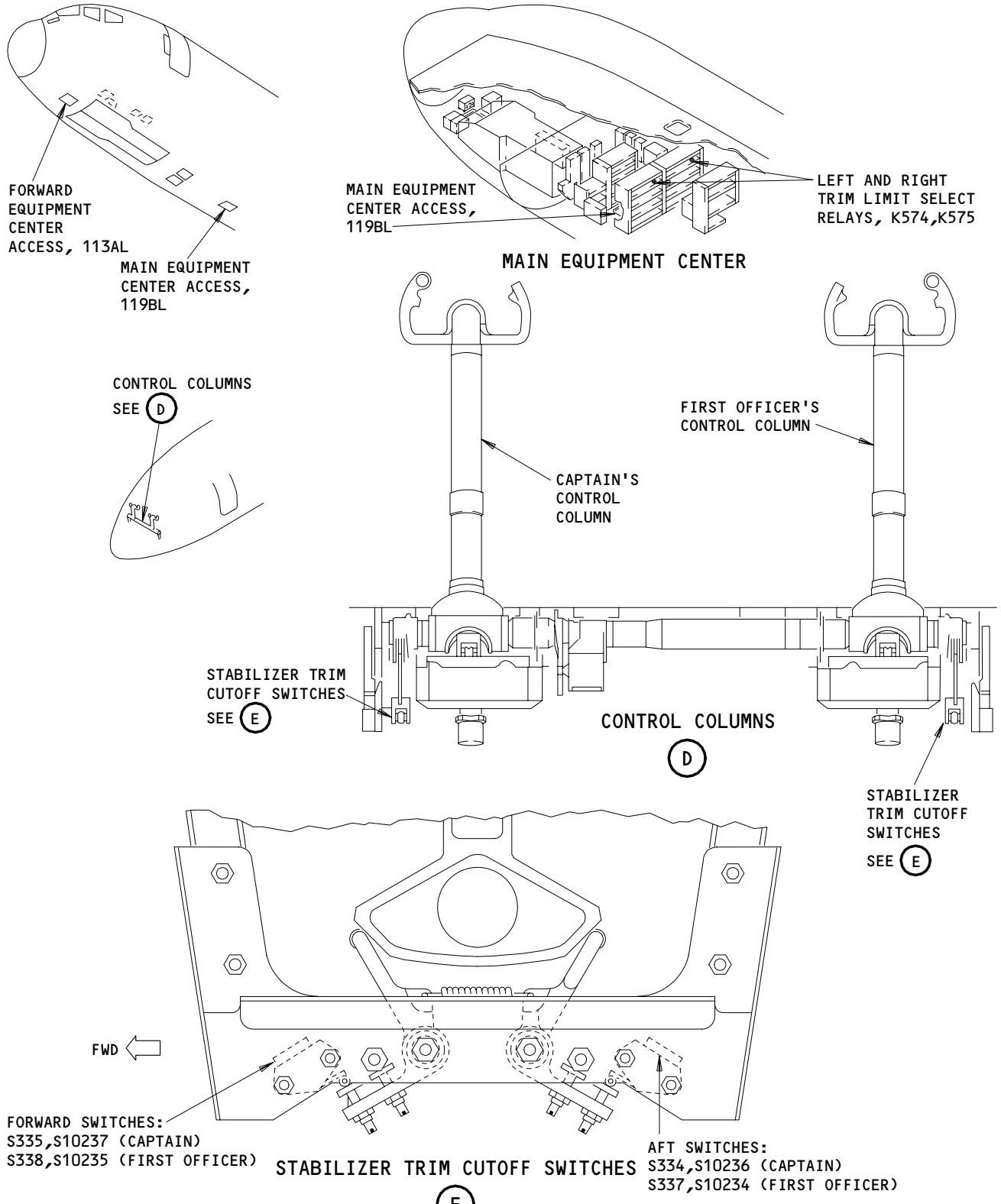
B



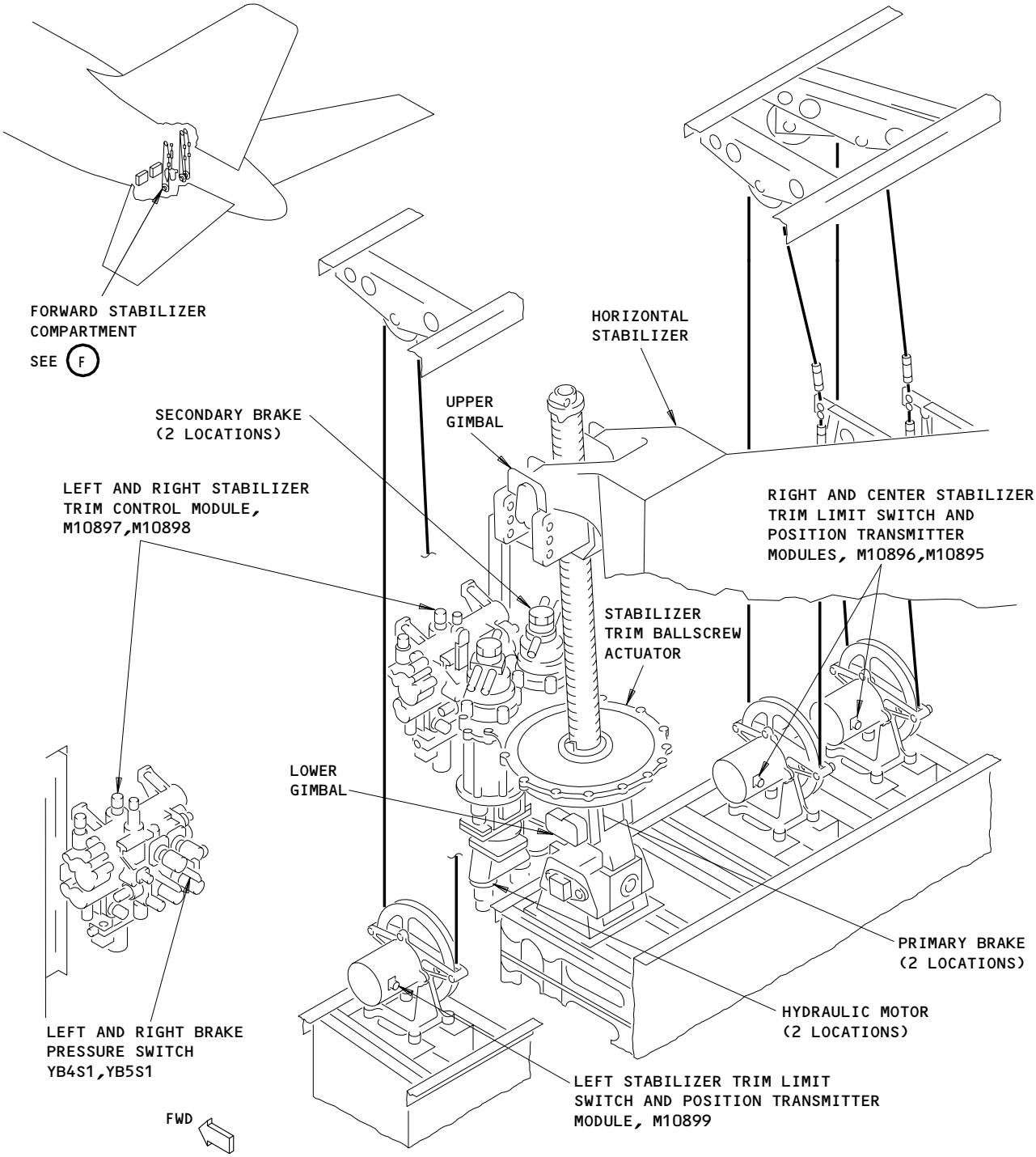
CONTROL STAND PANEL, P10

A

Horizontal Stabilizer Trim Control System – Component Location
Figure 102 (Sheet 1)



Horizontal Stabilizer Trim Control System – Component Location
Figure 102 (Sheet 2)



FORWARD STABILIZER COMPARTMENT
(F)

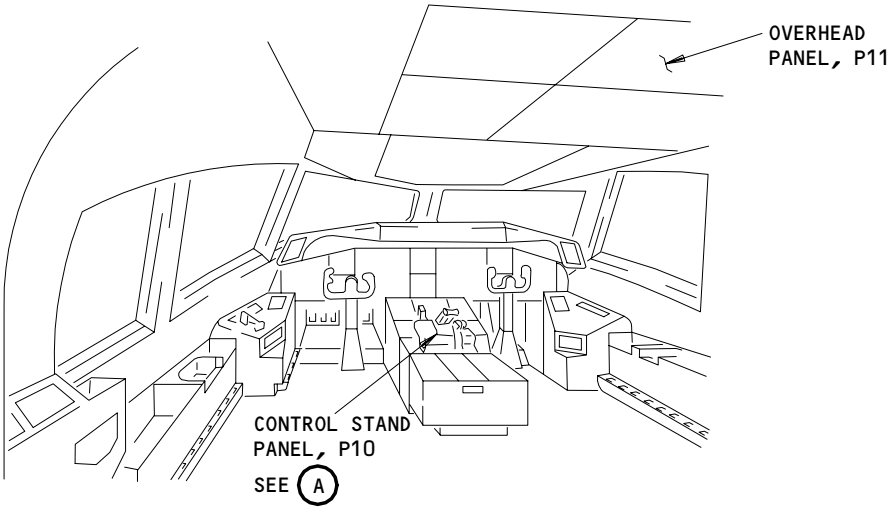
Horizontal Stabilizer Trim Control System – Component Location
Figure 102 (Sheet 3)

STABILIZER TRIM POSITION INDICATING SYSTEM

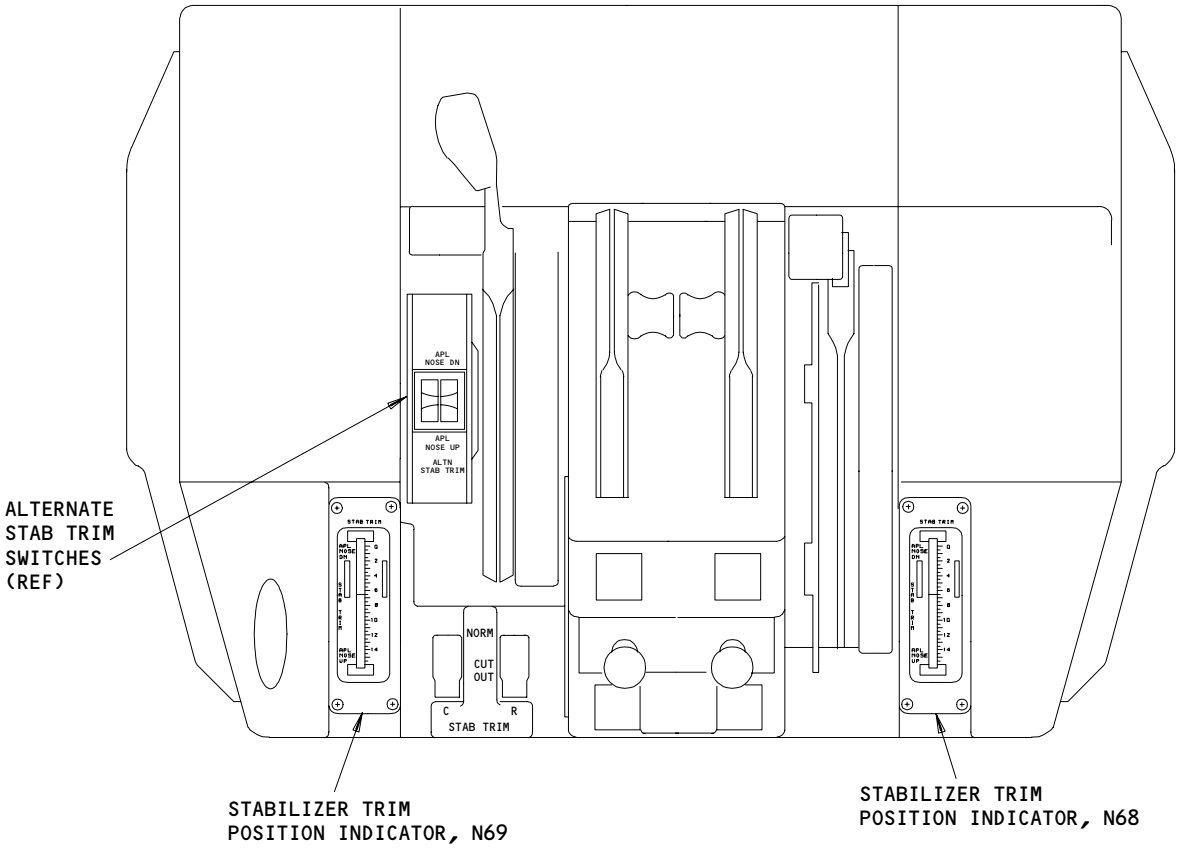
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
CIRCUIT BREAKERS –	2		FLT COMPT, P11	
STAB POS MOD C, C1525		1	11F19	*
STAB POS MOD L, C1523		1	11G15	*
STAB POS MOD R, C1526		1	11G24	*
STAB TRIM POS IND L, C1002		1	11H10	*
STAB TRIM POS IND R, C1009		1	11H19	*
INDICATOR – STAB TRIM POS L, N69	2	1	FLT COMPT, CONT STAND, P10	27-48-06
INDICATOR – STAB TRIM POS R, N68	2	1	FLT COMPT, CONT STAND, P10	27-48-06
MODULE – STAB TRIM LIMIT SW & POS XMTR C, M10895	3	1	311AL, AFT FUSELAGE	27-48-01
MODULE – STAB TRIM LIMIT SW & POS XMTR L, M10899	3	1	311AL, AFT FUSELAGE	27-48-01
MODULE – STAB TRIM LIMIT SW & POS XMTR R, M10896	3	1	311AL, AFT FUSELAGE	27-48-01
MODULE STABILIZER POSITION C, M10409	4	1	119BL, MAIN EQUIP CTR, P50	27-48-03
MODULE STABILIZER POSITION L, M10408	4	1	119BL, MAIN EQUIP CTR, P50	27-48-03
MODULE STABILIZER POSITION R, M10410	4	1	119BL, MAIN EQUIP CTR, P50	27-48-03
TRANSFORMER – (REF 31-01-36-1, FIG. 101) CTR STAB POS PWR, T10031				

* SEE THE WDM EQUIPMENT LIST

Stabilizer Trim Position Indicating System – Component Index
Figure 101



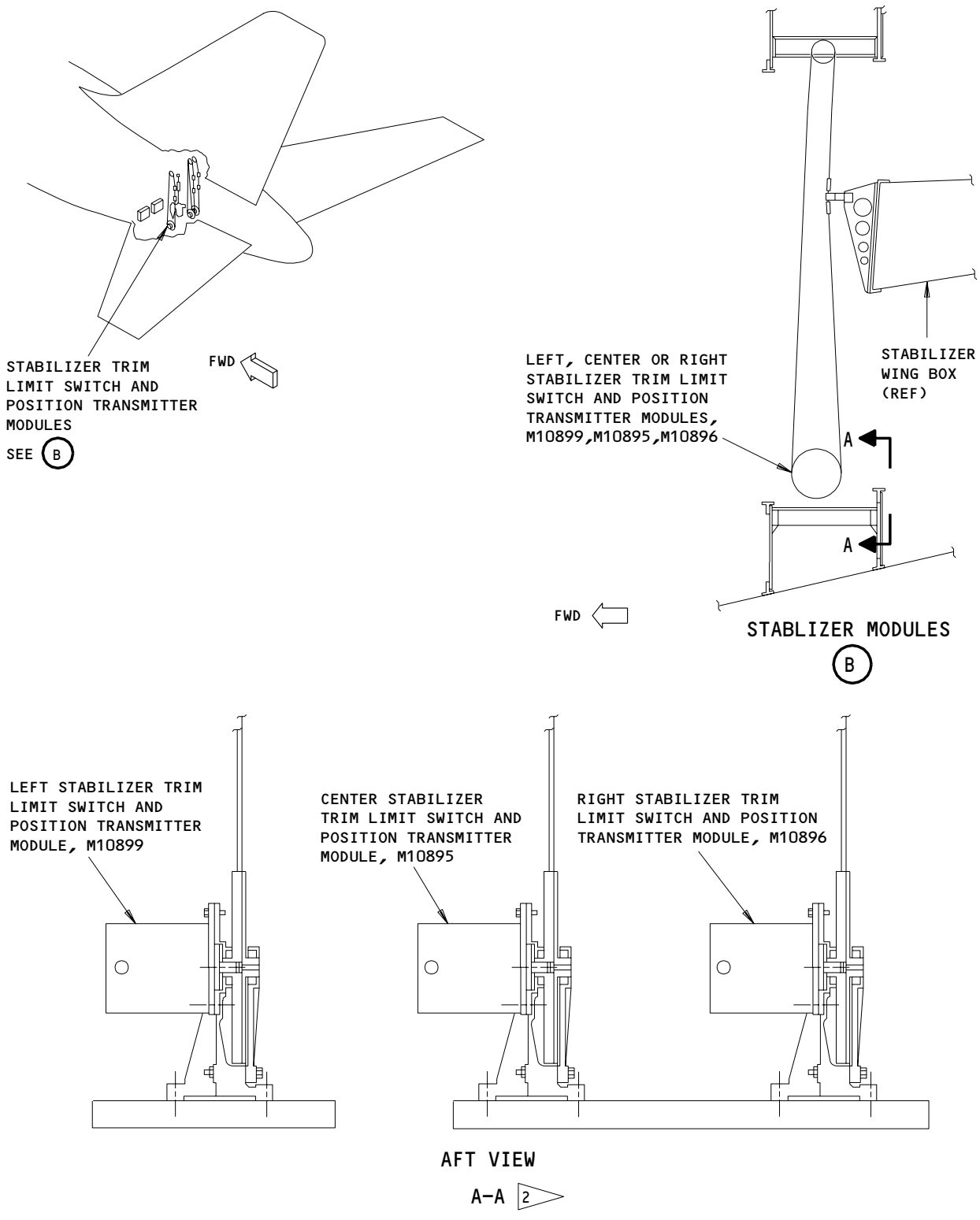
FLIGHT COMPARTMENT



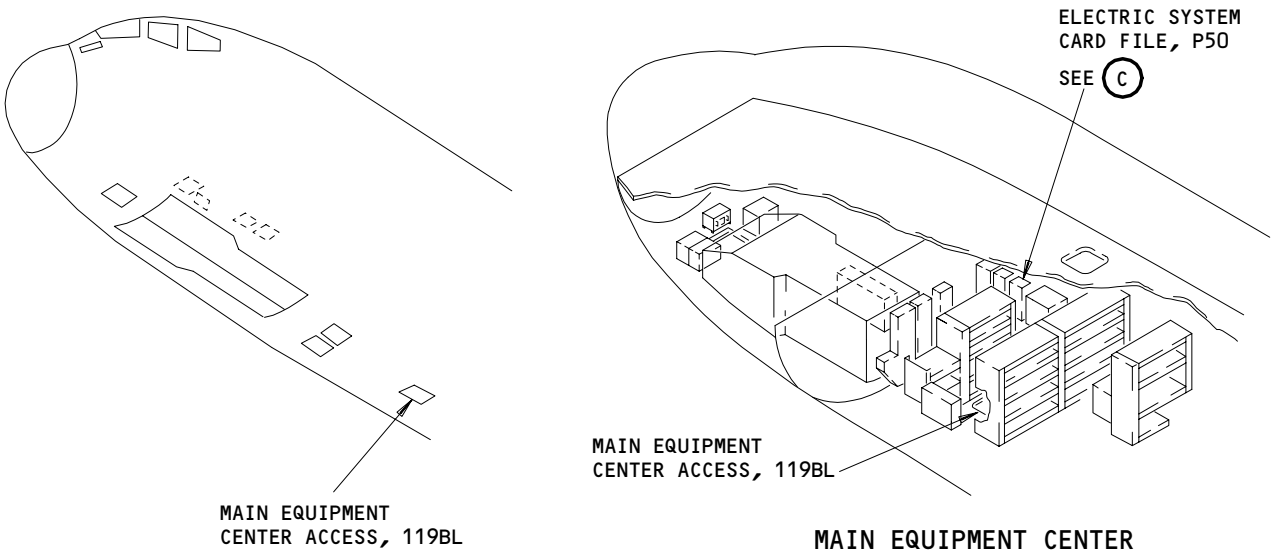
CONTROL STAND PANEL, P10

(A)

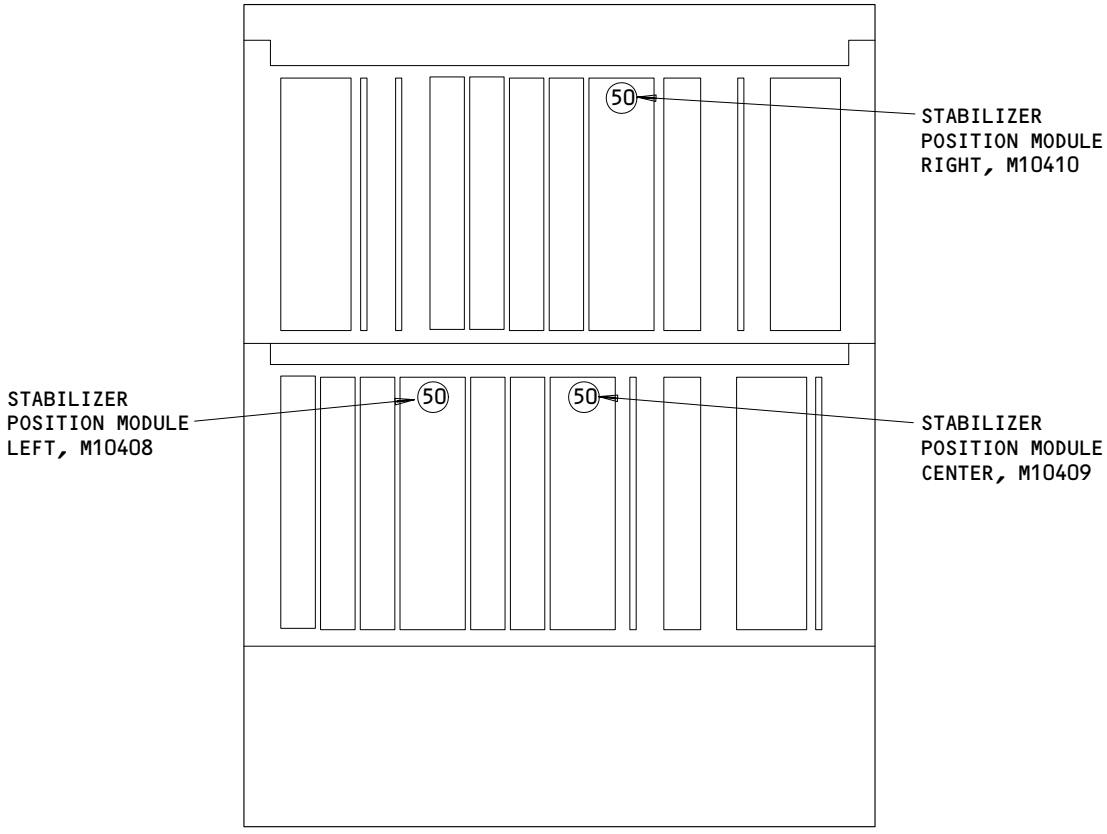
Horizontal Stabilizer Trim Control System – Component Location
Figure 102 (Sheet 1)



Horizontal Stabilizer Trim Control System - Component Location
Figure 102 (Sheet 2)



MAIN EQUIPMENT CENTER



ELECTRIC SYSTEM CARD FILE, P50

(C)

Horizontal Stabilizer Trim Control System - Component Location
Figure 102 (Sheet 3)

PREREQUISITES

ELECTRICAL POWER (AMM 24-22-00)

CB: 11H10,11H19

STABILIZER POSITION INDICATOR OFF FLAG IN VIEW

1 REMOVE CAPT (F/O) STABILIZER TRIM POSITION INDICATOR MODULE M69 (M68) FROM PANEL P10 (AMM 27-48-06). CLOSE CB 11H10 (11H19). CHECK VOLTAGE AT CONNECTOR D2542 (D2496) PIN 8 (WDM 27-48-11).
IS THERE 28V AC PRESENT AT PIN 8?

NO → 10 REPAIR CIRCUIT BETWEEN CB 11H10 (11H19) AND CAPT (F/O) STABILIZER TRIM POSITION INDICATOR MODULE M69 (M68) CONNECTOR D2542 (D2496) PIN 8; ALSO BETWEEN CB 11H10 (11H19) AND L (R) STAB TRIM POSITION TRANSMITTER MODULE M10899 (M10896) CONNECTOR D1837 (D1843) PINS 1 (WDM 27-48-11).
INSTALL INDICATOR (AMM 27-48-06).

YES ↓

2 IS THERE A GROUND AT CONNECTOR D2542 (D2496) PIN 9?

YES → 11 REPLACE CAPT (F/O) STABILIZER TRIM POSITION INDICATOR M69 (M68)(AMM 27-48-06).

NO → 12 CHECK AND REPAIR CIRCUIT BETWEEN CAPT (F/O) STABILIZER TRIM POSITION INDICATOR MODULE M69 (M68) CONNECTOR D2542 (D2496) PIN 9 AND GROUND GD2519-AC (WDM 27-48-11).
INSTALL INDICATOR (AMM 27-48-06).

Stabilizer Position Indicator OFF Flag in View
Figure 103

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00)
HYDRAULIC POWER (MM 29-11-00)

CB: 11C12,11C13,11H10,11H19

WARNING: AILERONS, ELEVATOR, RUDDER, FLAPS, SLAT, SPOILER, AND STABILIZER ARE FULLY POWERED SURFACES. CHECK THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR BEFORE PROVIDING HYDRAULIC POWER. INJURY TO PERSONNEL OR DAMAGE TO EQUIPMENT COULD OCCUR.

STABILIZER POSITION INDICATORS DIFFER

1 CHECK INDICATING TAPE ON LEFT AND RIGHT STABILIZER TRIM POSITION INDICATORS.
IS LEFT POSITION INDICATOR'S TAPE MISSING FROM VIEW?

YES → 5 GO TO HORIZONTAL STABILIZER COMPARTMENT.
PULL LEFT (M10899) STABILIZER LIMIT SWITCH & POSITION TRANSMITTER MODULE CONNECTOR D1837 (WDM 27-48-11)
IS THERE 28V AC ON PIN 1 (PIN 5 GND)?

YES → 7 REPLACE LEFT STABILIZER TRIM LIMIT SWITCH AND POSITION TRANSMITTER MODULE M10899 (MM 27-48-01). IF FAULT PERSISTS, REPAIR CIRCUIT BETWEEN LEFT (M10899) STABILIZER TRIM LIMIT SWITCH AND POSITION TRANSMITTER MODULE CONNECTOR D1837, PIN 8 AND 9, AND CAPT (M69) STABILIZER TRIM INDICATOR MODULE CONNECTOR D2542 PINS 6 AND 7 (WDM 27-48-11).

NO → 8 REPAIR CIRCUIT BETWEEN LEFT (M10899) STABILIZER TRIM LIMIT SWITCH AND POSITION TRANSMITTER MODULE CONNECTOR D1837 PIN 1 AND TERMINAL YA17 OF TB109 (WDM 27-48-11).

NO → 2 IS RIGHT STABILIZER TRIM POSITION INDICATOR'S TAPE MISSING FROM VIEW?

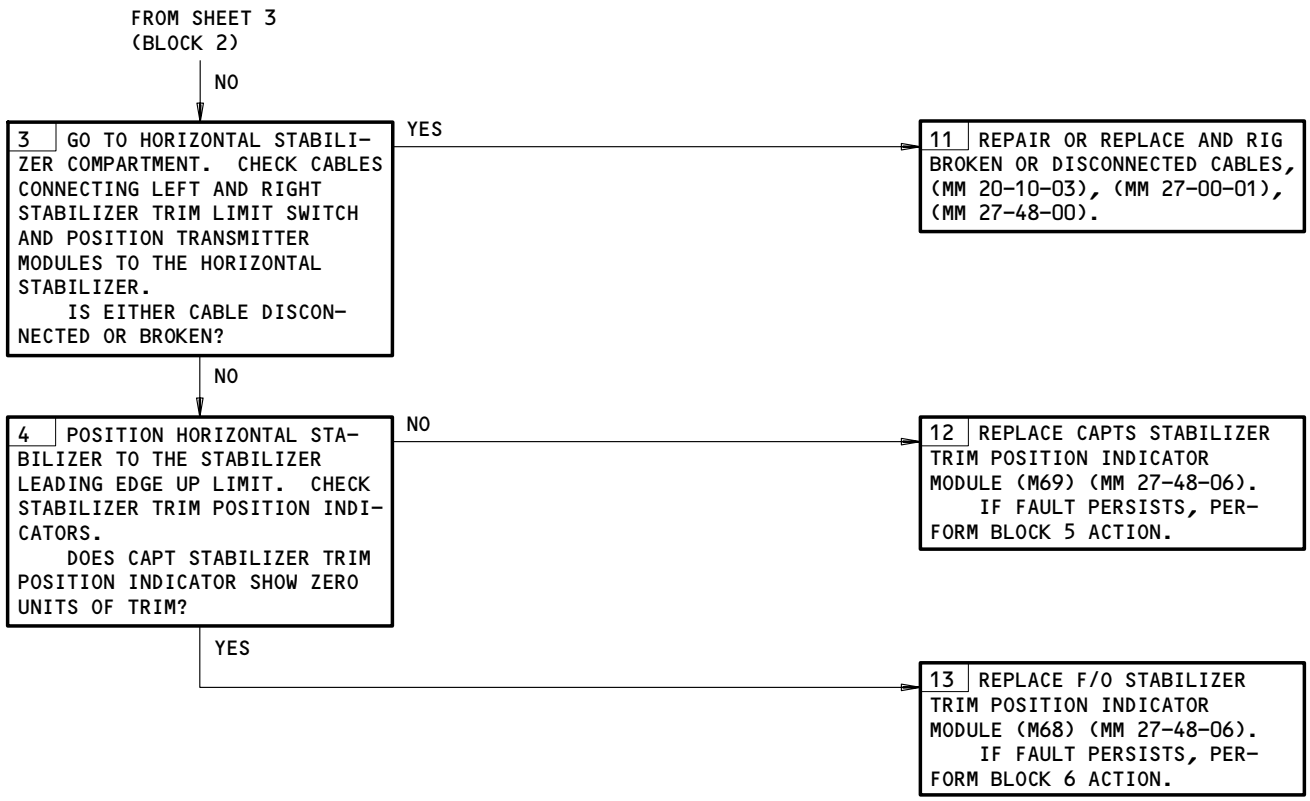
YES → 6 GO TO HORIZONTAL STABILIZER COMPARTMENT. PULL RIGHT (M10896) STABILIZER LIMIT SWITCH AND POSITION TRANSMITTER MODULE CONNECTOR D1843 (WDM 27-48-11).
IS THERE 28V AC ON PIN 1 (PIN 5 GND)?

YES → 9 REPLACE RIGHT STABILIZER TRIM LIMIT SWITCH AND POSITION TRANSMITTER MODULE M10896 (MM 27-48-01). IF THE FAULT PERSISTS, REPAIR CIRCUIT BETWEEN RIGHT (M10896) STABILIZER TRIM LIMIT SWITCH AND POSITION TRANSMITTER MODULE CONNECTOR D1843, PIN 8 AND 9, AND F/O (M68) STABILIZER TRIM INDICATOR MODULE CONNECTOR D2496 PINS 6 AND 7 (WDM 27-48-11).

NO → 10 REPAIR CIRCUIT BETWEEN RIGHT (M10896) STABILIZER TRIM LIMIT SWITCH AND POSITION TRANSMITTER MODULE CONNECTOR D1843 PIN 1 AND TERMINAL OF TB108 (WDM 27-41-11).

NO → SEE SHEET 4 (BLOCK 3)

Stabilizer Position Indicators Differ
Figure 104 (Sheet 1)



Stabilizer Position Indicators Differ
Figure 104 (Sheet 2)

STABILIZER POSITION MODULE (SPM) BITE PROCEDURE

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11G15,11F19,11G24

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

1 PUSH "BIT/VERIFY" SWITCH FOR 4-5 SECONDS ON LEFT SPM, M10408, IN PANEL P50.
DOES AN AMBER FAULT LED LIGHT COME ON?

YES → 10 IS AMBER "STAB RVDT" LED LIGHT ON?

YES → 20 REPLACE LEFT STABILIZER TRIM LIMIT SWITCH AND POSITION TRANSMITTER MODULE, M10899 (AMM 27-48-01/401).
IF THE PROBLEM CONTINUES, REMOVE THE LEFT SPM, M10408 (AMM 27-48-03/401) AND CHECK CIRCUIT CONTINUITY BETWEEN WIRING CONNECTORS D909 AND D1837 (WDM 27-48-21).
REPAIR AS NECESSARY.
INSTALL LEFT SPM, M10408.

NO → 21 AMBER "MODULE" LED LIGHT IS ON. REPLACE LEFT SPM, M10408 (AMM 27-48-03/401).

NO → 22 REPLACE LEFT SPM, M10408 (AMM 27-48-03/401).

2 DOES GREEN "TEST GOOD" LED LIGHT COME ON?

YES

3 PUSH "BIT/VERIFY" SWITCH FOR 4-5 SECONDS ON CENTER SPM, M10409, IN PANEL P50.
DOES AN AMBER FAULT LED LIGHT COME ON?

YES → 11 IS AMBER "STAB RVDT" LED LIGHT ON?

YES → 23 REPLACE CENTER STABILIZER TRIM LIMIT SWITCH AND POSITION TRANSMITTER MODULE, M10895 (AMM 27-48-01/401).
IF THE PROBLEM CONTINUES, REMOVE THE CENTER SPM, M10409 (AMM 27-48-03/401) AND CHECK CIRCUIT CONTINUITY BETWEEN WIRING CONNECTORS D821 AND D1841 (WDM 27-48-21).
REPAIR AS NECESSARY.
INSTALL CENTER SPM, M10409.

NO → 24 AMBER "MODULE" LED LIGHT IS ON. REPLACE CENTER SPM, M10409 (AMM 27-48-03/401).

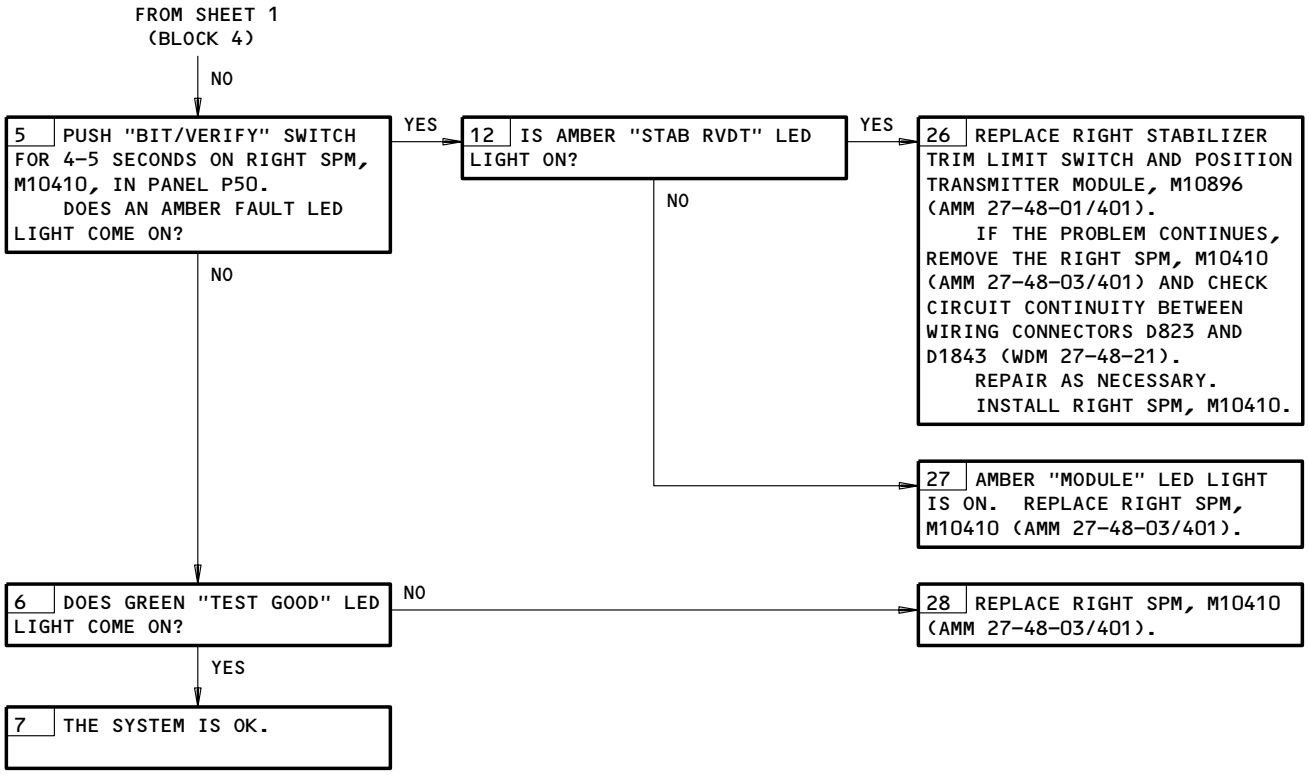
NO → 25 REPLACE CENTER SPM, M10409 (SMM 27-48-03/401).

4 DOES GREEN "TEST GOOD" LED LIGHT COME ON?

YES

SEE SHEET 2
(BLOCK 5)

Stabilizer Position Module (SPM) BITE Procedure
Figure 105 (Sheet 1)



Stabilizer Position Module (SPM) BITE Procedure
Figure 105 (Sheet 2)

TRAILING EDGE FLAP SYSTEM

1. ARINC Data Bus Charts
   A. General

      CAUTION: DO NOT DIRECTLY TOUCH THE CONNECTORS. USE A BREAKOUT BOX OR YOU CAN CAUSE DAMAGE TO THE CONNECTORS.

      (1) The ARINC 429 data bus charts give data necessary to make an analysis of ARINC 429 transmitters, receivers, and data buses. For the test, use a breakout box at the available terminal or at the LRU connectors.

   B. Equipment
      (1) Standard multi-meter
      (2) 429EBP 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
      (3) A34011-1 Breakout Box (recommended)
          A34011-112 Breakout Box (alternative)

2. ARINC Data Bus Charts

FSEU							
DIGITAL OUTPUT BUS CHART							
BUS NAME			CON	PINS	BUS	BIT	DATA
SOURCE	TYPE	BUS			FORMAT	RATE	BUS
FSEU (1 2)	A	1	B	J13 K13	429	LO	FSEU DATA BUS

TRAILING EDGE FLAP SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
BALLSCREW - INBOARD FLAP	6	4	MAIN GEAR WHEEL WELLS AND WING	27-51-11
BALLSCREW - OUTBOARD FLAP	7	4	WING	27-51-21
CARRIAGE - INBOARD FLAP	6	4	MAIN GEAR WHEEL WELLS AND WING	27-51-05
CARRIAGE - OUTBOARD FLAP	7	4	WING	27-51-16
CIRCUIT BREAKERS	1		FLT COMPT, P6,P11	
ALTN FLAP PWR, C323			6D23	*
FLAP LOAD RELIEF, C1022			11J18	*
FLAP POS IND L, C1008			11H12	*
FLAP POS IND R, C1522			11H13	*
FLAP/SLAT ALTN DRIVE SHUTOFF ARM, C4212			11H23	*
FLAP/SLAT SHUTOFF 1, C4110			11C18	*
FLAP/SLAT ALTN DR SHUTOFF 2, C4271			11H24	*
FLAP/SLAT ELEC UNIT 1 CONT, C1539			11G13	*
FLAP/SLAT ELEC UNIT 2 CONT, C1541			11C15	*
FLAP/SLAT ELEC UNIT 3 CONT, C1540			11G22	*
FLAP/SLAT ELEC UNIT 1 PWR, C1025			11G12	*
FLAP/SLAT ELEC UNIT 2 PWR, C1521			11C14	*
FLAP/SLAT ELEC UNIT 3 PWR, C4210			11G21	*
FLAP/SLAT ELEC UNIT 1 SENSOR, C1037			11G14	*
FLAP/SLAT ELEC UNIT 2 SENSOR, C1524			11C16	*
FLAP/SLAT ELEC UNIT 3 SENSOR, C1038			11G23	*
COMPUTER - (REF 31-41-00, FIG. 101)				
EICAS L, M10181				
EICAS R, M10182				
FAIRINGS - INBOARD FLAP TRACK	1	2	WING	27-51-30
FAIRINGS - OUTBOARD FLAP TRACK	1	4	WING	27-51-31
FLAP - INBOARD TE	1	2	WING TRAILING EDGE	27-51-02
FLAP - INBOARD TE FLAP AFT	1	2	INBOARD FLAP TRAILING EDGE	27-51-12
FLAP - OUTBOARD TE	1	2	WING TRAILING EDGE	27-51-14
FLAP - OUTBOARD TE FLAP AFT	1	2	OUTBOARD FLAP TRAILING EDGE	27-51-22
GEARBOX - INBOARD ANGLE, INBOARD FLAP	5	2	MAIN GEAR WHEEL WELLS	27-51-09
GEARBOX - OUTBOARD ANGLE, INBOARD FLAP	6	2	WING	27-51-10
GEARBOX - INBOARD TEE, INBOARD FLAP	5	2	MAIN GEAR WHEEL WELLS	27-51-07
GEARBOX - OUTBOARD TEE, INBOARD FLAP	5	2	551BB,651BB	27-51-08
GEARBOX - TEE, OUTBOARD FLAP	5	4	WING	27-51-18
INDICATOR - FLAP/SLAT POSITION, N15	2	1	FLT COMPT, P3	*
LEVER - FLAP CONTROL	2	1	FLT COMPT, P10	27-51-32
LIGHT - TRAILING EDGE, L434	2	1	FLT COMPT, P3	*
MODULE - FLAP PDU CONTROL VALVE	4	1	LEFT MAIN GEAR WHEEL WELL, TE FLAP PDU	27-51-28
MODULE - FLAP/SLAT DEPRESSURIZATION, V10060	3	1	FORWARD BULKHEAD LEFT MAIN GEAR WHEEL WELL	27-51-29
MOTOR - ALTERNATE TE FLAPS DRIVE, M547	4	1	MAIN GEAR WHEEL WELL, TE FLAP PDU	*
MOTOR - HYDRAULIC	4	1	MAIN GEAR WHEEL WELL, TE FLAP PDU	*

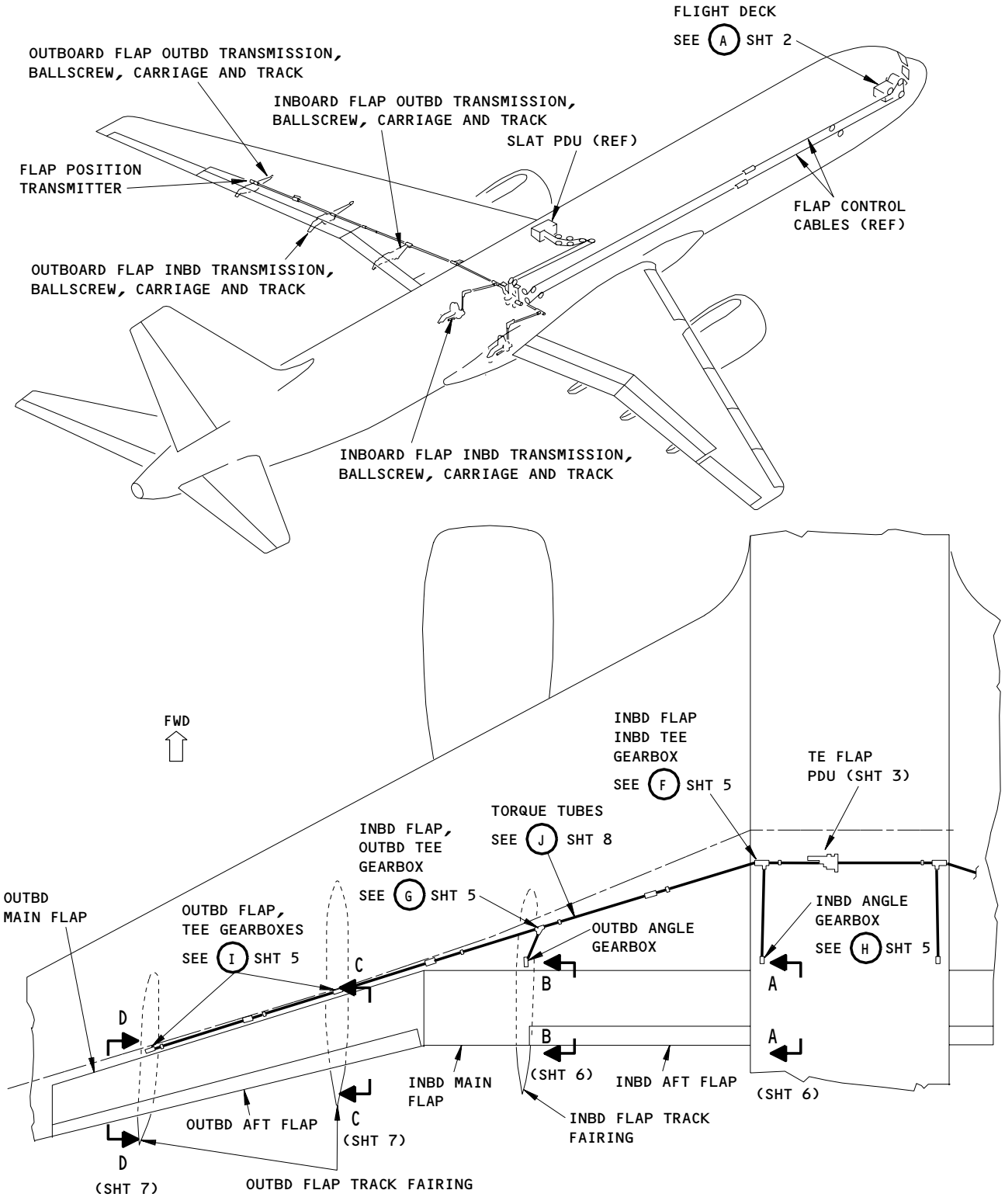
* SEE THE WDM EQUIPMENT LIST

Trailing Edge Flap System - Component Index
Figure 101 (Sheet 1)

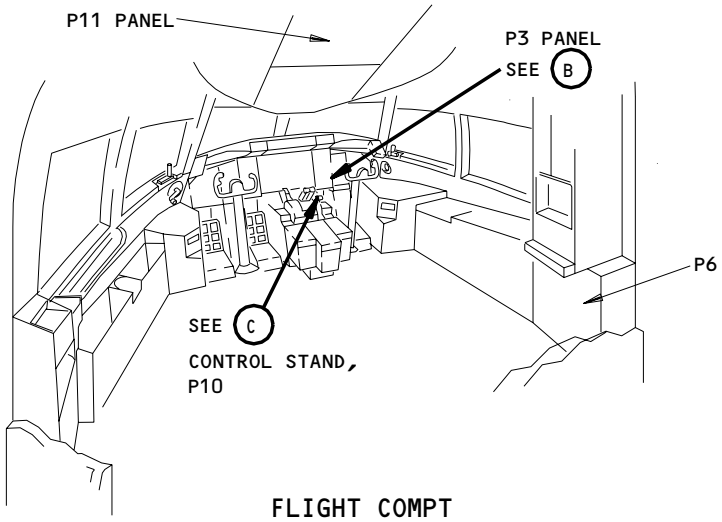
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
RELAY - (REF 31-01-33, FIG. 101) ALT FLAP EXTEND, K359 ALT FLAP RETRACT, K360 FLAP/SLAT ALT DRIVE ARM, K10095 DEPRESSURIZATION, K10104				
RELAY - (REF 31-01-36, FIG. 101) LE/TE TRANSFER, K10244 FLAP LOAD RELIEF, K10245				
SOLENOID - FLAP LOAD RELIEF	4	1	LEFT MAIN GEAR WHEEL WELL, FLAP PDU CONTROL VALVE MODULE	27-51-28
SWITCH - ALTERNATE FLAPS/SLATS POSITION SELECTOR, S10256	2	1	FLT COMPT, P3	*
SWITCH - FLAP/SLAT DEPRESSURIZATION PRESSURE, S1	3	1	LEFT MAIN GEAR WHEEL WELL	27-51-29
SWITCH - (REF 27-81-00, FIG. 101) LE SLAT ALTERNATE ARM, S10255				
SWITCH - TRAILING EDGE ALTERNATE DRIVE ARMING, S10254	2	1	FLT COMPT, P3	*
TRACK - INBOARD FLAP	6	4	MAIN GEAR WHEEL WELL AND WING	27-51-03
TRACK - OUTBOARD FLAP	7	4	WING	27-51-15
TRANSFORMER - (REF 31-01-70, FIG. 101) FSEU-2 POWER, T153				
TRANSMISSIONS - INBOARD FLAP	6	4	MAIN GEAR WHEEL WELL AND WING	27-51-06
TRANSMISSIONS - OUTBOARD FLAP	7	4	WING	27-51-17
TRANSMITTER - FLAP LEVER POSITION, TS5046	2	1	FLIGHT COMPT, P10	27-51-33
TRANSMITTER - PDU POSITION, TS5050	4	1	LEFT MAIN GEAR WHEEL WELL TE FLAP PDU	27-51-27
TRANSMITTERS - L FLAP POSITION, TS5049	5	1	OUTBD END FLAP DRIVE L WING	27-58-03
R FLAP POSITION, TS5051	5	1	OUTBD END FLAP DRIVE R WING	27-58-03
TRANSMITTER - (REF 27-81-00, FIG. 101) SLAT PDU POSITION, TS5048				
TRANSMITTERS - (REF 27-81-00, FIG. 101) L SLAT POSITION, TS5083 R SLAT POSITION, TS5047				
TUBE - TE FLAP TORQUE	8		FORWARD BULKHEAD MAIN GEAR WHEEL WELLS, WING REAR SPARS	27-51-25
UNIT - FLAP/SLAT ELECTRONIC, M10331,M10332, M10333	8	3	821, FWD CARGO COMPT, E5	27-51-01
UNIT - TE FLAP POWER DRIVE	3	1	FORWARD BULKHEAD LEFT MAIN GEAR WHEEL WELL	27-51-26
VALVE - TE FLAP BYPASS, V105	4	1	LEFT MAIN GEAR WHEEL WELL	27-51-27
VALVE - FLAP/SLAT DEPRESSURIZATION PRIOIRITY	3	1	LEFT MAIN GEAR WHEEL WELL	27-51-29
VALVE - FLAP/SLAT DEPRESSURIZATION SEQUENCE	3	1	LEFT MAIN GEAR WHEEL WELL	27-51-29
VALVE - FLAP/SLAT DEPRESSURIZATION SHUTOFF	3	1	LEFT MAIN GEAR WHEEL WELL	27-51-29
VALVE - FLAP/SLAT DEPRESSURIZATION SOLENOID, V1	3	1	LEFT MAIN GEAR WHEEL WELL	27-51-29

* SEE WM EQUIPMENT LIST

Component Index
Figure 101 (Sheet 2)

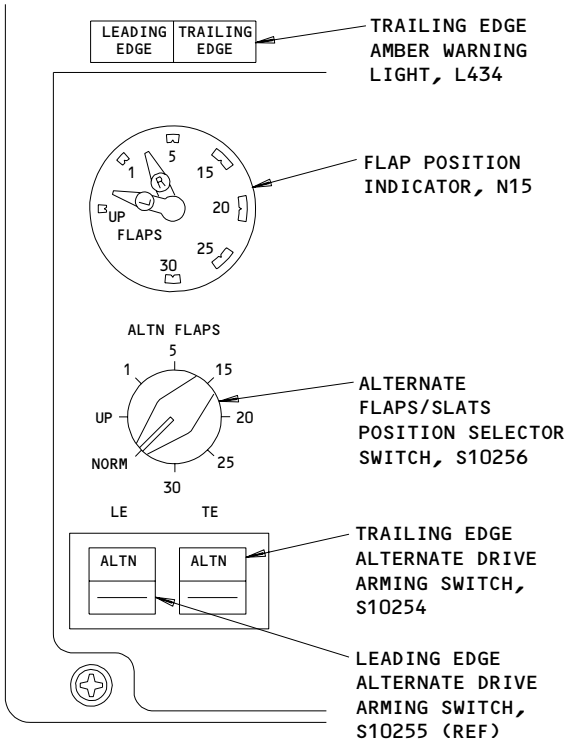


Trailing Edge Flap System – Component Location
Figure 102 (Sheet 1)



