GPA Group plc

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CHAPTER 71 TAB		
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2	MAY 20/08	RGUI
3	MAY 20/08	RGUI
4	MAY 20/08	RGUI
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1	SEP 20/98	R01
2	SEP 20/98	R01
3	SEP 28/99	R01
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71-INDEX		
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32	JUN 20/90	R02
33	SEP 28/01	R02
34	SEP 28/01	R02
35	SEP 28/01	R04
36	BLANK	
71-FAULT CODE INDEX		
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2	SEP 20/08	R01
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5	SEP 20/08	R02
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12	SEP 20/08	R06
71-BITE INDEX		
1	SEP 28/99	R01
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3	SEP 28/99	R01
4	BLANK	
71-05-00		
101	SEP 20/88	R01
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112	MAY 28/00	R01
113	MAY 28/00	R01
114	DEC 20/95	R01
115	DEC 20/95	R01
116	DEC 20/95	R01
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119	SEP 28/02	R01
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121	SEP 28/00	R01
122	JAN 28/00	R01
71-05-00		CONT.
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126	SEP 28/02	R01
127	SEP 28/05	R01
128	MAY 28/05	R01
129	SEP 28/05	R01
130	SEP 28/05	R01
131	SEP 28/05	R01
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140	MAY 20/08	R01
141	MAY 20/08	R02
142	MAY 20/08	R03
143	MAY 20/08	R01
144	MAY 20/08	R01
145	MAY 20/08	R01
146	MAY 20/08	R01
147	MAY 20/08	R01
148	MAY 20/08	R01
149	MAY 20/08	R01
150	BLANK	
71-06-00		
101	SEP 28/99	R01
102	DEC 20/88	R01
103	DEC 20/88	R01
104	JAN 28/02	R01
105	MAY 20/08	R02
106	MAY 20/08	R01
R 107	JAN 20/09	R02.1
108	MAY 20/08	R04
109	MAY 20/08	R04
110	MAY 20/08	R03
111	MAY 20/08	R01
112	MAY 20/08	R03
71-11-00		
101	SEP 20/94	R01
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101	SEP 20/94	R01
102	SEP 20/94	R01
71-71-00		
101	SEP 20/94	R01
102	SEP 20/94	R01
103	SEP 20/94	R01
104	BLANK	

R = REVISED, A = ADDED OR D = DELETED
F = FOLDOUT PAGE

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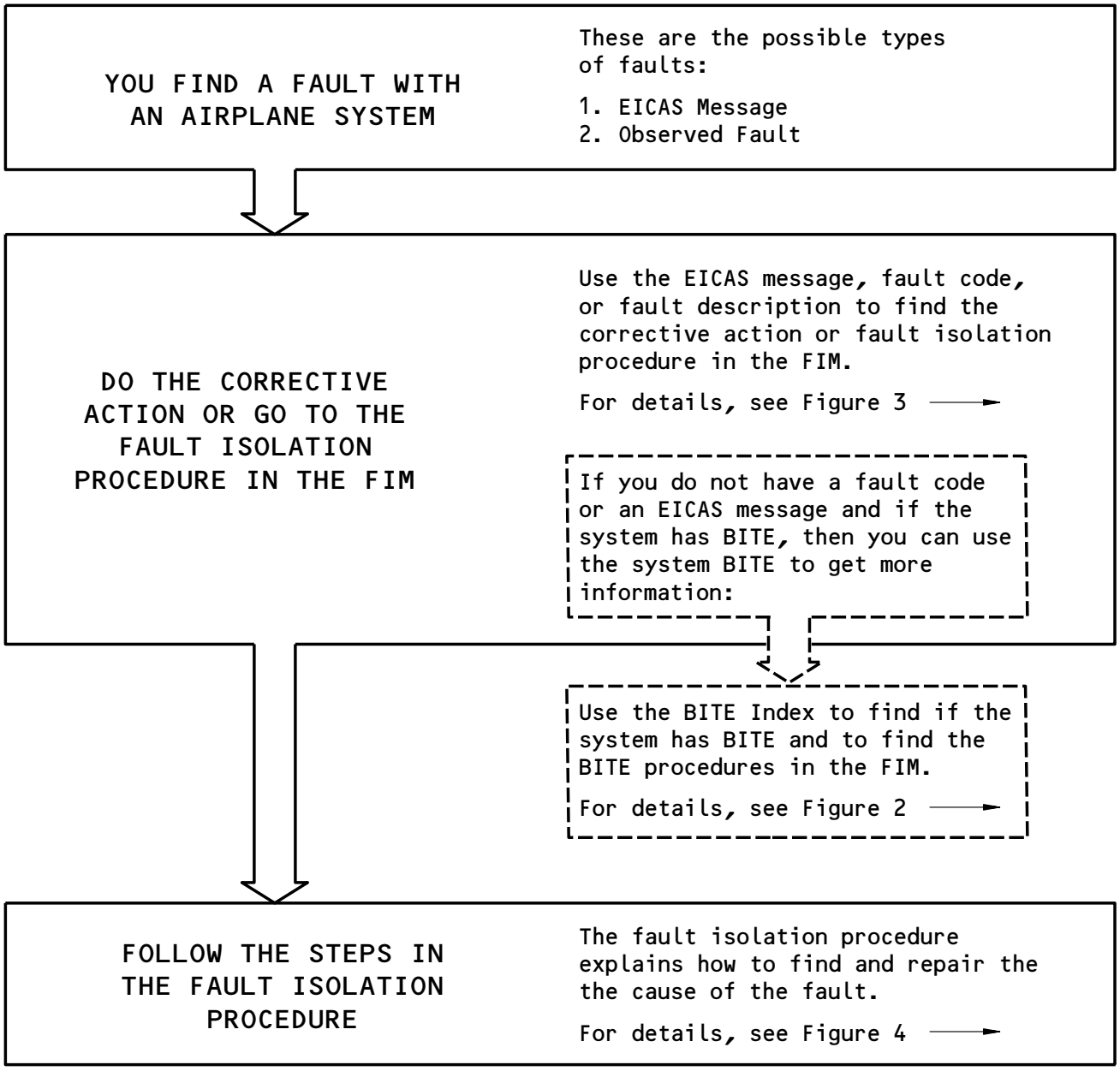
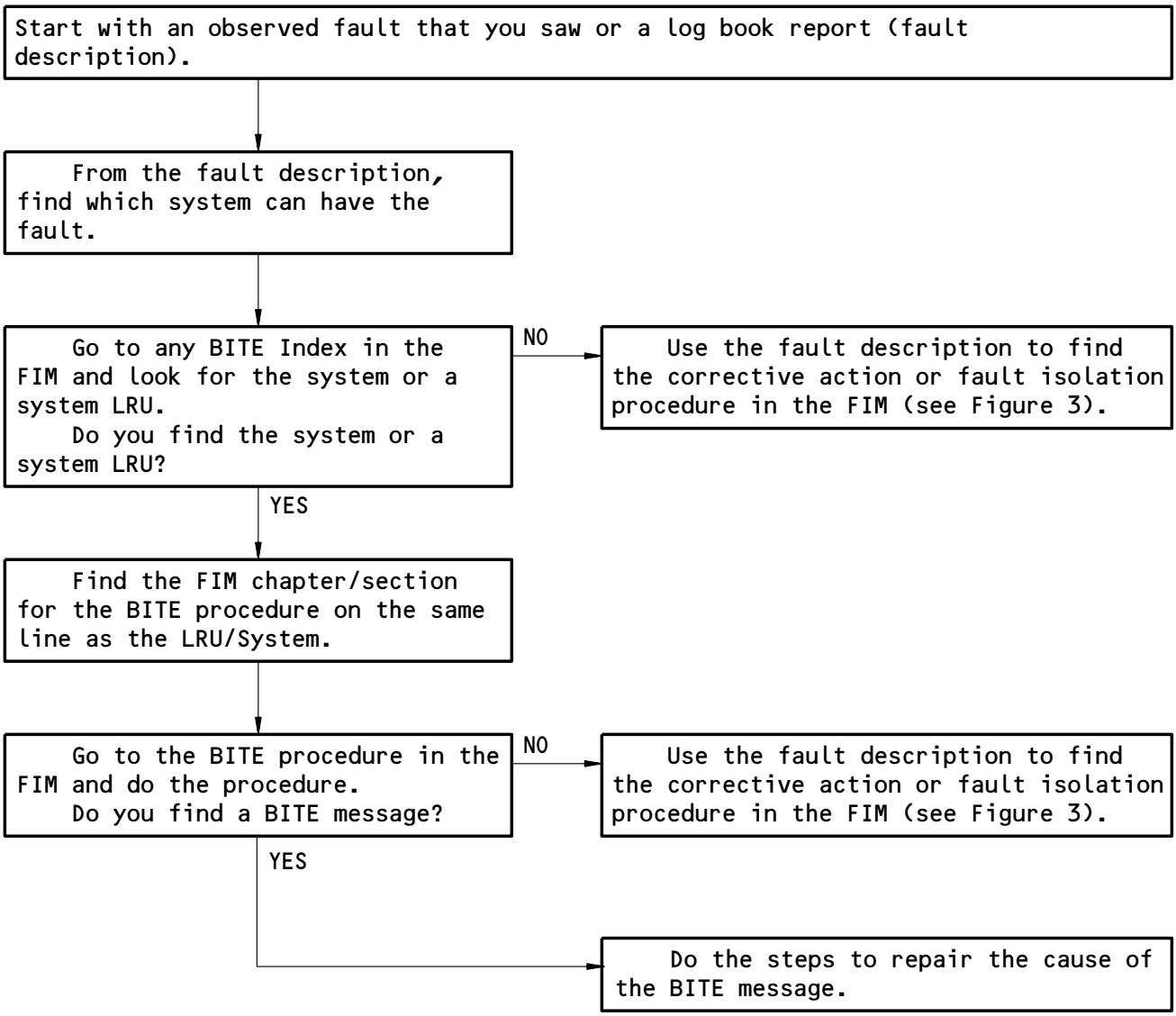


