Scandinavian Airlines System

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# CHAPTER 73 - ENGINE FUEL AND CONTROL

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| 73 03 XA -- | 1. A (01=L, 02=R) electronic engine control problem was enountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagram for flight crew actions).<br>2. SSM 73-00-00 thru SSM 73-21-08 |
| 73 03 XB -- | 1. A (01=L, 02=R) eng idle rpm low/high problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagrams for flight crew actions).<br>2. SSM 73-21-02, SSM 73-21-04 |
| 73 03 XC -- | 1. A (01=L, 02=R) eng flameout problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagrams for flight crew actions).<br>2. SSM 73-00-00 thru SSM 73-21-08 |
| 73 03 XD -- | 1. A (01=L, 02=R) eng power fluctuates problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagram for flight crew actions).<br>2. SSM 73-00-00 thru SSM 73-21-08 |
| 73 03 XE -- | 1. A (01=L, 02=R) takeoff thrust low problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagrams for flight crew actions).<br>2. SSM 73-00-00 thru SSM 73-21-08 |
| 73 03 XF -- | 1. A (01=L, 02=R) eng thrust loss (auto decel) problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagram for flight crew actions).<br>2. SSM 73-00-00 thru SSM 73-21-08 |
| 73 03 XG -- | 1. A (01=L, 02=R) eng high fuel flow problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagram for flight crew actions).<br>2. SSM 73-00-00 |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|
| 73 03 XH -- | 1. A (01=L, 02=R) eng fuel indication problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagrams for flight crew action).<br>2. SSM 73-31-01 |
| 73 03 XI -- | 1. A (01=L, 02=R) starting problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagrams for flight crew action).<br>2. SSM 73-00-00, SSM 74-31-01 and SSM 80-11-01 |
| 73 03 XJ -- | 1. A (01=L, 02=R) eng no light/wet start problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagram for flight crew actions).<br>2. SSM 73-00-00 thru SSM 73-21-08 |
| 73 03 XK -- | 1. A (01=L, 02=R) eng slow accel to idle problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagrams for flight crew actions).<br>2. SSM 73-00-00 thru SSM 73-21-08 |
| 73 03 XL -- | 1. A (01=L, 02=R) eng hung start problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagrams for flight crew actions).<br>2. SSM 73-00-00 thru SSM 73-21-08 |
| 73 03 XM -- | 1. A (01=L, 02=R) eng auto accel problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagrams for flight crew actions).<br>2. SSM 73-00-00 thru SSM 73-21-08 |
| 73 03 XN -- | 1. A (01=L, 02=R) eng response to thrust lever movement problem was encountered by the flight crew which is not covered in the fault code diagrams (Ref Chapter 71 fault code diagram for flight crew action).<br>2. SSM 73-00-00 thru SSM 73-21-08 |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|
| 73 03 01 00 | Not Used |
| 73 03 02 00 | 1. EICAS msg IDLE DISAGREE displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 111, Block 1 or FIM 73-21-00/101, Fig. 111A, Block 1 |
| 73 03 03 00 | 1. EICAS msg L ENG CONTROL displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 112, Block 1 |
| 73 03 04 00 | 1. EICAS msg L ENG EEC C1 displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 115, Block 1 |
| 73 03 05 00 | 1. EICAS msg L ENG EEC C2 displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 116, Block 1 |
| 73 03 06 00 | 73 03 06 00 thru 73 03 07 00<br>Not Used |
| 73 03 08 00 | 1. EICAS msg L ENG EEC MODE displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 113, Block 1 |
| 73 03 09 00 | 1. EICAS msg L ENG FUEL FILT displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-34-00/101, Fig. 103, Block 1 |
| 73 03 10 00 | Not Used |
| 73 03 11 00 | 1. EICAS msg L ENG LOW IDLE displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 111, Block 1 or FIM 73-21-00/101, Fig. 111A, Block 1 |
| 73 03 12 00 | Not Used |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
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| 73 03 13 00 | 1. EICAS msg R ENG CONTROL displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 112, Block 1 |
| 73 03 14 00 | 1. EICAS msg R ENG EEC C1 displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 115, Block 1 |
| 73 03 15 00 | 1. EICAS msg R ENG EEC C2 displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 116, Block 1 |
| 73 03 16 00 | 73 03 16 00 thru 73 03 17 00<br>Not Used |
| 73 03 18 00 | 1. EICAS msg R ENG EEC MODE displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 113, Block 1 |
| 73 03 19 00 | 1. EICAS msg R ENG FUEL FILT displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-34-00/101, Fig. 103, Block 1 |
| 73 03 20 00 | Not Used |
| 73 03 21 00 | 1. EICAS msg R ENG LOW IDLE displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 111, Block 1 or<br>FIM 73-21-00/101, Fig. 111A, Block 1 |
| 73 03 22 00 | Not Used |
| 73 03 23 -- | 1. EICAS msg (01=L, 02=R) ENG EEC MODE displayed (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 113, Block 1 |
| 73 03 24 -- | 1. EICAS msg (01=L, 02=R) ENG CONTROL displayed (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 112, Block 1 |
| 73 03 25 -- | 1. Eng thrust levers misaligned in NORM mode. Thrust levers split ____ knobs apart. (01=L, 02=R) thrust lever lags. alignment was norm in ALTN mode. Eng parameters were norm (Ref Chapter 71 Fault Code Diagram).<br>2. FIM 73-21-00/101, Fig. 107, Block 1 |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|
| 73 03 26 -- | 1. Eng thrust levers misaligned in ALTN mode. Thrust levers split ____ knobs apart. (01=L, 02=R) thrust lever lags. Eng parameters were norm (Ref Chapter 71 Fault Code Diagram).<br>2. FIM 73-21-00/101, Fig. 107, Block 1 |
| 73 03 27 -- | 1. Eng thrust levers misaligned in NORM mode. Thrust levers split ____ knobs apart. (01=L, 02=R) thrust lever lags. Alignment was not checked in ALTN mode. Eng parameters were norm (Ref Chapter 71 Fault Code Diagram).<br>2. FIM 73-21-00/101, Fig. 107, Block 1 |
| 73 03 28 -- | 1. (01=L, 02=R) eng min idle rpm low ____%N2 (Ref Chapter 71 for fault code diagrams).<br>2. Do the PIMU BITE procedure (71-PIMU MESSAGE INDEX). Look for the PIMU messages that follow:<br><br>EEC CH-A/B N2 CROSS-CK FAIL (353-15)<br>EEC CH-A/B N1 CROSS-CK FAIL (353-14)<br>EEC CH-A/B N1 RANGE FAIL (352-14)<br>EEC CH-A/B N2 RANGE FAIL (352-15)<br>EEC CH-A/B P-SENSR DISAGREE (350-20)<br>EEC A/B-CHAN FAIL (350-14)<br>EEC CH-A/B UNIT FAIL (350-15)<br><br>Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown.<br><br>If none of the PIMU messages are shown, refer to FIM 73-21-00/101, Fig. 117, Block 1 |
| 73 03 29 -- | 1. (01=L, 02=R) eng min idle rpm high ____%N2 (Ref Chapter 71 for fault code diagrams).<br>2. Do the PIMU BITE procedure (71-PIMU MESSAGE INDEX). Look for the PIMU messages that follow:<br><br>EEC CH-A/B FMU T/M W/A FAIL<br>EEC CH-A/B FMU TR-CK FAIL<br>EEC CH-A/B FMU FD-BK FAIL<br><br>Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown.<br><br>If none of the above PIMU messages are shown, refer to FIM 73-21-00/101, Fig. 117, Block 1 |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|

73 03 30 -- 1. (01=L, 02=R) eng appr idle rpm high ____%N2 (Ref Chapter 71 for fault code diagrams).
2. Do the PIMU BITE procedure (71-PIMU MESSAGE INDEX). Look for the PIMU messages that follow:

EEC CH-A/B FMU T/M W/A FAIL
EEC CH-A/B FMU TR-CK FAIL
EEC CH-A/B FMU FD-BK FAIL

Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown.

If none of the above PIMU messages are shown, refer to FIM 73-21-00/101, Fig. 117, Block 1

73 03 31 -- 1. (01=L, 02=R) eng appr idle rpm low ____%N2 with ldg flaps selected (Ref Chapter 71 for fault code diagrams).
2. Do the PIMU BITE procedure (71-PIMU MESSAGE INDEX). Look for the PIMU messages that follow:

EEC CH-A/B XTRN DIS DISAGREE (350-23)
EEC CH-A/B N1 CROSS-CK FAIL (353-14)
EEC CH-A/B N2 CROSS-CK FAIL (353-15)
EEC CH-A/B P-SENSR DISAGREE (350-20)
EEC CH-A/B N2 RANGE FAIL (352-15)
EEC A/B-CHAN FAIL (350-14)
EEC CH-A/B UNIT FAIL (350-15)

Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown.

If none of the above PIMU messages are shown, refer to FIM 73-21-00/101, Fig. 117, Block 1

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|

73 03 32 --

1. (01=L, 02=R) eng appr idle rpm low ____%N2 with eng anti-ice on (Ref Chapter 71 for fault code diagrams).
2. Do the PIMU BITE procedure (71-PIMU MESSAGE INDEX). Look for the PIMU messages that follow:

   EEC CH-A/B XTRN DIS DISAGREE (350-23)
   EEC CH-A/B N1 CROSS-CK FAIL (353-14)
   EEC CH-A/B N2 CROSS-CK FAIL (353-15)
   EEC CH-A/B P-SENSR DISAGREE (350-20)
   EEC CH-A/B N2 RANGE FAIL (352-15)
   EEC A/B-CHAN FAIL (350-14)
   EEC CH-A/B UNIT FAIL (350-15)

   Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown.

   If none of the PIMU messages are shown, refer to FIM 73-21-00/101, Fig. 117, Block 1

73 03 33 --

1. (01=L, 02=R) eng appr idle rpm low ___%N2, with ldg flap selected and eng anti-ice on (Ref Chapter 71 for fault code diagrams).
2. Do the PIMU BITE procedure (71-PIMU MESSAGE INDEX). Look for the PIMU messages that follow:

   EEC CH-A/B XTRN DIS DISAGREE (350-23)
   EEC CH-A/B N1 CROSS-CK FAIL (353-14)
   EEC CH-A/B N2 CROSS-CK FAIL (353-15)
   EEC CH-A/B P-SENSR DISAGREE (350-20)
   EEC CH-A/B N2 RANGE FAIL (352-15)
   EEC A/B-CHAN FAIL (350-14)
   EEC CH-A/B UNIT FAIL (350-15)

   Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown.

   If none of the PIMU messages are shown, refer to FIM 73-21-00/101, Fig. 110 , Block 1

73 03 34 --

1. (01=L, 02=R) eng flameout, operated norm after restart (Ref Chapter 71 for fault code diagrams).
2. FIM 73-21-00/101, Fig. 119, Block 1

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
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| 73 03 35 -- | 1. (01=L, 02=R) eng flameout. Restart was not successful due to zero F/F (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 105, Block 1 |
| 73 03 36 -- | 1. (01=L, 02=R) eng flameout. Restart was not successful due to low F/F (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 105, Block 3 |
| 73 03 37 -- | 1. (01=L, 02=R) eng flameout. Restarting not (attempted, successful). (Note reason for no restart) (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 109, Block 1 and FIM 73-21-00/101, Fig. 119, Block 1 |
| 73 03 38 -- | 1. (01=L, 02=R) eng power fluctuates at a constant thrust setting (Ref Chapter 71 fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 114, Block 1 |
| 73 03 39 -- | 1. (01=L, 02=R) eng did not reach target EPR. Eng parameters were normal for EPR obtained (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 104A, Block 1 |
| 73 03 40 -- | 1. (01=L, 02=R) eng Auto Decel. Eng parameter norm for thrust obtained (Ref Chapter 71 for fault code diagrams).<br>2. 73-21-00/101, Fig. 104, Block 1 |
| 73 03 41 -- | 1. (01=L, 02=R) eng high fuel flow. Other eng parameters norm. Fuel qty decrease confirms high fuel flow (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-11-00/101, Fig. 104, Block 1 |
| 73 03 42 -- | 1. (01=L, 02=R) eng high fuel flow. Other parameters norm. Fuel qty decrease does not confirm high fuel flow (Ref Chapter 71 fault code diagrams).<br>2. Replace the fuel flow transmitter (AMM 73-31-01/401). |
| 73 03 43 -- | 1. (01=L, 02=R) eng fuel used indicates low. Fuel flow indication normal (Ref Chapter 71 for fault code diagrams).<br>2. Examine the fuel system from the engine strut to the fuel flow transmitter for fuel leaks. If leaks are found, repair or replace the defective component or fix the leak as it is necessary. If leaks are not found, examine and repair the airplane fuel system as it is necessary (AMM 28-11-00/201). |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
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| 73 03 44 -- | 1. (01=L, 02=R) eng fuel flow display was intermittent (Ref Chapter 71 for fault code diagrams).<br>2. Replace the fuel flow transmitter (AMM 73-31-01/401). If the problem continues, remove the L (R) EICAS computer, M10181 (M10182) (AMM 31-41-02/401). Examine and repair the circuit from the connector D11000, pins 1, 2, and 3 at the fuel flow transmitter, M7192, to the connectors D881A, pins J8, J9, and J7, connector D881D, pins J1, K1, and H1 at the left EICAS computer, M10181, and connectors D883D, pins J1, K1, and H1, and connector D883A, pins J7, J8, and J9 at the right EICAS computer, M10182 (WDM 73-31-11). Install the EICAS computer. |
| 73 03 45 -- | 1. (01=L, 02=R) eng fuel flow display was zero. Fuel used was also low (Ref Chapter 71 for fault code diagrams).<br>2. Replace the fuel flow transmitter (AMM 73-31-01/401). If the problem continues, remove the L (R) EICAS computer, M10181 (M10182) (AMM 31-41-02/401). Examine and repair the circuit from the connector D11000, pins 1, 2, and 3 at the fuel flow transmitter, M7192, to the connectors D881A, pins J8, J9, and J7, connector D881D, pins J1, K1, and H1 at the left EICAS computer, M10181, and the connectors D883D, pins J1, K1, and H1, and the connector D883A, pins J7, J8, and J9 at the right EICAS computer, M10182 (WDM 73-31-11). Install the EICAS computer. |
| 73 03 46 -- | 1. (01=L, 02=R) eng F/F indicated zero during start, eng start was norm (Ref Chapter 71 for fault code diagrams).<br>2. Replace the fuel flow transmitter (AMM 73-31-01/401). If the probelm continues, remove the L (R) EICAS computers, M10181 (M10182) (AMM 31-41-02/401). Examine and repair the circuit from the connector D11000, pins 1, 2, and 3 at the fuel flow transmitter, M7192, to the connectors D881A, pins J8, J9, and J7, connector D881D, pins H1, K1, and J1 at the left EICAS computer, M10181, and the connectors D883D, pins J1, K1, and H1, and the connectors D883A, pins J7, J8, and J9 at the right EICAS computer, M10182 (WDM 73-31-11). Install the EICAS computers. |
| 73 03 47 -- | 1. (01=L, 02=R) eng failed to light during start. F/F indicated zero with fuel control sw RUN (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-11-00/101, Fig. 103, Block 1 |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
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| 73 03 48 -- | 1. (01=L, 02=R) eng F/F indicated low during start, eng start was norm (Ref Chapter 71 for fault code diagrams).<br>2. Replace the fuel flow transmitter (AMM 73-31-01/401). If the problem continues, remove the L (R) EICAS computers, M10181 (M10182) (AMM 31-41-02/401). Examine and repair the circuit from the connector D11000, pins 1, 2, and 3 at the fuel flow transmitter, M7192, to the connectors D881A, pins J8, J9, and J7, connector D881D, pins J1, K1, and H1 at the left EICAS computer, M10181, and the connectors D883D, pins J1, K1, and H1, and connector D883A, pins J7, J8, and J9 at the right EICAS computer, M10182 (WDM 73-31-11). Install the EICAS computers. |
| 73 03 49 -- | 1. (01=L, 02=R) eng F/F indicated high during start, eng start was norm (Ref Chapter 71 for fault code diagrams).<br>2. Replace the fuel flow transmitter (AMM 73-31-01/401). If the problem continues, remove the L (R) EICAS computers, M10181 (M10182) (AMM 31-41-02/401). Examine and repair circuit from the connector D11000, pins 1, 2, and 3 at the fuel flow transmitter, M7192, to the connectors D881A, pins J8, J9, and J7, connector D881D, pins J1, K1, and H1 at the left EICAS computer, M10181, and the connectors D883D, pins J1, K1, and H1, and connector D883A, pins J7, J8, and J9 at the right EICAS computer, M10182 (WDM 73-31-11). Install the EICAS computers. |
| 73 03 50 -- | 1. (01=L, 02=R) eng no lightoff during start attempt, F/F indicated zero. Eng and spar valve indicates norm operation (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-11-00/101, Fig. 103, Block 1 |
| 73 03 51 -- | 1. (01=L, 02=R) eng no lightoff during start attempt with ign selector in single or BOTH (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 106, Block 1 |
| 73 03 52 -- | Not Used |
| 73 03 53 -- | Not Used |
| 73 03 54 -- | 1. (01=L, 02=R) eng hung start before starter cutout. EGT did not increase after N2 stabilization (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 110, Block 1 |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|
| 73 03 55 -- | 1. (01=L, 02=R) eng auto accel. Eng was (approaching, exceeded) limits & was shut down (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 103, Block 1 |
| 73 03 56 -- | 1. (01=L, 02=R) eng auto accel. Eng was (approaching, exceeded) limits & was not shut down (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 103, Block 1 |
| 73 03 57 -- | 1. (01=L, 02=R) eng slow response to thrust lever movement (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 108A, Block 1 |
| 73 03 58 -- | 1. (01=L, 02=R) eng no response to thrust lever movement (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 108, Block 1 |
| 73 03 59 -- | 1. (01=L, 02=R) EICAS msg ENG CONTROL displayed and EICAS msg (01=L, 02=R) ENG EEC MODE displayed.<br>2. FIM 73-21-00/101, Fig. 112, Block 1 and FIM 73-21-00/101, Fig. 113, Block 1 |
| 73 03 60 -- | 1. EICAS msg (01=L, 02=R) ENG EEC C1 displayed (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 115, Block 1 |
| 73 03 61 00 | 1. EICAS msg IDLE DISAGREE displayed. Both eng min and appr idle rpm normal (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 111, Block 1 or FIM 73-21-00/101, Fig. 111A, Block 1 |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|
| 73 03 62 -- | 1. EICAS msg IDLE DISAGREE displayed. (01=L, 02=R) eng min/appr idle rpm low (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 111, Block 1 or FIM 73-21-00/101, Fig. 111A, Block 1 |
| 73 03 63 -- | 1. EICAS msg (01=L, 02=R) REV POS displayed (Ref Chapter 71 for fault code diagrams).<br>2. Do the PIMU BITE procedure (71-PIMU MESSAGE INDEX). Look for the PIMU messages that follow:<br><br>EEC CH-A/B REVERSER RNG FAIL (352-25)<br>EEC CH-A/B REVR CR-CK FAIL (353-25)<br>EEC A/B-CHAN FAIL (350-14)<br><br>Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown. |
| 73 03 64 -- | 1. EICAS msg (01=L, 02=R) EEC TEST PWR displayed (Ref Chapter 71 for fault code diagrams).<br>2. Put the EEC MAINT L (R) ENG POWER switch on the pilot's right side panel, P61, to the NORM position. If the problem continues, replace the L (R) ENG POWER switch S1 (S3) on the EEC MAINT panel, M1390 (WDM 73-21-11). |
| 73 03 65 -- | 1. EICAS msg (01=L, 02=R) ENG FUEL FILT displayed (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-34-00/101, Fig. 103, Block 1 |
| 73 03 66 00 | Not Used. |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|
| 73 03 67 00 | 1. EICAS msg L EEC TEST PWR displayed (Ref Chapter 31 for fault code diagram).<br>2. Put the EEC MAINT L ENG POWER switch on the pilot's right side panel, P61, to the NORM position. If the problem continues, replace the L ENG POWER switch S1 on the EEC MAINT panel, M1390 (WDM 73-21-11). |
| 73 03 68 00 | 1. EICAS msg R EEC TEST PWR displayed (Ref Chapter 31 for fault code diagram).<br>2. Put the EEC MAINT R ENG POWER switch on the pilot's right side panel, P61, to the NORM position. If the probelm continues, replace the R ENG POWER switch S3 on the EEC MAINT panel, M1390 (WDM 73-21-11). |
| 73 03 69 00 | 1. EICAS msg L ENG EEC C1 displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 115, Block 1 |
| 73 03 70 00 | 1. EICAS msg R ENG EEC C1 displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 115, Block 1 |
| 73 03 71 00 | 1. EICAS msg L ENG EEC C2 displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 116, Block 1 |
| 73 03 72 00 | 1. EICAS msg R ENG EEC C2 displayed (Ref Chapter 31 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 116, Block 1 |
| 73 03 73 00 | 1. EICAS msg L ENG REV POS displayed (Ref Chapter 31 for fault code diagram).<br>2. Do the PIMU BITE procedure (71-EPCS MESSAGE INDEX).<br>Look for the PIMU messages that follow:<br><br>EEC CH-A/B REVERSER RNG FAIL (352-25)<br>EEC CH-A/B REVR CR-CK FAIL (353-25)<br>EEC A/B-CHAN FAIL (350-14)<br><br>Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown. |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|
| 73 03 74 00 | 1. EICAS msg R ENG REV POS displayed (Ref Chapter 31 for fault code diagram).<br>2. Do the PIMU BITE procedure (71-PIMU MESSAGE INDEX). Look for the PIMU messages that follow:<br><br>EEC CH-A/B REVERSER RNG FAIL (352-25)<br>EEC CH-A/B REVR CR-CK FAIL (353-25)<br>EEC A/B-CHAN FAIL (350-14)<br><br>Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown. |
| 73 03 75 -- | 1. EICAS msg (01=L,02=R) ENG LIM PROT displayed (Ref Chapter 71 for fault code diagram).<br>2. There is no troubleshooting procedure for this EICAS message. This message is only set in conjunction with EICAS message (L,R) ENG EEC MODE (Refer to fault code 73 03 76 --) or EICAS message (L,R) ENG EEC C1 (Refer to fault code 73 03 77 --). |
| 73 03 76 -- | 1. EICAS msgs (01=L,02=R) ENG LIM PROT and (L,R) ENG EEC MODE displayed (Ref Chapter 71 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 113, Block 1 |
| 73 03 77 -- | 1. EICAS msgs (01=L,02=R) ENG LIM PROT and (L,R) ENG EEC C1 displayed (Ref Chapter 71 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 115, Block 1 |
| 73 03 78 -- | Not Used |

| FAULT CODE | 1. LOG BOOK REPORT<br>2. FAULT ISOLATION REFERENCE |
|---|---|
| 73 03 79 -- | 1. (01=L,02=R) eng did not reach target EPR. EICAS msg (L,R) ENG RPM LIM displayed (Ref Chapter 71 for fault code diagram).<br>2. Do the PIMU BITE procedure (71-PIMU MESSAGE INDEX). Look for the PIMU messages that follow:<br><br>EEC CH-A/B B25 T/M W/A FAIL (351-16)<br>EEC CH-A/B FMU TR-CK FAIL (351-19)<br>EEC CH-A/B B25 TR-CK FAIL 351-21)<br>EEC CH-A/B B25 FD-BK FAIL (351-26)<br>EEC CH-A/B N1 CROSS-CK FAIL (353-14)<br>EEC CH-A/B N2 CROSS-CK FAIL (353-15)<br>EEC CH-A/B STRT SOL W/A FAIL (354-15)<br>EEC CH-A/B STAB SOL W/A FAIL (354-16)<br>EEC CH-A/B PMA PWR SOL SHRT (354-24)<br><br>Refer to PIMU Table 101 for corrective action for any of the above PIMU messages shown. |
| 73 03 80 -- | 1. (01=L, 02=R) eng slow accel to idle. F/F and duct press were normal (Ref Chapter 71 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 110, Block 1 |
| 73 03 81 -- | 1. (01=L, 02=R) eng slow accel to idle. F/F was abnormal (Ref Chapter 71 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 110, Block 1 |
| 73 03 82 -- | 1. (01=L, 02=R) eng did not reach target EPR. Eng parameters were not normal for EPR obtained (Ref Chapter 71 for fault code diagrams).<br>2. FIM 73-21-00/101, Fig. 104B, Block 1 |
| 73 03 83 -- | 1. (01=L, 02=R) eng did not reach target EPR. Eng parameters not reported. (Ref Chapter 71 for fault code diagram).<br>2. FIM 73-21-00/101, Fig. 104C, Block 1 |

| FAULT CODE | |
|---|---|
| | 1. LOG BOOK REPORT |
| | 2. FAULT ISOLATION REFERENCE |

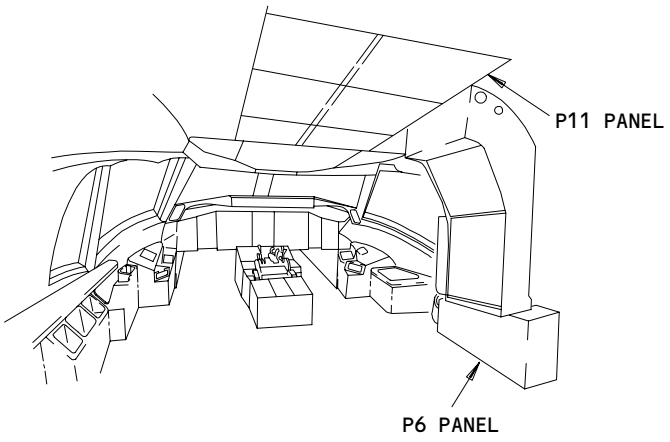
| | | |
|---|---|---|
| 73 03 84 -- | 1. | (01=L, 02=R) eng no lightoff during start attempt, F/F was low. (Ref Chapter 71 for fault code diagram). |
| | 2. | FIM 73-21-00/101, Fig. 118, Block 1 |

## FUEL DISTRIBUTION SYSTEM

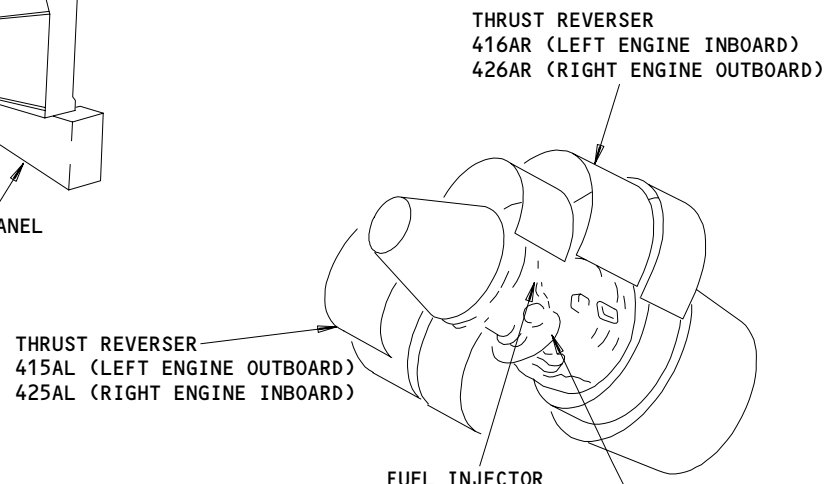
| COMPONENT | FIG. 102 SHT | QTY | ACCESS/AREA | AMM REFERENCE |
|---|---|---|---|---|
| CIRCUIT BREAKER – | 1 | | FLT COMPT, P6,P11 | |
| FUEL VALVE L SPAR, C1061 | | 1 | 6E1 | * |
| FUEL VALVE R SPAR, C1062 | | 1 | 6E2 | * |
| FUEL CONT VLV & EEC CHAN B RESET L, C1419 | | 1 | 11D25 | * |
| FUEL CONT VLV & EEC CHAN B RESET R, C1420 | | 1 | 11D26 | * |
| FILTER – LEFT ENGINE FUEL PUMP | 2 | 1 | 416AR, THRUST REVERSER | 73-11-02 |
| FILTER – RIGHT ENGINE FUEL PUMP | 2 | 1 | 426AR, THRUST REVERSER | 73-11-02 |
| INJECTORS AND SUPPORT – LEFT ENGINE FUEL | 1 | 24 | 415AL,416AR THRUST REVERSER | 73-11-05 |
| INJECTORS AND SUPPORT – RIGHT ENGINE FUEL | 1 | 24 | 425AL,426AR THRUST REVERSER | 73-11-05 |
| LINE – LEFT ENGINE MAIN FUEL SUPPLY | 1 | 1 | 416AR, THRUST REVERSER | 73-11-08 |
| LINE – RIGHT ENGINE MAIN FUEL SUPPLY | 1 | 1 | 426AR, THRUST REVERSER | 73-11-08 |
| PUMP – LEFT ENGINE FUEL | 2 | 1 | 416AR, THRUST REVERSER | 73-11-01 |
| PUMP – RIGHT ENGINE FUEL | 2 | 1 | 426AR, THRUST REVERSER | 73-11-01 |
| STRAINER – LEFT ENGINE FUEL DISTRIBUTION VALVE | 2 | 1 | 416AR, THRUST REVERSER | 73-11-04 |
| STRAINER – RIGHT ENGINE FUEL DISTRIBUTION VALVE | 2 | 1 | 426AR, THRUST REVERSER | 73-11-04 |
| VALVE – LEFT ENGINE FUEL BYPASS | 2 | 1 | 416AR, THRUST REVERSER | 73-11-07 |
| VALVE – RIGHT ENGINE FUEL BYPASS | 2 | 1 | 426AR, THRUST REVERSER | 73-11-07 |
| VALVE – LEFT ENGINE FUEL DISTRIBUTION | 2 | 1 | 416AR, THRUST REVERSER | 73-11-03 |
| VALVE – RIGHT ENGINE FUEL DISTRIBUTION | 2 | 1 | 426AR, THRUST REVERSER | 73-11-03 |

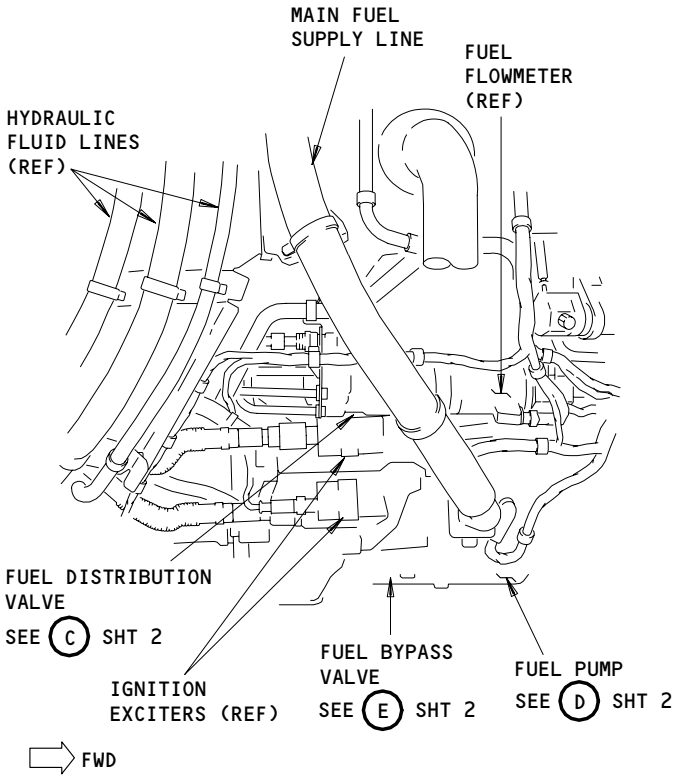
* SEE THE WDM EQUIPMENT LIST

Fuel Distribution System – Component Index
Figure 101

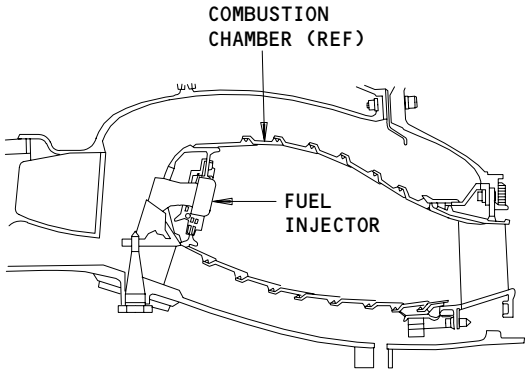



FLIGHT COMPARTMENT




RIGHT SIDE OF THE ENGINE
A

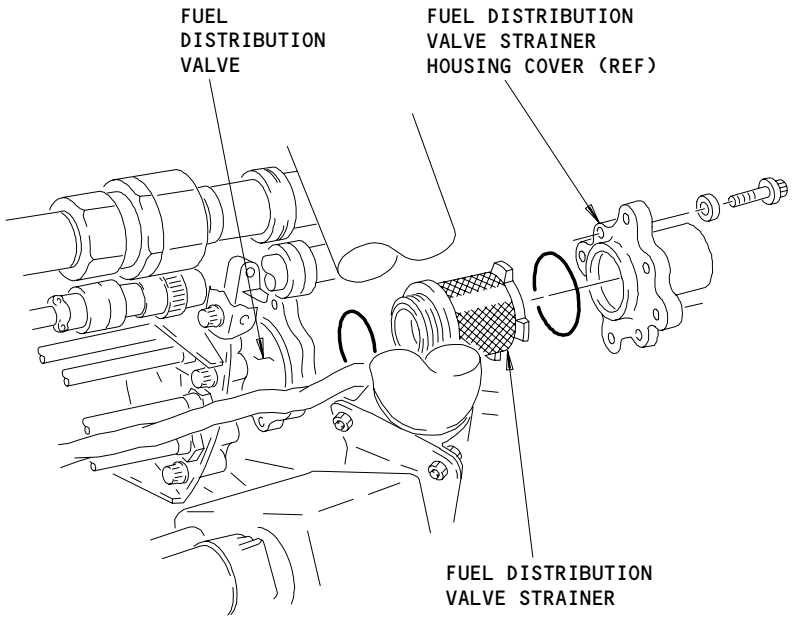



FUEL INJECTOR AND SUPPORT
B

Fuel Distribution System - Component Location
Figure 102 (Sheet 1)

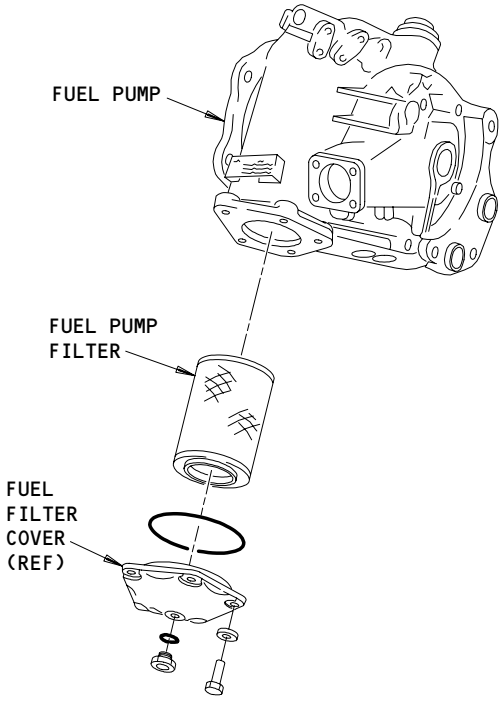


299343



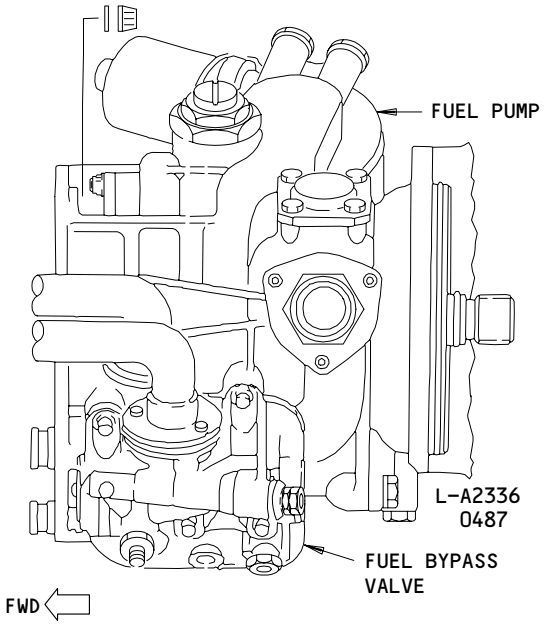

FUEL DISTRIBUTION VALVE

C




FUEL PUMP

D




FUEL BYPASS VALVE

E

Fuel Distribution System - Component Location (Details from Sht 1)
Figure 102 (Sheet 2)



300368

## NO ENGINE LIGHTOFF (NO FUEL FLOW)

**PREREQUISITES**

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

**POSSIBLE CAUSES:**

1. FMU FUEL SHUTOFF SOLENOID PROBLEM (WDM 76-11-11)
2. FUEL PUMP IS NOT SATISFACTORY (AMM 73-11-01/401)
3. CONTAMINATION IN ENGINE FUEL METERING SYSTEM (FIM 71-08-00/101, FIG. 103)
4. AIRCRAFT FUEL SYSTEM OR FIRE PROTECTION SYSTEM PROBLEM (AMM 28 AND AMM 26).

**FAULT ISOLATION:**

1 LOOK AT THE FLIGHT DECK/ MAINTENANCE MESSAGE DISPLAY. ARE THERE ANY MESSAGES?
- YES → 40 DO THE CORRECTIVE ACTION FOR EACH FAULT SHOWN.
- NO ↓

2 MAKE SURE THE FMU FUEL SHUTOFF SOLENOID OPERATES CORRECTLY (WDM 76-11-11). IS IT OPERATING CORRECTLY?
- NO → 41 REPLACE THE FMU (AMM 73-21-01/401).
- YES ↓

3 DO ENGINE CHECK 5 - FUEL PUMP PRESSURE CHECK (FIM 71-08-00/101, FIG. 105). IS PUMP OUTPUT WITHIN SPECIFIED LIMITS?
- NO → 42 REPLACE THE ENGINE FUEL PUMP (AMM 73-11-01/401).
- YES ↓

4 DO ENGINE CHECK 3 - FUEL SYSTEM CONTAMINATION CHECK (FIM 71-08-00/101, FIG. 103). WAS CONTAMINATION FOUND?
- YES → 43 DETERMINE THE SOURCE OF CONTAMINATION. REPAIR, OR REPLACE AS NECESSARY.
- NO ↓

5 MAKE SURE THE AIRCRAFT FUEL SYSTEM (FIM 28-22-00/101) AND THE FIRE PROTECTION SYSTEM (WDM 28-22-11) OPERATES CORRECTLY TO PERMIT CORRECT ENGINE FUEL FEED. DO THESE SYSTEMS OPERATE CORRECTLY?
- NO → 44 DO THE NECESSARY CORRECTIVE ACTION TO PERMIT ENGINE FUEL FEED.
- YES → 45 REFER TO TABLE A BELOW, FOR THE NON-FREQUENT CAUSES OF THIS FAULT. TAKE CORRECTIVE ACTION AS NECESSARY.

| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| MAINTENANCE | EXAMINE MAINTENANCE RECORD. |

TABLE A

No Engine Lightoff (No Fuel Flow)
Figure 103

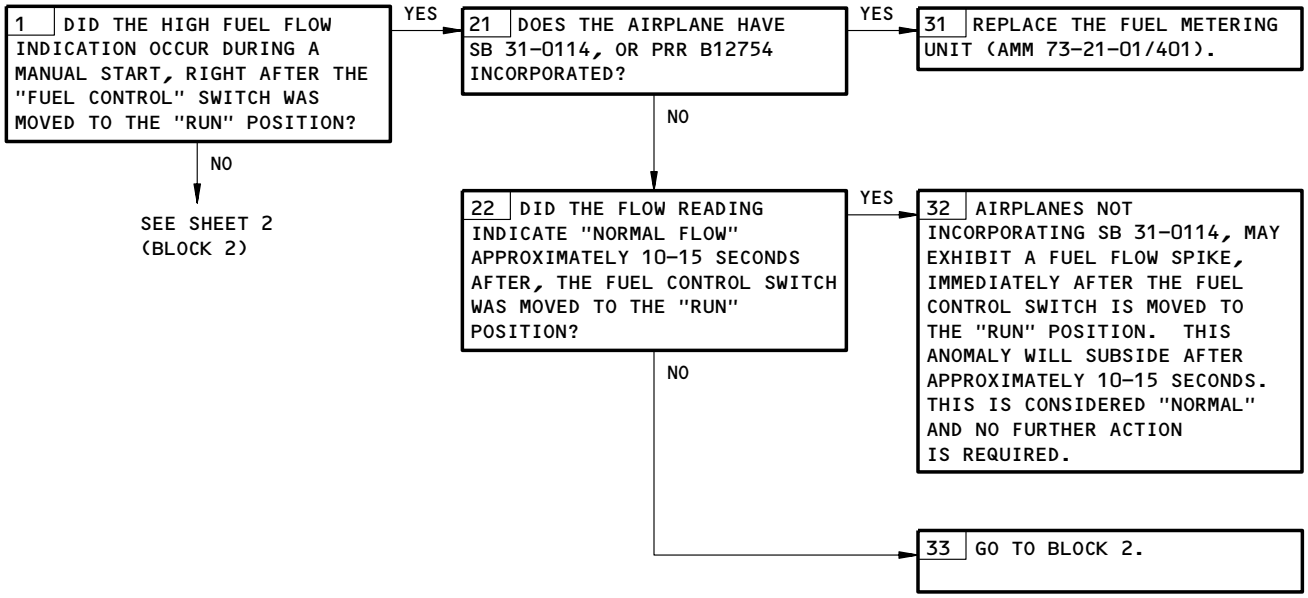
## HIGH FUEL FLOW, OTHER ENGINE PARAMETERS NORMAL

**PREREQUISITES**
NONE

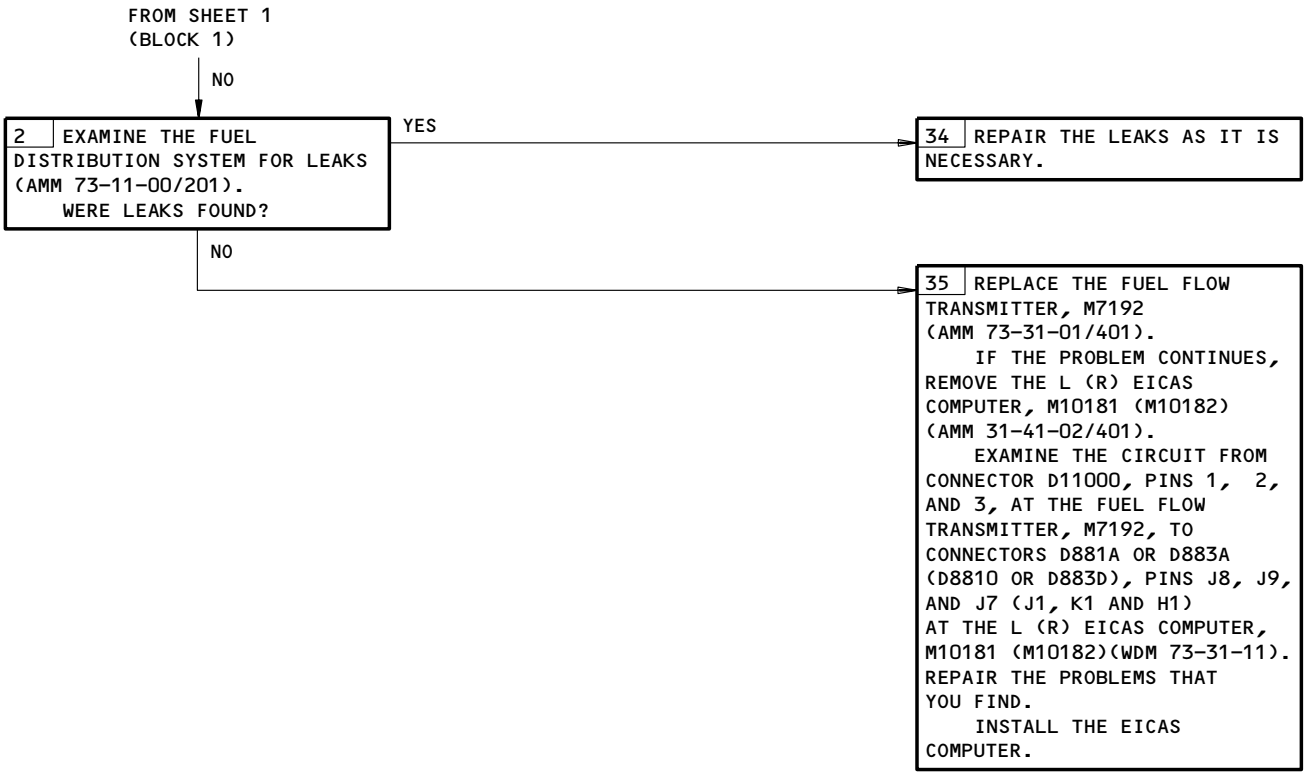
POSSIBLE CAUSES:

1. FOR AIRPLANES POST-SB 31-0114 OR PRR B12754, A FUEL FLOW INDICATION SPIKE DURING START IS NORMAL.
2. LEAK IN FUEL DISTRIBUTION SYSTEM
3. BAD FUEL METERING UNIT (AMM 73-21-01/401)
4. BAD FUEL FLOW TRANSMITTER (AMM 73-31-01/401).