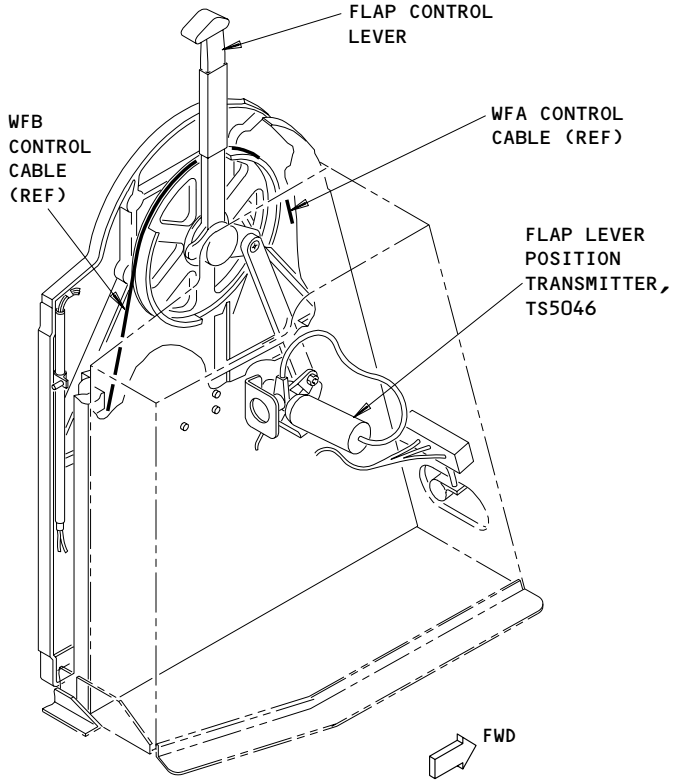
FLIGHT COMPT

A



P3 PANEL

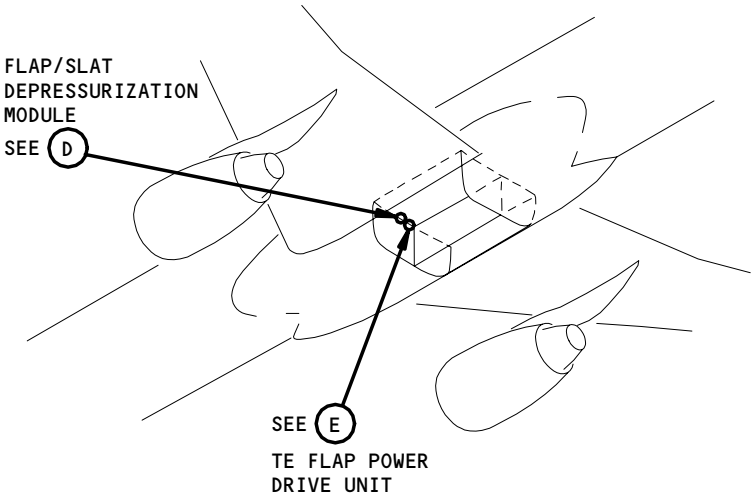
B

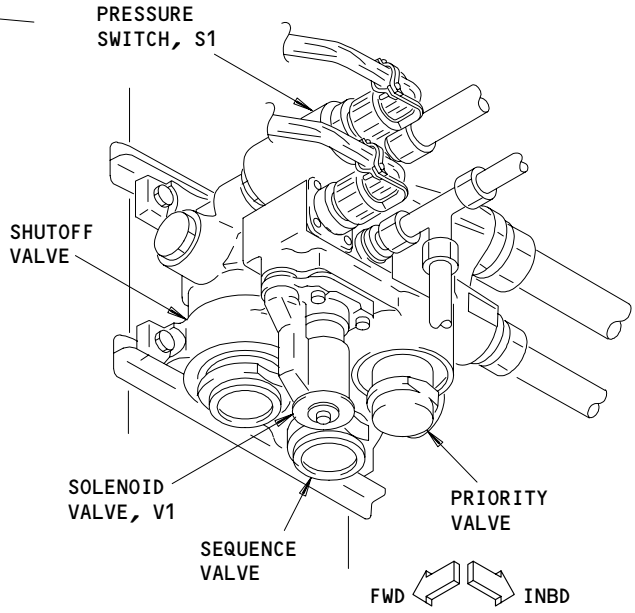


CONTROL STAND, P10

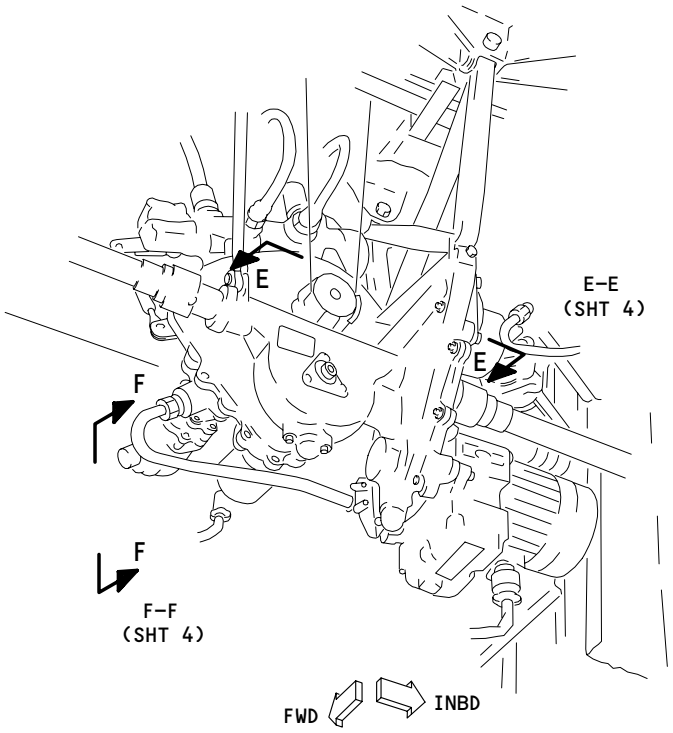
C

Component Location
Figure 102 (Sheet 2)



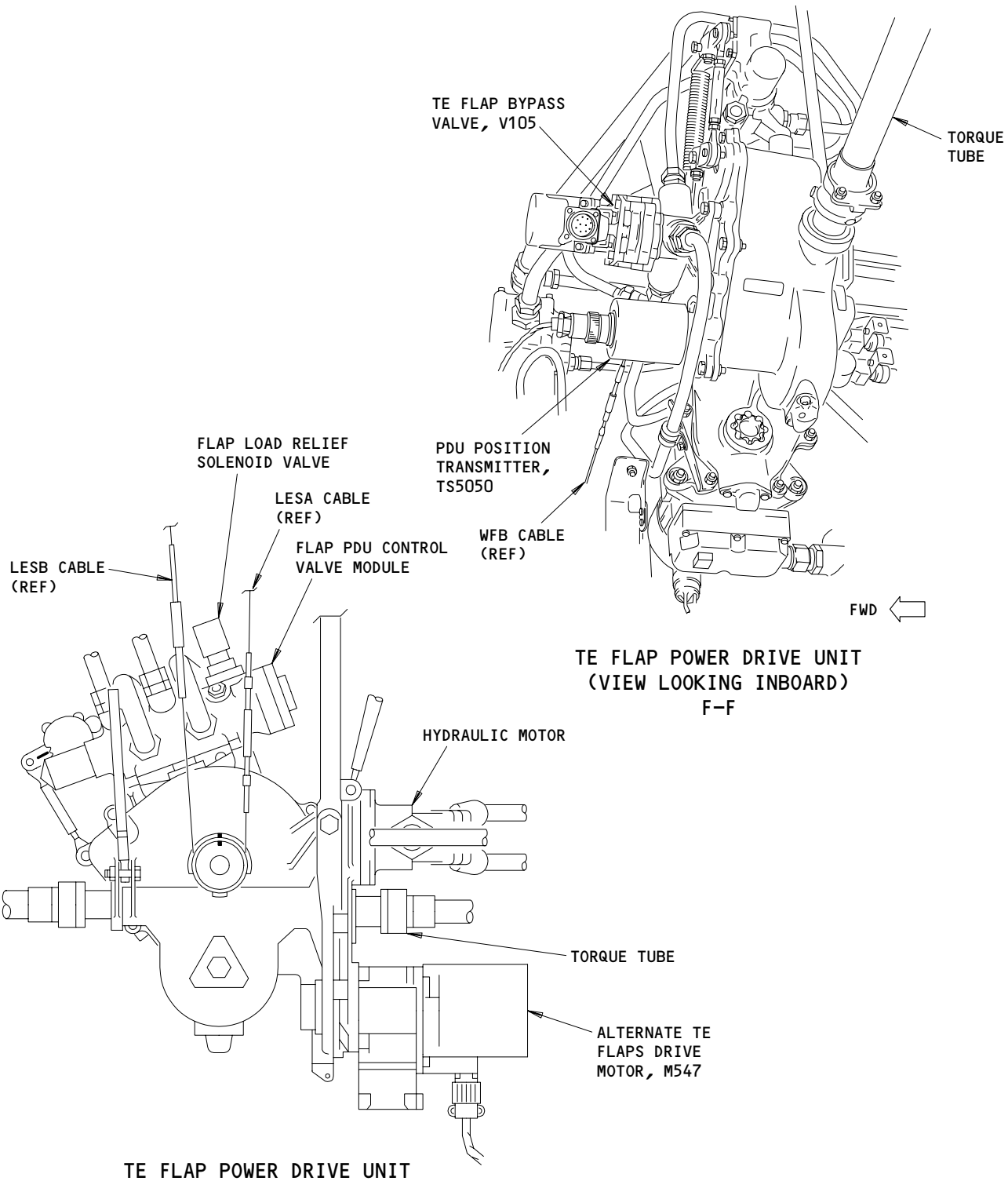


FLAP/SLAT DEPRESSURIZATION
MODULE, V10060
(D)



TE FLAP POWER DRIVE UNIT
(E)

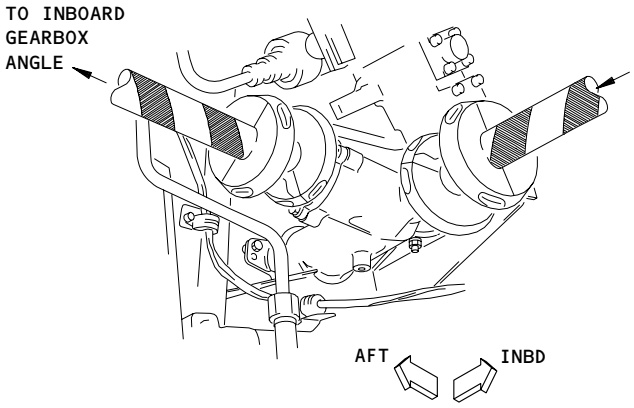
Component Location
Figure 102 (Sheet 3)



TE FLAP POWER DRIVE UNIT
(VIEW LOOKING INBOARD)
F-F

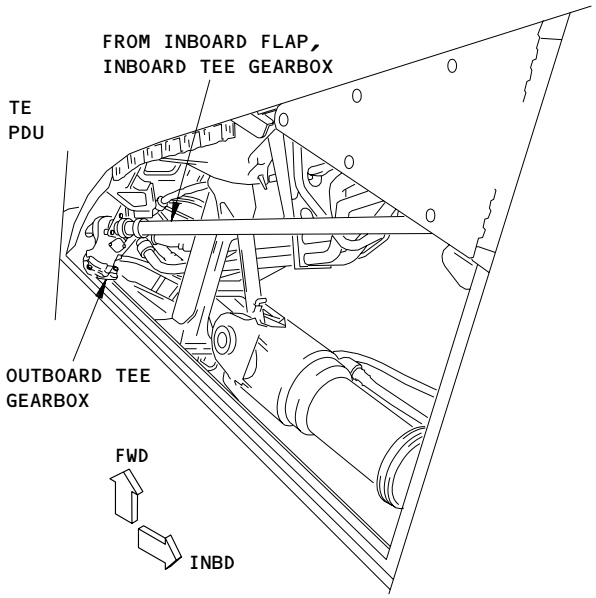
TE FLAP POWER DRIVE UNIT
(VIEW LOOKING FORWARD)
E-E

Component Location
Figure 102 (Sheet 4)



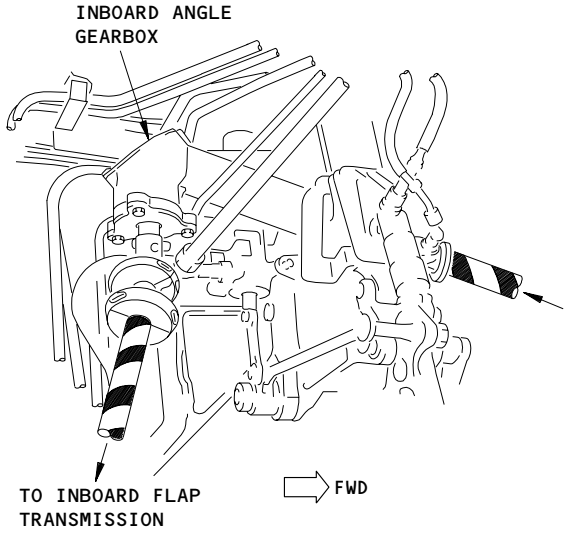
INBOARD FLAP, INBOARD TEE GEARBOX
(VIEW IN THE UP DIRECTION)

F



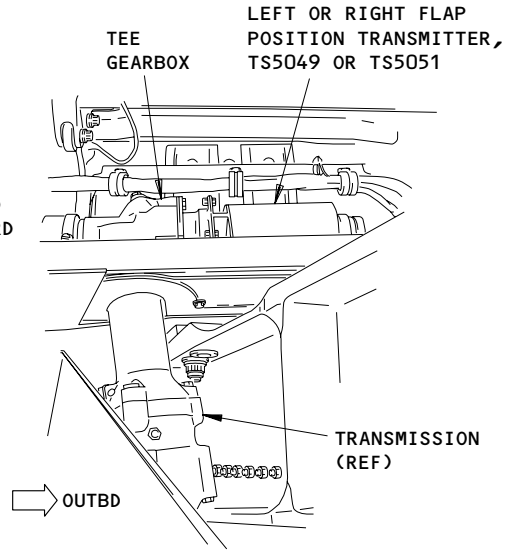
INBOARD FLAP, OUTBOARD TEE GEARBOX
(VIEW IN THE UP DIRECTION)

G



INBOARD ANGLE GEARBOX
(VIEW IN THE OUTBOARD DIRECTION)

H



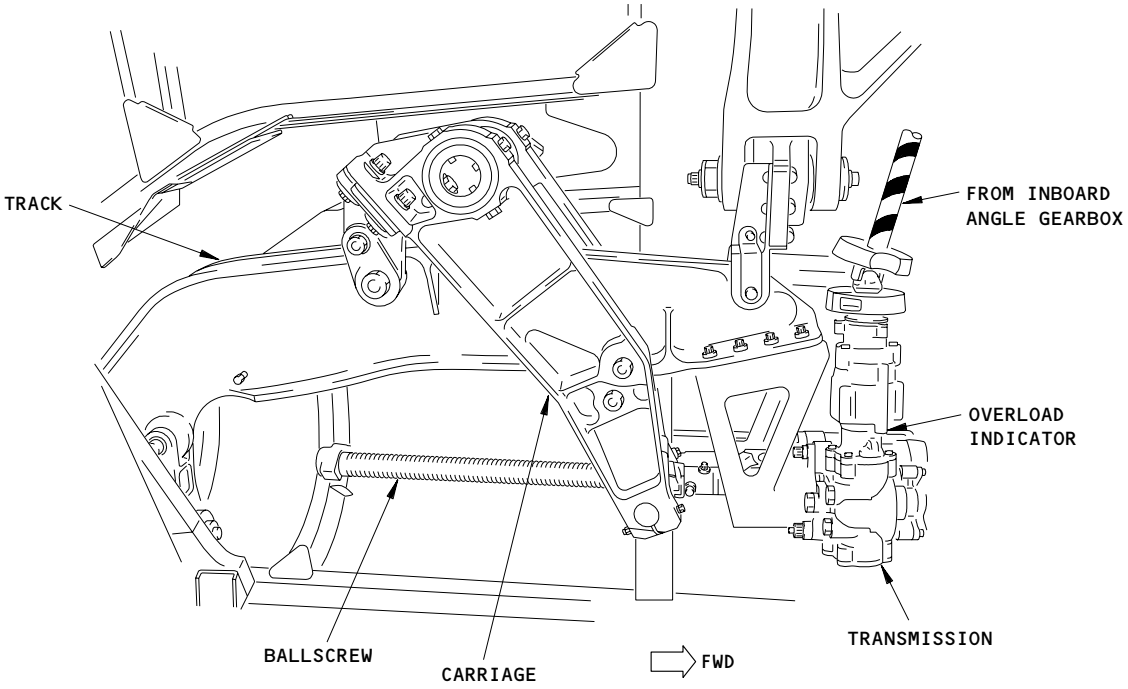
(OUTBOARD FLAP, OUTBOARD TEE GEARBOX IS SHOWN, OUTBOARD FLAP, INBOARD TEE GEARBOX IS EQUIVALENT.) 1
(VIEW IN THE FORWARD DIRECTION)

I

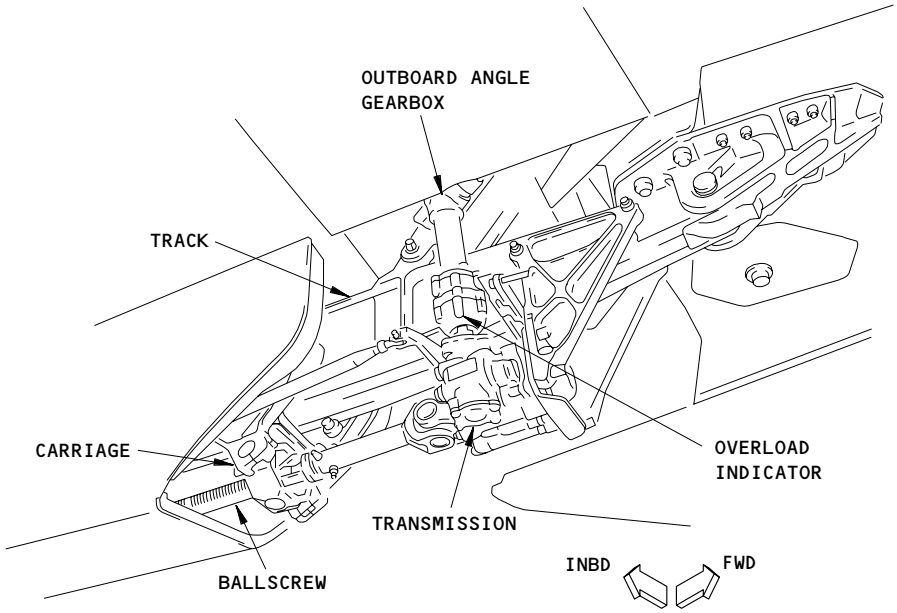
1 FLAP POSITION TRANSMITTERS INSTALLED ONTO OUTBOARD TEE GEARBOXES. INBOARD TEE GEARBOXES CONNECT TO TORQUE TUBES.

Trailing Edge Flap System - Component Location
Figure 102 (Sheet 5)

H85828

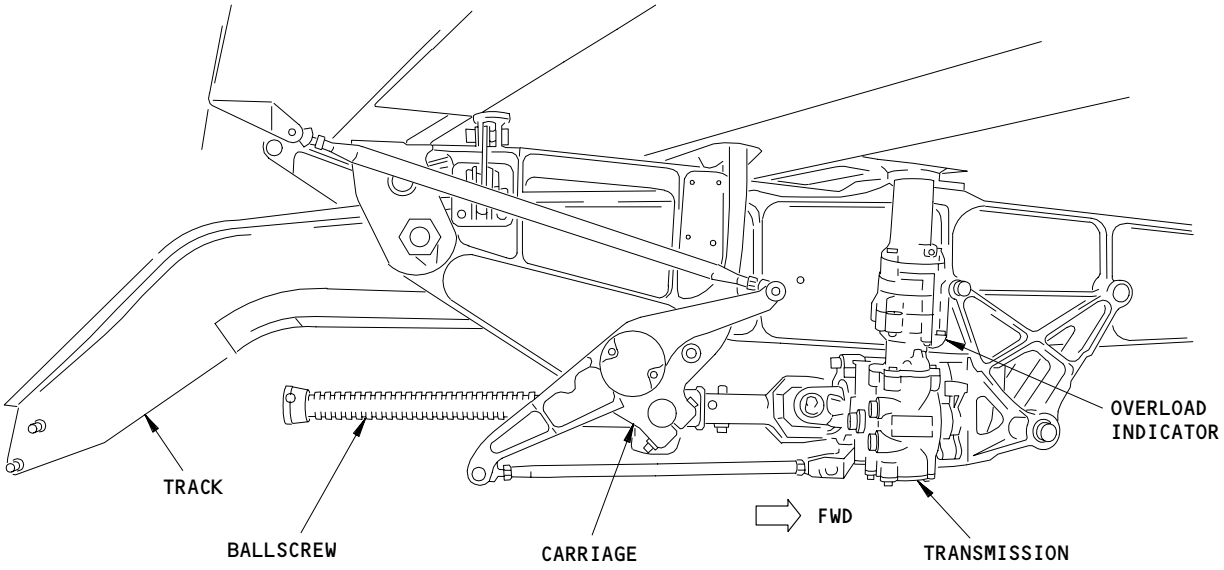


INBOARD FLAP, INBOARD DRIVE
(VIEW IN THE OUTBOARD DIRECTION)
A-A

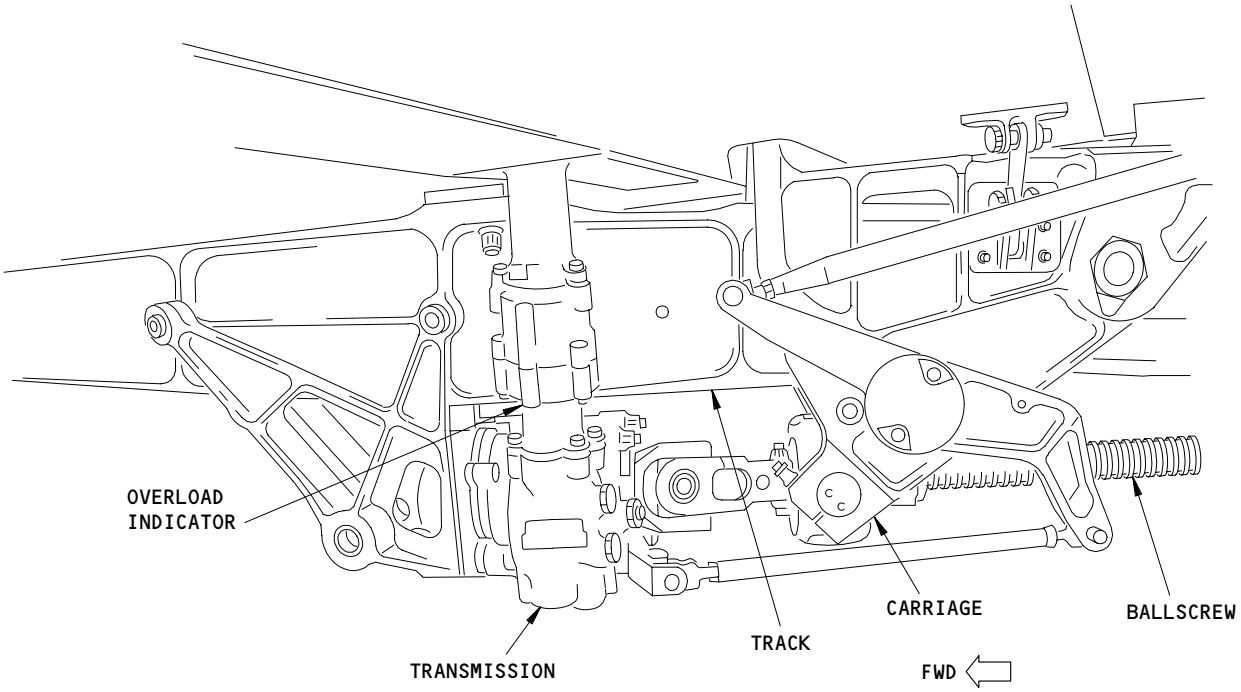


INBOARD FLAP, OUTBOARD DRIVE
B-B

Trailing Edge Flap System - Component Location
Figure 102 (Sheet 6)

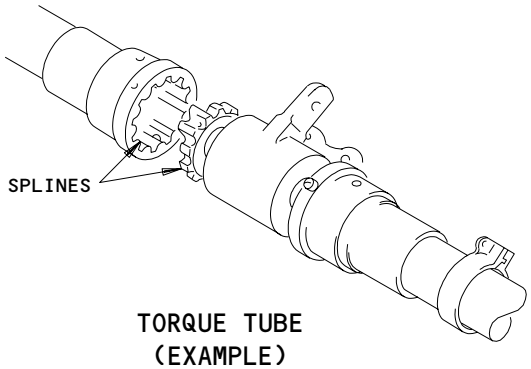


OUTBOARD FLAP, INBOARD DRIVE
(LOOKING OUTBOARD)
C–C



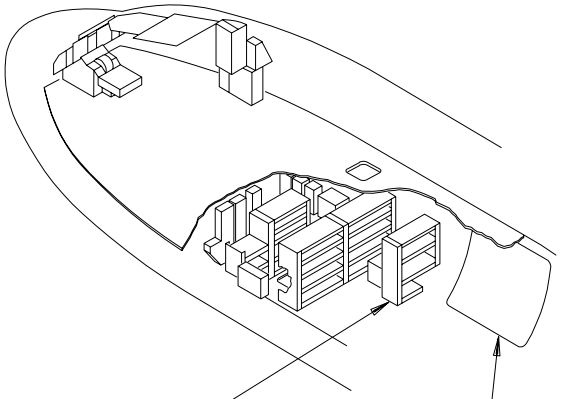
OUTBOARD FLAP, OUTBOARD DRIVE
(LOOKING OUTBOARD)
D–D

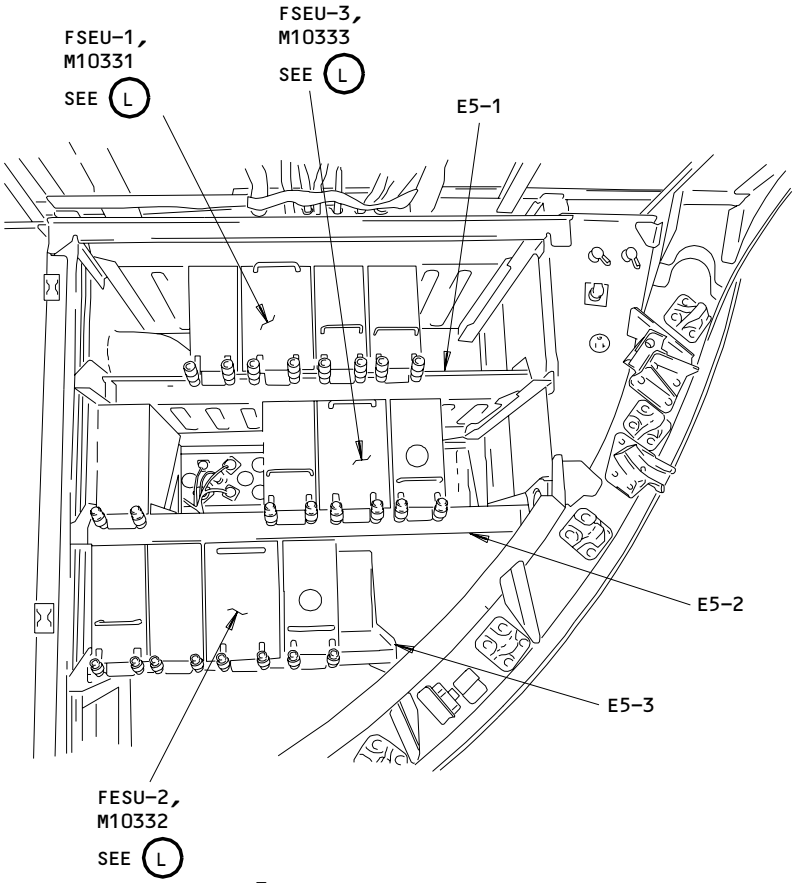
Trailing Edge Flap System – Component Location
Figure 102 (Sheet 7)



TORQUE TUBE
(EXAMPLE)

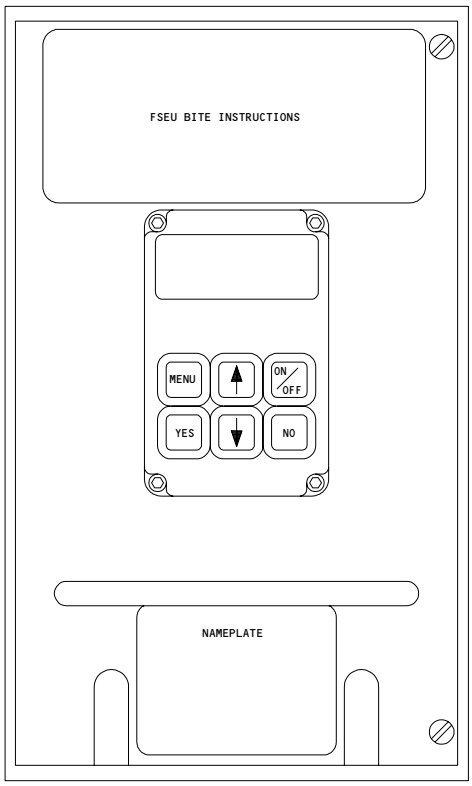
J FROM SHT 1





E5 EQUIPMENT RACK
(AFT VIEW)

K



FSEU
(EXAMPLE)

L

Component Location
Figure 102 (Sheet 8)

Not Used
Figure 103

FLAP/SLAT ELECTRONIC UNIT (FSEU) BITE PROCEDURE

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6D23,11C14,11C15,11C16,11C18,11G12,11G13,11G14,
11G21,11G23,11H12,11H13,11H23,11H24,11J18

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

NOTE: THE -40 FSEU HAS A NON-VOLATILE MEMORY WHICH STORES FAULTS FROM THE LAST FLIGHT LEG AND FLIGHT LEGS BEFORE THE LAST ONE (UP TO A MAXIMUM OF 64 FLIGHT LEGS).

1 DO THE BITE TEST ON ONE OF THE THREE FSEUs AT A TIME AS FOLLOWS:
1. PUSH THE ON/OFF SWITCH ON THE FACE PANEL OF FSEU M10331, M10332, OR M10333 TO SHOW THE "EXISTING FAULTS?" MESSAGE ON THE DISPLAY.
2. PUSH THE NO SWITCH TO SHOW THE "FAULT HISTORY" MESSAGE ON THE DISPLAY.
3. PUSH THE NO SWITCH TO SHOW THE "GROUND TESTS" MESSAGE ON THE DISPLAY
4. PUSH THE YES SWITCH TO SHOW THE "FLT DECK TESTS?" ON THE DISPLAY
5. PUSH THE NO SWITCH
6. PUSH THE YES SWITCH AFTER THE "DISPLAY TEST?" MESSAGE COMES ON THE DISPLAY.

DO ALL LEDs ON THE FACE PANEL OF THE FSEUs COME ON?

NOTE: THE LIGHTS WILL COME ON IN TWO DIFFERENT GROUPS.

NO → 31 IF ONE OR MORE OF THE LEDs ARE OUT, REPLACE THE FSEU M10331,M10332, OR M10333 (AMM 27-51-01/201).
IF ALL LEDs ARE OUT, EXAMINE THE CIRCUIT FROM FSEU, CONNECTOR 1, PIN, TO CIRCUIT BREAKER (CB) AS FOLLOWS:
FSEU-1, M10331
- D3312A, PIN D3 AND CB 11G12 - (C1025)(WDM 27-51-41)
- FSEU-2, M10332
  - D3528A, PIN D3 AND CB 11C14 (C1521) (WDM 27-51-61)
- FSEU-3, M10333
  - D3260A, PIN D3 AND CB 11G21 (C4210) (WDM 27-81-11).

REPAIR THE PROBLEMS THAT YOU FIND.

YES ↓

2 EXAMINE THE FSEUs FOR PAST AND EXISTING FAULTS AS FOLLOWS:

DO THESE STEPS TO LOOK FOR EXISTING FAULTS:
1. PUSH THE MENU SWITCH ON THE FACE PANEL OF FSEU M10331, M10332 OF M10333 TO SHOW THE "EXISTING FAULTS" MESSAGE ON THE DISPLAY
2. PUSH THE "YES" SWITCH TO LOOK AT THE FIRST PRESENT FAULT.

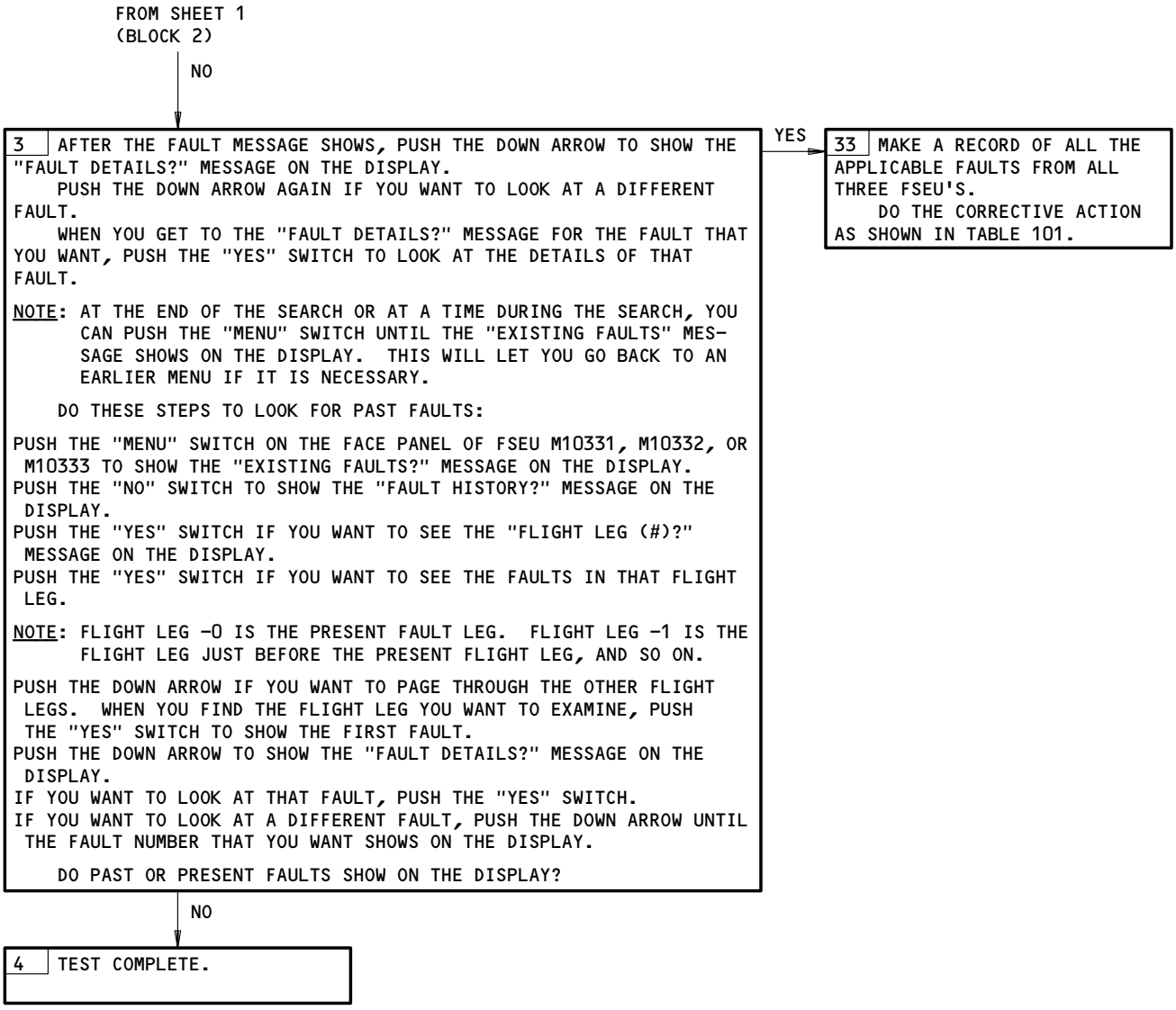
DOES THE "TEST INHIBITED" MESSAGE SHOW ON THE DISPLAY?

YES → 32 DO THE CORRECTIVE ACTION IN TABLE 101 FOR THE FAULT THAT SHOWS ON THE DISPLAY AFTER THE "TEST INHIBITED" MESSAGE.

NO → SEE SHEET 2 (BLOCK 3)

FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 1)

819039



FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 2)

MESSAGE	MESSAGE NUMBERS	CORRECTIVE ACTION
L-ADC FAILED	208	DO THE L-ADC BITE PROCEDURE IN ADC (FIM 34-00/101) AND DO THE CORRECTIVE ACTION.
L-ADC NO DATA	207	MAKE SURE THE L-ADC IS IN POSITION, DO THE L-ADC BITE PROCEDURE IN ADC (FIM 34-12-00/101), AND THE CORRECTIVE ACTION. IF THE PROBLEM CONTINUES, EXAMINE THE WIRING FROM FSEU-1 TO L-ADC. REPAIR THE PROBLEMS THAT YOU FIND.
L-ADC IN-TEST		MAKE SURE A TEST IS NOT RUN AT THE SAME TIME THAT YOU DO THE BITE TEST. FSEU BITE CAN NOT BE RUN WHEN L-ADC IS IN SELF-TEST.
FSEU 1 NO DATA	209	MAKE SURE THE FSEU-1 IS IN POSITION AND HAS POWER, RUN THE TEST AGAIN. IF THE PROBLEM CONTINUES, EXAMINE WIRING FROM FSEU-1 TO FSEU-2 (WDM 27-58-31). REPAIR THE PROBLEMS THAT YOU FIND.
FSEU 2 NO DATA	210	MAKE SURE THE FSEU-2 IS IN POSITION AND HAS POWER, RUN THE TEST AGAIN. IF THE PROBLEM CONTINUES, EXAMINE WIRING FROM FSEU-2 TO FSEU-3 (WDM 27-58-31). REPAIR THE PROBLEMS THAT YOU FIND.
-14/17 IN CHANNEL 1		MAKE SURE THE -40 FSEU IS IN THE FSEU-1 POSITION.
FSEU FAILED	101-115,301, 306,311,316, 332,336	REPLACE THE FSEU THAT SHOWED THE MESSAGE.
MODE SELECT	202	REMOVE THE FSEU THAT YOU TESTED (AMM 27-51-01/201). EXAMINE AND REPAIR, IF NECESSARY, THESE CONDITIONS ON THE FSEU THAT YOU REMOVED: • FSEU-1 (M10331): MAKE SURE YOU HAVE CONTINUITY BETWEEN D3312A, PINS H10 AND H8, AND BETWEEN PINS A11 AND A8. MAKE SURE YOU HAVE GROUND ON PIN K15 • FSEU-2 (M10332): MAKE SURE YOU HAVE CONTINUITY BETWEEN D3258A, PINS A11 AND A8, PINS B11 AND B8, AND PINS J10 AND J8. MAKE SURE YOU HAVE GROUND ON PIN K15 • FSEU-3 (M10333): MAKE SURE YOU HAVE CONTINUITY BETWEEN D3260A, PINS K10 AND K8 AND BETWEEN PINS B11 AND B8. MAKE SURE YOU HAVE GROUND ON PIN K15. INSTALL THE FSEU THAT YOU REMOVED (AMM 27-51-01/201).
FSEU 3 DISCRETE	203	GO TO BLOCK 15, SHEET 8.
DISCRETE OUTPUT OR ANALOG OUTPUT	204,205,206	GO TO THE "SHOP DETAILS" ON THE FSEU AND GET THE CONNECTOR AND PIN NUMBER THAT HAS A FAILURE. DO THE ACTION IN TABLE 102 FOR THAT CONNECTOR AND PIN NUMBER FOR THE FSEU (CHANNEL) THAT HAS THE FAILURE. IF THE CONNECTOR AND PIN NUMBER ARE NOT FOUND IN THE TABLE, DO A CHECK AND REPAIR ON THE NECESSARY CIRCUITS (WDM 27-58-31).
28V AC POWER OR 28V DC POWER	212	THIS INDICATED THAT THE 28V AC OR 28V DC POWER INTO THE FSEU WAS LOST FOR MORE THAN 5 SECONDS. MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED: FSEU-1 CONT CB 11G13,C1539 AND SENSOR CB 11G14,C1037 FSEU-2 CONT CB 11C15,C1541 AND SENSOR CB 11C16,C1524 FSEU-3 CONT CB 11G22,C1540 AND SENSOR CB 11G23,C1038 NOTE: THE -40 FSEUs CAN NOT DETECT LOSS OF 28V DC POWER. MAKE SURE NO PRESENT FAULTS EXIST IN THE "EXISTING FAULTS?" TEST IN THE FSEU. IF THE PROBLEM CONTINUES, GO TO BLOCK 23, SHEET 9.

TABLE 101 CONTINUED ON SHEET 4

FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 3)

MESSAGE	MESSAGE NUMBERS	CORRECTIVE ACTION
FLAP ARM CHAN #	213	REPLACE THE FLAP ARM SWITCH, S10254, FOR THE CHANNEL NUMBER THAT WAS SHOWN ON THE DISPLAY. IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE FLAP ARM SWITCH TO THE FSEU. REPAIR THE PROBLEMS THAT YOU FIND. • FSEU-1 (WDM 27-51-21) • FSEU-2 (WDM 27-51-61) • FSEU-3 (WDM 27-51-11).
SLAT ARM CHAN #	213	REPLACE THE SLAT ARM SWITCH, S10255, FOR THE CHANNEL NUMBER THAT WAS SHOWN ON THE DISPLAY. IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE SLAT ARM SWITCH TO THE FSEU. REPAIR THE PROBLEMS THAT YOU FIND. • FSEU-1 (WDM 27-51-21) • FSEU-2 (WDM 27-51-61) • FSEU-3 (WDM 27-51-11).
NO HYD PRESSURE	214,216,302, 307	GO TO FIG. 115.
NO HYD DEPRESS	215	SYSTEM FAILED TO DEPRESSURIZE AFTER THE SYSTEM SHUTDOWN OR AFTER THE ALTERNATE SYSTEM WAS ARMED FOR 25 SECONDS. GO TO FIG. 115.
FLA FAIL	217, 304	GO TO FIG. 107.
LT FLAP XMT RT FLAP XMT LT SLAT XMT RT SLAT XMT LEVER XMT FLAP PDU XMT SLAT PDU XMT	220-226,312, 313,322,323, 333,334,342, 343,346	DO THE ADJUSTMENT OF THE POSITION TRANSMITTER FOR THE MESSAGE THAT WAS GIVEN. IF THE PROBLEM CONTINUES, EXAMINE AND REPAIR THE STRAIN RELIEF BACKSHELL ON THE POSITION TRANSMITTER CONNECTOR FOR DAMAGE OR SHORTING TO THE SHELL. IF THERE IS NO DAMAGE OR SHORT, EXAMINE AND REPAIR THE CIRCUIT FOR THE POSITION TRANSMITTER: • R SLAT XMTR, TS5047, AND FSEU-1 (WDM 27-51-41) AND FSEU-2 (WDM 27-51-61) • R FLAP XMTR, TS5051, AND FSEU-1 (WDM 27-51-41) AND FSEU-2 (WDM 27-51-61) • L FLAP XMTR, TS5049, AND FSEU-1 (WDM 27-51-41) AND FSEU-2 (WDM 27-51-61) • L SLAT XMTR, TS5083, AND FSEU-1 (WDM 27-51-41) AND FSEU-2 (WDM 27-51-61) • FLAP LEVER XMTR, TS5046, AND FSEU-1 (WDM 27-51-41) • SLAT PDU XMTR, TS5048, AND FSEU-3 (WDM 27-81-11), OR FLAP PDU XMTR, TS5050, AND FSEU-3 (WDM 27-51-11).
LEVER DISAGREE	303	MAKE SURE THE FLAP CONTROL LEVER IS CORRECTLY SEATED IN THE THE SAME DETENT AS THE POSITION OF THE TE FLAPS AND LE SLATS. GO TO BLOCK 3, SHEET 2. IF THE "LEVER XMTR" MESSAGE SHOWS, ADJUST THE POSITION TRANS-MITTER FOR THE FLAP CONTROL LEVER (AMM 27-58-01/501). IF THE "LEVER XMTR" MESSAGE DOES NOT SHOW, THE FLAP CONTROL LEVER WAS NOT CORRECTLY SEATED A DETENT FOR MORE THAN 25 SECONDS.
FLAP DISAGREE	305,328	IF THE FAULT OCCURRED DURING NORMAL HYDRAULIC OPERATION, GO TO FIG. 105, BLOCK 2. IF THE FAULT OCCURRED DURING ALTERNATE ELECTRICAL OPERATION, MAKE SURE NO OVERLOAD INDICATORS ON THE FLAP TRANSMISSIONS CAME ON. IF AN INDICATOR DID COME ON, GO TO FIG. 105, BLOCK 18. IF NO INDICATORS CAME ON, GO TO FIG. 112, BLOCK 4.
SLAT DISAGREE	310,331	IF THE FAULT OCCURRED DURING NORMAL HYDRAULIC OPERATION, GO TO FIM 27-81-00/101, FIG. 104, BLOCK 2. IF THE FAULT OCCURRED DURING ALTERNATE ELECTRICAL OPERATION, MAKE SURE NO OVERLOAD INDICATORS ON THE PDU TORQUE LIMITERS CAME ON. IF AN INDICATOR DID COME ON, GO TO FIM 27-81-00/101, FIG. 104, BLOCK 3. IF NO INDICATORS CAME ON, GO TO FIG. 107, BLOCK 4.
AUTOSLAT FAIL	309	GO TO LE SLAT (FIM 27-81-00/101, FIG. 109).

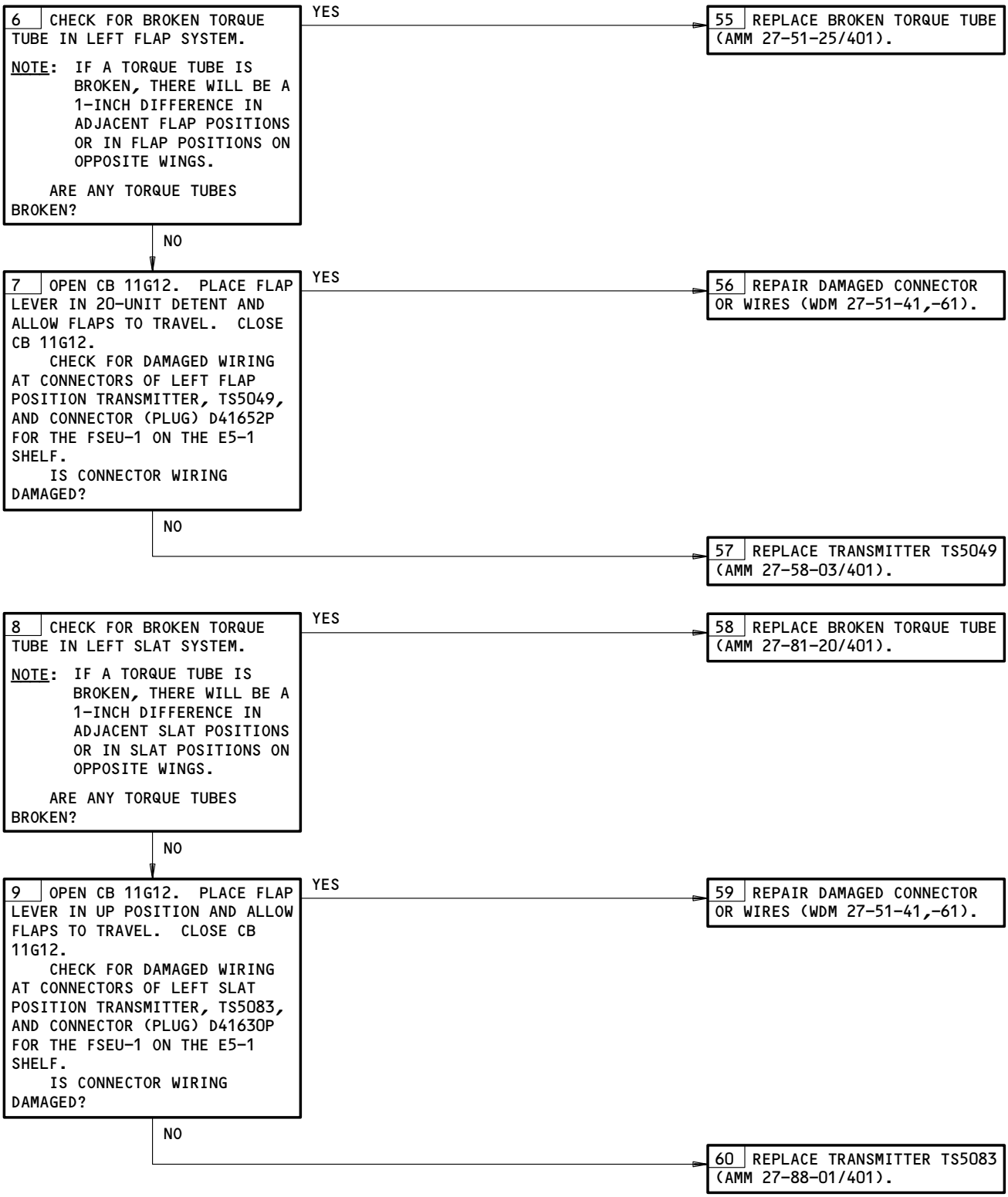
TABLE 101 CONTINUED ON SHEET 5

FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 4)

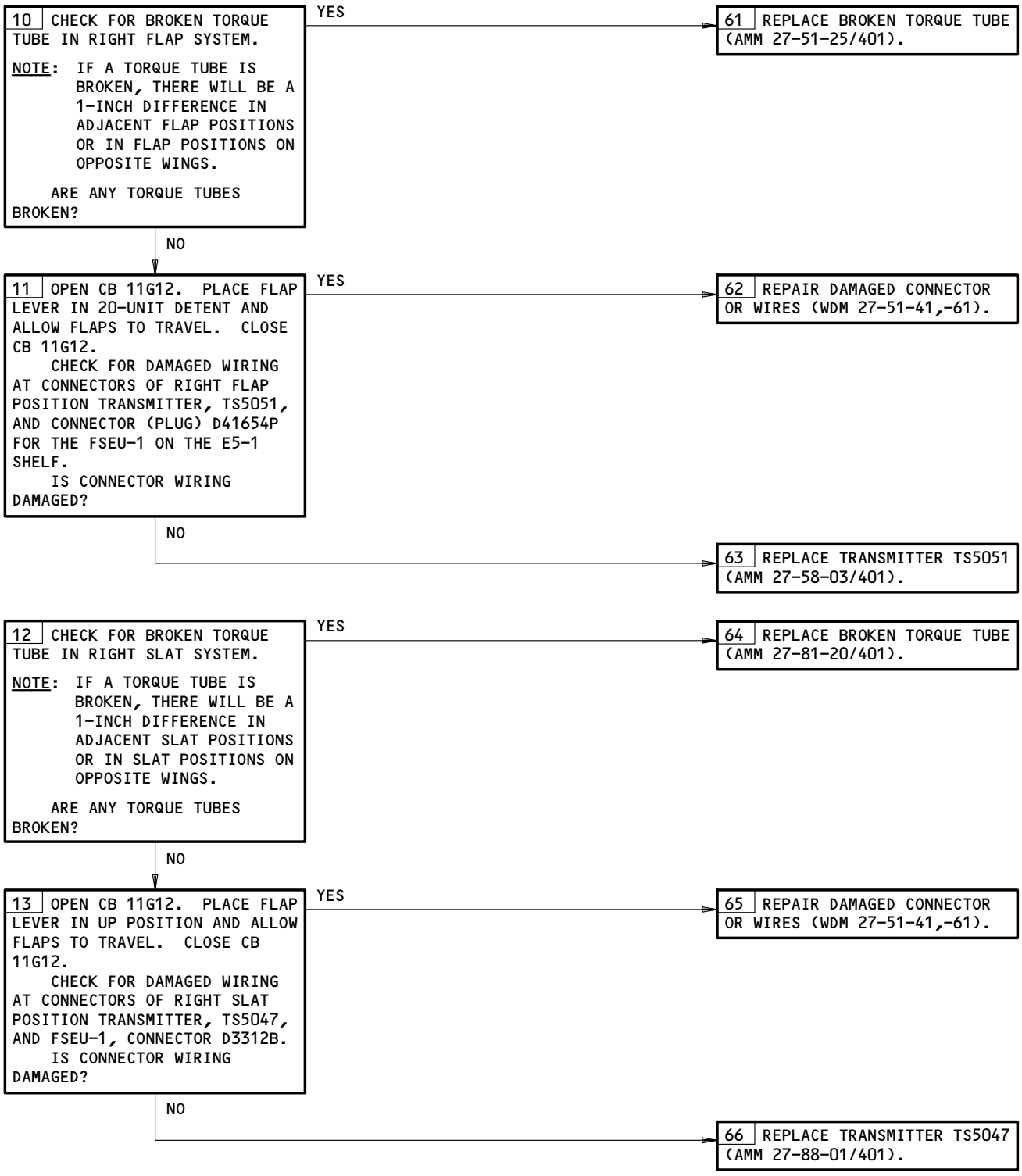
AUTOSLAT CIRCUIT	201	THIS SHOWS THERE WAS A PROBLEM IN THE AUTOSLAT CIRCUIT FROM FSEU-1 OR FSEU-2 TO THE SOLENOID IN THE CONTROL VALVE FOR THE LE SLAT PDU. REMOVE CONNECTOR D3050 FROM THE AUTOSLAT VALVE SOLENOID, M10304, AND MAKE SURE THERE IS CONTINUITY FROM PIN 1 TO PIN 2 (IF THE FAULT OCCURRED ON FSEU-1) OR PINS 3 AND 4 (IF THE FAULT OCCURED ON FSEU-2) (WDM 27-81-21). IF CONTINUITY DOES NOT EXIST, REPLACE THE AUTOSLAT SOLENOID VALVE, M10304 (WDM 27-81-21). IF THE CONTINUITY DOES EXIST, EXAMINE THE CIRCUIT FROM THE FSEU TO THE SOLENOID VALVE AND FROM THE SOLENOID VALVE TO GROUND (WDM 27-81-21).
LT FLAP DRIVE	314,335	GO TO BLOCK 6, SHEET 6.
RT FLAP DRIVE	315,347	GO TO BLOCK 10, SHEET 7.
SLAT LOSS	317,337	DO THIS PROCEDURE: EICAS MESSAGE "LE SLAT ASYM" DISPLAYED (FIM 27-81-00/101, FIG. 105, BLOCK 3).
LT SLAT DRIVE	324,344	GO TO BLOCK 8, SHEET 6.
RT SLAT DRIVE	325,345	GO TO BLOCK 12, SHEET 7.
FSEU 3 INOP	326,329	REPLACE THE FSEU-3 (AMM 27-51-01/201).
FLAP ARM DISAGREE OR SLAT ARM DISAGREE	327,330	GO TO BLOCK 26, SHEET 10.
MULT ALT COMMAND	211	THIS MESSAGE WILL SHOW IF FSEU-2 OR FSEU-3 RECEIVES MORE THAN ONE GROUND COMMAND FROM THE POSITION SELECTOR SWITCH FOR THE FLAP/SLAT ALTERNATE DRIVE. PUSH THE ARMING SWITCHES FOR THE FLAP AND SLAT ALTERNATE DRIVES TO ARM THE FLAP AND SLAT ALTERNATE DRIVES. TURN THE POSITION SELECTOR SELECTOR SWITCH, ON THE P3 PANEL, TO THE "NORM" DETENT, THEN TO THE "UP" THRU "30" DETENTS AND STOP FOR 5 SECONDS AT THE DETENTS. IF THE "FLAP/ SLAT ELEC" MESSAGE DOES NOT SHOW ON THE EICAS DISPLAY, DO A TEST ON THE NORMAL HYDRAULIC OPERATION (AMM 27-51-00/501) TO MAKE SURE THE FAULT DOES NOT IF THE "FLAP/SLAT ELEC" MESSAGE DOES SHOW ON THE EICAS DISPLAY, EXAMINE THE CIRCUIT FROM THE POSITION SELECTOR SWITCH, S10256, TO FSEU-2, M10332, (WDM 27-51-61) OR FSEU-3, M1-333 (WDM 27-51-11).