Basic Fault Isolation Process
Figure 1

H54497



How to Get Fault Information from BITE
Figure 2

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

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

ASSUMED CONDITIONS AT START OF TASK

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

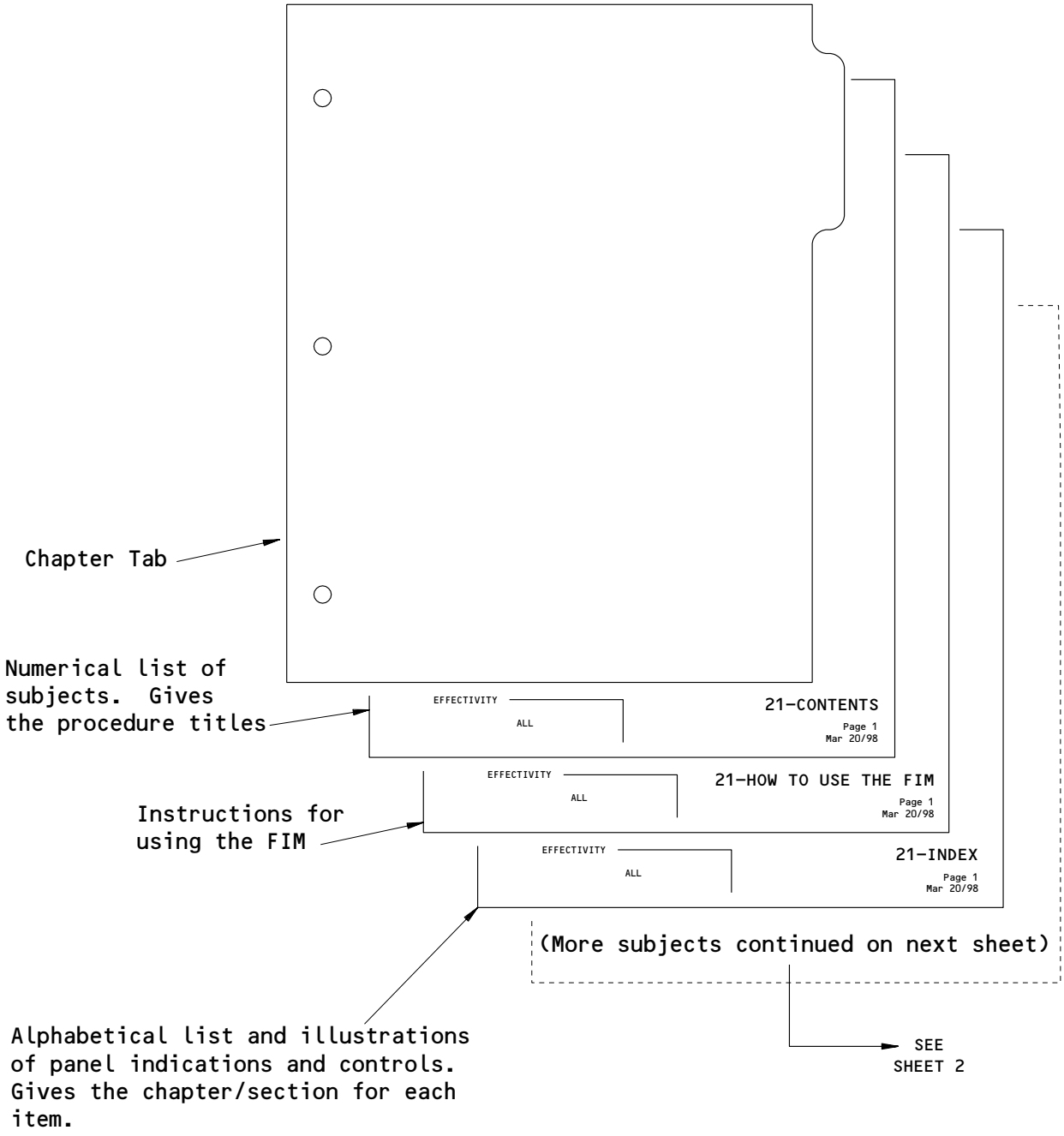
PREREQUISITES

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

FAULT ISOLATION BLOCKS

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

Do the Fault Isolation Procedure
Figure 4

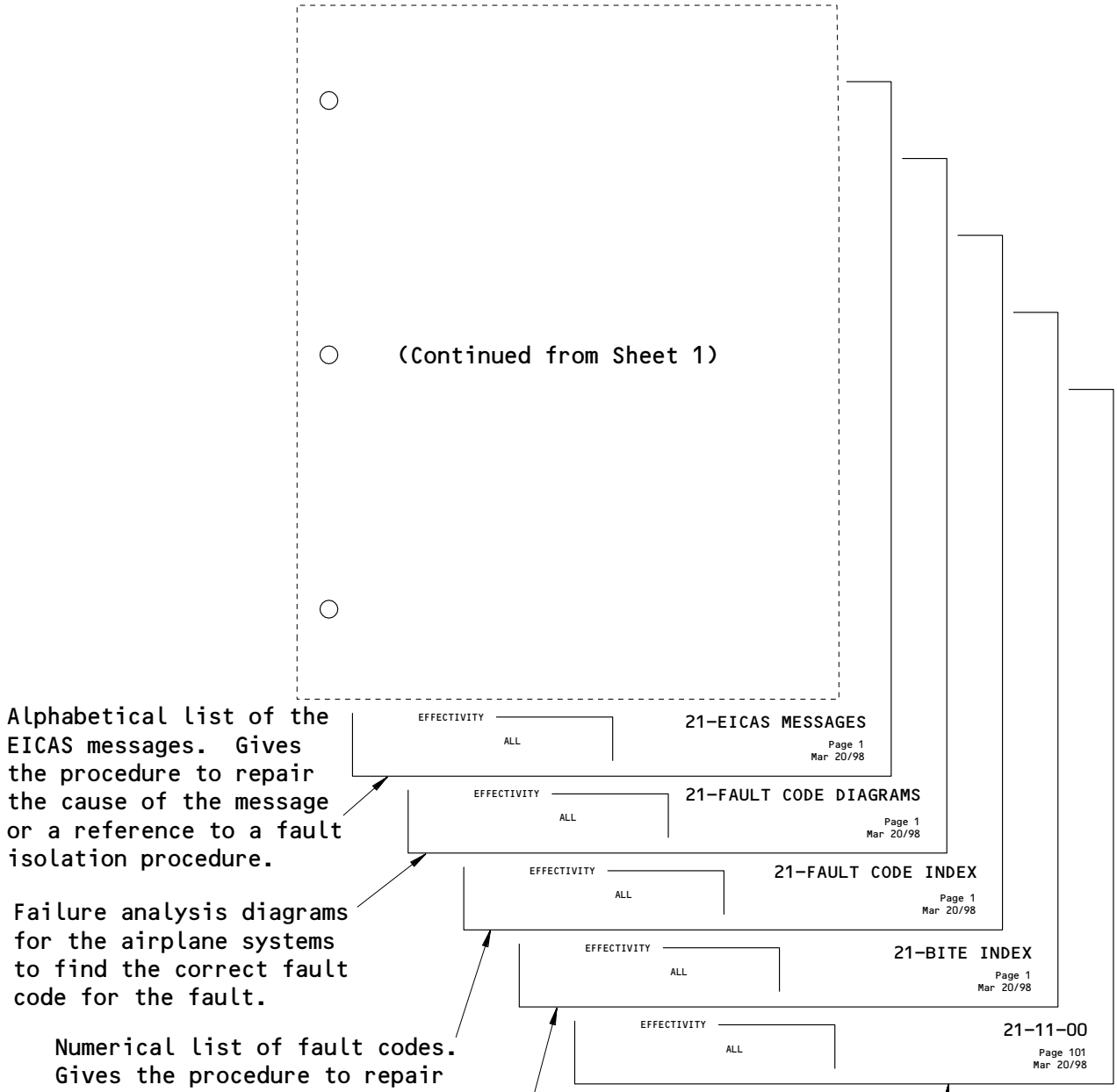


Subjects in Each FIM Chapter
Figure 5 (Sheet 1)

EFFECTIVITY
ALL

71-HOW TO USE THE FIM

H54501

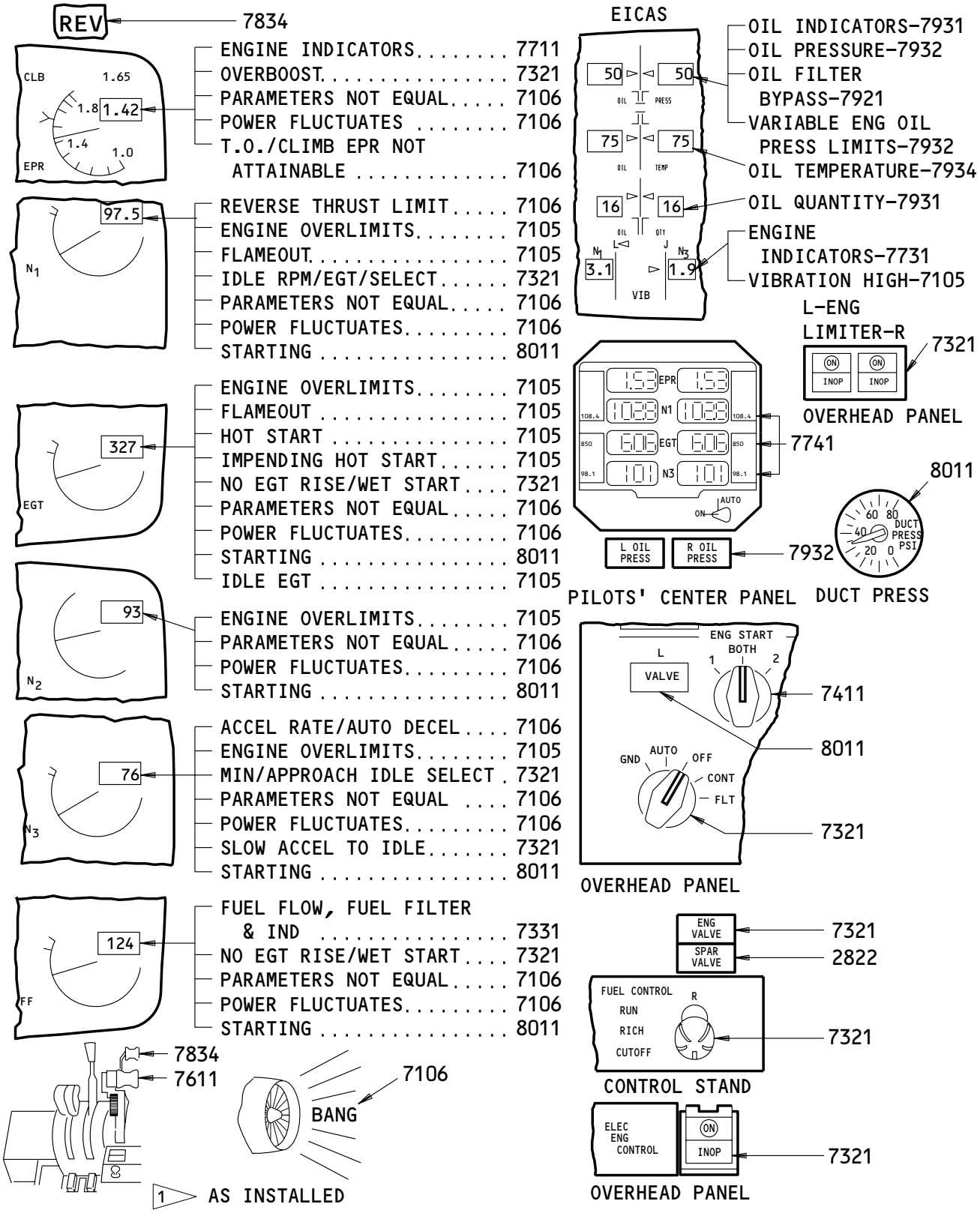