FAULT ISOLATION:




High Fuel Flow, Other Engine Parameters Normal
Figure 104 (Sheet 1)



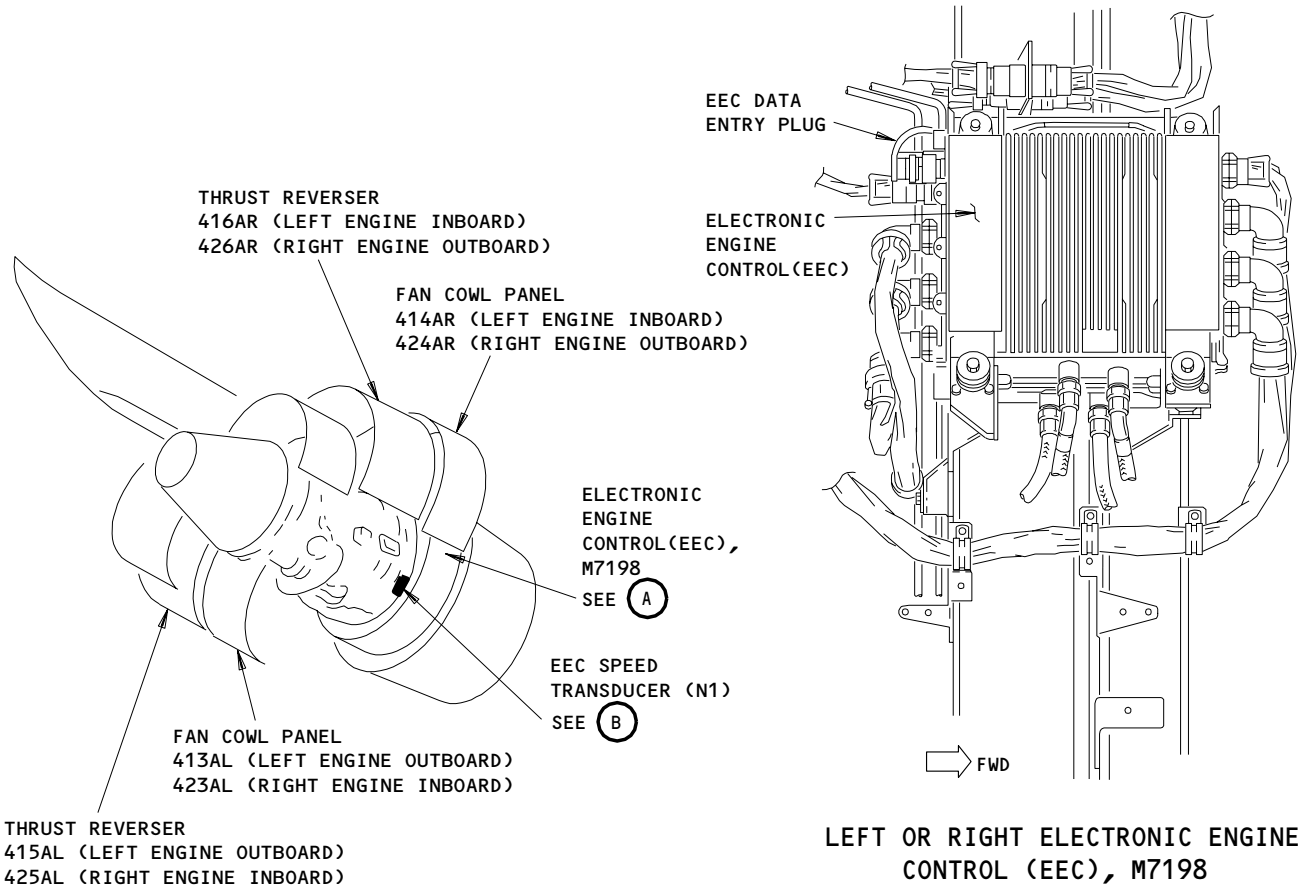

High Fuel Flow, Other Engine Parameters Normal
Figure 104 (Sheet 2)

## FUEL CONTROL SYSTEM

| COMPONENT | FIG. 102 SHT | QTY | ACCESS/AREA | AMM REFERENCE |
|---|---|---|---|---|
| ALTERNATOR - LEFT EEC, T686 | 6 | 1 | 415AL,416AR, THRUST REVERSERS | 73-21-05 |
| ALTERNATOR - RIGHT EEC, T686 | 6 | 1 | 425AL,426AR, THRUST REVERSERS | 73-21-05 |
| CIRCUIT BREAKER - | 3 | | FLIGHT COMPT, P6,P11 | |
| AIR DATA CMPTR LEFT, C625 | | 1 | 11A10 | * |
| AIR DATA CMPTR RIGHT, C626 | | 1 | 11F30 | * |
| APU ENG START/ECS DISCRETES, C1512 | | 1 | 11B36 | * |
| FUEL CONT VLV & EEC CHAN B RESET L, C1419 | | 1 | 11D25 | * |
| FUEL CONT VLV & EEC CHAN B RESET R, C1420 | | 1 | 11D26 | * |
| FUEL VALVE LEFT SPAR, C1061 | | 1 | 6E1 | * |
| FUEL VALVE RIGHT SPAR, C1062 | | 1 | 6E2 | * |
| L ENGINE PERF SOL CHAN A, C1465 | | 1 | 11L3 | * |
| L ENGINE PERF SOL CHAN B, C1466 | | 1 | 11L4 | * |
| LEFT ENGINE EEC DISCRETES, C1404 | | 1 | 11M5 | * |
| LEFT ENGINE PROBE HEAT, C1122 | | 1 | 6L25 | * |
| R ENGINE PERF SOL CHAN A, C1467 | | 1 | 11L30 | * |
| R ENGINE PERF SOL CHAN B, C1468 | | 1 | 11L31 | * |
| RIGHT ENGINE EEC DISCRETES, C1405 | | 1 | 11M32 | * |
| RIGHT ENGINE PROBE HEAT, C1123 | | 1 | 6K25 | * |
| CONTROL - LEFT ELECTRONIC ENGINE, M7198 | 1 | 1 | 414AR, FAN COWL PANEL | 73-21-04 |
| CONTROL - RIGHT ELECTRONIC ENGINE, M7198 | 1 | 1 | 424AR, FAN COWL PANEL | 73-21-04 |
| HARNESS - LEFT ENGINE EEC WIRING | 1 | 1 | 416AR, THRUST REVERSER | 73-21-07 |
| HARNESS - RIGHT ENGINE EEC WIRING | 1 | 1 | 426AR, THRUST REVERSER | 73-21-07 |
| PLUG - LEFT ENGINE EEC DATA ENTRY | 1 | 1 | 414AR, FAN COWL PANEL | 73-21-08 |
| PLUG - RIGHT ENGINE EEC DATA ENTRY | 1 | 1 | 424AR, FAN COWL PANEL | 73-21-08 |
| PROBE - LEFT ENGINE EEC FUEL TEMPERATURE THERMOCOUPLE | 6 | 1 | 416AR, THRUST REVERSER | 73-21-09 |
| PROBE - LEFT ENGINE EEC INLET TOTAL PRESSURE/ TEMPERATURE (PT2/TT2), T867 | 4 | 1 | 412AR, INLET PROBE ACCESS PANEL | 73-21-03 |
| PROBE - LEFT ENGINE EEC OIL TEMPERATURE THERMOCOUPLE | 2 | 1 | 415AL,416AR, THRUST REVERSERS | 73-21-10 |
| PROBE - LEFT ENGINE EEC THERMOCOUPLE (TT3) | 5 | 1 | 416AR, THRUST REVERSER | 73-21-14 |
| PROBE - RIGHT ENGINE EEC FUEL TEMPERATURE THERMOCOUPLE | 6 | 1 | 426AR, THRUST REVERSER | 73-21-09 |
| PROBE - RIGHT ENGINE EEC INLET TOTAL PRESSURE TEMPERATURE (PT2/TT2), T867 | 4 | 1 | 422AR, INLET PROBE ACCESS PANEL | 73-21-03 |
| PROBE - RIGHT ENGINE EEC OIL TEMPERATURE THERMOCOUPLE | 2 | 1 | 425AL,426AR, THRUST REVERSERS | 73-21-10 |
| PROBE - RIGHT ENGINE EEC THERMOCOUPLE (TT3) | 5 | 1 | 426AR, THRUST REVERSER | 73-21-14 |
| RESOLVER - LEFT THRUST LEVER ANGLE (TLA), TS171 | 3 | 1 | 113AL, FORWARD EQUIPMENT COMPT ACCESS | |
| RESOLVER - RIGHT THRUST LEVER ANGLE (TLA), TS170 | 3 | 1 | 113AL, FORWARD EQUIPMENT COMPT ACCESS | |
| TRANSDUCER - LEFT ENGINE EEC SPEED (N1) | 1 | 1 | 415AL,416AR, THRUST REVERSERS | 73-21-06 |
| TRANSDUCER - RIGHT ENGINE EEC SPEED (N1) | 1 | 1 | 425AL,426AR, THRUST REVERSERS | 73-21-06 |
| UNIT - LEFT ENGINE FUEL METERING | 6 | 1 | 415AL,416AR, THRUST REVERSERS | 73-21-01 |
| UNIT - RIGHT ENGINE FUEL METERING | 6 | 1 | 425AL,426AR, THRUST REVERSERS | 73-21-01 |

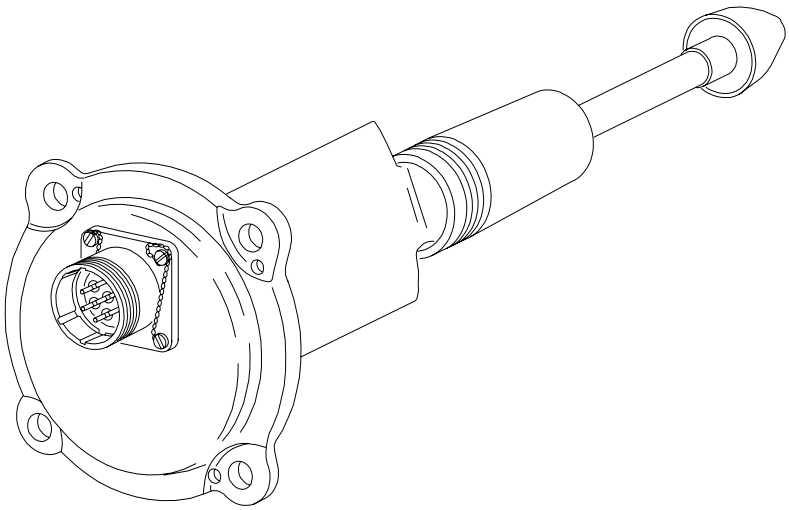
* SEE THE WDM EQUIPMENT LIST

Fuel Control System - Component Index
Figure 101




LEFT OR RIGHT ELECTRONIC ENGINE CONTROL (EEC), M7198

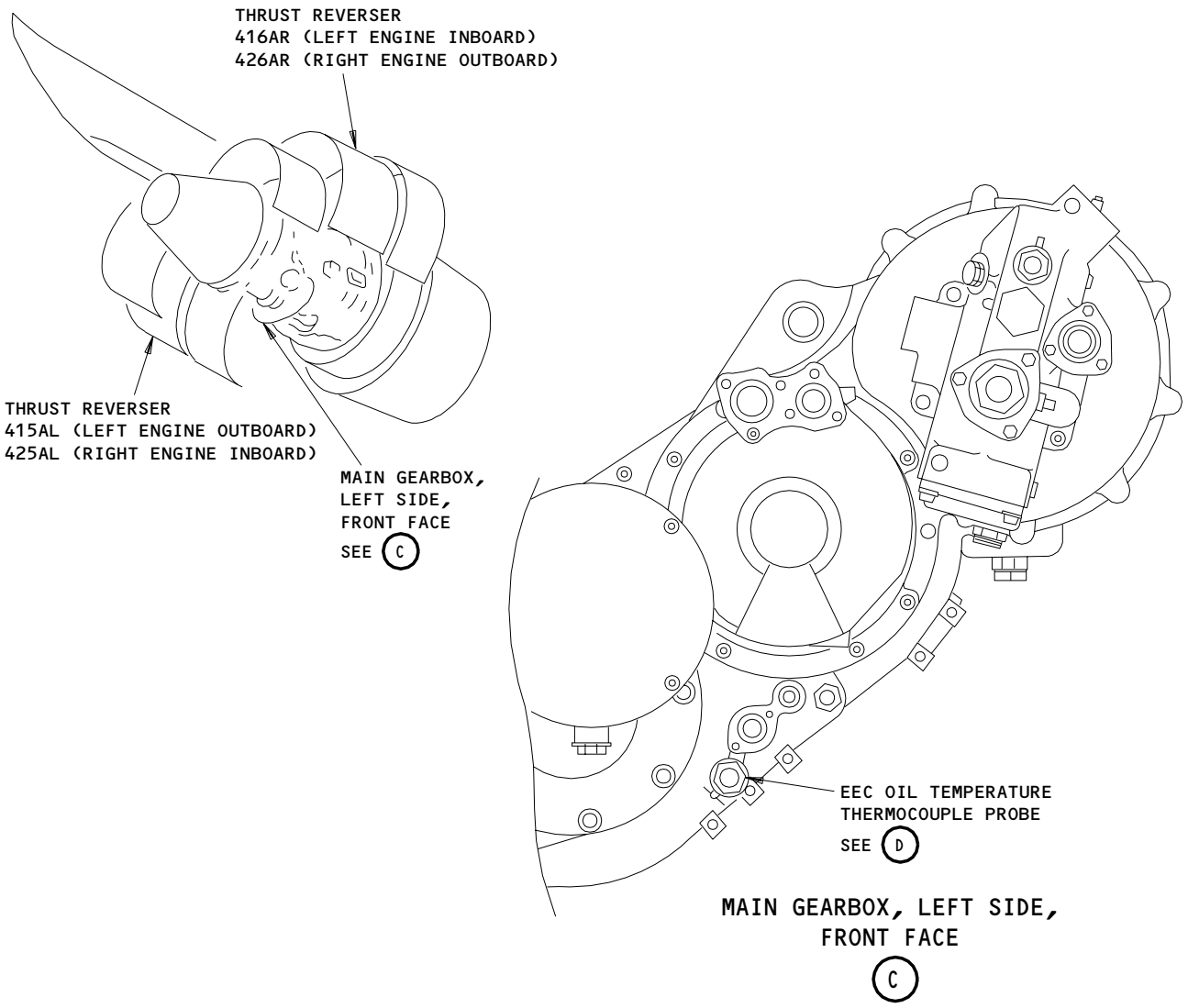
A



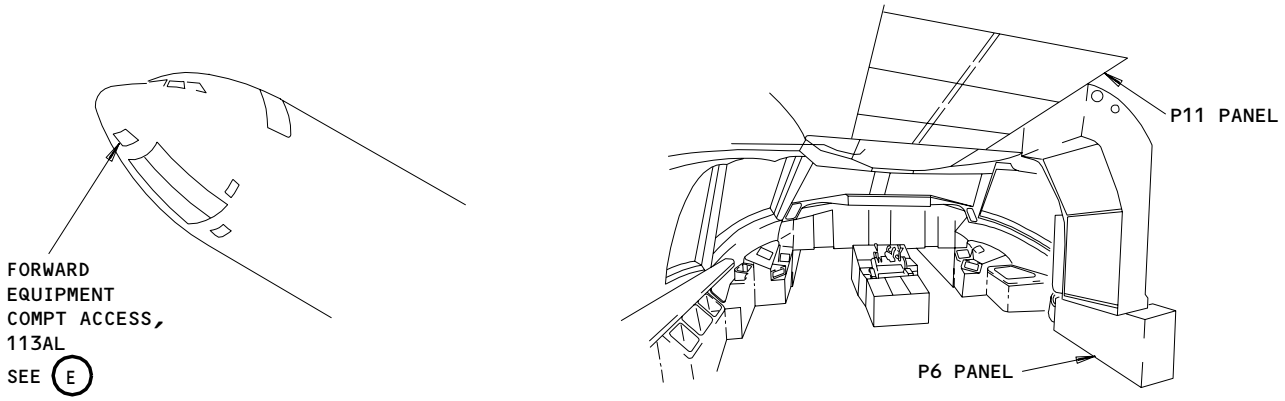
LEFT OR RIGHT EEC SPEED TRANSDUCER (N1)

B

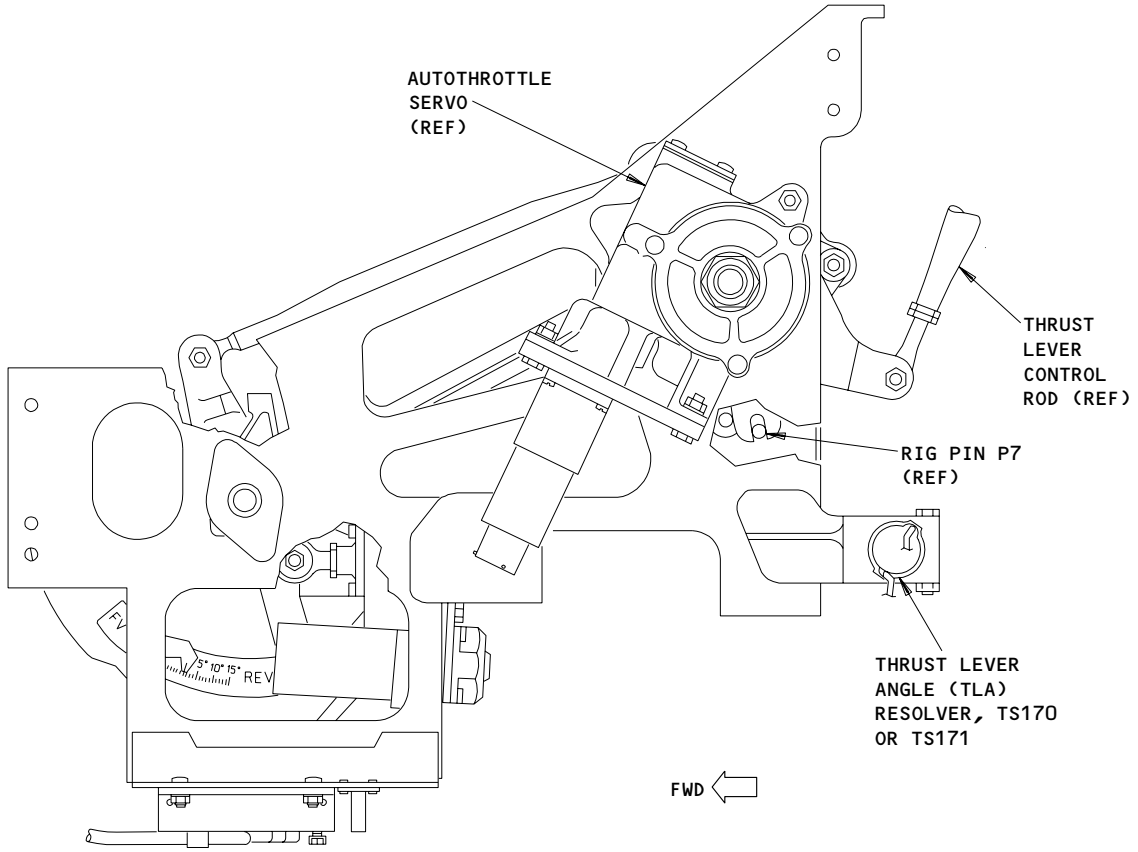
Fuel Control System – Component Location
Figure 102 (Sheet 1)




Fuel Control System - Component Location
Figure 102 (Sheet 2)



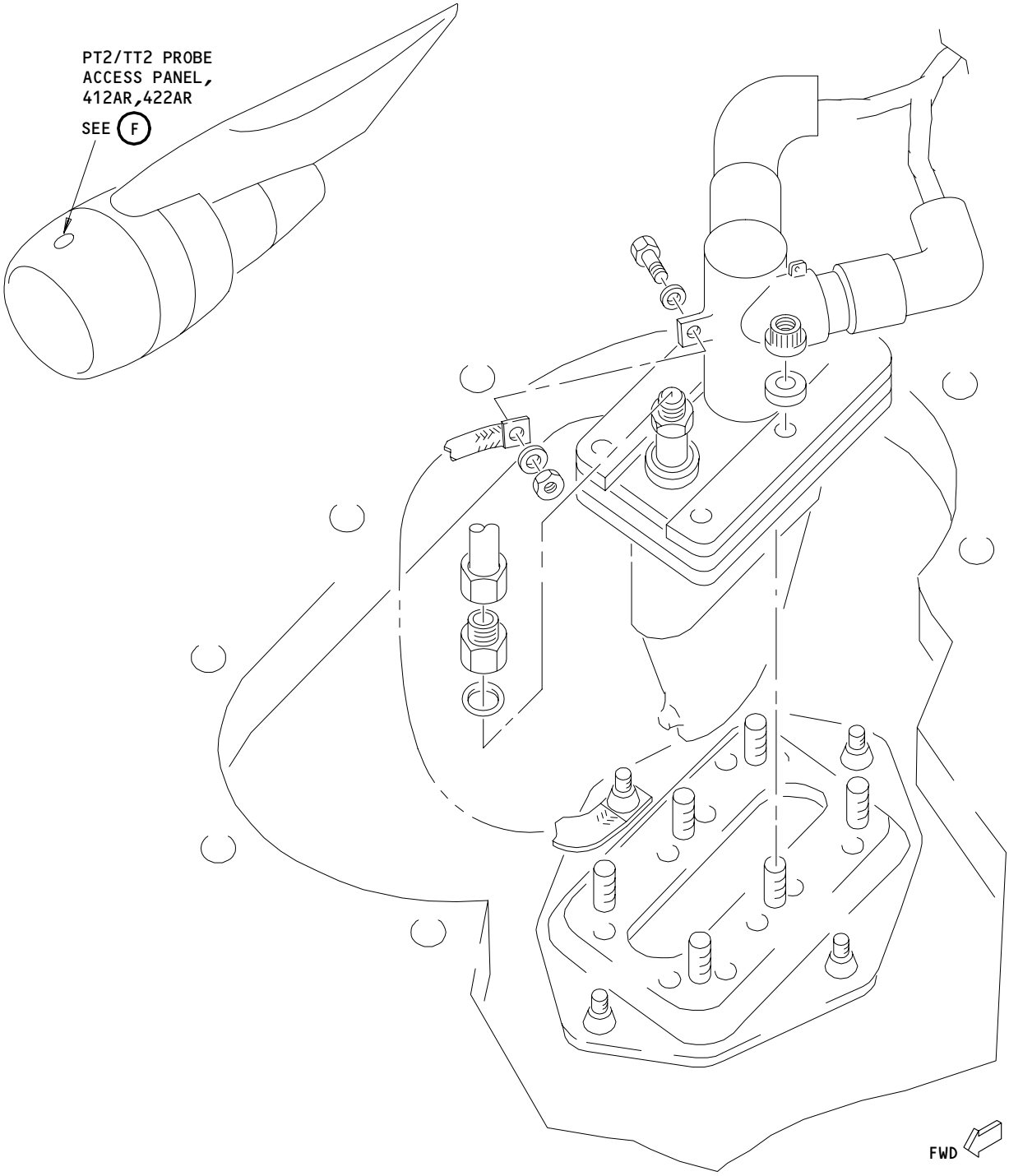

FLIGHT COMPARTMENT




LEFT OR RIGHT THRUST LEVER ANGLE (TLA) RESOLVER, TS170 OR TS171

E

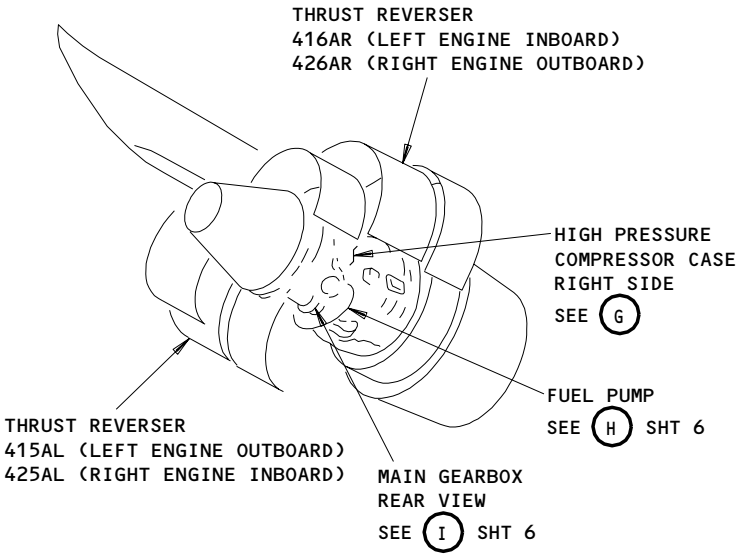
Fuel Control System – Component Location
Figure 102 (Sheet 3)

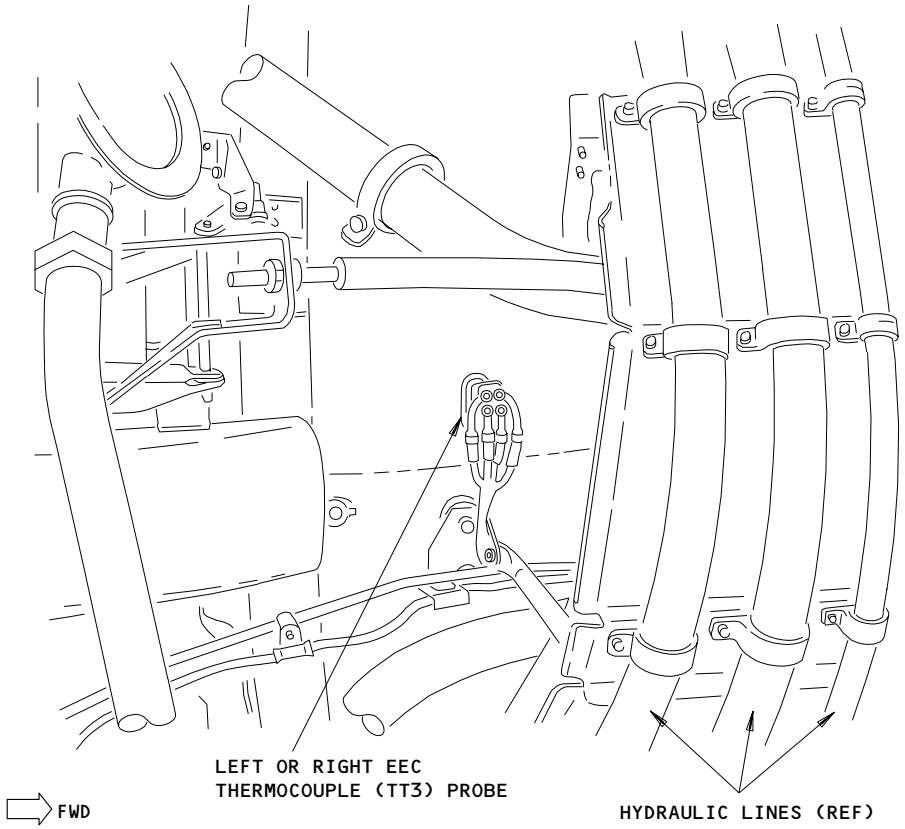



LEFT OR RIGHT EEC INLET TOTAL PRESSURE/TEMPERATURE
(PT2/TT2) PROBE, T867

(F)

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

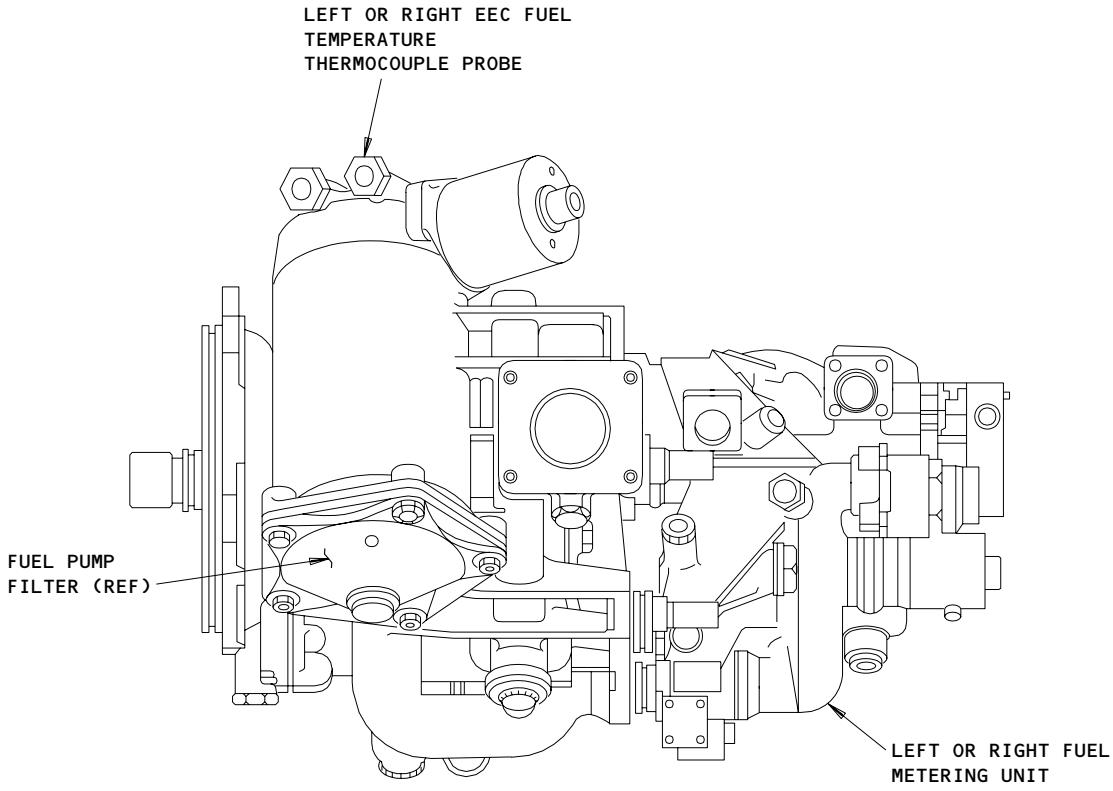



HIGH PRESSURE COMPRESSOR CASE, RIGHT SIDE

G

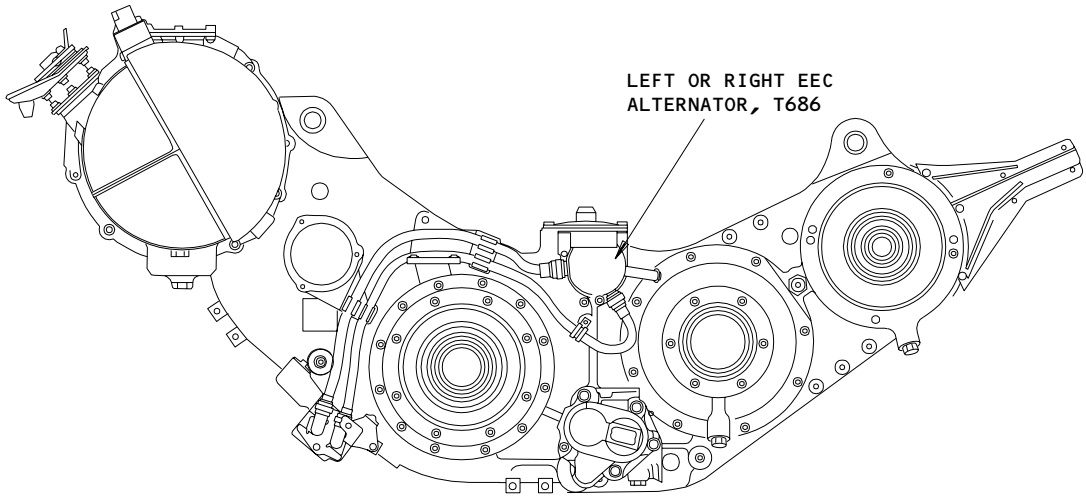
Fuel Control System – Component Location
Figure 102 (Sheet 5)




FUEL PUMP

H

L-A0224




MAIN GEARBOX REAR VIEW

I

L-A2339

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

**PREREQUISITES**

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

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

## ENGINE AUTO ACCELERATION

**DESCRIPTION:**

THE ENGINE PARAMETERS (EPR, N1, N2, EGT AND FUEL FLOW) INCREASE WITHOUT THRUST LEVER MOVEMENT.

**FAULT ISOLATION:**

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGES THAT FOLLOW:

EEC CH-A/B FMU T/M W/A FAIL (351-14)
EEC CH-A/B SVA T/M W/A FAIL (351-15)
EEC CH-A/B FMU TR-CK FAIL (351-19)
EEC CH-A/B SVA TR-CK FAIL (351-20)
EEC CH-A/B SVA FD-BK FAIL (351-25)
EEC CH-A/B FMU CR-CK FAIL (353-24)

DO ANY OF THE ABOVE MESSAGES SHOW?

YES → 40 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO → 41 REFER TO TABLE A, BELOW FOR NON-FREQUENT CAUSES OF THIS FAULT. TAKE CORRECTIVE ACTION AS NECESSARY.

Engine Auto Acceleration
Figure 103 (Sheet 1)

| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| FUEL METERING UNIT | EXAMINE, REPAIR, OR REPLACE THE FUEL METERING UNIT (AMM 73-21-01/401). |
| N2 SIGNAL (PMA) | EXAMINE, REPAIR, OR REPLACE THE PERMANENT MAGNET ALTERNATOR (AMM 73-21-05/401). |
| PB MANIFOLD | DO VISUAL CHECK 4 - BURNER PRESSURE (PB) MANIFOLD CONDITION (FIM 71-07-00/101, FIG. 104).<br>DO ENGINE CHECK 11 - BURNER PRESSURE (PB) MANIFOLD CHECK (FIM 71-08-00/101, FIG. 111). |
| P4.95 MANIFOLD | EXAMINE, REPAIR, OR REPLACE THE P4.95 COMPONENTS (AMM 72-00-00/701). |
| STATOR VANE ACTUATOR SYSTEM | MAKE SURE THE STATOR VANE ACTUATOR SYSTEM IS RIGGED PROPERLY. |
| THRUST LEVER ANGLE (TLA) RESOLVER | EXAMINE, REPAIR, OR REPLACE THE THRUST LEVER ANGLE (TLA) RESOLVER (AMM 73-21-11/401). |
| 2.9 BLEED VALVE SYSTEM | DO ENGINE CHECK 4 - 2.9 BLEED VALVE SYSTEM CHECK (FIM 71-08-00/101, FIG. 104). |
| 2.5 BLEED VALVE SYSTEM | DO ENGINE CHECK 10 - 2.5 BLEED VALVE SYSTEM CHECK (FIM 71-08-00/101, FIG. 110). |
| EEC (LESS-FREQUENT CAUSE) | EXAMINE OR REPLACE THE EEC (AMM 73-21-04/401). |

TABLE A

Engine Auto Acceleration
Figure 103 (Sheet 2)

**PREREQUISITES**

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

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

# ENGINE AUTO DECEL

## DESCRIPTION:

THE ENGINE PARAMETERS (EPR, N1, N2, EGT AND FUEL FLOW) DECREASE WITHOUT THRUST LEVER MOVEMENT.

## POSSIBLE CAUSES:

1. LEAKS IN FUEL DISTRIBUTION SYSTEM
2. BAD BURNER PRESSURE SENSING LINE
3. BAD FUEL PUMP PRESSURE
4. FUEL SYSTEM CONTAMINATION
5. BAD FUEL METERING UNIT.

## FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGES THAT FOLLOW:

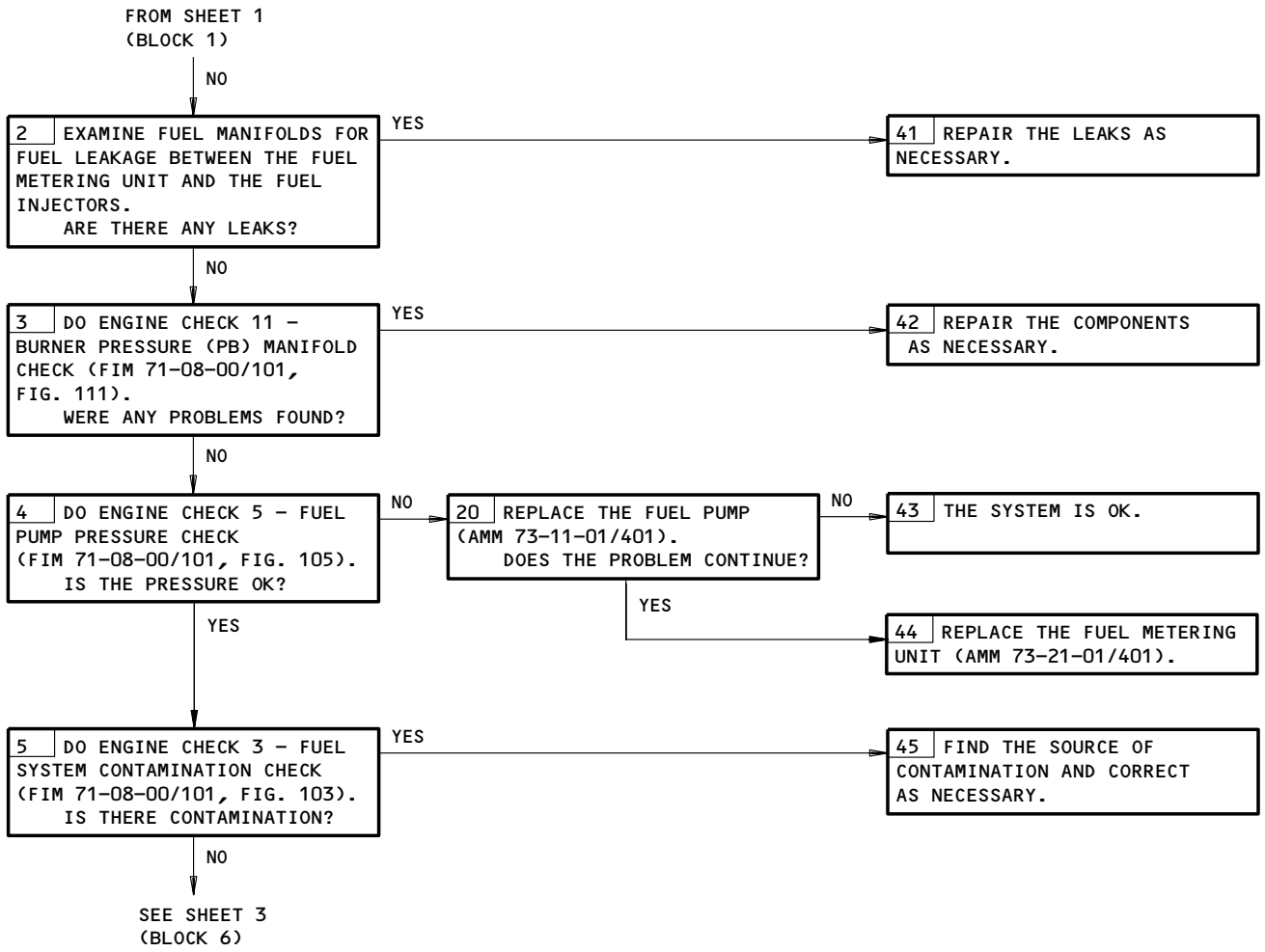
EEC CH-A/B UNIT FAIL (350-15)
EEC CH-A/B FMU TR-CK FAIL (351-19)
EEC CH-A/B N1 RANGE FAIL (352-14)
EEC CH-A/B N2 RANGE FAIL (352-15)
EEC CH-A/B REVERSER RNG FAIL (352-25)
EEC CH-A/B TRA RNG FAIL (352-26)
EEC CH-A/B N1 CROSS-CK FAIL (353-14)
EEC CH-A/B N2 CROSS-CK FAIL (353-15)
EEC CH-A/B REVR CR-CK FAIL (353-25)
EEC CH-A/B TRA CR-CK FAIL (353-26)

DOES ONE OR MORE OF THE ABOVE MESSAGES SHOW?