TABLE 101

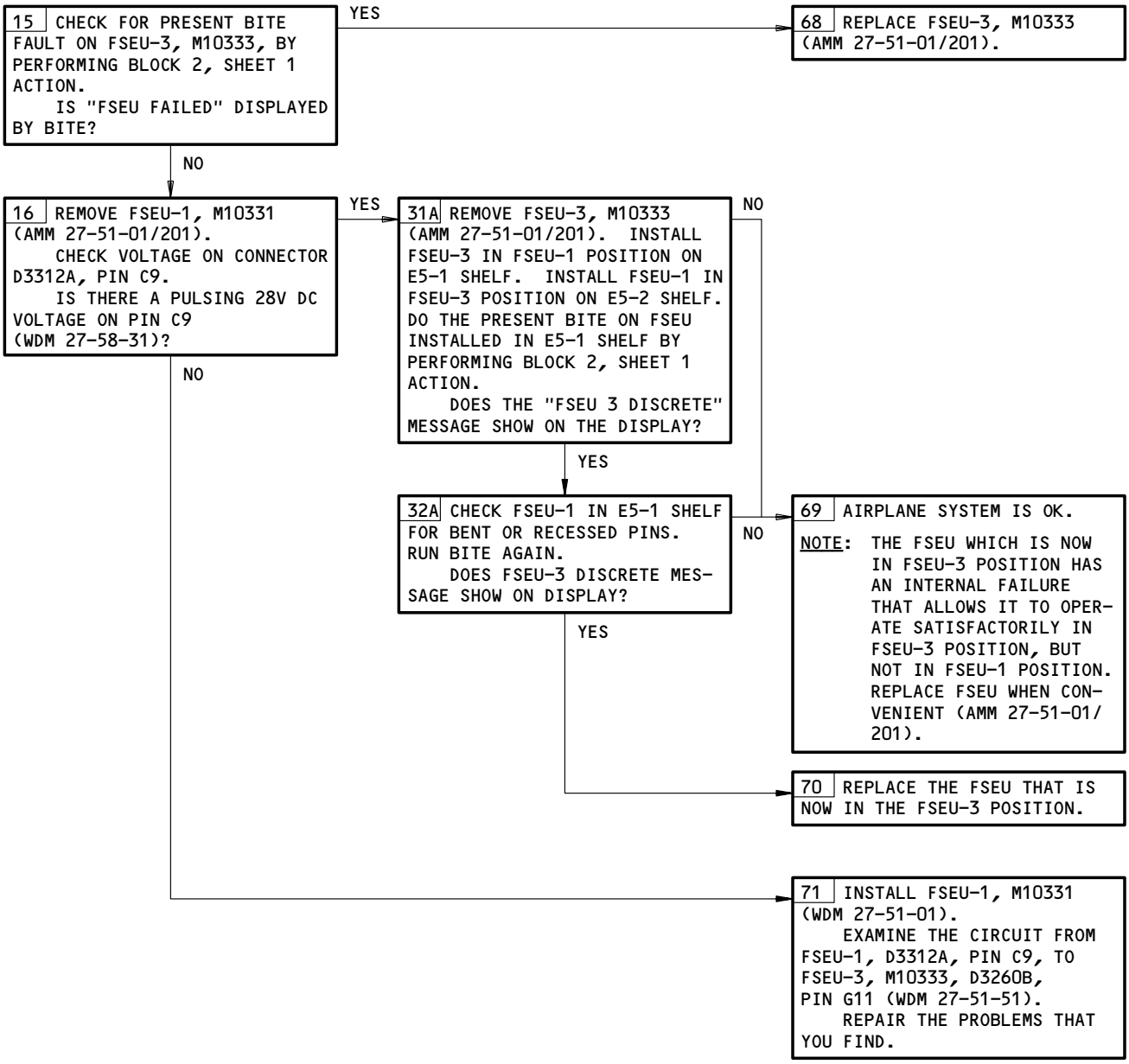
FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 5)



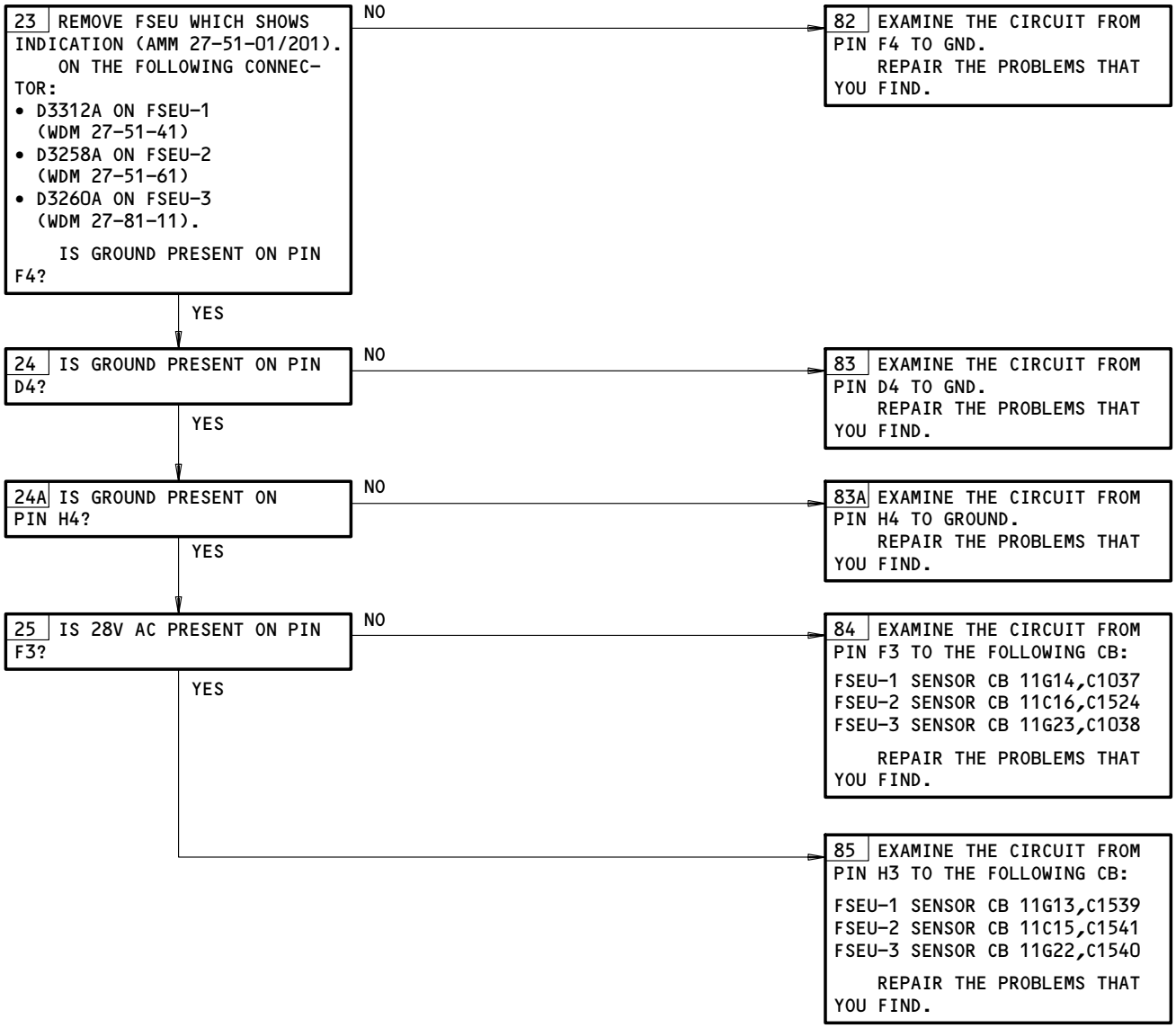
FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 6)



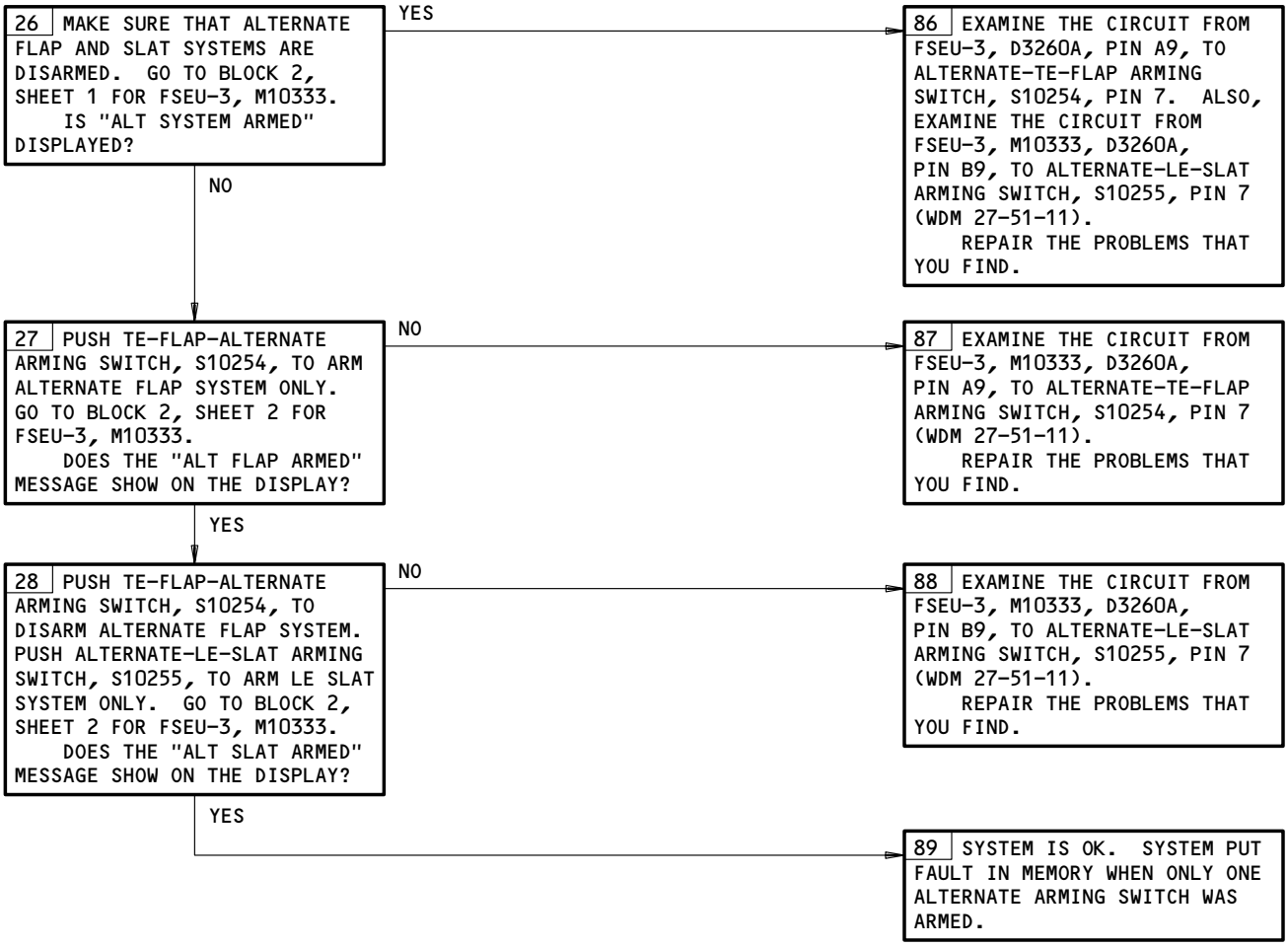
FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 7)



FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 8)



FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 9)



Flap/Slat Electronic Unit BITE Procedure
Figure 104 (Sheet 10)

TABLE 102

CONNECTOR; PIN # FSEU, CIRCUIT BREAKER	MAINTENANCE ACTION
B;C5 FSEU-1, C1022 (11J18)	DO A CHECK AND REPAIR CIRCUIT BETWEEN C1022 AND FSEU-1, D3312B, PIN C5 (WDM 27-51-51). IF NO DAMAGE WAS FOUND, REPLACE FLAP LOAD RELIEF RELAY, K10245 (WDM 27-51-51).
B;E6 FSEU-1, C4212 (11H23)	DO A CHECK AND REPAIR CIRCUIT BETWEEN C4212 AND FSEU-1, D3312B, PIN E6 (WDM 27-51-21). IF NO DAMAGE WAS FOUND, REPLACE FLAP/SLAT ALT DRIVE ARM RELAY, K10095 (WDM 27-51-21).
B;C8 FSEU-1, C1017 (11H11)	DO A CHECK AND REPAIR CIRCUIT BETWEEN C1017 AND FSEU-1, D3312B, PIN C8 (WDM 27-41-11). IF NO DAMAGE WAS FOUND, REPLACE TRIM LIMIT SELECT LEFT RELAY, K574 (WDM 27-41-11).
B;D8 FSEU-2, C1254 (11P9)	DO A CHECK AND REPAIR CIRCUIT BETWEEN C1254 AND FSEU-2, D3258B PIN D8 (WDM 33-24-11). IF NO DAMAGE WAS FOUND, REPLACE FASTEN SEAT BELT RELAY, K10028 (WDM 33-24-11).
B;H8 FSEU-2, C4107 (11L7)	DO A CHECK AND REPAIR CIRCUIT BETWEEN C4107 AND FSEU-2, D3258B PIN H8 (WDM 76-11-21). IF NO DAMAGE WAS FOUND, REPLACE LEFT FLAP SIGNAL RELAY, K10349 (WDM 76-11-21).
B;C8 FSEU-3, C1018 (11H20)	DO A CHECK AND REPAIR CIRCUIT BETWEEN C1018 AND FSEU-3 D3260B, PIN C8 (WDM 27-41-21). IF NO DAMAGE WAS FOUND, REPLACE TRIM LIMIT SELECT RIGHT RELAY, K575 (WDM 27-41-21).
B;H8 FSEU-3, C4108 (11L33)	DO A CHECK AND REPAIR CIRCUIT BETWEEN C4108 AND FSEU-3, D3260B PIN H8 (WDM 76-11-21). IF NO DAMAGE WAS FOUND, REPLACE RIGHT FLAP SIGNAL RELAY, K10348 (WDM 76-11-21).
B;A10 FSEU-3, C660 (11P14)	DO A CHECK AND REPAIR CIRCUIT BETWEEN C660 AND FSEU-3, D3260B PIN A10. IF NO DAMAGE WAS FOUND, REPLACE SMOKE CLEAR BYPASS RELAY, K10497 (WDM 21-25-11).

FLAP/SLAT ELECTRONIC UNIT BITE Procedure
Figure 104 (Sheet 11)

EICAS MESSAGE "TE FLAPS DISAGREE" DISPLAYED WITH THE FLAP CONTROL LEVER IN ANY DETENT DURING NORMAL OPERATION

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C14,11C15,11C16,11G13,11C18,11G12,11G14,11G21, 11G22,11G23,11H12,11H13,11H23,11H24,11J18

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
LEFT HYDRAULIC SYSTEM PRESSURIZED (AMM 29-11-00/201)

1 INSTALL MAIN LANDING GEAR DOOR LOCKS (AMM 32-00-15/201). CHECK THAT FLAP LEVER IS PROPERLY SEATED IN DETENT AND ALTN FLAPS SWITCH IS IN NORM.

NOTE: WITH FLAP LEVER OUT OF ANY DETENT OR NOT PROPERLY SEATED IN A DETENT FOR MORE THAN 25 SECONDS, "TE FLAPS DISAGREE" MESSAGE WILL BE DISPLAYED ON EICAS AND FLAP/SLAT HYDRAULIC SHUTDOWN WILL OCCUR.

DO THIS PROCEDURE: FSEU BITE PROCEDURE (FIM 27-51-00/101, FIG. 104).

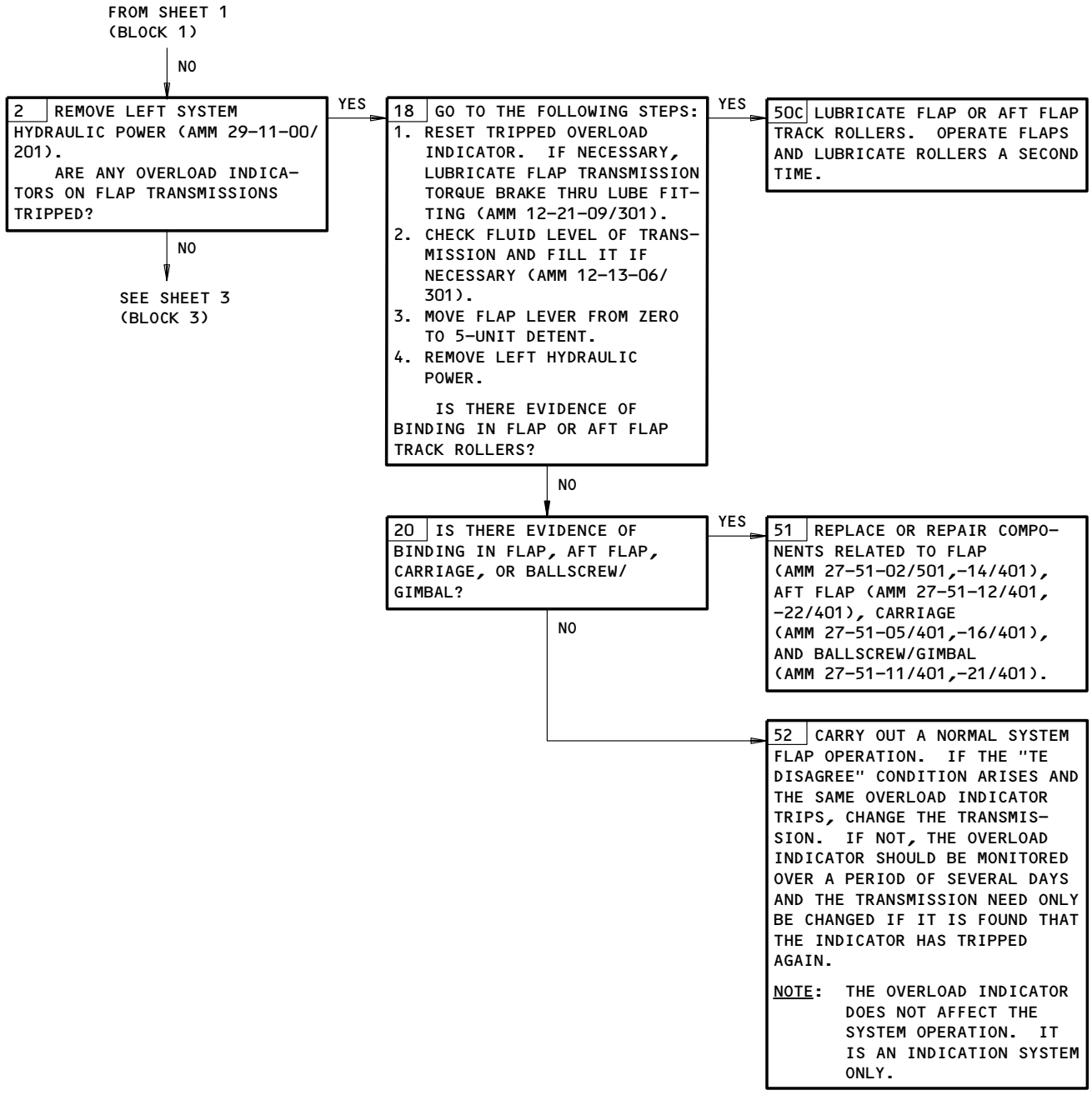
DOES BITE INDICATE FAILED LRU?

NOTE: IGNORE FLAP AND SLAT POSITION TRANSMITTER FAULTS IF THE DISAGREE MESSAGE IS STILL PRESENT.

YES → 5OA DO THE INDICATED CORRECTIVE ACTION (FIM 27-51-00/101, FIG. 104).

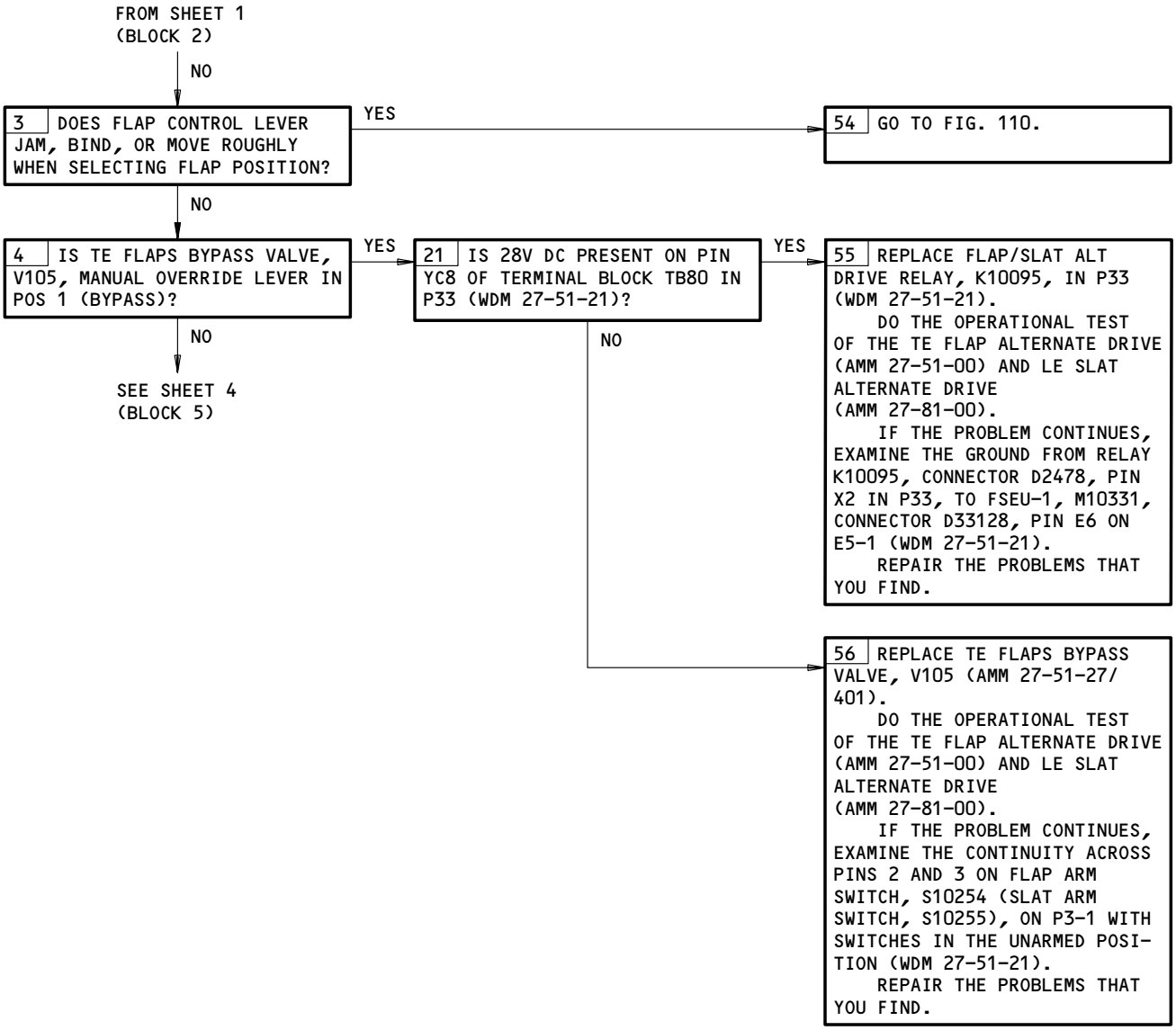
NO → SEE SHEET 2 (BLOCK 2)

EICAS Message TE FLAPS DISAGREE Displayed with the Flap Control Lever in any Detent During Normal Operation
Figure 105 (Sheet 1)

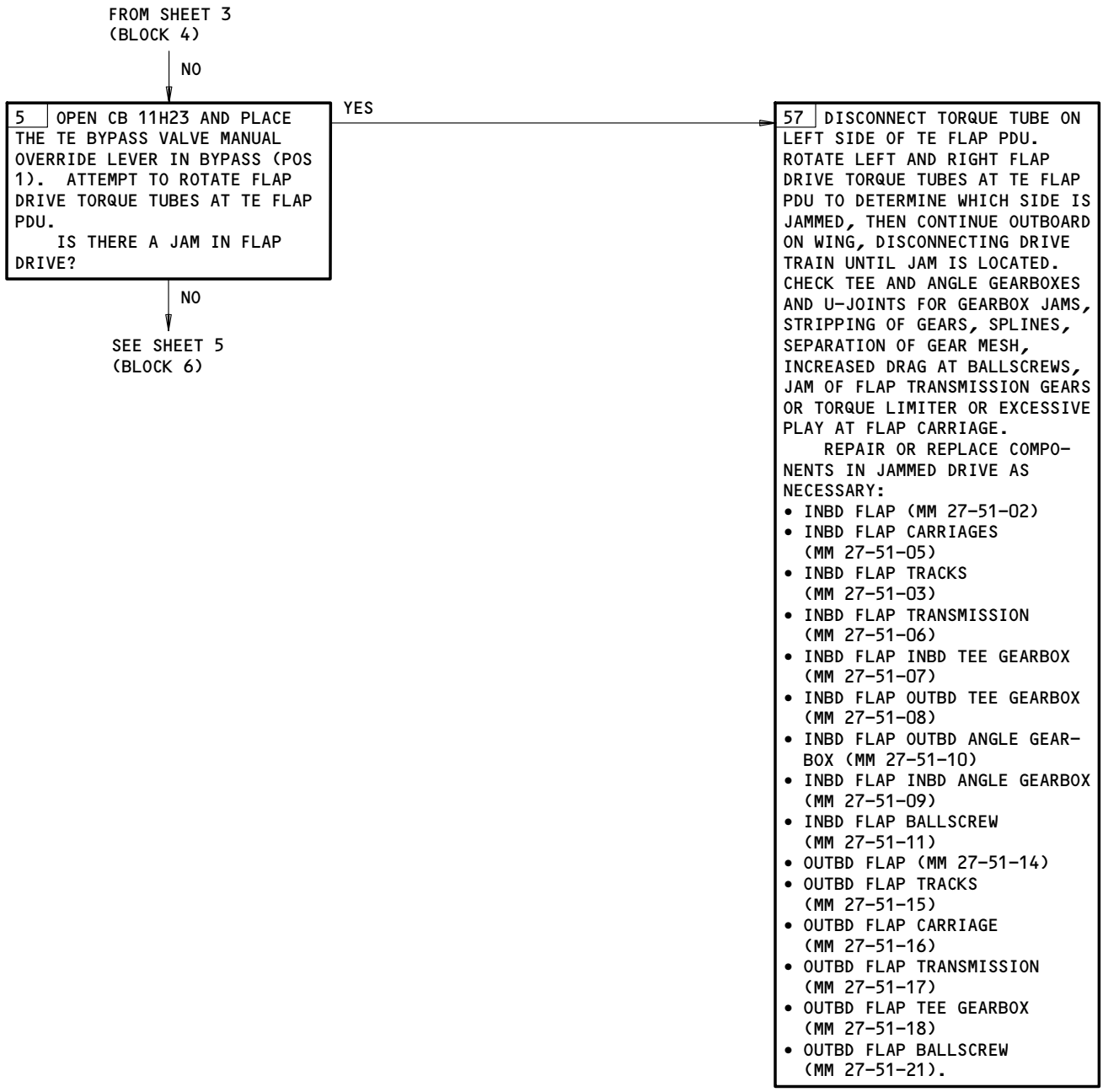


EICAS Message TE FLAPS DISAGREE Displayed with the Flap Control Lever in any Detent During Normal Operation
Figure 105 (Sheet 2)

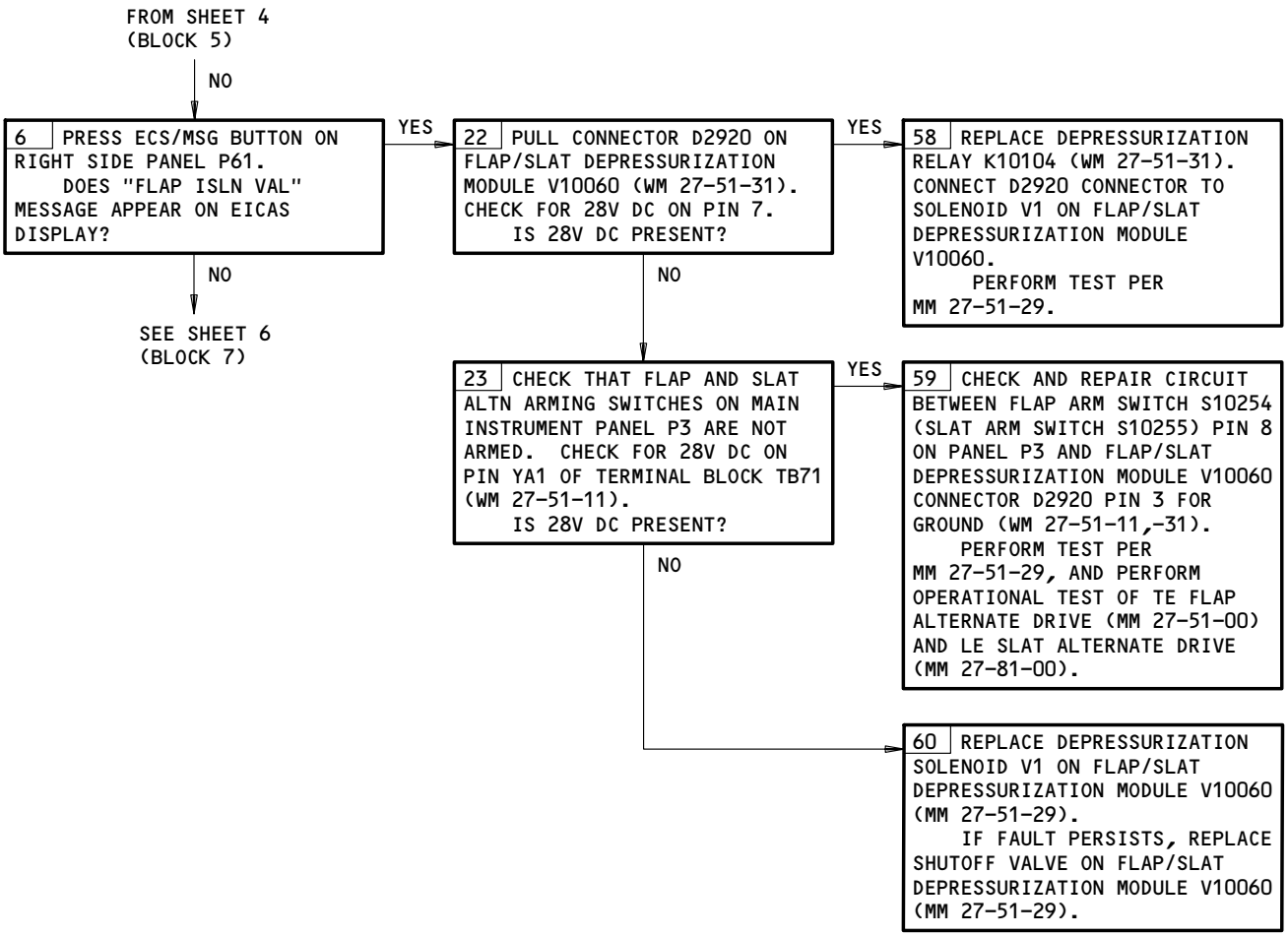
E34270



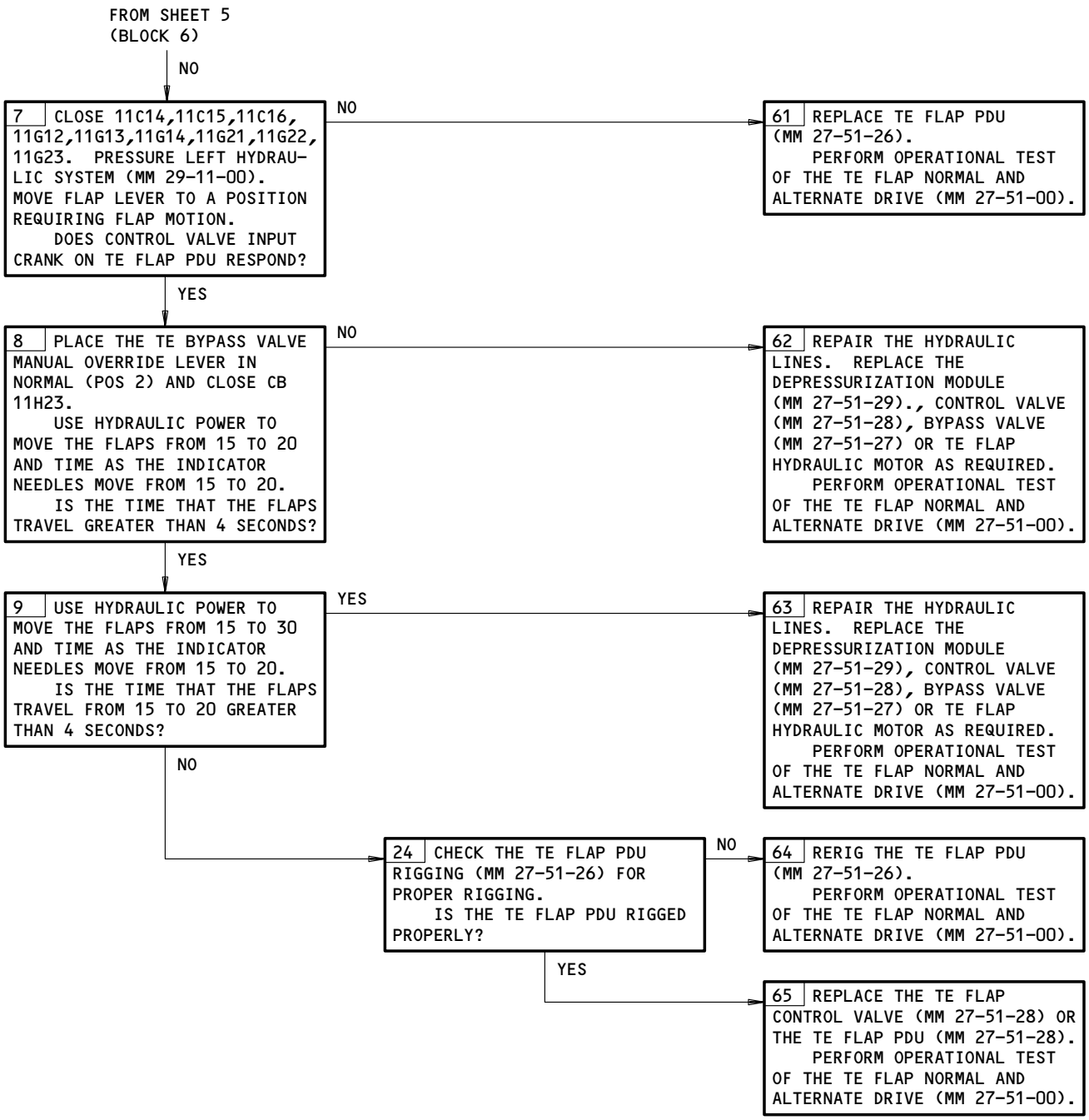
EICAS Message TE FLAPS DISAGREE Displayed with the Flap Control Lever in any Detent During Normal Operation
Figure 105 (Sheet 3)



EICAS Message TE FLAPS DISAGREE Displayed with the Flap Control Lever in any Detent During Normal Operation
Figure 105 (Sheet 4)



EICAS Message TE FLAPS DISAGREE Displayed with the Flap Control Lever in any Detent During Normal Operation
Figure 105 (Sheet 5)



EICAS Message TE FLAPS DISAGREE Displayed with the Flap Control Lever in any Detent During Normal Operation
Figure 105 (Sheet 6)

PREREQUISITES

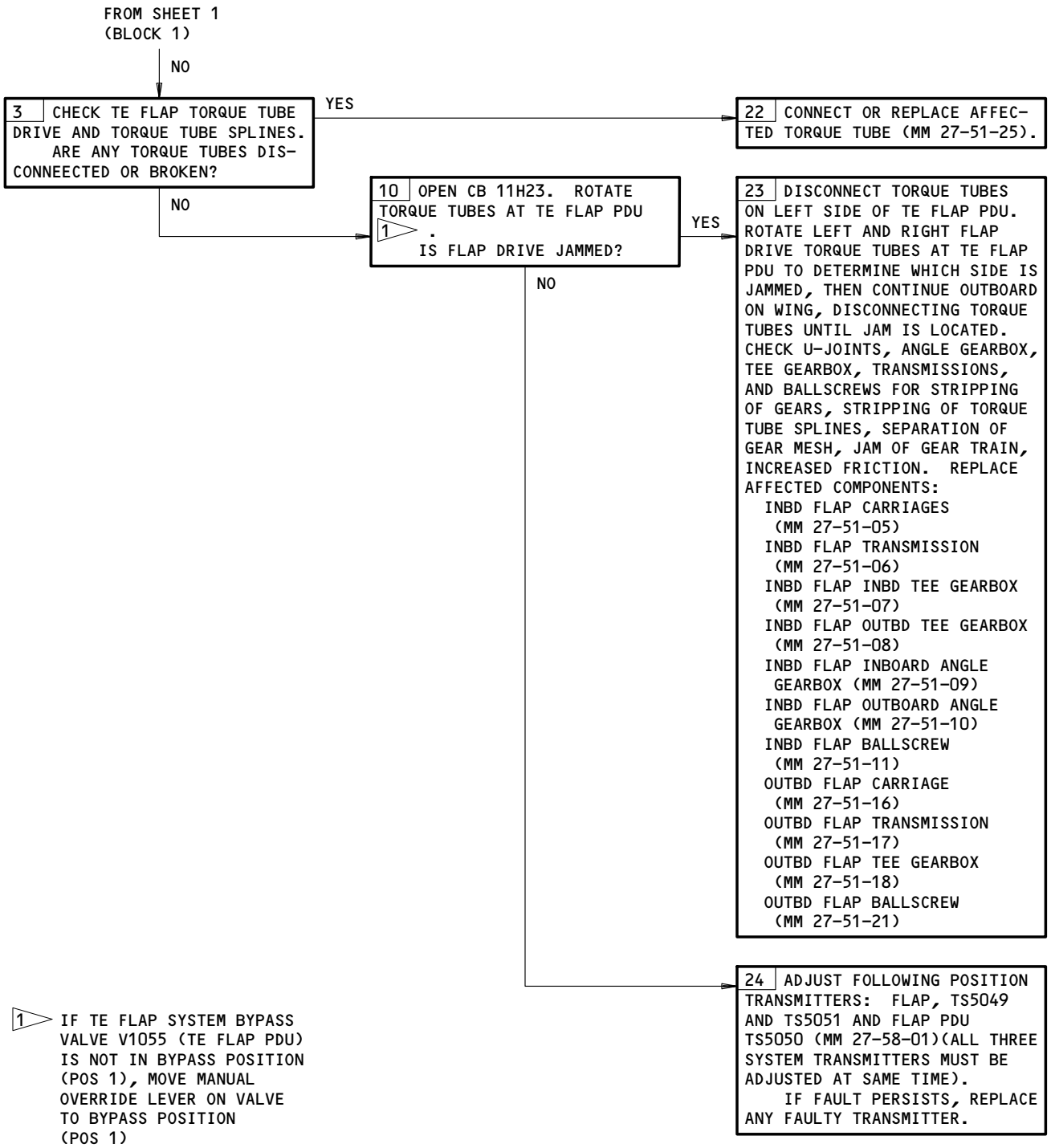
ELECTRICAL POWER (MM 24-22-00)
MAIN LANDING GEAR DOOR LOCKS INSTALLED (MM 32-00-15)

CB'S: 11C14,11C15,11C16,11C18,11G12,11G13,11G21, 11G22,11G23,11J18,11H12,11H13,11H23.11H24

FLAP CONTROL LEVER IS IN ONE UNIT OR MORE POSITION, "TE FLAPS ASYM" MESSAGE DISPLAYED ON EICAS, NO FLAP MOVEMENT

WARNING: TO PREVENT DAMAGE, CLEAR AREA AROUND FLIGHT CONTROL SURFACES BEFORE PROVIDING HYDRAULIC POWER. KEEP AREA CLEAR DURING FAULT ISOLATION.

Flap Control Lever is in One Unit or More Position,
TE FLAP ASYM Displayed on EICAS, No Flap Movement
Figure 106 (Sheet 1)



Flap Control Lever is in One Unit or More Position
TE FLAP ASYM Displayed on EICAS, No Flap Movement
Figure 106 (Sheet 2)

EICAS MESSAGE:
"FLAP LD RELIEF" DISPLAYED. FLAPS 30 SELECTED. FLAPS FAILED TO RETRACT TO POS 25 WITH A/S MORE THAN 170K.

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C14, 11C15, 11C16, 11C18, 11G12, 11G13, 11G14, 11G21, 11G22, 11G23, 11H12, 11H13, 11H24, 11J18

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER (AMM 29-11-00/201)

WARNING: TO PREVENT INJURY OR DAMAGE, CLEAR PERSONNEL AND EQUIPMENT FROM CONTROL SURFACES BEFORE PROVIDING HYDRAULIC POWER. KEEP AREA CLEAR WHEN OPERATING CONTROL SURFACES.

1 CHECK THAT FLAP CONTROL LEVER IS IN 30-UNIT DETENT, THAT FLAPS ARE FULLY EXTENDED (FLAPS 30), AND THAT MAIN LANDING GEAR DOOR LOCKS ARE INSTALLED (AMM 32-00-15/201).
PLACE FLAP CONTROL LEVER FROM THE 30-UNIT POSITION TO THE 20-UNIT POSITION.
DO THE FLAPS RETRACT?

NO → 22 GO TO FIG. 105.

YES

2 PLACE FLAP LEVER TO 30-UNIT POSITION. OPERATE FLA TEST SWITCH, S10329 (E/E COMPT).
DO FLAPS RETRACT TO 25-UNIT DETENT?

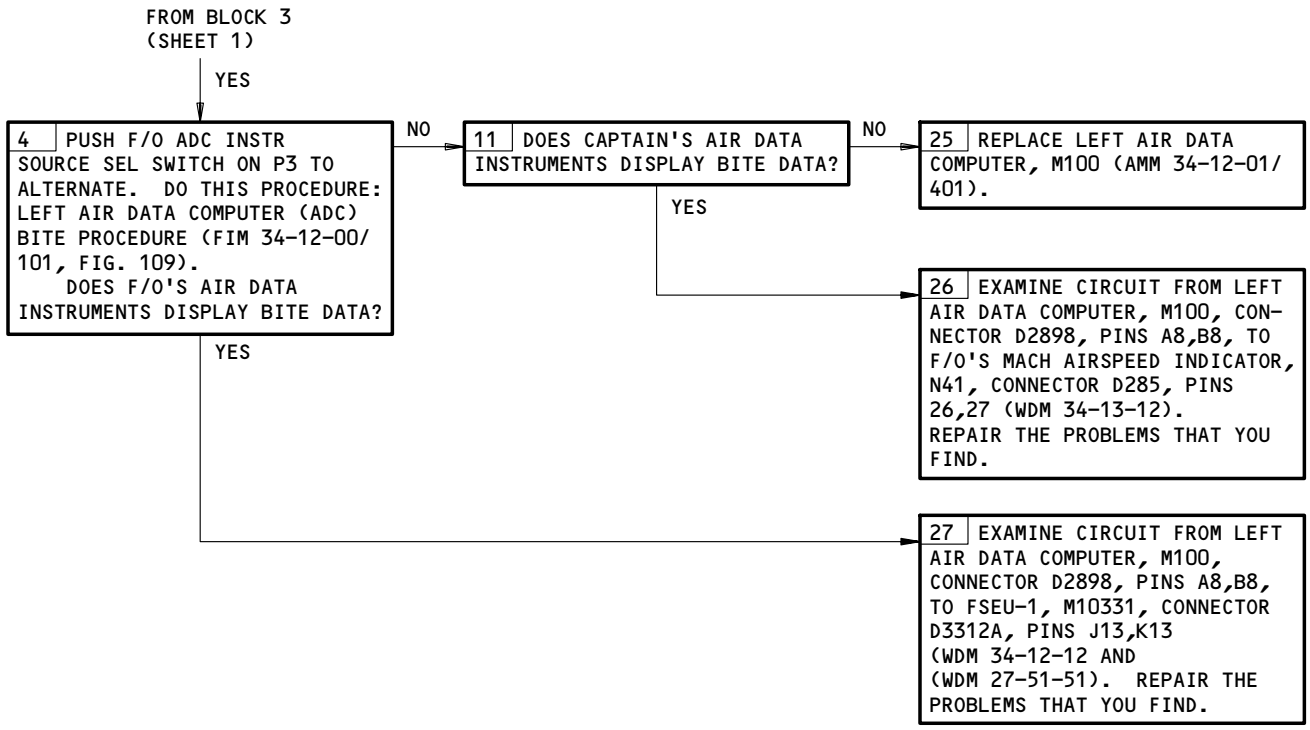
NO → 10 GO TO LEFT MAIN GEAR WHEEL WELL. PULL FLAP LOAD RELIEF SOLENOID, CONNECTOR D3024.
CHECK FOR 28V DC ON PIN 2 (PIN 1, GND) AND 28V DC ON PIN 4 (PIN 3, GND) (WDM 27-51-51).
IS THERE POWER ON PIN 2 AND PIN 4?

NO → 23 REPLACE FLAP LOAD RELIEF RELAY, K10245 (WDM 27-51-51).
DO THE FLAP LOAD RELIEF SYSTEM TEST (AMM 27-51-00/201).
IF THE PROBLEM CONTINUES EXAMINE THE CIRCUIT FROM FLAP LOAD RELIEF SOLENOID, M10303, CONNECTOR D3024, PIN 3 AND PIN 5, TO FLAP LOAD RELIEF RELAY, K10245, CONNECTOR D3022, PIN A1 ON P36 (WDM 27-51-51). REPAIR THE PROBLEMS THAT YOU FIND.
EXAMINE THE CIRCUIT FROM FLAP LOAD RELIEF RELAY, CONNECTOR D3022, PIN A2, TO CIRCUIT BREAKER 11J18 (C1022). REPAIR THE PROBLEMS THAT YOU FIND.
EXAMINE THE CIRCUIT FROM CONNECTOR D3022, PIN X2, TO FSEU-1, M10331, CONNECTOR D3312B, PIN C5. REPAIR THE PROBLEMS THAT YOU FIND.

YES → 24 REPLACE FLAP LOAD RELIEF SOLENOID, M10303 (AMM 27-51-28/201).
IF THE PROBLEM CONTINUES, REPLACE TE PDU CONTROL VALVE MODULE (AMM 27-51-28/201).

YES → SEE BLOCK 4 (SHEET 2)

EICAS Message FLAP LD RELIEF Displayed. Flaps 30 Selected.
Flaps Failed to Retract to Pos 25 with A/S More Than 170K.
Figure 107 (Sheet 1)



EICAS Message: FLAP LD RELIEF Displayed. Flaps 30 Selected.
Flaps Failed to Retract to Pos 25 with A/S More Than 170K.
Figure 107 (Sheet 2)

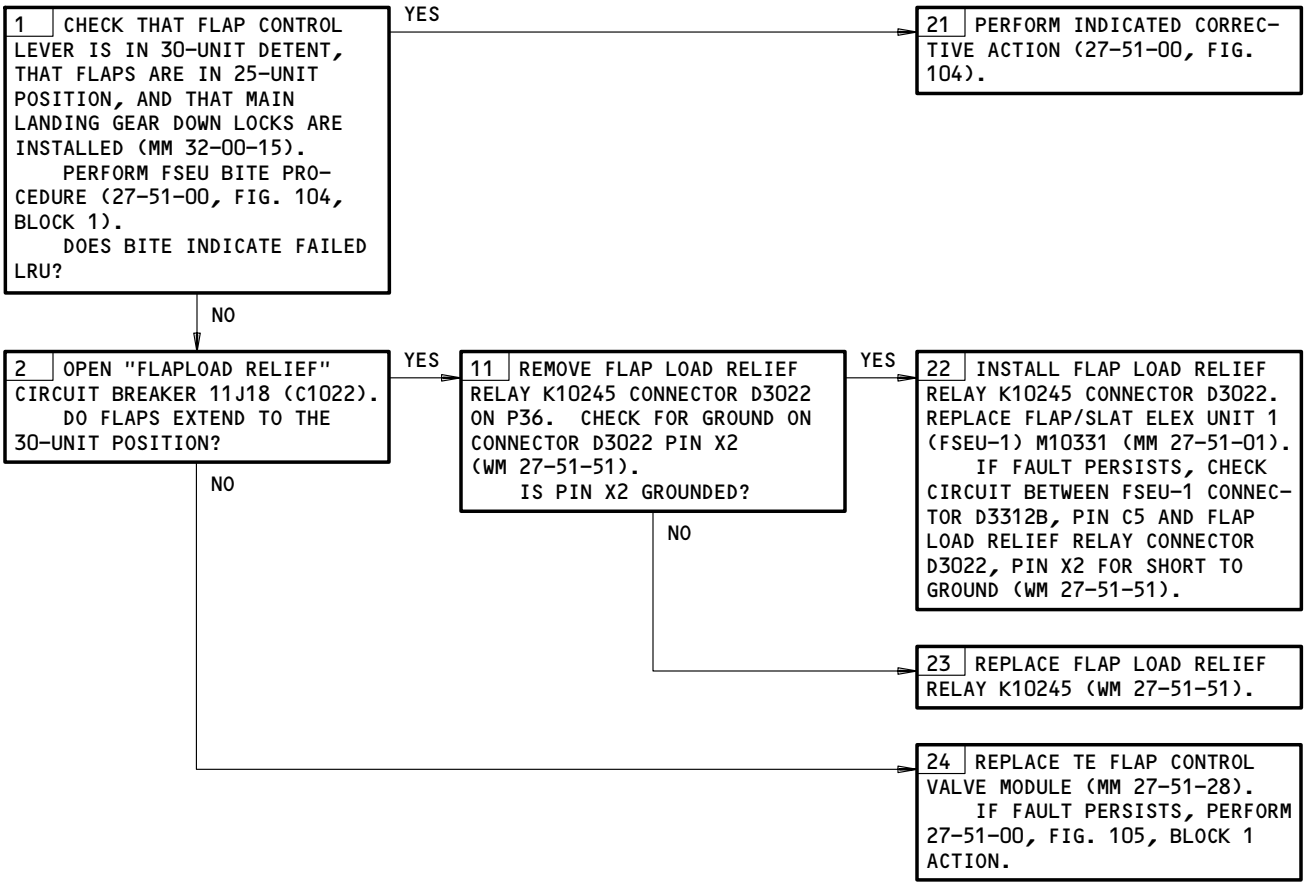
EICAS MESSAGE "TE FLAP DISAGREE" DISPLAYED. FLAPS 30 SELECTED. FLAPS FAILED TO EXTEND TO POS 30 WITH A/S LESS THAN 165K.

PREREQUISITES

ELECTRIC POWER (MM 24-22-00)
HYDRAULIC POWER (MM 29-11-00)

CB'S: 11C14,11C15,11C16,11C18,11G12,11G13,11G14, 11G21,11G22,11G23,11H12,11H13,11H24,11J18

WARNING: TO PREVENT INJURY OR DAMAGE, CLEAR PERSONNEL AND EQUIPMENT FROM CONTROL SURFACES BEFORE PROVIDING HYDRAULIC POWER. KEEP AREA CLEAR WHEN OPERATING CONTROL SURFACES.



EICAS Message TE FLAP DISAGREE Displayed. Flaps 30 Selected.
Flaps Failed to Extend to Pos 30 with A/S Less Than 165K.
Figure 108

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C14, 11C15, 11C16, 11C18, 11G12, 11G13, 11G14, 11G21, 11G22, 11G23, 11H12, 11H13, 11H24, 11J18

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER (AMM 29-11-00/201)

WARNING: KEEP PERSONNEL AND EQUIPMENT CLEAR OF ALL CONTROL SURFACES TO PREVENT INJURY AND DAMAGE. ALl TE FLAPS AND LE SLATS WILL BE POWERED IN PREPARATION FOR CHANGE OF POSITION. AILERON, SPOILER, RUDDER, AND ELEVATOR CONTROL SURFACES WILL ALSO BE POWERED. CHECK THAT ENGINE FAN DUCT COWLING WILL NOT BE IN PATH OF LE SLATS TO PREVENT DAMAGE.

FLAP POSITION INDICATOR NEEDLE(S) INOPERATIVE (STICK) DURING TE FLAPS OPERATION

1 DO THIS PROCEDURE: FLAP/SLAT ELECTRONIC UNIT (FSEU) BITE PROCEDURE (FIM 27-51-00/ 101, FIG. 104).
DOES BITE INDICATE FAILED LRU?

YES → 21 PERFORM INDICATED CORRECTIVE ACTION (FIM 27-51-00/101 FIG. 104).

NO ↓

2 DOES FAULT EXIST ON FLAP/SLAT NORMAL AND ALTERNATE CONTROL?

NO → 22 REPLACE FSEU-1 M10331 IF FAULT IS ONLY ON NORMAL CONTROL, OR REPLACE FSEU-2 M10332 IF FAULT IS ONLY ON ALTERNATE CONTROL (AMM 27-51-01/401).

YES ↓

3 MOVE FLAP CONTROL LEVER FROM UP TO 1-UNIT DETENT AND RETURN TO UP WHILE OBSERVING FLAP INDICATION NEEDLES RESPONSE.
DO NEEDLES JUMP TO 1/2 POSITION WHEN LEVER MOVES IN EITHER DIRECTION?

NO → 23 REPLACE LE/TE TRANSFER RELAY K10244 IN P36 (WDM 27-58-11).
PERFORM TEST OF POSITION INDICATION (AMM 27-58-00/501).

YES ↓

4 REMOVE FLAPS POS INDICATOR N15 FROM P3 AND DISCONNECT D2960 CONNECTOR FROM N15. CHECK CIRCUIT CONTINUITY BETWEEN PINS 4, 6, 9 AND 10 AT D2960 AND ALSO CONTINUITY BETWEEN PINS 3, 5, 7, AND 8 AT D2960 (WDM 27-58-11).
DOES CONTINUITY EXIST?

YES → 24 REPLACE FLAPS POSITION INDICATOR N15 ON P3 (AMM 27-58-02/401).
PERFORM TEST OF POSITION INDICATION (AMM 27-58-00/501).

NO → 25 REPAIR CIRCUIT BETWEEN FLAP POSITION INDICATOR CONNECTOR D2960, PINS 3, 6, 7, 8, 9 AND 10, ON P3, AND CIRCUIT BREAKERS 11H12 AND 11H13 (WDM 27-58-11).
PERFORM TEST OF POSITION INDICATION (AMM 27-58-00/501).

Flap Position Indicator Needle(s) Inoperative During TE Flaps Operation
Figure 109

FLAP LEVER JAMS, BINDS OR IS ROUGH WHEN SELECTING ANY FLAP POSITION

PREREQUISITES

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
MAIN LANDING GEAR DOOR LOCKS INSTALLED
(AMM 32-00-15/201)

1 FULLY EXTEND THE FLAP HANDLE.
MASK OFF THE SURROUNDING AREA TO PROTECT FROM OVERSPRAY.
GENEROUSLY APPLY MIL-L-23398, TYPE II OR BAC5811, TYPE 7 LUBRICANT TO THE SLIDING PART OF THE FLAP HANDLE. USE AN EXTENSION STRAW TO ALLOW SPRAY IN HARD TO REACH AREAS AND TO CONCENTRATE SPRAY IN LOCALIZED AREAS. 1
DOES FLAP LEVER STILL BIND WHEN MOVED?

NO → 21 NO ACTION REQUIRED

YES

2 ANY BREAKS, WEAR, JAM, DEFECTIVE PULLEYS, FOREIGN OBJECTS IN FLAP CONTROL CABLES?

YES → 22 REPAIR AS REQUIRED (AMM 27-00-01, AMM 20-10-03).
PERFORM OPERATIONAL TEST OF FLAP NORMAL DRIVE (AMM 27-51-00).