Subjects in Each FIM Chapter
Figure 5 (Sheet 2)

EFFECTIVITY
ALL

71-HOW TO USE THE FIM

H54502



POWER PLANT – INDEX

EFFECTIVITY

ALL

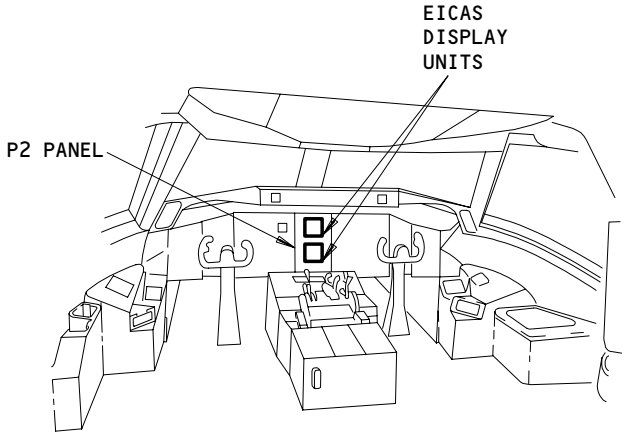
71-INDEX

R14 Page 1
Dec 20/96

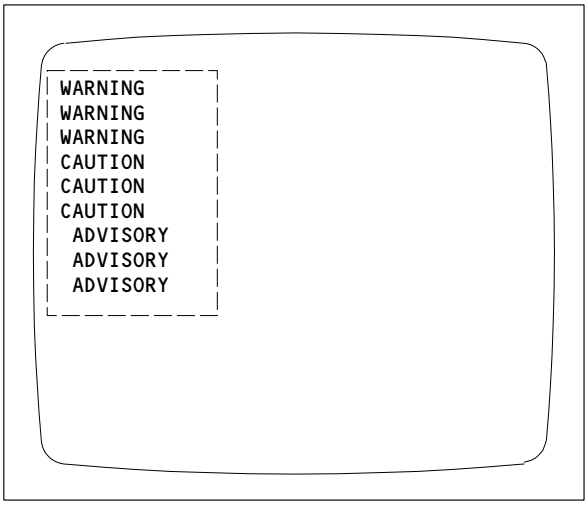
G25724

POWER PLANT - EICAS MESSAGE LIST

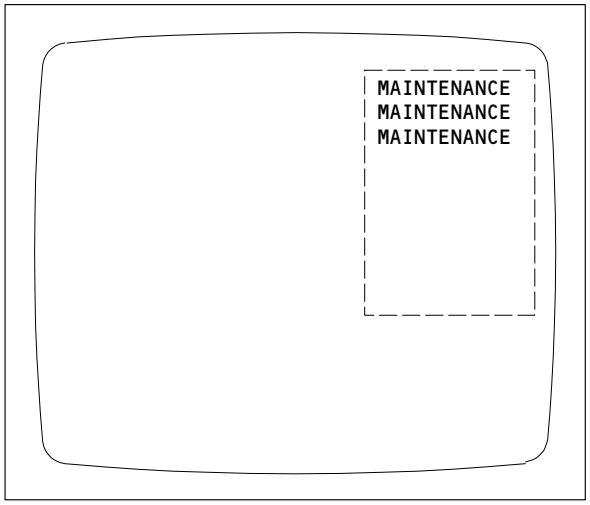
1. General
   A. This procedure shows the EICAS message locations and gives a list of procedures to find the solution for each message.
      (1) EICAS Message Locations (Fig. 1)
         (a) Figure 1 shows the location of the EICAS display units and the area where the messages show on the display units.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