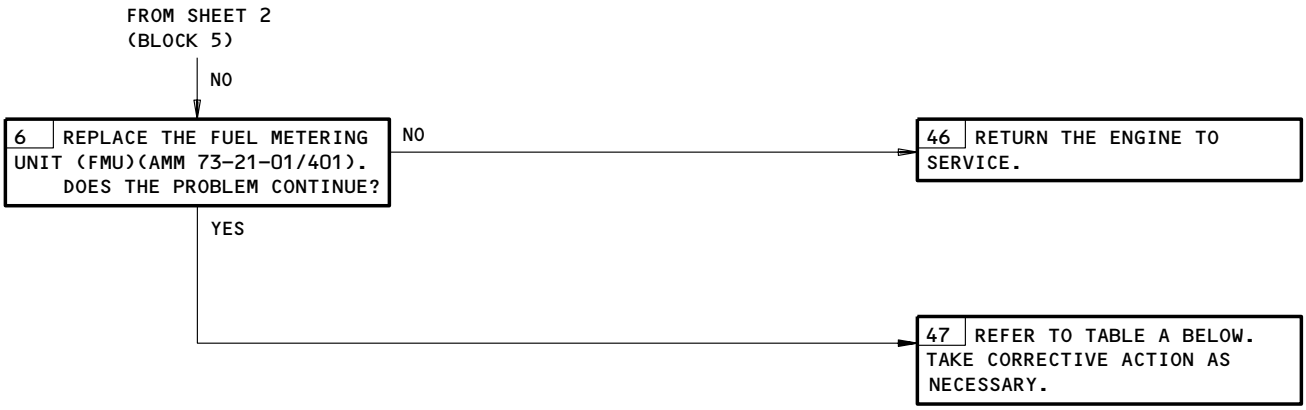
YES → 40 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO → SEE SHEET 2 (BLOCK 2)

Engine Auto Decel
Figure 104 (Sheet 1)




Engine Auto Decel
Figure 104 (Sheet 2)




| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| MAINTENANCE | EXAMINE THE MAINTENANCE HISTORY RECORDS. TAKE CORRECTIVE ACTION AS NECESSARY. |
| N1 SIGNAL | REPLACE THE N1 SPEED PROBE (AMM 73-21-06/401). |
| N2 SIGNAL (PMA/N2) | EXAMINE, REPAIR OR REPLACE THE PERMANENT MAGNET ALTERNATOR (AMM 73-21-05/401). |
| P2/T2 SIGNAL | EXAMINE, REPAIR OR REPLACE THE P2/T2 PROBE (AMM 73-21-03/401). |
| P4.95 SIGNAL | EXAMINE, REPAIR OR REPLACE THE P4.95 COMPONENTS (AMM 72-00-00/701). |
| THRUST REVERSER POSITION | EXAMINE, REPAIR OR REPLACE THE THRUST REVERSER COMPONENTS. |
| VARIABLE STATOR VANE SYSTEM | ENGINE CHECK 9 - VARIABLE STATOR VANE SYSTEM CHECK RIGGING (FIM 71-08-00/101, FIG. 109). |
| ELECTRONIC ENGINE CONTROL (EEC) (LESS FREQUENT) | EXAMINE AND REPLACE EEC (AMM 73-21-04/401). |

TABLE A

Engine Auto Decel
Figure 104 (Sheet 3)

## ENGINE DID NOT REACH TARGET EPR (ENGINE PARAMETERS NORMAL FOR EPR OBTAINED)

**PREREQUISITES**

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

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

POSSIBLE CAUSES:

1. LEAKS IN FUEL DISTRIBUTION SYSTEM
2. BAD BURNER PRESSURE SENSING LINE
3. BAD FUEL FILTER
4. BAD FUEL PUMP PRESSURE
5. BAD FUEL METERING UNIT

FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGES THAT FOLLOW:

EEC A/B CHAN FAIL (350-14)
EEC CH-A/B UNIT FAIL (350-15)
EEC CH-A/B P-SENSR DISAGREE (350-20)
EEC CH-A/B TMC DATA (350-25)
EEC CH-A/B L ADC CHAN FAIL (350-27)
EEC CH-A/B R ADC CHAN FAIL (350-28)
EEC CH-A/B CHAN TMC I/F (350-29)
EEC CH-A/B FMU TR-CK FAIL (351-19)
EEC CH-A/B TRA RNG FAIL (352-26)
EEC CH-A/B T2 CROSS-CK FAIL (353-18)
EEC CH-A/B FMU CR-CK FAIL (353-24)
EEC CH-A/B TRA CR-CK FAIL (353-26)
EEC CH-A/B PO LINE FAIL (353-27)

DOES ONE OR MORE OF THE ABOVE MESSAGES SHOW?

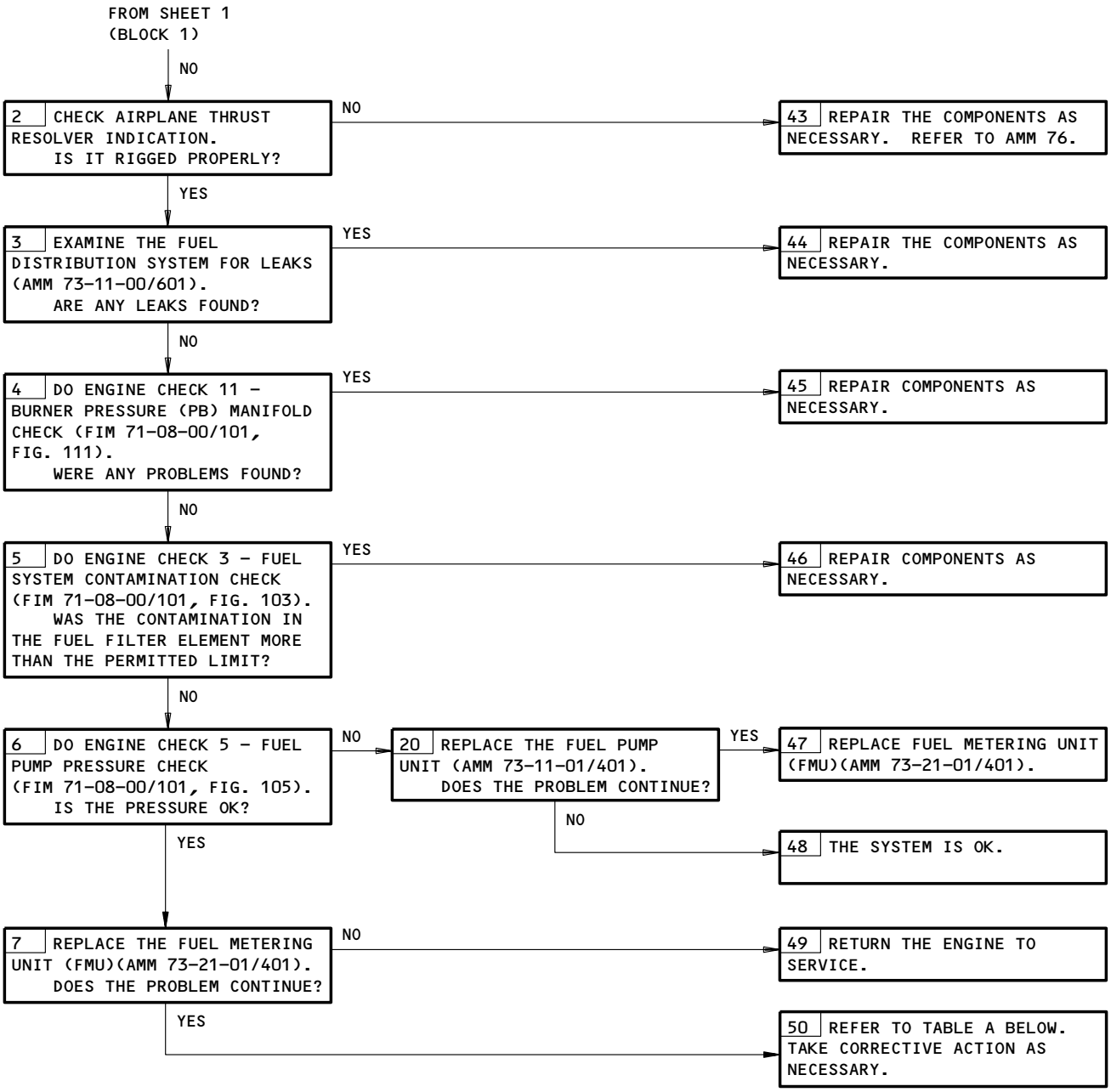
YES → 41 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO → SEE SHEET 2 (BLOCK 2)

Engine did not Reach Target EPR (Engine Parameters Normal for EPR Obtained)
Figure 104A (Sheet 1)



H59305




| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| ENGINE OR AIRCRAFT FUEL SYSTEM RESTRICTIONS | TROUBLESHOOT APPROPRIATE SYSTEMS (REFER TO CHAPTER 28). |
| INCORRECT FUEL FILTER INSTALLED | CONFIRM CORRECT SIZE AND MODEL OF FILTER (AMM 73-11-02/601). |

NON-FREQUENT CAUSES FOR LOW TAKE-OFF POWER - ENGINE PARAMETERS NORMAL
TABLE A

Engine did not Reach Target EPR (Engine Parameters Normal for EPR Obtained)
Figure 104A (Sheet 2)

## ENGINE DID NOT REACH TARGET EPR (ENGINE PARAMETERS NOT NORMAL FOR EPR OBTAINED)

**PREREQUISITES**

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

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

POSSIBLE CAUSES:

1. LEAKS IN P4.95 SENSE LINE
2. BAD TT2 SIGNAL
3. BAD 2.5 BLEED VALVE SYSTEM
4. BAD 2.9 BLEED/START VALVE
5. BAD STATOR VANE ACTUATOR SYSTEM.

FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGES THAT FOLLOW:

EEC A/B CHAN FAIL (350-14)
EEC CH-A/B UNIT FAIL (350-15)
EEC CH-A/B P5 LINE FAULT (350-21)
EEC CH-A/B B25 T/M W/A FAIL (351-16)
EEC CH-A/B SVA TR-CK FAIL (351-20)
EEC CH-A/B B25 TR-CK FAIL (351-21)
EEC CH-A/B B25 FD-BK FAIL (351-26)
EEC CH-A/B T2 CROSS-CK FAIL (353-18)
EEC CH-A/B PO LINE FAIL (353-27)
EEC CH-A/B STRT BLD OPEN (353-28)
EEC CH-A/B STAB SOL W/A FAIL (354-16)
EEC CH-A/B PMA PWR SOL SHRT (354-24)

DOES ONE OR MORE OF THE ABOVE MESSAGES SHOW?

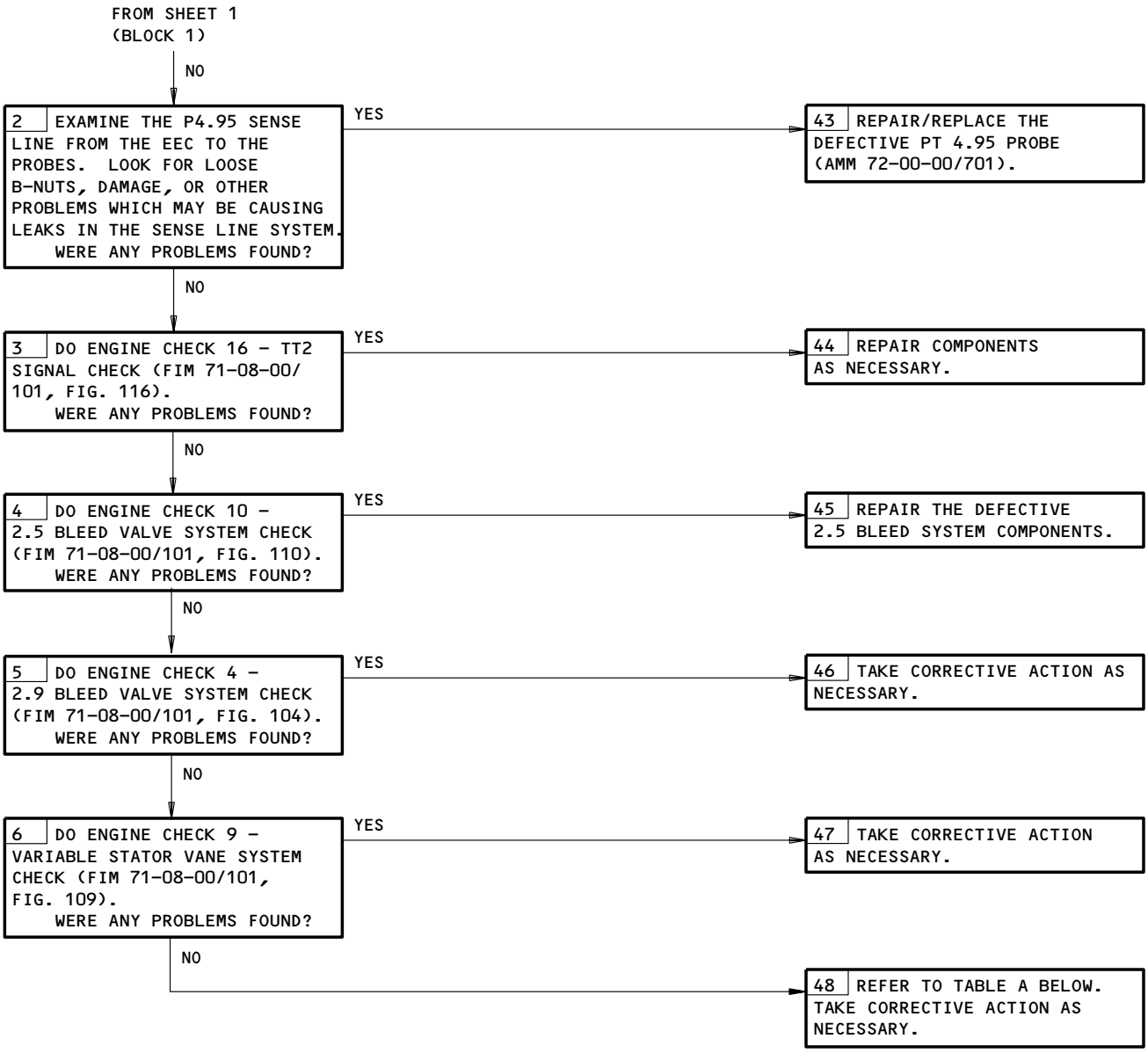
YES → 41 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO → SEE SHEET 2 (BLOCK 3)

Engine did not Reach Target EPR (Engine Parameters Normal for EPR Obtained)
Figure 104B (Sheet 1)



H59343




| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| INTERNAL EEC PRESSURE SENSOR LEAKAGE | REPLACE THE EEC (AMM 73-21-04/401). |

NON-FREQUENT CAUSES FOR LOW TAKE-OFF POWER - ENGINE PARAMETERS NOT NORMAL
TABLE A

Engine did not Reach Target EPR (Engine Parameters Normal for EPR Obtained)
Figure 104B (Sheet 2)

## ENGINE DID NOT REACH TARGET EPR (ENGINE PARAMETERS NOT REPORTED)

**PREREQUISITES**

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

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

POSSIBLE CAUSES:

1. LEAKS IN FUEL DISTRIBUTION SYSTEM
2. BAD P4.95 SENSE LINE
3. BAD BURNER PRESSURE SENSING LINE
4. BAD 2.5 BLEED VALVE SYSTEM
5. BAD FUEL FILTER
6. BAD 2.9 BLEED/START VALVE
7. BAD STATOR VANE ACTUATOR SYSTEM
8. BAD FUEL PUMP PRESSURE.

FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE PIMU MESSAGES THAT FOLLOW:

EEC A/B CHAN FAIL (350-14)
EEC CH-A/B UNIT FAIL (350-15)
EEC CH-A/B P-SENSOR DISAGREE (350-20)
EEC CH-A/B P5 LINE FAULT (350-21)
EEC CH-A/B TMC DATA (350-25)
EEC CH-A/B L ADC CHAN FAIL (350-27)
EEC CH-A/B R ADC CHAN FAIL (350-28)
EEC A/B-CHAN TMC I/F (350-29)
EEC CH-A/B B25 T/M W/A FAIL (351-16)
EEC CH-A/B FMU TR-CK FAIL (351-19)
EEC CH-A/B SVA TR-CK FAIL (351-20)
EEC CH-A/B B25 TR-CK FAIL (351-21)
EEC CH-A/B B25 FD-BK FAIL 351-26)
EEC CH-A/B TRA RNG FAIL (352-26)
EEC CH-A/B T2 CROSS-CK FAIL (353-18)
EEC CH-A/B FMU CR-CK FAIL (353-24)

DOES ONE OR MORE OF THE ABOVE MESSAGES SHOW?

YES → 41 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

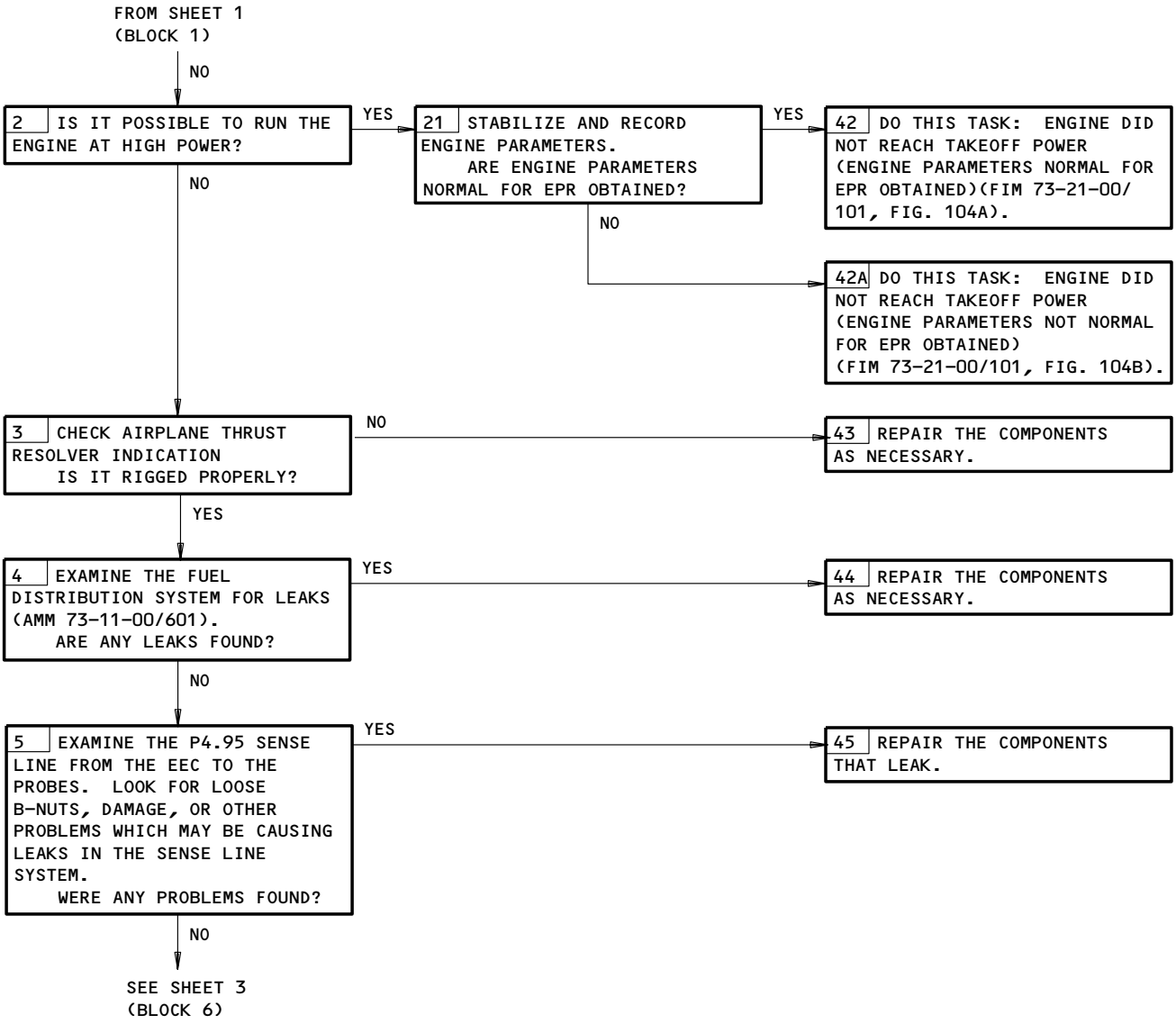
NO

SEE SHEET 2
(BLOCK 2)

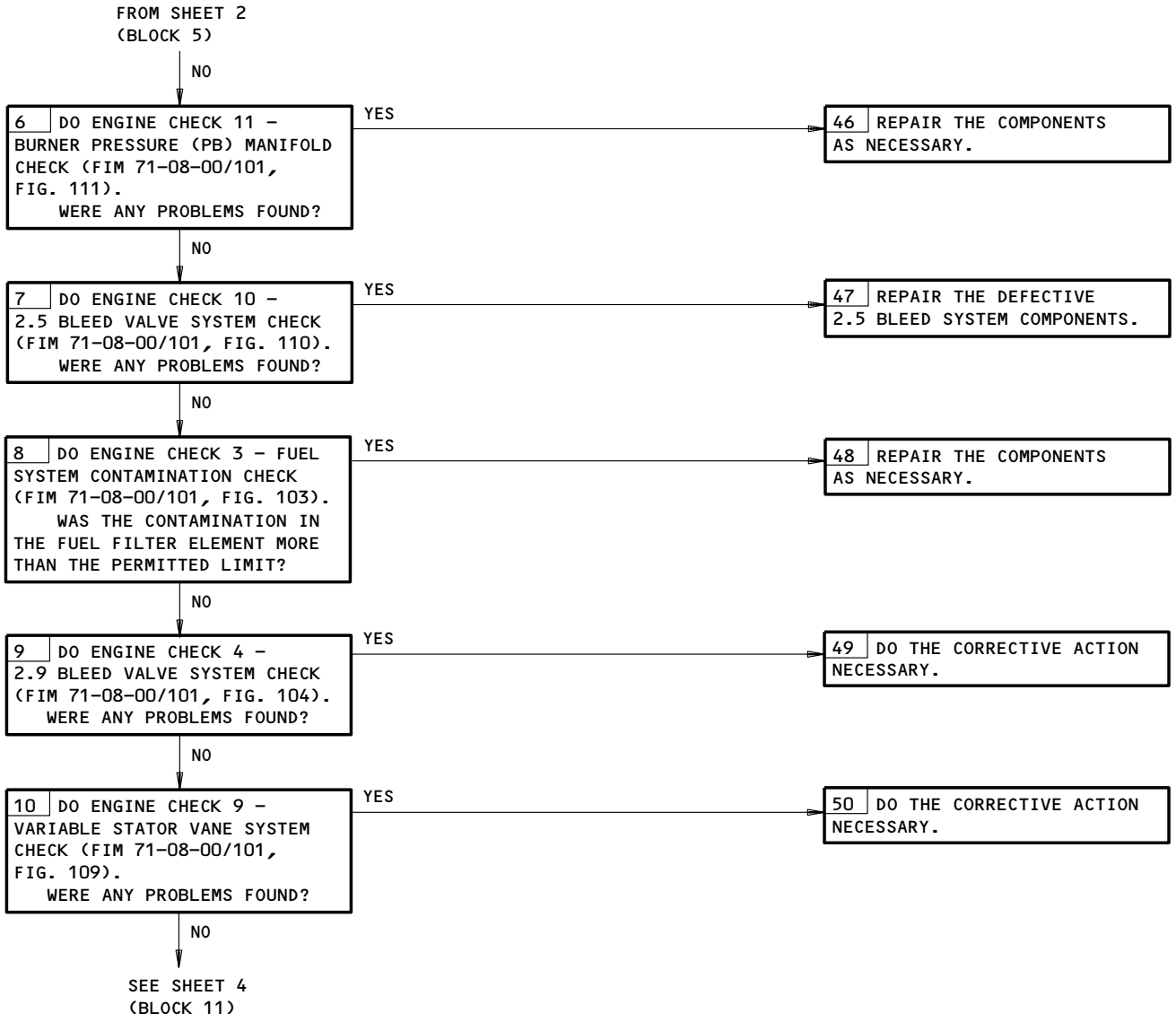
Engine did not Reach Target EPR (Engine Parameters Not Reported)
Figure 104C (Sheet 1)



H59396



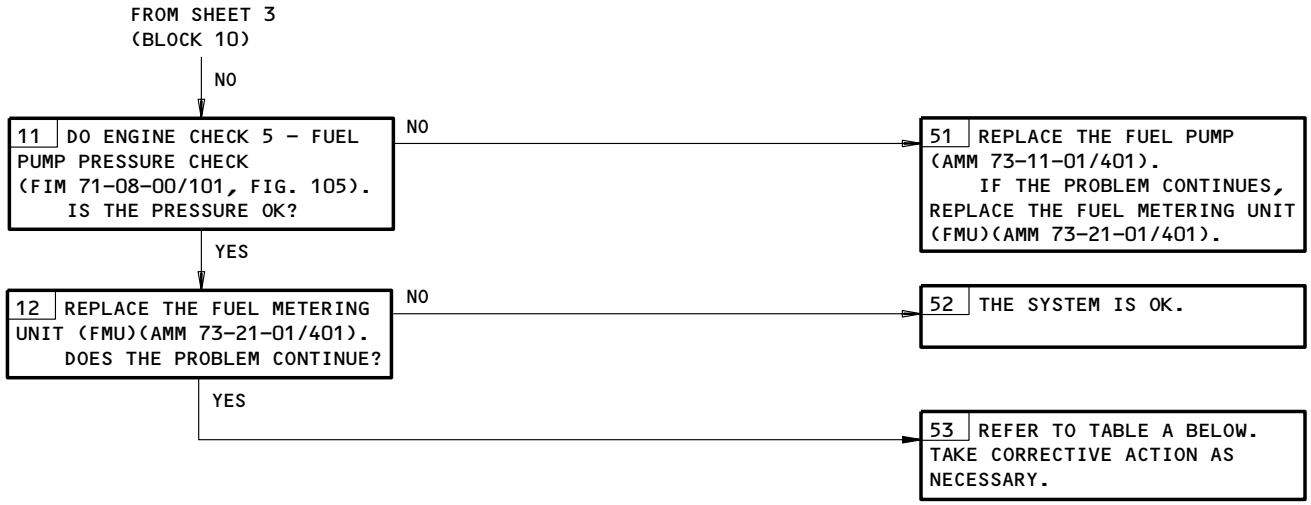

Engine did not Reach Target EPR (Engine Parameters Not Reported)
Figure 104C (Sheet 2)




Engine did not Reach Target EPR (Engine Parameters Not Reported)
Figure 104C (Sheet 3)



H59397




| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| ENGINE OR AIRCRAFT FUEL SYSTEM RESTRICTIONS | TROUBLESHOOT APPROPRIATE SYSTEMS. REFER TO CHAPTER 28. |
| INCORRECT FUEL FILTER INSTALLED | CONFIRM CORRECT SIZE AND MODEL OF FILTER (AMM 73-11-02/601). |
| INTERNAL EEC PRESSURE SENSOR LEAKAGE | REPLACE EEC (AMM 73-21-04/401). |

NON-FREQUENT CAUSES FOR LOW TARGET EPR - ENGINE PARAMETERS NOT REPORTED
TABLE A

Engine did not Reach Target EPR (Engine Parameters Not Reported)
Figure 104C (Sheet 4)

**PREREQUISITES**

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

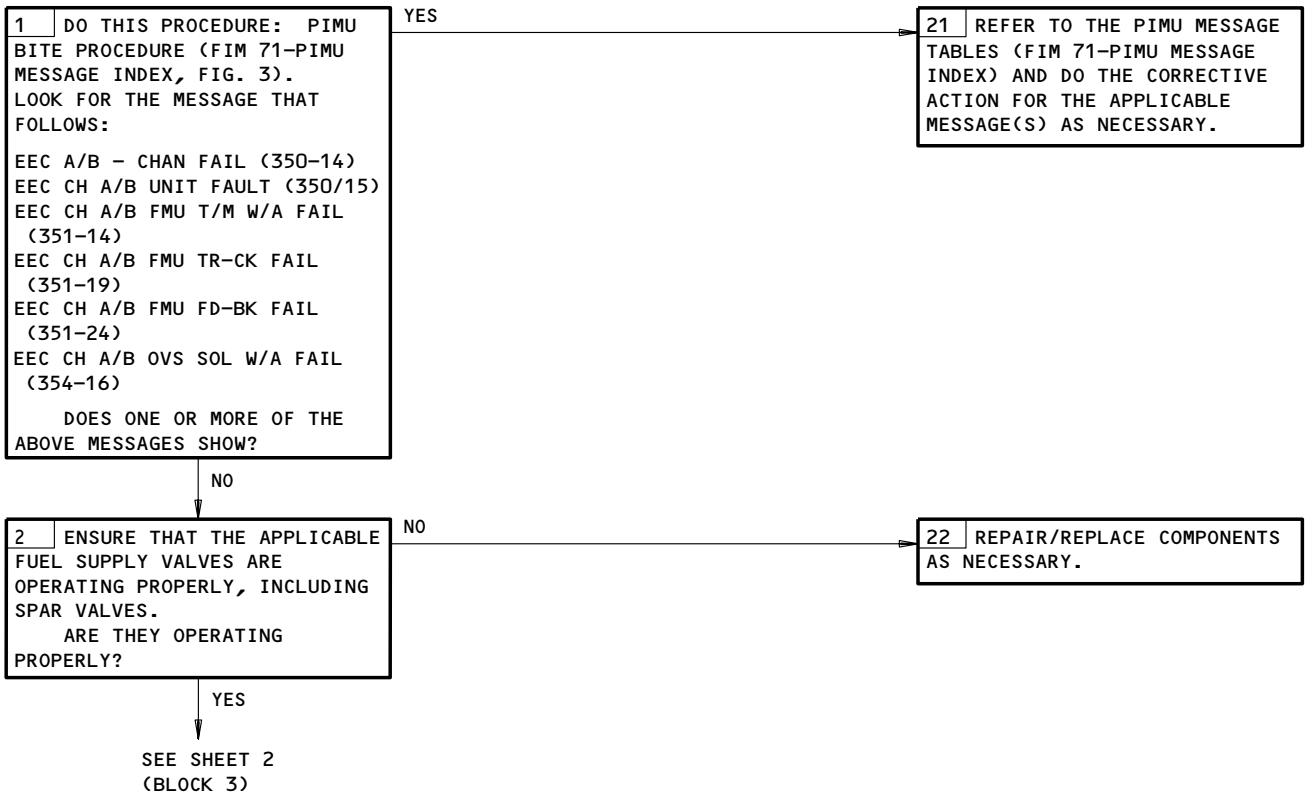
## ENGINE FLAMEOUT (NO OR LOW FUEL FLOW)

NOTE: IF AN INFLIGHT ENGINE SHUTDOWN HAS OCCURRED, DO THE ENGINE WINDMILLING INSPECTION (AMM 72-00-00/601).

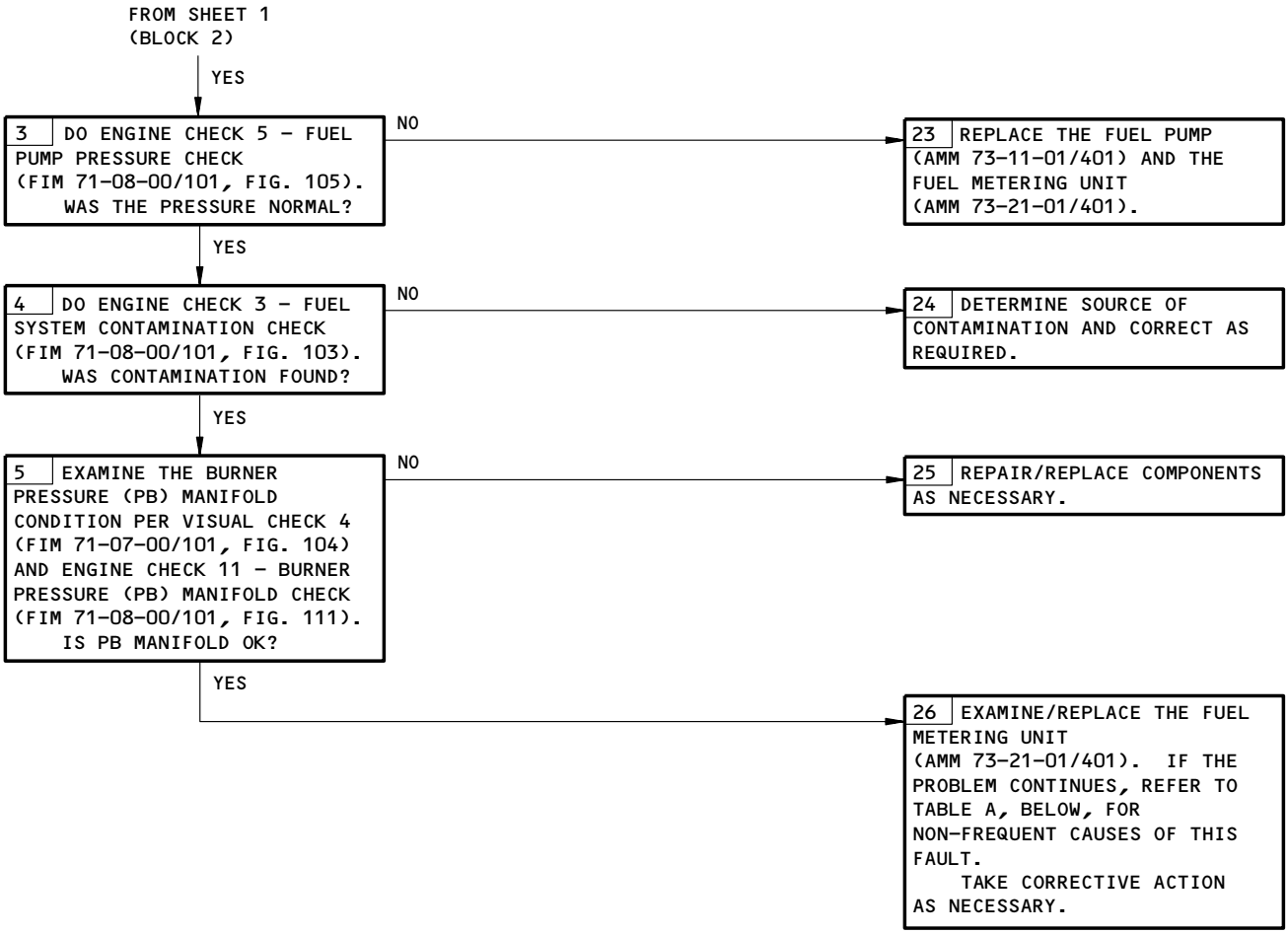
POSSIBLE CAUSES:

1. FUEL CONTROL CIRCUIT PROBLEM
2. FUEL PUMP IS NOT SATISFACTORY (AMM 73-11-01/401)
3. CONTAMINATION IN FUEL SYSTEM
4. LEAK IN BURNER PRESSURE (PB) MANIFOLD
5. FUEL METERING VALVE IS NOT SATISFACTORY (AMM 73-21-01/401).

FAULT ISOLATION:




Engine Flameout (No or Low Fuel Flow)
Figure 105 (Sheet 1)




| NON–FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| AIRCRAFT FUEL SYSTEM RESTRICTION/ INTERRUPTION | MAKE SURE THE AIRCRAFT FUEL SYSTEM (FIM 28–22–00/101) AND THE FIRE PROTECTION SYSTEM (WDM 28–21–11) OPERATES CORRECTLY. |
| ENGINE FUEL SHUTOFF (SPAR) VALVE | DO THIS PROCEDURE: ENGINE FUEL SHUTOFF (SPAR) VALVE SWITCHLIGHT DOES NOT INDICATE AGREEMENT (FIM 28–22–00/101, FIG. 104). |
| FUEL ICING (WATER IN FUEL) | REMOVE FUEL/OIL COOLER (FOC) (AMM 79–21–01/401). EXAMINE SOLENOID BYPASS VALVE AND COOLER. |
| MAINTENANCE | EXAMINE MAINTENANCE RECORD. |

TABLE A

Engine Flameout (No or Low Fuel Flow)
Figure 105 (Sheet 2)

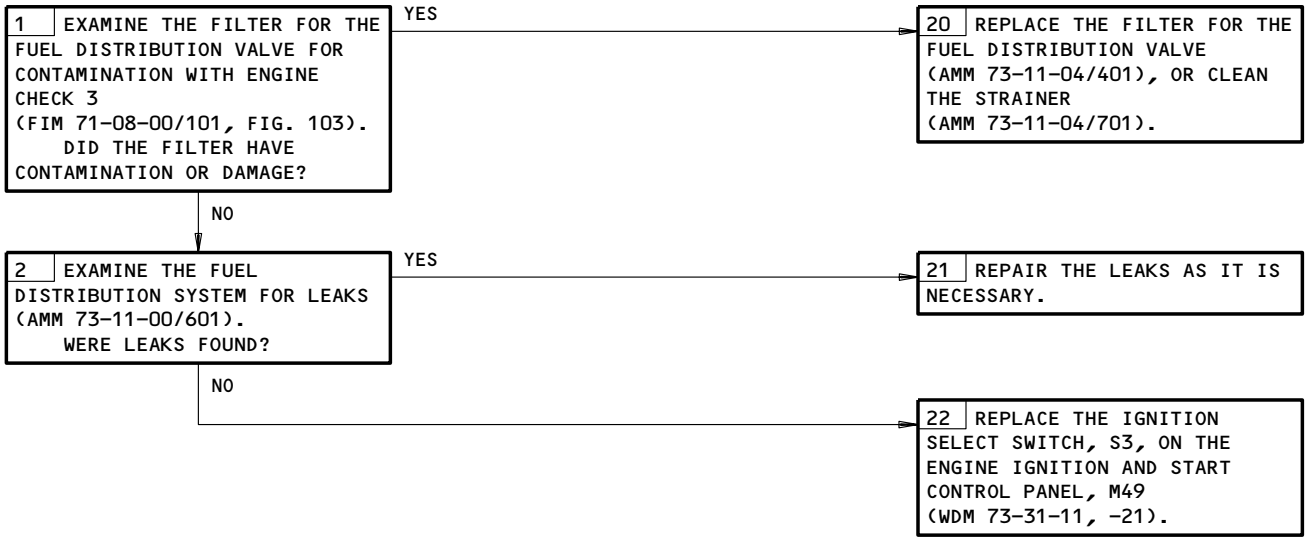
## NO ENGINE LIGHTOFF WITH IGNITION SELECTOR IN SINGLE OR BOTH (FUEL FLOW WAS AVAILABLE)

**PREREQUISITES**
NONE

**POSSIBLE CAUSES:**

1. CONTAMINATED OR DAMAGED FUEL DISTRIBUTION VALVE FILTER (AMM 73-11-04/401)
2. LEAK IN FUEL DISTRIBUTION SYSTEM
3. BAD IGNITION SELECT SWITCH (WDM 73-31-11, -21).

**FAULT ISOLATION:**




No Engine Lightoff With Ignition Selector in Single or Both
(Fuel Flow was Available)
Figure 106

PREREQUISITES

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

## THRUST LEVERS MISALIGNED

POSSIBLE CAUSES:

1. THRUST LEVERS NOT ADJUSTED CORRECTLY (AMM 76-11-00/601)
2. BAD THRUST LEVER ANGLE RESOLVER (AMM 73-21-11/401).

FAULT ISOLATION:

Thrust Levers Misaligned
Figure 107 (Sheet 1)

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGES THAT FOLLOW:

EEC CH-A/B TRA RNG FAIL (352-26)
EEC CH-A/B TRA CR-CK FAIL (353-26)
EEC CH-A/B T2 RANGE FAIL (352-18)
EEC CH-A/B T2 CROSS-CK FAIL (353-18)
EEC CH-A/B LBL 353 BIT 27
EEC CH-A/B PO LINE FAIL (353-27)
EEC CH-A/B P2 LINE FAULT (350-22)
EEC CH-A/B P5 LINE FAULT (350-21)
EEC CH-A/B TMC DATA (350-25)
EEC A/B-CHAN TMC I/F (350-29)
EEC CH-A/B L ADC CHANFAIL (350-27)
EEC CH-A/B R ADC CHANFAIL (350-28)
EEC CH-A/B DEM PLUG INVALID (350-26)
EEC CH-A/B LBL 350 BIT 19
EEC CH-A/B A/C ID FAILSAFE (350-19)
EEC CH-A/B P-SENSR DISAGREE (350-20)
EEC CH-A/B XTRN DIS DISAGREE (350-23)
EEC CH-A/B FMU FD-BK FAIL (351-24)
EEC CH-A/B SVA TR-CK FAIL (351-20)
EEC CH-A/B B25 TR-CK FAIL (351-21)
EEC CH-A/B SVA FD-BK FAIL (351-25)
EEC CH-A/B SVA T/M W/A FAIL (351-15)
EEC CH-A/B B25 FD-BK FAIL (351-26)
EEC CH-A/B B25 T/M W/A FAIL (351-16)

CONTINUED ON SHEET 3

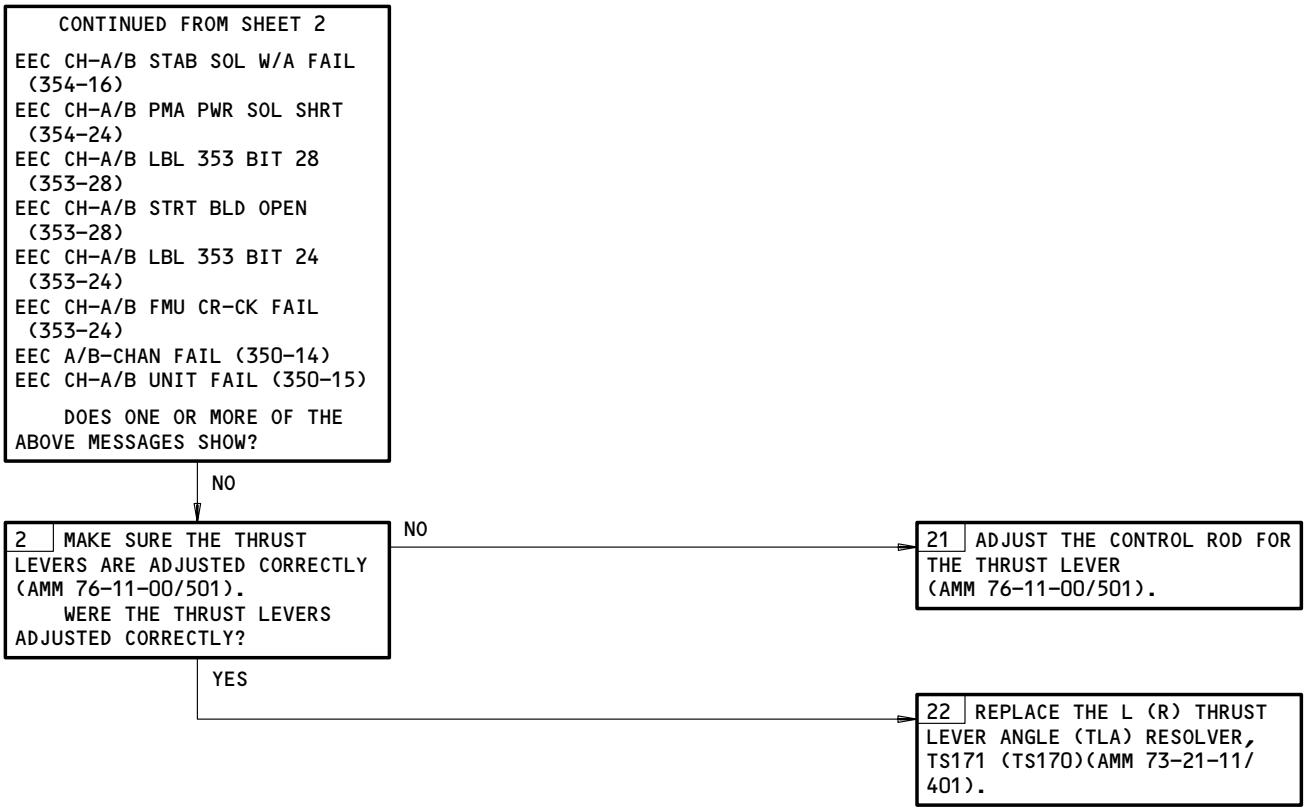
YES

20 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

Thrust Levers Misaligned
Figure 107 (Sheet 2)



E88815




Thrust Levers Misaligned
Figure 107 (Sheet 3)

## NO ENGINE RESPONSE TO THRUST LEVER MOVEMENT, ENGINE PARAMETERS NORMAL

**PREREQUISITES**

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

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

POSSIBLE CAUSES:

1. THRUST LEVERS NOT ADJUSTED CORRECTLY (AMM 76-11-00/501)
2. BAD BURNER PRESSURE (PB) SENSING LINES
3. BAD THRUST REVERSER INDICATION
4. CONTAMINATION IN FUEL SYSTEM
5. BAD FUEL PUMP
6. BAD FUEL METERING UNIT.

FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGES THAT FOLLOW:

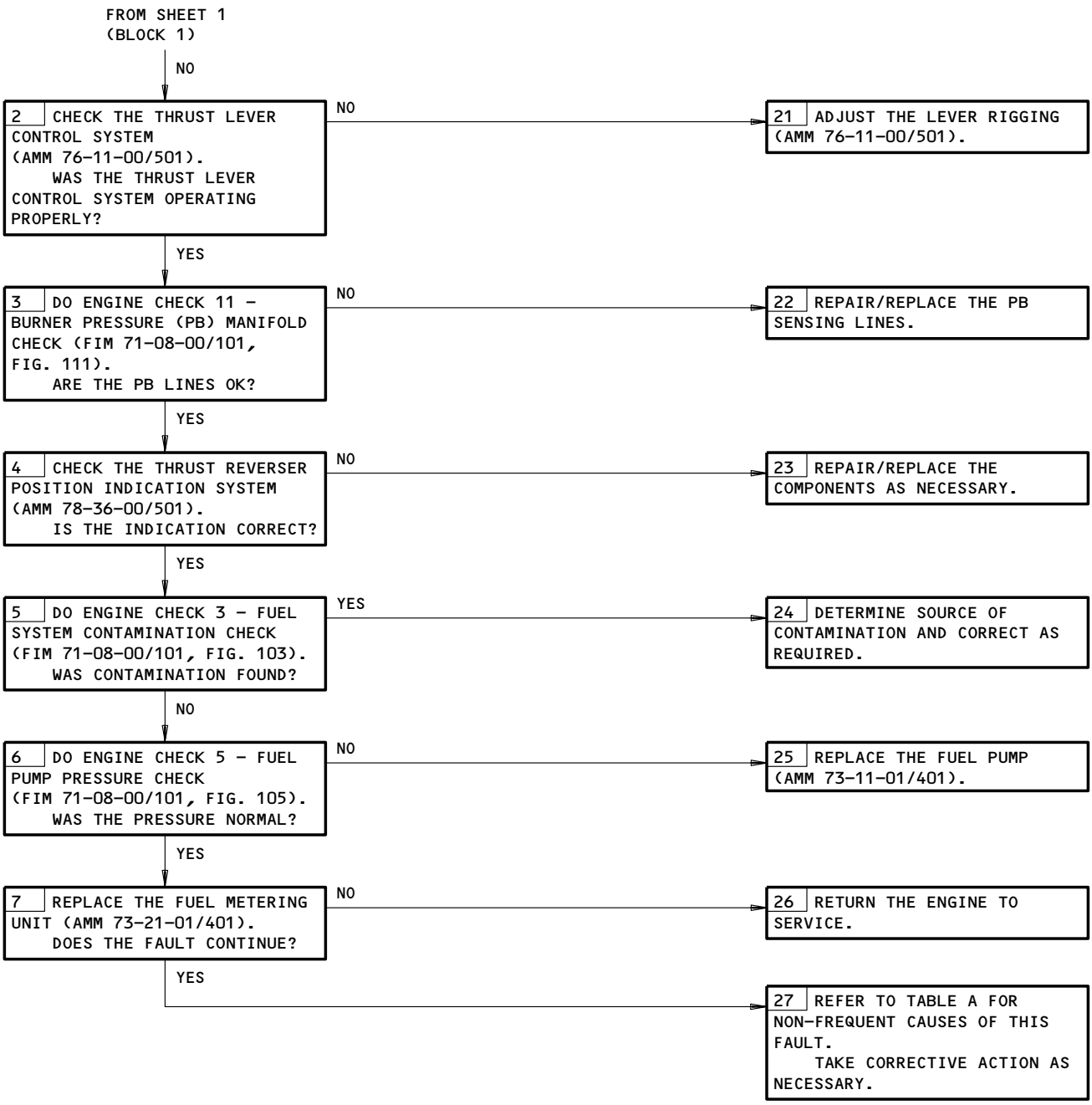
EEC A/B CHAN FAIL (350-14)
EEC CH-A/B UNIT FAIL (350-15)
EEC CH-A/B P-SENSR DISAGREE (350-15)
EEC CH-A/B FMU T/M W/A FAIL (351-14)
EEC CH-A/B SVA T/M W/A FAIL (351-15)
EEC CH-A/B FMU TR-CK FAIL (351-19)
EEC CH-A/B SVA TR-CK FAIL (351-20)
EEC CH-A/B FMU FD-BK FAIL (351-24)
EEC CH-A/B SVA FD-BK FAIL (351-25)
EEC CH-A/B TRA RNG FAIL (352-26)

DOES ONE OR MORE OF THE ABOVE MESSAGES SHOW?

YES → 20 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO → SEE SHEET 2 (BLOCK 2)

No Engine Response to Thrust Lever Movement, Engine Parameters Normal
Figure 108 (Sheet 1)




No Engine Response to Thrust Lever Movement, Engine Parameters Normal
Figure 108 (Sheet 2)

| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| AIRPLANE FUEL SYSTEM RESTRICTION | CHAPTER 28 |
| EEC | EXAMINE/REPLACE THE EEC (AMM 73-21-04/401). |
| MAINTENANCE | EXAMINE THE MAINTENANCE HISTORY RECORD. TAKE CORRECTIVE ACTION AS NECESSARY. |
| P2/T2 PROBE | EXAMINE/REPAIR/REPLACE THE P2/T2 PROBE (AMM 73-21-03/401). |
| THRUST LEVER ANGLE (TLA) RESOLVER | EXAMINE/REPAIR/REPLACE THRUST LEVER ANGLE (TLA) RESOLVER (AMM 73-21-11/401). |

TABLE A

No Engine Response to Thrust Lever Movement, Engine Parameters Normal
Figure 108 (Sheet 3)

## SLOW ENGINE RESPONSE TO THRUST LEVER MOVEMENT, ENGINE PARAMETERS NORMAL

**PREREQUISITES**

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

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

POSSIBLE CAUSES:

1. BAD BURNER PRESSURE (PB) SENSING LINES.
2. BAD FUEL PUMP.
3. BAD FUEL METERING UNIT.

FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGES THAT FOLLOW:

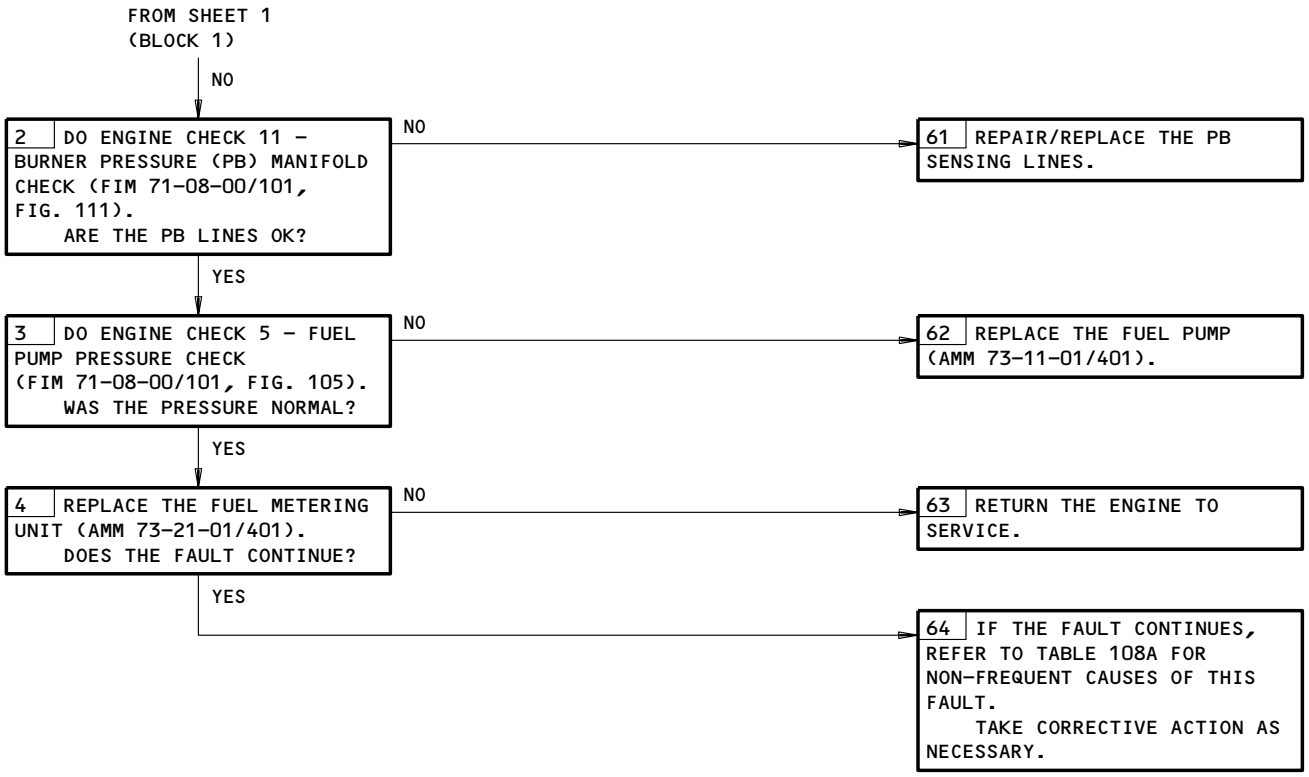
EEC CH-A/B FMU TR-CK FAIL (351-19)
EEC CH-A/B P5 LINE FAULT (350-21)
EEC CH-A/B P2 LINE FAULT (350-22)
EEC CH-A/B LBL 353 BIT 27
EEC CH-A/B PO LINE FAIL (353-27)
EEC CH-A/B FMU T/M W/A FAIL (351-14)
EEC CH-A/B SVA TR-CK FAIL (351-20)

DOES ONE OR MORE OF THE ABOVE MESSAGES SHOW?

YES → 20 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO → SEE SHEET 2 (BLOCK 2)

Slow Engine Response to Thrust Lever Movement, Engine Parameters Normal
Figure 108A (Sheet 1)




| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| AIRPLANE FUEL SYSTEM RESTRICTION | CHAPTER 28 |
| EEC | EXAMINE/REPLACE THE EEC (AMM 73-21-04/401). |
| ENGINE BLEED SYSTEM | DO ENGINE CHECK 10 – 2.5 BLEED VALVE SYSTEM CHECK AND ENGINE CHECK 4 – 2.9 BLEED VALVE SYSTEM CHECK (FIM 71-08-00/101). |
| FUEL SYSTEM CONTAMINATION | DO ENGINE CHECK 3 – FUEL SYSTEM CONTAMINATION CHECK (FIM 71-08-00/101, FIG. 103). |
| MAINTENANCE | EXAMINE THE MAINTENANCE HISTORY RECORD. TAKE CORRECTIVE ACTION AS NECESSARY. |
| VARIABLE STATOR VANE SYSTEM | DO ENGINE CHECK 9 – VARIABLE STATOR VANE SYSTEM CHECK (FIM 71-08-00/101, FIG. 109). |

NON-FREQUENT CAUSES FOR SLOW ENGINE RESPONSE TO THRUST LEVER MOVEMENT
TABLE A

Slow Engine Response to Thrust Lever Movement, Engine Parameters Normal
Figure 108A (Sheet 2)



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**PREREQUISITES**

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

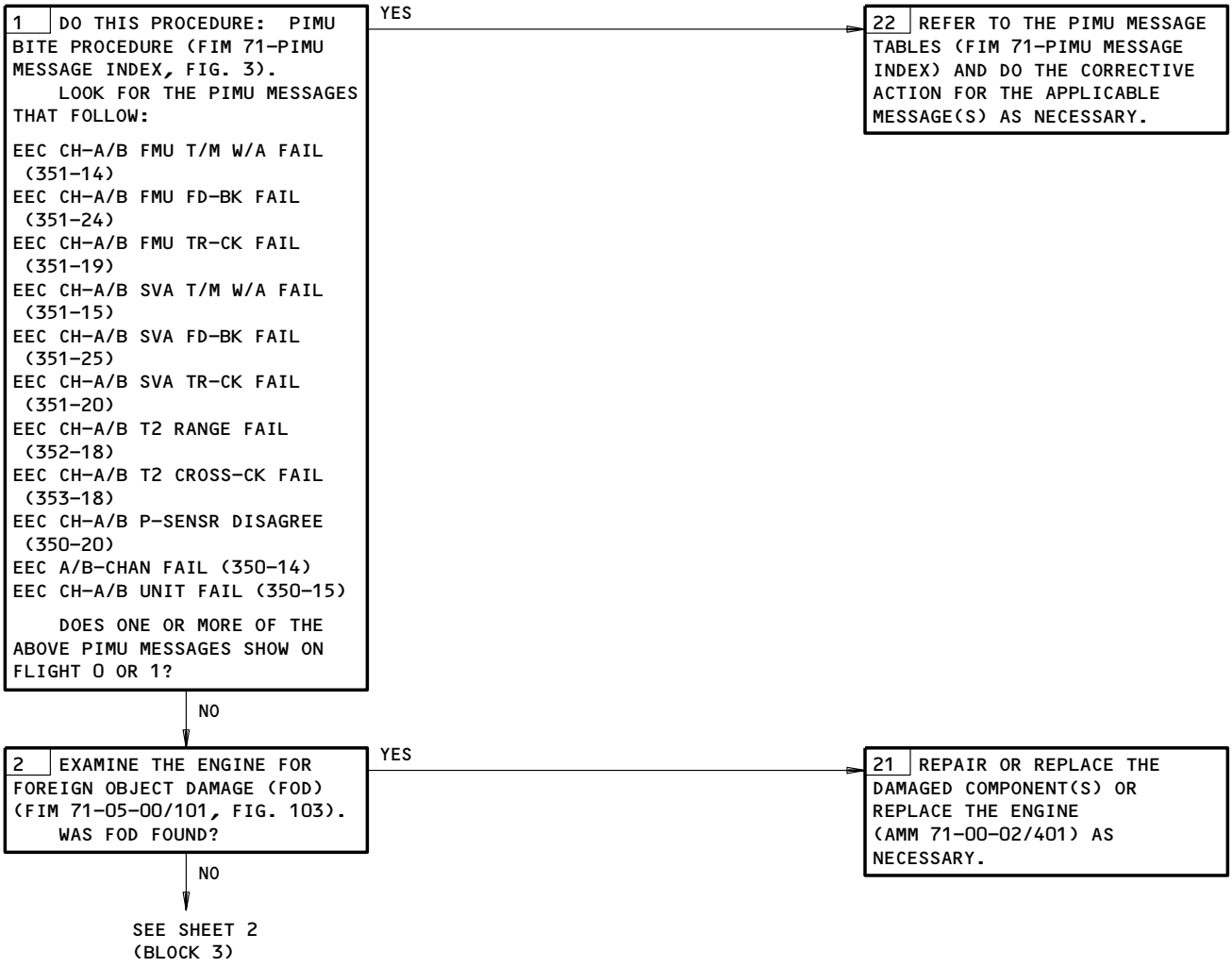
## ENGINE FLAMEOUT (REASON FOR UNSUCCESSFUL RESTART UNKNOWN)

NOTE: IF AN INFLIGHT ENGINE SHUTDOWN HAS OCCURRED, DO THE ENGINE WINDMILLING INSPECTION (AMM 72-00-00/601).

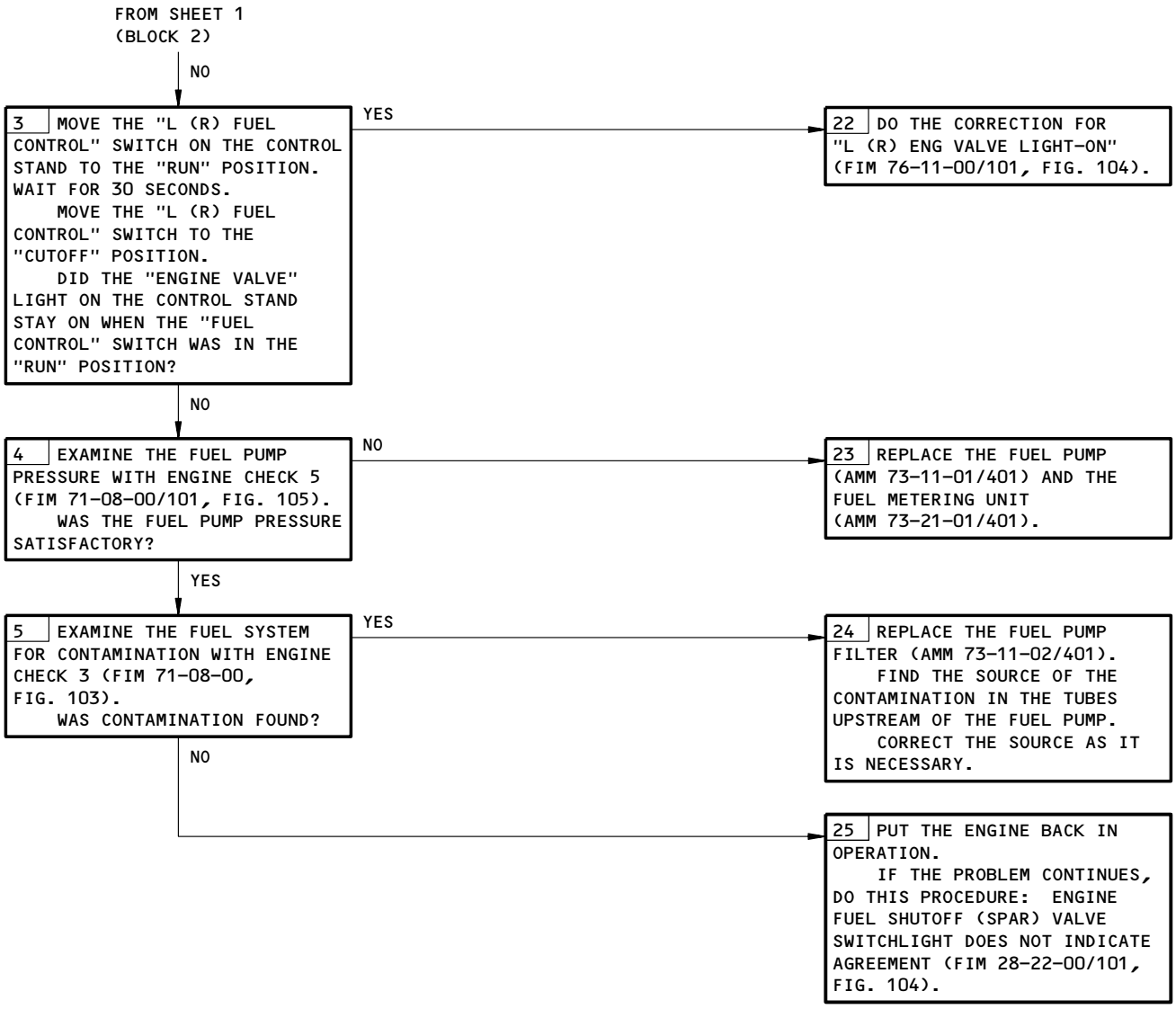
POSSIBLE CAUSES:

1. FOD
2. FUEL PUMP OR FUEL METERING UNIT IS NOT SATISFACTORY (AMM 73-11-01/401 AND AMM 73-21-01/401)
3. CONTAMINATION IN FUEL SYSTEM (AMM 73-11-02/401).

FAULT ISOLATION:




Engine Flameout (Reason for Unsuccessful Restart Unknown)
Figure 109 (Sheet 1)




Engine Flameout (Reason for Unsuccessful Restart Unknown)
Figure 109 (Sheet 2)

**PREREQUISITES**

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6E1, 6E2, 11D25, 11D26

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

## HUNG START OR SLOW ACCELERATION TO IDLE

POSSIBLE CAUSES:

1. BAD TT2 SIGNAL (FIM 71-08-00/101)
2. BAD OR DAMAGED BURNER PRESSURE MANIFOLD (FIM 71-08-00/101, FIG. 111)
3. BAD ENGINE CONTROL SYSTEM ACTUATOR (FIM 71-08-00/101)
4. TIGHT N2 ROTOR (AMM 72-00-00/601)
5. DAMAGED OR DETERIORATED HPC (AMM 72-00-00/601)
6. BAD FUEL METERING UNIT (AMM 73-11-01/401).

FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE PIMU MESSAGES THAT FOLLOW:

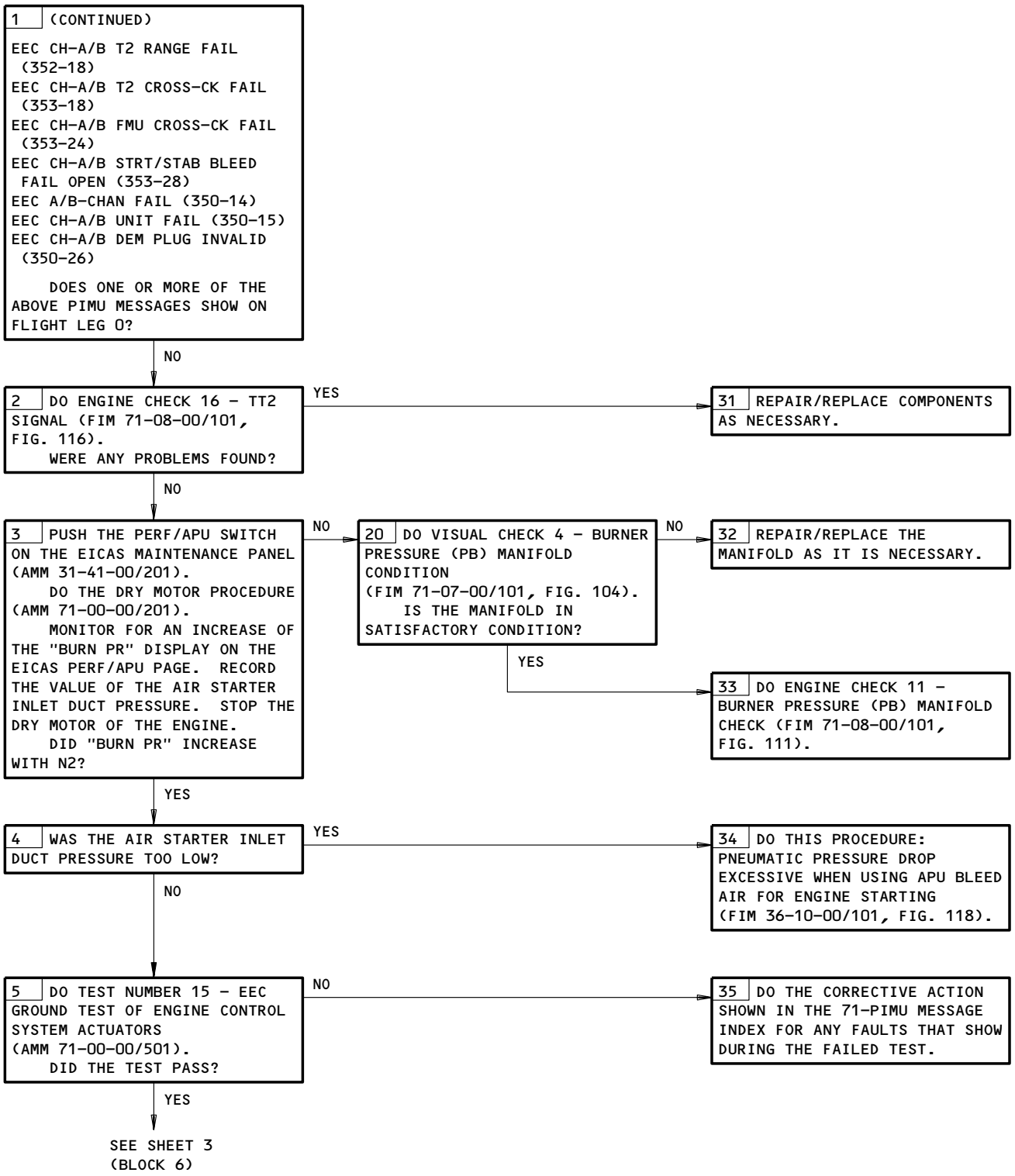
EEC CH-A/B FMU T/M W/A FAIL (351-14)
EEC CH-A/B FMU FD-BK FAIL (351-24)
EEC CH-A/B SVA T/M W/A FAIL (351-15)
EEC CH-A/B SVA FD-BK FAIL (351-25)
EEC CH-A/B FMU TR-CK FAIL (351-19)
EEC CH-A/B SVA TR-CK FAIL (351-20)
EEC CH-A/B B25 TR-CK FAIL (351-21)
EEC CH-A/B STRT SOL W/A FAIL (354-15)
EEC CH-A/B PMA PWR SOL SHRT (354-24)
EEC CH-A/B OVS SOL W/A FAIL (354-14)
EEC CH-A/B STAB SOL W/A FAIL (354-16)
EEC CH-A/B XTRN DIS DISAGREE (350-23)
EEC CH-A/B P-SENSR DISAGREE (350-20)
EEC CH-A/B T3 RANGE FAIL (352-22)
EEC CH-A/B T3 CROSS-CK FAIL (353-22)

(CONTINUED)

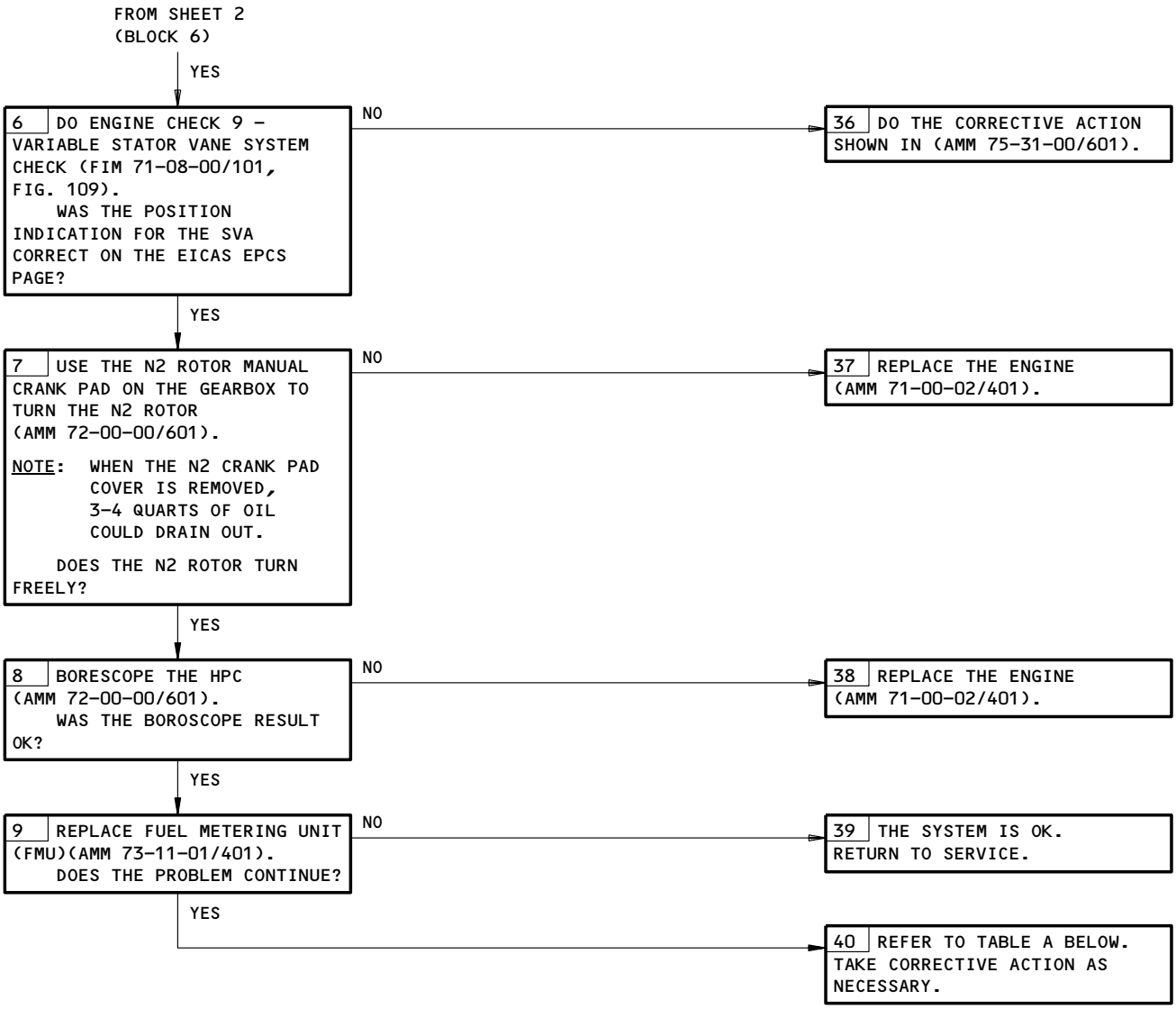
YES →

30 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

Hung Start or Slow Acceleration to Idle
Figure 110 (Sheet 1)




Hung Start or Slow Acceleration to Idle
Figure 110 (Sheet 2)




Hung Start or Slow Acceleration to Idle
Figure 110 (Sheet 3)





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| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| 2.9 BLEED VALVE SYSTEM | DO ENGINE CHECK 4 - 2.9 BLEED VALVE SYSTEM CHECK (FIM 71-08-00/101, FIG. 104). |
| AIRPLANE/ENGINE BLEED SYSTEMS | REFER TO CHAPTER 21. |
| EEC IS POWERED IN CHANNEL A AND CHANNEL B BEFORE ENGINE START | LOOK FOR PROBLEMS IN THE EEC RESET AND CHANNEL INHIBIT CIRCUIT. LOOK AT THE CIRCUIT FOR THE K1036 AND K1037, RELAYS (LEFT ENGINE) AND K1039 AND K1038, RELAYS (RIGHT ENGINE). REPAIR OR REPLACE AS NECESSARY. |
| EXTERNAL RESET CLOSED | GO TO FIM 71-PIMU MESSAGE INDEX, LABEL-BIT 350-23, EEC CH-A/B XTRN DIS DISAGREE. ONLY DO THE STEPS FOR "EXTERNAL RESET". |
| FUEL SYSTEM RESTRICTIONS | REMOVE AND EXAMINE ENGINE FUEL FILTER FOR FOD, CLOGGING, CORRECT P/N (AMM 73-11-02/401).<br>REMOVE AND EXAMINE DISTRIBUTION VALVE STRAINER FOR FOD, CLOGGING, CORRECT P/N (AMM 73-11-04/401). |
| GASPATH DAMAGE | EXAMINE THE INLET, EXHAUST, 2.5/2.9 BLEED OPENING FOR DAMAGE. |
| MAINTENANCE | EXAMINE THE MAINTENANCE HISTORY RECORDS. TAKE CORRECTIVE ACTION AS NECESSARY. |
| OVERSERVICED OR DETERIORATED IDG WHICH CAUSES A HIGH DRAG ON THE HPC | EXAMINE AND SERVICE IDG (AMM 12-13-07/301). |
| PREMATURE STARTER CUT-OUT OR LACK OF TORQUE PROVIDED BY THE STARTER | MAKE SURE THAT THE STARTER IS PROPERLY SERVICED AND ROTATES FREELY (AMM 80-11-00/501 AND AMM 72-00-00/601). OBSERVE STARTER OPERATION COMPARED TO ANOTHER ENGINE. |
| TT3 SIGNAL | EXAMINE/REPAIR THE EEC TT3 T/C PROBE AND WIRING (AMM 73-21-14/401). |
| WATER IN Pb TRAP | REMOVE WATER FROM TRAP (AMM 73-21-04/601). |

NON-FREQUENT CAUSES FOR HUNG START
TABLE A

Hung Start or Slow Acceleration to Idle
Figure 110 (Sheet 4)

## EICAS MESSAGE "IDLE DISAGREE" OR "L (R) ENG LOW IDLE" IS SHOWN

**PREREQUISITES**

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

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

POSSIBLE CAUSES:

1. L (R) IDLE SOLENOID RELAY (WDM 73-21-19)
2. L (R) FLAP/STAB POSITION MODULE (AMM 27-50-01/401)
3. AIR/GROUND RELAY (AMM 32-09-02/401)
4. L (R) ENGINE EEC DISCRETES CARD ASSEMBLY (AMM 73-21-12/401)
5. L (R) TAI IDLE RELAY (WDM 73-21-19)
6. ENGINE EEC (AMM 73-21-04/401)
7. BAD ELECTRICAL CIRCUIT.

FAULT ISOLATION:

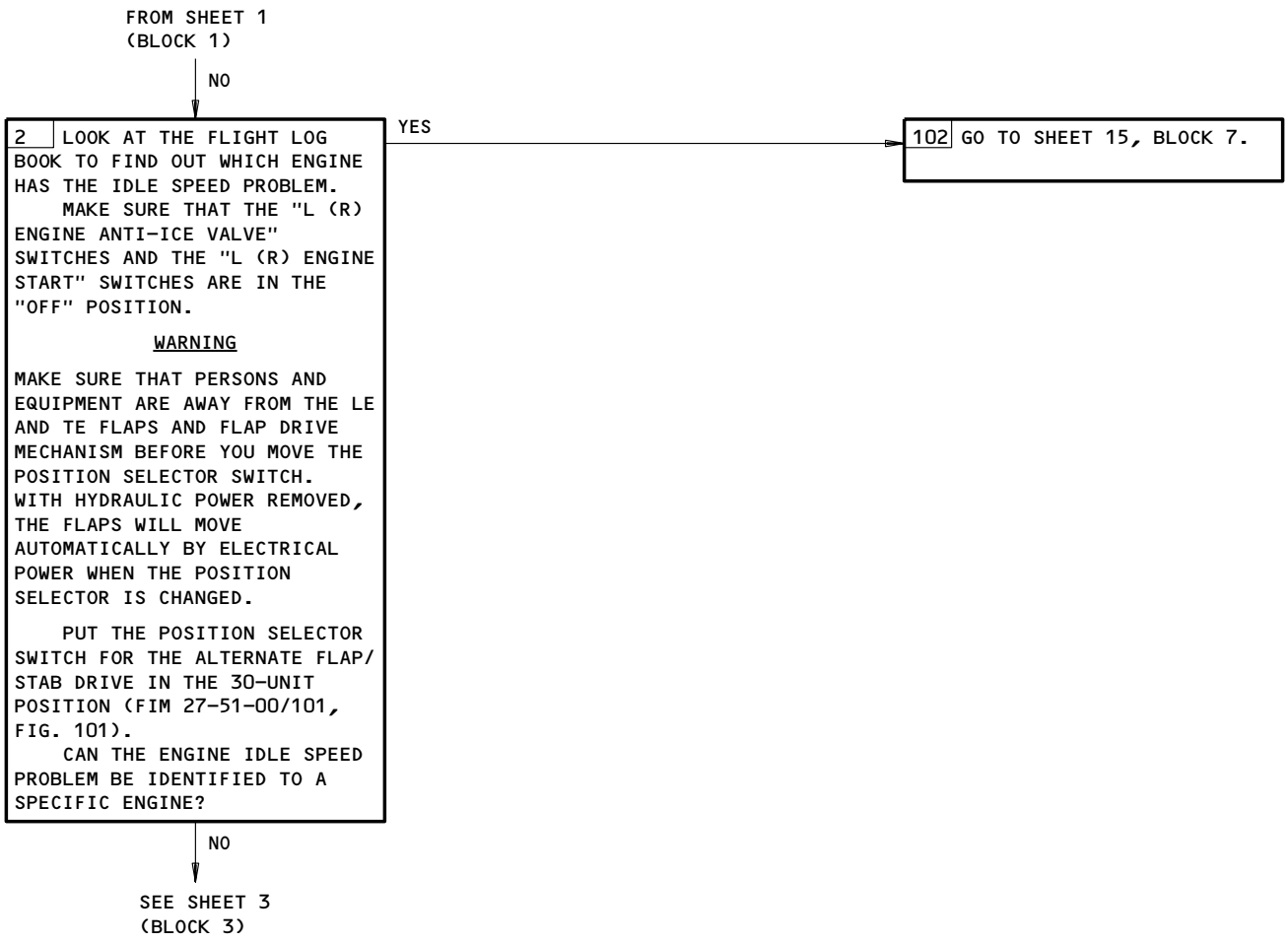
1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGE THAT FOLLOWS ON THE LEFT AND RIGHT PIMU:
EEC CH-A/B XTRN DIS DISAGREE (350-23)
DOES THIS MESSAGE SHOW?

YES → 101 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

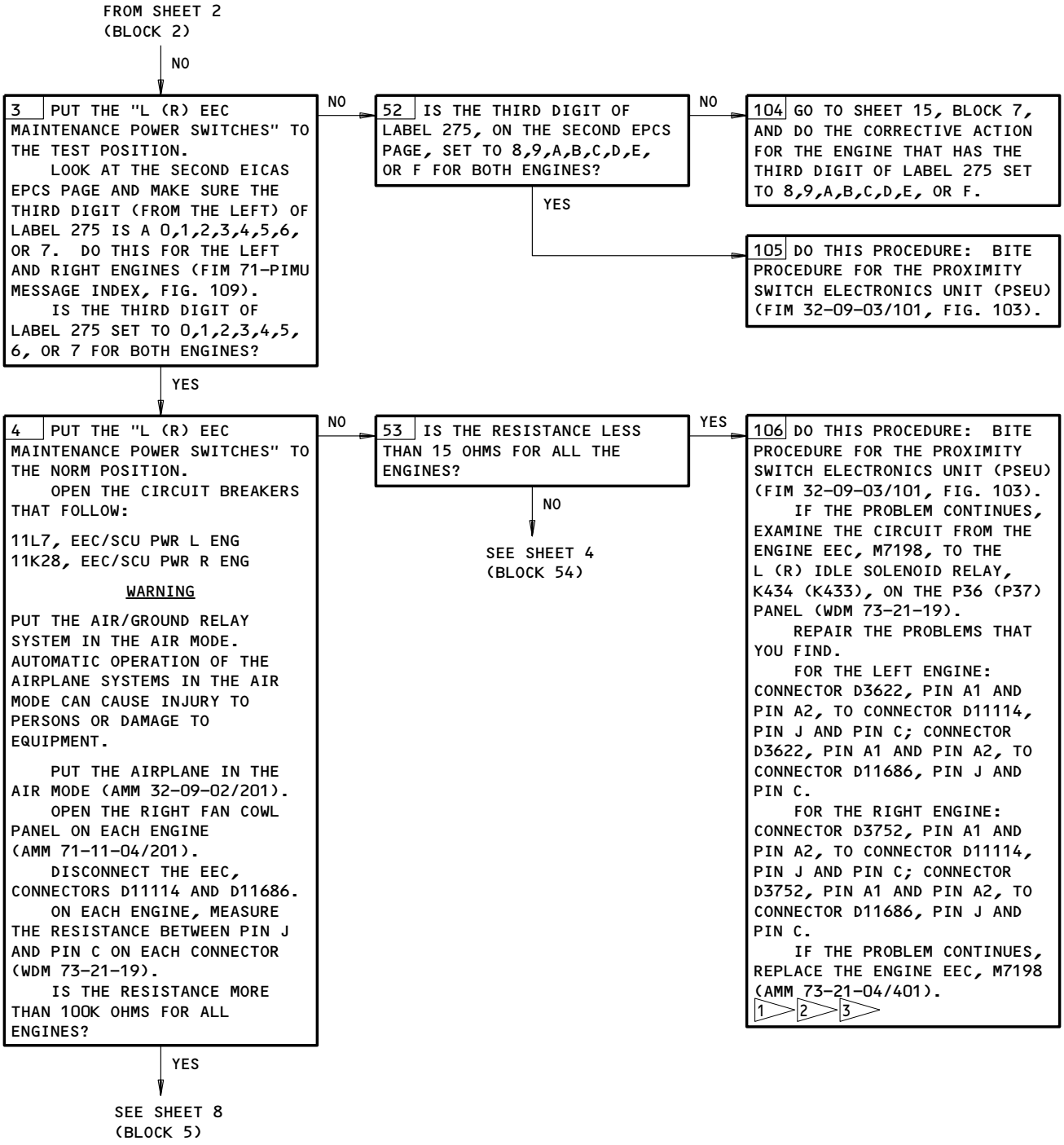
NO → SEE SHEET 2 (BLOCK 2)

1 CONNECT THE ELECTRICAL CONNECTORS THAT HAVE BEEN DISCONNECTED.
2 CLOSE THE CIRCUIT BREAKERS THAT HAVE BEEN OPENED.
3 PUT THE AIRPLANE IN THE GROUND MODE (AMM 32-09-02/201).