NO

3 CHECK FLAP CONTROL CABLE TENSION (AMM 27-51-00).
IS CABLE TENSION WITHIN LIMITS?

NO → 23 ADJUST CABLES AS NECESSARY (AMM 27-51-00).
PERFORM OPERATIONAL TEST OF FLAP NORMAL DRIVE (AMM 27-51-00).

YES

4 CHECK FLAP CONTROL LEVER INSTALLATION IN THE CONTROL STAND FOR FOREIGN OBJECTS, ATTACH POINTS TO STRUCTURE.
IS INSTALLATION CORRECT?

NO → 24 REPAIR OR REPLACE FLAP CONTROL LEVER AS NECESSARY (AMM 27-51-32).

YES

5 DISCONNECT FLAP CONTROL LEVER POSITION TRANSMITTER LINKAGE.
DOES FLAP LEVER STILL BIND WHEN MOVED?

NO → 25 REPAIR OR REPLACE FLAP CONTROL LEVER POSITION TRANSMITTER AS NECESSARY (AMM 27-51-33).

YES

6 GO TO LEFT MAIN GEAR WHEEL WELL. DISCONNECT CONTROL VALVE INPUT LINK ON PDU.
DOES CONTROL VALVE INPUT ARM OR LINK BIND OR STICK WHEN MOVED?

YES → 26 REPLACE TE PDU CONTROL VALVE MODULE (AMM 27-51-28).

NO → 27 REPLACE TE PDU (AMM 27-51-26).

1 ALLOW TO AIRDRY IF POSSIBLE. THE LUBRICANT WILL DRY WITHIN MINUTES, HOWEVER, THE COATING (RESIN SYSTEM) THAT HOLDS THE PIGMENTS WILL CURE IN 6 HOURS AT 77 +/-3 DEGREES F (25 +/-2 DEGREEES C). 24 HOURS GIVES THE BEST WEAR AND CORROSION PROTECTION.

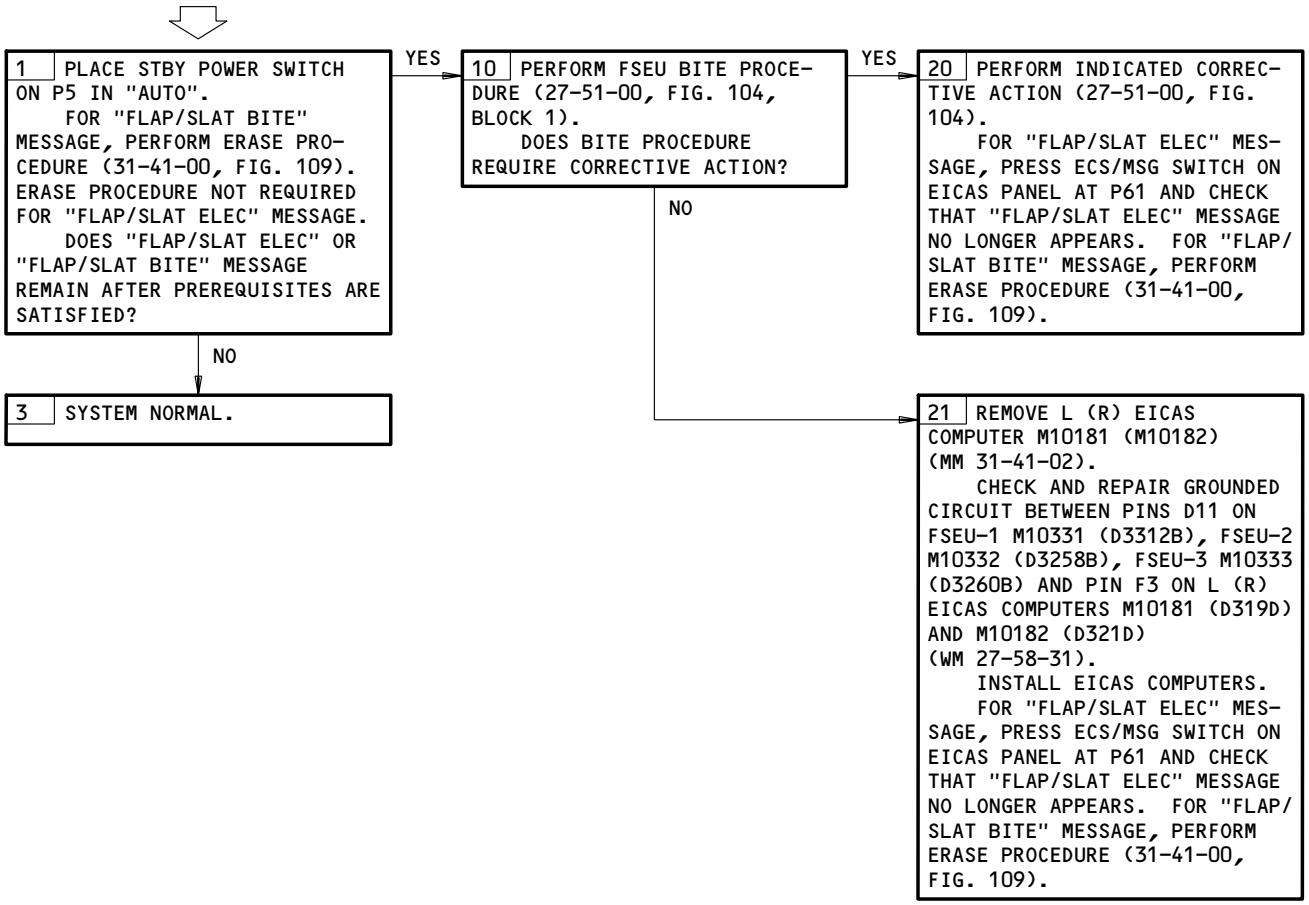
Flap Lever Jams, Binds or is Rough When Selecting Any Flap Position
Figure 110

EICAS MESSAGE "FLAP/SLAT ELEC" OR "FLAP/SLAT BITE" DISPLAYED

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00)
AIR DATA SYSTEM (MM 34-12-00)
EICAS (MM 31-41-00)

CB'S: 6D23,11C14,11C15,11C16,11C18,11G12,11G13,11G14, 11G21,11G23,11H12,11H13,11H23,11H24,11J18



EICAS Message FLAP/SLAT ELEC or FLAP/SLAT BITE Displayed
Figure 111

EICAS MESSAGE "TE FLAP DISAGREE" DISPLAYED WITH ALTN FLAPS ROTARY SWITCH IN A COMMANDED POSITION AND TE ARMING SWITCH IN "ALTN"

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00)
HYDRAULIC POWER (MM 29-11-00)
EICAS (MM 31-41-00)

CB'S: 6D20,6D23,11C14,11C15,11C16,,11C18,11G12,11G13, 11G14,11G21,11G22,11G23,11H12,11H13,11H23,11H24

1 CHECK THAT HYDRAULIC POWER IS OFF (MM 29-11-00). CHECK POSITION OF MANUAL OVERRIDE LEVER ON TE FLAP PDU BYPASS VALVE V105 (BYPASS=POS 1 OR NORMAL=POS 2) IN LEFT WHEEL WELL.
IS BYPASS VALVE IN NORMAL (POS 2)?

YES → 14 REMOVE CONNECTOR D1716 ON TE FLAP BYPASS VALVE V105 (WM 27-51-21).
IS THERE 28V DC AT PIN 3 AND GROUND AT PIN 1 OF D1716 WIRING PLUG?

YES → 21 REPLACE BYPASS VALVE V105 (MM 27-51-27).

NO → 22 CHECK AND REPAIR FLAP ARMING CIRCUIT BETWEEN CB 11H23 AND CONNECTOR D1716 PIN 3 (WM 27-51-21).
TEST TRAILING EDGE FLAP ALTERNATE DRIVE OPERATION (MM 27-51-00).

NO → 2 PRESS LE ALTN AND TE ALTN DRIVE ARMING SWITCHES TO DISARM ALTN DRIVE SYSTEMS. PROVIDE HYDRAULIC POWER (MM 29-11-00). ATTEMPT TO MOVE FLAPS BY COMMANDING NEW POSITION WITH THE FLAP LEVER.
DO THE FLAPS MOVE?

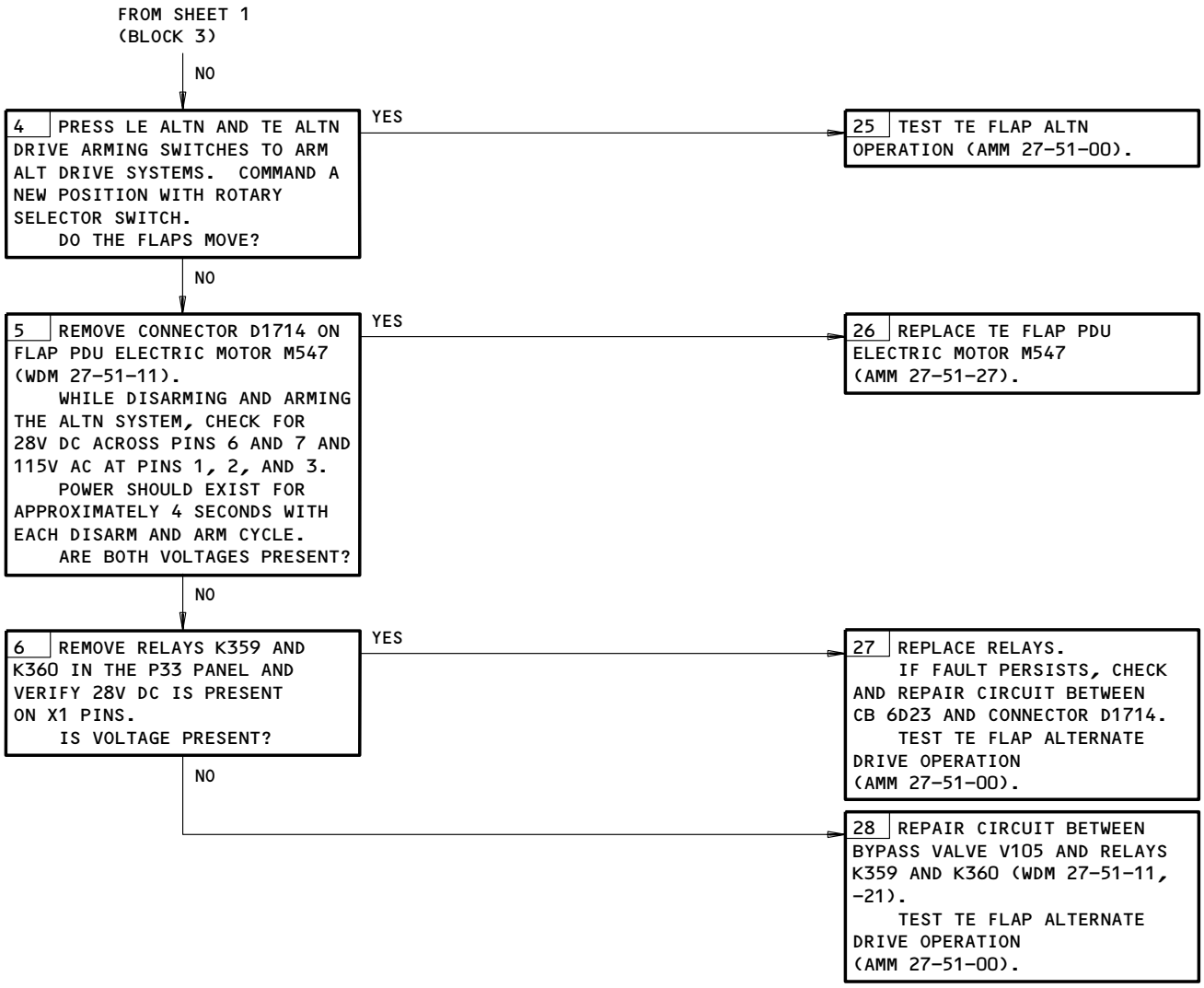
NO → 23 PERFORM 27-51-00, FIG. 105 BLOCK 2 ACTION.

YES → 3 REMOVE HYDRAULIC POWER (MM 29-11-00).
PERFORM FSEU BITE TEST PROCEDURE (27-51-00, FIG. 104 BLOCK 1).
DOES BITE TEST REQUIRE CORRECTIVE ACTION?

YES → 24 PERFORM INDICATED CORRECTIVE ACTION (27-51-00, FIG. 104).

NO → SEE SHEET 2 (BLOCK 4)

EICAS Message TE Flap DISAGREE Displayed with ALTN FLAPS Rotary Switch in a Commanded Position and TE Arming Switch in ALTN
Figure 112 (Sheet 1)



EICAS Message TE FLAP DISAGREE Displayed with ALTN FLAPS Rotary Switch in a Commanded Position and TE Arming Switch in ALTN
Figure 112 (Sheet 2)

Not Used
Figure 113

Not Used
Figure 114

PREREQUISITES

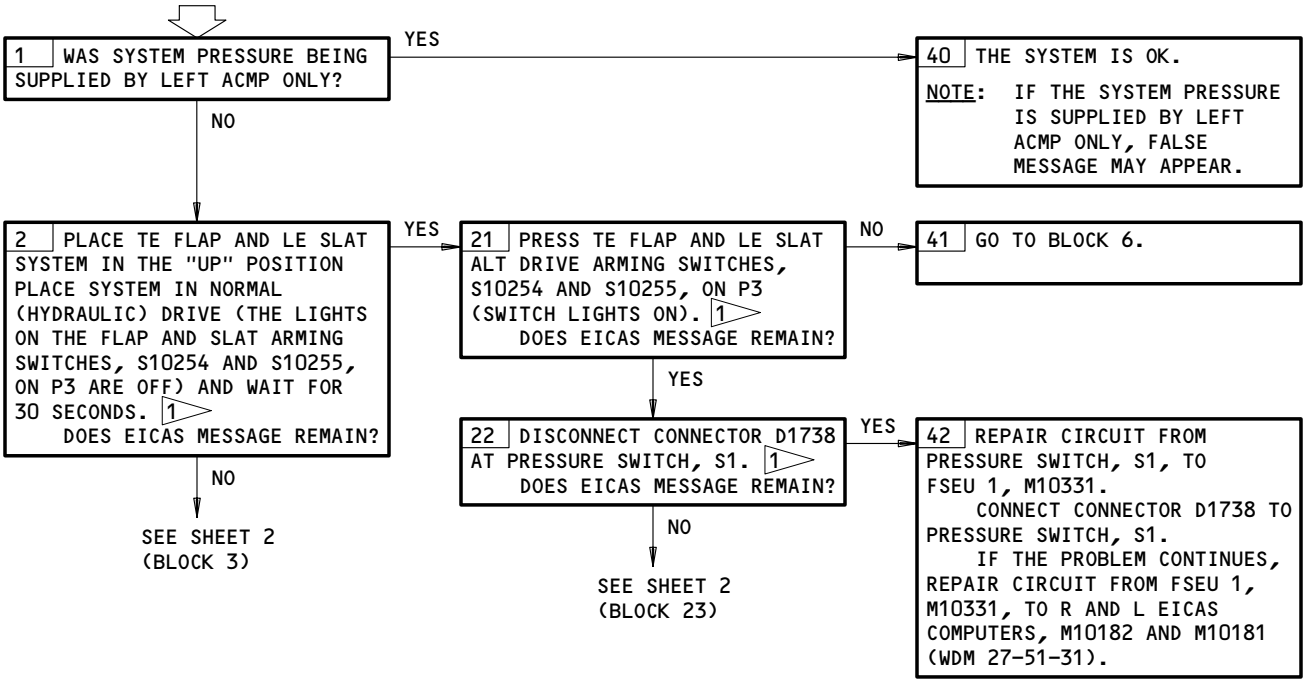
MAKE SURE THIS SYTSTEM WILL OPERATE:
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C17,11G12,11G13,11G14,11H24

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
LEFT SYS HYDRAULIC POWER (AMM 29-11-00/201)
INSTALL MAIN LANDING GEAR DOOR LOCKS (AMM 32-00-15/201)

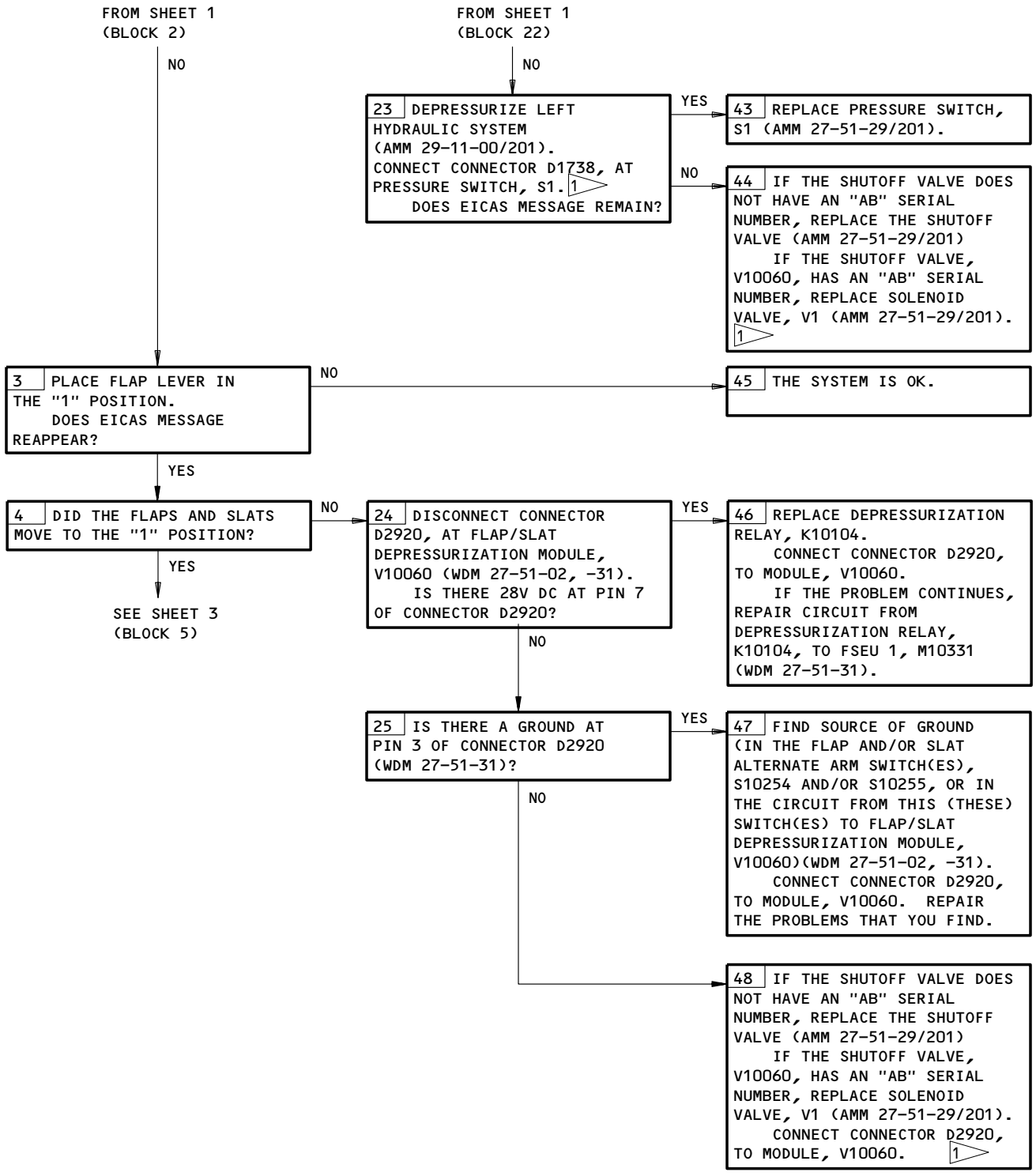
EICAS MESSAGE "FLAP ISLN VAL" OR "FLAP LOAD RELIEF" OR "TE FLAP DISAGREE" OR LE SLAT DISAGREE" DISPLAYED

WARNING: TO PREVENT INJURY OR DAMAGE, CLEAR PERSONNEL AND EQUIPMENT FROM CONTROL SURFACES BEFORE PROVIDING HYDRAULIC POWER. KEEP AREA CLEAR WHEN PERFORMING FAULT ISOLATION. CHECK THAT FAN DUCT COWLING WILL NOT BE IN PATH OF LEADING EDGE SLATS.

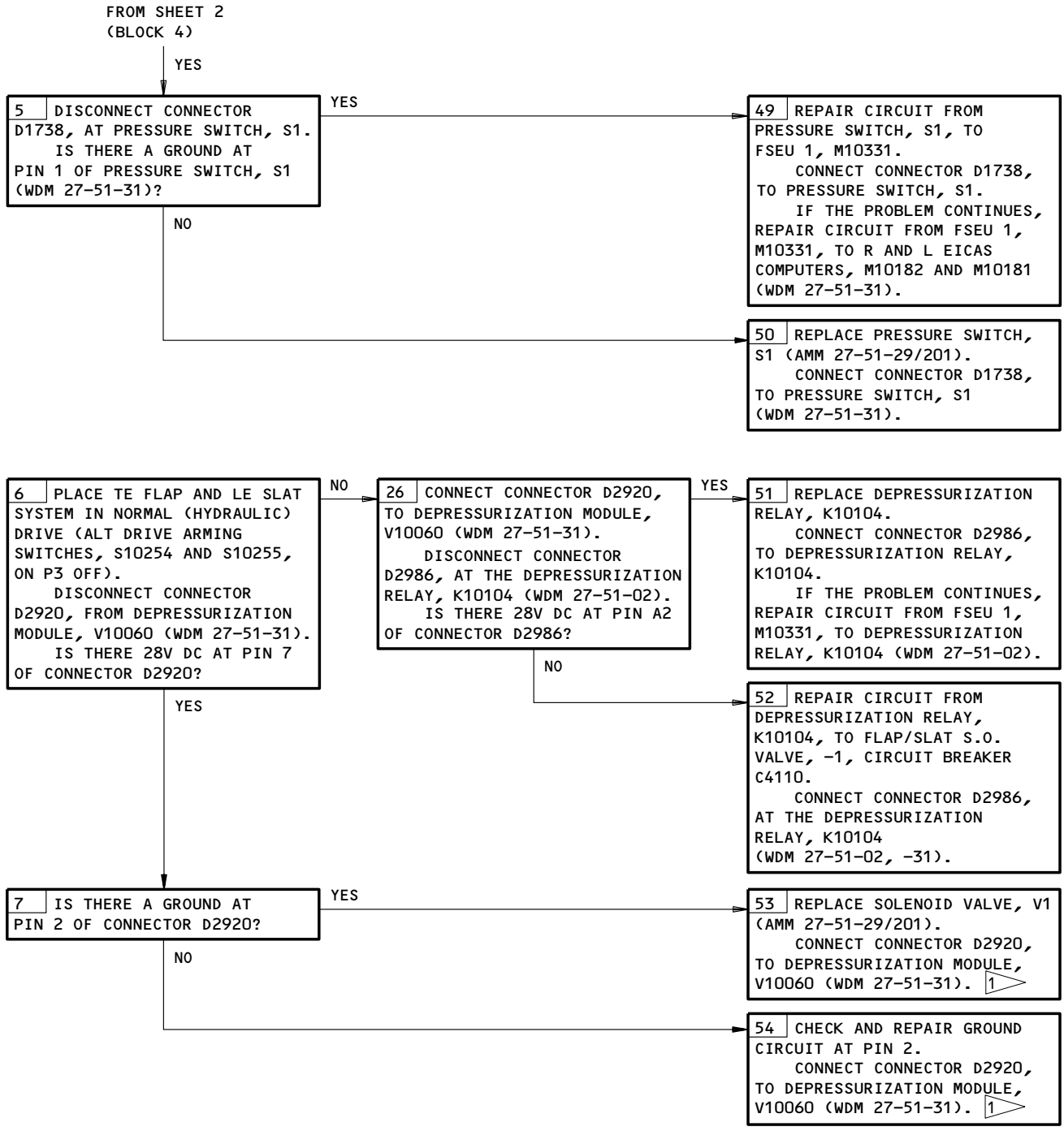


1 DO THIS PROCEDURE: EICAS STATUS/MAINTENANCE MESSAGE ERASE PROCEUDRE (FIM 31-41-00/101, FIG. 109).

EICAS Message FLAP ISLN VAL or FLAP LOAD RELIEF or
TE FLAP DISAGREE or LE SLAT DISAGREE Displayed
Figure 115 (Sheet 1)



EICAS Message FLAP ISLN VAL or FLAP LOAD RELIEF or
TE FLAP DISAGREE or LE SLAT DISAGREE Displayed
Figure 115 (Sheet 2)



EICAS Message FLAP ISLN VAL or FLAP LOAD RELIEF or
TE FLAP DISAGREE or LE SLAT DISAGREE Displayed
Figure 115 (Sheet 3)

PREREQUISITES

ELECTRICAL POWER (MM 24-22-00/201)
HYDRAULIC POWER (MM 29-11-00/201)
EICAS (MM 31-41-00/201)

CB'S: 11C14,11C15,11C16,11G12,11G13,11G14,11G21, 11G22,11G23,11H12,11H13,11H14,11H24,11J18; 11C17

FLAPS SET TO 30 DETENT. FLAPS DO NOT RETRACT TO POS 25 WITH A/S MORE THAN 170K

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZERS ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

1 MAKE SURE THE FLAP ALTERNATE DRIVE SYSTEM IS DISARMED. IF ARMED, PUSH THE FLAP ALT DRIVE TO DISARM THE FLAP ALTERNATE SYSTEM.
REMOVE THE FSEU-1 (M10331) FROM E5-1 SHELF (MM 27-51-01/201).
GROUND PIN F5 OF THE D3312B CONNECTOR ON THE E5-1 SHELF.
DOES THE "FLAP LD RELIEF" MESSAGE SHOW ON THE EICAS DISPLAY?

YES → 21 REMOVE THE GROUND CONNECTION FROM PIN F5 OF THE D3312B CONNECTOR ON THE E5-1 SHELF.
INSTALL THE FSEU-1 (M10331) ON THE E5-1 SHELF (MM 27-51-01/201).
DO THE 27-51-00, FIG. 107, BLOCK 1 ACTION.

NO ↓

2 REMOVE THE GROUND CONNECTION FROM PIN F5 OF THE D3312B CONNECTOR ON THE E5-1 SHELF.
GROUND PIN 29 OF THE D41652P CONNECTOR ON THE E5-1 SHELF (WDM 27-51-51).
DOES THE "FLAP LD RELIEF" MESSAGE SHOW IN THE EICAS DISPLAY?

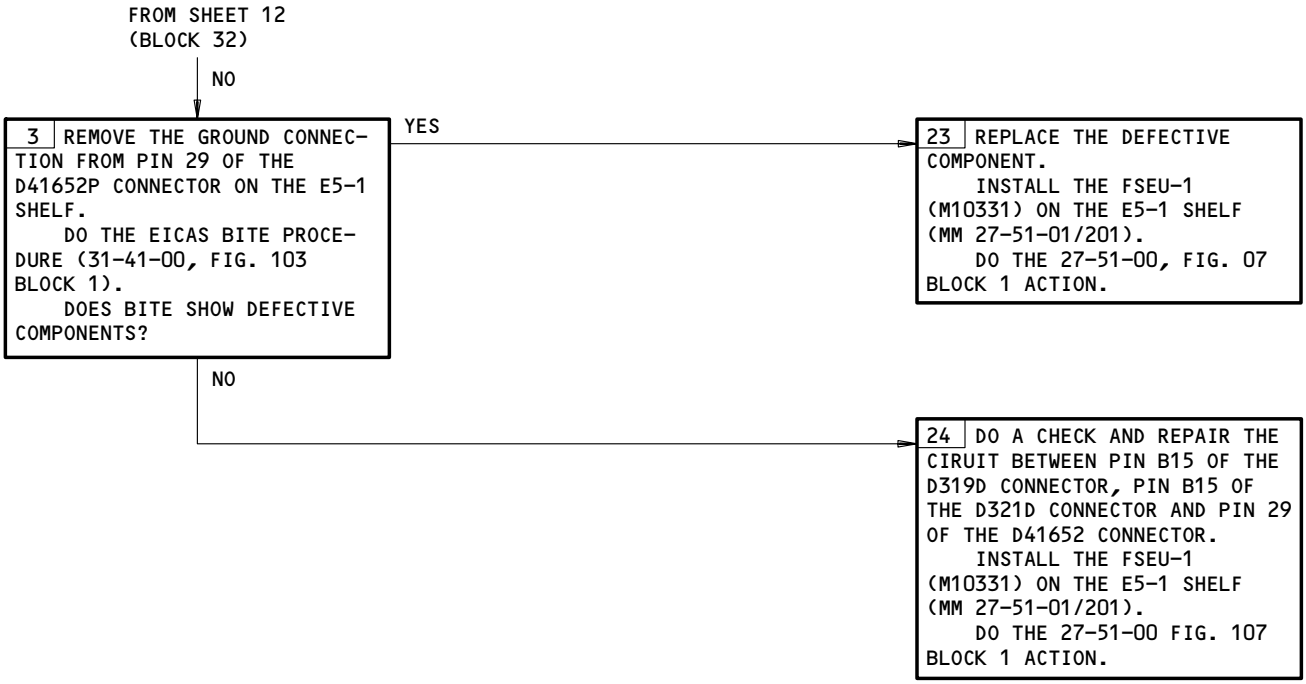
YES → 22 REMOVE THE GROUND CONNECTION FROM PIN 29 OF THE D41652P CONNECTOR ON THE E5-1 SHELF.
REPAIR THE CIRCUIT BETWEEN PIN F5 OF THE D3312B CONNECTOR AND PIN 29 OF THE D41652P CONNECTOR (WDM 27-51-51).
INSTALL THE FSEU-1 (M10331) ON THE E5-1 SHELF (MM 27-51-01/201).
DO THE 27-51-00, FIG. 107, BLOCK 1 ACTION.

NO ↓

SEE SHEET 2 (BLOCK 3)

1 ELA EBL-EBR
2 ELA EBS-999

Flaps Set to 30 Detent. Flaps do not Retract to Pos 25 with A/S more than 170K
Figure 116 (Sheet 1)



Flaps Set to 30 Detent. Flaps do not Retract to Pos 25
with A/S More Than 170K
Figure 116 (Sheet 2)

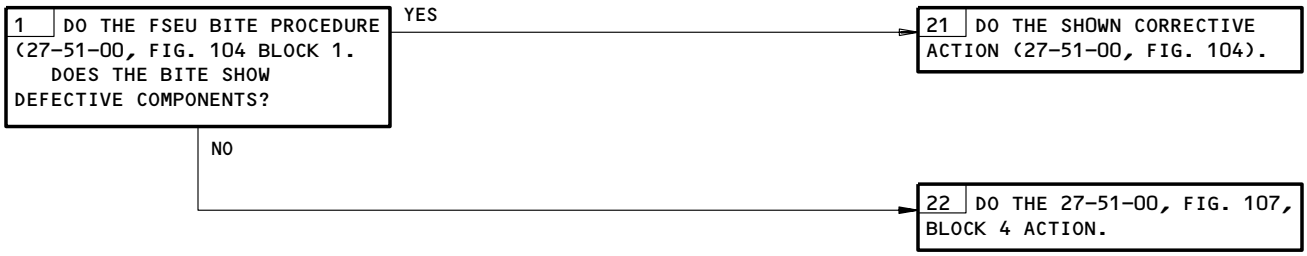
PREREQUISITES

ELECTRICAL POWER (MM 24-22-00/201)
MAIN LANDING GEAR DOOR LOCKS INSTALLED (MM-32-00-15/201).
EICAS (MM 31-41-00/201)

CB'S: 11C14,11C15,11C16,11G12,11G13,11G14,11G21, 11G22,11G23,11H12,11H13,11H23,11H24,11J18

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZERS ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

FLAPS RETRACT AT THE WRONG AIRSPEED OR FLAPS EXTEND AT THE WRONG AIRSPEED



Flaps Retract at the Wrong Airspeed or
Flaps Extend at the Wrong Airspeed
Figure 117

Not Used
Figure 118

H88567

Not Used
Figure 119

H88573

PREREQUISITES
MAIN LANDING GEAR DOOR LOCKS INSTALLED
(AMM 32-00-15/201)

WARNING: TO PREVENT INJURY OR DAMAGE, CLEAR PERSONNEL AND EQUIPMENT FROM CONTROL SURFACES BEFORE PROVIDING HYDRAULIC POWER. KEEP AREA CLEAR WHEN PERFORMING FAULT ISOLATION. CHECK THAT FAN DUCT COWLING WILL NOT BE IN PATH OF LEADING EDGE SLATS.

AIRPLANE ROLLS WHEN FLAP POSITION 25 OR GREATER IS SELECTED

1 CHECK RUDDER AND AILERON RIGGING (AMM 27-01-00/501).
IS RIGGING WITHIN THE LIMITS?

NO → 21 ADJUST RUDDER OR AILERON RIGGING AS NECESSARY (AMM 27-01-00/501).
DO THE OPERATIONAL TEST OF THE FLAP NORMAL DRIVE SYSTEM (AMM 27-51-00/501).

YES

2 CHECK INBOARD "FLEXI-SEAL" ADJUSTMENT OF INBOARD FLAP WITH FLAPS UP AND WITH FLAPS FULLY EXTENDED (AMM 27-51-02/501).
IS THE INBOARD SEAL WITHIN THE LIMITS?

NO → 22 ADJUST THE "FLEXI-SEAL" AS NECESSARY (AMM 27-51-02/501).

YES

3 CHECK THE CLEARANCE BETWEEN THE RAMP TUBE AND THE TORQUE TUBE SLOT DOOR PROTECTOR WITH FLAPS FULLY EXTENDED.
IS THE CLEARANCE MORE THAN 0.55-0.60 INCH?

NO → 23 TRIM THE PROTECTOR TO OBTAIN A CLEARANCE OF 0.55-0.60 INCH BETWEEN THE PROTECTOR AND THE RAMP TUBE.
REMOVE THE MAIN FLAP TORQUE TUBE SLOT DOOR, IF NECESSARY (FIGURE 120, SHEET 3).

YES

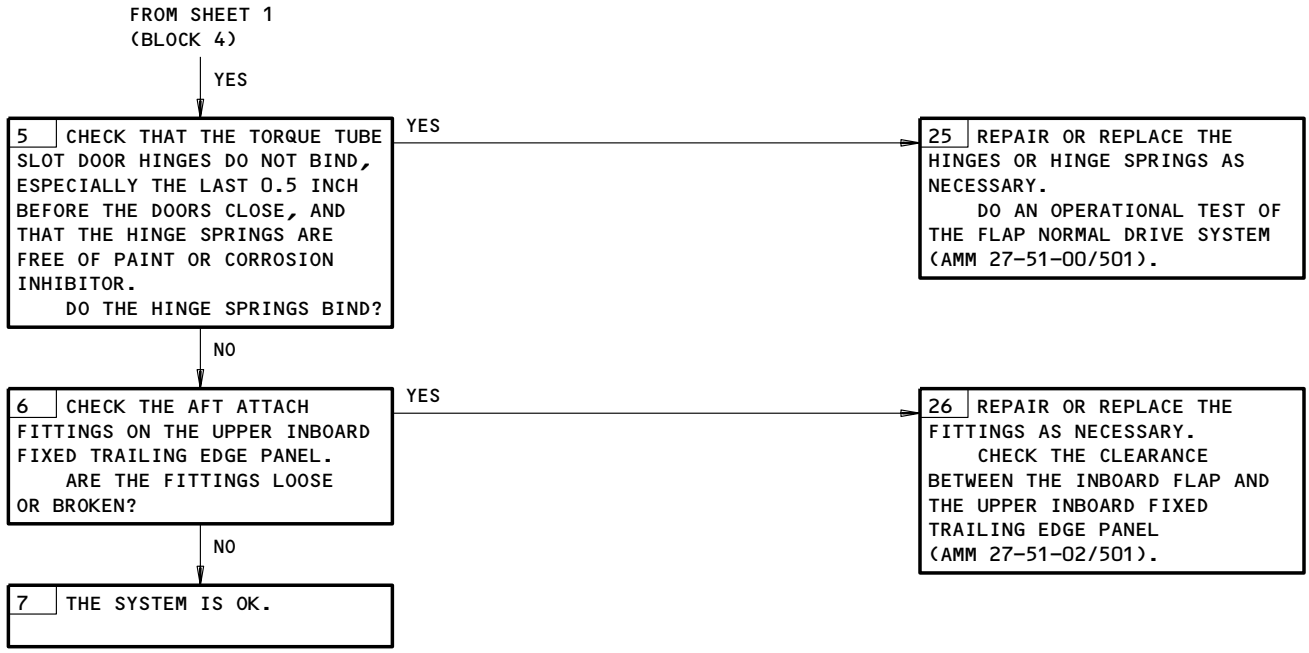
4 CHECK THE CLEARANCE BETWEEN THE TORQUE TUBE SLOT DOORS AND THE SURROUNDING STRUCTURE WHEN THE DOORS ARE MOVING.
IS THERE A MINIMUM GAP OF 0.15 INCH?

NO → 24 ADJUST THE DOORS TO MAINTAIN A MINIMUM OF 0.15 INCH GAP BETWEEN THE DOORS AND THE EDGE OF THE STRUCTURE.
TRIM DOORS AND RUB STRIPS AS NECESSARY (FIGURE 120, SHEET 3).

YES

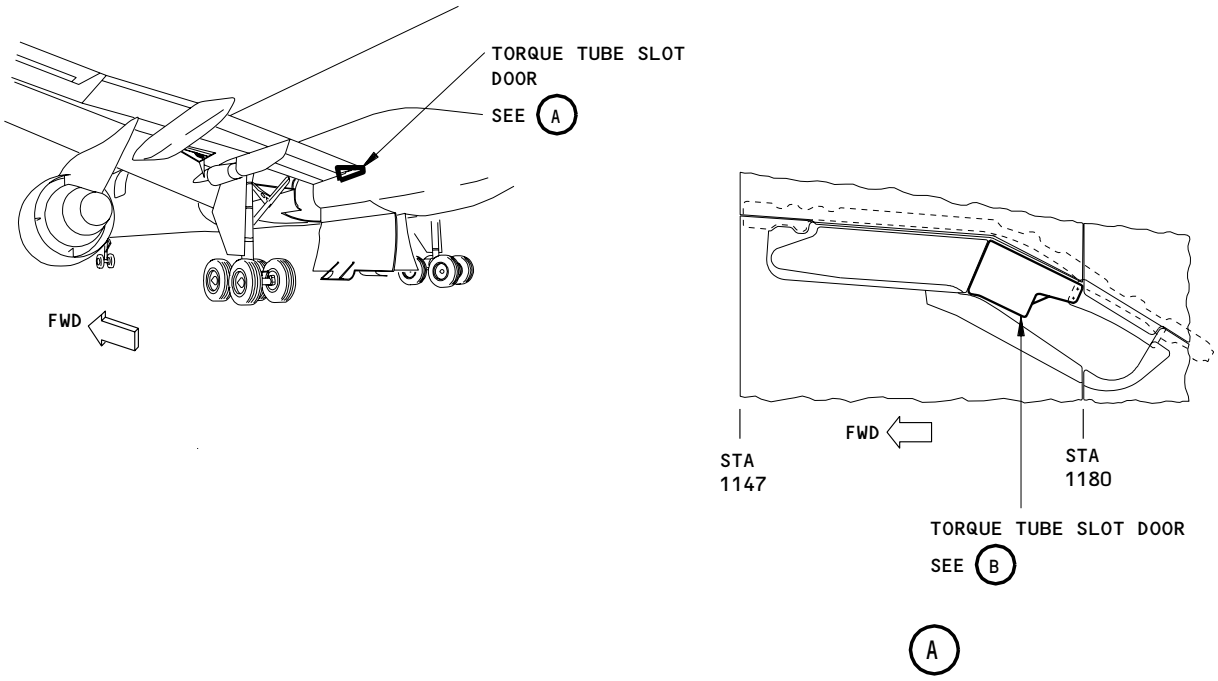
SEE SHEET 2
(BLOCK 5)

Airplane Rolls When Flap Position 25 or Greater is Selected
Figure 120 (Sheet 1)

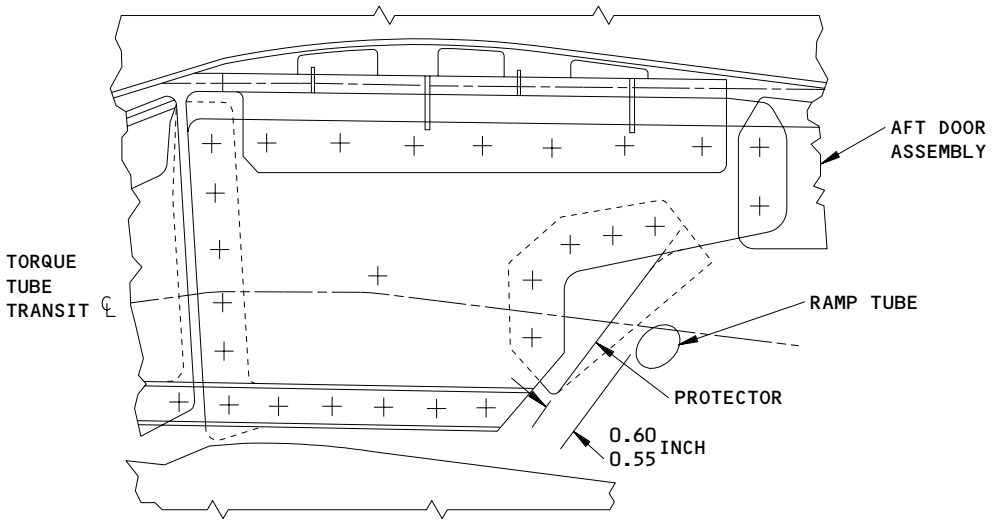


Airplane Rolls When Flap Position 25 or Greater is Selected
Figure 120 (Sheet 2)

H88048



A



TORQUE TUBE SLOT DOOR

B

Airplane Rolls When Flap Position 25 or Greater is Selected
Figure 120 (Sheet 3)

FSEU ID NOT DEFINED								
OCTAL LABELS CHART								
SIGNAL	TYPE	LABEL	FORMAT	MIN UPDATE RATE	SDI	BINARY RANGE	POSITIVE SENSE	UNITS
FLAP POSITION-L	A	377	BNR	10		±360	ALWAYS POS	DEG'S
FLAP POSITION-L	A	377	BNR	10		±360	ALWAYS POS	DEG'S
FLAP POSITION-L	A	377	BNR	10		±360	ALWAYS POS	DEG'S
FLAP POSITION-R	A	377	BNR	10		±360	ALWAYS POS	DEG'S
FLAP POSITION-R	A	377	BNR	10		±360	ALWAYS POS	DEG'S
FLAP POSITION-R	A	377	BNR	10		±360	ALWAYS POS	DEG'S
SLAT POSITION-L	A	377	BNR	10		±360	ALWAYS POS	DEG'S
SLAT POSITION-L	A	377	BNR	10		±360	ALWAYS POS	DEG'S
SLAT POSITION-L	A	377	BNR	10		±360	ALWAYS POS	DEG'S
SLAT POSITION-R	A	377	BNR	10		±360	ALWAYS POS	DEG'S
SLAT POSITION-R	A	377	BNR	10		±360	ALWAYS POS	DEG'S
SLAT POSITION-R	A	377	BNR	10		±360	ALWAYS POS	DEG'S

SPOILER/SPEEDBRAKE CONTROL SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ACTUATOR (PCA) - SPOILER POWER CONTROL	2	12	WING REAR SPAR OR MAIN LG BEAM	27-61-02
SPOILER 1 PCA, M306				
SPOILER 2 PCA, M307				
SPOILER 3 PCA, M308				
SPOILER 4 PCA, M309				
SPOILER 5 PCA, M310				
SPOILER 6 PCA, M311				
SPOILER 7 PCA, M312				
SPOILER 8 PCA, M313				
SPOILER 9 PCA, M314				
SPOILER 10 PCA, M315				
SPOILER 11 PCA, M316				
SPOILER 12 PCA, M317				
CIRCUIT BREAKER -	1		FLT COMPT, OVERHEAD PANEL, P11	
CSEU 1L AC, C1538 OR		1	11C6	
FLT CONT ELEC 1L AC, C1538				*
CSEU 1L DC, C1534 OR		1	11C7	
FLT CONT ELEC 1L DC, C1534				*
CSEU 1R AC, C1536 OR		1	11G17	
FLT CONT ELEC 1R AC, C1536				*
CSEU 1R DC, C1531 OR		1	11G18	
FLT CONT ELEC 1R DC, C1531				*
CSEU 2L AC, C1537 OR		1	11C8	
FLT CONT ELEC 2L AC, C1537				*
CSEU 2L DC, C1533 OR		1	11C9	
FLT CONT ELEC 2L DC, C1533				*
CSEU 2R AC, C1535 OR		1	11G27	
FLT CONT ELEC 2R AC, C1535				*
CSEU 2R DC, C1532 OR		1	11G28	
FLT CONT ELEC 2R DC, C1532				*
COMPUTER - (FIM 31-41-00/101)				
L EICAS, M10181				
R EICAS, M10182				
LIGHT - SPOILERS, L14	1	1	FLT COMPT, OVERHEAD PANEL, P5 AUX ANNUN PANEL, M10394	*
MODULE - (FIM 27-09-00/101)				
POWER SUPPLY 1L (PSM 1L), M536				
POWER SUPPLY 1R (PSM 1R), M538				
POWER SUPPLY 2L (PSM 2L), M537				
POWER SUPPLY 2R (PSM 2R), M532				
SPOILER CONTROL 1L (SCM 1L), M530	3	1		
SPOILER CONTROL 1R (SCM 1R), M533	3	1		
SPOILER CONTROL 2L (SCM 2L), M531	3	1		
SPOILER CONTROL 2R (SCM 2R), M534	3	1		
SPOILER CONTROL 3L (SCM 3L), M532	3	1		
SPOILER CONTROL 3R (SCM 3R), M535	3	1		
PANEL - (FIM 30-31-00/101)				
AUXILIARY ANNUNCIATOR, M10394				

* SEE THE WDM EQUIPMENT LIST

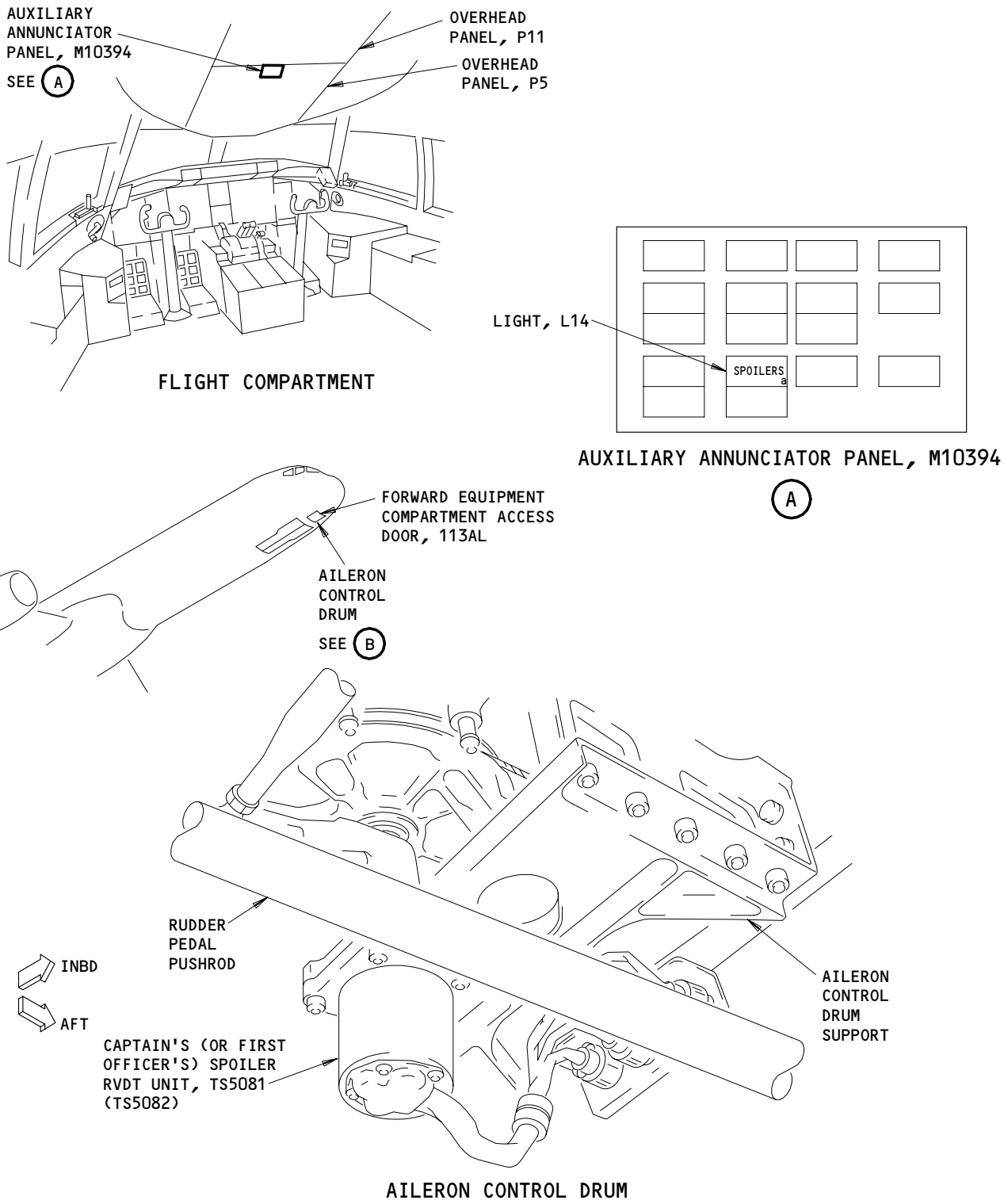
Spoiler/Speedbrake Control System - Component Index
Figure 101 (Sheet 1)

SPOILER/SPEEDBRAKE CONTROL SYSTEM

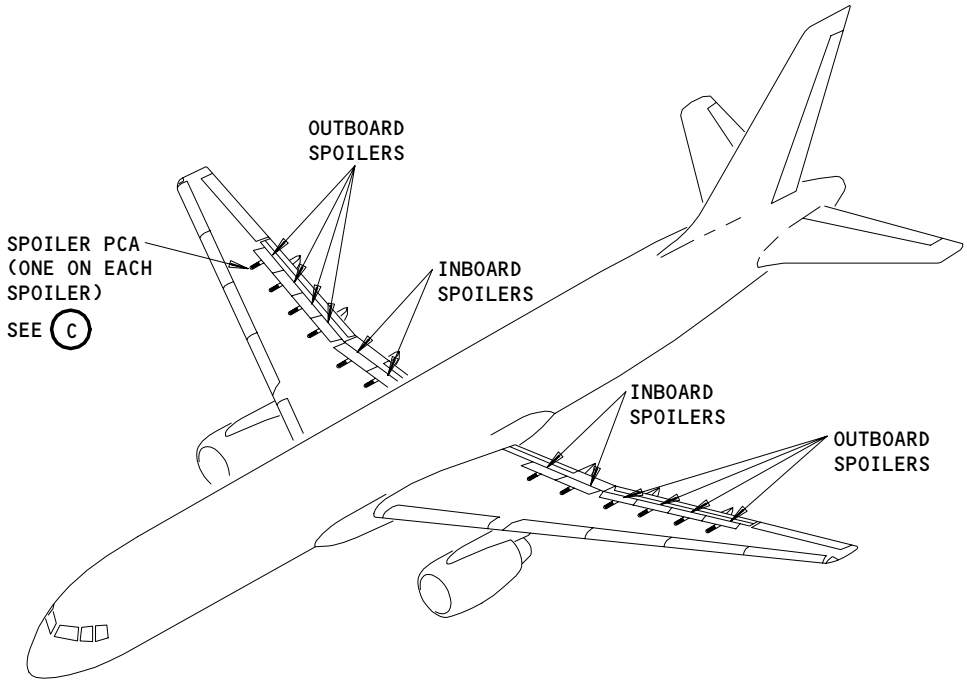
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
SCREEN - SPOILER PCA FILTER	2	12	SPOILER PCA	27-61-02
SPOILER - INBOARD, 554,553,653,654	2	4	WING TRAILING EDGE	27-61-01
SPOILER - OUTBOARD, 565,564,563,562,662,663, 664,665	2	8	WING TRAILING EDGE	27-61-01
SWITCH - CENTER HYDRAULIC SYSTEM PRESSURE, S10002 (REF 29-11-00, FIG. 101)				
UNIT - CAPTAIN'S CONTROL WHEEL SPOILER TRANSDUCER (RVDT), TS5081	1	1	113AL, FWD EQUIP COMPT, AILERON CONTROL DRUM ASSEMBLY	27-61-04
UNIT - FIRST OFFICER'S CONTROL WHEEL SPOILER TRANSDUCER (RVDT), TS5082	1	1	113AL, FWD EQUIP COMPT, AILERON CONTROL DRUM ASSEMBLY	27-61-04
VALVE (EHSV) - SPOILER PCA ELECTROHYDRAULIC SERVO	2	12	SPOILER PCA	27-61-02

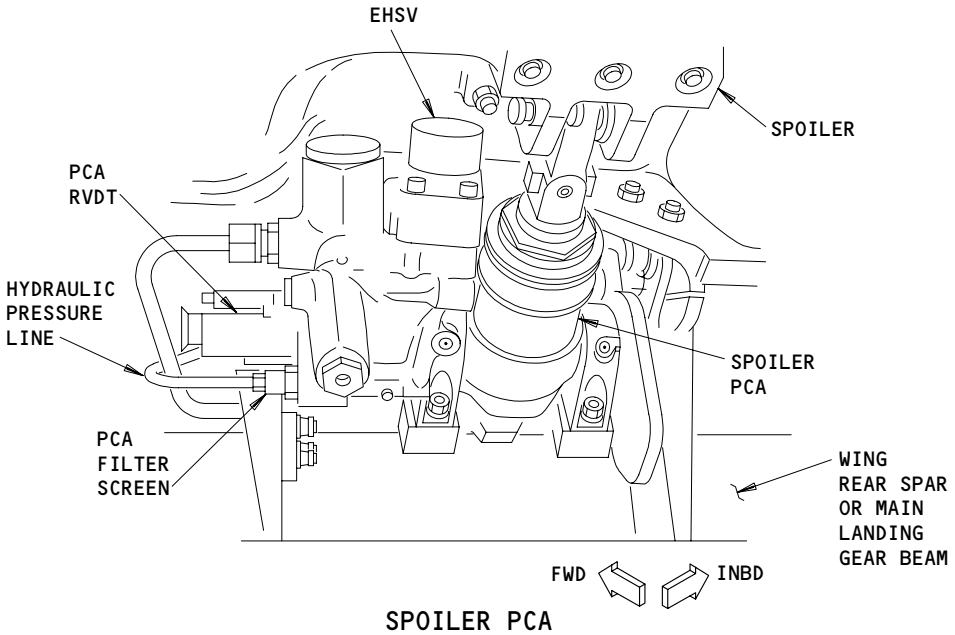
* SEE THE WDM EQUIPMENT LIST

Spoiler/Speedbrake Control System - Component Index
Figure 101 (Sheet 2)



Spoiler/Speedbrake Control System - Component Location
Figure 102 (Sheet 1)



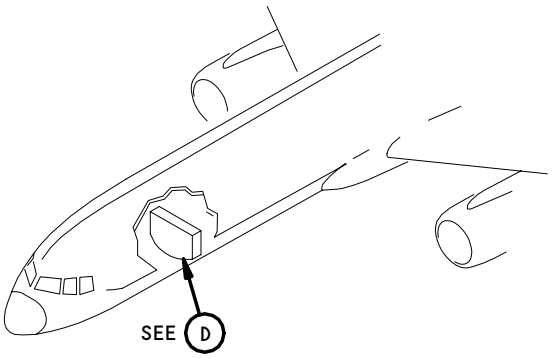


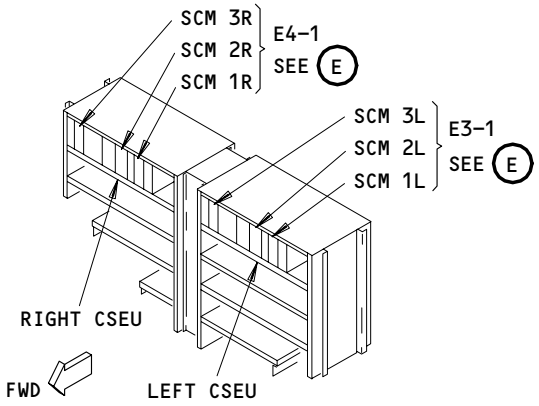
SPOILER PCA

C

NOTE: THE SPOILERS ARE NUMBERED 1 THRU 12 FROM THE OUTBOARD LEFT WING SPOILER TO THE OUTBOARD RIGHT WING SPOILER.