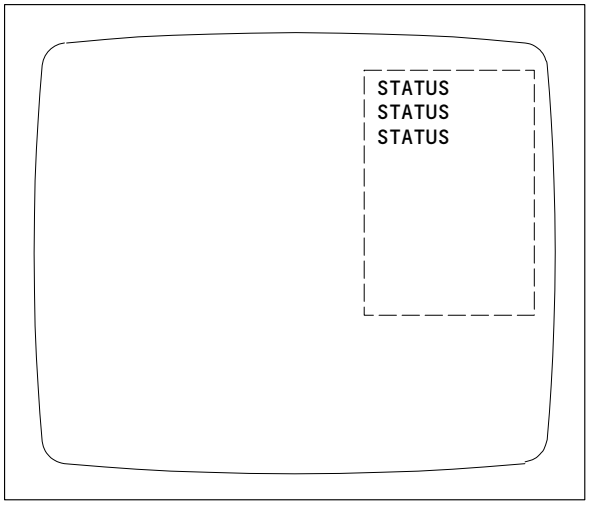
FLIGHT COMPARTMENT



ENGINE PRIMARY PAGE OR COMPACTED PAGE
(TOP DISPLAY UNIT)



ECS/MSG PAGE
(BOTTOM DISPLAY UNIT)



STATUS PAGE
(BOTTOM DISPLAY UNIT)

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

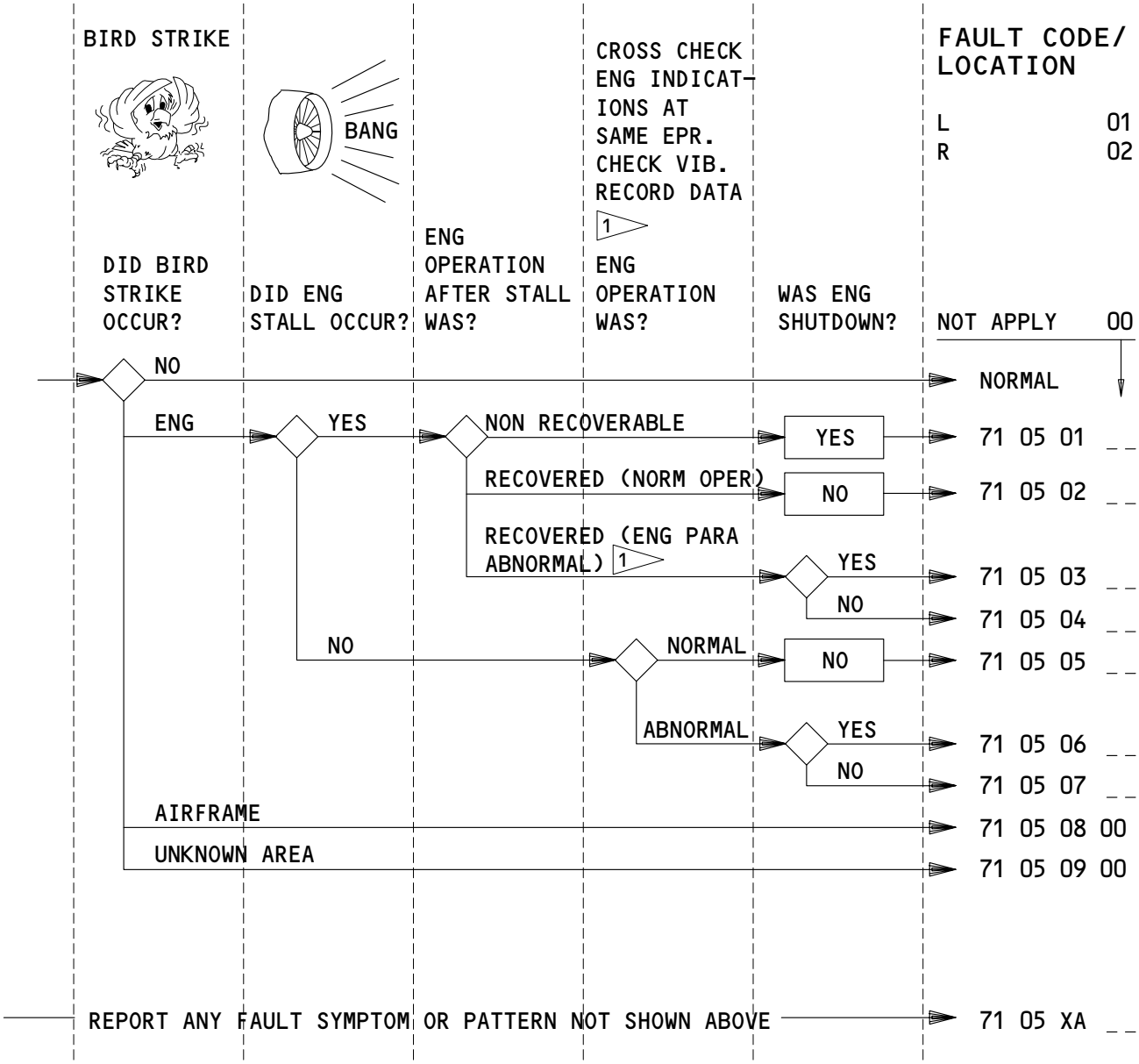
EICAS Message Locations
Figure 1

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
(L,R) EEC	C	FIM 73-21-00/101, Fig. 103.
(L,R) EEC BITE	M	FIM 73-21-00/101, Fig. 103.
(L,R) EEC OFF	B	No procedure is necessary.
(L,R) ENG ANTI-ICE	C	Go to 30-EICAS MESSAGES.
(L,R) ENG BB VIB	M	FIM 77-31-00/101, Fig. 104.
(L,R) ENG BLEED OFF	C	Go to 36-EICAS MESSAGES.
(L,R) ENG BLEED VAL	B	Go to 36-EICAS MESSAGES.
(L,R) ENG EEC	B	FIM 73-21-00/101, Fig. 115.
(L,R) ENG FIRE LP 1	S,M	Go to 26-EICAS MESSAGES.
(L,R) ENG FIRE LP 2	S,M	Go to 26-EICAS MESSAGES.
(L,R) ENG FUEL FILT	C,S,M	FIM 73-11-00/101, Fig. 103. C-level messages are only displayed on airplanes post SB 757-31-0059.
(L,R) ENG FUEL VAL	C	Go to 73-FAULT CODE INDEX and look at the fault codes: 73 21 03, 73 21 04, 73 21 11, 73 21 34.
(L,R) ENG HI STAGE	C	Go to 36-EICAS MESSAGES.