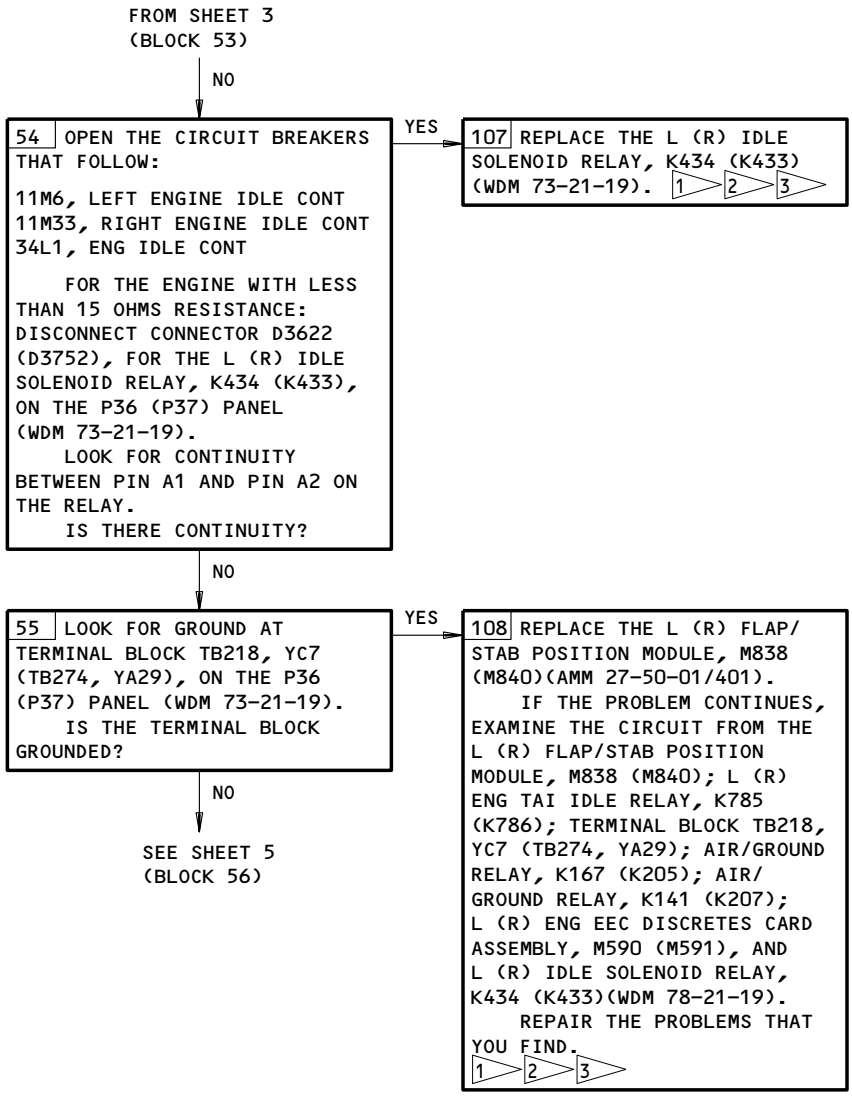
EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 1)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 2)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 3)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 4)



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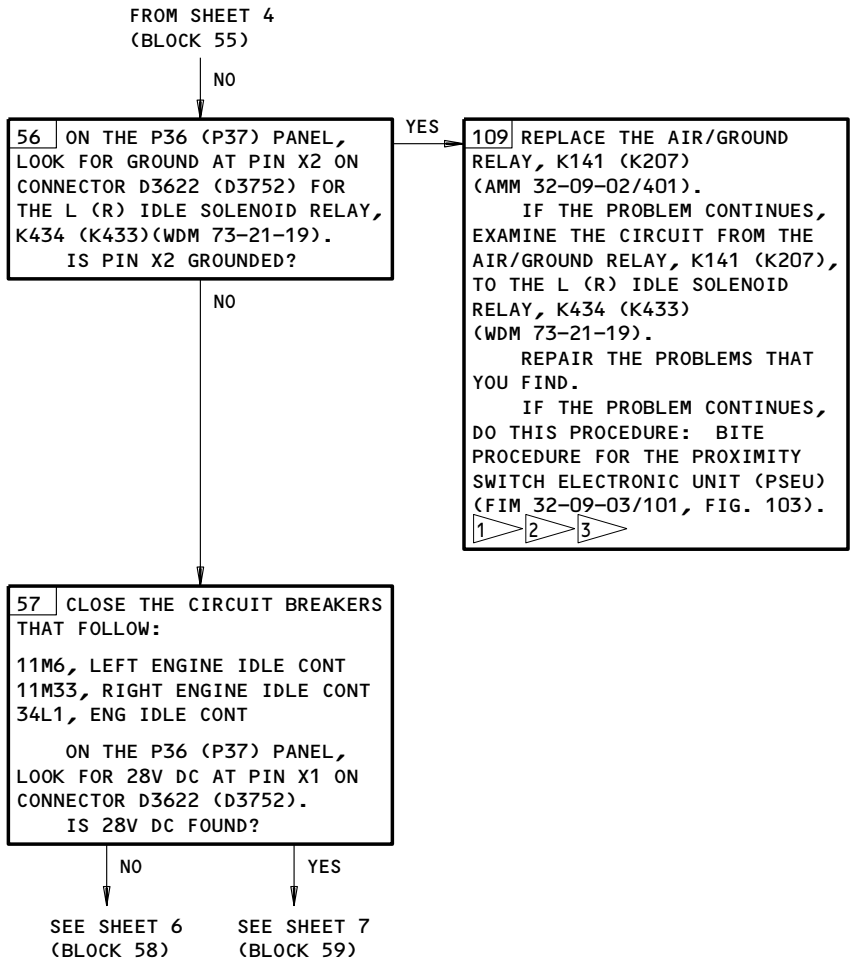
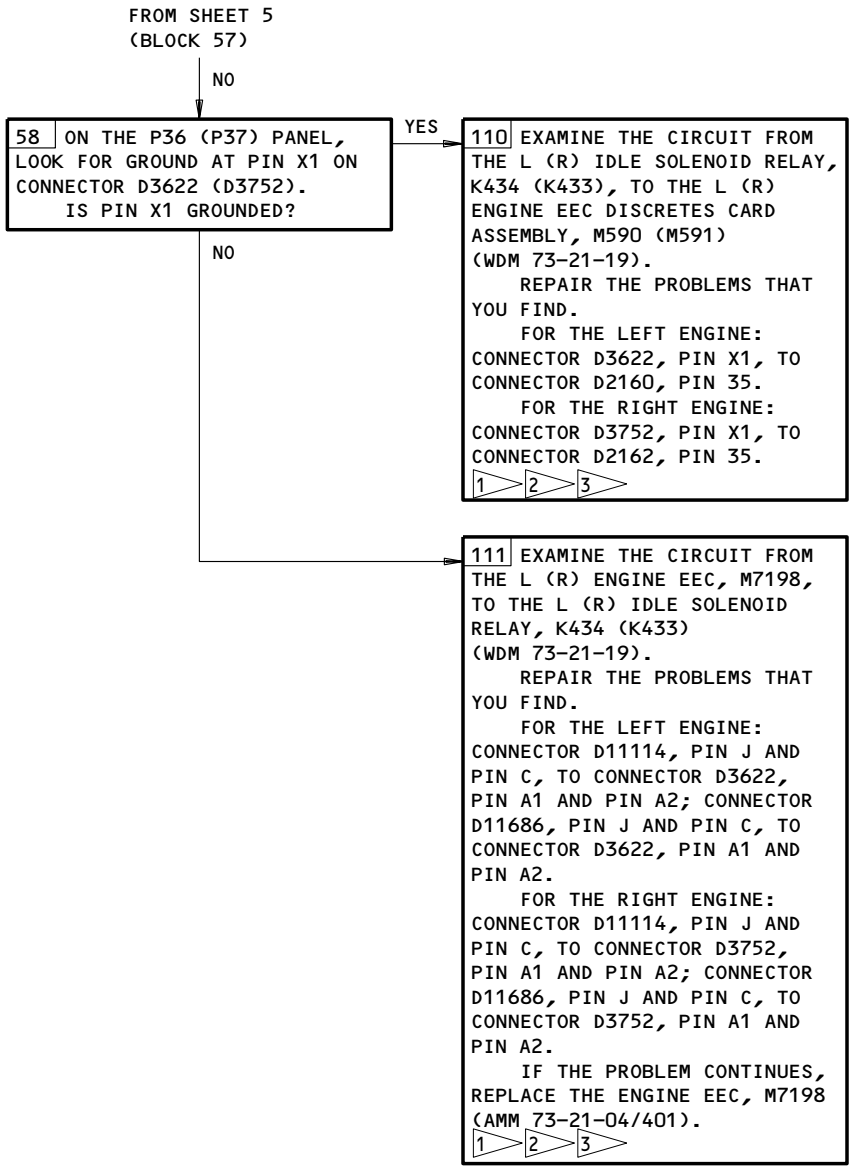
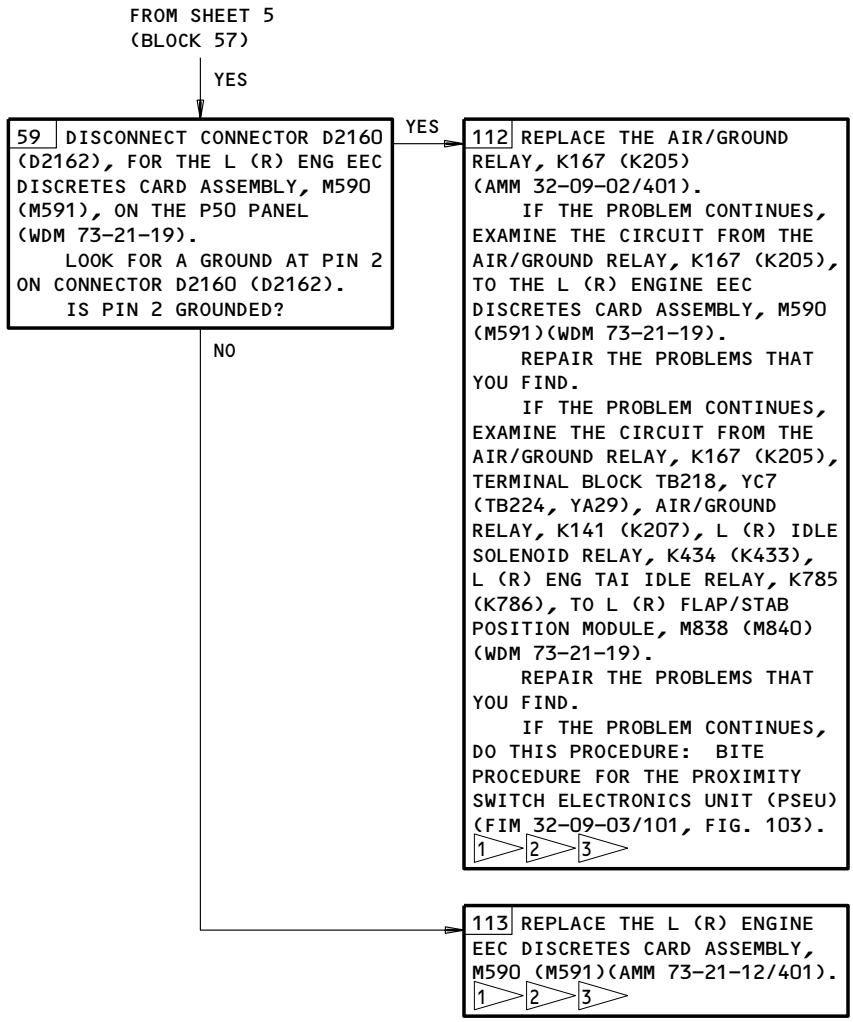


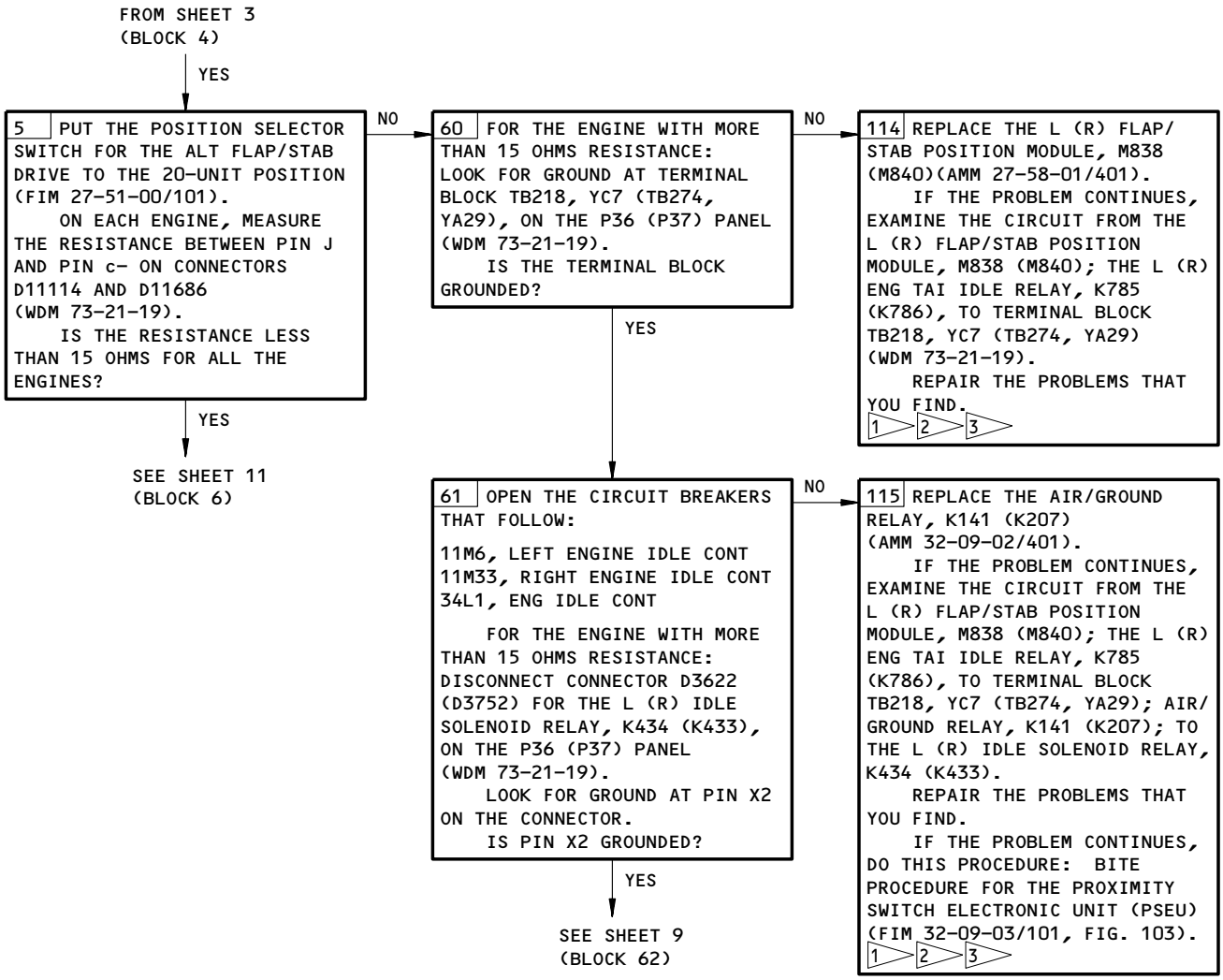

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 5)



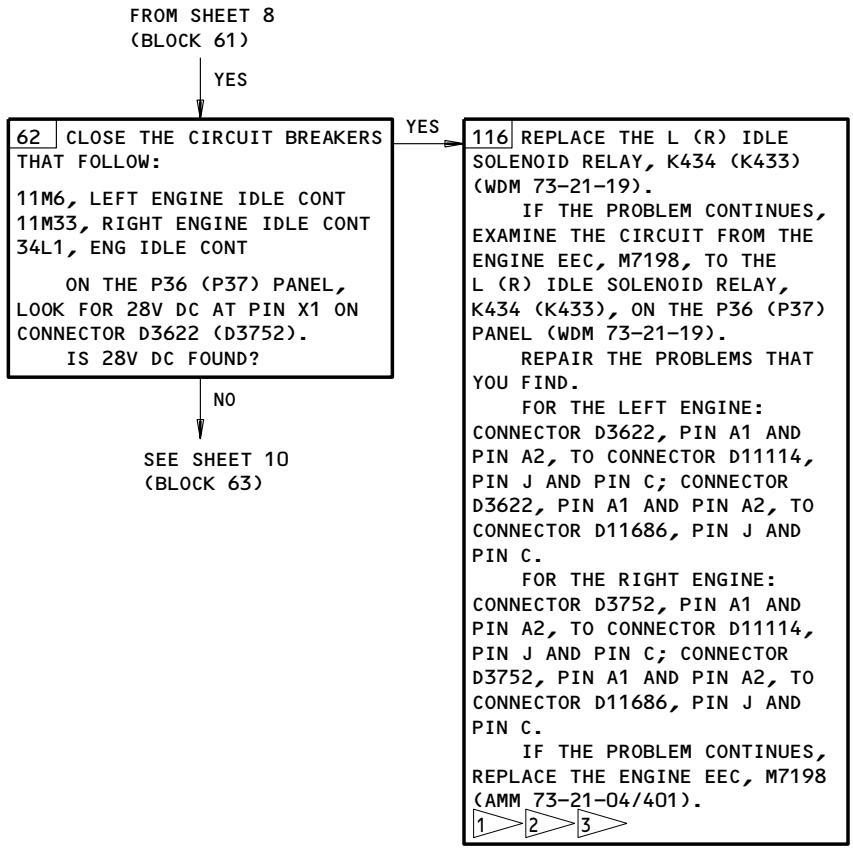

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 6)



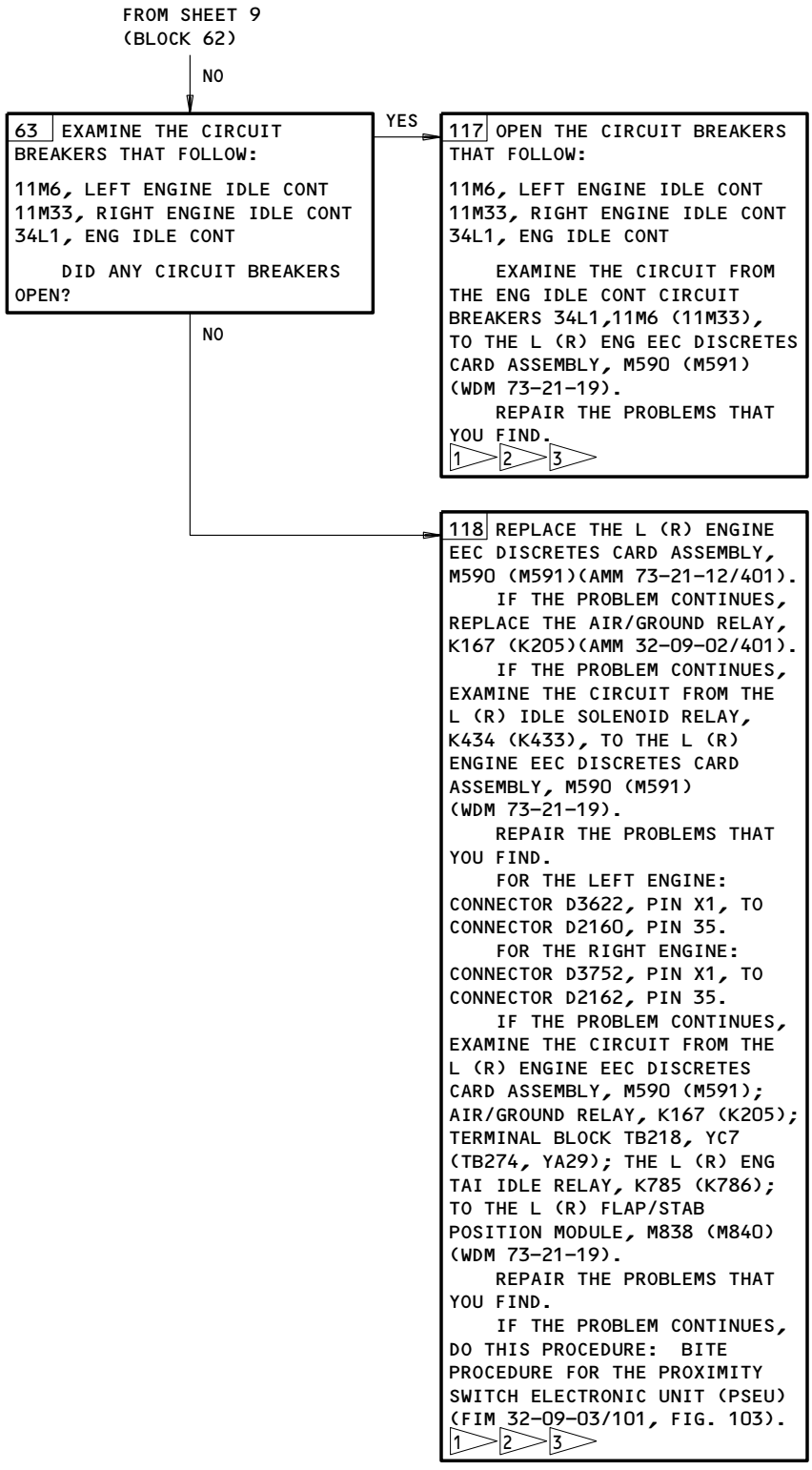

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 7)



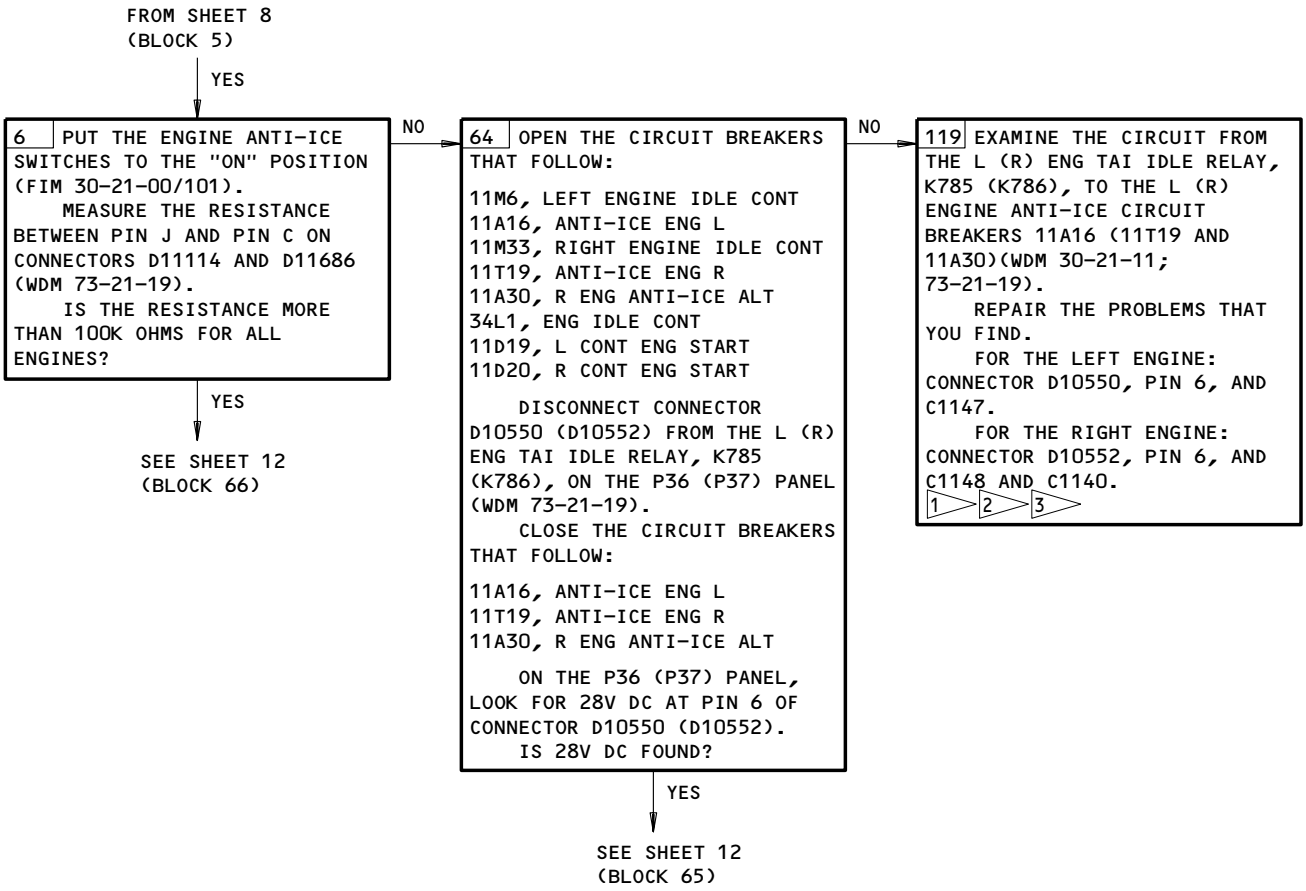

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 8)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 9)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 10)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 11)



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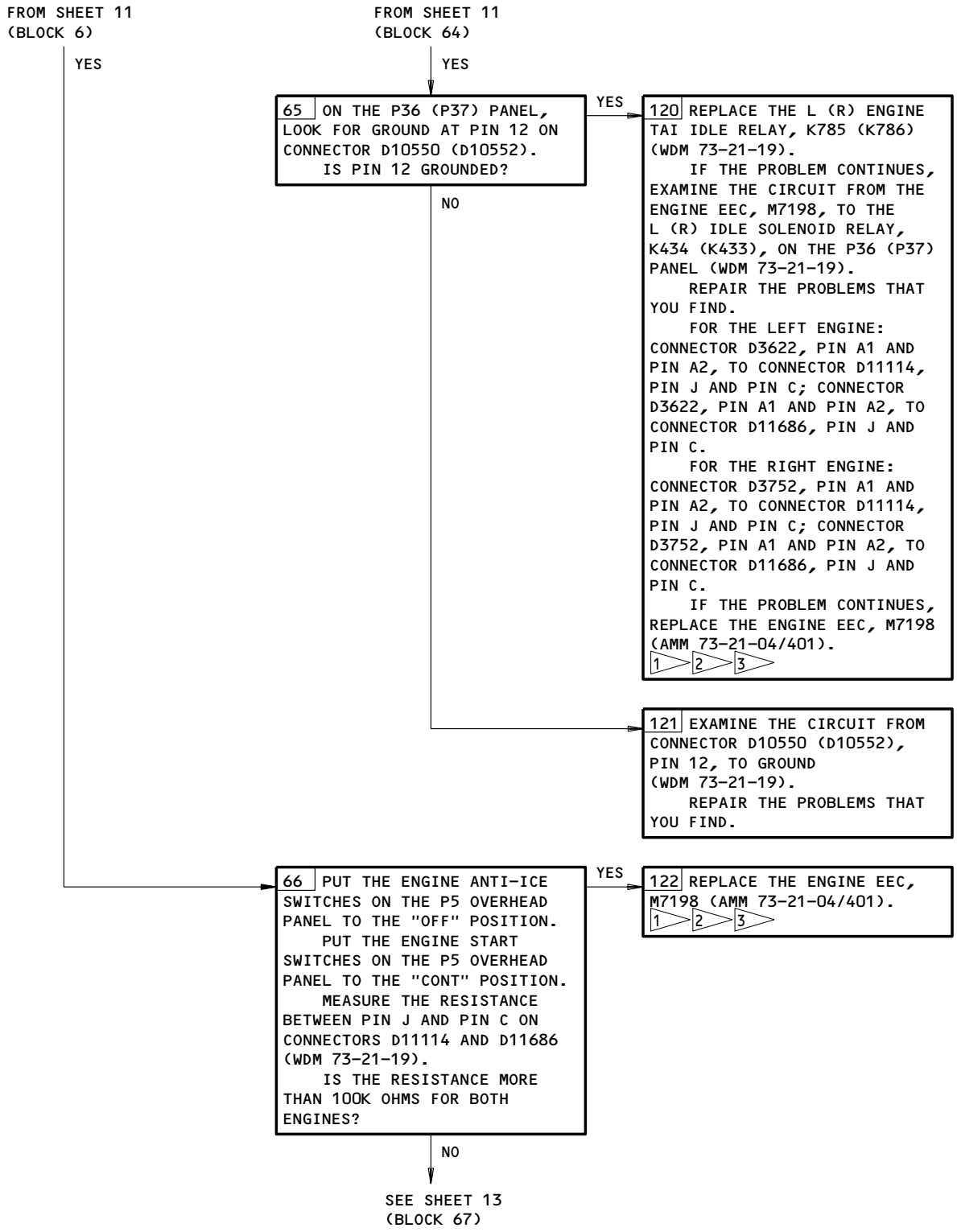
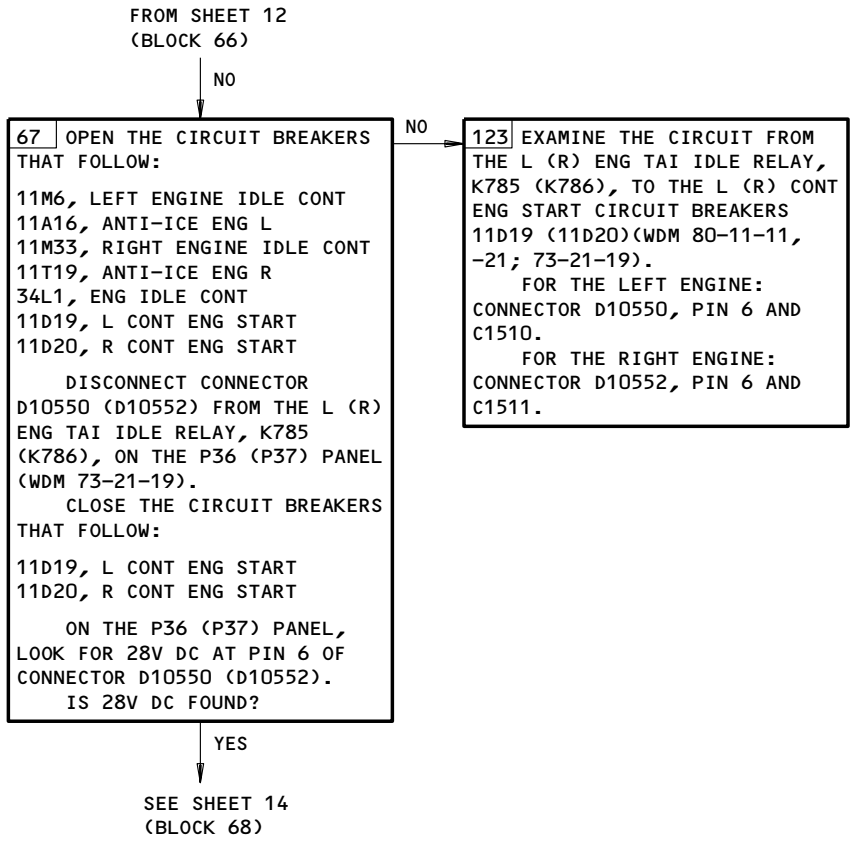
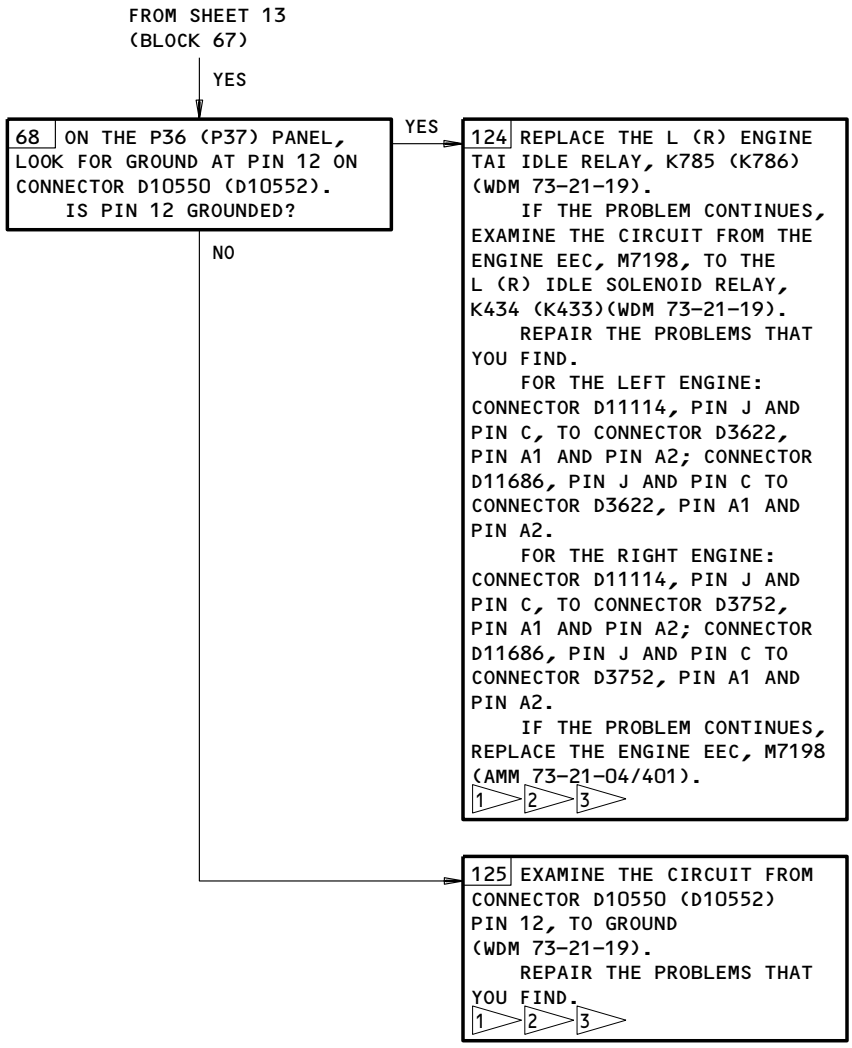


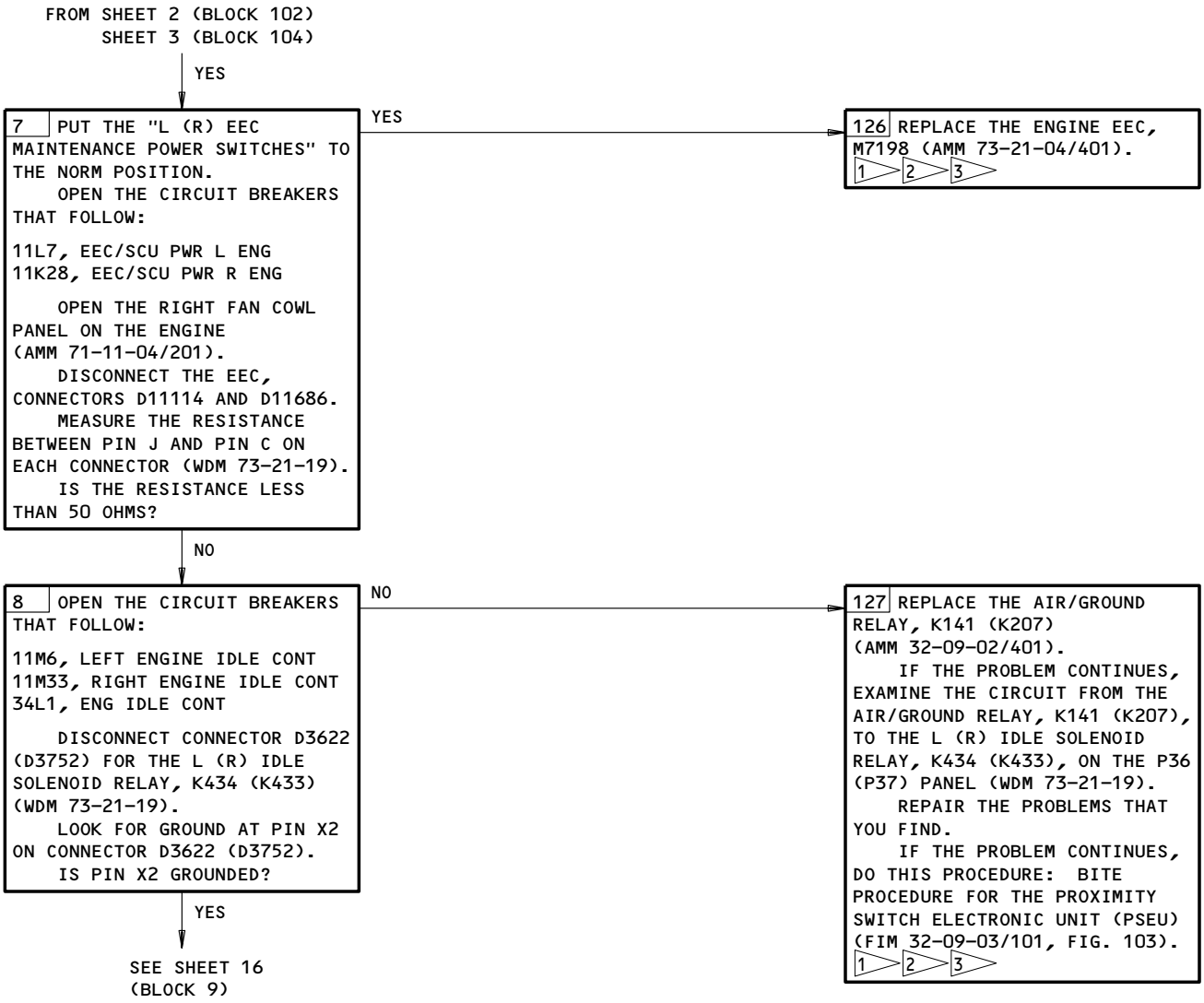

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 12)



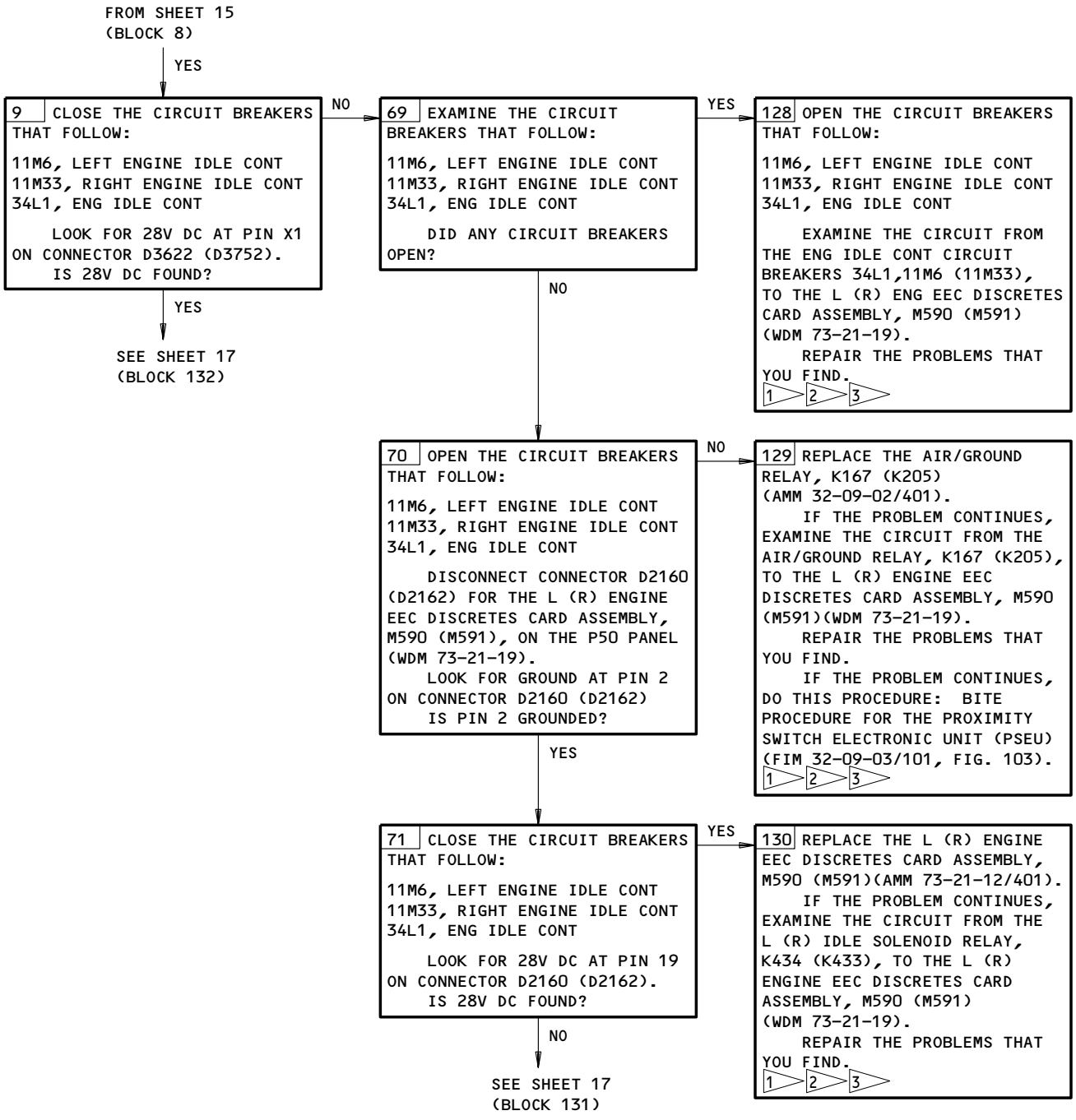

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 13)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 14)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 15)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 16)

FROM SHEET 16
(BLOCK 9)

YES

FROM SHEET 16
(BLOCK 71)

NO

131 EXAMINE THE CIRCUIT FROM THE L (R) ENGINE EEC DISCRETES CARD ASSEMBLY, M590 (M591), TO THE ENG IDLE CONT CIRCUIT BREAKERS 34L1, 11M6 (11M33) (WDM 73-21-19).

REPAIR THE PROBLEMS THAT YOU FIND.

FOR THE LEFT ENGINE: CONNECTOR D2160, PIN 19, AND C1459,C1458.

FOR THE RIGHT ENGINE: CONNECTOR D2162, PIN 19, AND C1459,C1457.

1 2 3

132 REPLACE THE L (R) IDLE SOLENOID RELAY, K434 (K433) (WDM 73-21-19).

IF THE PROBLEM CONTINUES, EXAMINE THE CIRCUIT FROM THE ENGINE EEC, M7198, TO THE L (R) IDLE SOLENOID RELAY, K434 (K433), ON THE P36 (P37) PANEL (WDM 73-21-19).

REPAIR THE PROBLEMS THAT YOU FIND.

FOR THE LEFT ENGINE: CONNECTOR D3622, PIN A1 AND PIN A2, TO CONNECTOR D11114, PIN J AND PIN C; CONNECTOR D3622, PIN A1 AND PIN A2, TO CONNECTOR D11686, PIN J AND PIN C.

FOR THE RIGHT ENGINE: CONNECTOR D3752, PIN A1 AND PIN A2, TO CONNECTOR D11114, PIN J AND PIN C; CONNECTOR D3752, PIN A1 AND PIN A2, TO CONNECTOR D11686, PIN J AND PIN C.

IF THE PROBLEM CONTINUES, REPLACE THE ENGINE EEC, M7198 (AMM 73-21-04/401).

1 2 3

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111 (Sheet 17)

## EICAS MESSAGE "IDLE DISAGREE" OR "L (R) ENG LOW IDLE" IS SHOWN

**PREREQUISITES**

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

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

POSSIBLE CAUSES:

1. L (R) IDLE SOLENOID RELAY (WDM 73-21-19)
2. L (R) FLAP/STAB POSITION MODULE (AMM 27-50-01/401)
3. AIR/GROUND RELAY (AMM 32-09-02/401)
4. L (R) ENG EEC DISCRETES CARD ASSEMBLY (AMM 73-21-12/401)
5. L (R) ENG ANTI-ICE CMD RELAY (WDM 73-21-19)
6. L (R) ENG CONT IGN IDLE RELAY (WDM 73-21-19)
7. ENGINE EEC (AMM 73-21-04/401)
8. BAD ELECTRICAL CIRCUIT.

FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGE THAT FOLLOWS ON THE LEFT AND RIGHT PIMU:

EEC CH-A/B XTRN DIS DISAGREE (350-23)

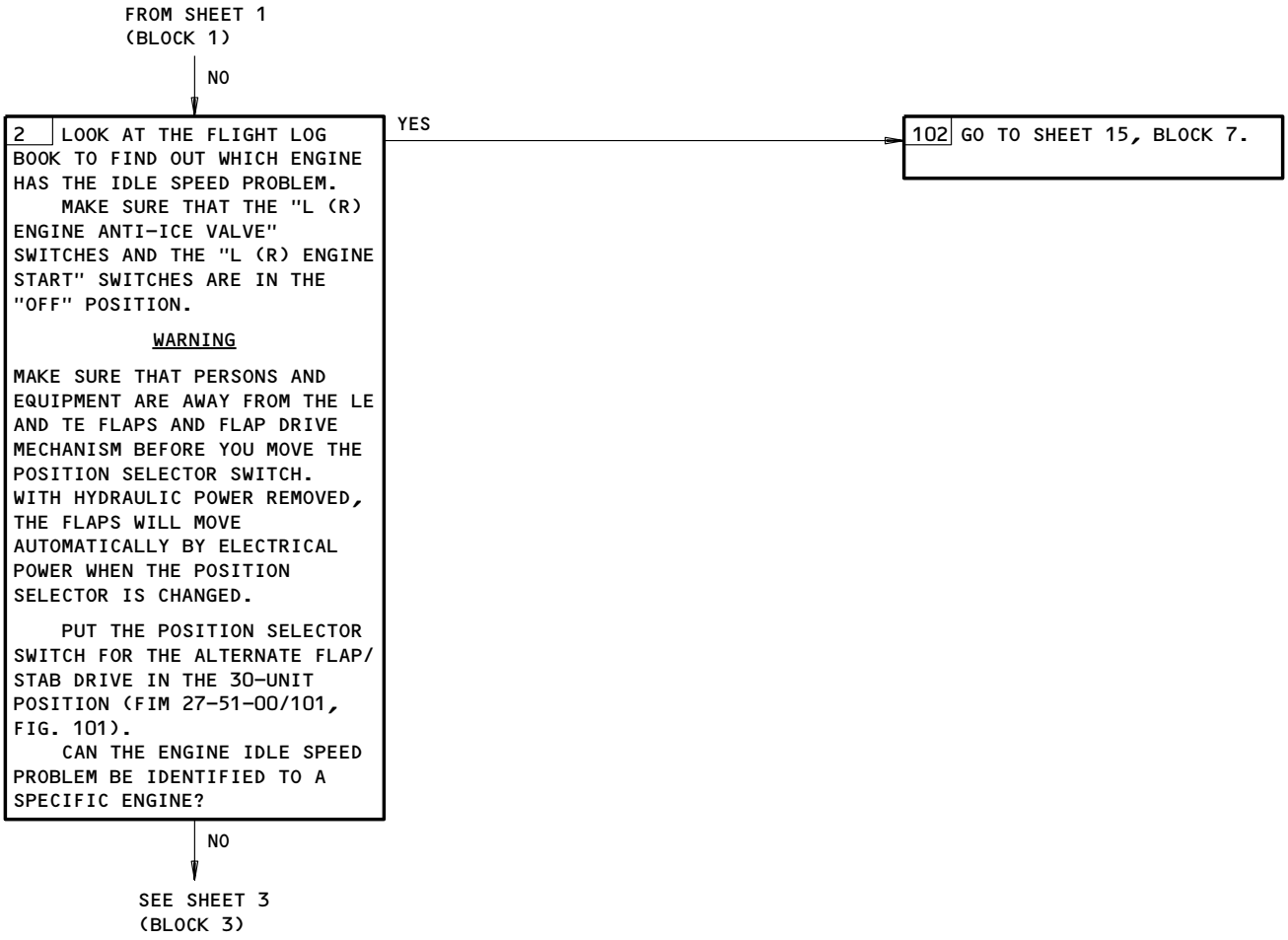
DOES THIS MESSAGE SHOW?