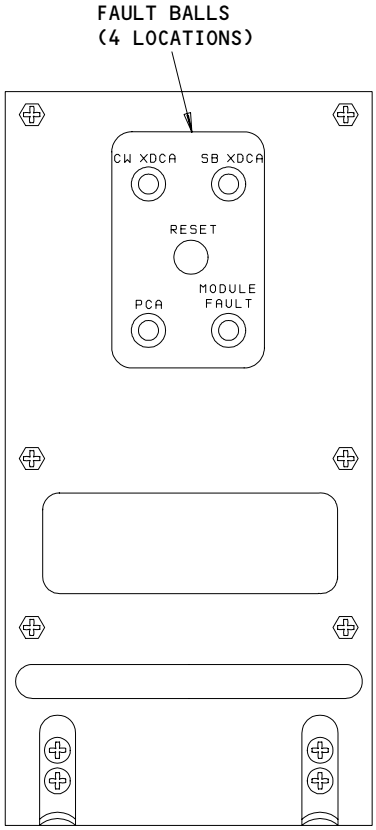
Spoiler/Speedbrake Control System - Component Location
Figure 102 (Sheet 2)





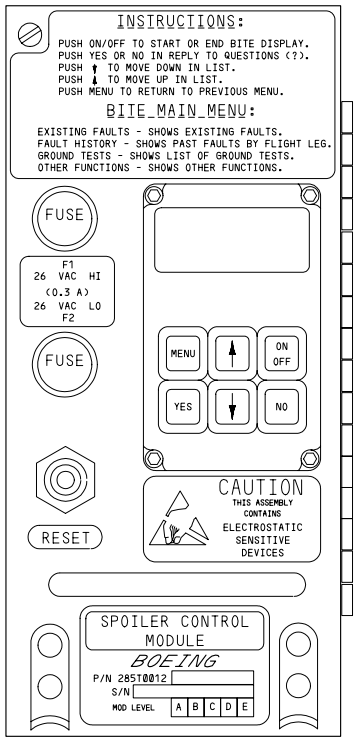
MAIN EQUIPMENT CENTER

D



SPOILER CONTROL MODULE

E 1



SPOILER CONTROL MODULE

E 2

1 -100 SERIES SCMs

2 -200 SERIES SCMs

Spoiler/Speedbreak Control System - Component Location
Figure 102 (Sheet 3)

A13098

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C6, 11C7, 11C8, 11C9, 11G17, 11G18, 11G27, 11G28

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

NOTE: MAKE SURE YOU HOLD THE SPEEDBRAKE LEVER INPUTS FOR AT LEAST 20 SECONDS. THIS WILL LET THE SPOILER CONTROL SYSTEM FIND ALL THE APPLICABLE SYSTEM FAILURES.

"SPOILER" CAUTION LIGHT OR "SPOILER" EICAS MESSAGE SHOWED

1 DOES A SPOILER CONTROL MODULE (SCM) SHOW A POWER CONTROL ACTUATOR (PCA) FAULT?

NO

10 DO THE BITE PROCEDURE FOR THE SPOILER CONTROL MODULE.
AIRPLANES WITH -100 SERIES SCMs (FIM 27-09-00/101, FIG. 105).
AIRPLANES WITH -200 SERIES SCMs (FIM 27-09-00/101, FIG. 105A).

YES

2 DID THE FLIGHT CREW MAKE A REPORT OF UNCOMMANDED ROLL OR LARGE AILERON TRIM WITH FLAPS AT 25 OR 30?

YES

11 IF THE AIRPLANE ROLLED TO THE RIGHT OR LEFT TRIM WAS NECESSARY DO THE FOLLOWING.
REPLACE THE LEFT PCA THAT IS CONTROLLED BY THE SCM WITH THE PCA FAULT (AMM 27-61-02/201).
IF THE AIRPLANE ROLLED TO THE LEFT OR RIGHT TRIM WAS NECESSARY DO THE FOLLOWING.
REPLACE THE RIGHT PCA THAT IS CONTROLLED BY THE SCM WITH THE PCA FAULT (AMM 27-61-02/201).

NO

3 AIRPLANES WITH -100 SERIES SCMs;
REPLACE THE TWO POWER CONTROL ACTUATORS CONTROLLED BY THE SCM WITH THE PCA FAULT (AMM 27-61-02/201).
AIRPLANES WITH -200 SERIES SCMs;
REPLACE THE POWER CONTROL ACTUATOR SHOWN IN THE EXISTING FAULTS OF THE SCM (AMM 27-61-02/201).

SPOILER Caution Light or SPOILER EICAS Message Showed
Figure 103

PREREQUISITES

NONE

SPEEDBRAKE LEVER IS BINDING

1 DO THE SPEEDBRAKE LEVER FORCE TEST (AMM 27-62-00/501).
IS THE FORCE MORE THAN 6LB?

NO → 21 LEVER FORCE IS IN LIMIT.

YES ↓

2 EXAMINE THE SEAL ASSEMBLY AND THE RUBBER STRIPS AROUND THE SPEEDBRAKE LEVER ON THE CONTROL STAND PANEL, P10.
DOES THE SEAL ASSEMBLY OR RUBBER STRIPS PREVENT FREE MOVEMENT OF THE SPEEDBRAKE LEVER?

YES → 22 REPLACE THE SEAL ASSEMBLY AND RUBBER STRIP AROUND THE SPEEDBRAKE LEVER.

NO ↓

3 OPEN THESE CIRCUIT BREAKERS AND ATTACH DO-NOT-CLOSE TAGS:
11C6, 11C7, 11C8, 11C9, 11G11, 11G17, 11G18, 11G27, 11G28.
REMOVE THE SEAL ASSEMBLY FROM THE P10 PANEL.
OPEN THE ACCESS PANEL ON THE LEFT SIDE OF THE CONTROL STAND.
EXAMINE THE LEVER LINKAGE FOR DAMAGED OR DISCONNECTED PARTS.
IS THE SPEEDBRAKE LEVER LINKAGE DAMAGED OR DISCONNECTED FROM THE SPEEDBRAKE MECHANISM?

YES → 11 MASK OFF THE SURROUNDING AREA TO PROTECT FROM OVERSPRAY.
GENEROUSLY APPLY MIL-L-23398, TYPE II OR BAC5811, TYPE 7 LUBRICANT TO SLIDING PART OF THE SPEEDBRAKE LEVER. USE AN EXTENSION STRAW TO ALLOW SPRAY IN HARD TO REACH AREAS AND TO CONCENTRATE SPRAY IN LOCALIZED AREAS.
DOES SPEEDBRAKE LEVER STILL BIND WHEN MOVED? 1

YES → 23 REPLACE THE DAMAGED PARTS. CONNECT THE SPEEDBRAKE LEVER AND ITS LINKAGE TO THE SPEEDBRAKE MECHANISM (AMM 27-62-01/401).
INSTALL THE ACCESS PANEL AND THE SEAL ASSEMBLY ON THE CONTROL STAND. REMOVE THE DO-NOT-CLOSE TAGS AND CLOSE THESE CIRCUIT BREAKERS: 11C6, 11C7, 11C8, 11C9, 11G11, 11G17, 11G18, 11G27, 11G28.

NO → 24 NO ACTION REQUIRED.

NO → 25 DISCONNECT THE SPEEDBRAKE LEVER AND ITS LINKAGE FROM THE SPEEDBRAKE MECHANISM. REPAIR THE SPEEDBRAKE MECHANISM. EXAMINE THE NO-BACK CLUTCH AND ITS SHAFT FOR SLIPPAGE. REPAIR OR REPLACE THE NECESSARY PARTS (AMM 27-62-02/201).
INSTALL THE ACCESS PANEL AND THE SEAL ASSEMBLY ON THE CONTROL STAND. REMOVE THE DO-NOT-CLOSE TAGS AND CLOSE THESE CIRCUIT BREAKERS: 11C6, 11C7, 11C8, 11C9, 11G11, 11G17, 11G18, 11G27, 11G28.

1 ALLOW TO AIRDRY IF POSSIBLE. THE LUBRICANT WILL DRY WITHIN MINUTES, HOWEVER, THE COATING (RESIN SYSTEM) THAT HOLDS THE PIGMENTS WILL CURE IN 6 HOURS AT 77 +/-3 DEGREES F (25 +/-2 DEGREEES C). 24 HOURS GIVES THE BEST WEAR AND CORROSION PROTECTION.

Speedbrake Lever is Binding
Figure 104

PREREQUISITES

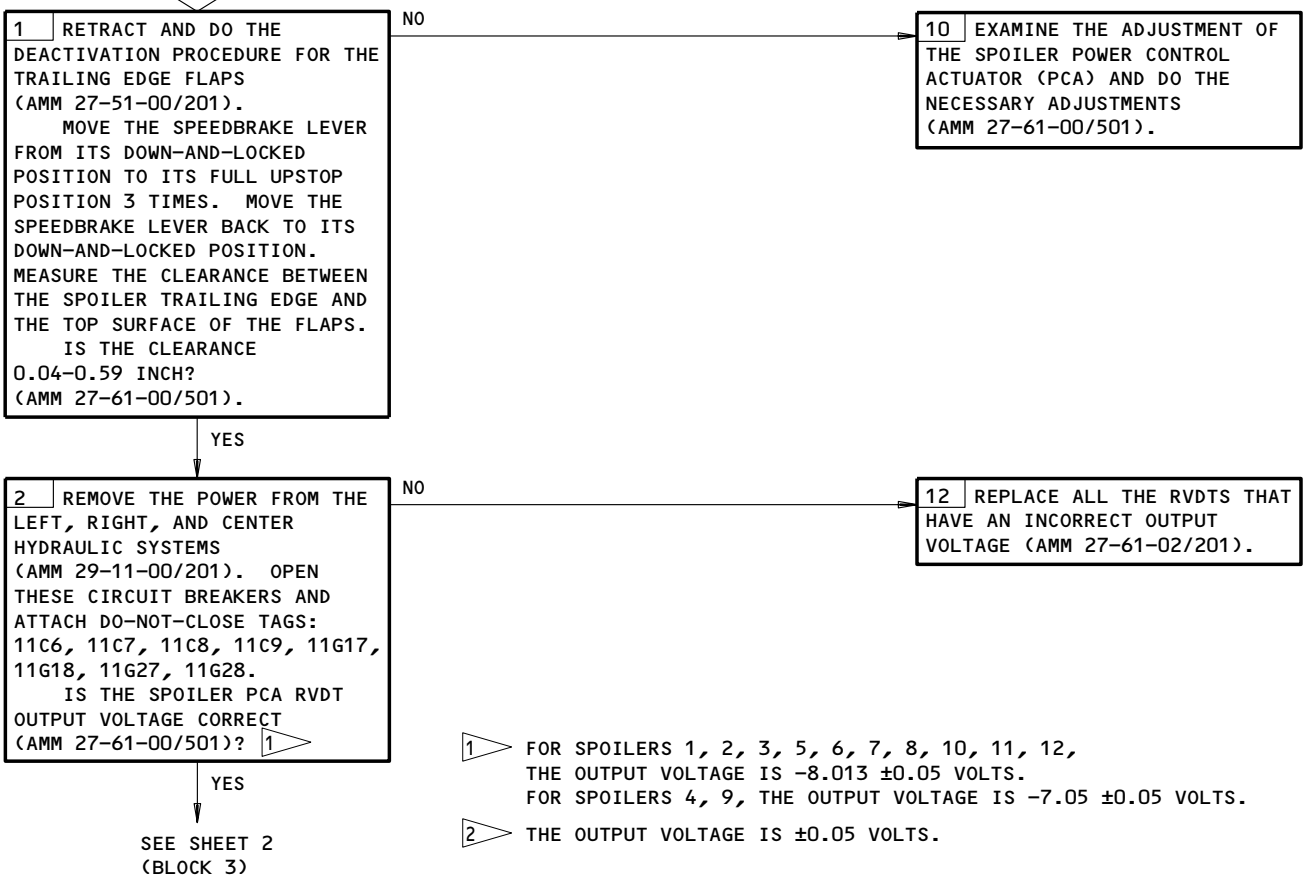
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C6, 11C7, 11C8, 11C9, 11G17, 11G18, 11G27, 11G28

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

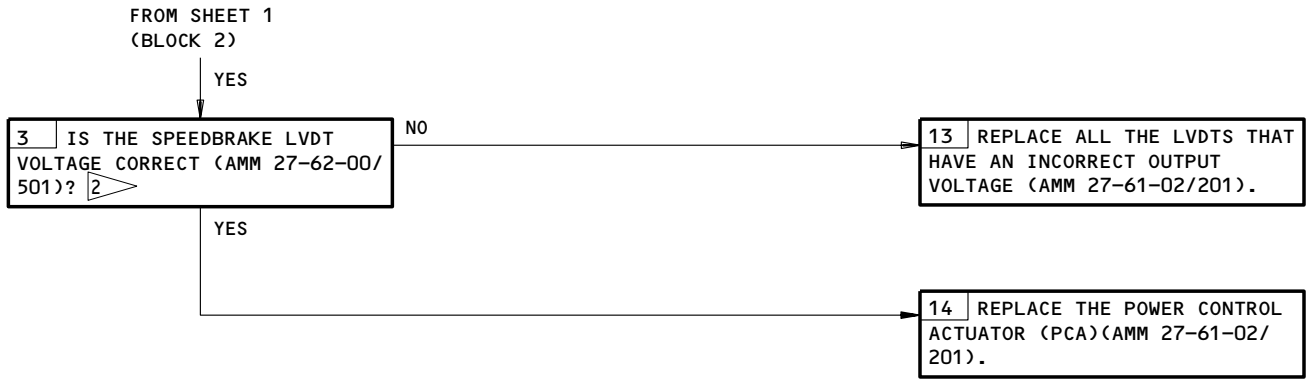
WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

NOTE: MAKE SURE YOU HOLD THE SPEEDBRAKE LEVER INPUTS FOR AT LEAST 20 SECONDS. THIS WILL LET THE SPOILER CONTROL SYSTEM FIND ALL THE APPLICABLE SYSTEM FAILURES.

SPOILER(S) FLOAT WITH NO "SPOILER" CAUTION LIGHT OR "SPOILER" EICAS MESSAGE



Spoiler(s) Float With No SPOILER Caution Light or SPOILER EICAS Message
Figure 104A (Sheet 1)



Spoiler(s) Float With No SPOILER Caution Light or SPOILER EICAS Message
Figure 104A (Sheet 2)

G74696

AUTO-SPEEDBRAKE CONTROL SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
ASSEMBLY - (FIM 22-32-00/101)				
AUTOTHROTTLE MICROSWITCH PACK, M966				
ACTUATOR - AUTO-SPEEDBRAKE, M577	2	1	FLT COMPT, CONTROL STAND P10, SPEEDBRAKE MECHANISM	27-62-02
CIRCUIT BREAKER -	1		FLT COMPT, P11	
AUTO SPEED BRAKE, C1023		1	11G11	*
CLUTCH - AUTO SPEEDBRAKE NO-BACK	2	1	FLT COMPT, CONTROL STAND P10	27-62-02
COMPUTER - (FIM 31-41-00/101)				
L EICAS, M10181				
R EICAS, M10182				
DELAY - (FIM 31-01-36/101)				
AUTO-SPEEDBRAKE TIME, M963				*
DIODE - (FIM 31-01-37/101)				
AUTO-SPEEDBRAKE LIGHT ISOL, R10213 1>				*
LEVER - SPEEDBRAKE	1	1	FLT COMPT, CONTROL STAND P10	27-62-01
LEVERS - (FIM 76-11-00/101)				
FORWARD THRUST				
REVERSE THRUST				
LIGHT - AUTO SPD BRK, L15	1	1	FLT COMPT, P5, AUX ANN M10394	*
MECHANISM - SPEEDBRAKE		1	FLT COMPT, CONTROL STAND P10	27-62-02
PANEL - (FIM 30-31-00/101)				
AUXILIARY ANNUNCIATOR, M10394				
RELAY - (FIM 32-09-00/101)				
AIR/GND SYS 1, K167				
AIR/GND SYS 2, K211				
RELAY - (FIM 31-01-36/101)				
AUTO-SPEEDBRAKE AIR/GND 1, K87				
AUTO-SPEEDBRAKE AIR/GND 2, K88				
AUTO-SPEEDBRAKE EXTEND, K217				
AUTO-SPEEDBRAKE RETRACT, K218				
AUTO-SPEEDBRAKE WARNING, K220				
RELAY - (FIM 31-01-37/101)				
LANDING GEAR TILT PRESSURE, K550				
RESISTOR - (FIM 31-01-37/101)				
AUTO-SPEEDBRAKE LIGHT ISOL, R10214 1>				

* SEE THE WDM EQUIPMENT LIST

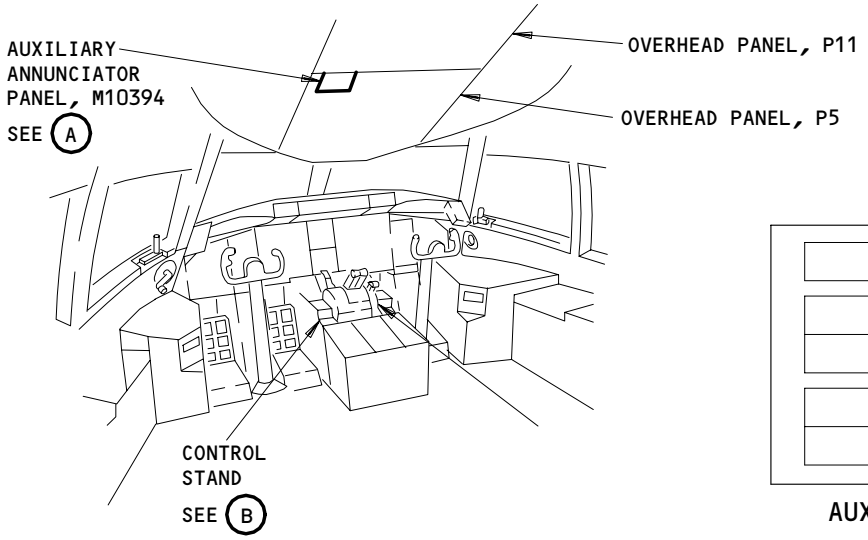
1> IF INSTALLED (POST-SB 31-19)

Auto-Speedbrake Control System - Component Index
Figure 101 (Sheet 1)

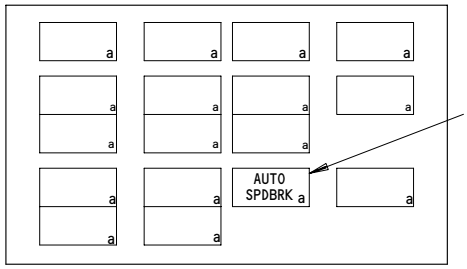
AUTO-SPEEDBRAKE CONTROL SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
SWITCH - AUTO-SPEEDBRAKE ARMING, S371	2	1	FLT COMPT, CONTROL STAND P10, SPEEDBRAKE MECHANISM	27-62-02
SWITCH - LEFT SPEEDBRAKE RETRACT LEVER POSITION, S10	2	1	113AL, FWD EQUIP COMPT, AUTO-THROTTLE MICROSWITCH PACK ASSEMBLY M966	27-62-07
SWITCH - LEFT GEAR TILT PRESSURE, S452 (REF 32-30-00, FIG. 101)				
SWITCH - REVERSE THRUST LEVER POSITION, S374	1	1	FLT COMPT, CONTROL STAND P10	27-62-08
SWITCH - RIGHT SPEEDBRAKE RETRACT LEVER POSITION, S14	2	1	113AL, FWD EQUIP COMPT, AUTO-THROTTLE MICROSWITCH PACK ASSEMBLY M966	27-62-07
SWITCH - RIGHT GEAR TILT PRESSURE, S453 (REF 32-30-00, FIG. 101)				
SWITCH - SPEEDBRAKE LEVER POSITION, S493 (REF 31-51-00, FIG. 101)				
TRANSDUCER (LVDT) - SPEEDBRAKE UNIT 1, TS35	2	1	FLT COMPT, CONTROL STAND P10, SPEEDBRAKE MECHANISM	27-62-02
TRANSDUCER (LVDT) - SPEEDBRAKE UNIT 2, TS36	2	1	FLT COMPT, CONTROL STAND P10, SPEEDBRAKE MECHANISM	27-62-02
TRANSDUCER (LVDT) - SPEEDBRAKE UNIT 3, TS37	2	1	FLT COMPT, CONTROL STAND P10, SPEEDBRAKE MECHANISM	27-62-02

Auto-Speedbrake Control System - Component Index
Figure 101 (Sheet 2)

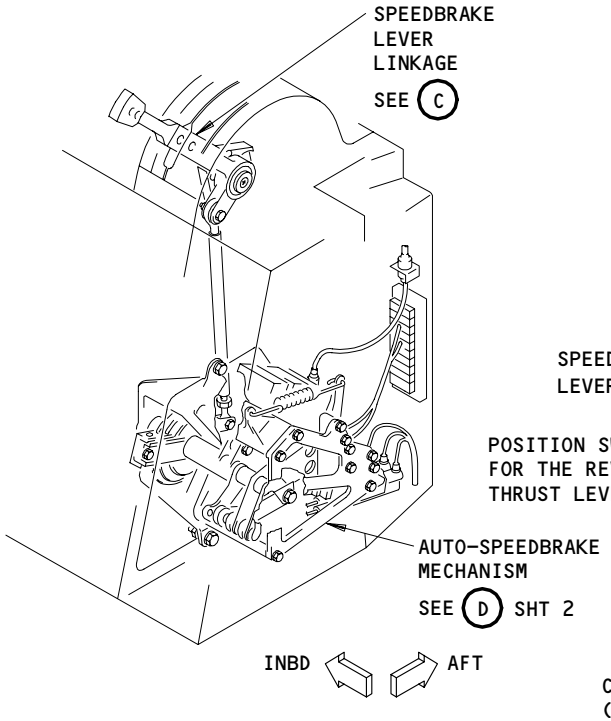


FLIGHT COMPARTMENT



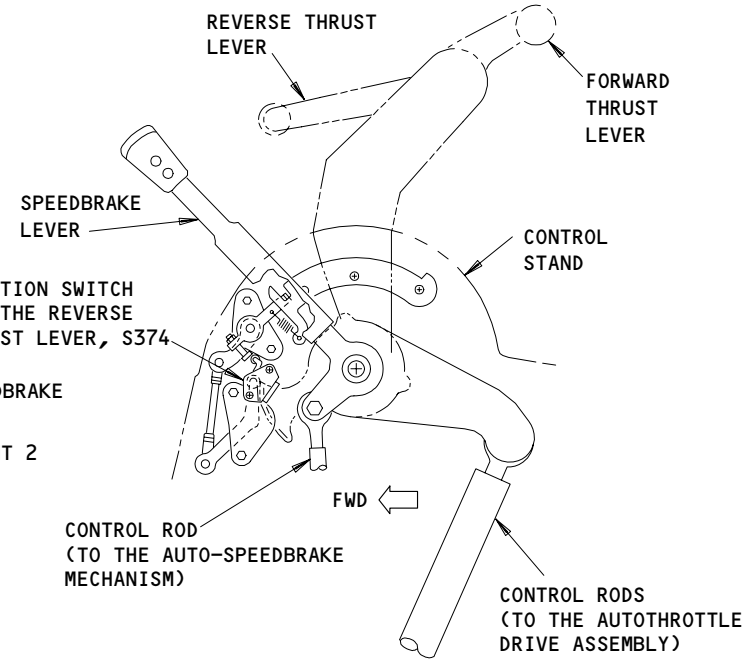
AUXILIARY ANNUNCIATOR PANEL, M10394

A



CONTROL STAND

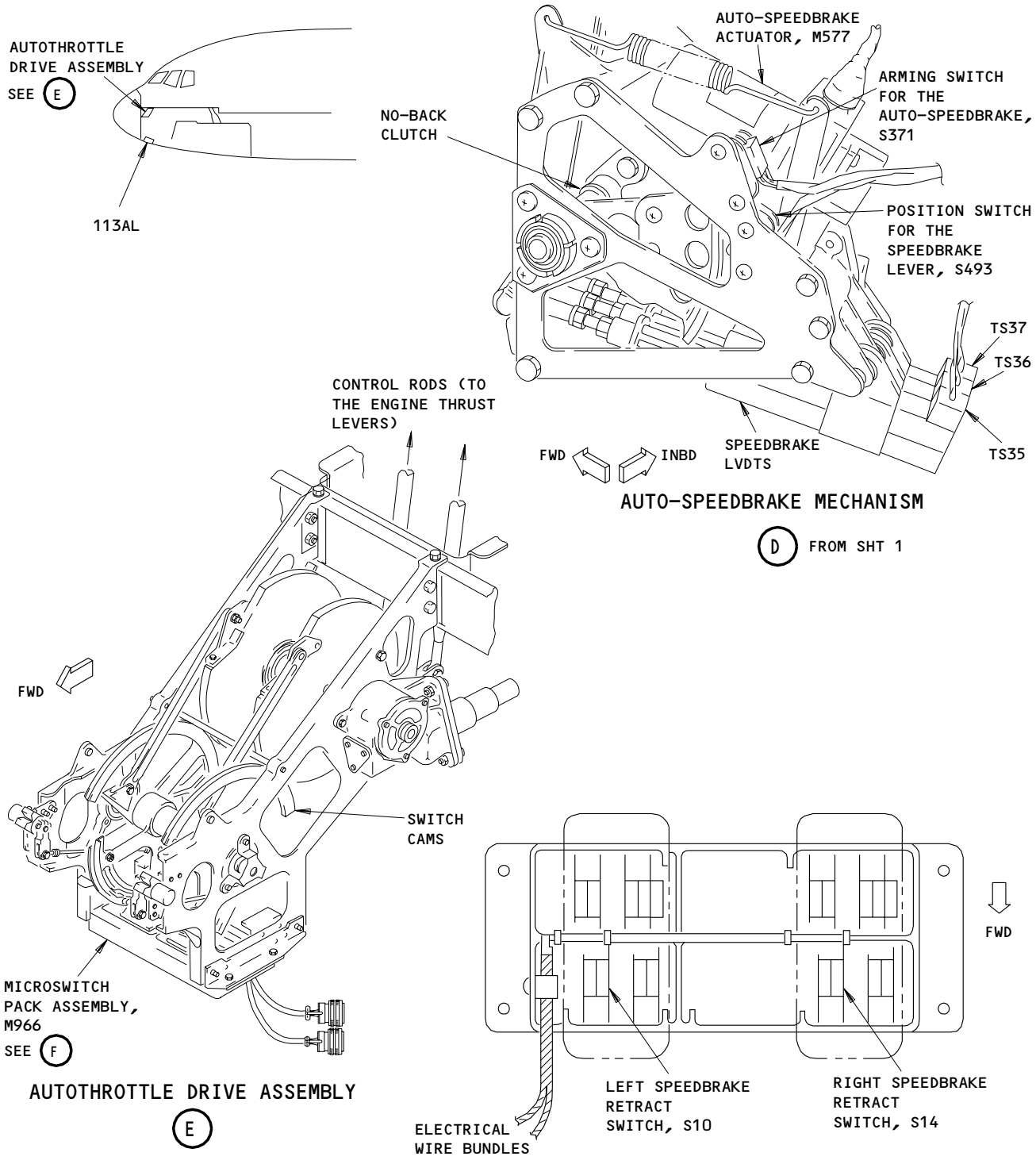
B



SPEEDBRAKE LEVER LINKAGE

C

Auto-Speedbrake Control System - Component Location
Figure 102 (Sheet 1)



Auto-Speedbrake Control System - Component Location
Figure 102 (Sheet 2)

Not Used
Figure 103

PREREQUISITES

MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
11G11

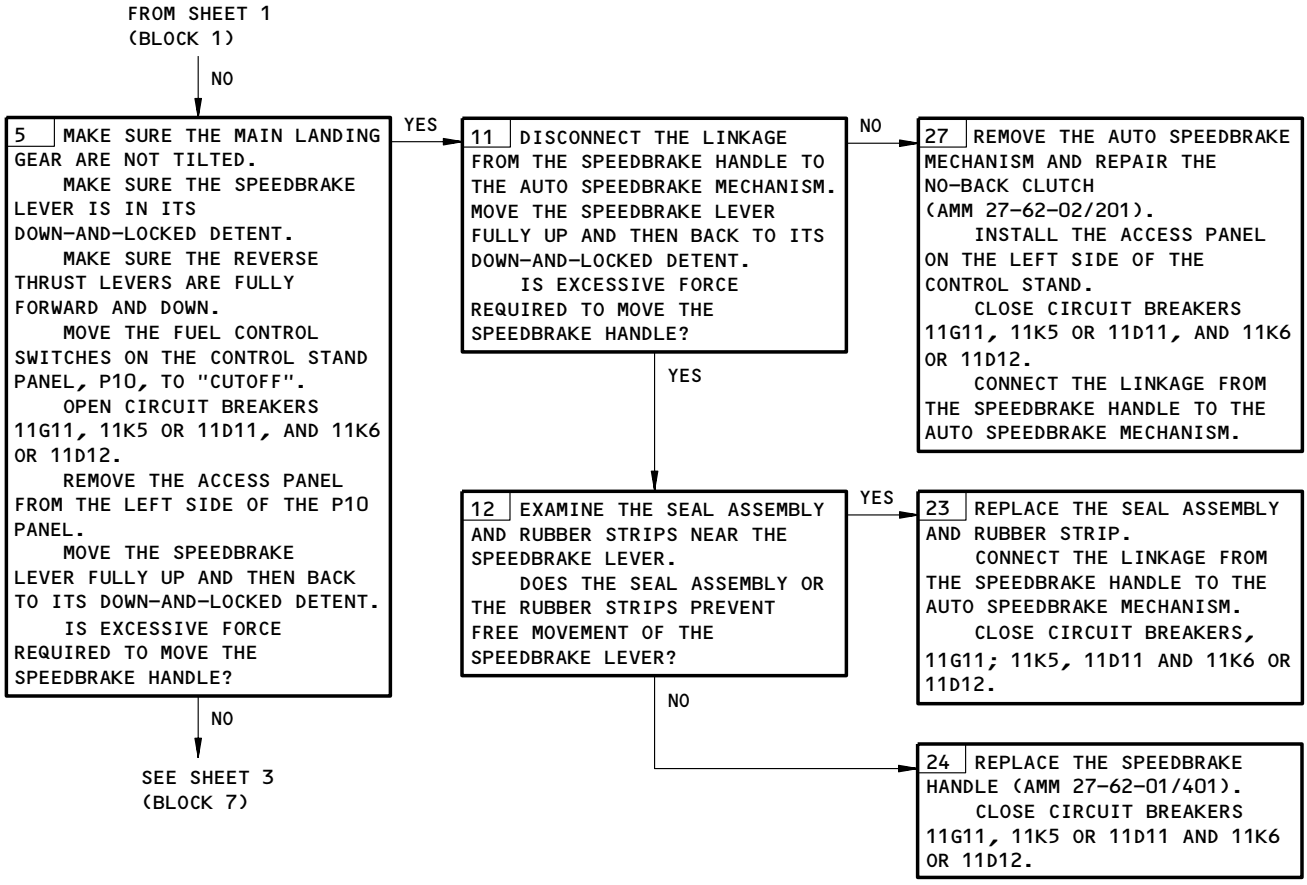
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

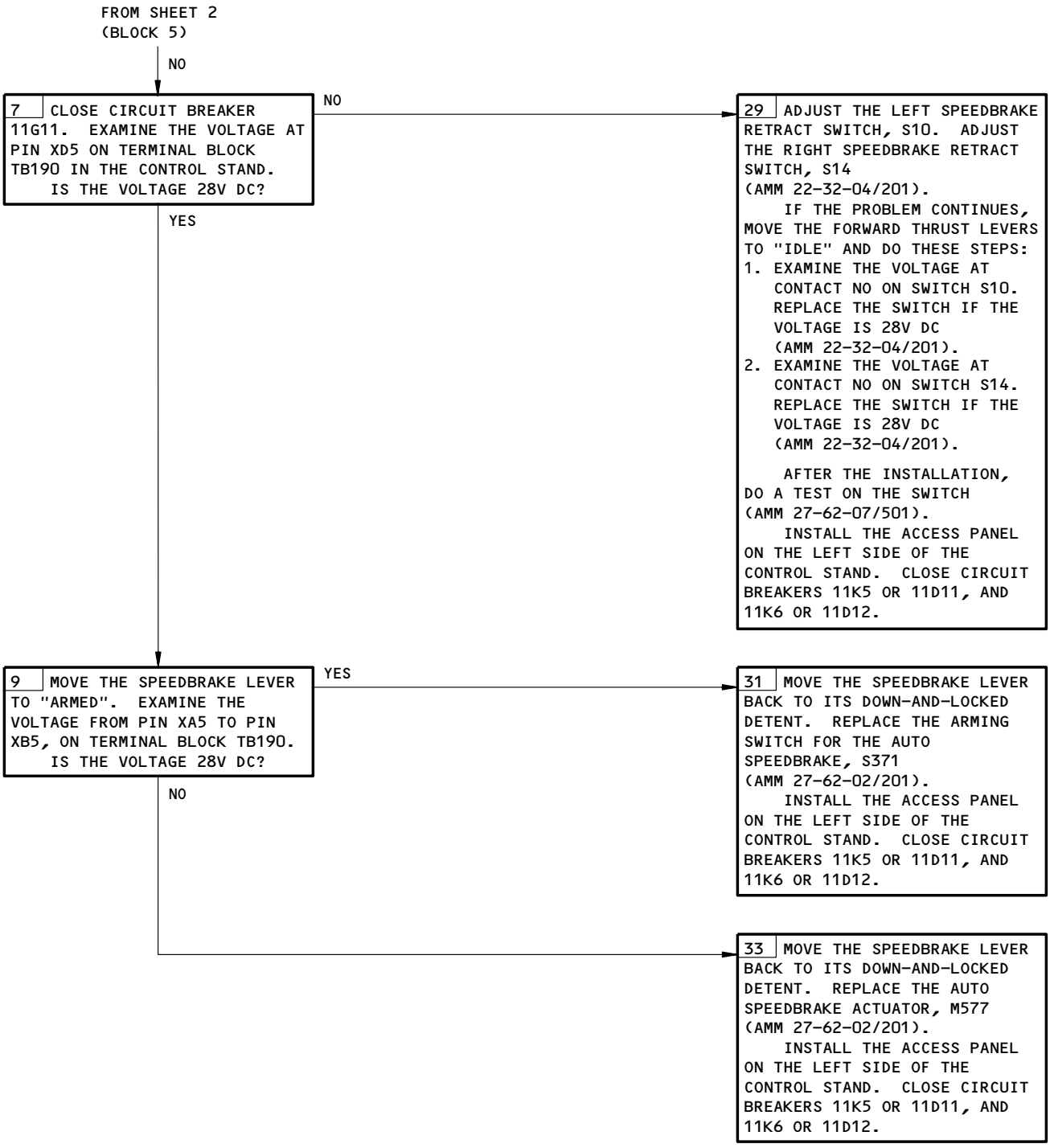
NOTE: AFTER YOU MOVE THE SPEEDBRAKE LEVER, STOP FOR AT LEAST 20 SECONDS TO LET THE SYSTEM FIND AND SHOW ALL THE APPLICABLE FAULTS.

SPEEDBRAKE LEVER FAILED TO EXTEND AUTOMATICALLY ON LANDING

Speedbrake Lever Failed to Extend Automatically on Landing
Figure 104 (Sheet 1)



Speedbrake Lever Failed to Extend Automatically on Landing
Figure 104 (Sheet 2)



Speedbrake Lever Failed to Extend Automatically on Landing
Figure 104 (Sheet 3)

PREREQUISITES

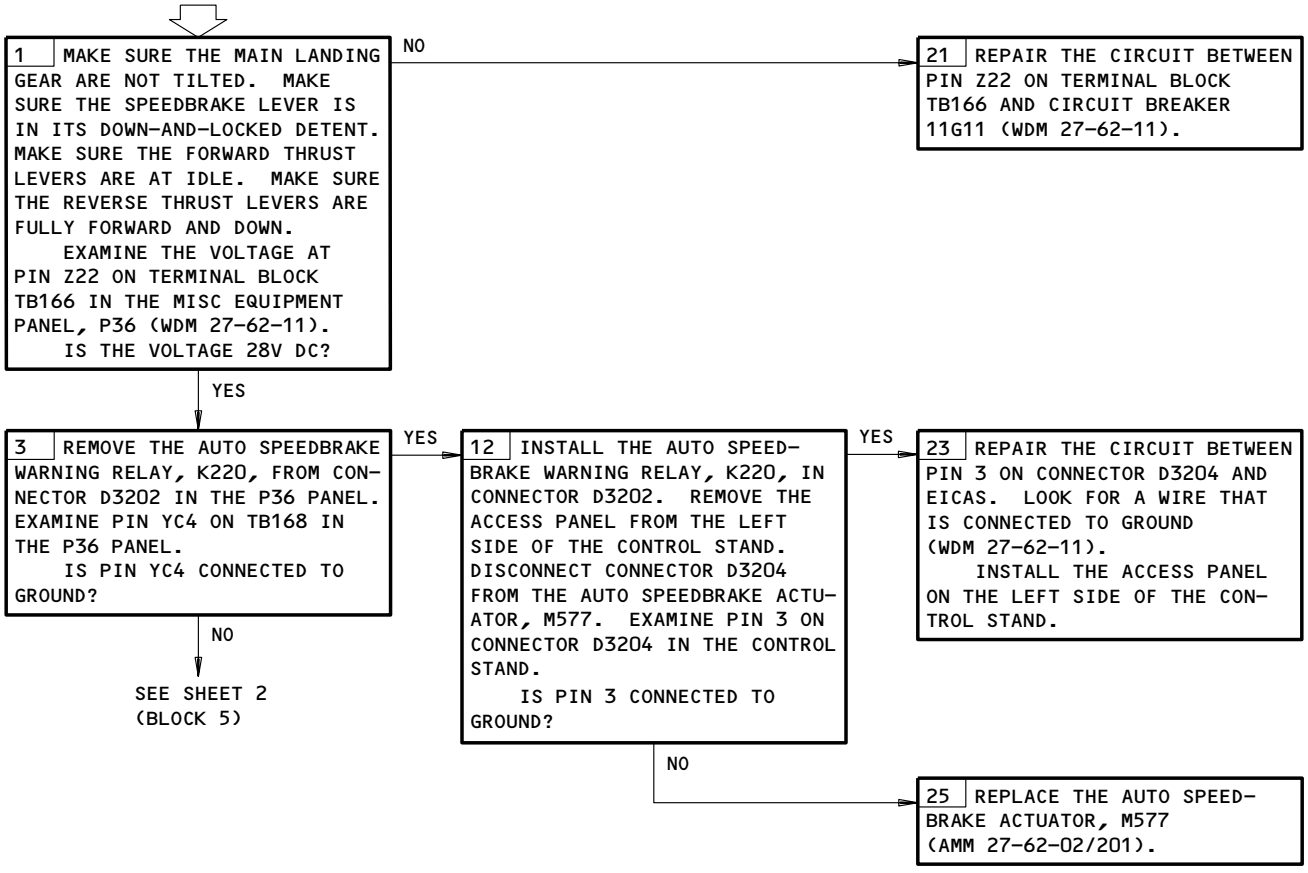
MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
11G11

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

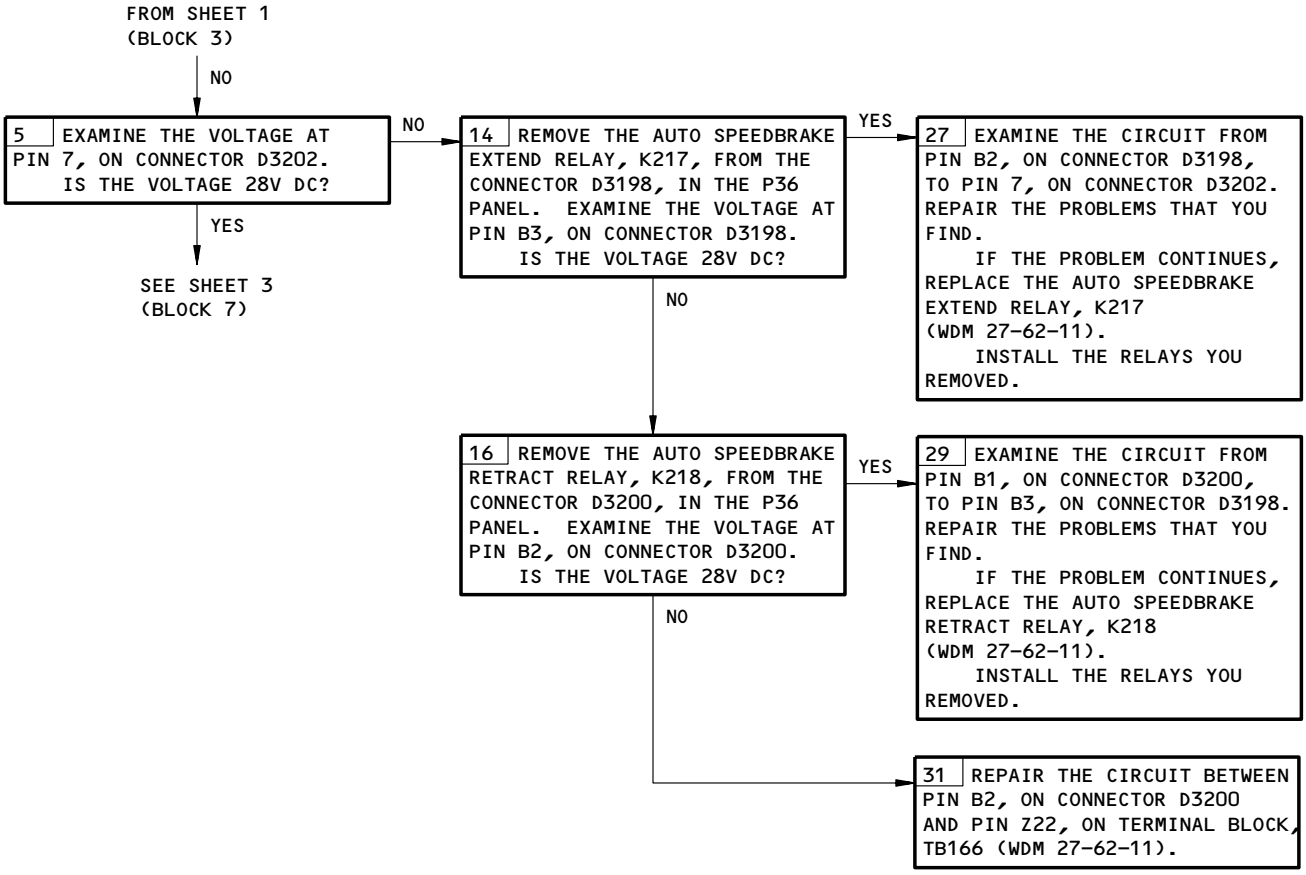
NOTE: AFTER THE SPEEDBRAKE LEVER MOVES, STOP FOR AT LEAST 20 SECONDS TO LET THE SYSTEM FIND AND SHOW ALL THE APPLICABLE FAULTS.

"AUTO SPD BRK" LGT ILLUM WITH SPEED-BRAKE LEVER DOWN. EICAS MESSAGE: "AUTO SPEEDBRAKE" DISPLAYED

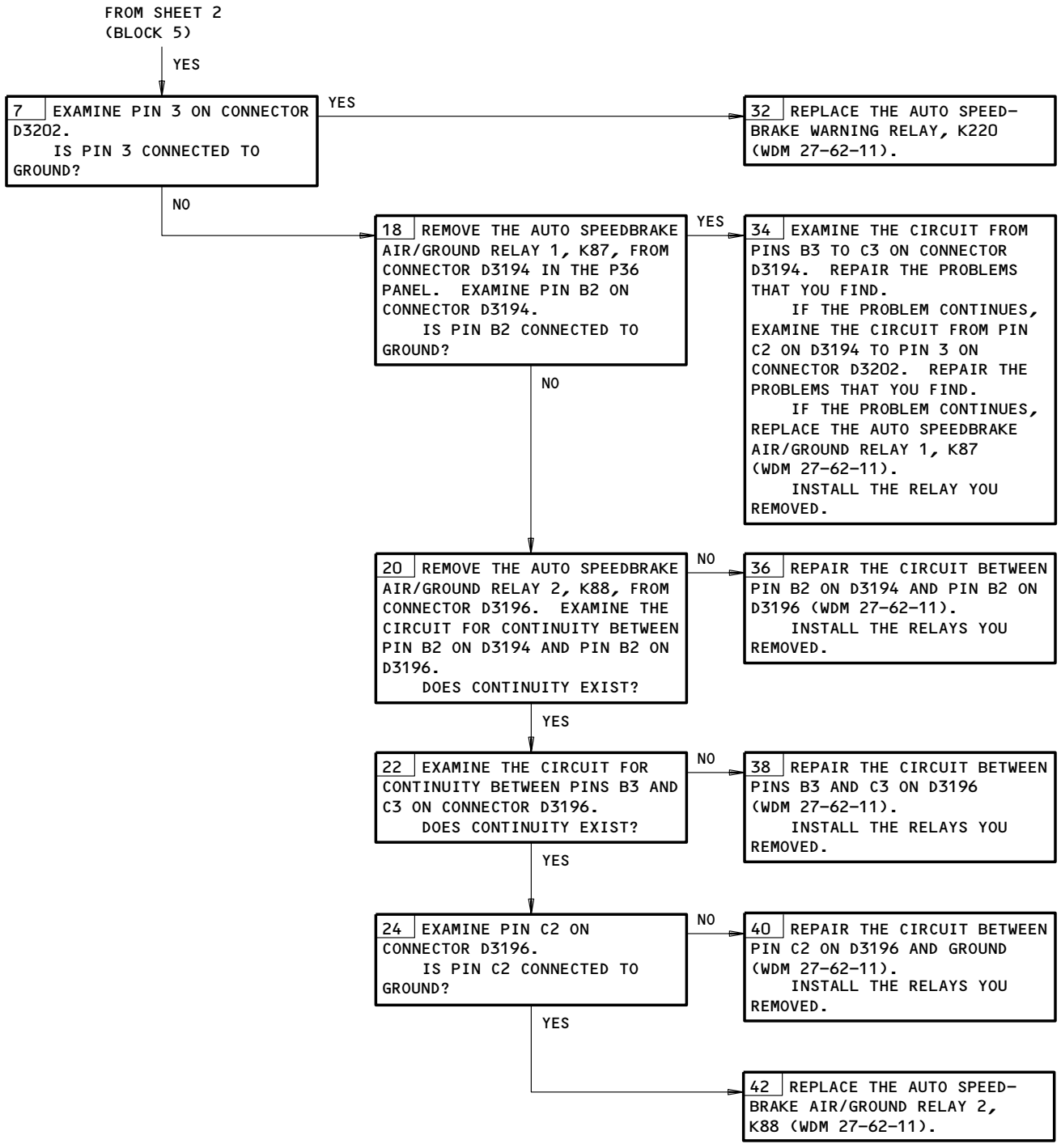


AUTO SPD BRK Lgt Illum with Speedbrake Lever Down. EICAS Message: AUTO SPEEDBRAKE Displayed
Figure 105 (Sheet 1)

217619



AUTO SPD BRK Lgt Illum with Speedbrake Lever Down. EICAS Message: AUTO SPEEDBRAKE Displayed.
Figure 105 (Sheet 2)



AUTO SPD BRK Lgt Illum with Speedbrake Lever Down. EICAS Message: AUTO SPEEDBRAKE Displayed.
Figure 105 (Sheet 3)

PREREQUISITES

MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
11G11

MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)
HYDRAULIC POWER IS ON (MM 29-11-00/201)

WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

NOTE: AFTER YOU MOVE THE SPEEDBRAKE LEVER, STOP FOR AT LEAST 20 SECONDS TO LET THE SYSTEM FIND AND SHOW ALL THE APPLICABLE FAULTS.

"AUTO SPD BRK" LGT ILLUM WITH SPEED-BRAKE LEVER ARMED. EICAS MESSAGE: "AUTO SPEEDBRAKE" DISPLAYED

1 MAKE SURE THE MAIN LANDING GEAR ARE NOT TILTED. MOVE THE SPEEDBRAKE LEVER TO THE "ARMED" DETENT. MAKE SURE THE FORWARD THRUST LEVERS ARE AT IDLE. MAKE SURE THE REVERSER THRUST LEVERS ARE FULLY FORWARD AND DOWN.
EXAMINE THE VOLTAGE AT PIN Z22 ON TERMINAL BLOCK TB166 IN THE MISC EQUIPMENT PANEL, P36 (WDM 27-62-11).
IS THE VOLTAGE 28V DC?

NO → 41 MOVE THE SPEEDBRAKE LEVER TO ITS DOWN-AND-LOCKED DETENT.
REPAIR THE CIRCUIT BETWEEN PIN Z22 ON TERMINAL BLOCK TB166 AND CIRCUIT BREAKER 11G11 (WDM 27-62-11).

YES

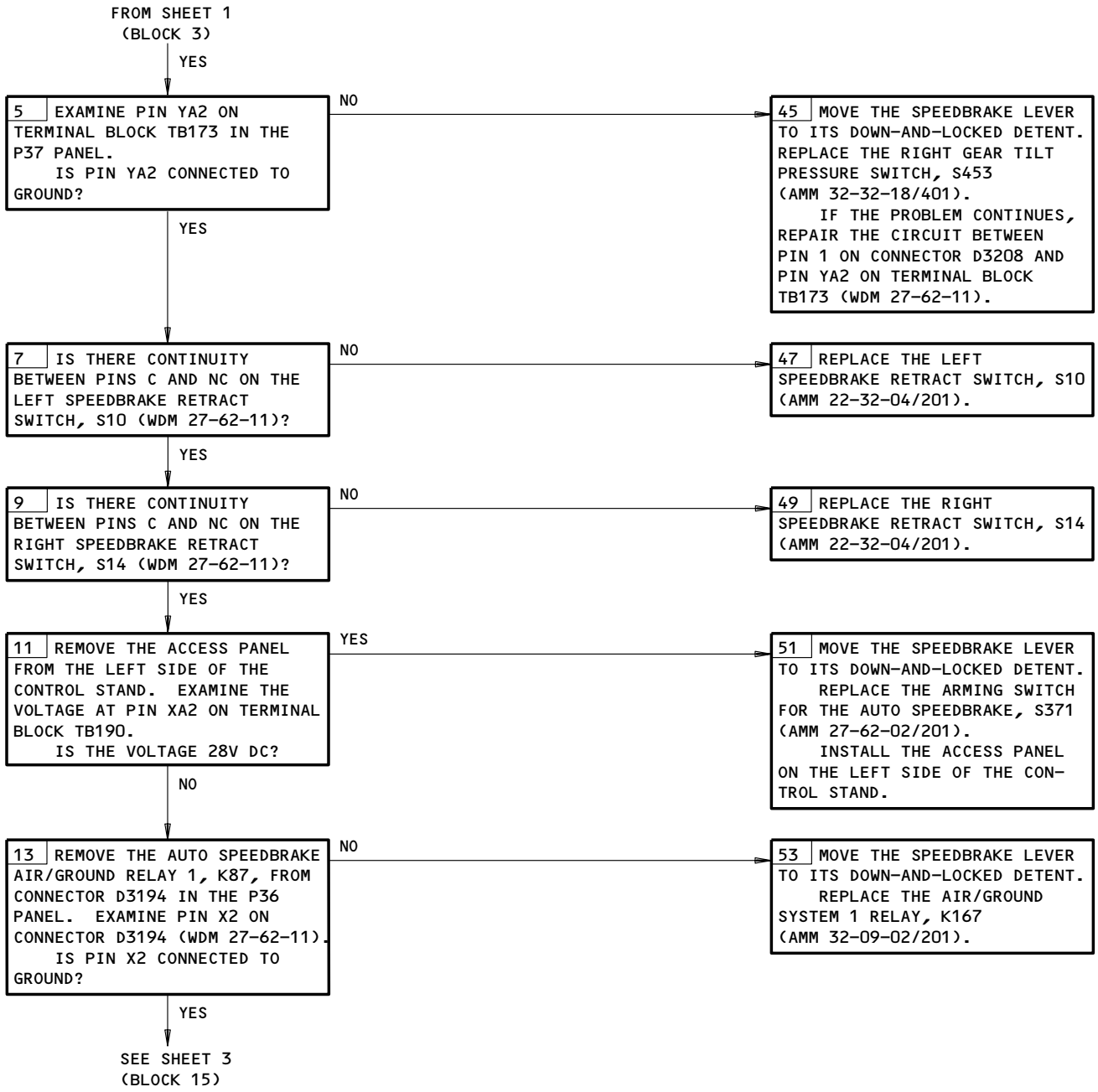
3 EXAMINE PIN YA3 ON TERMINAL BLOCK TB173 IN THE MISC EQUIPMENT PANEL, P37.
IS PIN YA3 CONNECTED TO GROUND?

NO → 43 MOVE THE SPEEDBRAKE LEVER TO ITS DOWN-AND-LOCKED DETENT.
REPLACE THE LEFT GEAR TILT PRESSURE SWITCH, S452 (MM 32-32-18/401).
IF THE PROBLEM CONTINUES, REPAIR THE CIRCUIT BETWEEN PIN 1 ON CONNECTOR D3192 AND PIN YA3 ON TERMINAL BLOCK TB173 (WDM 27-62-11).