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
(L,R) ENG HYD OVHT	C	Go to 29-EICAS MESSAGES.
(L,R) ENG LIMITER	C	FIM 73-21-00/101, Fig. 115.
(L,R) ENG LOW N1	S,M	FIM 73-21-00/101, Fig. 109A.
(L,R) ENG LP PUMP	S,M	FIM 73-11-00/101, Fig. 104.
(L,R) ENG OIL PRESS	B	Go to 79-FAULT CODE INDEX and look at the fault codes: 79 32 03, 79 32 08, 79 32 09.
(L,R) ENG OH LP 1	S,M	Go to 26-EICAS MESSAGES.
(L,R) ENG OH LP 2	S,M	Go to 26-EICAS MESSAGES.
(L,R) ENG OVHT	B	Go to 26-EICAS MESSAGES.
(L,R) ENG PROBE HEAT	S,M	Go to 30-EICAS MESSAGES.
(L,R) ENG SHUTDOWN	B	No procedure is necessary.
(L,R) ENG SPEED CARD	S,M	Go to 77-FAULT CODE INDEX and look at the fault codes: 77 12 01, 77 12 04.
(L,R) ENG STARTER	C	FIM 80-11-00/101, Fig. 105.
(L,R) ENG TAI VALVE	S,M	Go to 30-EICAS MESSAGES.

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
(L,R) ENG VIB	S	FIM 77-31-00/101, Fig. 103.
(L,R) ENG VIB BITE	M	FIM 77-31-00/101, Fig. 103.
(L,R) ENGINE FIRE	A	Go to 26-EICAS MESSAGES.
(L,R) FUEL SPAR VAL	C	Go to 28-EICAS MESSAGES.
(L,R) IGN STBY BUS	M	FIM 74-11-00/101, Fig. 105.
(L,R) OIL FILTER	C	Go to 79-FAULT CODE INDEX and look at the fault codes: 79 21 06, 79 21 07, 79 21 08, 79 21 09.
(L,R) REV ISLN VAL	C,M	Go to the 78-FAULT CODE INDEX and look at the fault codes: 78 34 03, 78 34 07, 78 34 08, 78 34 09, 78 34 10, 78 34 11, 78 34 12, 78 34 13, 78 34 14, 78 34 15, 78 34 18, 78 34 19.

EICAS MESSAGE LIST		
EICAS MESSAGE	LEVEL	PROCEDURE
(L,R) STARTER CUTOUT	B	FIM 80-11-00/101, Fig. 107.
(L,R) SURGE BITE	M	FIM 75-32-00/101, Fig. 107.
(L,R) SURGE CONT	S,M	AIRPLANES WITHOUT SB 75-5; FIM 75-32-00/101, Fig. 106. AIRPLANES WITH SB 75-5 DO NOT HAVE THE "(L,R) SURGE CONT" STATUS OR MAINTENANCE MESSAGE.
(L,R) TURB OH DET 1	S,M	Go to 26-EICAS MESSAGES.
(L,R) TURB OH DET 2	S,M	Go to 26-EICAS MESSAGES.



1 RECORD EPR, N1, N2, N3, F/F, EGT & VIB AT SAME EPR.

APPLICABLE CIRCUIT BREAKERS

NONE

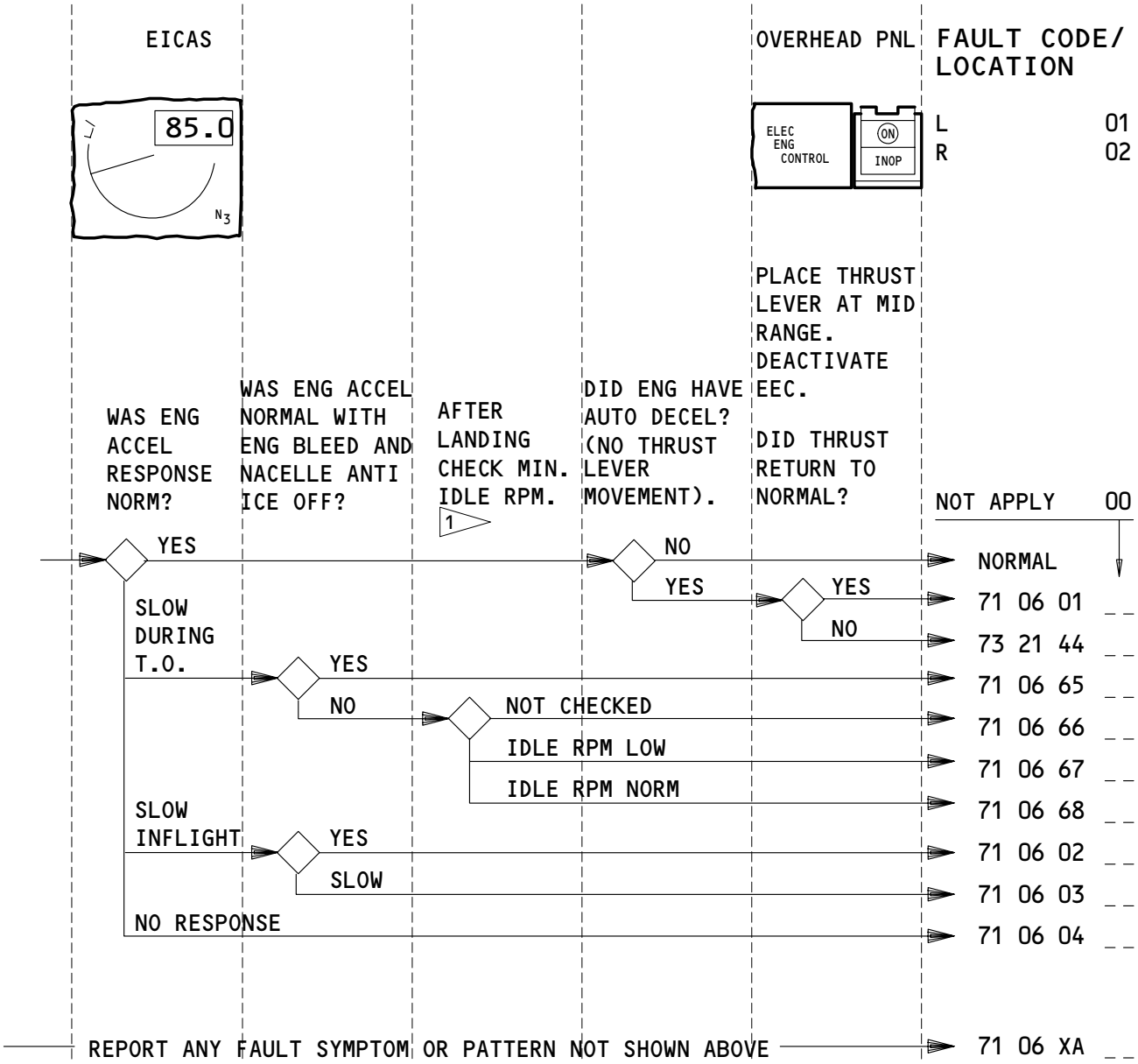
BIRD STRIKE – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