YES → 101 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

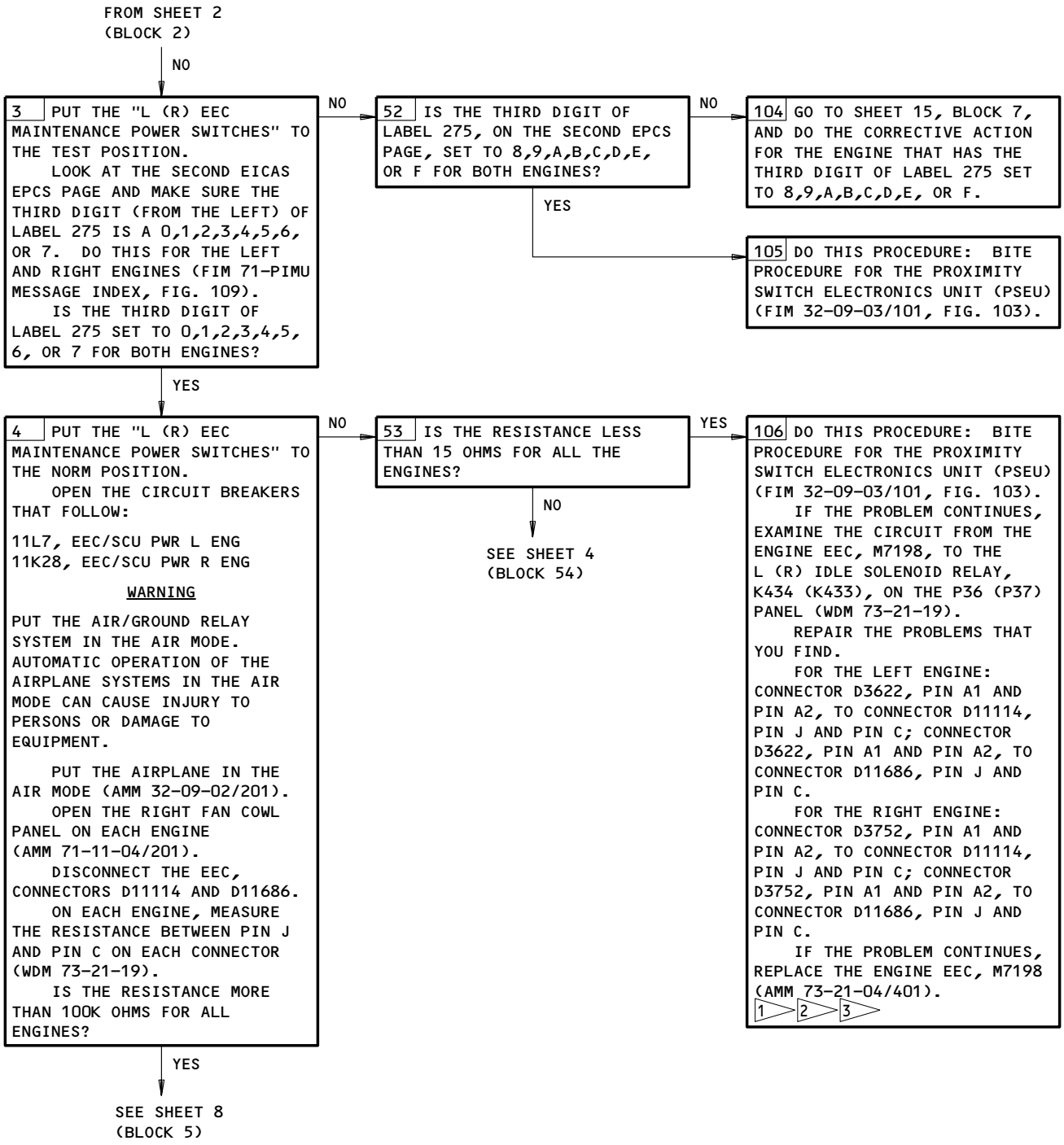
NO → SEE SHEET 2 (BLOCK 2)

1 CONNECT THE ELECTRICAL CONNECTORS THAT HAVE BEEN DISCONNECTED.
2 CLOSE THE CIRCUIT BREAKERS THAT HAVE BEEN OPENED.
3 PUT THE AIRPLANE IN THE GROUND MODE (AMM 32-09-02/201).

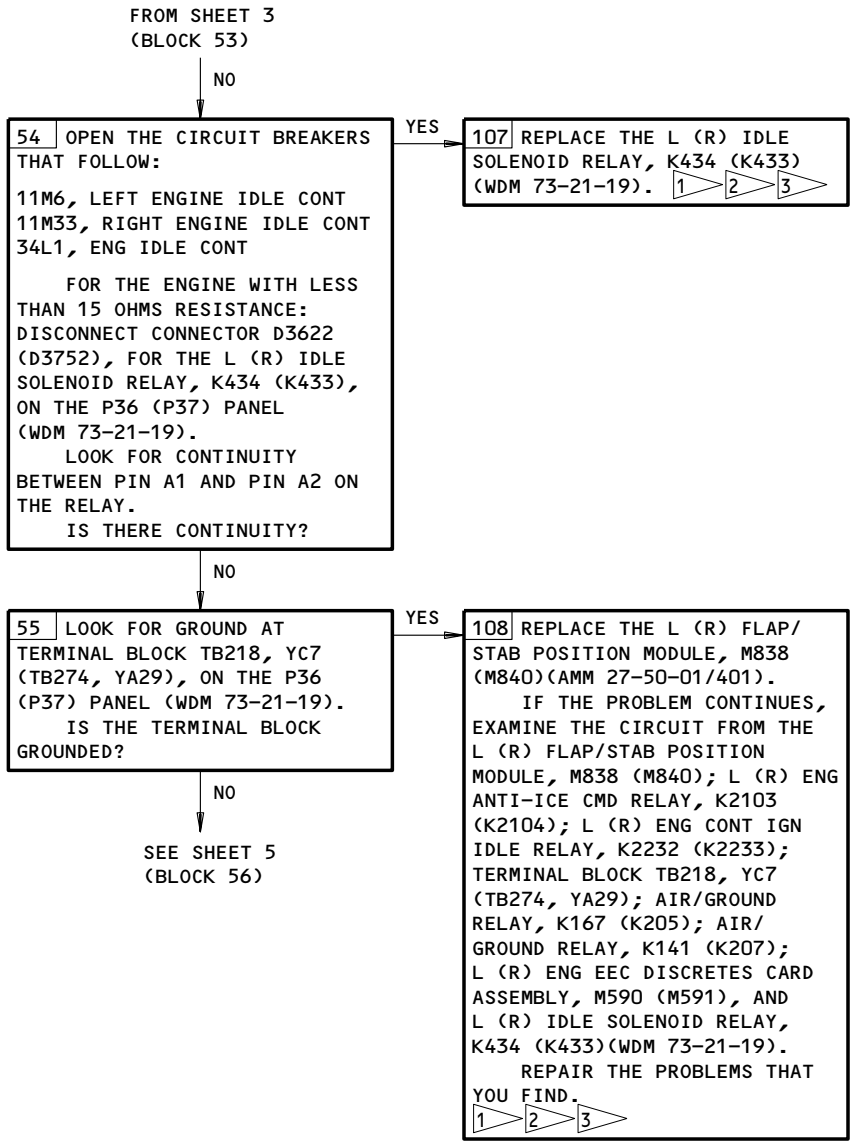
EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 1)



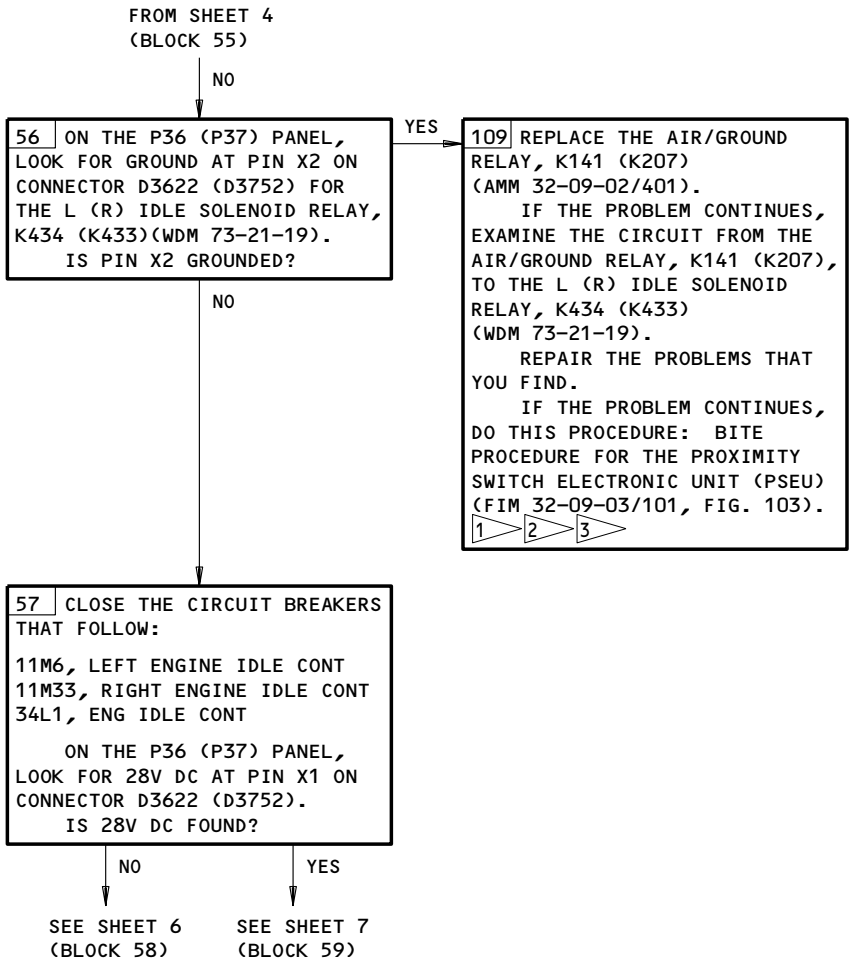

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 2)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 3)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 4)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 5)



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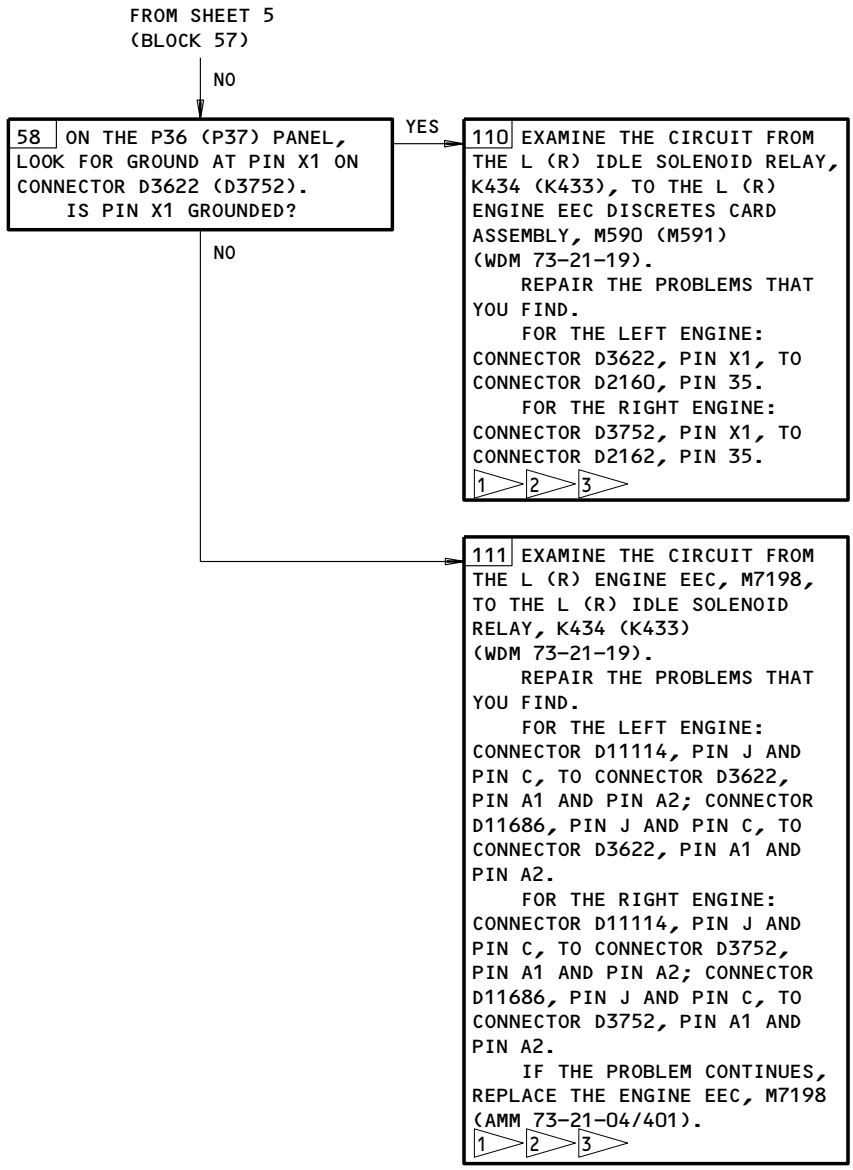
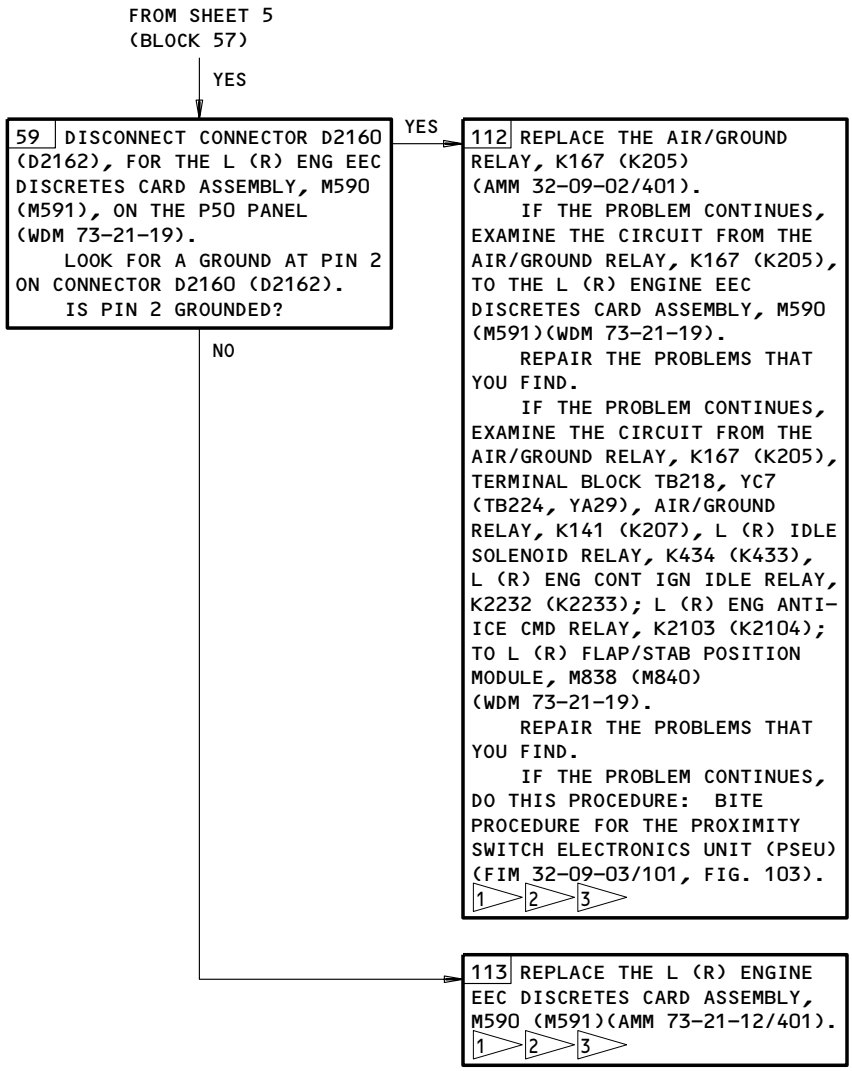
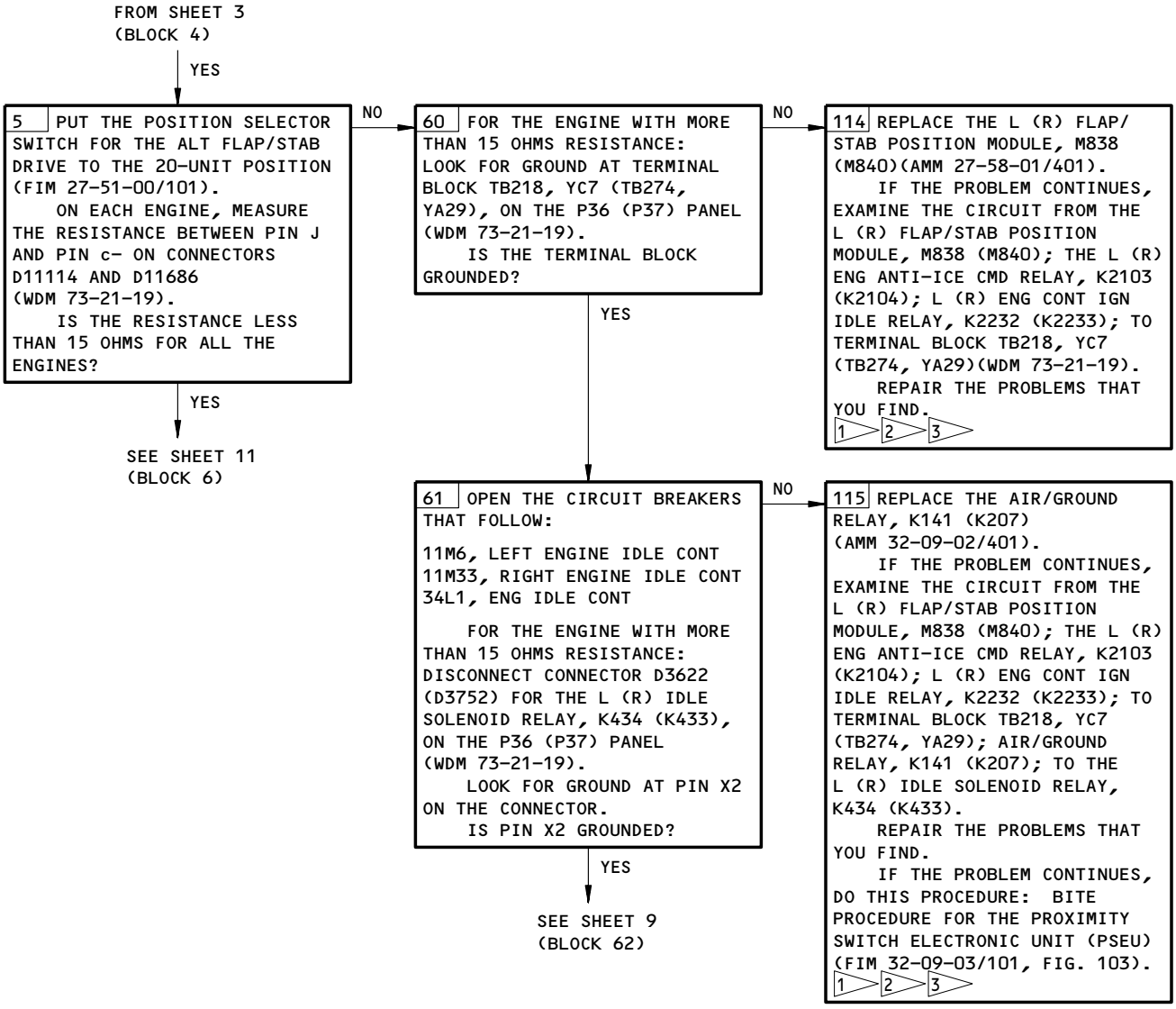


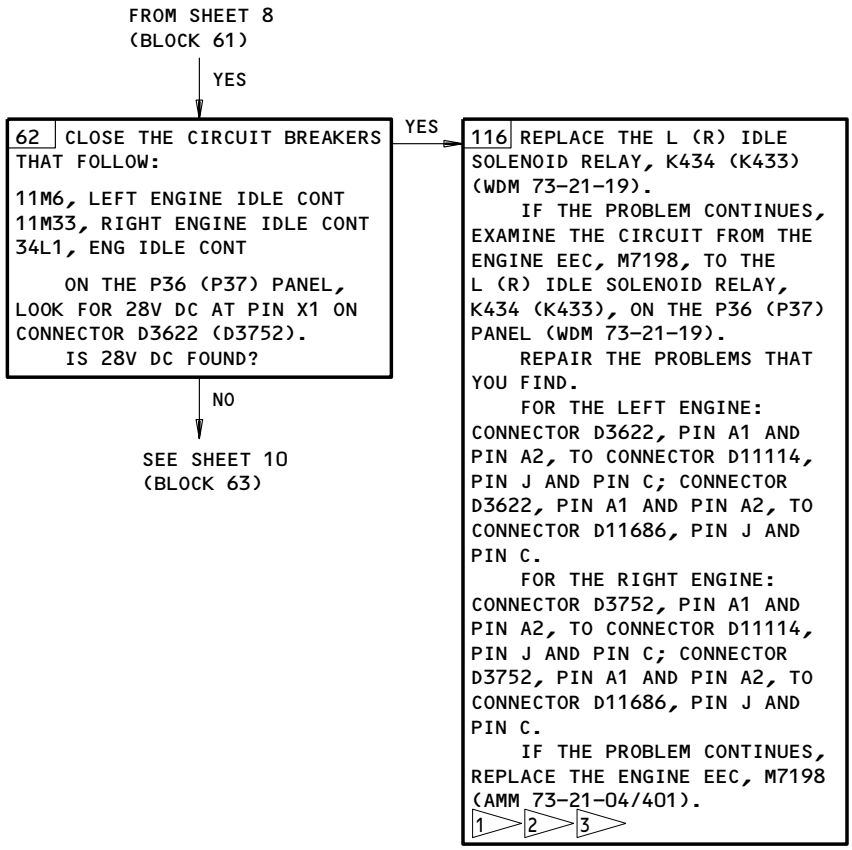

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 6)



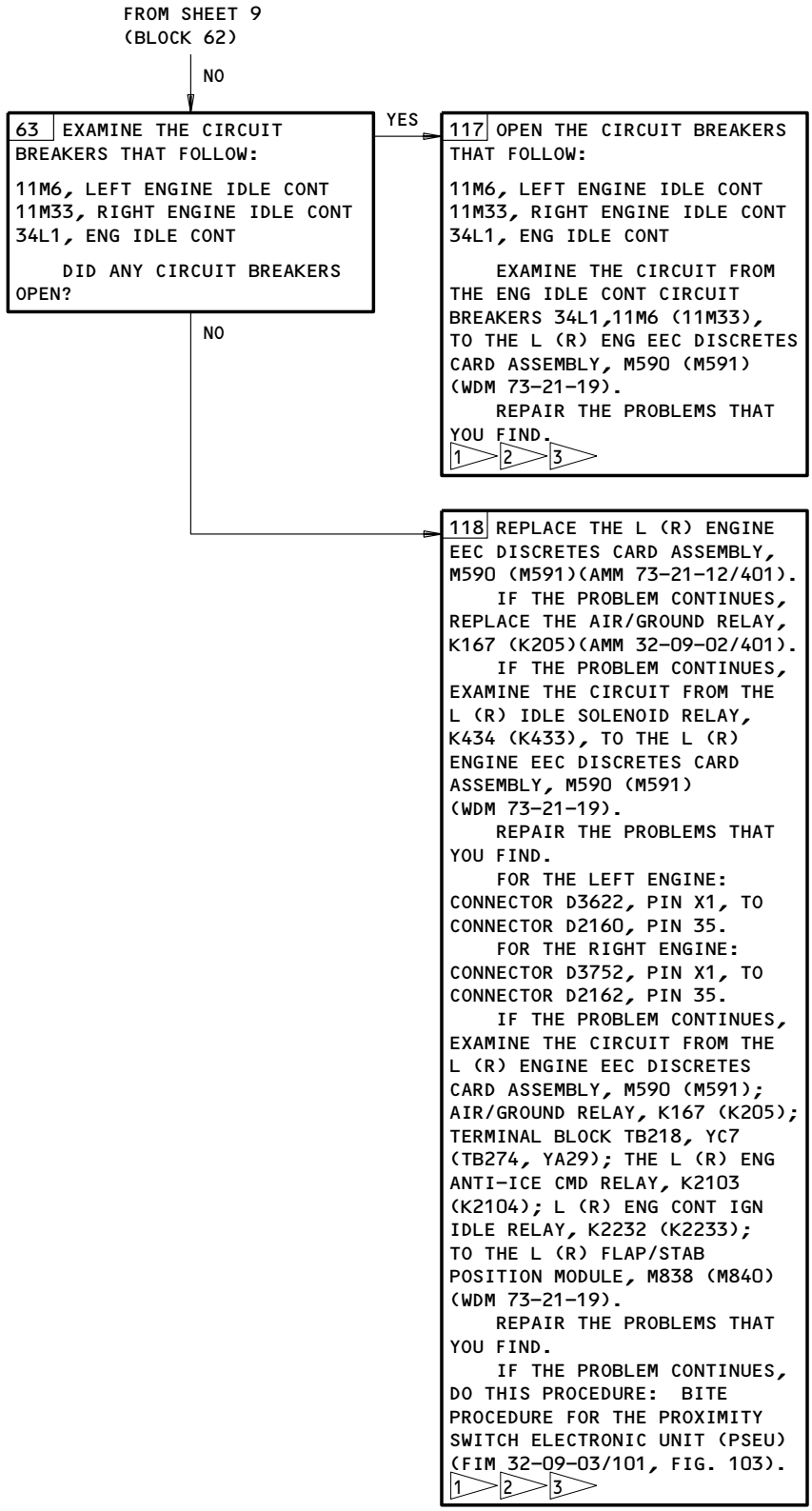

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 7)



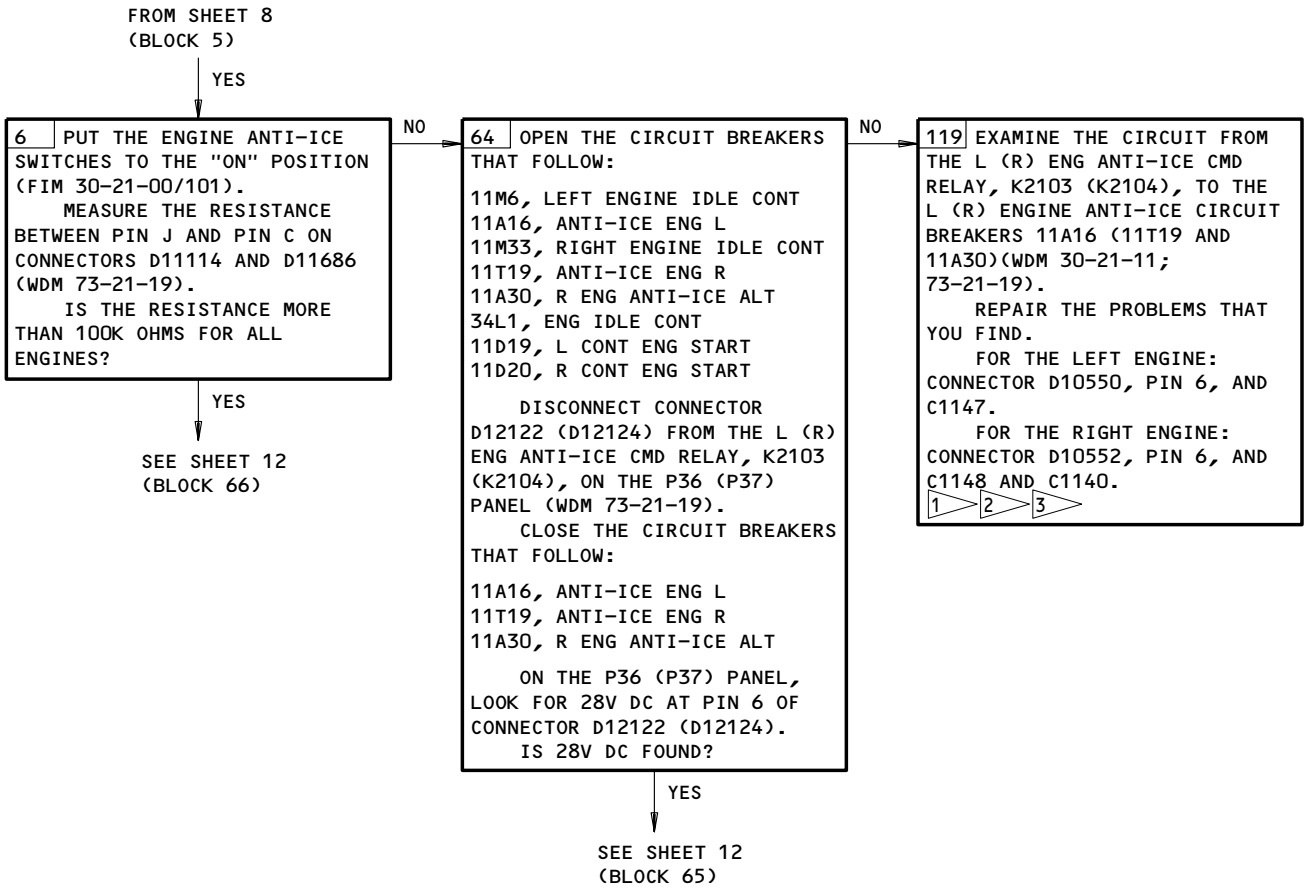

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 8)



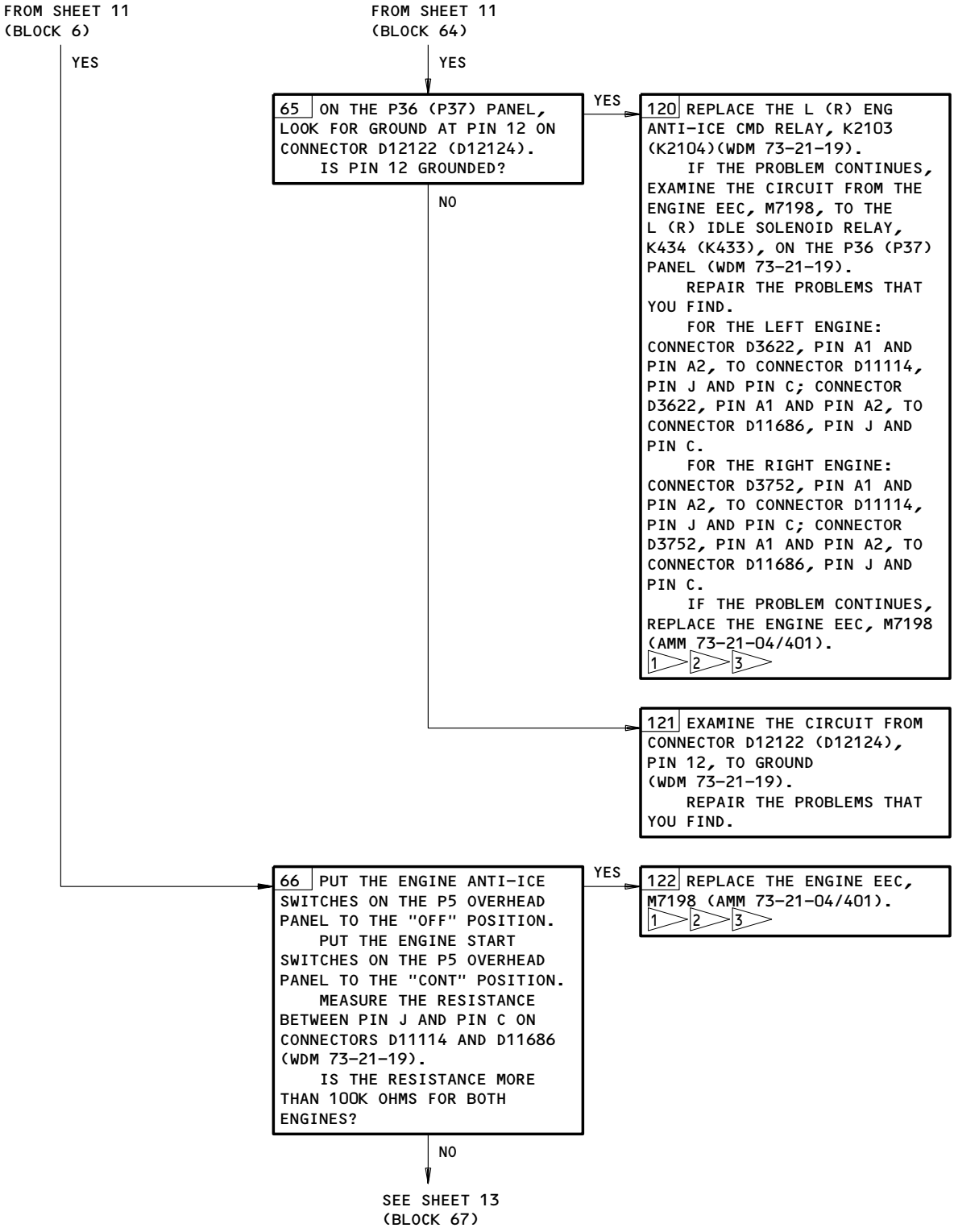

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 9)



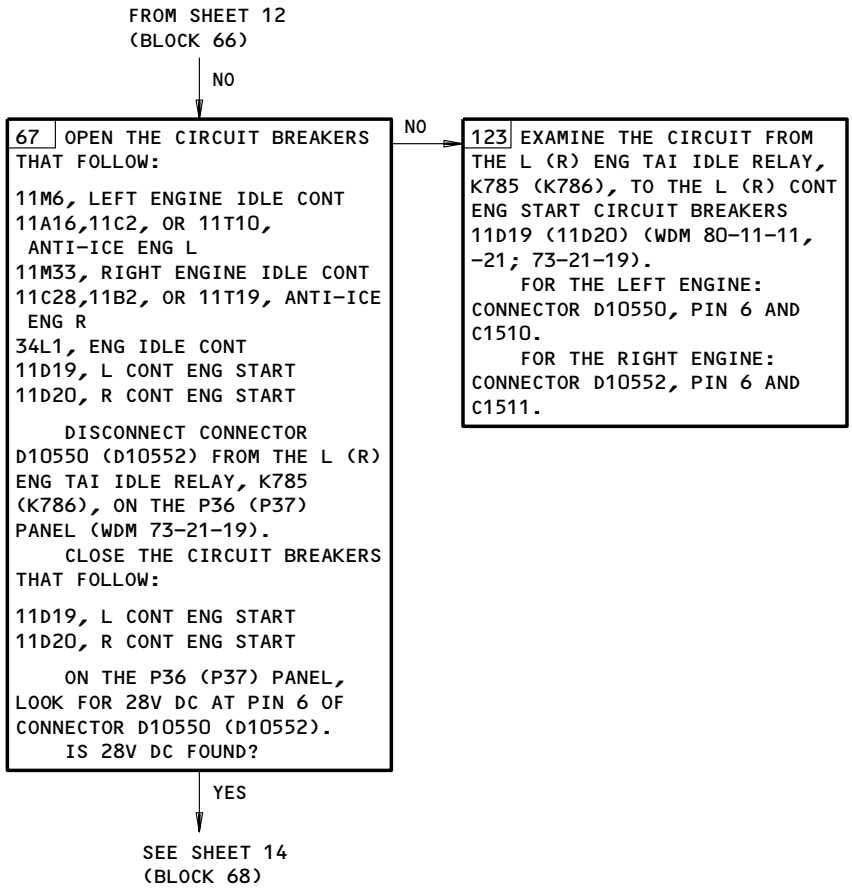

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 10)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 11)



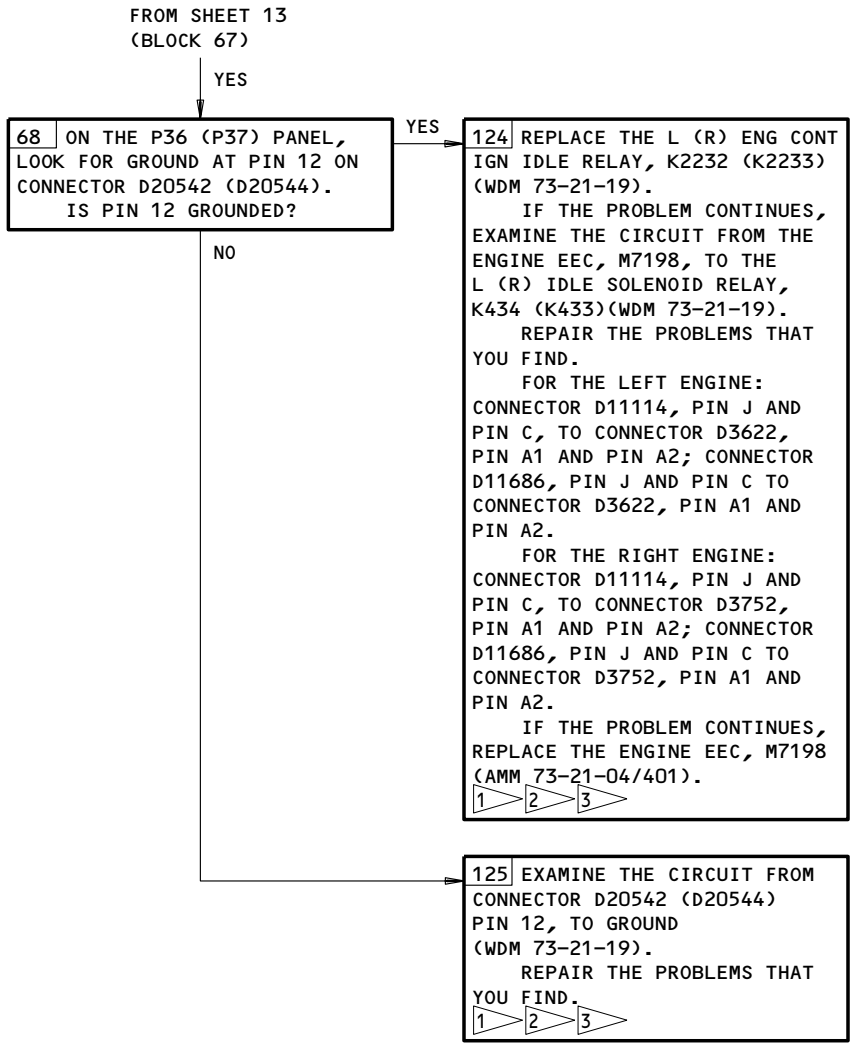

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 12)



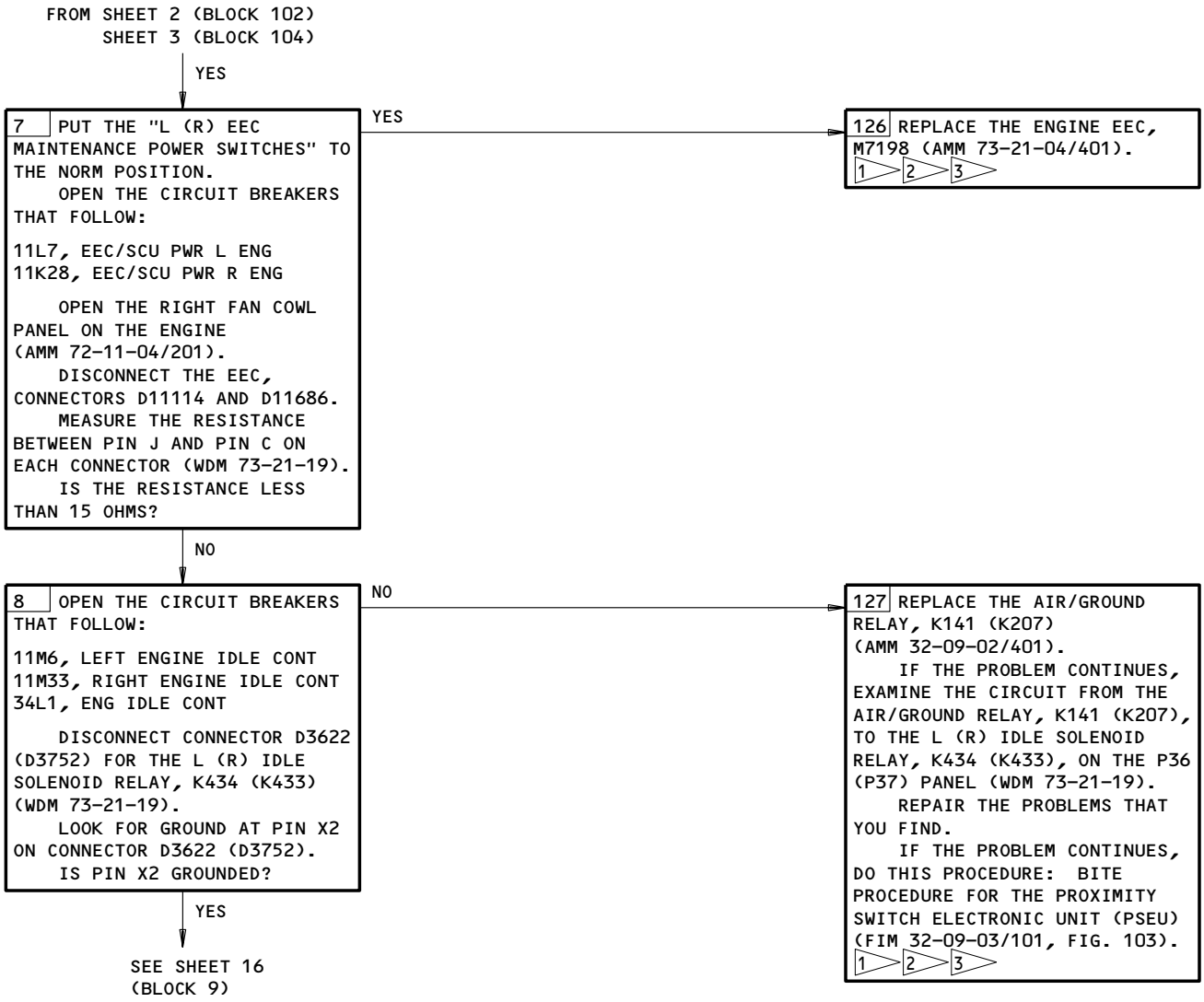

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 13)