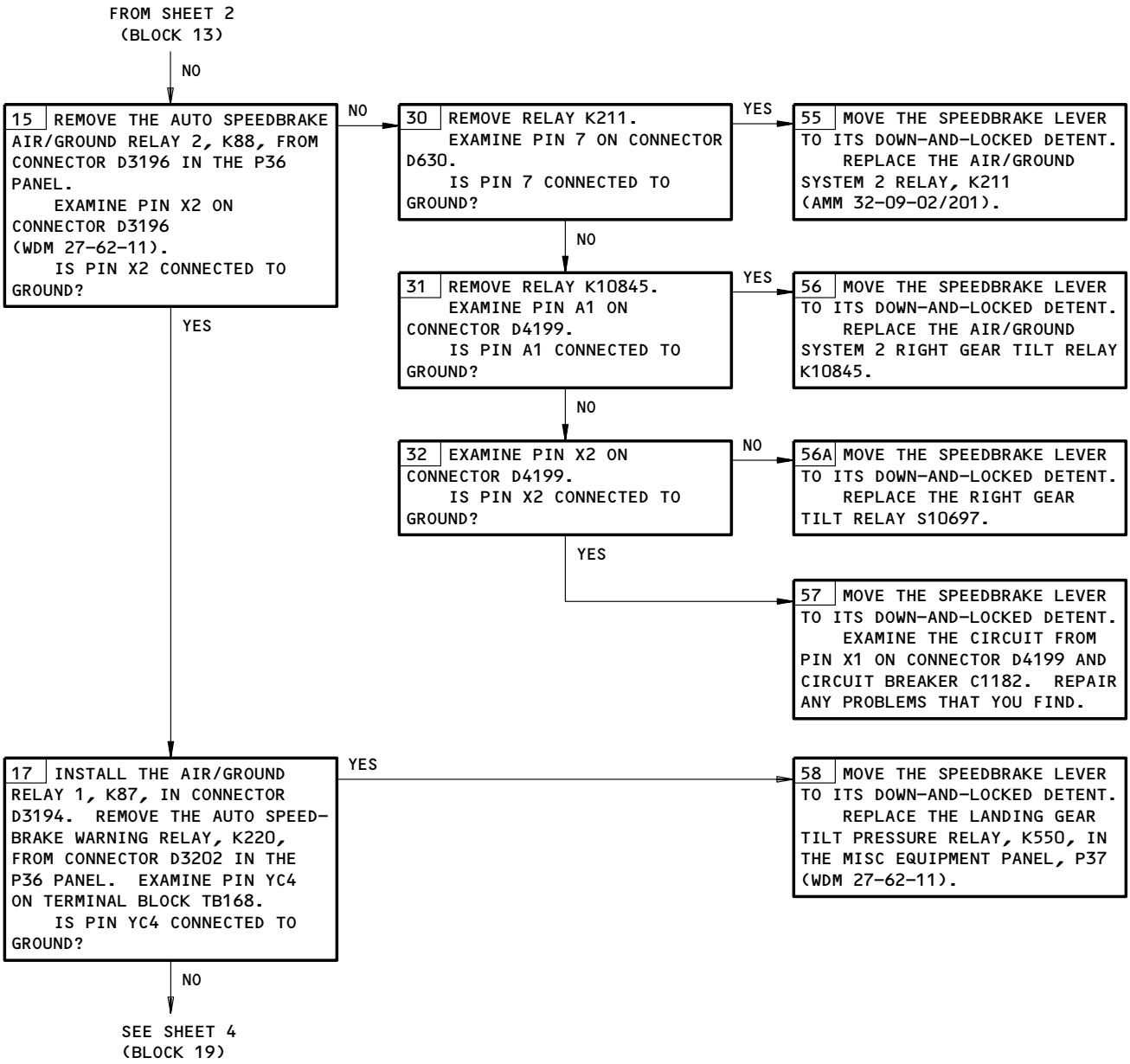
YES

SEE SHEET 2
(BLOCK 5)

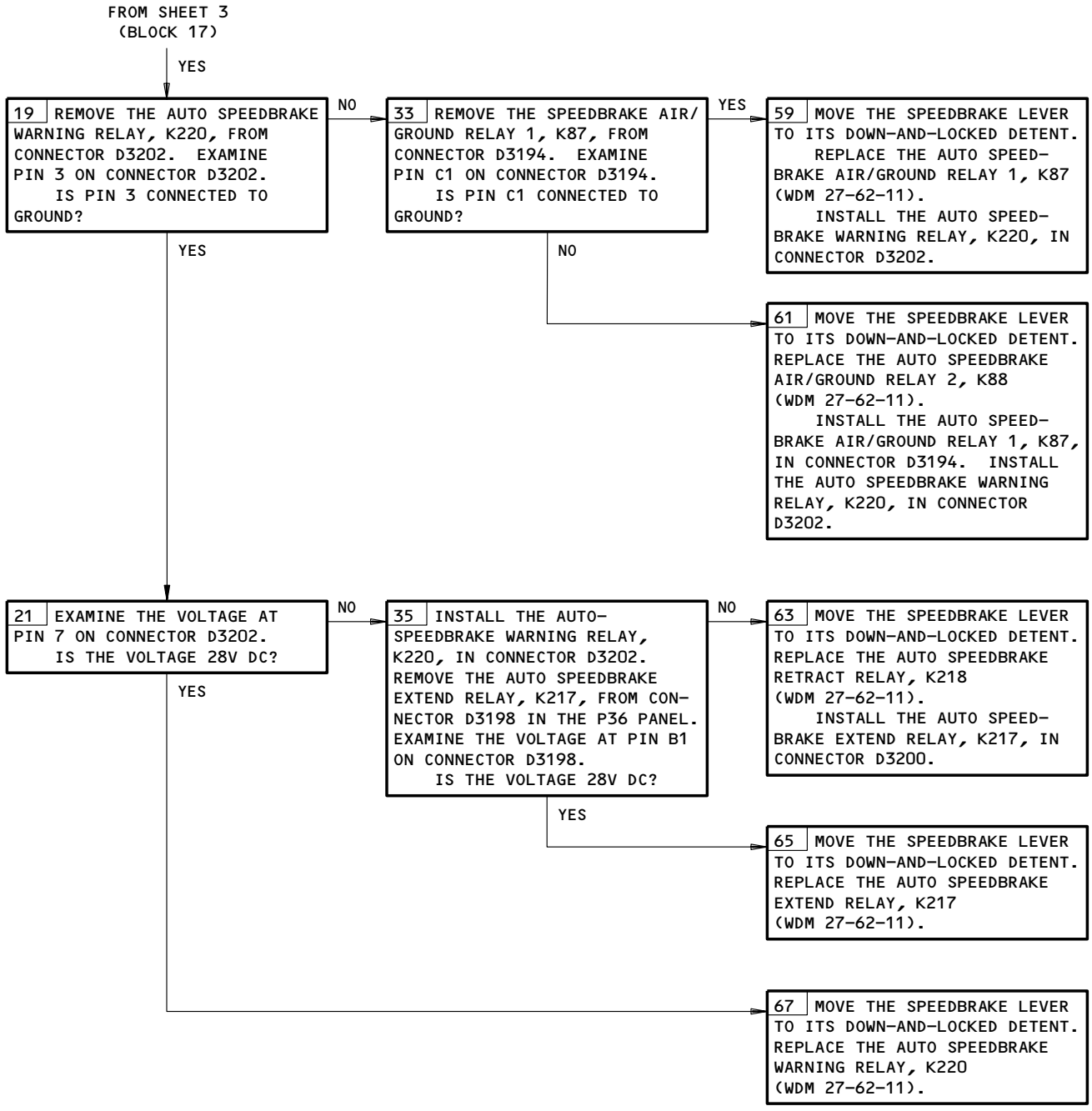
AUTO SPD BRK Lgt Illum with Speedbrake Lever Armed. EICAS Message:
AUTO SPEEDBRAKE Displayed
Figure 106 (Sheet 1)



AUTO SPD BRK Lgt Illum with Speedbrake Lever Armed. EICAS Message:
AUTO SPEEDBRAKE Displayed
Figure 106 (Sheet 2)



AUTO SPD BRK Lgt Illum with Speedbrake Lever Armed. EICAS Message:
AUTO SPEEDBRAKE Displayed
Figure 106 (Sheet 3)



AUTO SPD BRK Lgt Illum with Speedbrake Lever Armed. EICAS Message:
AUTO SPEEDBRAKE Displayed
Figure 106 (Sheet 4)

PREREQUISITES

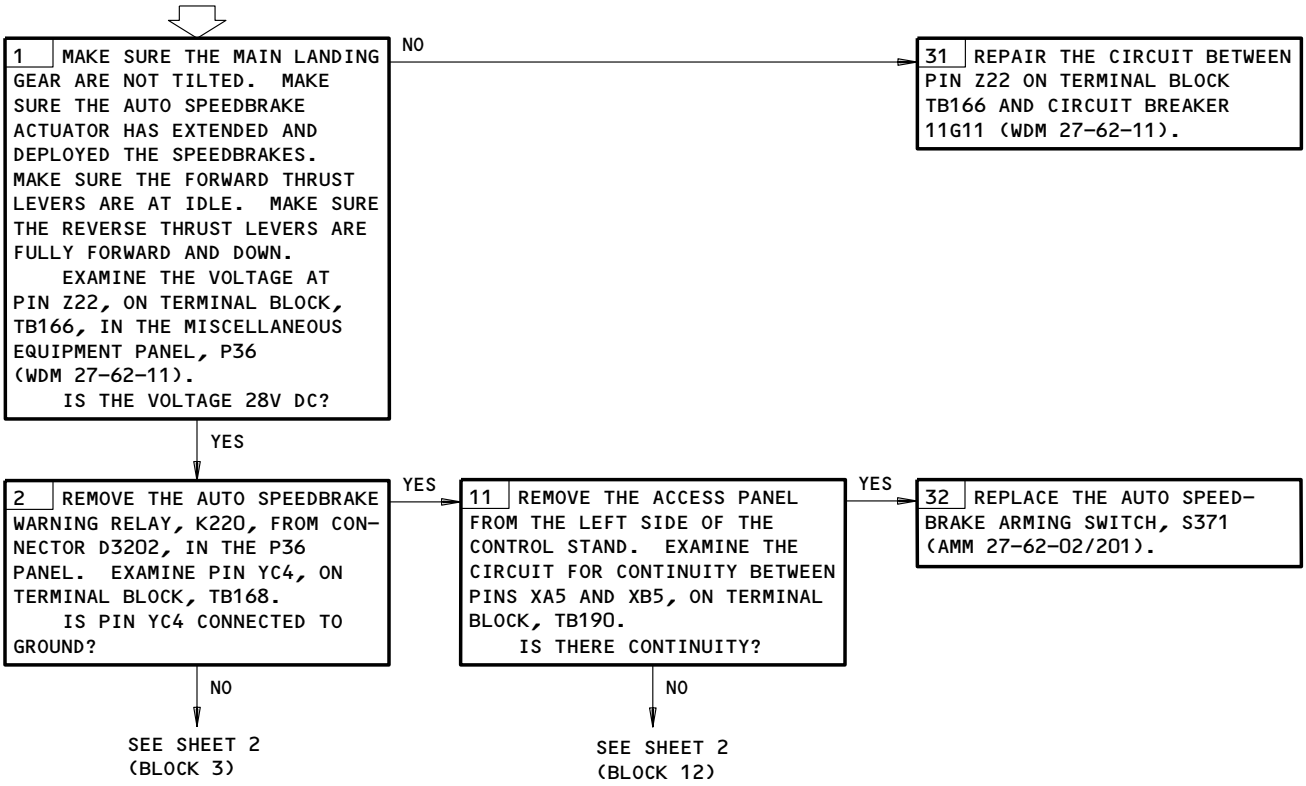
MAKE SURE THIS CIRCUIT BREAKER IS CLOSED:
11G11

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

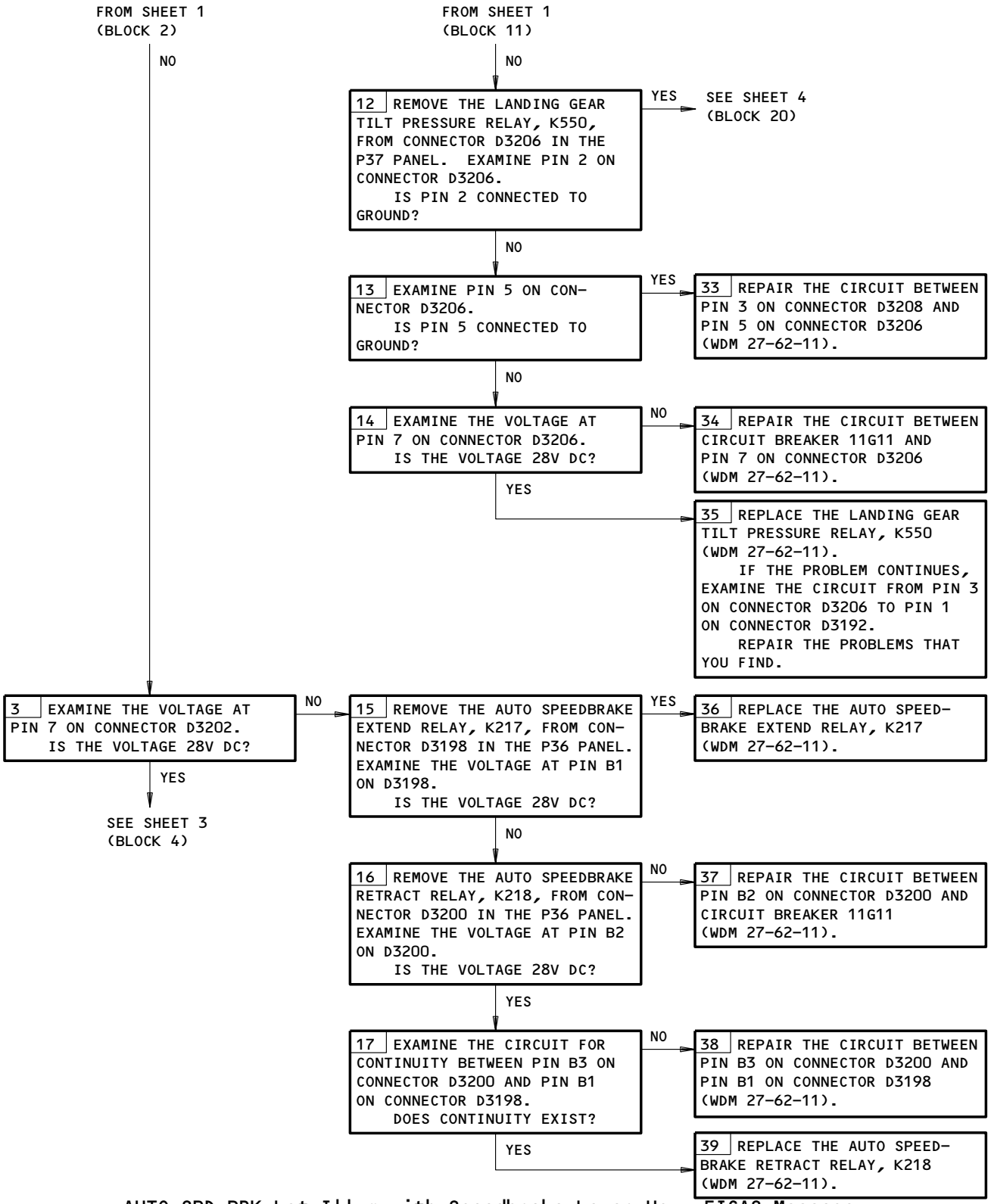
WARNING: KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN occur WHEN HYDRAULIC POWER IS SUPPLIED.

NOTE: AFTER THE SPEEDBRAKE LEVER MOVES, STOP FOR AT LEAST 20 SECONDS TO LET THE SYSTEM FIND AND SHOW ALL THE APPLICABLE FAULTS.

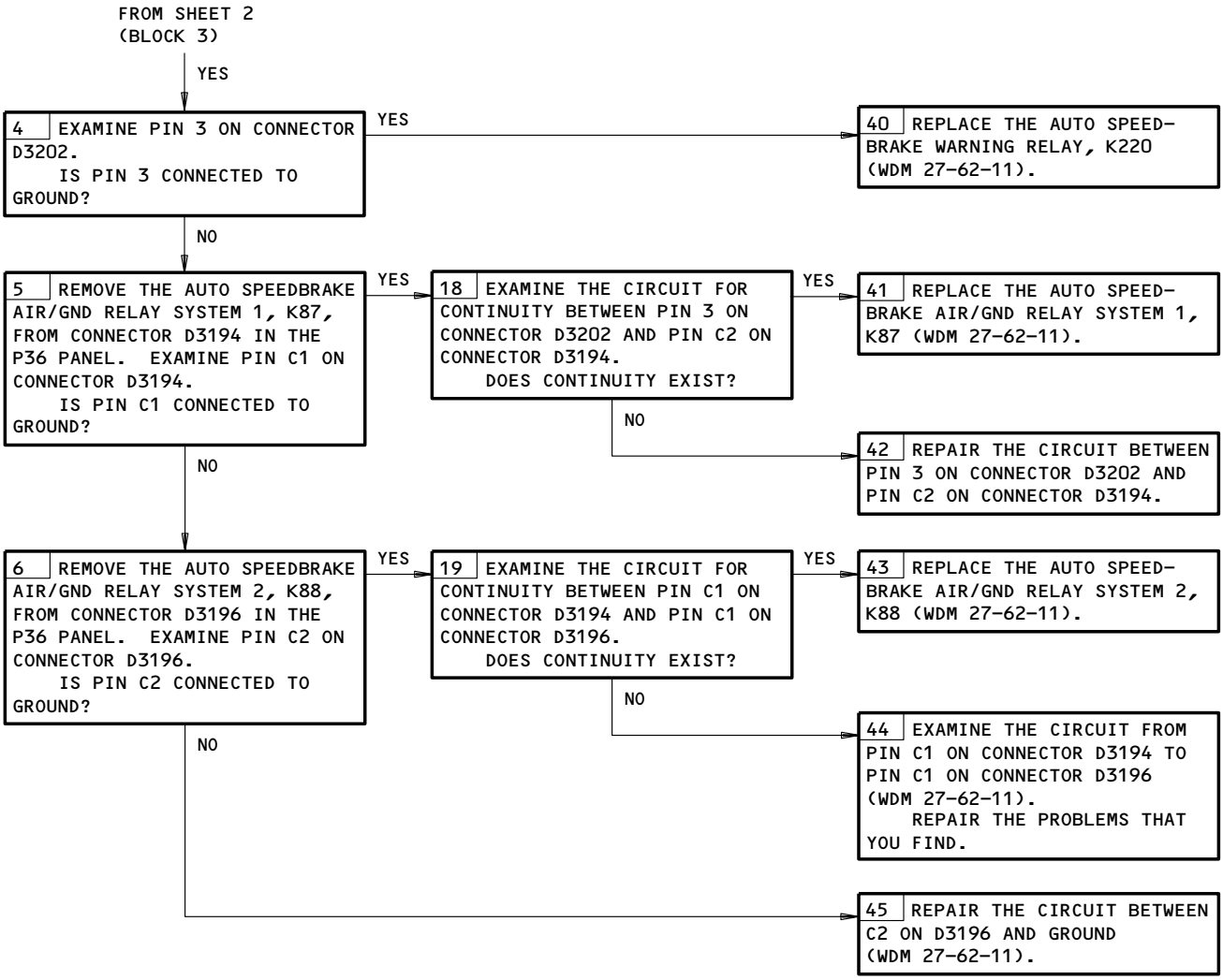
"AUTO SPD BRK" LGT ILLUM WITH SPEED-BRAKE LEVER UP. EICAS MESSAGE: "AUTO SPEEDBRAKE" DISPLAYED



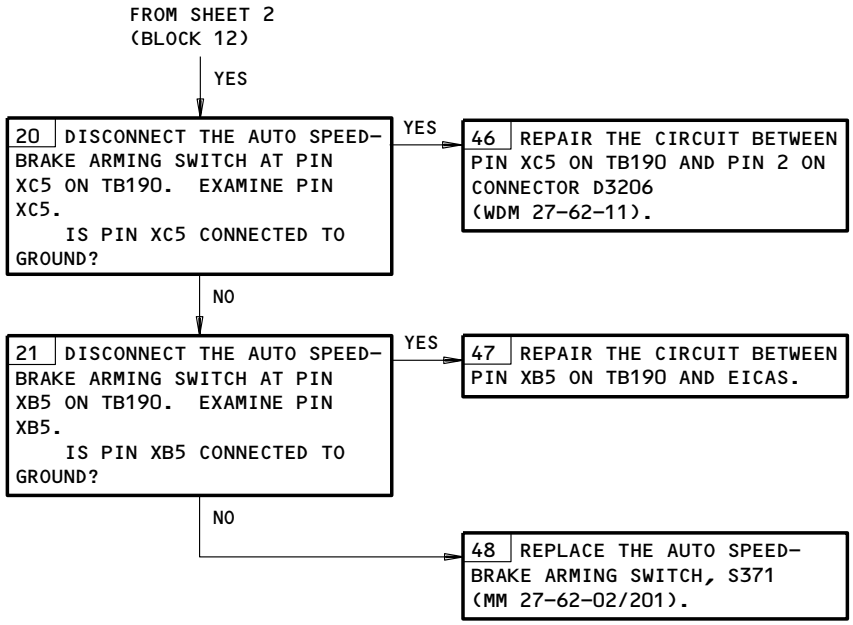
AUTO SPD BRK Lgt Illum with Speedbrake Lever Up. EICAS Message: AUTO SPEEDBRAKE Displayed
Figure 107 (Sheet 1)



AUTO SPD BRK Lgt Illum with Speedbrake Lever Up. EICAS Message: AUTO SPEEDBRAKE Displayed
Figure 107 (Sheet 2)



AUTO SPD BRK Lgt Illum with Speedbrake Lever Up. EICAS Message:
AUTO SPEEDBRAKE Displayed
Figure 107 (Sheet 3)



AUTO SPD BRK Lgt Illum with Speedbrake Lever Up. EICAS Message:
AUTO SPEEDBRAKE Displayed
Figure 107 (Sheet 4)

LEADING EDGE SLAT SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
ACTUATOR - ROTARY	10	20	SEE THE SPECIFIC SLAT	27-81-18
CIRCUIT BREAKERS	1		FLIGHT COMPARTMENT, P6 PANEL, P11 PANEL	
ALTN FLAP PWR, C323		1	6D23	*
ALTN SLAT PWR, C3014		1	6D20	*
FLAP/SLAT ALTN DR SHUTOFF 2, C4271		1	11H24	*
FLAP/SLAT ALTN DR SHUTOFF ARM, C4212		1	11H23	*
FLAP/SLAT ELEC UNIT 1 CONT, C1539		1	11G13	*
FLAP/SLAT ELEC UNIT 1 POWER, C1025		1	11G12	*
FLAP/SLAT ELEC UNIT 1 SENSOR, C1037		1	11G14	*
FLAP/SLAT ELEC UNIT 2 CONT, C1541		1	11C15	*
FLAP/SLAT ELEC UNIT 2 POWER, C1521		1	11C14	*
FLAP/SLAT ELEC UNIT 2 SENSOR, C1524		1	11C16	*
FLAP/SLAT ELEC UNIT 3 CONT, C1540		1	11G22	*
FLAP/SLAT ELEC UNIT 3 POWER, C4210		1	11G21	*
FLAP/SLAT ELEC UNIT 3 SENSOR, C1038		1	11G23	*
FLAP/SLAT SHUTOFF 1, C4110		1	11C17	*
STICK SHAKER LEFT, C1039		1	11C11	*
STICK SHAKER RIGHT, C4209		1	11J21	*
WARN ELEX A, C565		1	11J33	*
WARN ELEX B, C566		1	11B18	*
COMPUTER - (REF 31-41-00, FIG. 101)				
EICAS LEFT, M10181				
EICAS RIGHT, M10182				
COMPUTER - (REF 34-12-00, FIG. 101)				
LEFT AIR DATA, M100				
GEARBOX - ANGLE	5	1	511BB,611BB	27-81-15
INDICATOR - FLAP/SLAT POSITION, N15	1	1	FLIGHT COMPARTMENT, P3 PANEL	*
LEVER - (REF 27-51-00, FIG. 101)				
FLAP CONTROL				
LIGHT - LEADING EDGE, L433	1	1	FLIGHT COMPARTMENT, P3 PANEL	*
MODULE - (REF 27-32-00, FIG. 101)				
LEFT STALL WARNING, M615				
RIGHT STALL WARNING, M938				
MODULE - FLAP/SLAT DEPRESSURIZATION, V10060	11	1	LEFT MAIN GEAR WHEEL WELL	27-51-29
MODULE - LE SLAT CONTROL VALVE	4	1	511CB	27-81-06
MOTOR - ALTERNATE LE SLAT DRIVE, M10220	4	1	511CB	27-81-08
MOTOR - HYDRAULIC	4	1	511CB	27-81-08
RELAY - (REF 31-01-33, FIG. 101)				
ALT LE SLAT, K10494				
ALT SLAT EXTEND, K10097				
ALT SLAT RETRACT, K10098				
FLAP/SLAT ALT DRIVE, K10095				
SLAT - INBOARD LE				
SLAT NO. 5	8	1	511DB,511EB,511FB,511GB,511HB,511JB	27-81-01
SLAT NO. 6	8	1	611DB,611EB,611FB,611GB,611HB,611JB	27-81-01

* SEE THE WDM EQUIPMENT LIST

Leading Edge Slat System - Component Index
Figure 101 (Sheet 1)

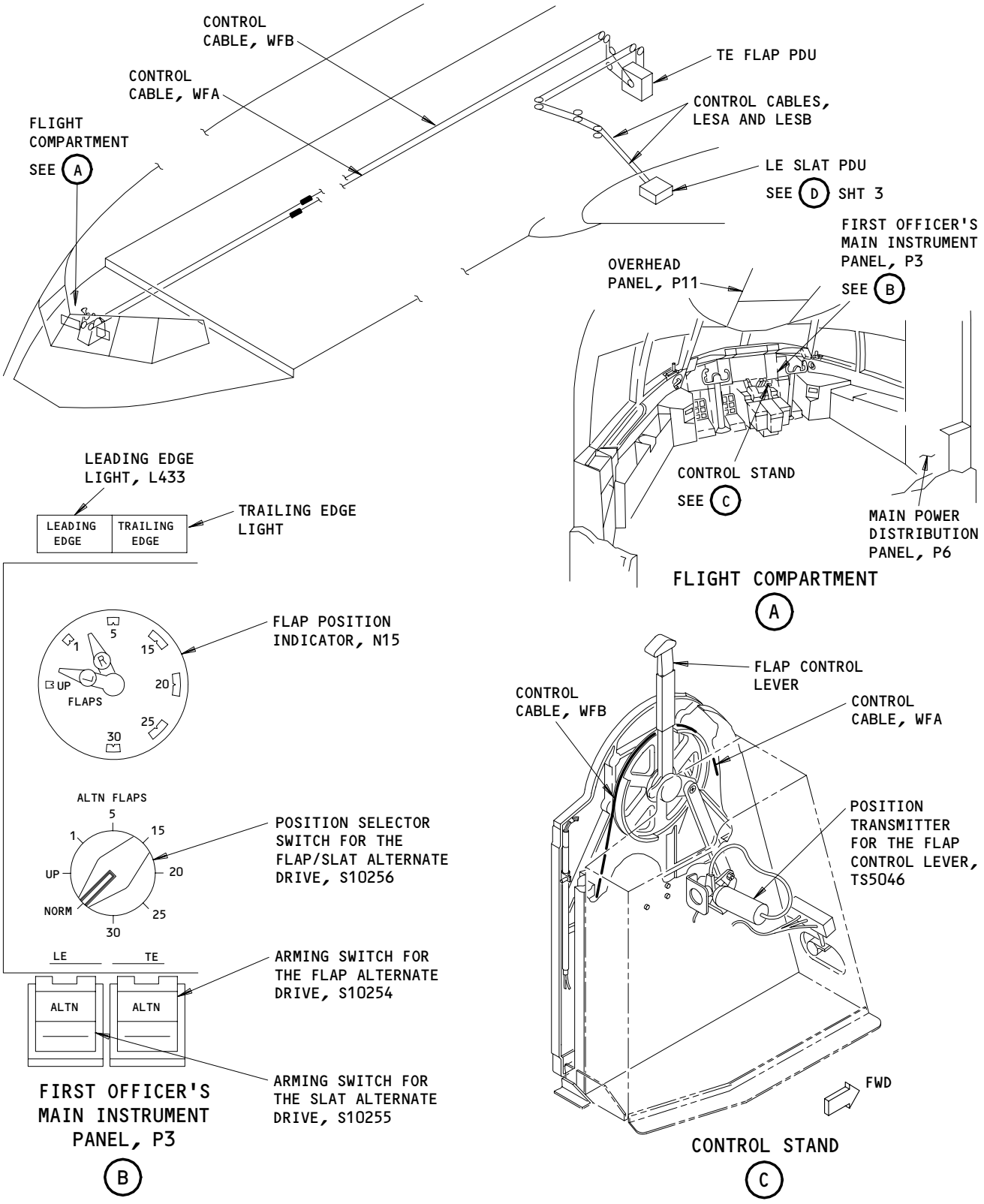
COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
SLAT - OUTBOARD LE				
SLAT NO. 1	8	1	521RB,521PB	27-81-02
SLAT NO. 2	8	1	521MB,521KB	27-81-02
SLAT NO. 3	8	1	521GB,521EB	27-81-02
SLAT NO. 4	8	1	521CB,521AB	27-81-02
SLAT NO. 7	8	1	621AB,621CB	27-81-02
SLAT NO. 8	8	1	621EB,621GB,621HB	27-81-02
SLAT NO. 9	8	1	621KB,621MB	27-81-02
SLAT NO. 10	8	1	621PB,621RB	27-81-02
SOLENOID - AUTO SLAT VALVE	4	1	511CB	27-81-06
SWITCH - (FIM 27-51-00/101) DRIVE ARMING, S10254 FLAP/SLAT DEPRESSURIZATION PRESSURE, S1 TRAILING EDGE ALTERNATE				
SWITCH - ALTERNATE FLAPS/SLATS POSITION SELECTOR, S10256	1	1	FLIGHT COMPARTMENT, P3 PANEL	*
SWITCH - INBOARD SLAT LOSS SENSING, S10340	6	1	1> 511DB; 2> 511HB	27-81-41
SWITCH - INBOARD SLAT LOSS SENSING, S10338	6	1	1> 611DB; 2> 611HB	27-81-41
SWITCH - LE SLAT ALTERNATE ARM, S10255	1	1	FLIGHT COMPARTMENT, P3 PANEL	*
SWITCH - OUTBOARD SLAT LOSS SENSING, S10341	6	1	521KB	27-81-42
SWITCH - OUTBOARD SLAT LOSS SENSING, S10339	6	1	621KB	27-81-42
TRACK - INBOARD LE SLAT AUXILIARY	8	4	SEE THE SPECIFIED SLAT	27-81-11
TRACK - INBOARD LE SLAT MAIN	8	6	SEE THE SPECIFIED SLAT	27-81-10
TRACK - OUTBOARD LE SLAT AUXILIARY	8	32	SEE THE SPECIFIED SLAT	27-81-13
TRACK - OUTBOARD LE SLAT MAIN	8	32	SEE THE SPECIFIED SLAT	27-81-12
TRANSFORMER - (FIM 31-01-70/101) FSEU-2, T153				
TRANSMITTER - (FIM 27-51-00/101) FLAP PDU POSITION, TS5050 LEFT FLAP POSITION, TS5049 RIGHT FLAP POSITION, TS5051				
TRANSMITTER - (FIM 27-81-00/101) LEFT SLAT POSITION, TS5083 RIGHT SLAT POSITION, TS5047				
TRANSMITTER - LE SLAT PDU POSITION, TS5048	4	1	511CB	27-81-08
TUBE - TORQUE	2		SEE SPECIFIED SLAT AND THE AFT END OF THE FORWARD CARGO COMPARTMENT	27-81-20
UNIT - (FIM 27-51-00/101) FLAP/SLAT ELECTRONIC-1, M10331 FLAP/SLAT ELECTRONIC-2, M10332 FLAP/SLAT ELECTRONIC-3, M10333				
UNIT - LE SLAT POWER DRIVE	3	1	511CB,511DB	27-81-07
VALVE - (FIM 27-51-00/101) FLAP/SLAT DEPRESSURIZATION PRIORITY FLAP/SLAT DEPRESSURIZATION SEQUENCE FLAP/SLAT DEPRESSURIZATION SHUT OFF FLAP/SLAT DEPRESSURIZATION SOLENOID, V1				
VALVE - LE SLAT BYPASS,	7	1	193BL (LEFT WING-BODY FAIRING, FOUND FORWARD OF WING)	27-81-09

* SEE THE WDM EQUIPMENT LIST

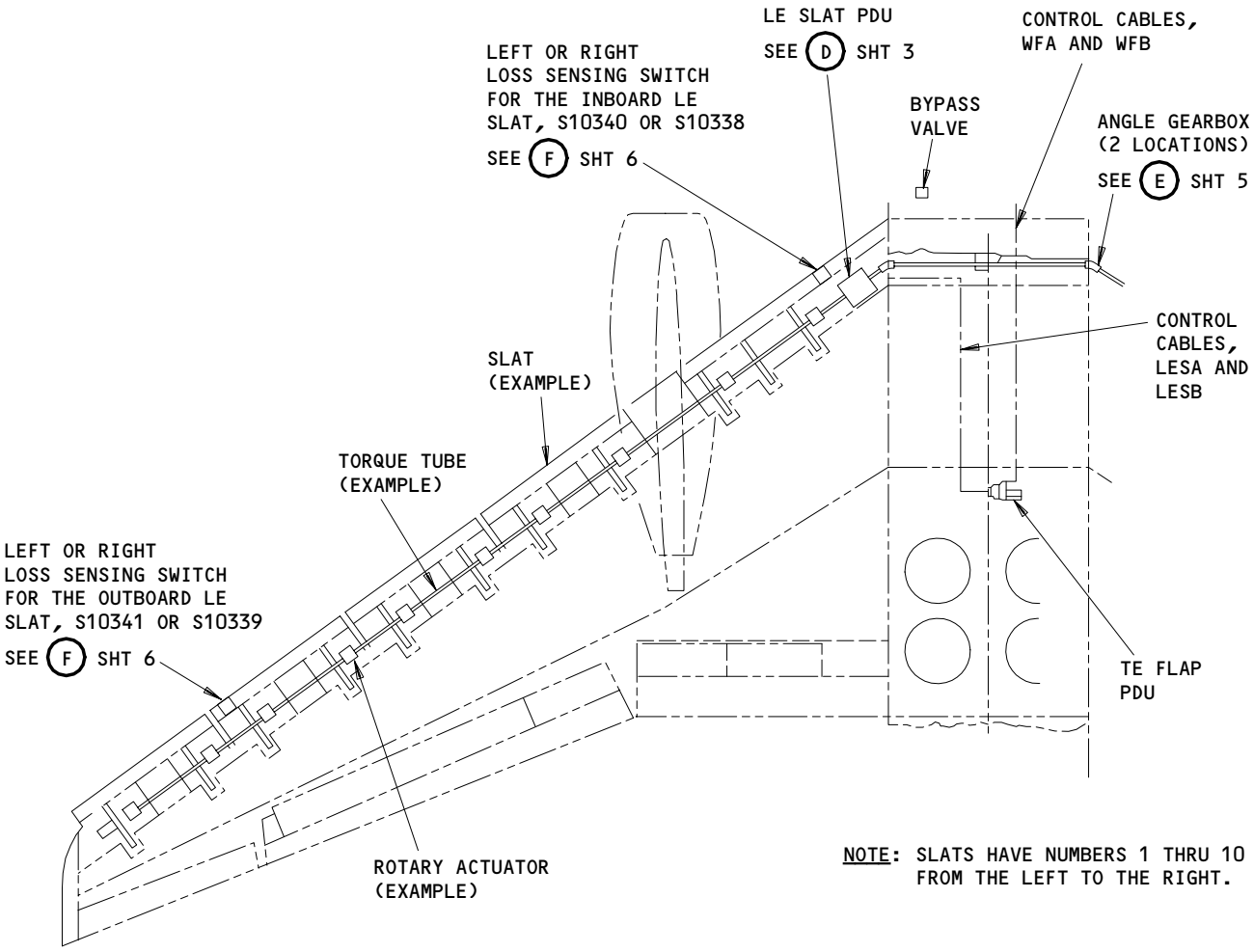
1> FOR ROLLER TYPE SENSOR SWITCH

2> FOR CAM TYPE SENSOR SWITCH

Leading Edge Slat System - Component Index
Figure 101 (Sheet 2)

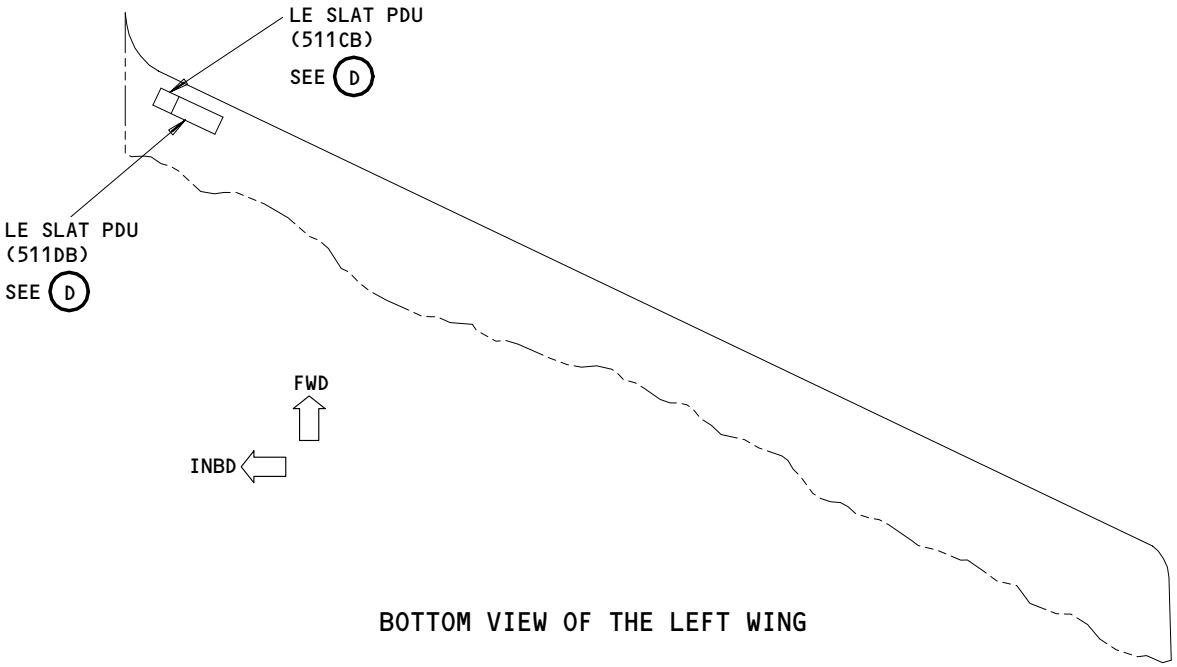


Leading Edge Slat System - Component Location
Figure 102 (Sheet 1)

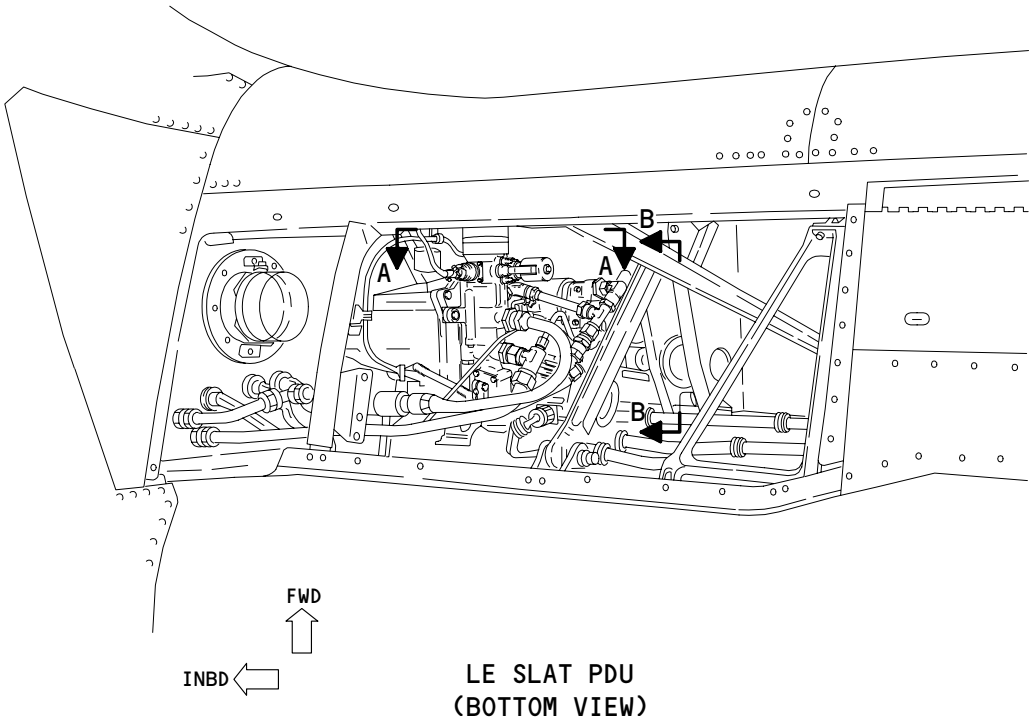


PLAN VIEW
(LEFT WING SHOWN, RIGHT WING IS OPPOSITE)

Leading Edge Slat System - Component Location
Figure 102 (Sheet 2)

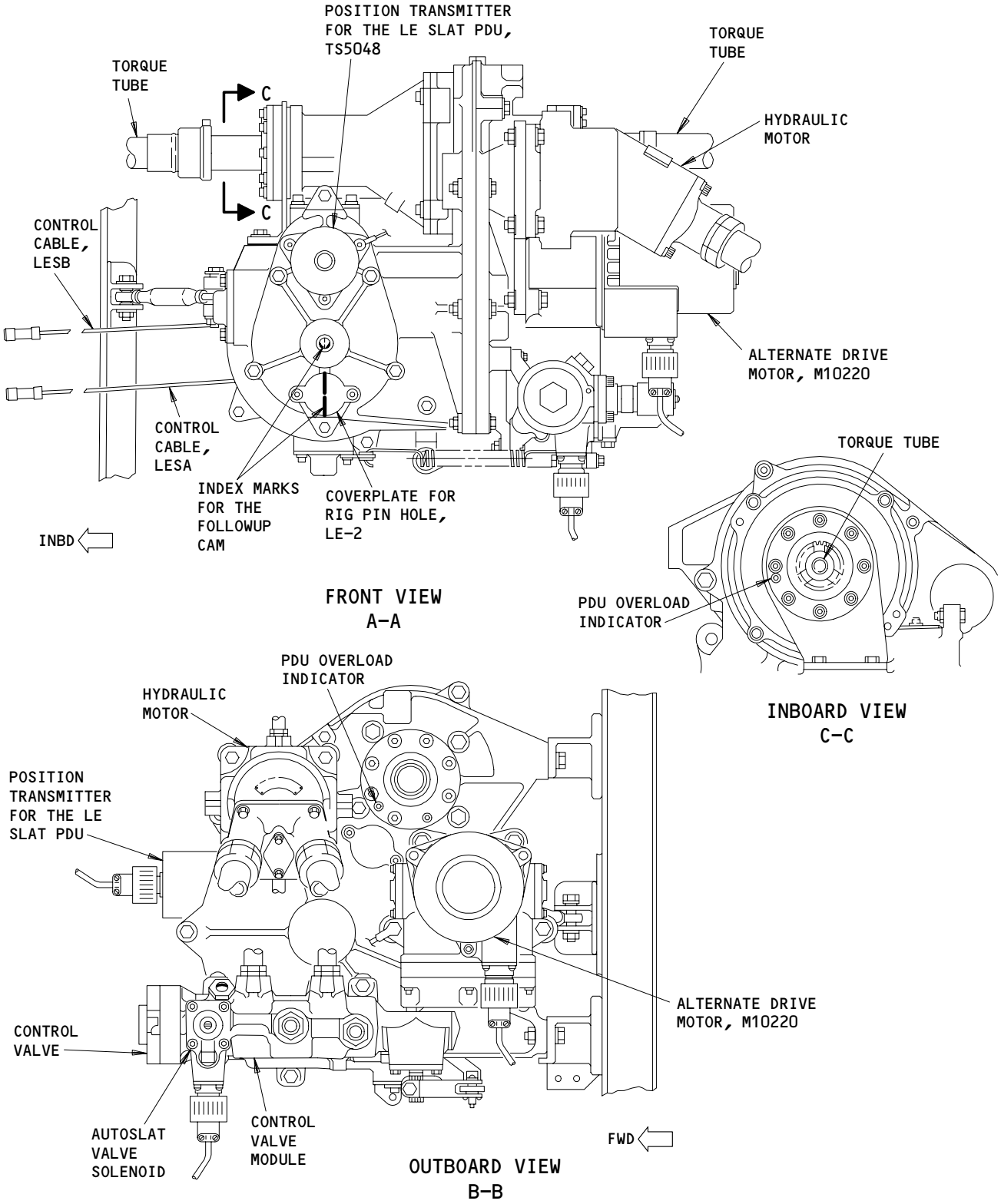


BOTTOM VIEW OF THE LEFT WING

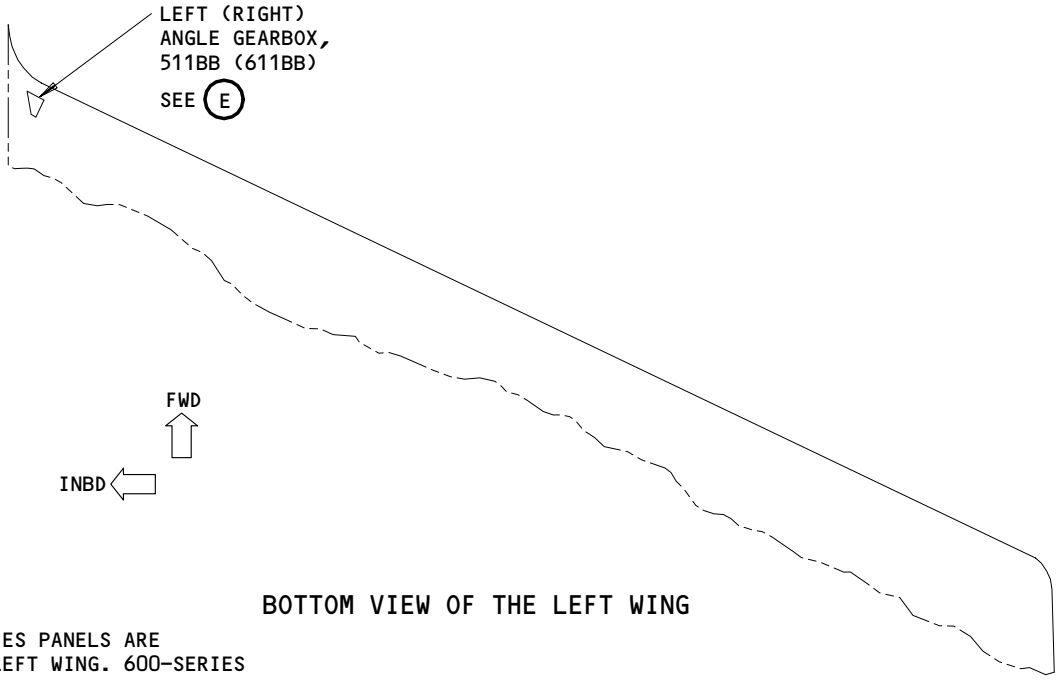


LE SLAT PDU
(BOTTOM VIEW)
D

Leading Edge Slat System – Component Location
Figure 102 (Sheet 3)

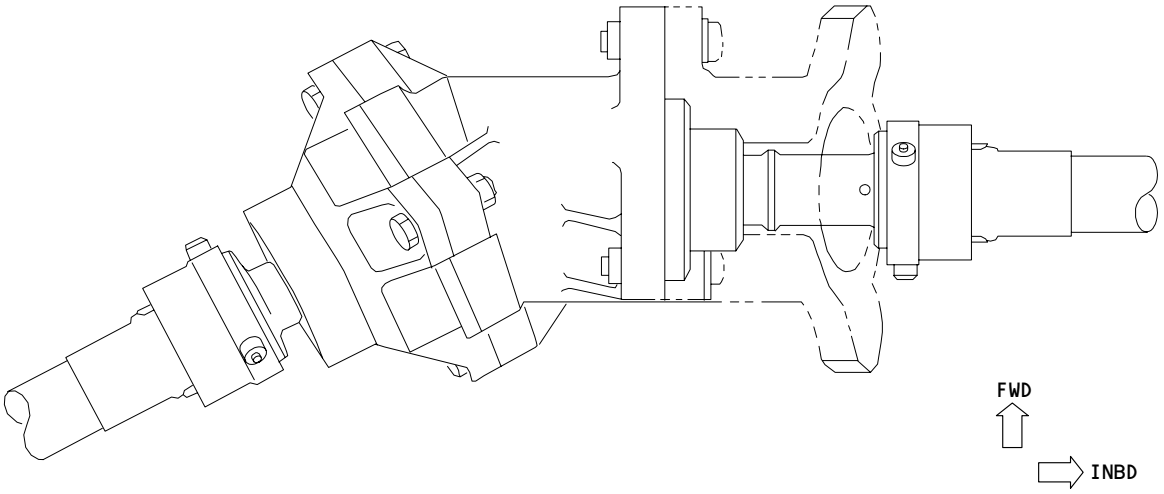


Leading Edge Slat System - Component location
Figure 102 (Sheet 4)



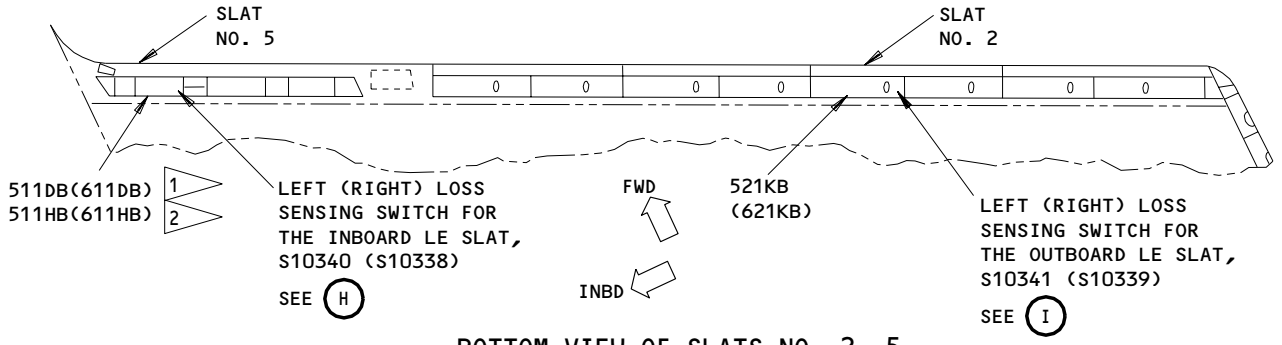
BOTTOM VIEW OF THE LEFT WING

NOTE: 500-SERIES PANELS ARE ON THE LEFT WING. 600-SERIES PANELS ARE ON THE RIGHT WING.



ANGLE GEARBOX
(LEFT WING SHOWN, RIGHT WING IS OPPOSITE)
(E)

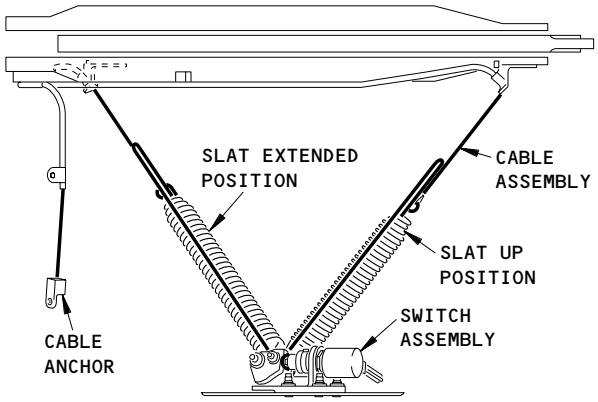
Leading Edge Slat System - Component Location
Figure 102 (Sheet 5)



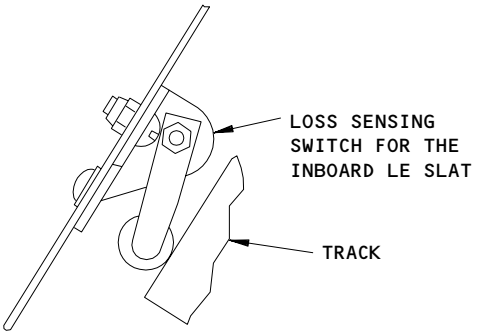
BOTTOM VIEW OF SLATS NO. 2, 5
(SLATS NO. 6-10 ARE OPPOSITE)

F FROM SHT 2

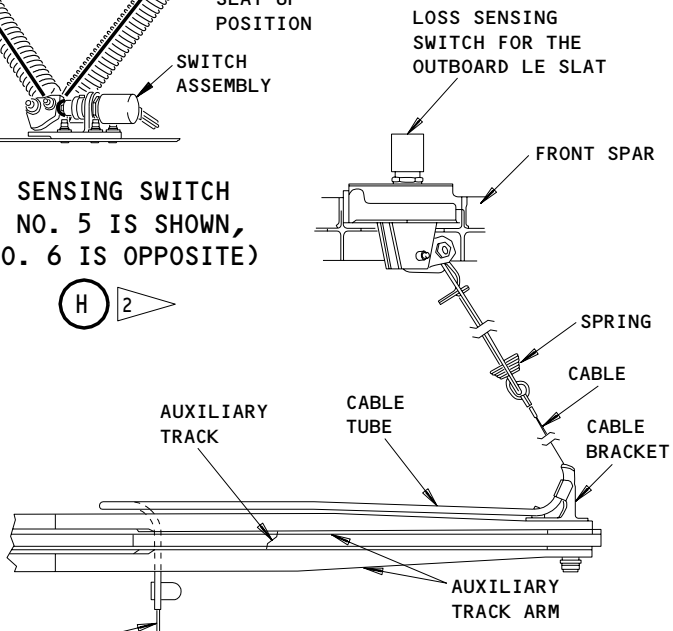
NOTE: 500-SERIES PANELS ARE ON THE LEFT WING. 600-SERIES PANELS ARE ON THE RIGHT WING.