54279



1 SEE CHECK 1 "MIN/APPR IDLE RPM CHECK".

APPLICABLE CIRCUIT BREAKERS

NONE

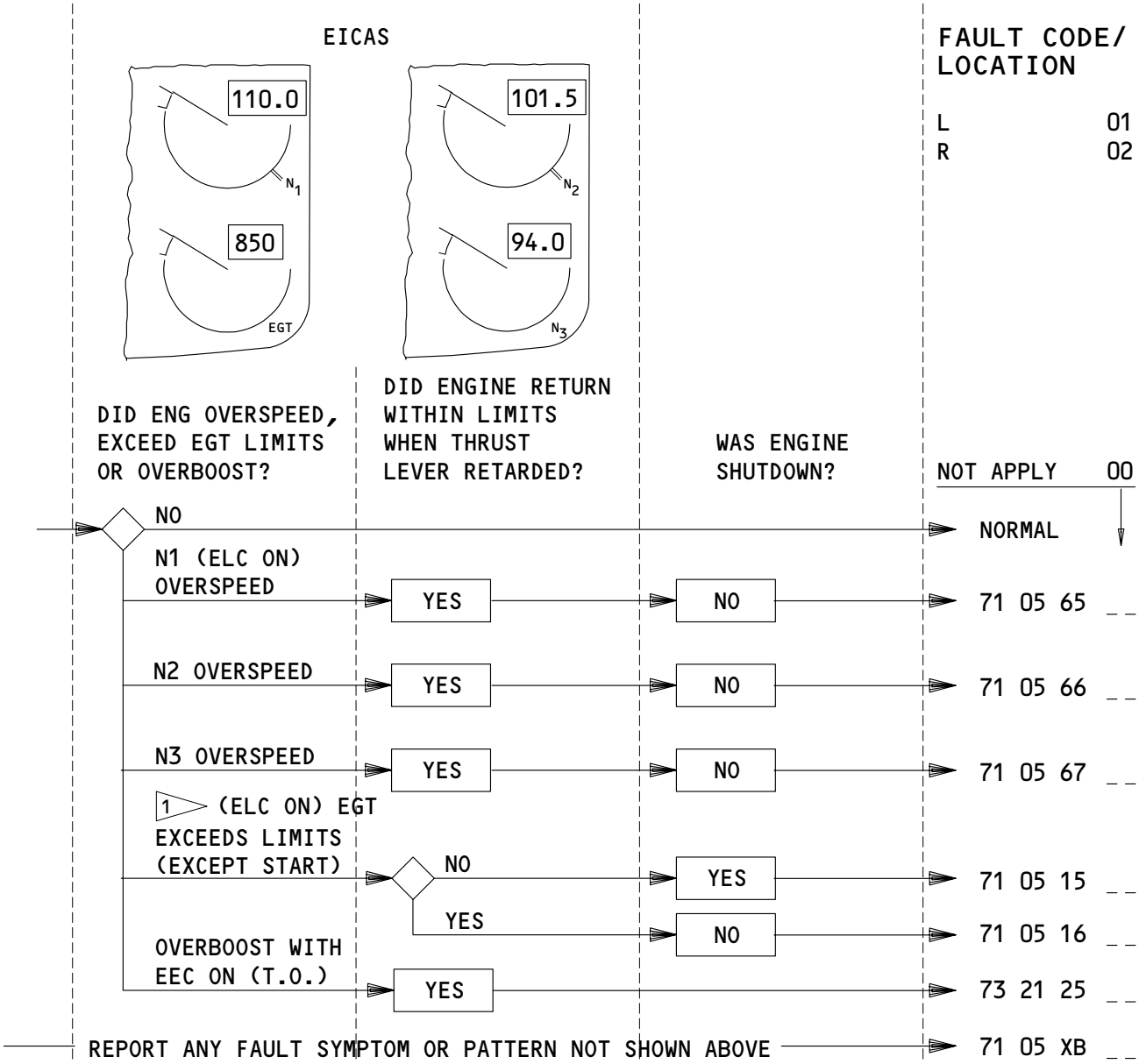
ENG ACCEL RATE/AUTO DECEL – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

649230



1 SEE "SURGE (STALL) T.O. & CONSTANT POWER" OR "SURGE (STALL) ACCEL, DECEL, CONT MSG" FAULT CODES. T.O. & CONSTANT POWER" OR "SURGE (STALL) ACCEL, DECEL, CONT MSG" FAULT CODES. EGT START LIMITS REMAIN FOR 30 SEC. AFTER ENG START. THRUST LEVER ADVANCEMENT PRIOR TO 30 SEC. MAY CAUSE EGT OVERLIMIT. THIS USUALLY HAPPENS DURING INFLIGHT START.

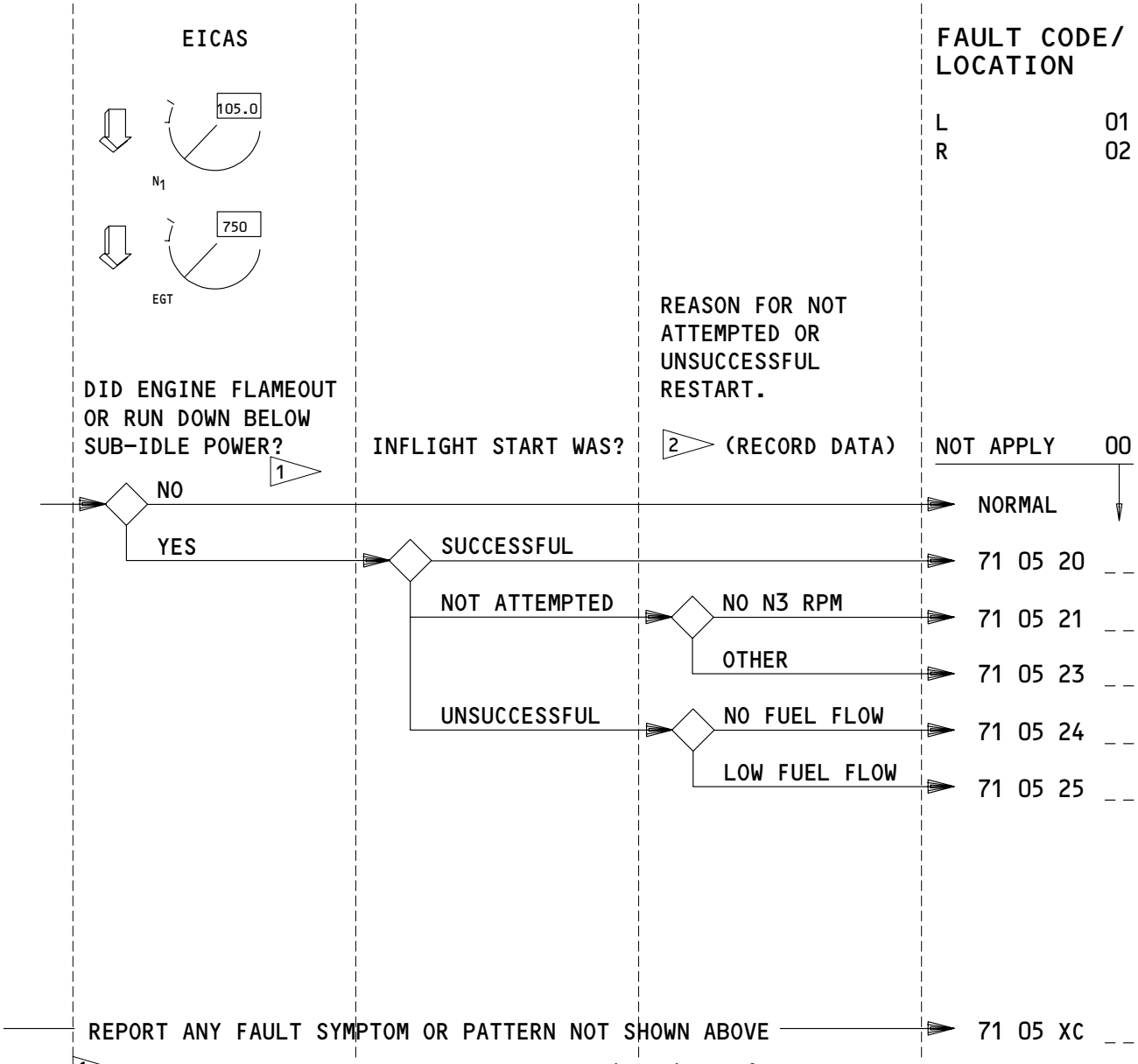
APPLICABLE CIRCUIT BREAKERS

11L4	LEFT ELECTRONIC ENGINE CONTROL LIMITER
11L5	LEFT ELECTRONIC ENGINE CONTROL SUPV
11L31	RIGHT ELECTRONIC ENGINE CONTROL LIMITER
11L32	RIGHT ELECTRONIC ENGINE CONTROL SUPV

ENGINE OVERLIMITS (NOT STARTING) - FAULT CODES

EFFECTIVITY
ALL

71-FAULT CODE DIAGRAM



1 IF FLAMEOUT PRECEDED BY A SURGE, SEE "SURGE (STALL) T.O. & CONSTANT POWER" OR "SURGE (STALL) ACCEL, DECEL, CONT MSG" FAULT CODES.