H91547



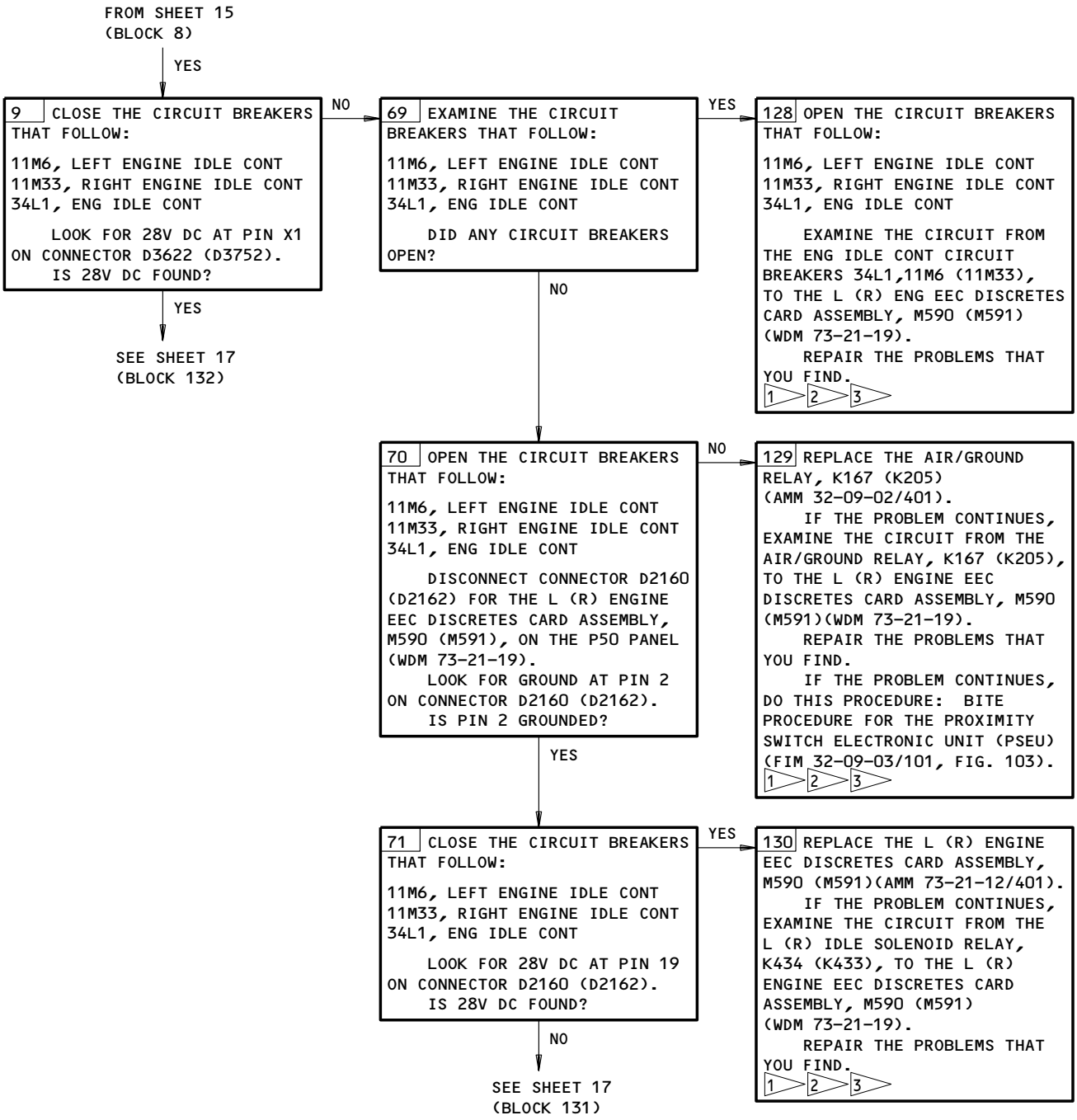

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 14)



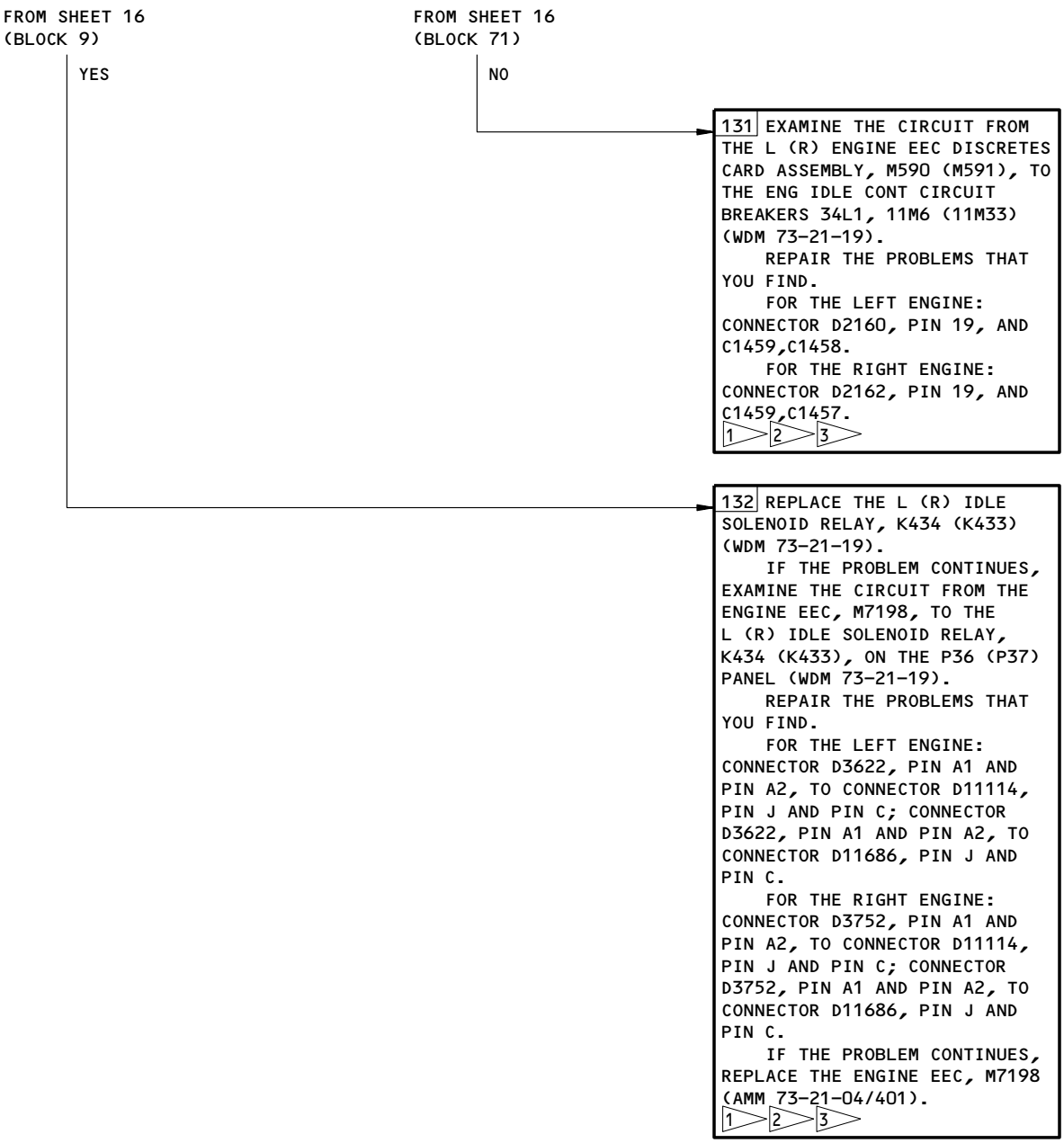

EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 15)



H91549




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 16)




EICAS Message IDLE DISAGREE or L (R) ENG LOW IDLE Is Shown
Figure 111A (Sheet 17)

**PREREQUISITES**

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

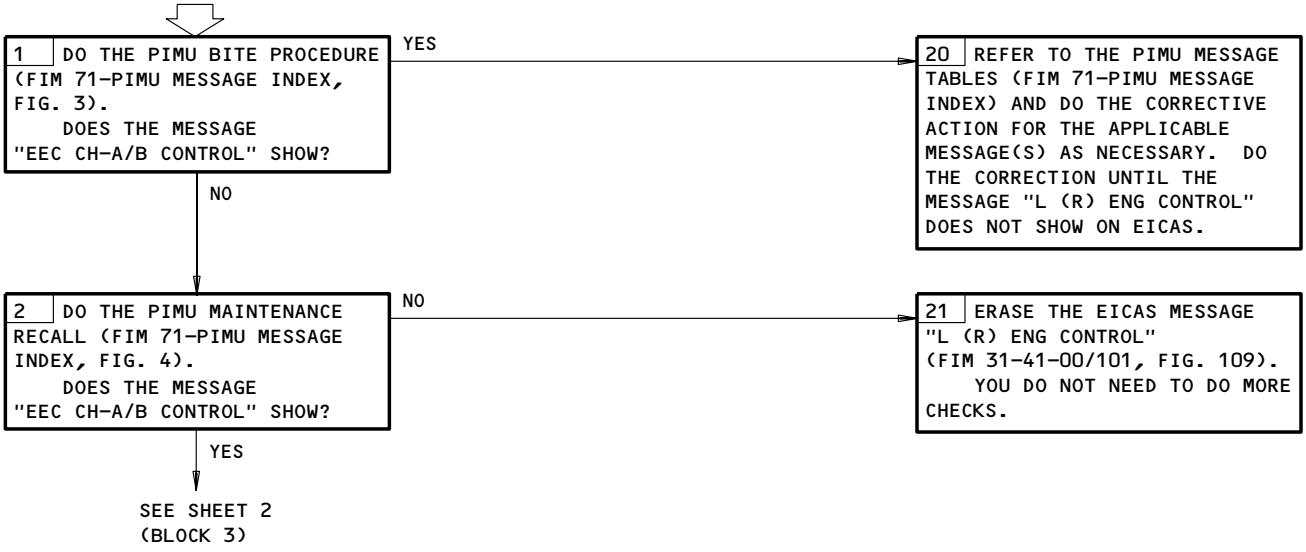
MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
33D4,33D5,34P2,34P3

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

NOTE: THE EICAS MESSAGE "L (R) ENG CONTROL" WILL NOT BE SHOWN WHEN THE ENGINE N2 ROTOR SPEED IS LESS THAN 15%. THE EICAS MESSAGE "L (R) ENG CONTROL" WILL BE SHOWN IF ALL OF THE CONDITIONS THAT FOLLOW OCCUR:

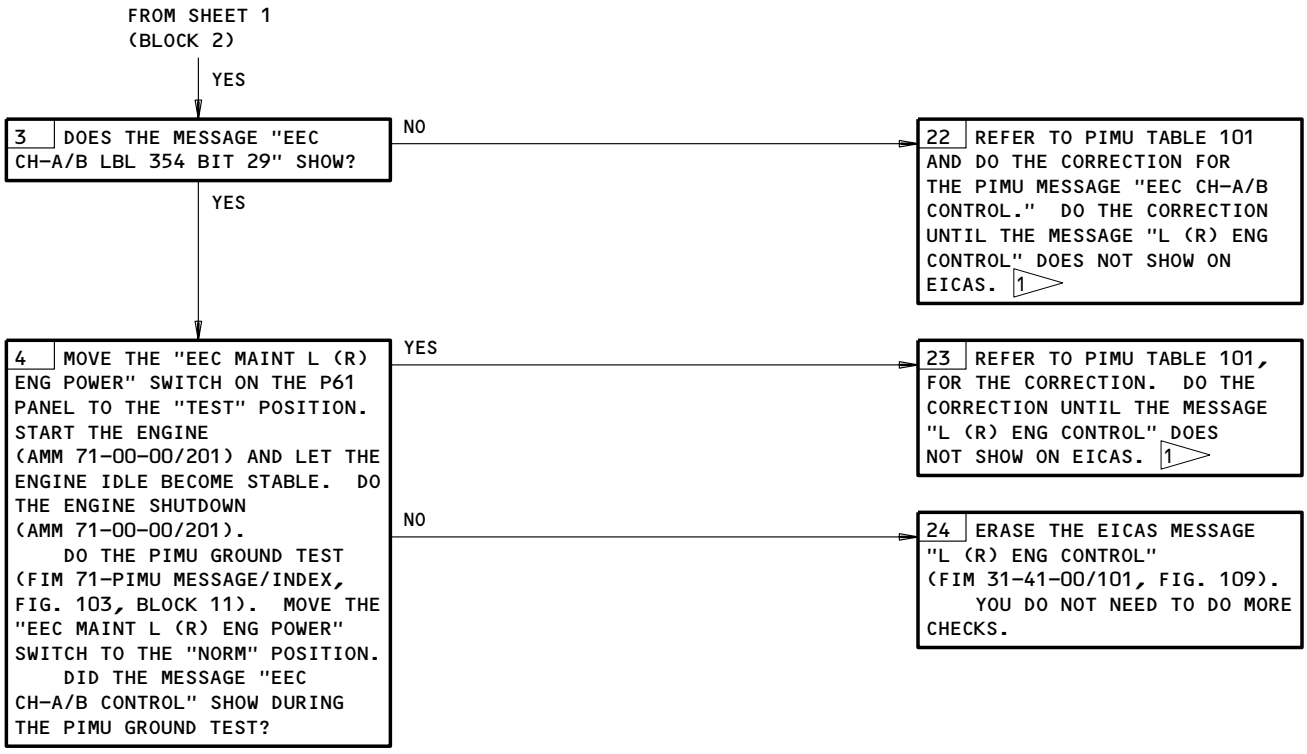
- THE FAILURE THAT CAUSED THE MESSAGE TO BE SHOWN IS NOT CORRECTED
- THE ENGINE N2 ROTOR SPEED IS MORE THAN 15% FOR 60 SECONDS.

## EICAS MSG "L (R) ENG CONTROL" DISPLAYED

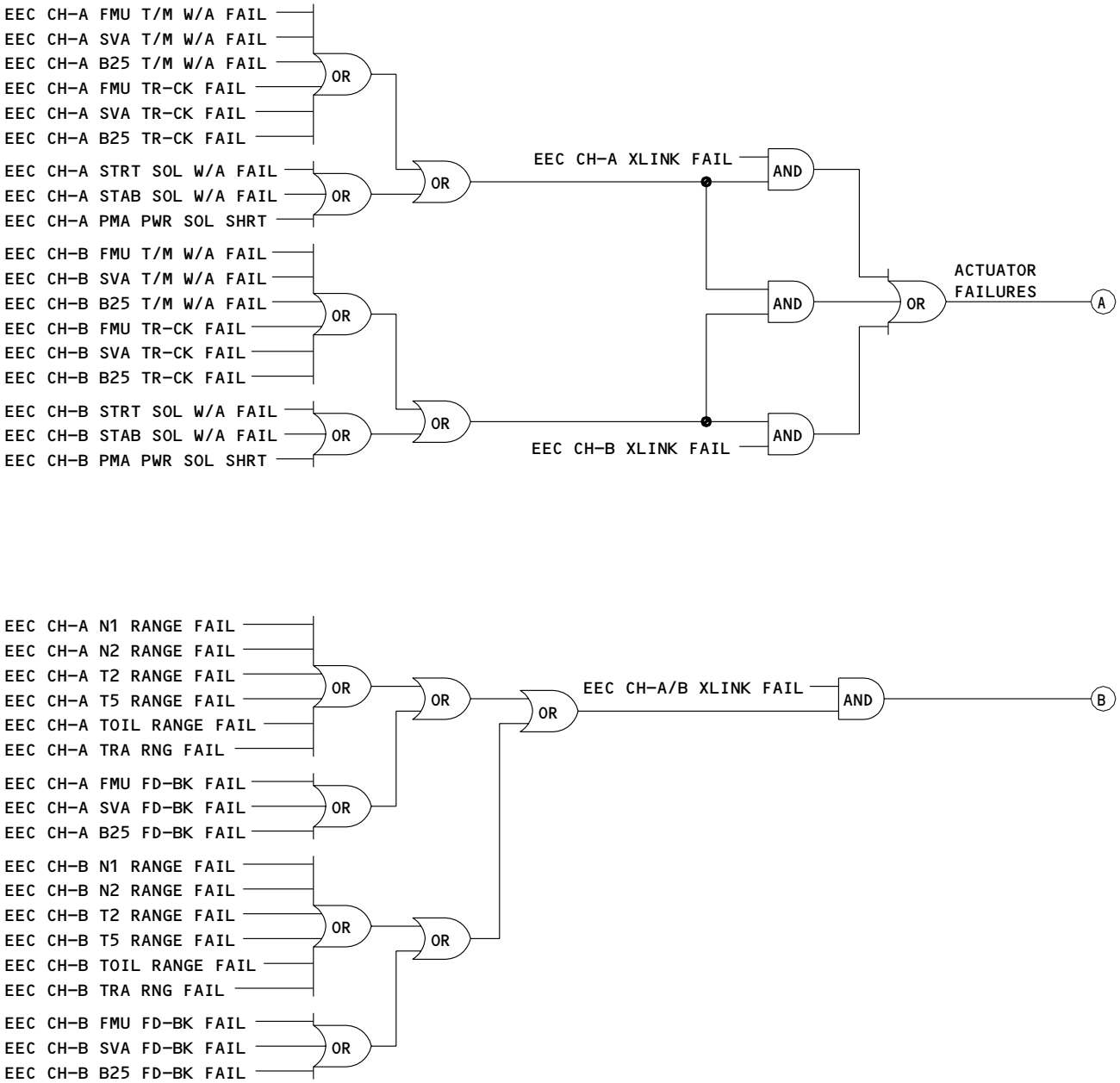



1 A LOGIC DIAGRAM (SHEETS 3 AND 4) SHOWS HOW THE EICAS MESSAGE "L (R) ENG CONTROL" IS SET. YOU CAN USE THE LOGIC DIAGRAM TO FIND THE EASIEST FAULT TO CORRECT SO THIS EICAS MESSAGE WILL NOT SHOW.

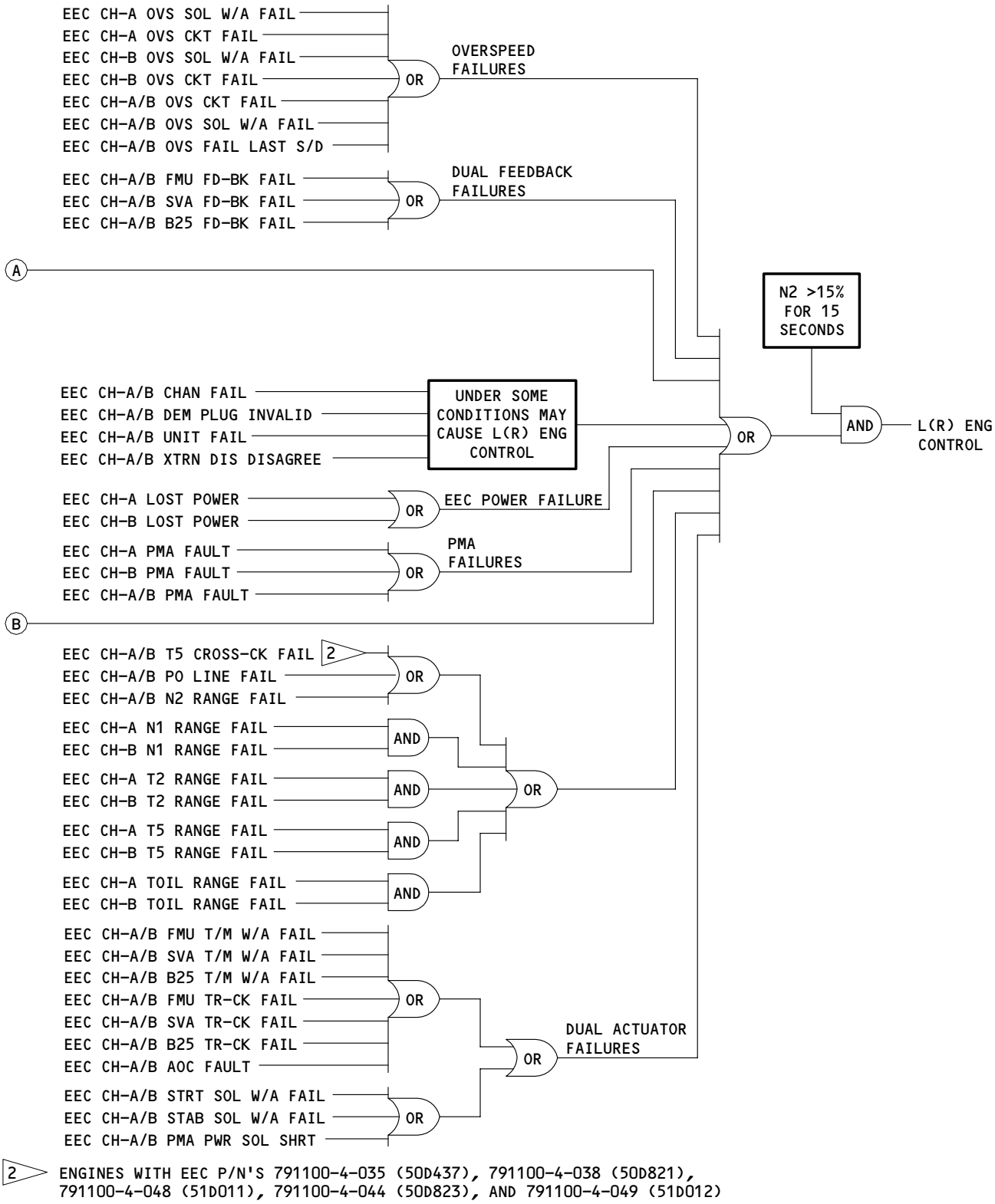
EICAS Msg L (R) ENG CONTROL Displayed
Figure 112 (Sheet 1)




EICAS Msg L (R) ENG CONTROL Displayed
Figure 112 (Sheet 2)




EICAS Message L(R) ENG CONTROL Logic Diagram
Figure 112 (Sheet 3)




EICAS Message L(R) ENG CONTROL Logic Diagram
Figure 112 (Sheet 4)

EFFECTIVITY
ALL

A60469

**PREREQUISITES**

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
33D4, 33D5, 34P2, 34P3

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

NOTE: THE EICAS MESSAGE "L (R) ENG EEC MODE" WILL BE SHOWN IF THE CONDITIONS THAT FOLLOW OCCUR:

- THE FAILURE THAT CAUSED THE MESSAGE TO BE SHOWN IS NOT CORRECTED.
- THE FUEL CONTROL SWITCHES ARE IN THE RUN POSITION FOR 3 MINUTES OR THE N2 ROTOR SPEED IS ABOVE 53% (IDLE).

EICAS MSG "L (R) ENG EEC MODE" DISPLAYED

1 DO THE PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
MAKE A LIST OF THE MESSAGES THAT SHOW ON THE PIMU DISPLAY.
LOOK FOR THE PIMU MESSAGES THAT FOLLOW:

EEC CH-A P2 LINE FAULT (350-22)
EEC CH-A LBL 350 BIT 24 (350-24)
EEC CH-A T2/P2 PROBE HT (350-24)

DOES THE PIMU MESSAGE FOR 350-22 AND 350-24 SHOW BY CHANNEL A ONLY? 1

YES → 10 LOOK FOR THE PIMU MESSAGES THAT FOLLOW:

EEC B-CHAN FAIL (350-14)
EEC CH-B DEM PLUG INVALID (350-26)
EEC CH-B FMU T/M W/A FAIL (351-14)
EEC CH-B SVA T/M W/A FAIL (351-15)
EEC CH-B B25 T/M W/A FAIL (351-16)
EEC CH-B TCC T/M W/A FAIL (351-17)
EEC CH-B AOC T/M W/A FAIL (351-18)
EEC CH-B FMU TR-CK FAIL (351-19)
EEC CH-B SVA TR-CK FAIL (351-20)
EEC CH-B B25 TR-CK FAIL (351-21)
EEC CH-B TCC TR-CK FAIL (351-22)
EEC CH-B AOC TR-CK FAIL (351-23)
EEC CH-B LOST POWER (352-29)
EEC CH-B LBL 353 BIT 16 (353-16)
EEC CH-B PMA FAULT (353-16)

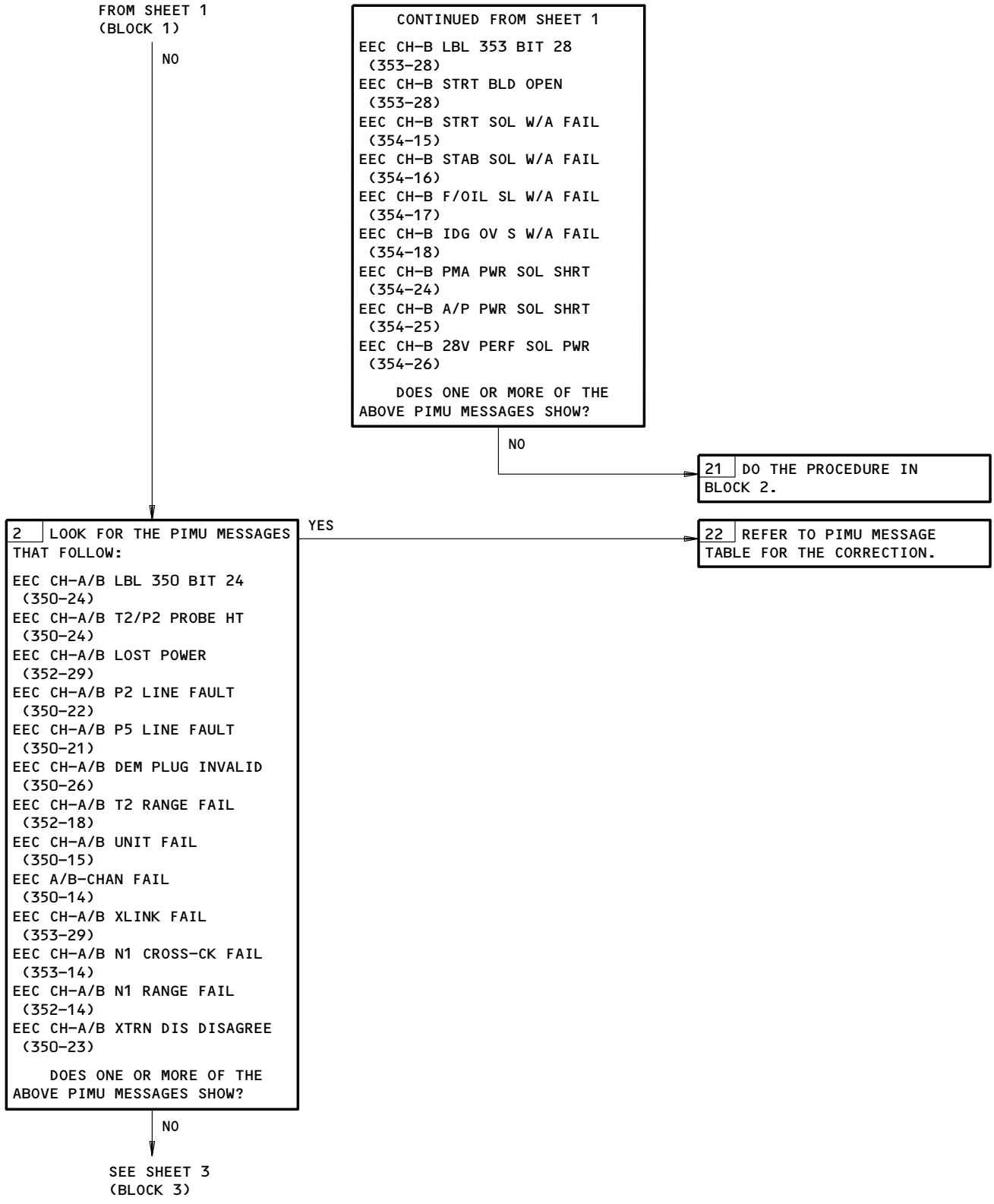
CONTINUED ON SHEET 2

YES → 20 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

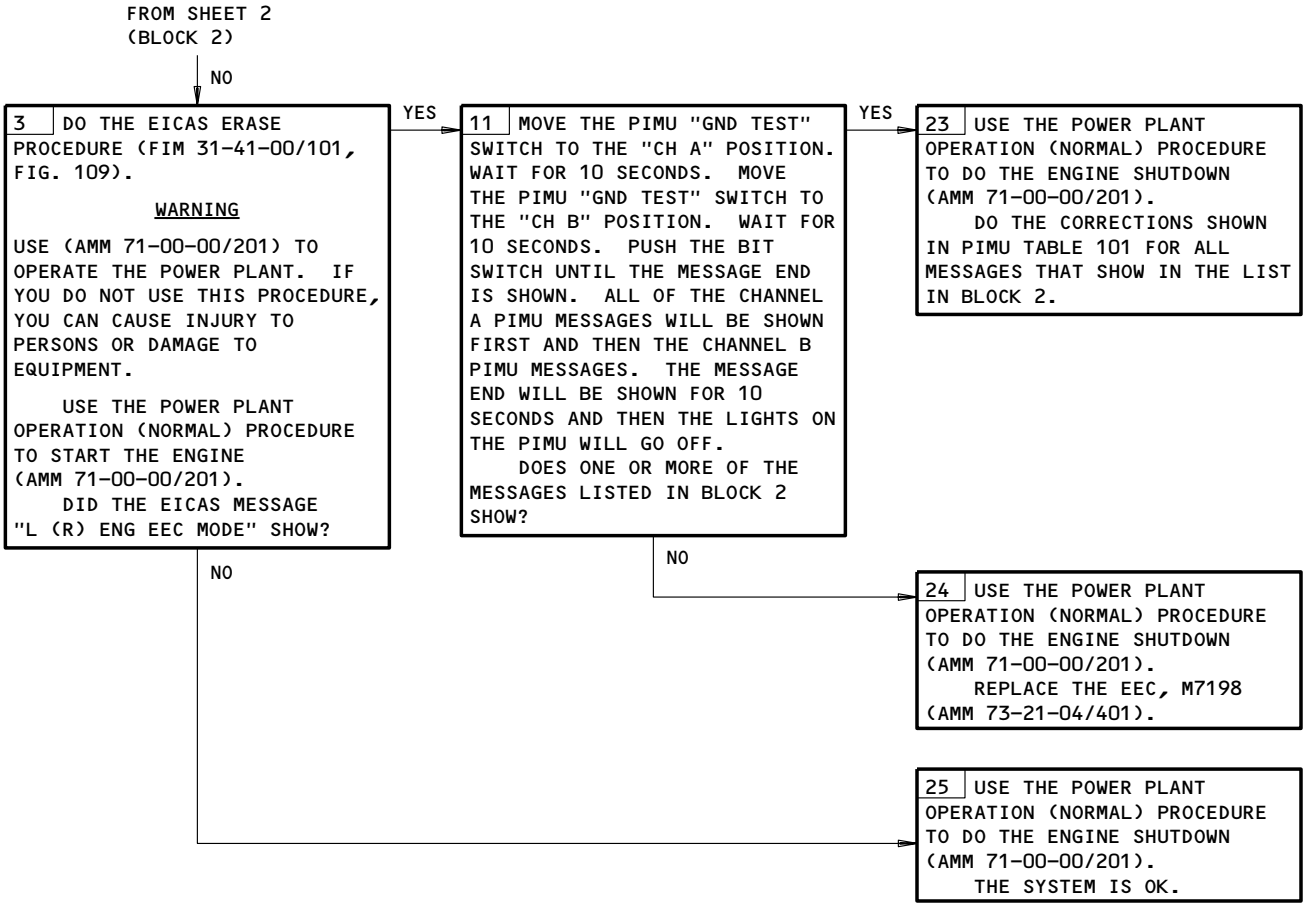
NO → SEE SHEET 2 (BLOCK 2)

1 IF THE PIMU MESSAGE FOR 350-22 AND 350-24 ARE SHOWN BY CHANNEL A ONLY, IT IS POSSIBLE THAT THESE ARE NUISANCE MESSAGES. FOR MORE DATA ON THE POSSIBLE NUISANCE CONDITION, REFER TO THE MAINTENANCE TIP 767 MT 73-4 OR TO THE SERVICE LETTER 767-SL-73-8.

EICAS Msg L (R) ENG EEC MODE Displayed
Figure 113 (Sheet 1)




EICAS Msg L (R) ENG EEC MODE Displayed
Figure 113 (Sheet 2)




EICAS Msg L (R) ENG EEC MODE Displayed
Figure 113 (Sheet 3)

## ENGINE POWER FLUCTUATES

**PREREQUISITES**

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

POSSIBLE CAUSES:

1. BAD 2.9 BLEED VALVE SOLENOID (AMM 75-32-04/401)
2. BAD 2.9 BLEED VALVE (AMM 75-32-03/401)
3. BAD 2.5 BLEED SYSTEM COMPONENTS
4. BAD FUEL METERING UNIT (AMM 73-21-01/401).

FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGES THAT FOLLOW:

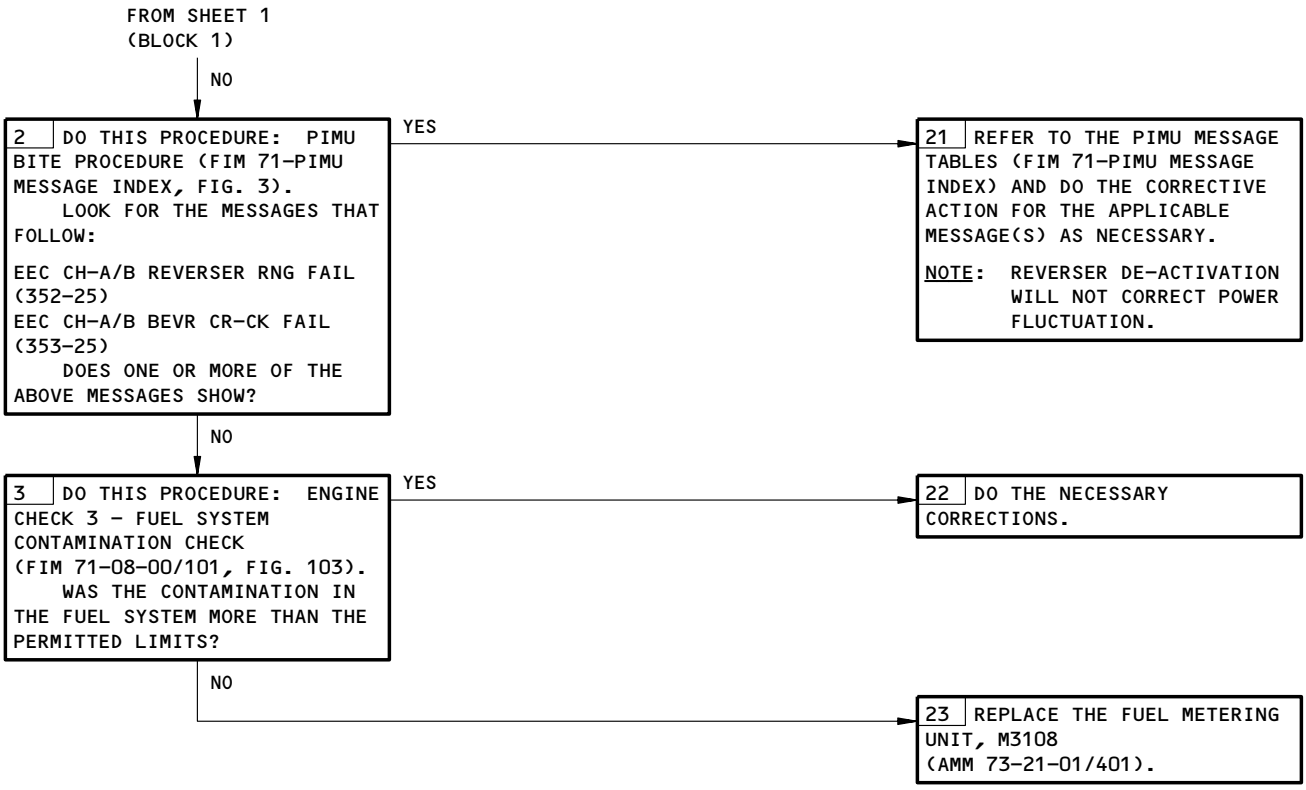
EEC CH-A/B FMU TR-CK FAIL (351-19)
EEC CH-A/B SVA TR-CK FAIL (351-20)
EEC CH-A/B B25 TR-CK FAIL (351-21)
EEC CH-A/B FMU FD-BK FAIL (351-24)
EEC CH-A/B SVA FD-BK FAIL (351-25)
EEC CH-A/B B25 FD-BK FAIL (351-26)
EEC CH-A/B STAB SOL W/A FAIL (354-16)
EEC CH-A/B STRT SOL W/A FAIL (354-15)
EEC CH-A/B PMA PWR SOL SHRT (354-24)
EEC CH-A/B FMU T/M W/A FAIL (351-14)
EEC CH-A/B SVA T/M W/A FAIL (351-15)
EEC CH-A/B B25 T/M W/A FAIL (351-16)
EEC A/B-CHAN FAIL (350-14)
EEC CH-A/B UNIT FAIL (350-15)

DOES ONE OR MORE OF THE ABOVE MESSAGES SHOW?

YES → 20 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO → SEE SHEET 2 (BLOCK 2)

Engine Power Fluctuates
Figure 114 (Sheet 1)




Engine Power Fluctuates
Figure 114 (Sheet 2)

EICAS MESSAGE "L (R) ENG EEC C1" DISPLAYED 1

**PREREQUISITES**

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

1 DO THIS PROCEDURE: PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
DOES THE PIMU MESSAGE "EEC CH-A/B FAULT CAT 1" SHOW?

YES → 20 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO ↓

2 DO THIS PROCEDURE: PIMU MAINTENANCE RECALL PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 4).
DOES THE MESSAGE "EEC CH-A/B FAULT CAT 1" SHOW ON FLIGHT LEG 0 OR 1?

YES → 21 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO → 22 FOR THE LEFT ENGINE: EXAMINE THE CIRCUIT FROM THE EEC, M7198, TO THE L (R) EICAS COMPUTER, M10181 (M10182); CHANNEL A, CONNECTOR D11114, PINS P, R, TO CONNECTOR D881A (D883A), PINS J3, J4; CHANNEL B, CONNECTOR D11686, PINS P, R, TO CONNECTOR D881B (D883B) PINS A14, B14 (WDM 73-21-14). REPAIR THE PROBLEMS THAT YOU FIND.
FOR THE RIGHT ENGINE: EXAMINE THE CIRCUIT FROM THE EEC, M7198, TO THE L (R) EICAS COMPUTER, M10181 (M10182); CHANNEL A, CONNECTOR D11114, PINS P, R, TO CONNECTOR D881D (D883D), PINS J4, J5; CHANNEL B, CONNECTOR D11686, PINS P, R, TO CONNECTOR D881E (D883E), PINS E14, E13 (WDM 73-21-14). REPAIR THE PROBLEMS THAT YOU FIND.

1 THE EICAS MESSAGE "L (R) ENG EEC C1" IS SET IF THE ENGINES ARE STARTED WHEN THE AIRPLANE IS POWERED BY THE BATTERY. THE PIMU MESSAGE "EEC CH-A/B 28V PERF SOL PWR" IS ALSO SET. NO CORRECTIVE ACTION IS NECESSARY IF THE MESSAGES ARE SET WHILE YOU DO AN ENGINE START WITH AIRPLANE BATTERY POWER.

EICAS Message L (R) ENG EEC C1 Displayed
Figure 115

EICAS MESSAGE
"L (R) ENG EEC C2"
DISPLAYED

**PREREQUISITES**

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

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

1 DO THE PIMU BITE PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
DOES THE PIMU MESSAGE "EEC CH-A/B FAULT CAT 2" SHOW?

YES → 20 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO

2 DO THE PIMU MAINTENANCE RECALL PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 4).
DOES THE MESSAGE "EEC CH-A/B FAULT CAT 2" SHOW ON FLIGHT LEG 0 OR 1?

YES → 21 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

NO → 22 CONTINUE TO USE THE ENGINE. MORE TESTS ARE NOT NECESSARY.

EICAS Message L (R) ENG EEC C2 Displayed
Figure 116

**PREREQUISITES**

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
6E1,6E2,6L19,6K25,11D7,11D8,111D25,11D26,11M1,11M2,
11M9,11M28,11M29,11M36

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

## IDLE RPM IS TOO HIGH OR TOO LOW. (ENGINE RELATED)

DESCRIPTION:

UNUSUAL GROUND IDLE AND/OR FLIGHT IDLE SPEEDS THAT ARE CAUSED BY ENGINE RELATED PROBLEMS.

POSSIBLE CAUSES:

1. BAD OR DAMAGED TT2 SIGNAL (AMM 73-21-03/401)
2. BAD OR DAMAGED BURNER PRESSURE (PB) SIGNAL (FIM 71-07-00/101)
3. START/STABILITY BLEED SYSTEM MALFUNCTION (AMM 75-32-04/401)
4. FUEL SCHEDULING SYSTEM (FIM 71-08-00/101).