LOSS SENSING SWITCH
(SLAT NO. 5 IS SHOWN,
SLAT NO. 6 IS OPPOSITE)
H 2



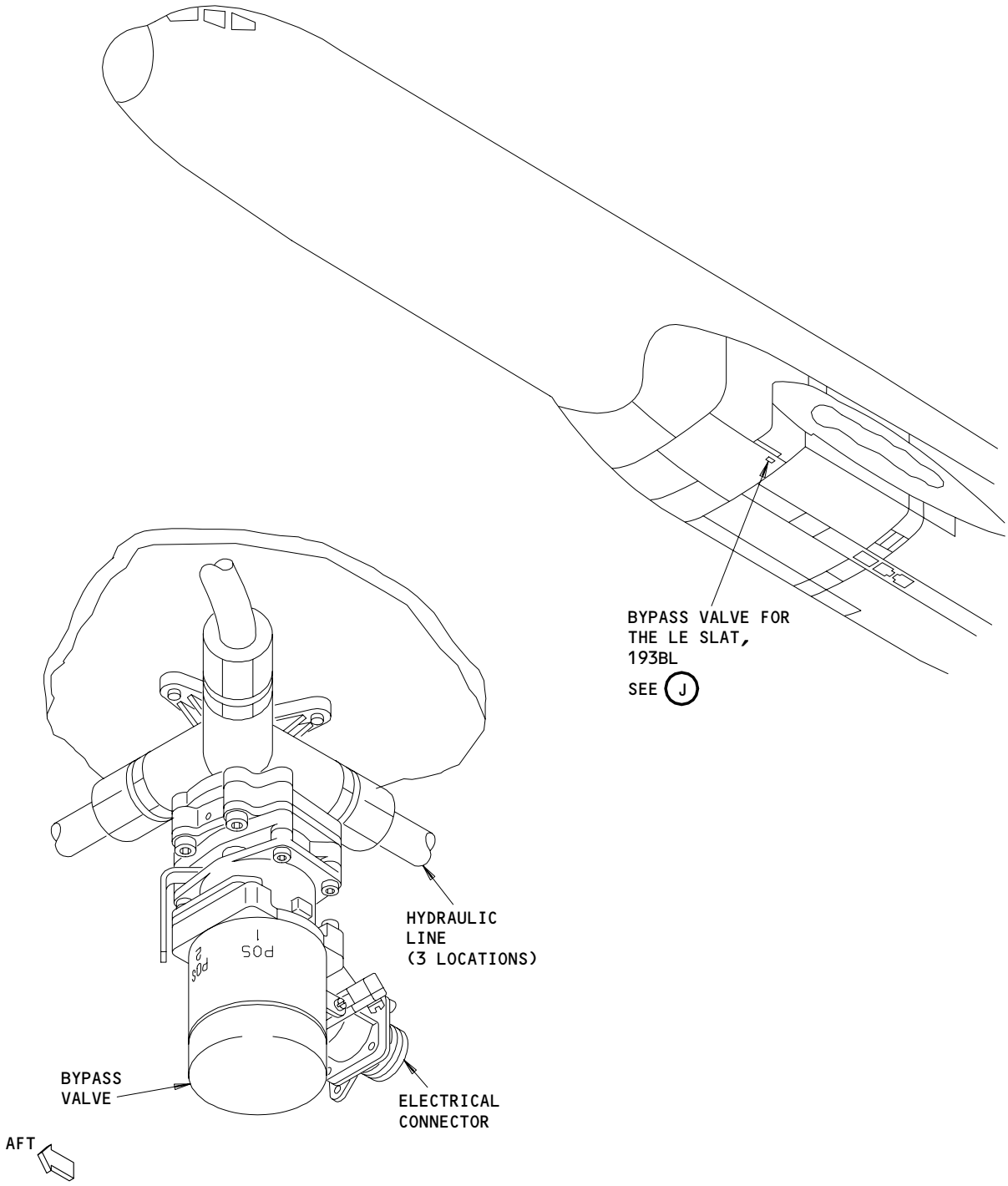
LOSS SENSING SWITCH
(SLAT NO. 5 IS SHOWN,
SLAT NO. 6 IS OPPOSITE)
H 1



LOSS SENSING SWITCH
(SLAT NO. 2 IS SHOWN,
SLAT NO. 10 IS OPPOSITE)
I

1 FOR ROLLER TYPE SENSOR SWITCH
2 FOR CAM TYPE SENSOR SWITCH

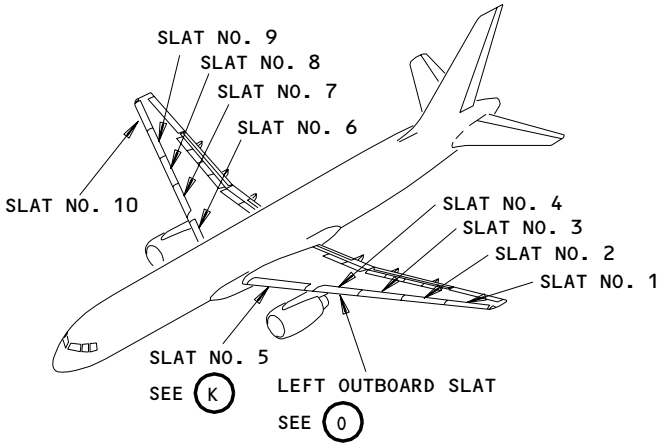
Leading Edge Slat System - Component Location
Figure 102 (Sheet 6)

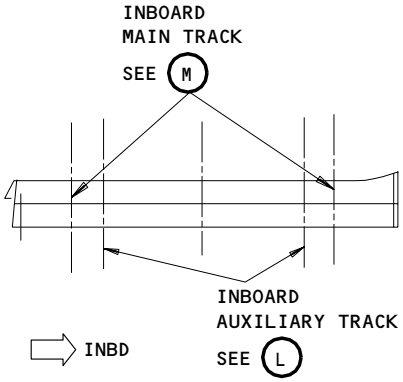


BYPASS VALVE FOR THE LE SLAT, V10059

(J)

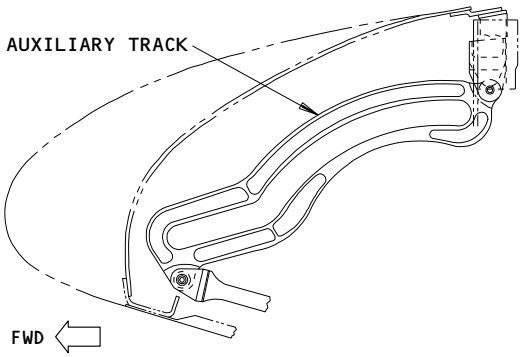
Leading Edge Slat System – Component Location
Figure 102 (Sheet 7)





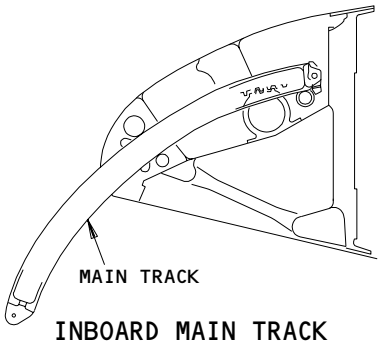
SLAT NO. 5
(EXAMPLE SLAT NO. 6)

K



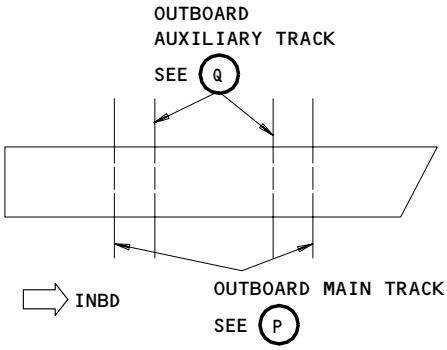
INBOARD AUXILIARY TRACK

L



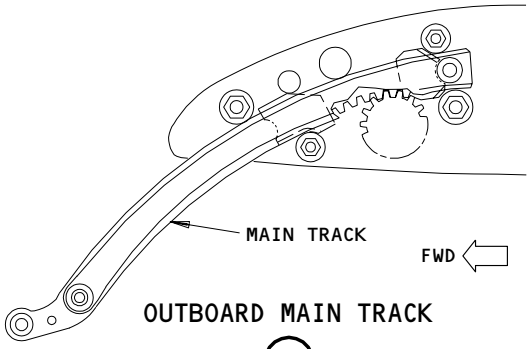
INBOARD MAIN TRACK

M



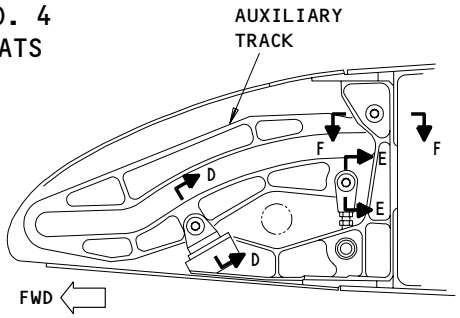
LEFT OUTBOARD SLAT NO. 4
(EXAMPLE OUTBOARD SLATS
NO. 1-3 AND 7-10)

O



OUTBOARD MAIN TRACK

P

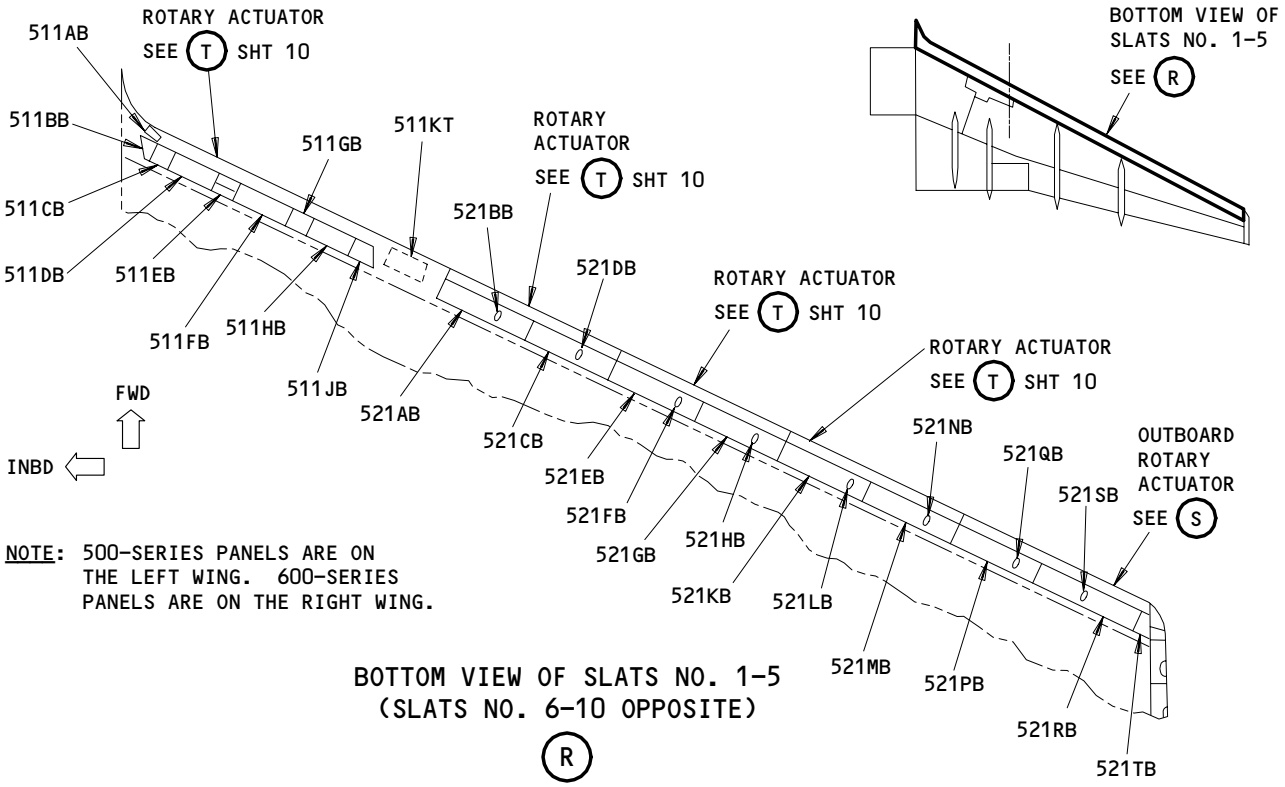


NOTE: SEE FIG. 102 (SHEET 12) FOR SECTIONAL VIEWS.

OUTBOARD AUXILIARY TRACK

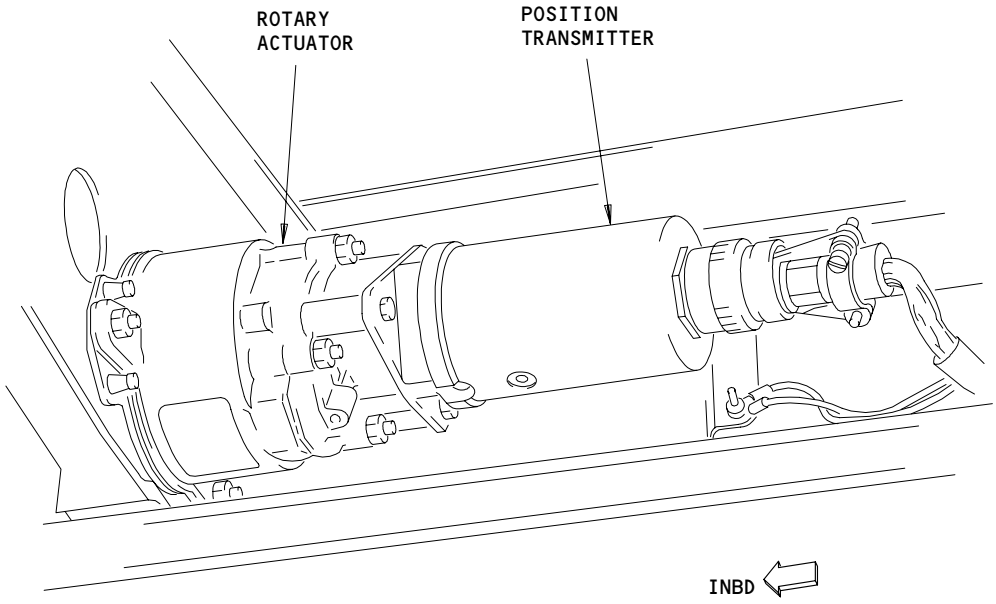
Q

Leading Edge Slat System - Component Location
Figure 102 (Sheet 8)



BOTTOM VIEW OF SLATS NO. 1-5
(SLATS NO. 6-10 OPPOSITE)

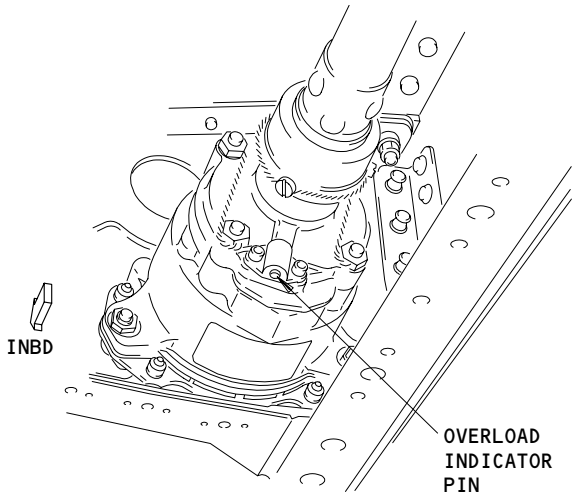
(R)



OUTBOARD ROTARY ACTUATOR

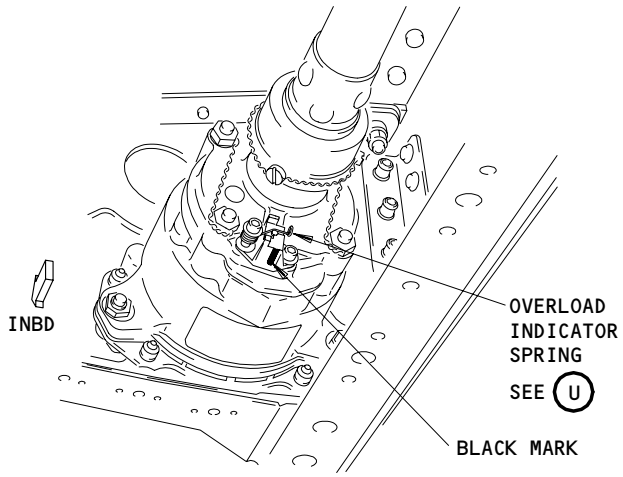
(S)

Leading Edge Slat System - Component Location
Figure 102 (Sheet 9)



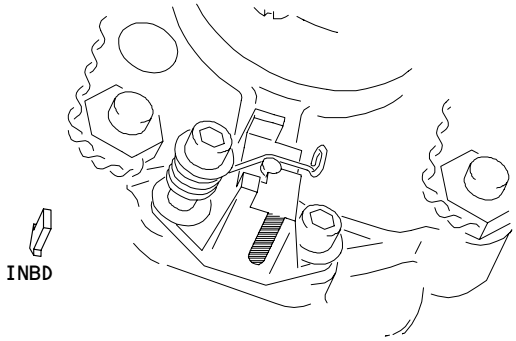
ROTARY ACTUATOR
(ROTARY ACTUATORS WITH
AN OVERLOAD INDICATOR PIN)

(T) FROM SHT 9 1



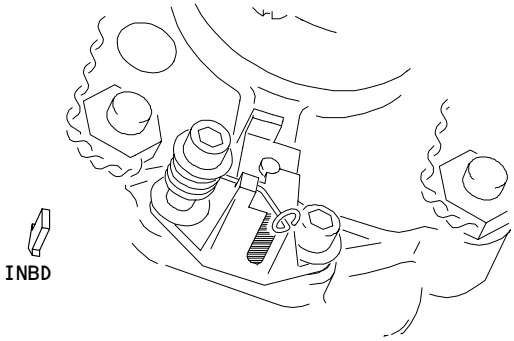
ROTARY ACTUATOR
(ROTARY ACTUATORS WITH
AN OVERLOAD INDICATOR SPRING)

(T) FROM SHT 9 2



OVERLOAD INDICATOR SPRING
(NON-TRIPPED CONDITION)

(U)



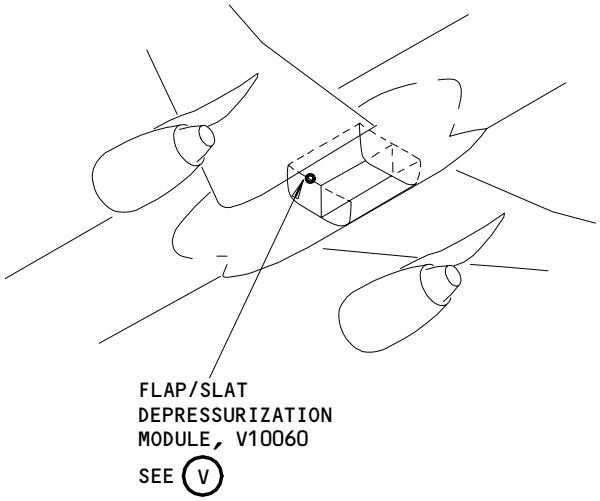
OVERLOAD INDICATOR SPRING
(TRIPPED CONDITION)

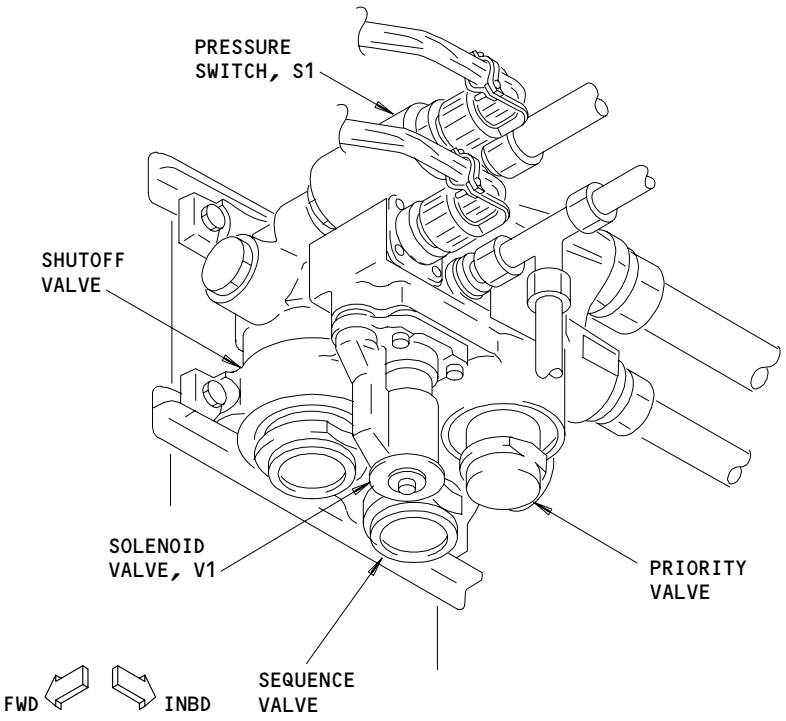
(U)

1 AN OVERLOAD INDICATOR PIN WILL BE ABOVE THE OUTER ADJACENT HOUSING OR THE RED PART OF THE PIN WILL SHOW IF THE OVERLOAD INDICATOR CAME ON.

2 AN OVERLOAD INDICATOR SPRING WILL BE ALIGNED WITH THE BLACK MARK ON THE ROTARY ACTUATOR HOUSING IF THE OVERLOAD INDICATOR CAME ON.

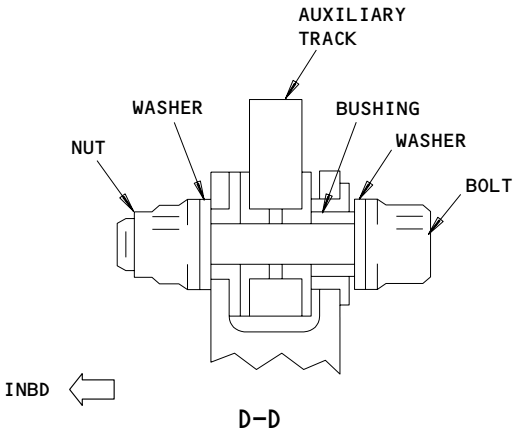
Leading Edge Slat System - Component Location
Figure 102 (Sheet 10)



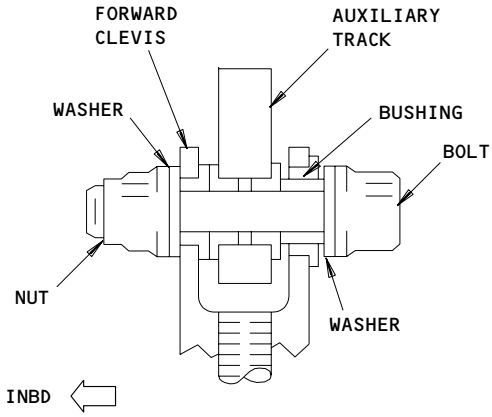


FLAP/SLAT DEPRESSURIZATION
MODULE, V10060
(V)

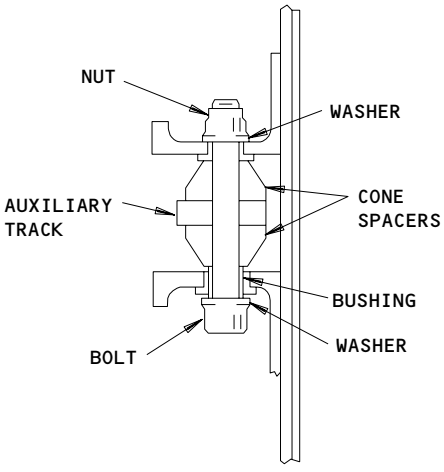
Leading Edge Slat System – Component Location
Figure 102 (Sheet 11)



D-D



E-E



F-F

Leading Edge Slat System - Component Location
Figure 102 (Sheet 12)

Not Used
Figure 103

PREREQUISITES

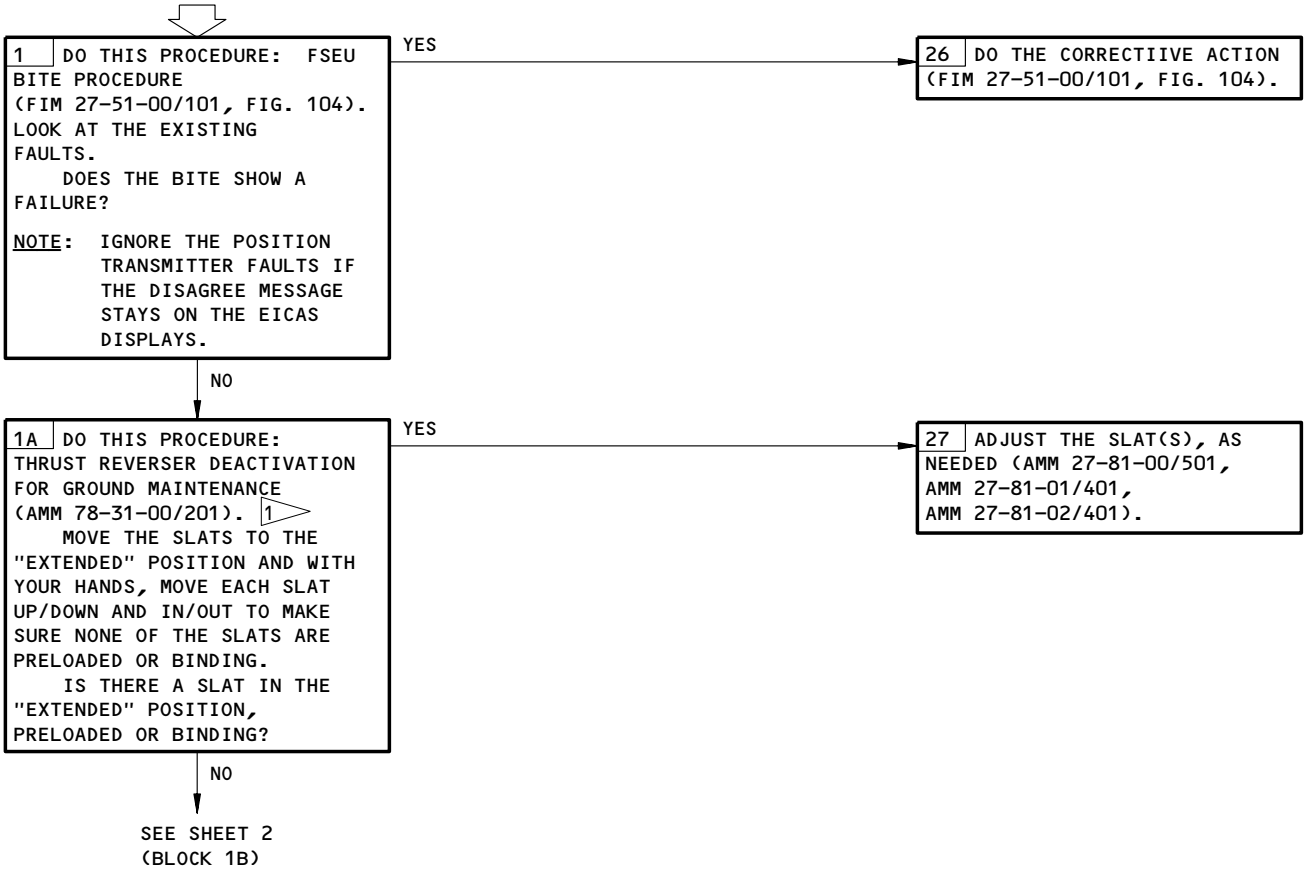
MAKE SURE THESE SYSTEMS WILL OPERATE:
LEFT HYDRAULIC SYSTEM (AMM 29-11-00/201)
EICAS (AMM 31-41-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C14, 11C15, 11C16, 11C17, 11G12, 11G13, 11G14, 11G21, 11G22, 11G23, 11H12, 11H13, 11H23, 11H24

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

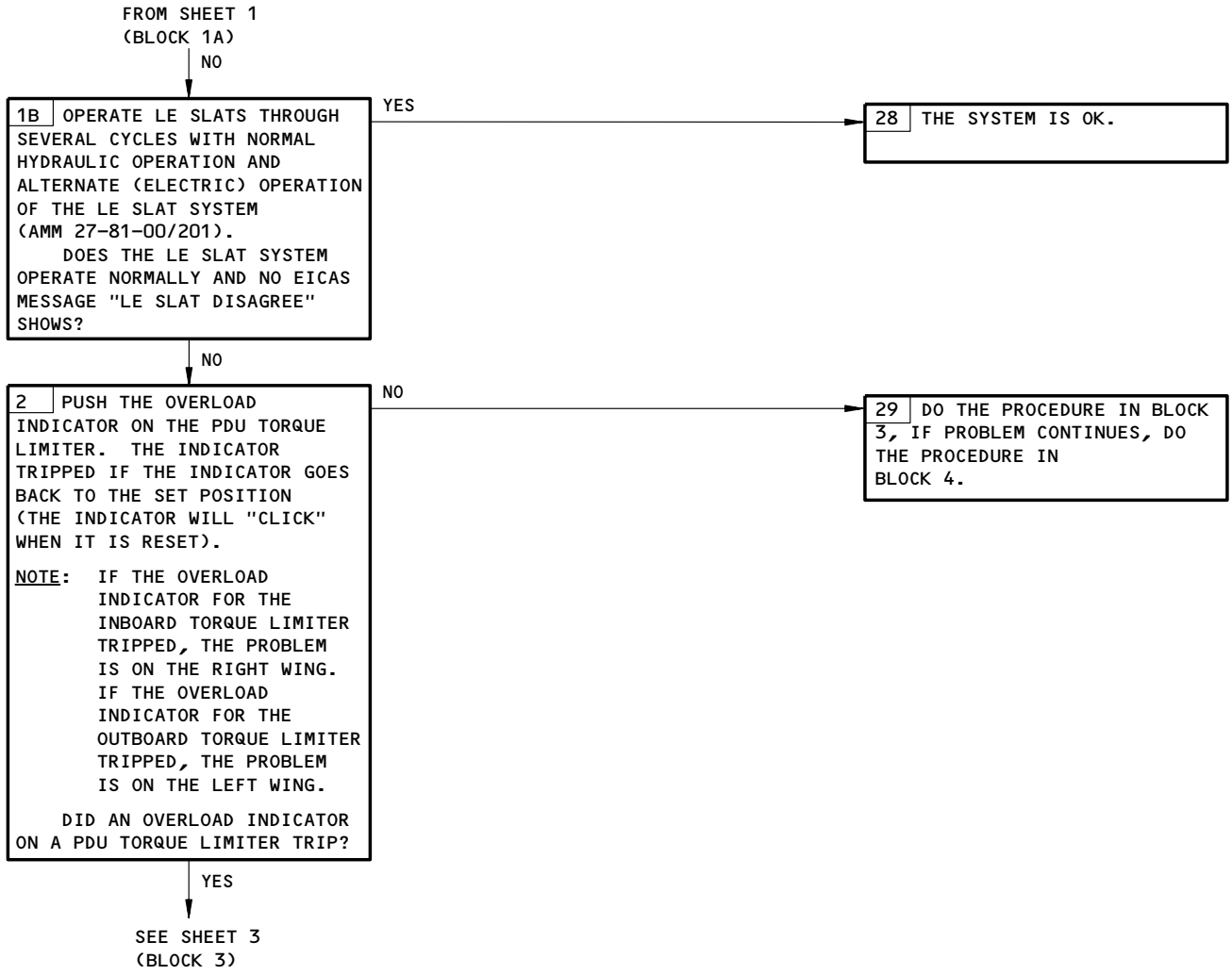
EICAS MESSAGE "LE SLAT DISAGREE" DISPLAYED WITH THE FLAP LEVER IN ANY DETENT DURING NORMAL OPERATION

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

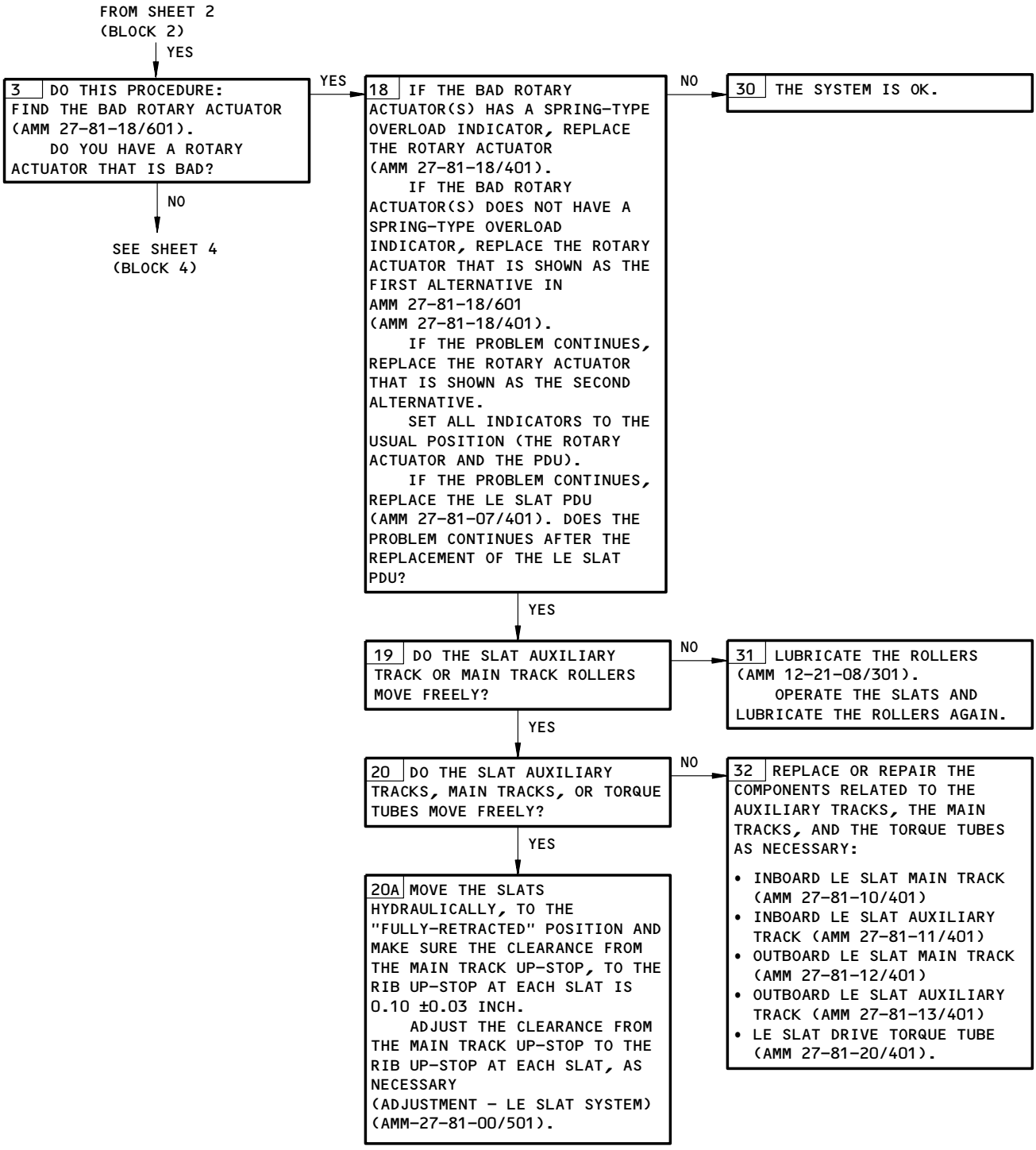


1 DO THE ACTIVATION PROCEDURE FOR THE THRUST REVERSER (AMM 78-31-00/201), AFTER THE FAULT ISOLATION PROCEDURE.

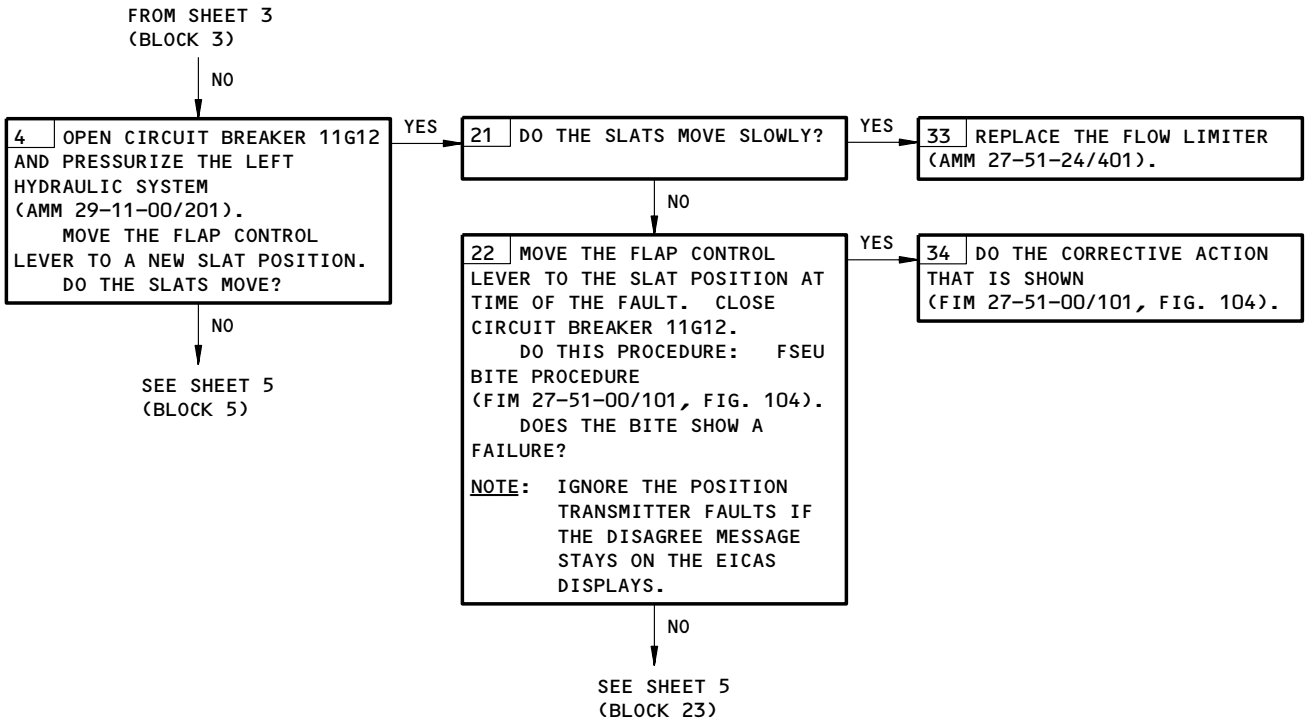
EICAS Message LE SLAT DISAGREE Displayed with the Flap Lever In Any Detent during Normal Operation
Figure 104 (Sheet 1)



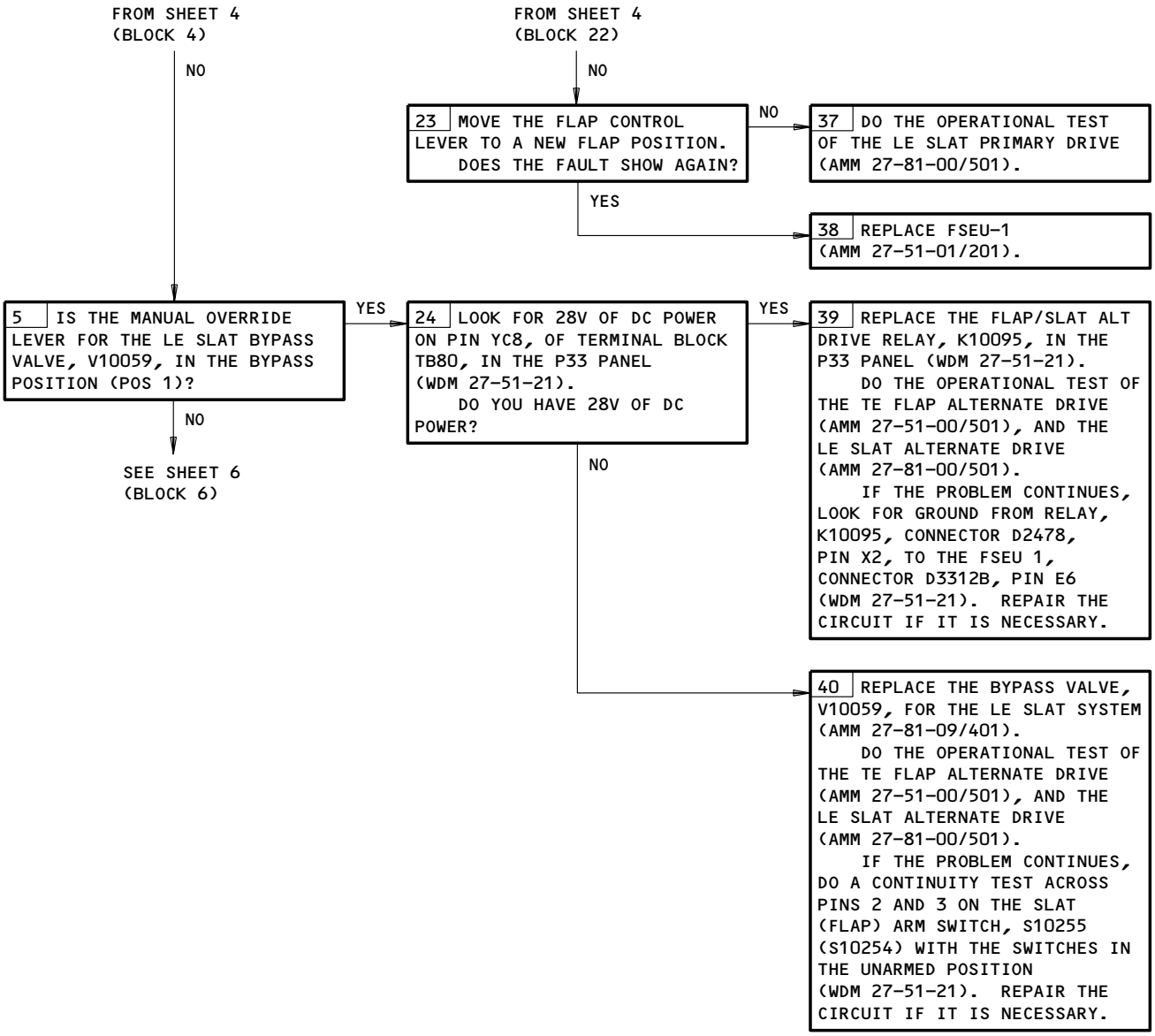
EICAS Message LE SLAT DISAGREE Displayed with the Flap Lever in any Detent During Normal Operation
Figure 104 (Sheet 2)



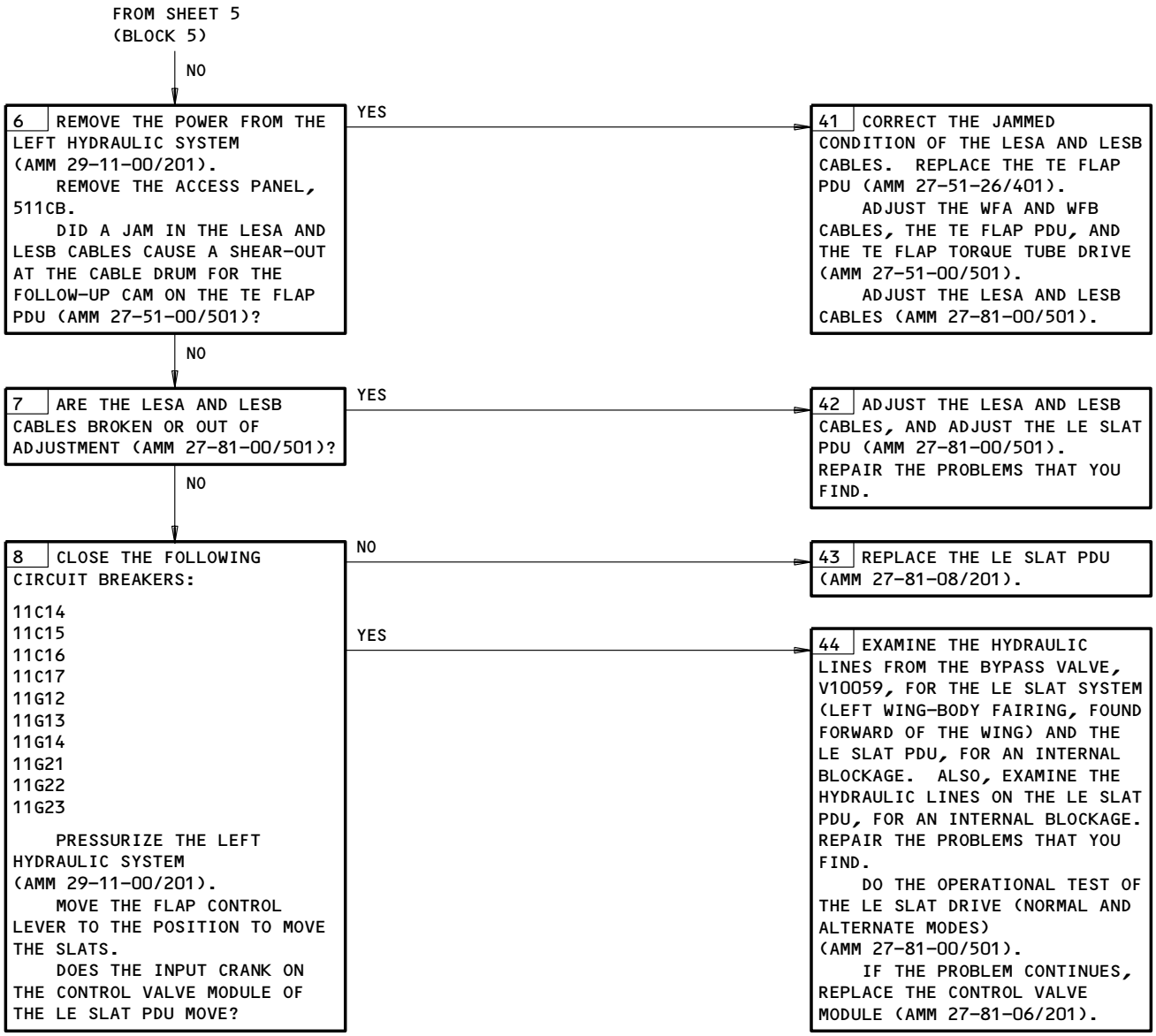
EICAS Message LE SLAT DISAGREE Displayed with the Flap Lever in any Detent during Normal Operation
Figure 104 (Sheet 3)



EICAS Message LE SLAT DISAGREE Displayed with the Flap Lever in any Detent During Normal Operation
Figure 104 (Sheet 4)



EICAS Message LE SLAT DISAGREE Displayed with the Flap Lever in any Detent During Normal Operation
Figure 104 (Sheet 5)



EICAS Message LE SLAT DISAGREE Displayed with the Flap Lever in any Detent During Normal Operation
Figure 104 (Sheet 6)

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C14, 11C15, 11C16, 11G12, 11G13, 11G14, 11G21, 11G22, 11G23, 11H12, 11H13, 11H14, 11H23, 11H24 OR 11C17 OR 11C18, 6D20, 6D23

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

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

EICAS MESSAGE "LE SLAT ASYM" DISPLAYED

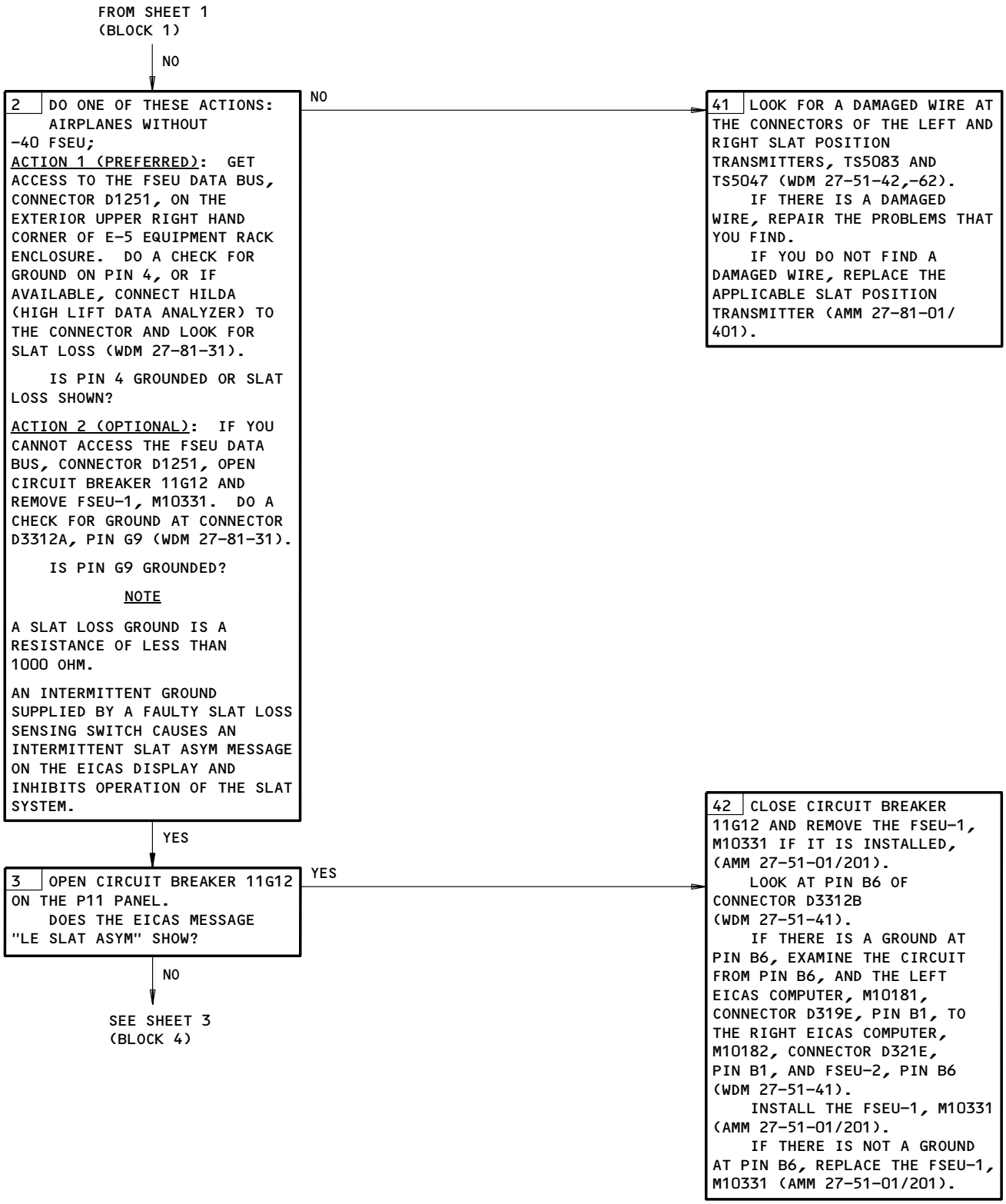
1 DO THE THRUST REVERSER DEACTIVATION FOR GROUND MAINTENANCE (AMM 78-31-00/201) 1 .
DO THIS PROCEDURE:
FLAP/SLAT ELECTRONICS UNIT (FSEU) BITE PROCEDURE (FIM 27-51-00/101, FIG. 104).
LOOK AT THE FAULTS HISTORY.
AIRPLANES WITH -40 FSEU;
IF BITE INDICATES SLAT LOSS IN THE FSEU (FAULT CODE 317 IN FSEU-1 OR FAULT CODE 337 IN FSEU-2) GO TO BLOCK 3.
DOES THE BITE SHOW A FAILURE?

YES → 40 DO THE CORRECTIVE ACTION SHOWN (FIM 27-51-00/101, FIG. 104).
AIRPLANES WITH -40 FSEU;
IF A FAILURE MESSAGE SHOWS, LOOK FOR A DAMAGED WIRE AT THE CONNECTORS OF THE LEFT AND RIGHT SLAT POSITION TRANSMITTERS, TS5083 AND TS5047 (WDM 27-58-11).
IF THERE IS A DAMAGED WIRE, REPAIR THE PROBLEMS THAT YOU FIND.
IF YOU DO NOT FIND A DAMAGED WIRE, REPLACE THE APPLICABLE SLAT POSITION TRANSMITTER (AMM 27-81-01/401).

NO → SEE SHEET 2 (BLOCK 2)

1 DO THE ACTIVATION PROCEDURE FOR THE THRUST REVERSER (AMM 78-31-00/201) AFTER THE FAULT ISOLATION PROCEDURE.

EICAS Message LE SLAT ASYM Displayed
Figure 105 (Sheet 1)



EICAS Message LE SLAT ASYM Displayed
Figure 105 (Sheet 2)

FROM SHEET 2
(BLOCK 3)

NO

4 LOOK AT PIN 7 OF CONNECTOR D41828P (WDM 27-81-31).
IS THE RESISTANCE AT PIN 7 LESS THAN 100 KOHM?

NOTE: A SLAT LOSS GROUND IS A RESISTANCE OF LESS THAN 1000 OHM. A RESISTANCE OF LESS THAN 100 KOHM SHOWS THAT THERE IS A GROUND PATH IN THE CIRCUIT.

YES

43 CUT WIRE NUMBER 3 FROM THE RIGHT INBOARD SLAT LOSS SENSING SWITCH, S10338 (WDM 27-81-31).
LOOK AT PIN 7, OF CONNECTOR D41828P.
IF THERE IS NOT A GROUND AT PIN 7, REPLACE THE RIGHT INBOARD SLAT LOSS SENSING SWITCH, S10338 OR S10588 (AMM 27-81-41/401).
IF THERE IS A GROUND AT PIN 7, LOOK FOR A DAMAGED WIRE FROM THE RIGHT INBOARD AND OUTBOARD LOSS SENSING SWITCHES, S10338 OR S10588 AND S10339. REPAIR THE PROBLEMS THAT YOU FIND.
IF THERE IS A GROUND AT PIN 7, AND YOU DID NOT FIND A DAMAGED WIRE, THEN REPLACE THE RIGHT OUTBOARD SLAT LOSS SENSING SWITCH, S10339 (AMM 27-81-42/401).

NO

5 LOOK AT PIN 7 OF CONNECTOR D41630P (WDM 27-81-31).
IS THE RESISTANCE AT PIN 7 LESS THAN 100 KOHM?

NOTE: A SLAT LOSS GROUND IS A RESISTANCE OF LESS THAN 1000 OHM. A RESISTANCE OF LESS THAN 100 KOHM SHOWS THAT THERE IS A GROUND PATH IN THE CIRCUIT.

YES

44 CUT WIRE NUMBER 3 FROM THE LEFT INBOARD SLAT LOSS SENSING SWITCH, S10340 (WDM 27-81-31).
LOOK AT PIN 7, OF CONNECTOR D41630P.
IF THERE IS NOT A GROUND AT PIN 7, REPLACE THE LEFT INBOARD SLAT LOSS SENSING SWITCH, S10340 OR S10589 (AMM 27-81-41/401).
IF THERE IS A GROUND AT PIN 7, LOOK FOR A DAMAGED WIRE FROM THE LEFT INBOARD AND OUTBOARD LOSS SENSING SWITCHES, S10340 OR S10589 AND S10441. REPAIR THE PROBLEMS THAT YOU FIND.
IF THERE IS A GROUND AT PIN 7, AND YOU DID NOT FIND A DAMAGED WIRE, THEN REPLACE THE LEFT OUTBOARD SLAT LOSS SENSING SWITCH, S10341 (AMM 27-81-42/401).