2

ENG DATA

FUEL TEMP ____ EPR ____
FUEL FLOW ____
RECORD WHICH TANK WAS SUPPLYING ENG & HOW LONG.
ENG WAS — ACCEL / DECEL / STEADY STATE

FLIGHT CONDITIONS

ALT _____ TAT ____
AIRSPEED ____
ICING CONDITIONS ____
TURBULENCE ____

APPLICABLE CIRCUIT BREAKERS

NONE

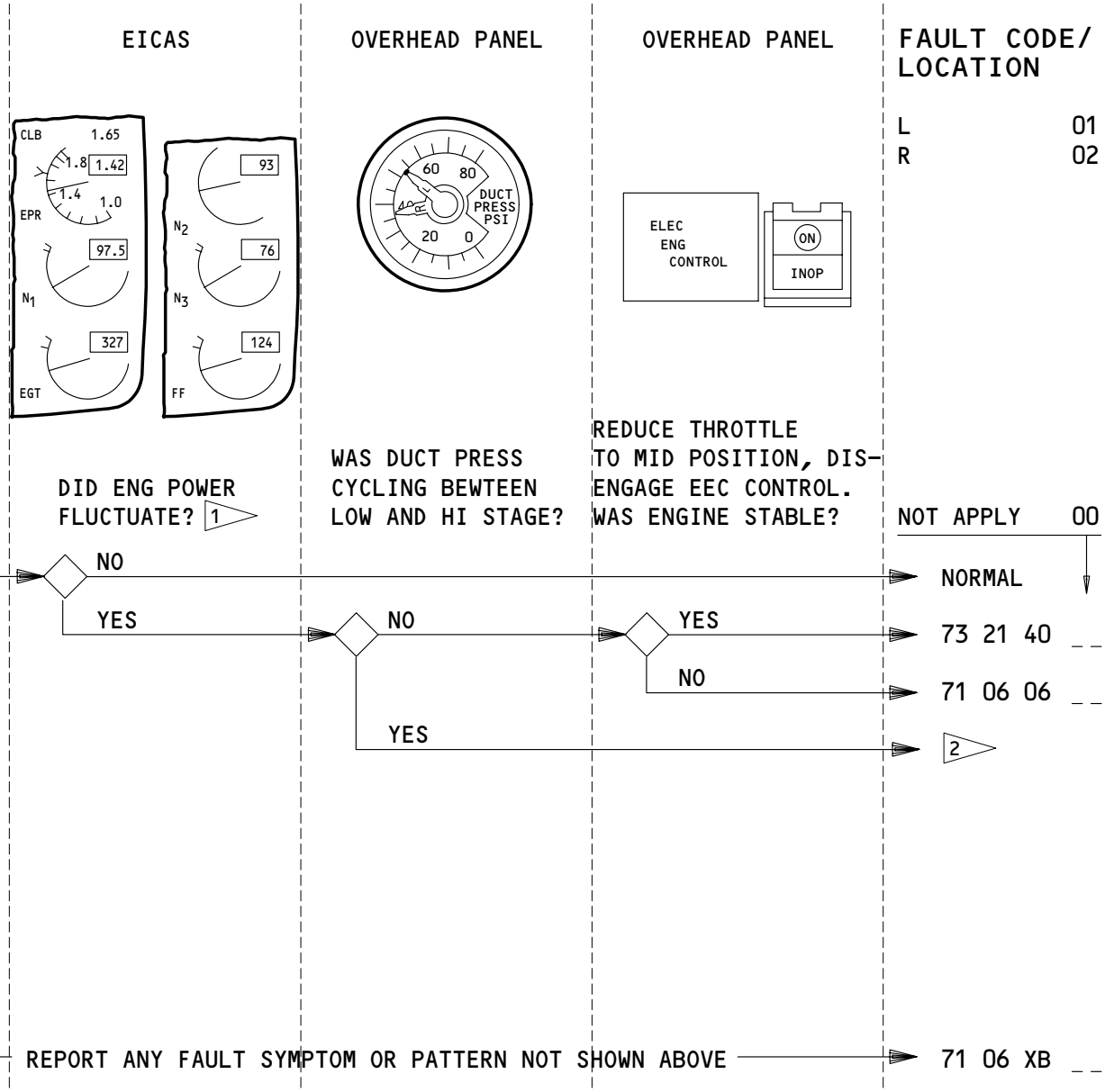
FLAMEOUT – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

54283



1 ENG PARAMETERS MAY FLUCTUATE DURING HEAVY RAIN.

2 SEE PNEUMATICS CHAPTER, "ENGINE PNEUMATIC SUPPLY" FAULT CODES.

APPLICABLE CIRCUIT BREAKERS

11L5	LEFT ELECTRONIC ENGINE CONTROL SUPV
11L32	RIGHT ELECTRONIC ENGINE CONTROL SUPV

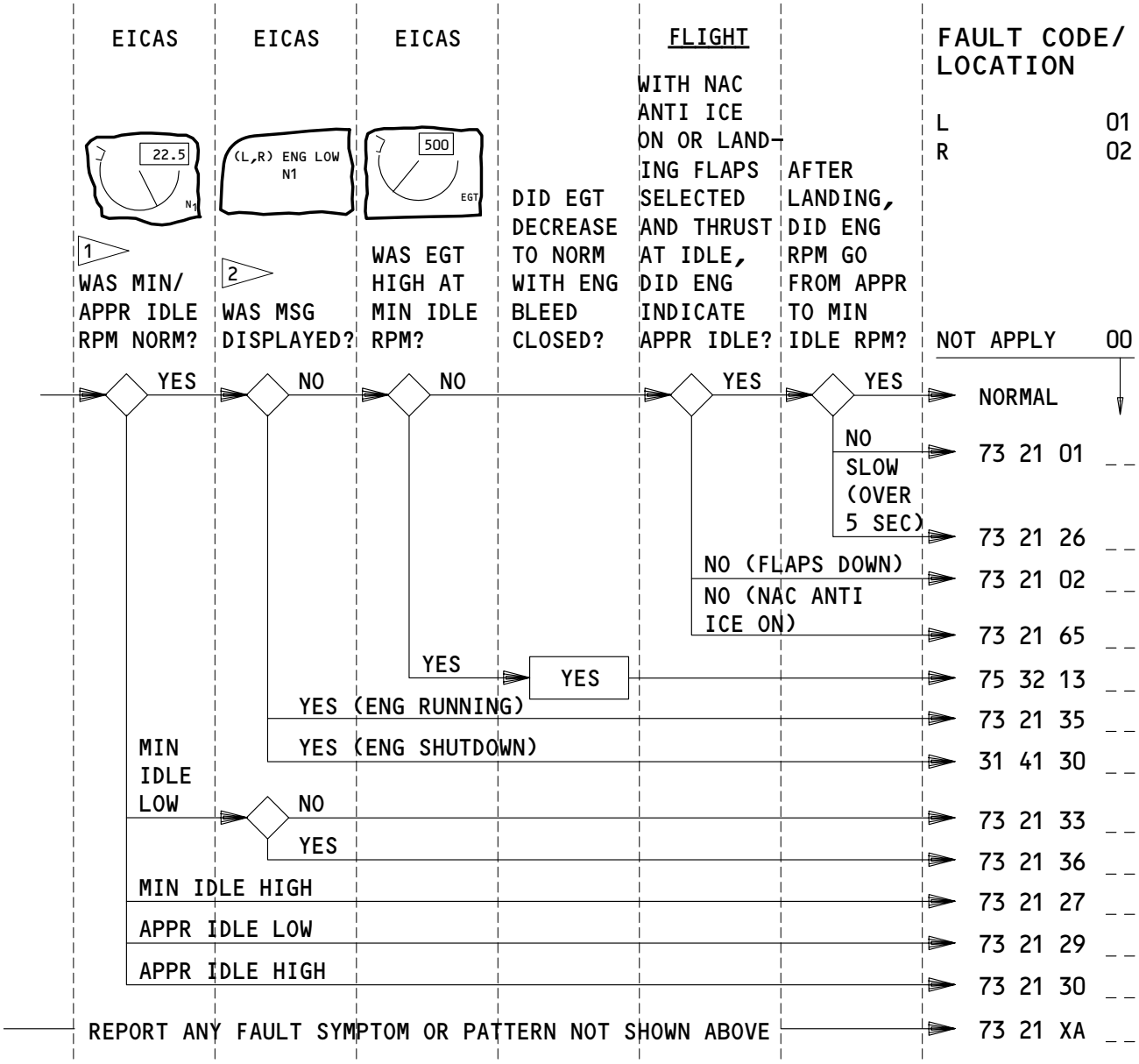
POWER FLUCTUATES – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