FAULT ISOLATION:


Idle RPM Is Too High or Too Low (Engine Related)
Figure 117 (Sheet 1)



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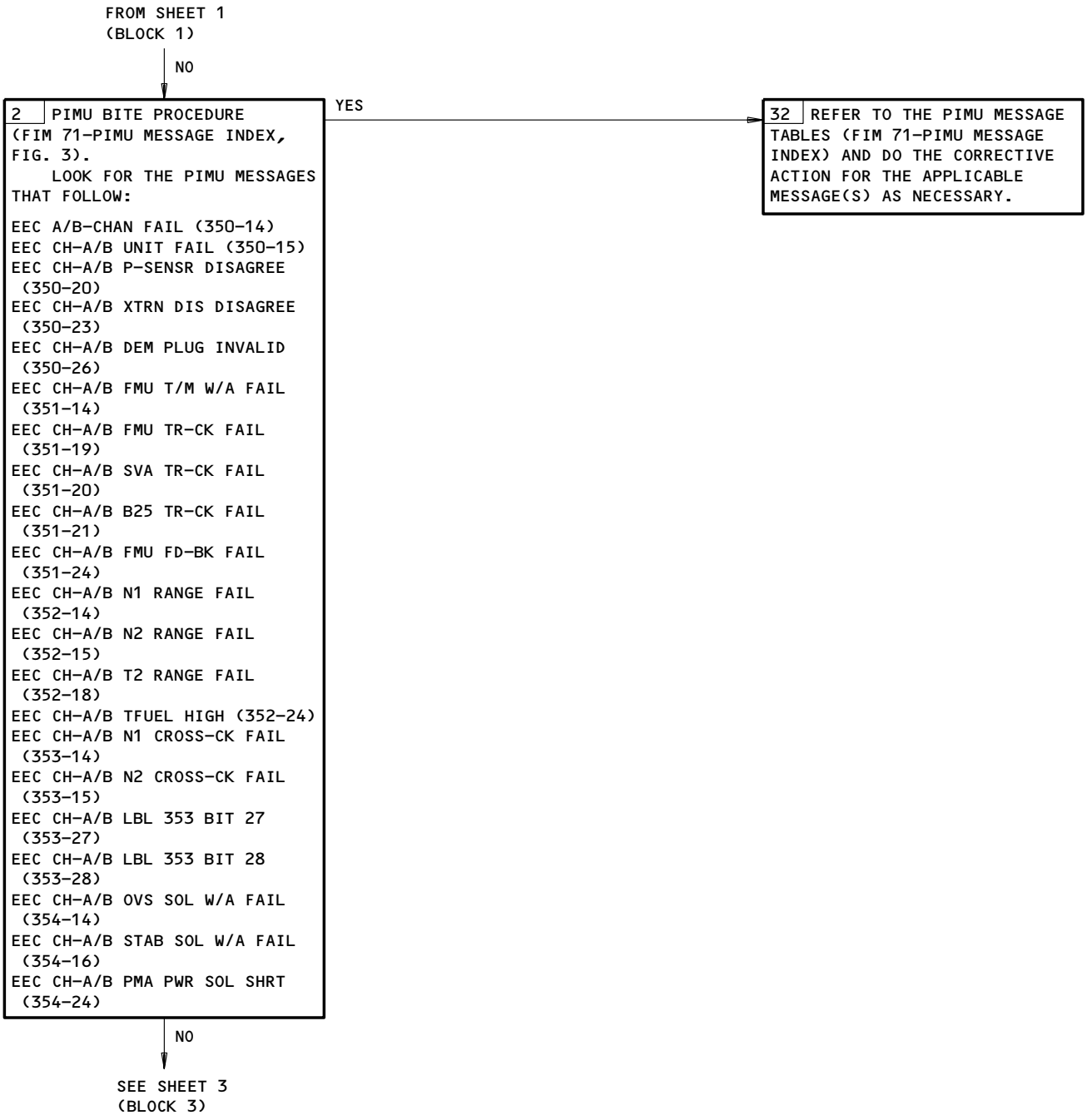
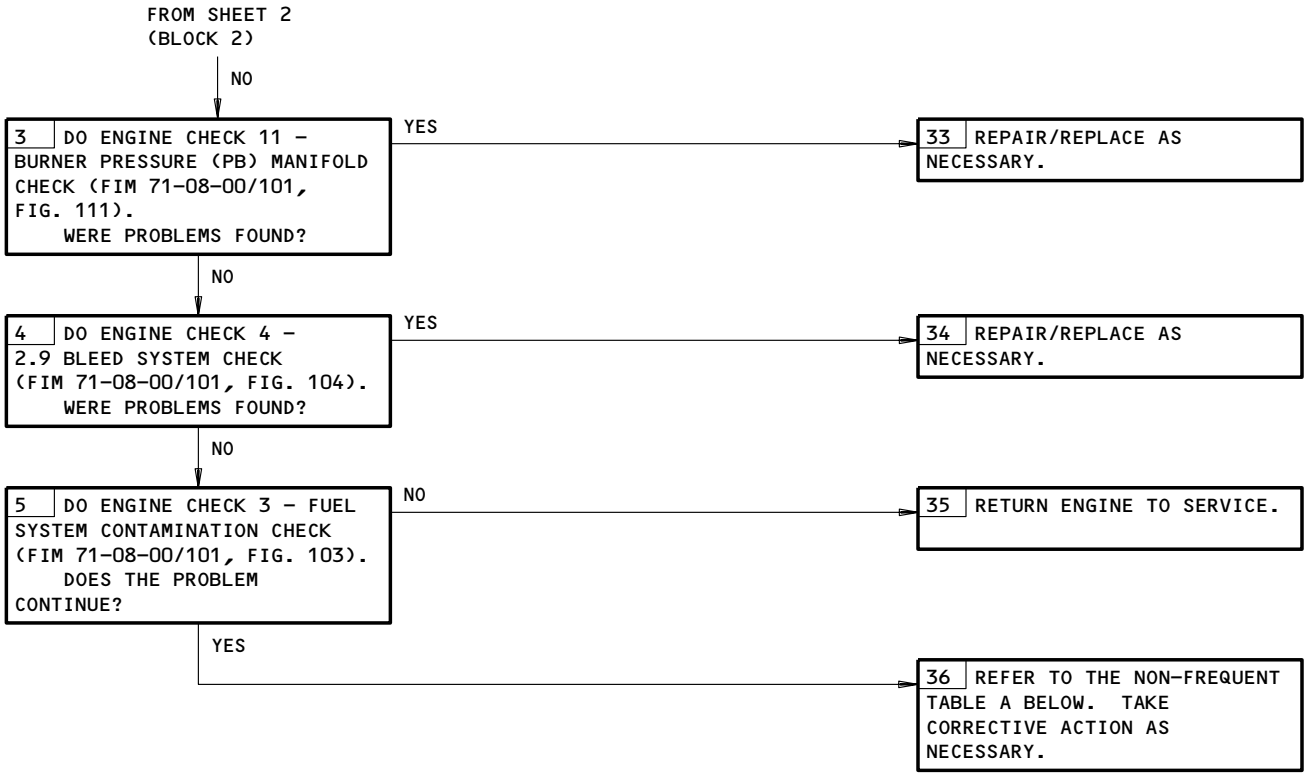



Idle RPM Is Too High or Too Low (Engine Related)
Figure 117 (Sheet 2)




| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| AIRPLANE BLEED SYSTEM MALFUNCTION | REFER TO CHAPTER 21. |
| LANDING GEAR POSITION, OR FLAP SETTING IS OUT OF ALIGNMENT | REFER TO CHAPTER 27 AND CHAPTER 32. LOOK FOR EICAS RELATED MESSAGES. |
| MAINTENANCE HISTORY | EXAMINE MAINTENANCE HISTORY. |
| N2 SIGNAL (PMA) | EXAMINE/REPAIR/REPLACE PMA (AMM 73-21-05/401). |

TABLE A

Idle RPM Is Too High or Too Low (Engine Related)
Figure 117 (Sheet 3)

**PREREQUISITES**

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

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

# NO ENGINE LIGHTOFF (FUEL FLOW IS LOW)

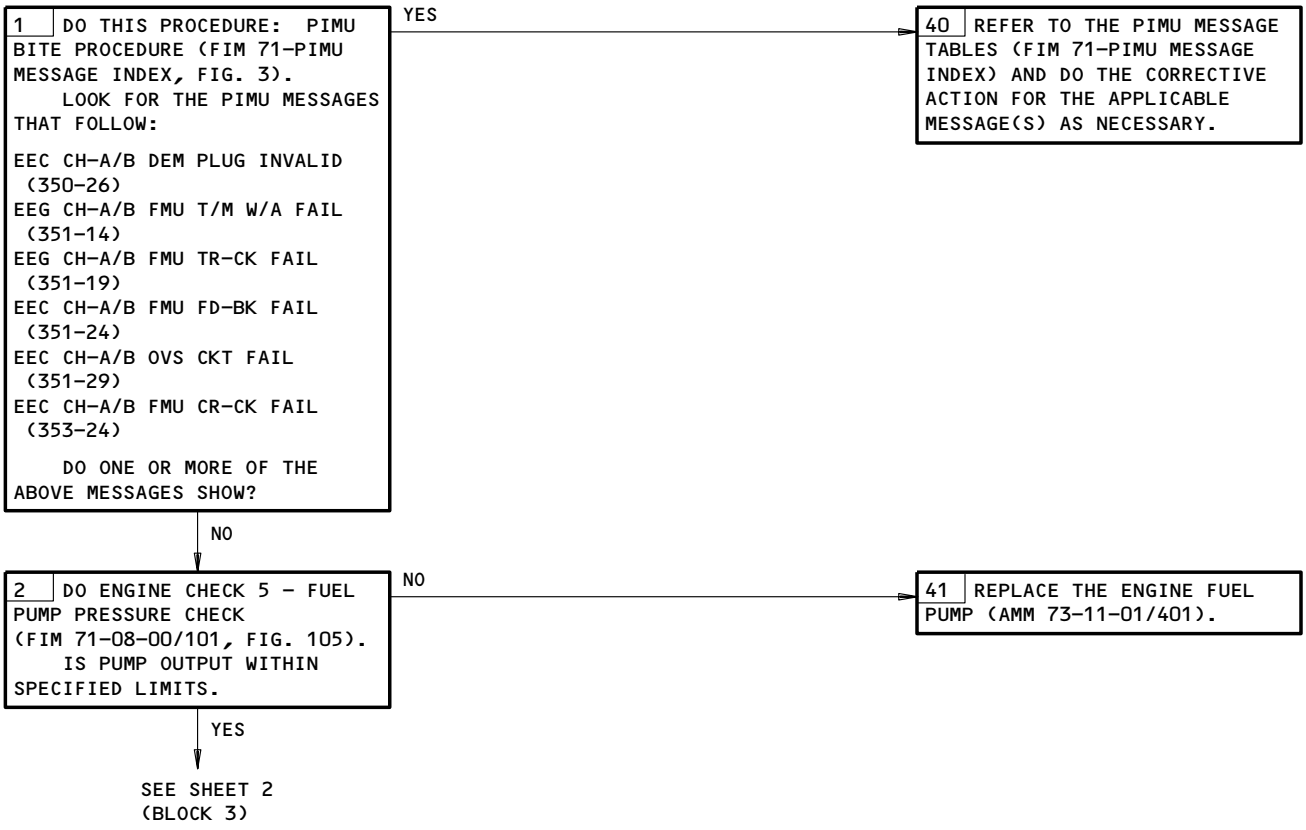
## DESCRIPTION:

AFTER THE FUEL SWITCH IS TURNED ON, THERE IS NO EGT INCREASE IN 20 SECONDS.
FUEL FLOW INDICATION IS LOWER THAN EXPECTED.

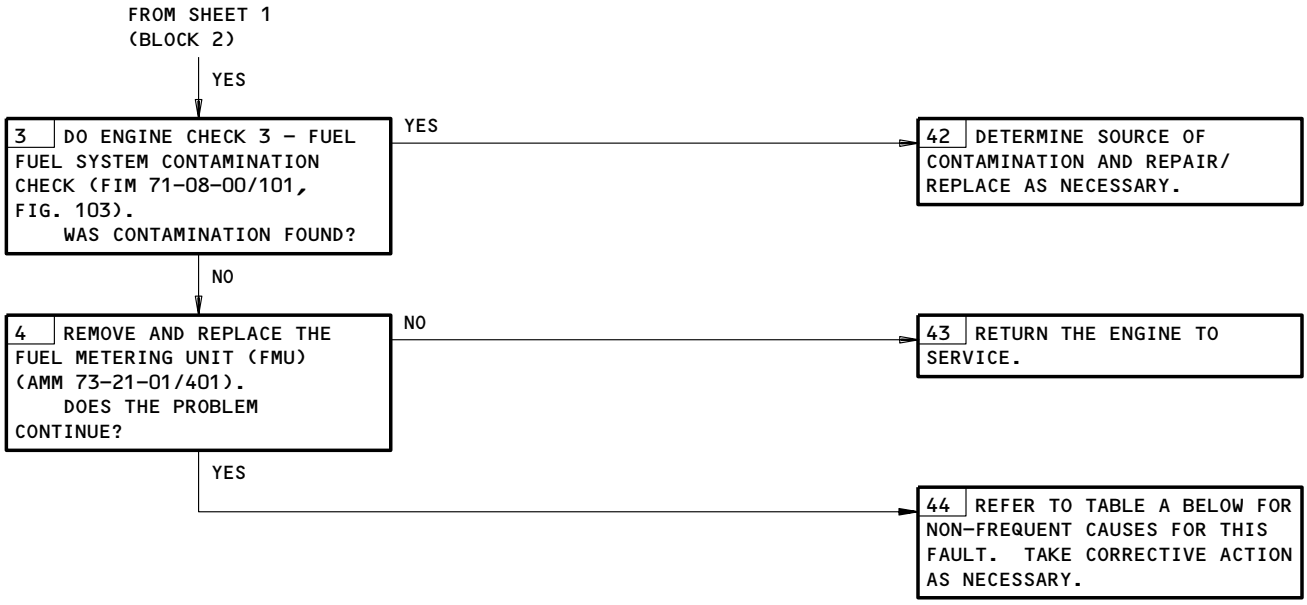
## POSSIBLE CAUSES:

1. FUEL PUMP OUTPUT IS NOT SATISFACTORY (AMM 73-11-01/401).
2. CONTAMINATION IN ENGINE FUEL METERING SYSTEM (FIM 71-08-00/101, FIG. 103).
3. FUEL METERING UNIT IS NOT SATISFACTORY (AMM 73-21-01/401).

## FAULT ISOLATION:




No Engine Lightoff (Fuel Flow is Low)
Figure 118 (Sheet 1)




| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| MAINTENANCE | EXAMINE MAINTENANCE RECORD |

TABLE A

No Engine Lightoff (Fuel Flow is Low)
Figure 118 (Sheet 2)

## ENGINE FLAMEOUT (FUEL FLOW IS OK)

**PREREQUISITES**

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

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

### DESCRIPTION:

ENGINE FLAMEOUT MAY OCCUR WITH A COMPRESSOR STALL. FUEL FLOW IS CORRECT FOR THE THRUST SETTING.

### POSSIBLE CAUSES:

1. DAMAGED HPC COMPRESSOR BLADES (AMM 72-00-00/601)
2. BAD COMPRESSOR STATOR VANE CONTROL SYSTEM (AMM 75-31-00/601).

### FAULT ISOLATION:

1 DO THIS PROCEDURE: PIMU MAINTENANCE RECALL PROCEDURE (FIM 71-PIMU MESSAGE INDEX, FIG. 3).
LOOK FOR THE MESSAGES THAT FOLLOW:

EEC A/B CHAN FAIL
(350-14)
EEC CH-A/B CONTROL
(350-16)
EEC CH-A/B SVA T/M W/A FAIL
(351-15)
EEC CH-A/B SVA TR-CK FAIL
(351-20)
EEC CH-A/B SVA FD-BK FAIL
(351-25)
EEC CH-A/B N2 RANGE FAIL
(352-15)
EEC CH-A/B T FUEL RNG FAIL
(352-20)
EEC CH-A/B T FUEL HIGH
(352-24)
EEC CH-A/B F/OIL SL W/A FAIL
(354-17)

DO ANY OF THE ABOVE MESSAGES SHOW?

YES → 40 REFER TO THE PIMU MESSAGE TABLES (FIM 71-PIMU MESSAGE INDEX) AND DO THE CORRECTIVE ACTION FOR THE APPLICABLE MESSAGE(S) AS NECESSARY.

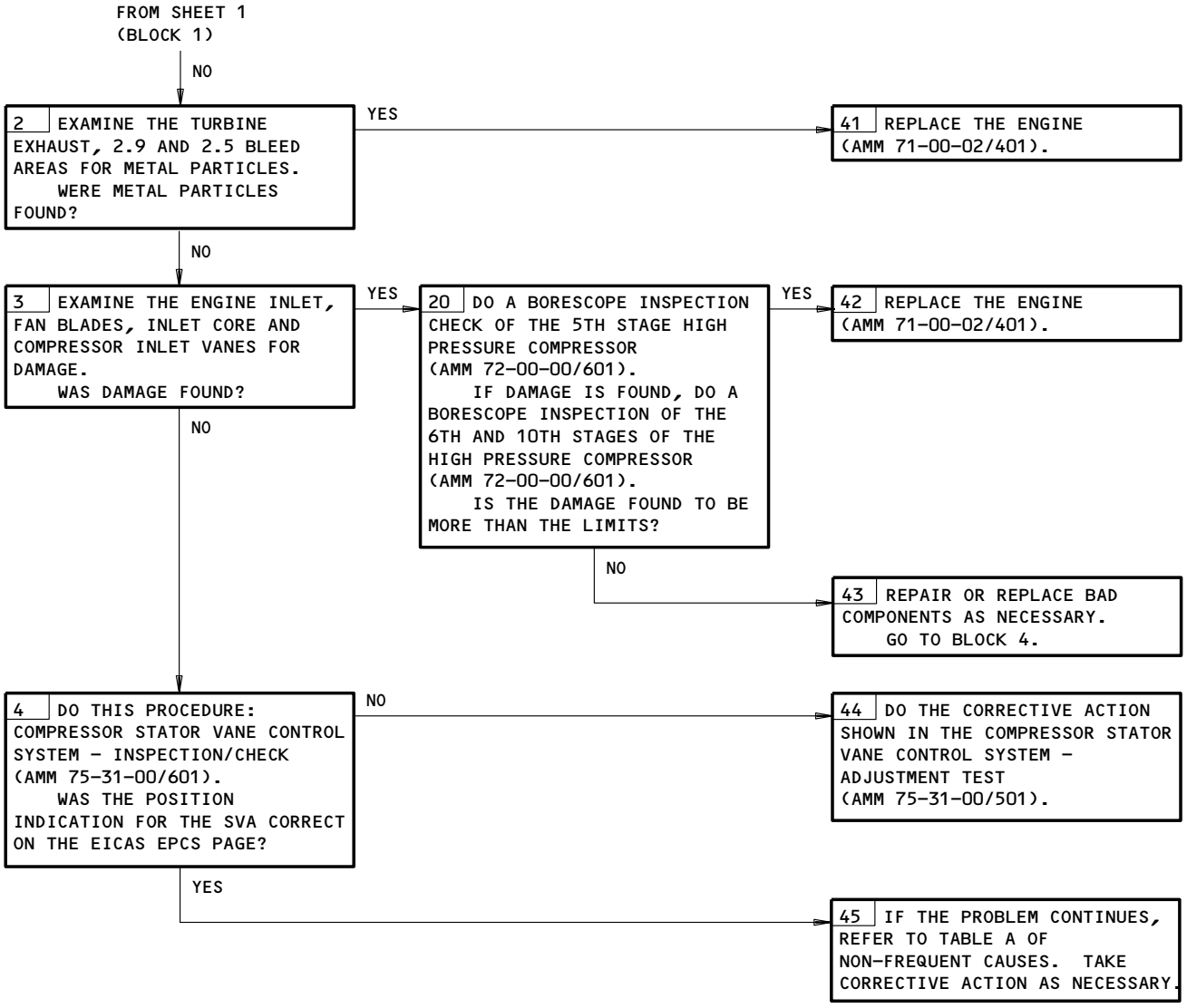
NO → SEE SHEET 2 (BLOCK 2)

Engine Flameout (Fuel Flow Is Ok)
Figure 119 (Sheet 1)





K15524




| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| FUEL CONTAMINATION | DO ENGINE CHECK 3 - FUEL SYSTEM CONTAMINATION CHECK (FIM 71-08-00/101, FIG. 103). |
| MAINTENANCE | EXAMINE MAINTENANCE HISTORY RECORD. |
| N2 SIGNAL (PMA/N2) | EXAMINE, REPAIR, OR REPLACE PERMANENT MAGNET ALTERNATOR (AMM 73-21-05/401). |
| ELECTRONIC ENGINE CONTROL (EEC) (LESS FREQUENT) | EXAMINE AND REPLACE EEC (AMM 73-21-04/401). |

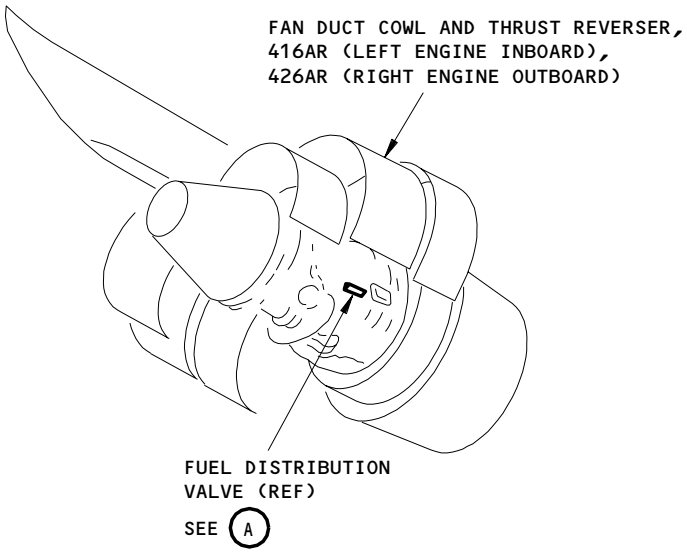
TABLE A

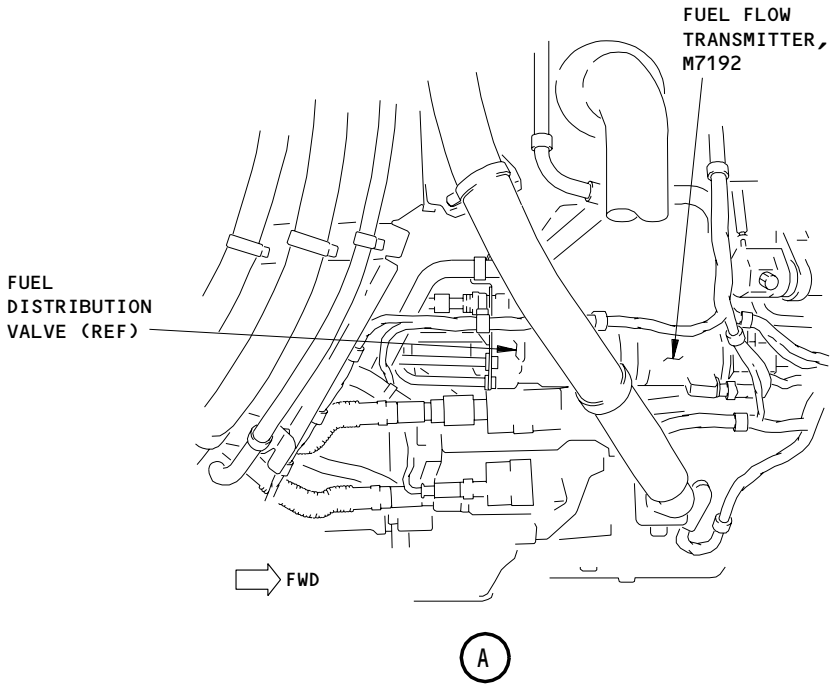
Engine Flameout (Fuel Flow Is Ok)
Figure 119 (Sheet 2)

FUEL FLOW INDICATING SYSTEM

| COMPONENT | FIG. 102 SHT | QTY | ACCESS/AREA | AMM REFERENCE |
|---|---|---|---|---|
| COMPUTER - (FIM 31-41-00/101) L EICAS, M10181 | | | | |
| COMPUTER - (FIM 31-41-00/101) R ECIAS, M10182 | | | | |
| TRANSMITTER - L ENG FUEL FLOW, M7192 | -- | 1 | 416AR, FAN DUCT COWL AND THRUST REVERSER, FUEL DISTRIBUTION VALVE (REF) | 73-31-01 |
| TRANSMITTER - R ENG FUEL FLOW, M7192 | -- | 1 | 426AR, FAN DUCT COWL AND THRUST REVERSER, FUEL DISTRIBUTION VALVE (REF) | 73-31-01 |

Fuel Flow Indicating System - Component Index
Figure 101




Fuel Flow Indicating System – Component Location
Figure 102

FUEL PRESSURE INDICATING SYSTEM

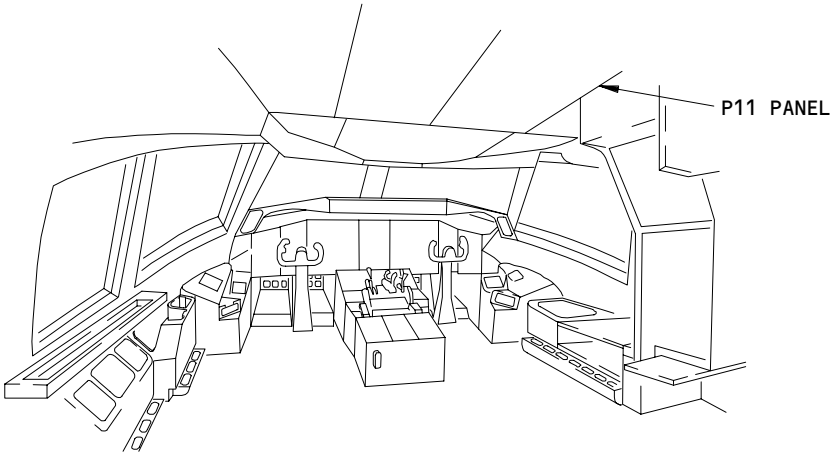
| COMPONENT | FIG. 102 SHT | QTY | ACCESS/AREA | AMM REFERENCE |
|---|---|---|---|---|
| CIRCUIT BREAKER – | | | FLIGHT COMPT, P11 | |
| L ENG FUEL PRESS, C1415 | | 1 | 11M7 | * |
| R ENG FUEL PRESS, C1416 | | 1 | 11M34 | * |
| COMPUTER – (FIM 31-41-00/101) | | | | |
| L EICAS, M10181 | | | | |
| R EICAS, M10182 | | | | |
| TRANSMITTER – | | | | |
| L ENG FUEL PUMP INTERSTAGE PRESSURE, M7193 | 2 | 1 | 416AR, THRUST REVERSER | 73-33-01 |
| R ENG FUEL PUMP INTERSTAGE PRESSURE, M7193 | 2 | 1 | 426AR, THRUST REVERSER | 73-33-01 |

* SEE THE WDM EQUIPMENT LIST

Fuel Pressure Indicating System – Component Index
Figure 101

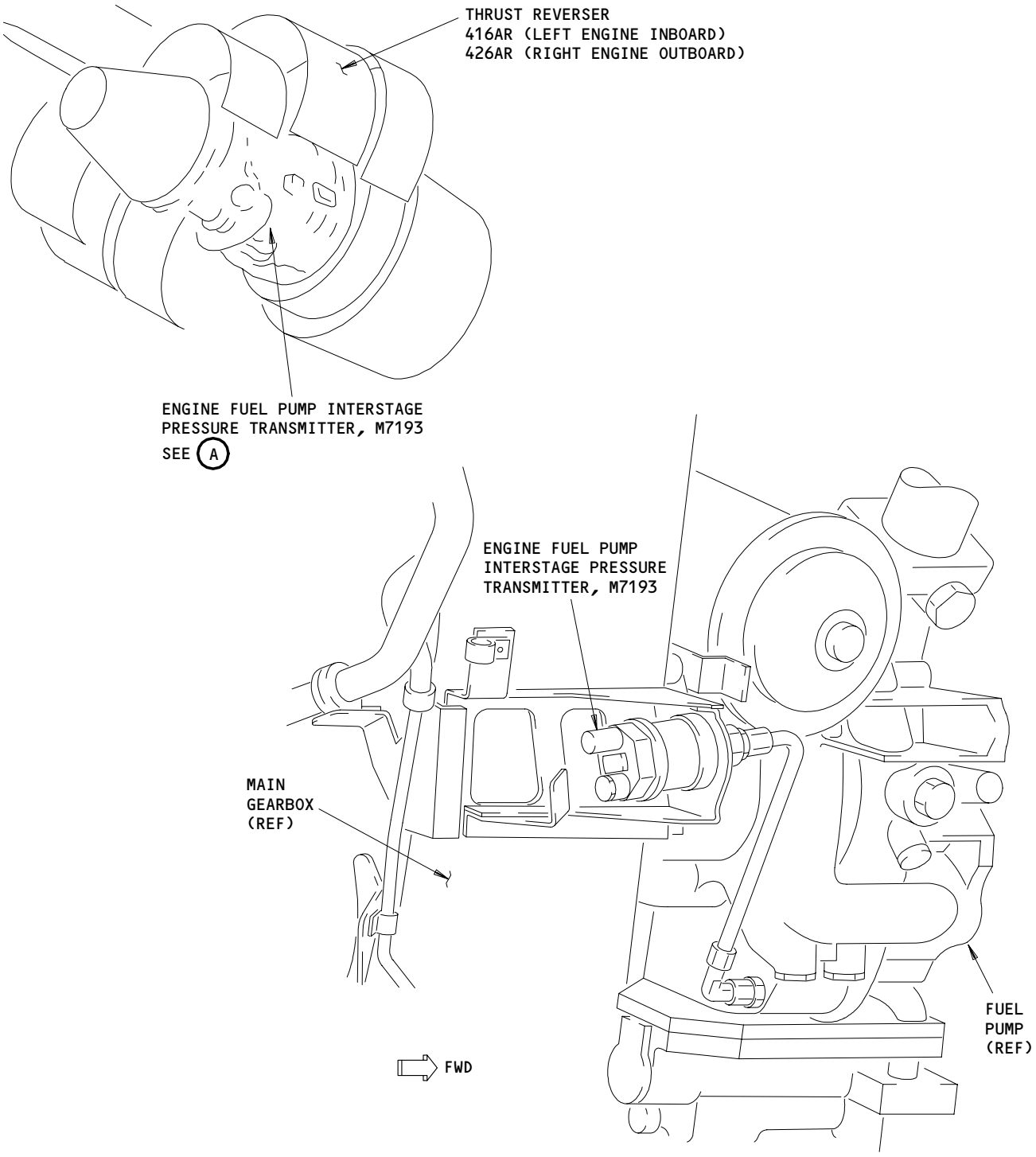


E66661




FLIGHT COMPARTMENT

Fuel Pressure Indicating System - Component Location
Figure 102 (Sheet 1)



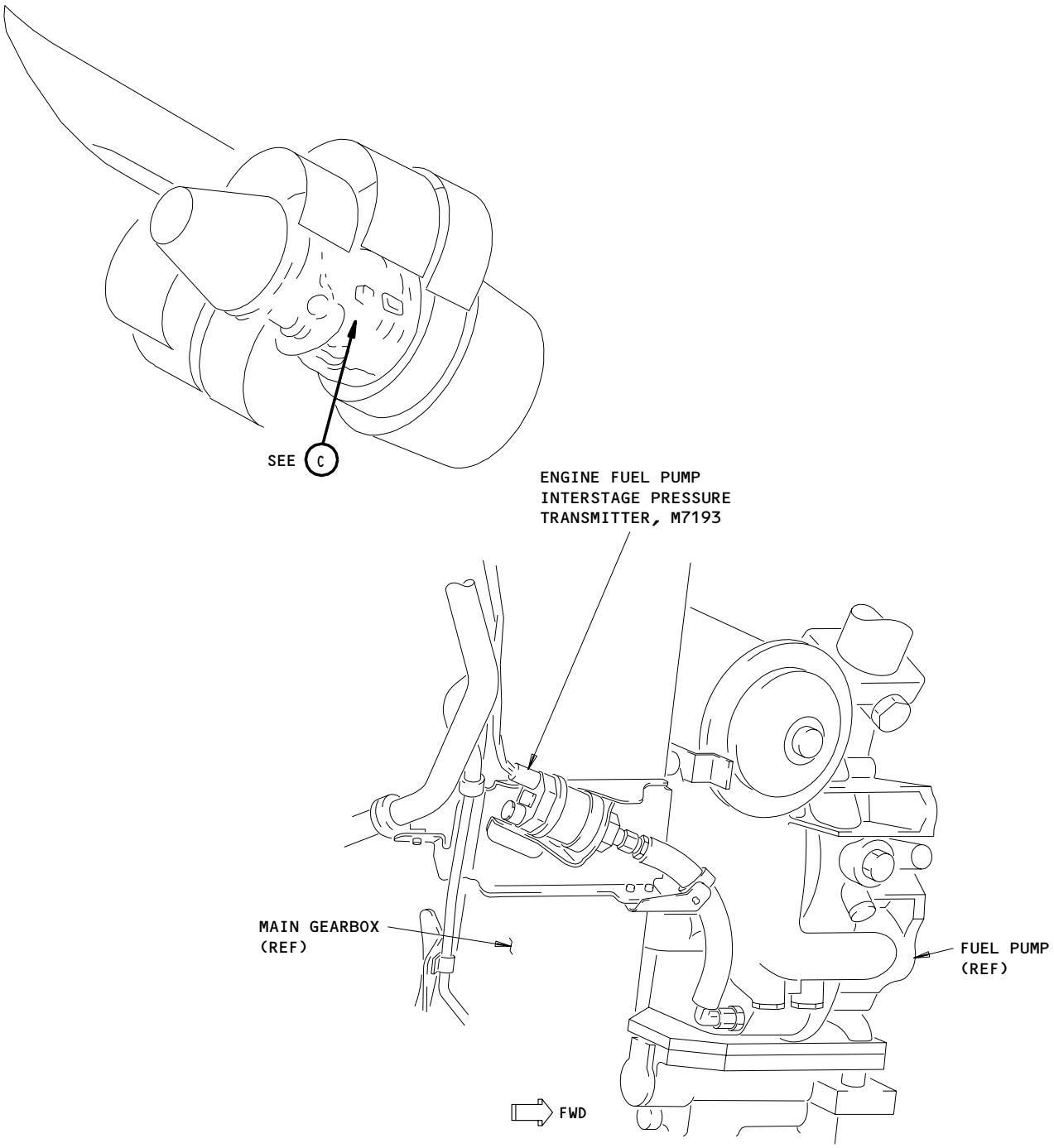

ENGINE FUEL PUMP INTERSTAGE PRESSURE
TRANSMITTER, M7193

A

Fuel Pressure Indicating System – Component Location
Figure 102 (Sheet 2)



684852




ENGINE FUEL PUMP INTERSTAGE PRESSURE
TRANSMITTER, M7193

C

Fuel Pressure Indicating System – Component Location
Figure 102 (Sheet 3)

## ENGINE FUEL PUMP INTERSTAGE PRESSURE INDICATION PROBLEMS

**PREREQUISITES**

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

MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED:
11M7,11M34

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

POSSIBLE CAUSES:

1. INADEQUATE VOLTAGE FROM INTERSTAGE PRESSURE TRANSMITTER (WDM 73-33-11)
2. OPEN CIRCUIT BETWEEN INTERSTAGE PRESSURE TRANSMITTER AND EICAS (WDM 73-33-11)
3. BAD FUEL PUMP INTERSTAGE PRESSURE TRANSMITTER (AMM 73-33-01/401).

FAULT ISOLATION:

1 REMOVE CONNECTOR D10998 FROM THE INTERSTAGE PRESSURE TRANSMITTER, M7193, FOR THE FUEL PUMP OF THE L (R) ENGINE.
MEASURE THE VOLTAGE AT PIN B OF CONNECTOR D10998.
WAS THERE 28V AC AT PIN B OF CONNECTOR D10998?

NO → 20 EXAMINE THE CIRCUIT FROM THE CIRCUIT BREAKERS FOR THE L (R) ENGINE FUEL PRESSURE, C1415 (C1416), CONNECTOR D7968P (D7986P), PIN 29, TO THE INTERSTAGE PRESSURE TRANSMITTER, M7193, CONNECTOR D10998, PIN B (WDM 73-33-11).
REPAIR THE PROBLEMS THAT YOU FIND.

YES ↓

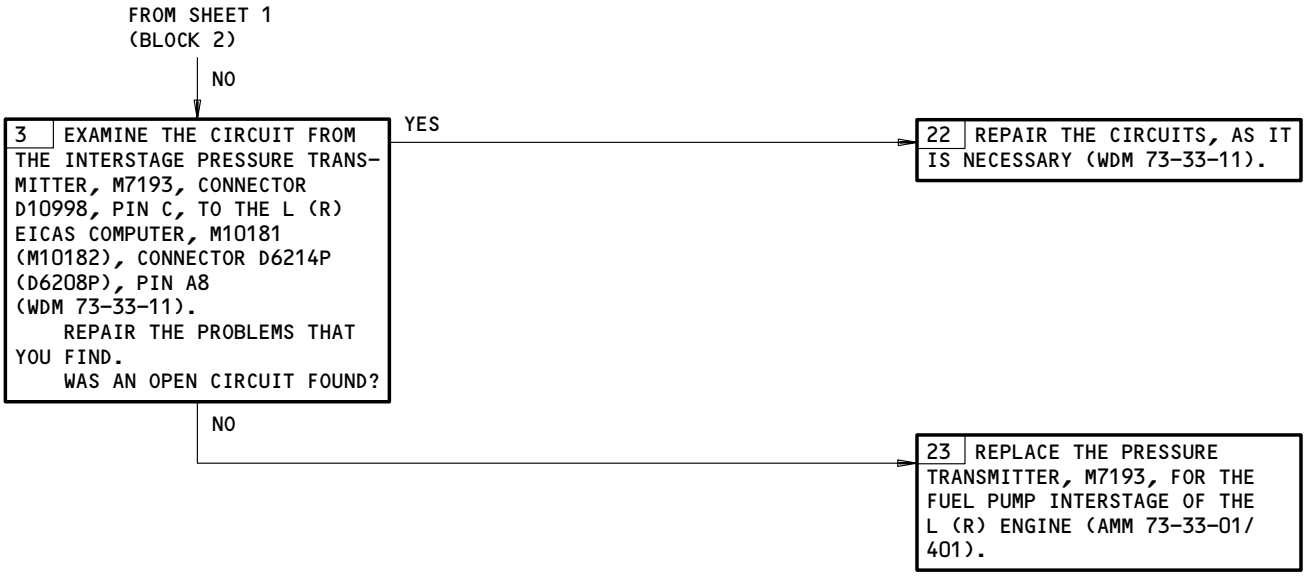
2 FOR THE LEFT ENGINE:
EXAMINE THE CIRCUIT FROM THE INTERSTAGE PRESSURE TRANSMITTER, M7193, CONNECTOR D10998, PIN A, TO THE EICAS, RACK E8, CONNECTOR D6240P, PIN A15 (WDM 73-33-11).
REPAIR THE PROBLEMS THAT YOU FIND.
FOR THE RIGHT ENGINE:
EXAMINE THE CIRCUIT FROM THE INTERSTAGE PRESSURE TRANSMITTER, M7193, CONNECTOR D10998, PIN A, TO THE EICAS, RACK E8, CONNECTOR D6214P, PIN A7 (WDM 73-33-11).
REPAIR THE PROBLEMS THAT YOU FIND.
WAS AN OPEN CIRCUIT FOUND?

YES → 21 REPAIR THE CIRCUITS, AS IT IS NECESSARY (WDM 73-33-11).

NO ↓

SEE SHEET 2
(BLOCK 3)

Engine Fuel Pump Interstage Pressure Indication Problems
Figure 103 (Sheet 1)




Engine Fuel Pump Interstage Pressure Indication Problems
Figure 103 (Sheet 2)

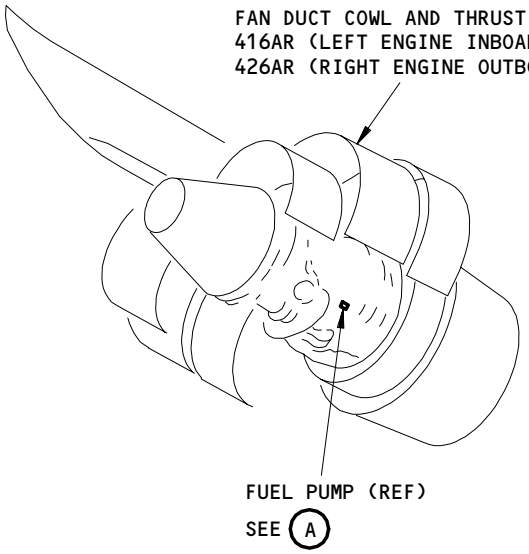
FUEL FILTER BYPASS WARNING SYSTEM

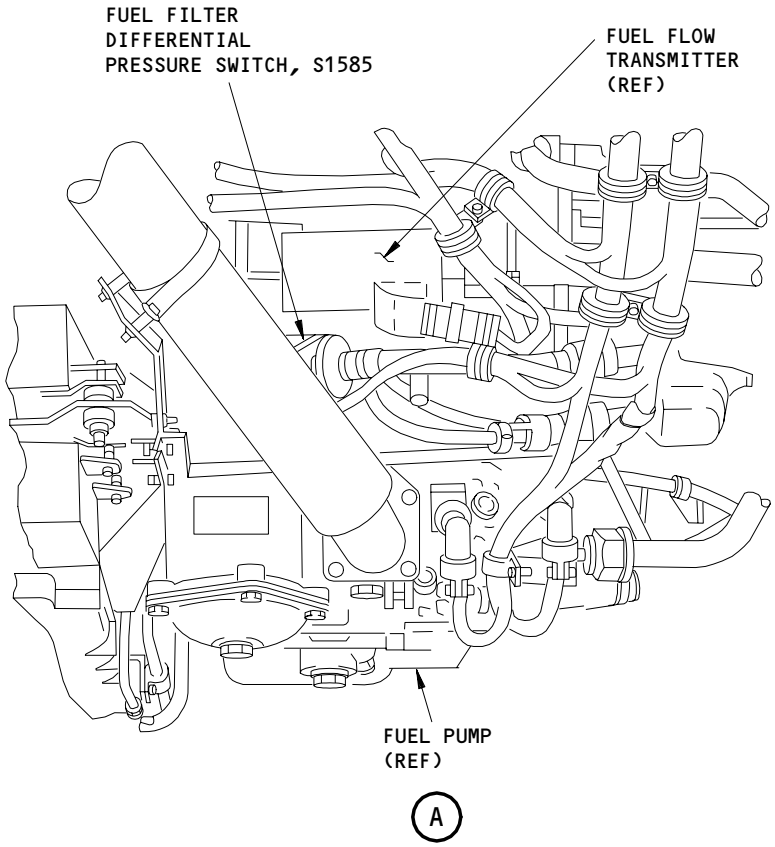
| COMPONENT | FIG. 102 SHT | QTY | ACCESS/AREA | AMM REFERENCE |
|---|---|---|---|---|
| COMPUTER - (FIM 31-41-00/101) LEFT EICAS, M10181<br>COMPUTER - (FIM 31-41-00/101) RIGHT EICAS, M1082<br>SWITCH - FUEL FILTER DIFFERENTIAL PRESSURE, S1585 | -- | 2 | 416AR, 426AR FAN DUCT COWL AND THRUST REVERSER, FUEL PUMP | 73-34-01 |

Fuel Filter Bypass Warning System - Component Index
Figure 101



E66663




Fuel Filter Bypass Warning System - Component Location
Figure 102

**PREREQUISITES**

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

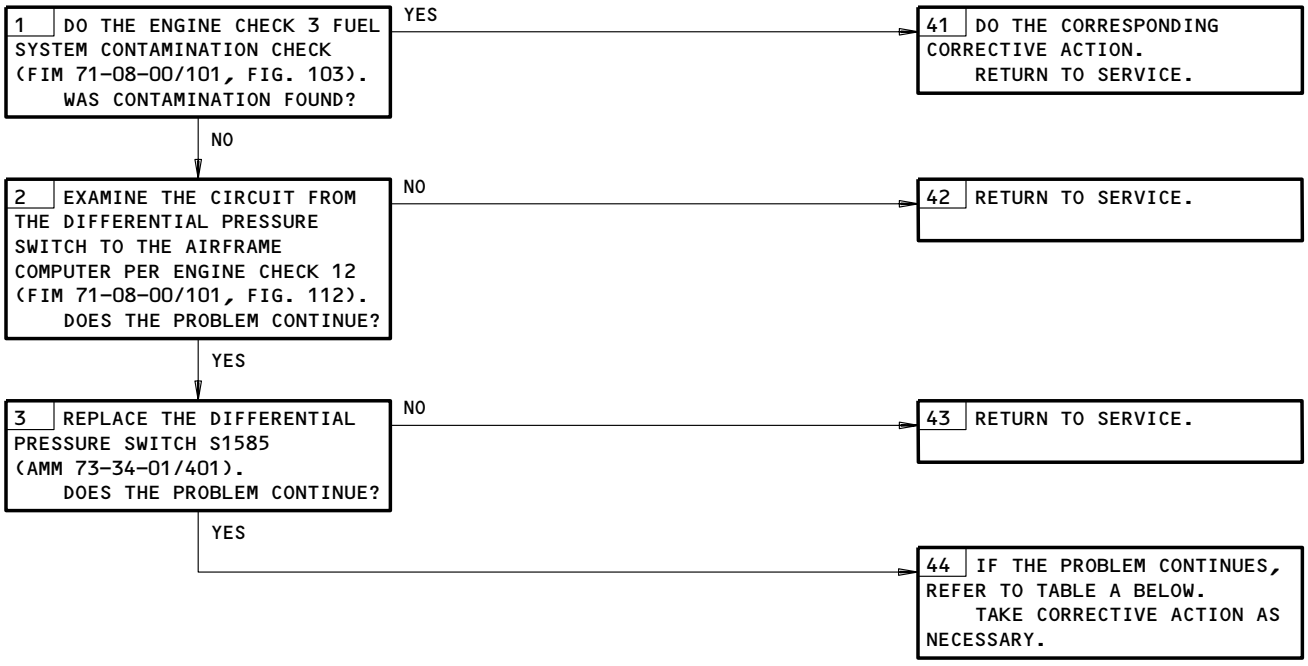
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IN ON (AMM 24-22-00/201)

## EICAS MSG "L (R) ENG FUEL FILT" SHOWN

POSSIBLE CAUSES:

1. CONTAMINATION IN THE FUEL PUMP FILTER
2. UNSATISFACTORY ELECTRICAL CONNECTION AT THE DIFFERENTIAL PRESSURE SWITCH
3. BAD DIFFERENTIAL PRESSURE SWITCH

FAULT ISOLATION:




| NON-FREQUENT CAUSES OF THIS PROBLEM IN ALPHABETICAL ORDER | RECOMMENDED CORRECTIVE ACTION |
|---|---|
| FUEL PUMP DISTRESS | EXAMINE/REPLACE FUEL PUMP (AMM 73-11-01/401). |
| INCORRECT FILTER INSTALLED | REPLACE WITH CORRECT FILTER (AMM 73-11-02/401). |
| MAINTENANCE | EXAMINE THE MAINTENANCE HISTORY RECORD. TAKE CORRECTIVE ACTION AS NECESSARY. |

TABLE A

EICAS Msg L (R) ENG FUEL FILT Shown
Figure 103