NO

SEE SHEET 4
(BLOCK 6)

EICAS Message LE SLAT ASYM Displayed
Figure 105 (Sheet 3)

K28381

FROM SHEET 3
(BLOCK 5)

NO

6 LOOK AT PIN 7 OF CONNECTOR D41630P (WDM 27-81-31).
IS THE RESISTANCE AT PIN 7 LESS THAN 100 KOHM?

NOTE: A SLAT LOSS GROUND IS A RESISTANCE OF LESS THAN 1000 OHM. A RESISTANCE OF LESS THAN 100 KOHM SHOWS THAT THERE IS A GROUND PATH IN THE CIRCUIT.

YES

20 LOOK AT PIN 11 OF CONNECTOR D41392J (WDM 27-81-31).
IS THE RESISTANCE AT PIN 11 LESS THAN 100 KOHM?

NOTE: A SLAT LOSS GROUND IS A RESISTANCE OF LESS THAN 1000 OHM. A RESISTANCE OF LESS THAN 100 KOHM SHOWS THAT THERE IS A GROUND PATH IN THE CIRCUIT.

NO

45 ON THE LEFT INBOARD SLAT, EXAMINE FOR DAMAGE THE ROLLER TYPE SWITCH ASSEMBLY/BRACKET-TRACK ASSEMBLY AND/OR THE CAM TYPE SWITCH ASSEMBLY/CABLE ASSEMBLY.
MAKE SURE THE ASSEMBLIES ARE INSTALLED AND ADJUSTED CORRECTLY (AMMs 27-81-41/401, 27-81-41/501, 27-81-42/401, 27-81-42/501).
EXAMINE THE CONDITION OF THE GROUNDING PIGTAILS, WIRES SPLICES, PLUG CONNECTIONS, SHIELD TERMINATIONS SHORTING TO INNER CONDUCTORS AT ALL PLUGS. REPAIR THE PROBLEMS THAT YOU FIND.
IF THE PROBLEM CONTINUES, REPLACE THE LEFT INBOARD SLAT LOSS SENSING SWITCH, S10340 OR S10589 (AMM 27-81-41/401).

NO

SEE SHEET 5
(BLOCK 7)

YES

21 LOOK FOR DAMAGED WIRES FROM CONNECTOR D41392J TO THE LEFT OUTBOARD SLAT LOSS SENSING SWITCH, S10341, AND FROM CONNECTOR D41630P TO CONNECTOR D41392P (WDM 27-81-31).
IS THERE A DAMAGED WIRE?

YES

46 REPAIR THE PROBLEMS THAT YOU FIND.

NO

47 IF THE PROBLEM IS ON THE LEFT HAND SIDE (PLUG SIDE) GET ACCESS TO THE PLUG, D41392P, IN THE LEFT WING VAPOR SEAL, AW1333 (ABOVE THE PYLON AREA). POSITION 1.
EXAMINE PLUG FOR SIGNS OF ROUNDNESS AND FOR MOISTURE-INTAKE OR ARCING.
EXAMINE THE CONDITION OF THE O-RING IN THE RECEPTACLE.
REPAIR THE PROBLEMS THAT YOU FIND.
IF THE PROBLEM CONTINUES, REPLACE THE LEFT OUTBOARD SLAT LOSS SENSING SWITCH, S10341 (AMM 27-81-42/401).

EICAS Message LE SLAT ASYM Displayed
Figure 105 (Sheet 4)

FROM SHEET 4
(BLOCK 6)

NO

7 LOOK AT PIN 7 OF CONNECTOR D41828P (WDM 27-81-31).
IS THE RESISTANCE AT PIN 7 LESS THAN 100 KOHM?

NOTE: A SLAT LOSS GROUND IS A RESISTANCE OF LESS THAN 1000 OHM. A RESISTANCE OF LESS THAN 100 KOHM SHOWS THAT THERE IS A GROUND PATH IN THE CIRCUIT.

YES

22 LOOK AT PIN 11 OF CONNECTOR D41396J OR D41392P (WDM 27-81-31).
IS THE RESISTANCE AT PIN 11 LESS THAN 100 KOHM?

NOTE: A SLAT LOSS GROUND IS A RESISTANCE OF LESS THAN 1000 OHM. A RESISTANCE OF LESS THAN 100 KOHM SHOWS THAT THERE IS A GROUND PATH IN THE CIRCUIT.

NO

48 ON THE RIGHT INBOARD SLAT, EXAMINE FOR DAMAGE THE ROLLER TYPE SWITCH ASSEMBLY/BRACKET-TRACK ASSEMBLY AND/OR THE CAM TYPE SWITCH ASSEMBLY/CABLE ASSEMBLY.
MAKE SURE THE ASSEMBLIES ARE INSTALLED AND ADJUSTED CORRECTLY (AMMs 27-81-41/401, 27-81-41/501, 27-81-42/401, 27-81-42/501).
EXAMINE THE CONDITION OF THE GROUNDING PIGTAILS, WIRES SPLICES, PLUG CONNECTIONS, SHIELD TERMINATIONS SHORTING TO INNER CONDUCTORS AT ALL PLUGS. REPAIR THE PROBLEMS THAT YOU FIND.
IF THE PROBLEM CONTINUES, REPLACE THE RIGHT INBOARD SLAT LOSS SENSING SWITCH, S10338 OR S10588 (AMM 27-81-41/401).

NO

SEE SHEET 6
(BLOCK 8)

YES

23 LOOK FOR DAMAGED WIRES FROM CONNECTOR D41696J TO THE RIGHT OUTBOARD SLAT LOSS SENSING SWITCH, S10339; AND FROM CONNECTOR D14828P TO CONNECTOR D41396P (WDM 27-81-31).
IS THERE A DAMAGED WIRE?

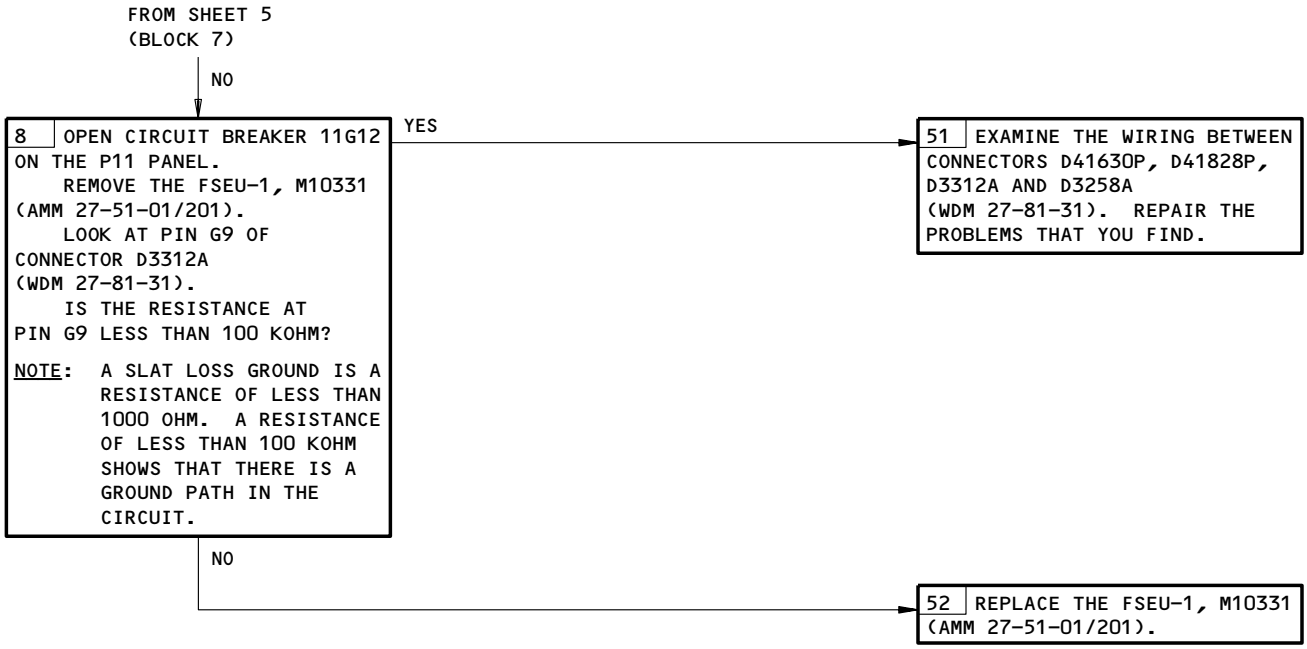
YES

49 REPAIR THE PROBLEMS THAT YOU FIND.

NO

50 IF THE PROBLEM IS ON THE RIGHT HAND SIDE (RECEPTACLE SIDE) GET ACCESS TO THE PLUG, D41396P IN THE RIGHT WING VAPOR SEAL, AW2333 (ABOVE THE PYLON AREA). POSITION 5.
EXAMINE PLUG FOR ROUNDNESS AND FOR SIGNS OF MOISTURE IN-TAKE OR ARCING.
EXAMINE THE CONDITION OF THE O-RING IN THE RECEPTACLE.
REPAIR THE PROBLEMS THAT YOU FIND.
IF THE PROBLEM CONTINUES, REPLACE THE RIGHT OUTBOARD SLAT LOSS SENSING SWITCH, S10339 (AMM 27-81-42/401).

EICAS Message LE SLAT ASYM Displayed
Figure 105 (Sheet 5)



EICAS Message LE SLAT ASYM Displayed
Figure 105 (Sheet 6)

Not Used
Figure 106

PREREQUISITES

MAKE SURE THESE SYSTEMS WILL OPERATE:
HYDRAULIC POWER (AMM 29-11-00/201)
EICAS (AMM 34-41-00/201)

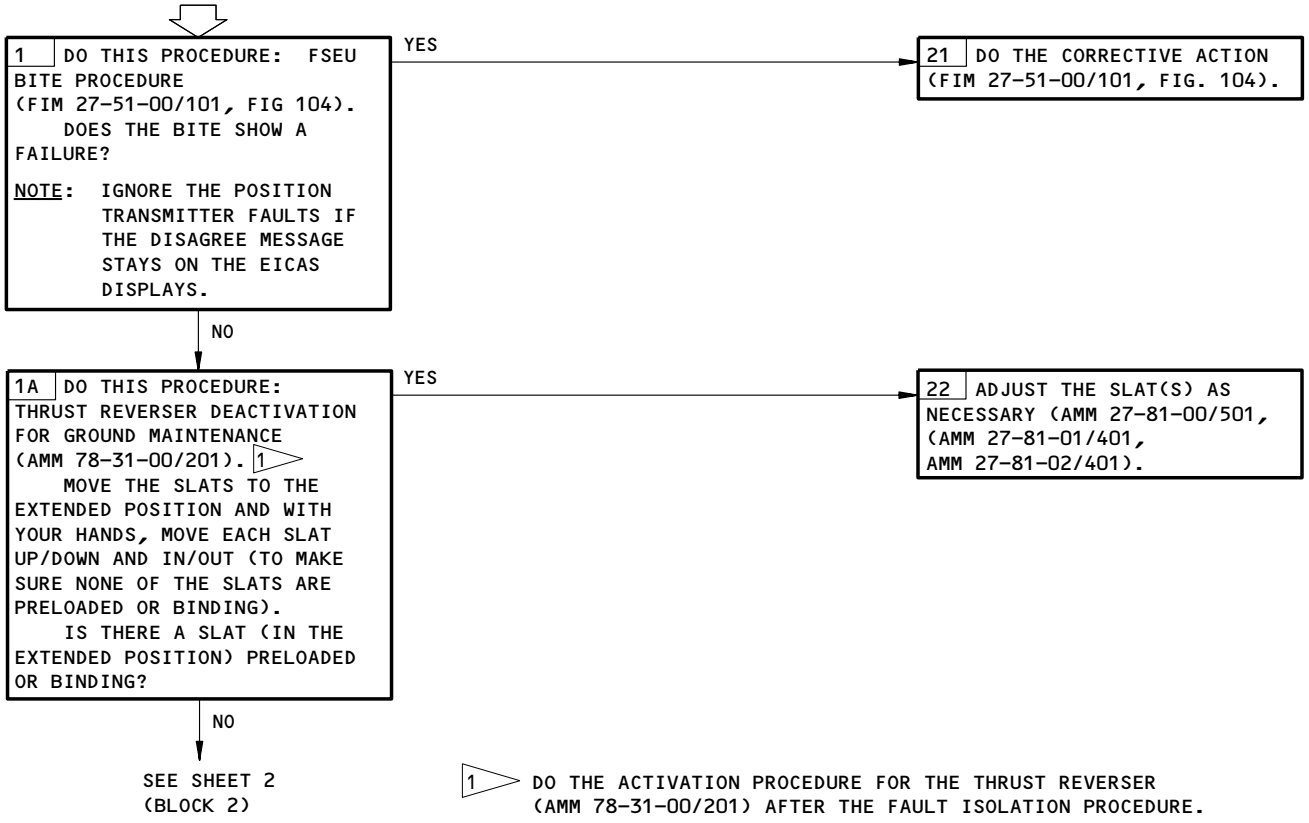
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6D20, 6D23, 11C14, 11C15, 11C16, 11C17, 11G12, 11G13, 11G14, 11G21, 11G22, 11G23, 11H12, 11H13, 11H23, 11H24

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

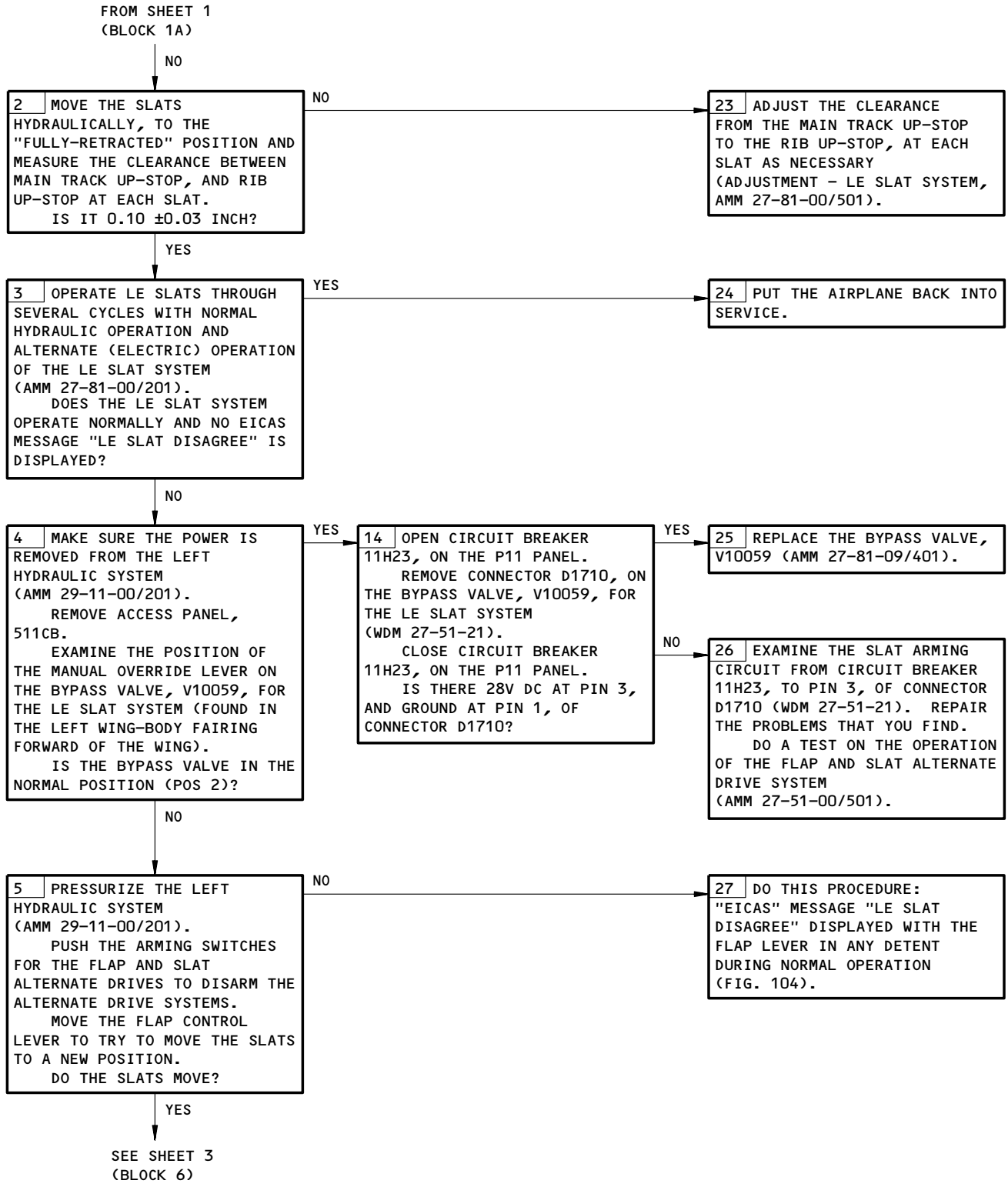
EICAS MESSAGE "LE SLAT DISAGREE" DISPLAYED WITH ROTARY SWITCH IN A COMMANDED POSITION AND LE ARMING SWITCH IN "ALTN"

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

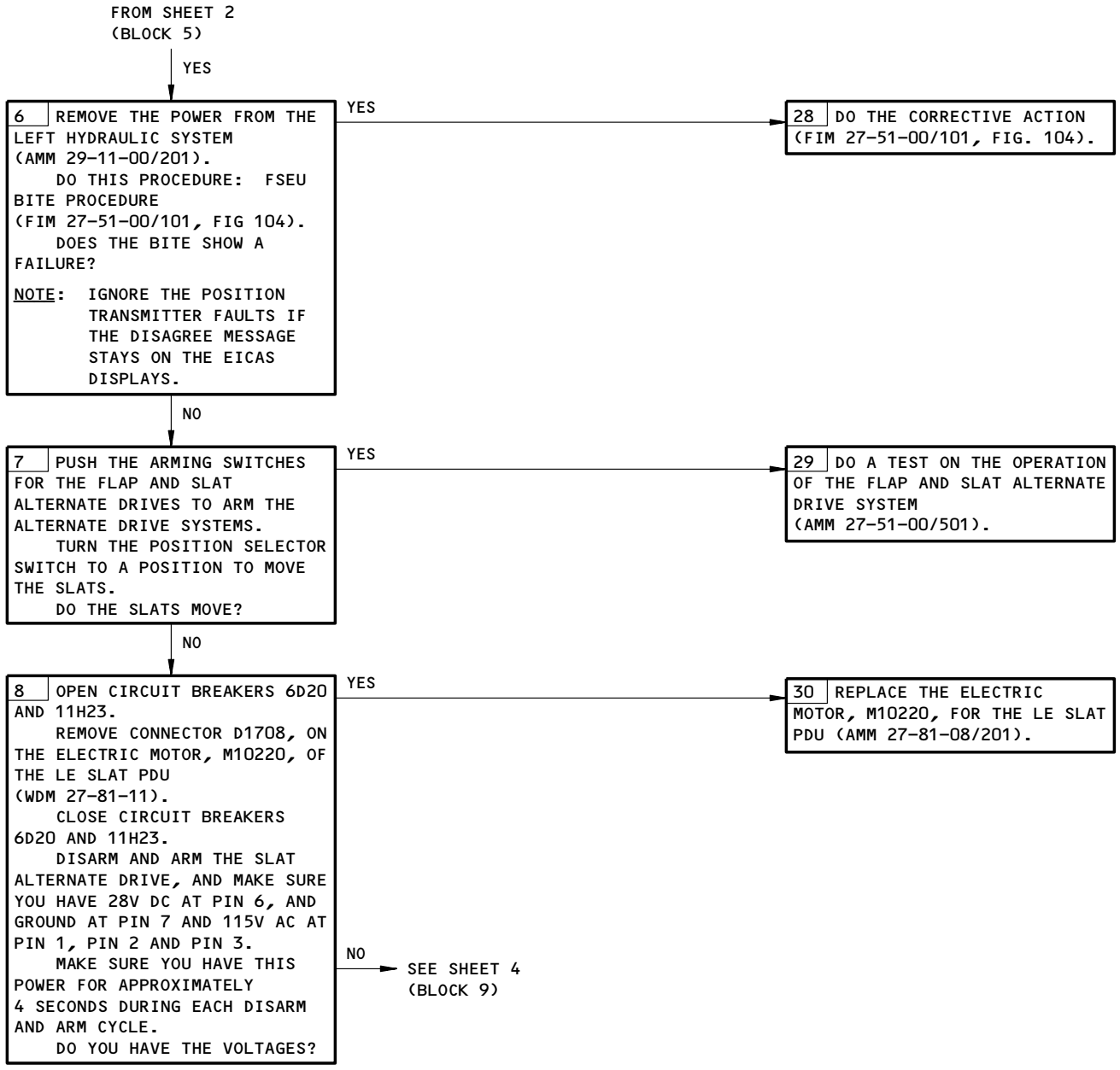
NOTE: MAKE SURE A-32 MODE A, -37 MODE A, OR -40 FSEU IS INSTALLED IN THE FSEU-1 POSITION.



EICAS Message LE SLAT DISAGREE Displayed with Rotary Switch in a Commanded Position and LE Arming Switch in ALTN
Figure 107 (Sheet 1)



EICAS Message LE SLAT DISAGREE Displayed with Rotary Switch in a Commanded Position and LE Arming Switch in ALTN
Figure 107 (Sheet 2)



EICAS Message LE SLAT DISAGREE Displayed with Rotary Switch in a Commanded Position and LE Arming Switch in ALTN
Figure 107 (Sheet 3)

FROM SHEET 3
(BLOCK 8)

NO

9 OPEN CIRCUIT BREAKERS, 11C14, 11C15, 11C16.
MAKE SURE YOU HAVE 28V DC AT PIN X1, OF RELAY, K10098, ON THE MISCELLANEOUS ELECTRICAL POWER PANEL, P33 (WDM 27-51-21).
CLOSE CIRCUIT BREAKERS, 11C14, 11C15, 11C16 AND MAKE SURE YOU DO NOT HAVE 28V DC AT PIN X1, OF RELAY, K10098.
DOES THE 28V DC POWER TEST OPERATE CORRECTLY?

NO → 31 REPLACE THE RELAY, K10494, IN THE P33 PANEL (WDM 27-51-21).
DO A TEST ON THE OPERATION OF THE FLAP AND SLAT ALTERNATE DRIVE SYSTEM (AMM 27-51-00/501).

YES → 32 REPLACE THE RELAY, K10097, IN THE P33 PANEL (WDM 27-81-11).
DO A TEST ON THE OPERATION OF THE FLAP AND SLAT ALTERNATE DRIVE SYSTEM (AMM 27-51-00/501).
IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM CONNECTOR D1708, ON THE ELECTRIC MOTOR, M10220, TO THE PRESSURE SEAL (WDM 27-81-11). REPAIR THE PROBLEMS THAT YOU FIND.
DO A TEST ON THE OPERATION OF THE FLAP AND SLAT ALTERNATE DRIVE SYSTEM (AMM 27-51-00/501).

EICAS Message LE SLAT DISAGREE Displayed with Rotary Switch in a Commanded Position and LE Arming Switch in ALTN
Figure 107 (Sheet 4)

EICAS MESSAGE "LE SLAT DISAGREE" DISPLAYED WHEN SLAT EXTENSION TO POS 15 OR WHEN SLAT RETRACTION TO "UP" (BOTH FLAP POINTERS INDICATE "UP") IS SELECTED WITH ALTN SLAT DRIVE SYSTEM

PREREQUISITES

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6D20, 6D23, 11C14, 11C15, 11C16, 11C17, 11G12, 11G13, 11G14, 11G21, 11G22, 11G23, 11H12, 11H13, 11H23, 11H24

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

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

1 DO THIS PROCEDURE: FSEU BITE PROCEDURE (FIM 27-51-00/101, FIG 104).
LOOK AT THE EXISTING FAULTS.
DOES THE BITE SHOW A FAILURE?

NOTE: IGNORE THE POSITION TRANSMITTER FAULTS IF THE DISAGREE MESSAGE STAYS ON THE EICAS DISPLAYS.

YES → 17 DO THE CORRECTIVE ACTION (FIM 27-51-00/101, FIG. 104).

NO ↓

1A DO THIS PROCEDURE: THRUST REVERSER DEACTIVATION FOR GROUND MAINTENANCE (AMM 78-31-00/201). 1
MOVE THE SLATS TO THE EXTENDED POSITION AND WITH YOUR HANDS, MOVE EACH SLAT UP/DOWN AND IN/OUT, TO MAKE SURE NONE OF THE SLATS ARE PRELOADED OR BINDING.
IS THERE A SLAT (IN THE EXTENDED POSITION) PRELOADED OR BINDING?

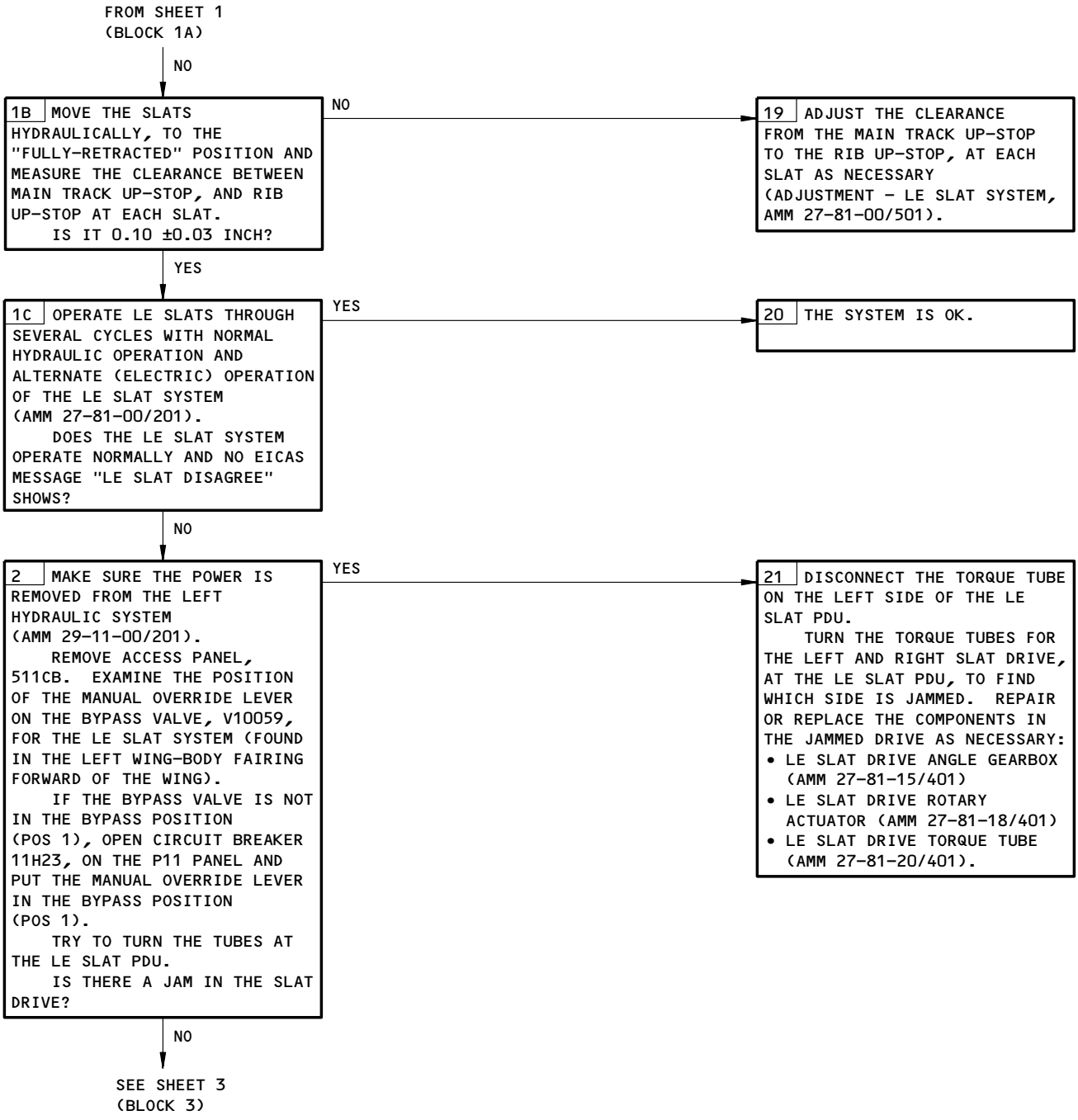
YES → 18 ADJUST THE SLAT(S) AS NECESSARY (AMM 27-81-00/501, (AMM 27-81-01/401, AMM 27-81-02/401).

NO ↓

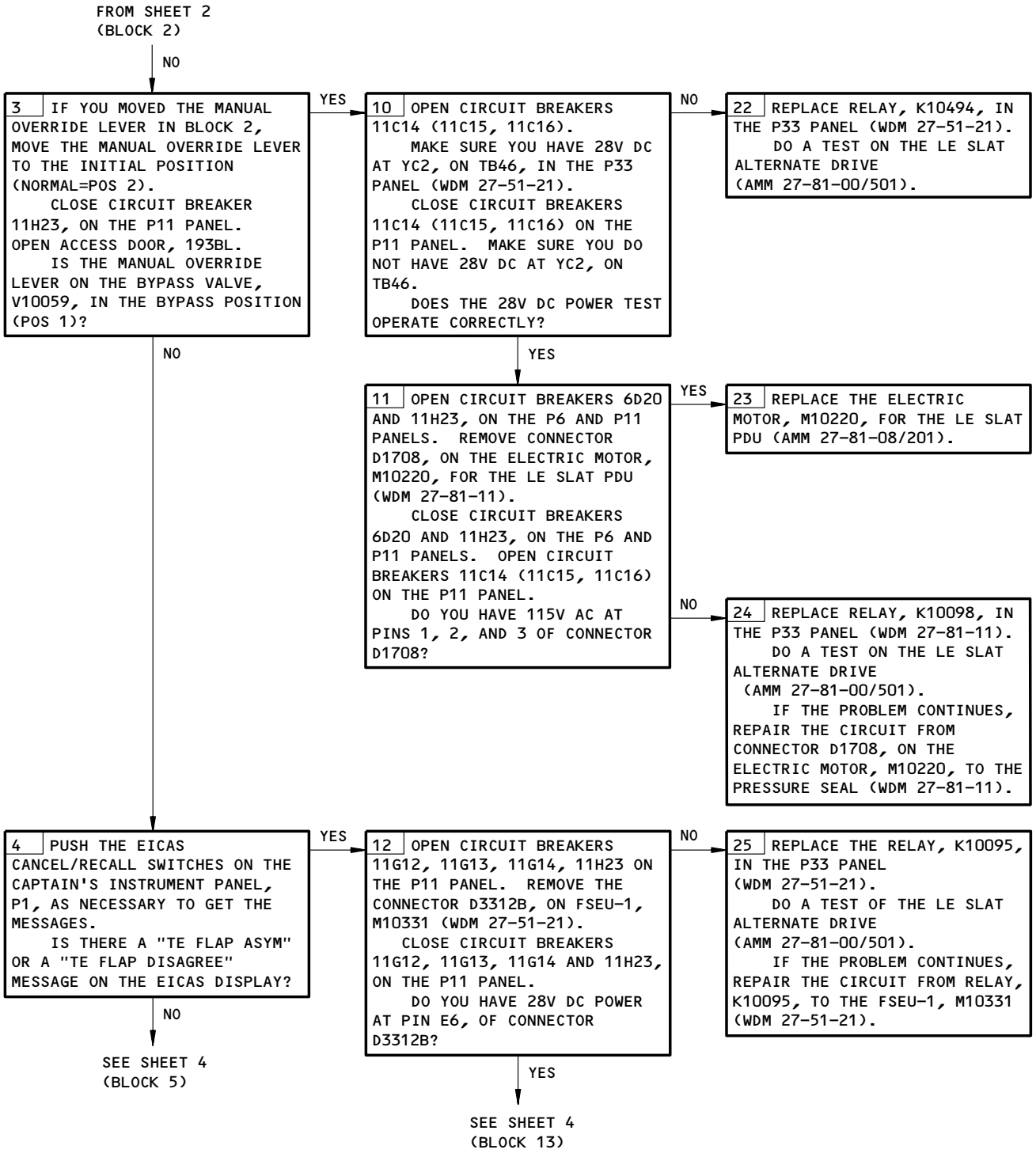
SEE SHEET 2
(BLOCK 1B)

1 DO THE ACTIVATION PROCEDURE FOR THE THRUST REVERSER (AMM 78-31-00/201) AFTER THE FAULT ISOLATION PROCEDURE.

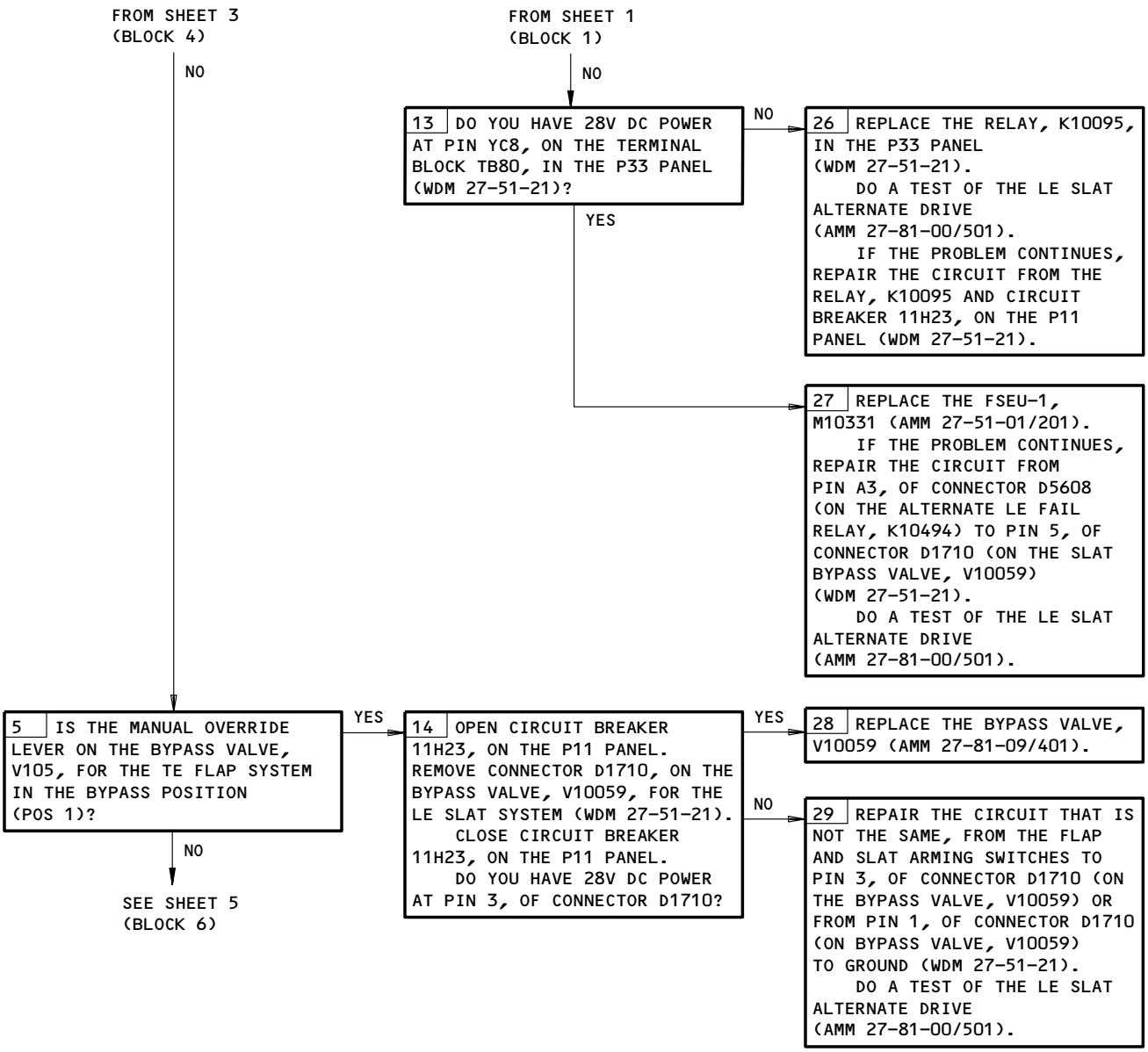
EICAS Message LE SLAT DISAGREE Displayed when Slat Extension to Pos 15 or when Slat Retraction to UP (Both Flap Pointers Indicate UP) is Selected with Altn Slat Drive System
Figure 108 (Sheet 1)



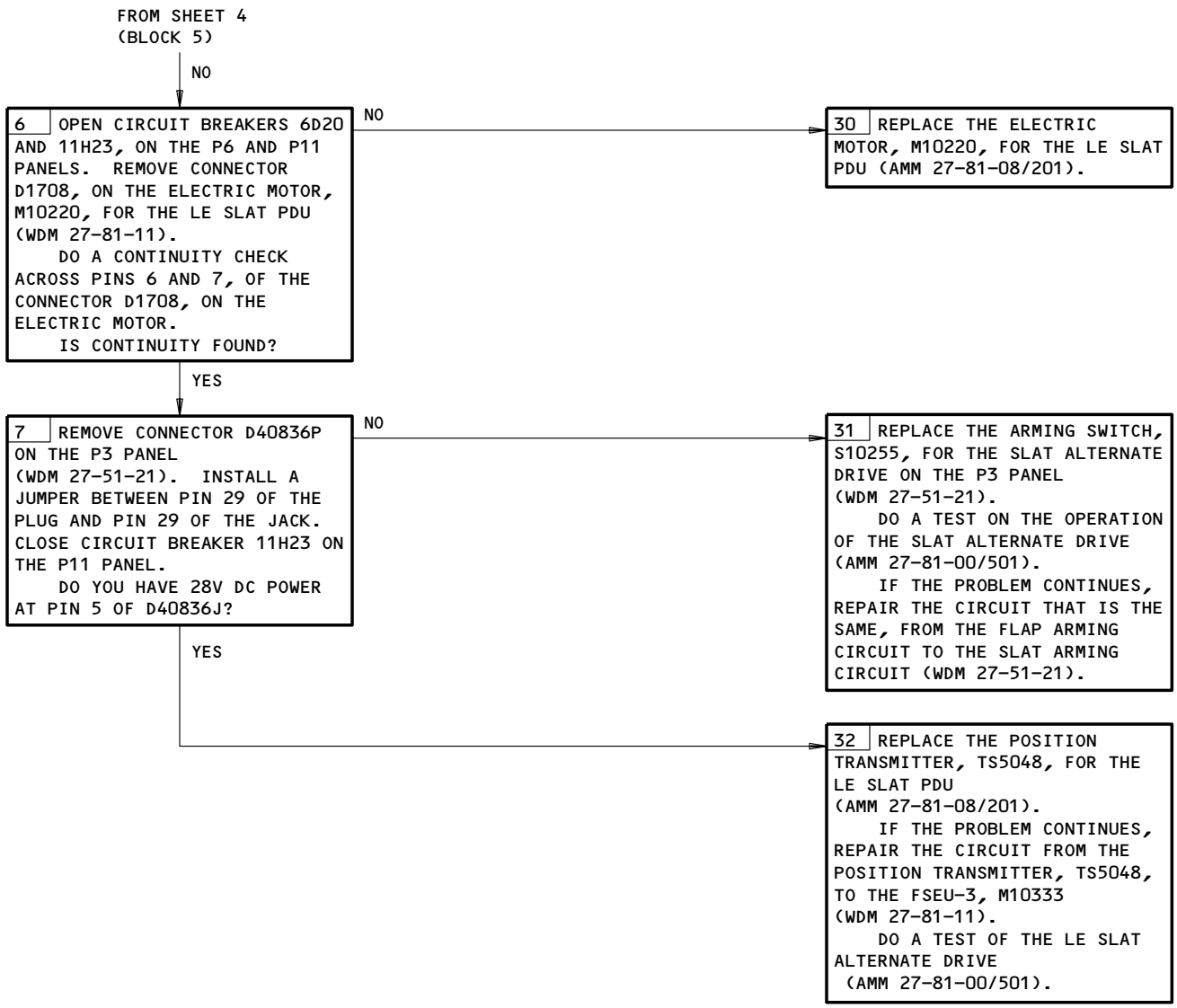
EICAS Message: LE SLAT DISAGREE Displayed when Slat Extension to Pos 15 or when Slat Retraction to UP (Both Flap Pointers Indicate UP) is Selected with Altn Slat Drive System
Figure 108 (Sheet 2)



EICAS Message: LE SLAT DISAGREE Displayed when Slat Extension to Pos 15 or when Slat Retraction to UP (Both Flap Pointers Indicate UP) is Selected with Altn Slat Drive System
Figure 108 (Sheet 3)



EICAS Message: LE SLAT DISAGREE Displayed when Slat Extension to Pos 15 or when Slat Retraction to UP (Both Flap Pointers Indicate UP) is Selected with Altn Slat Drive System
Figure 108 (Sheet 4)



EICAS Message: LE SLAT DISAGREE Displayed when Slat Extension to Pos 15 or when Slat Retraction to UP (Both Flap Pointers Indicate UP) is Selected with Altn Slat Drive System
Figure 108 (Sheet 5)

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE:
LEFT HYDRAULIC SYSTEM (MM 29-11-00/201)

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11B18,11C11,11C14,11C15,11C16,11C17,11G12,11G13, 11G14,11H23,11H24,11J21,11J33

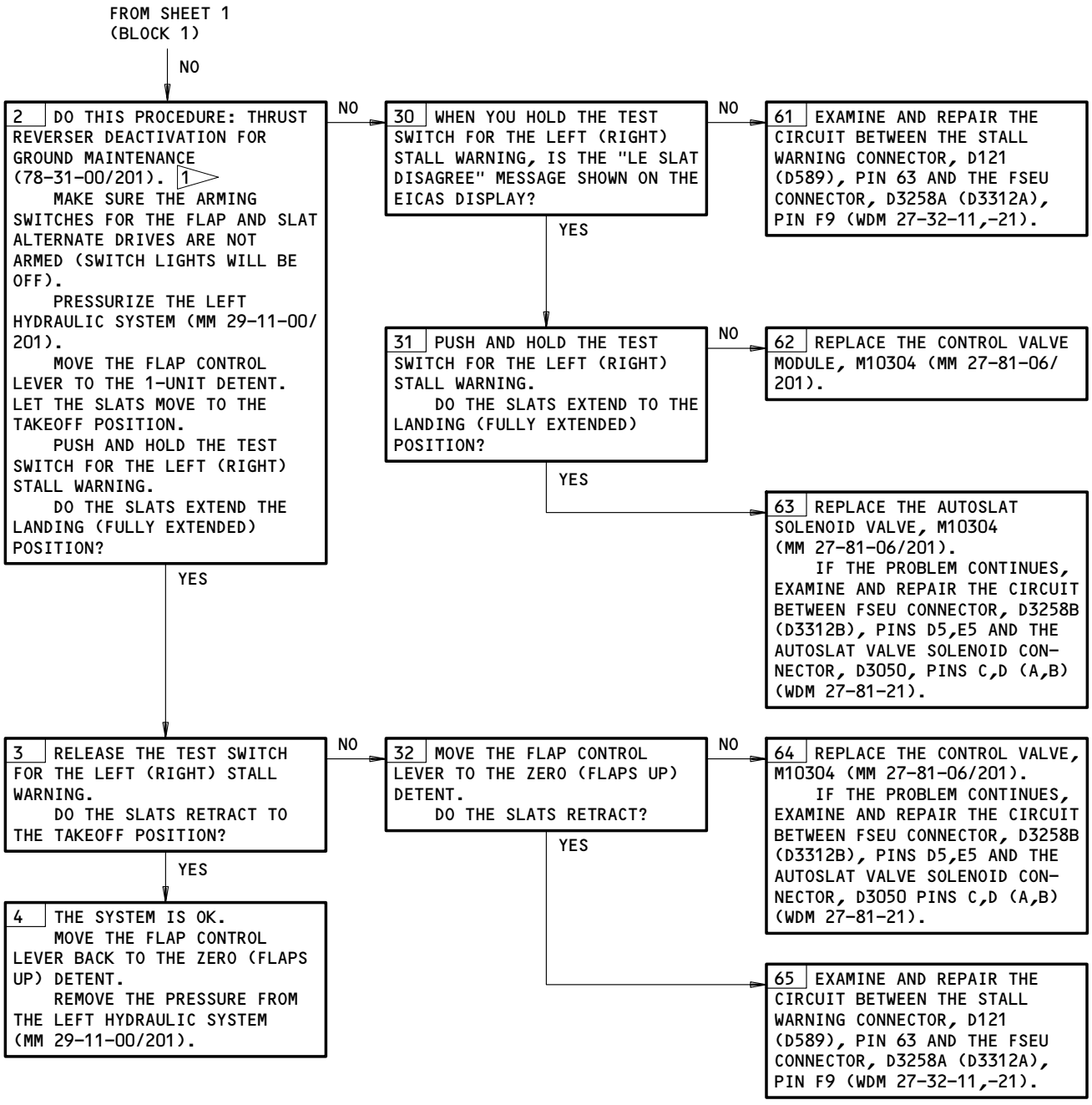
MAKE SURE THE AIRPLANE IS IN THE CONFIGURATION THAT FOLLOWS:
ELECTRICAL POWER IS ON (MM 24-22-00/201)

WARNING: DO THE THRUST REVERSER DEACTIVATION PROCEDURE TO PREVENT THE OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER CAN CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

KEEP PERSONS AND EQUIPMENT AWAY FROM ALL CONTROL SURFACES WHEN HYDRAULIC POWER IS SUPPLIED. AILERONS, ELEVATORS, RUDDER, FLAPS, SLATS, SPOILERS, AND STABILIZER ARE FULLY POWERED SURFACES. INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR WHEN HYDRAULIC POWER IS SUPPLIED.

SLATS FAILED TO EXTEND OR RETRACT WHEN TESTED (STALL WARNING)

Slats Failed To Extend Or Retract When Tested (Stall Warning)
Figure 109 (Sheet 1)



1 DO THE ACTIVATION PROCEDURE FOR THE THRUST REVERSER (MM 78-31-00/201) AFTER THE FAULT ISOLATION PROCEDURE.

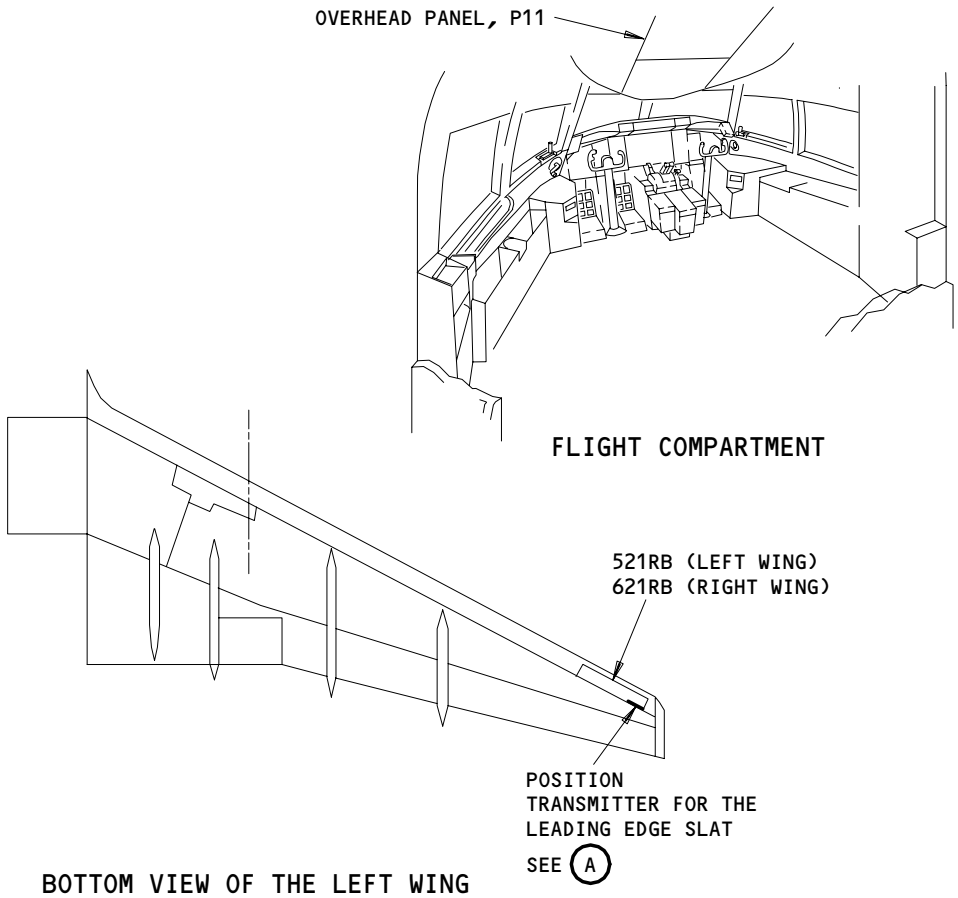
Slats Failed To Extend Or Retract When Tested (Stall Warning)
Figure 109 (Sheet 2)

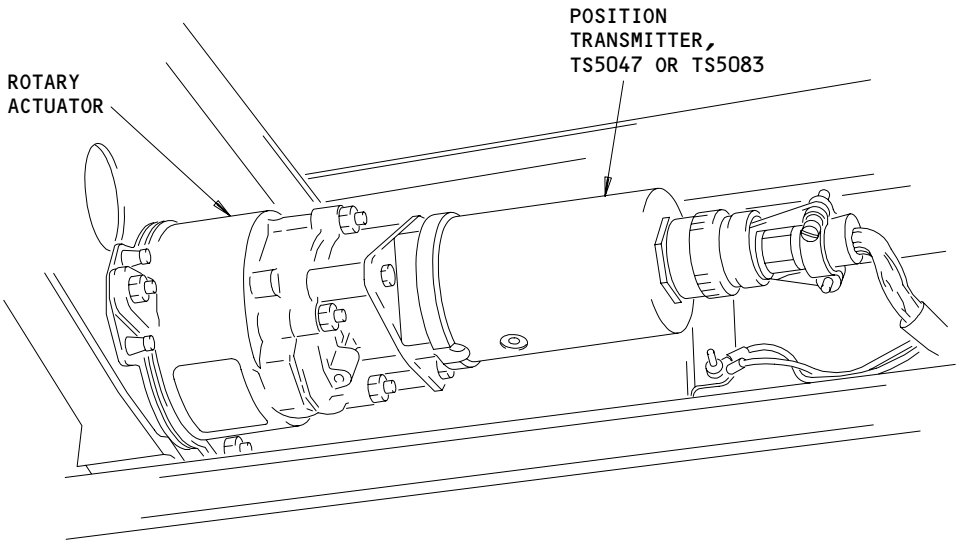
LEADING EDGE SLAT POSITION INDICATING SYSTEM

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	REFERENCE
CIRCUIT BREAKERS	-		FLIGHT COMPARTMENT, P11 PANEL	
FLAP LOAD RELIEF, C1022		1	11J18	*
FLAP POS IND LEFT, C1008		1	11H12	*
FLAP POS IND RIGHT, C1522		1	11H13	*
FLAP SLAT ELEC UNIT 1 CONT, C1539		1	11G13	*
FLAP SLAT ELEC UNIT 1 POWER, C1025		1	11G12	*
FLAP SLAT ELEC UNIT 1 SENSOR, C1037		1	11G14	*
FLAP SLAT ELEC UNIT 2 CONT, C1541		1	11C15	*
FLAP SLAT ELEC UNIT 2 POWER, C1521		1	11C14	*
FLAP SLAT ELEC UNIT 2 SENSOR, C1524		1	11C16	*
FLAP SLAT ELEC UNIT 3 CONT, C1540		1	11G22	*
FLAP SLAT ELEC UNIT 3 POWER, C4210		1	11G21	*
FLAP SLAT ELEC UNIT 3 SENSOR, C1038		1	11G23	*
FLAP SLAT SHUTOFF 1		1	11C17	*
RELAY - (REF 31-01-36, FIG. 101) LE/TE TRANSFER, K10244				
TRANSMITTER - LE SLAT POSITION, TS5047, TS5083	-	2	521RB (LEFT), 621RB (RIGHT)	27-88-01
UNIT - (REF 27-51-00, FIG. 101) FLAP/SLAT ELECTRONIC-1, M10331				

* SEE THE WDM EQUIPMENT LIST

Leading Edge Slat Position Indicating System - Component Index
Figure 101





Leading Edge Slat Position Indicating System – Component Location
Figure 102

Not Used
Figure 103

BOTH FLAP POINTERS ARE ON 1/2 WITH THE FLAP LEVER IN UP. NO LEADING EDGE EICAS MESSAGES ARE DISPLAYED.

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C14,11C15,11C16,11C17,11G12,11G13,11G14,11G21,
11G22,11G23,11H12,11H13,11H14,11J18

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

1 MAKE SURE THAT THE FLAP CONTROL LEVER IS IN THE UP POSITION.
DO THIS PROCEDURE: FSEU BITE PROCEDURE (FIM 27-51-00/101, FIG. 104).
DOES THE FSEU BITE PROCEDURE SHOW A FAILURE?

YES → 2 REPLACE THE FSEU-1, M10331 (MM 27-51-01/201).

NO → 3 REPLACE RELAY K10244 IN THE P36 PANEL (WDM 27-58-11).
IF THE PROBLEM CONTINUES, REPAIR THE CIRCUIT FROM PIN 12 ON RELAY K10244 TO PIN H5 ON CONNECTOR D33128 OF FSEU-1, M10331 (WDM 27-58-11).

Both Flap Pointers Are on 1/2 with the Flap Lever in UP.
No Leading Edge EICAS Messages Are Displayed.
Figure 104

BOTH FLAP POINTERS INDICATE 1/2 WITH THE FLAP LEVER IN 1. NO LEADING EDGE EICAS MESSAGES ARE DISPLAYED.

PREREQUISITES

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11C14,11C15,11C16,11C17,11G12,11G13,11G14,11G21,
11G22,11G23,11H12,11H13,11H14,11J18

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)
HYDRAULIC POWER IS ON (AMM 29-11-00/201)

1 PUT THE FLAP CONTROL LEVER IN THE 1-UNIT DETENT TO EXTEND THE FLAPS AND SLATS.
DO THIS PROCEDURE: FSEU BITE PROCEDURE (FIM 27-51-00/101, FIG. 104).
DOES THE FSEU BITE PROCEDURE SHOW A FAILURE?

YES → 2 REPLACE THE FSEU-1, M10331 (AMM 27-51-01/201).

NO → 3 REPLACE RELAY K10244 IN THE P36 PANEL (WDM 27-58-11).
IF THE PROBLEM CONTINUES, REPAIR THE CIRCUIT FROM PIN 12 ON RELAY K10244 TO PIN H5 ON CONNECTOR D33128 OF FSEU-1, M10331 (WDM 27-58-11).

Both Flap Pointer Indicate 1/2 with the Flap Lever in 1.
No Leading Edge EICAS Messages Are Displayed.
Figure 105