597867



1 SEE (MIN/APPR) IDLE RPM CHECK. MIN IDLE SHOULD BE KEPT ABOVE 21.2% N1 (535E4).

2 MSG WILL DISPLAY IF N1 IS BELOW 21.2% (535E4).

APPLICABLE CIRCUIT BREAKERS

11L7	LEFT ENGINE IDLE CONT
11L33	RIGHT ENGINE IDLE CONT

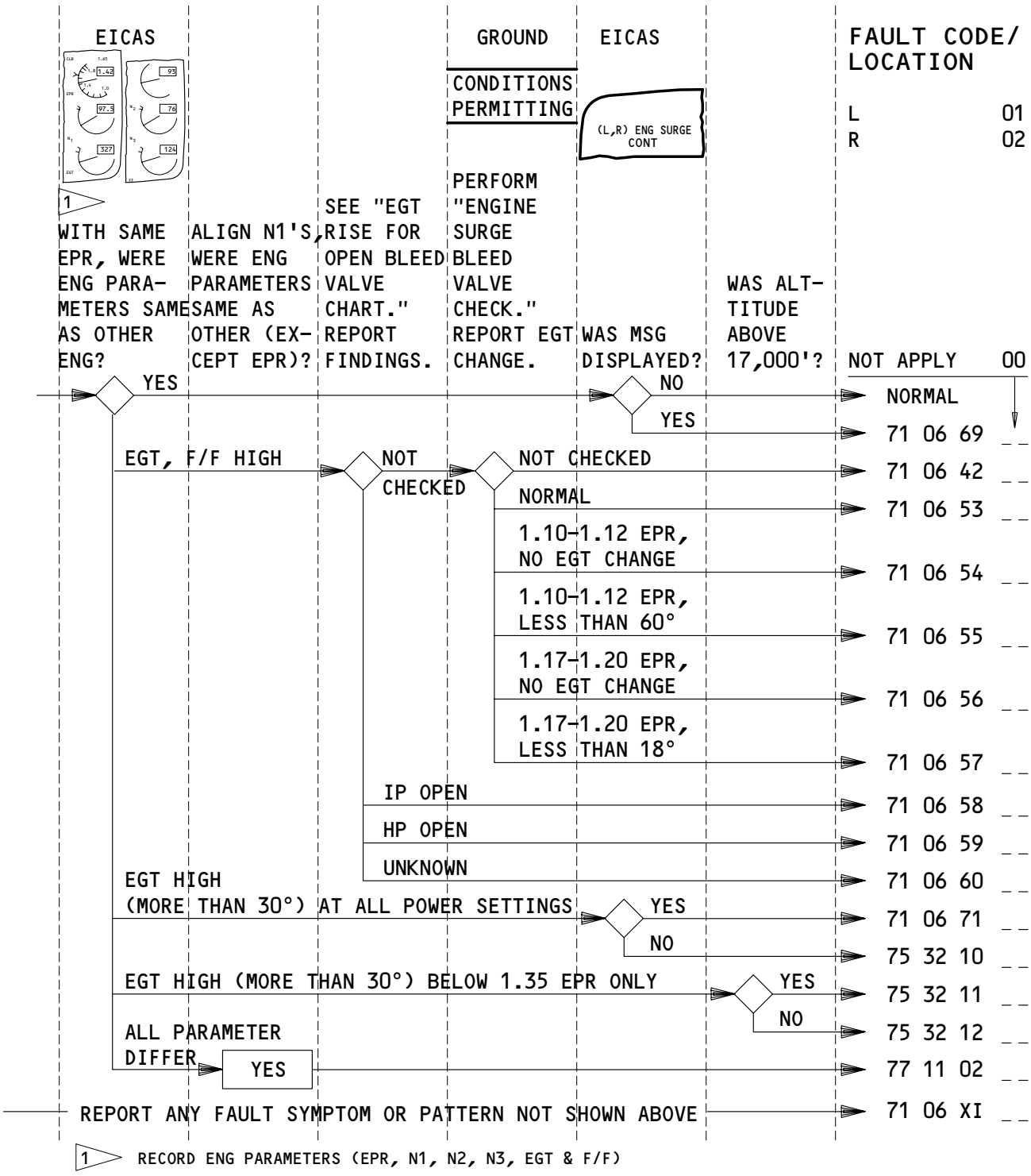
(MIN/APPR) IDLE RPM/EGT/SELECT - FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

187848



APPLICABLE CIRCUIT BREAKERS

NONE

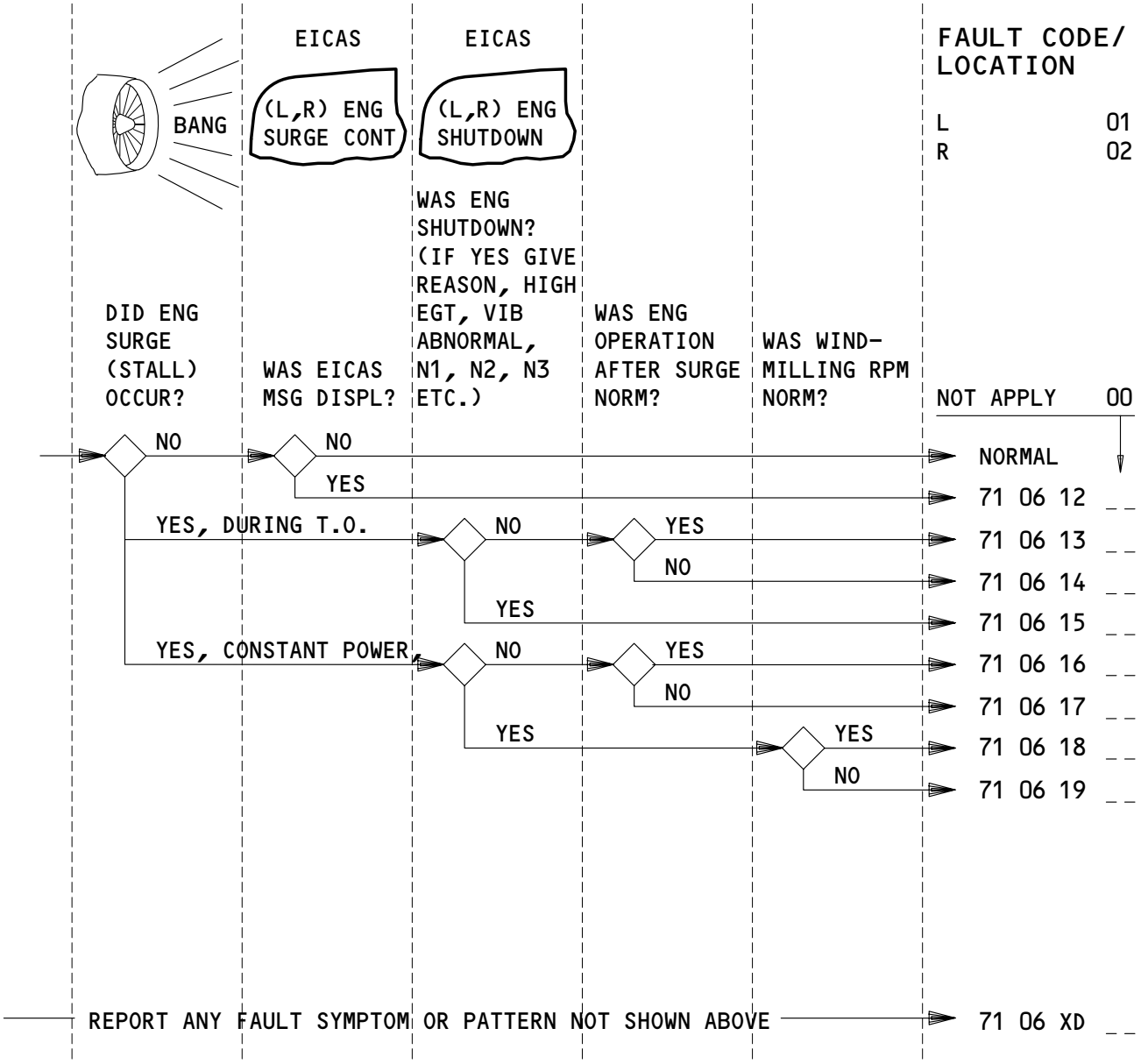
SAME EPR, OTHER PARAMETERS NOT EQUAL - FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

187849



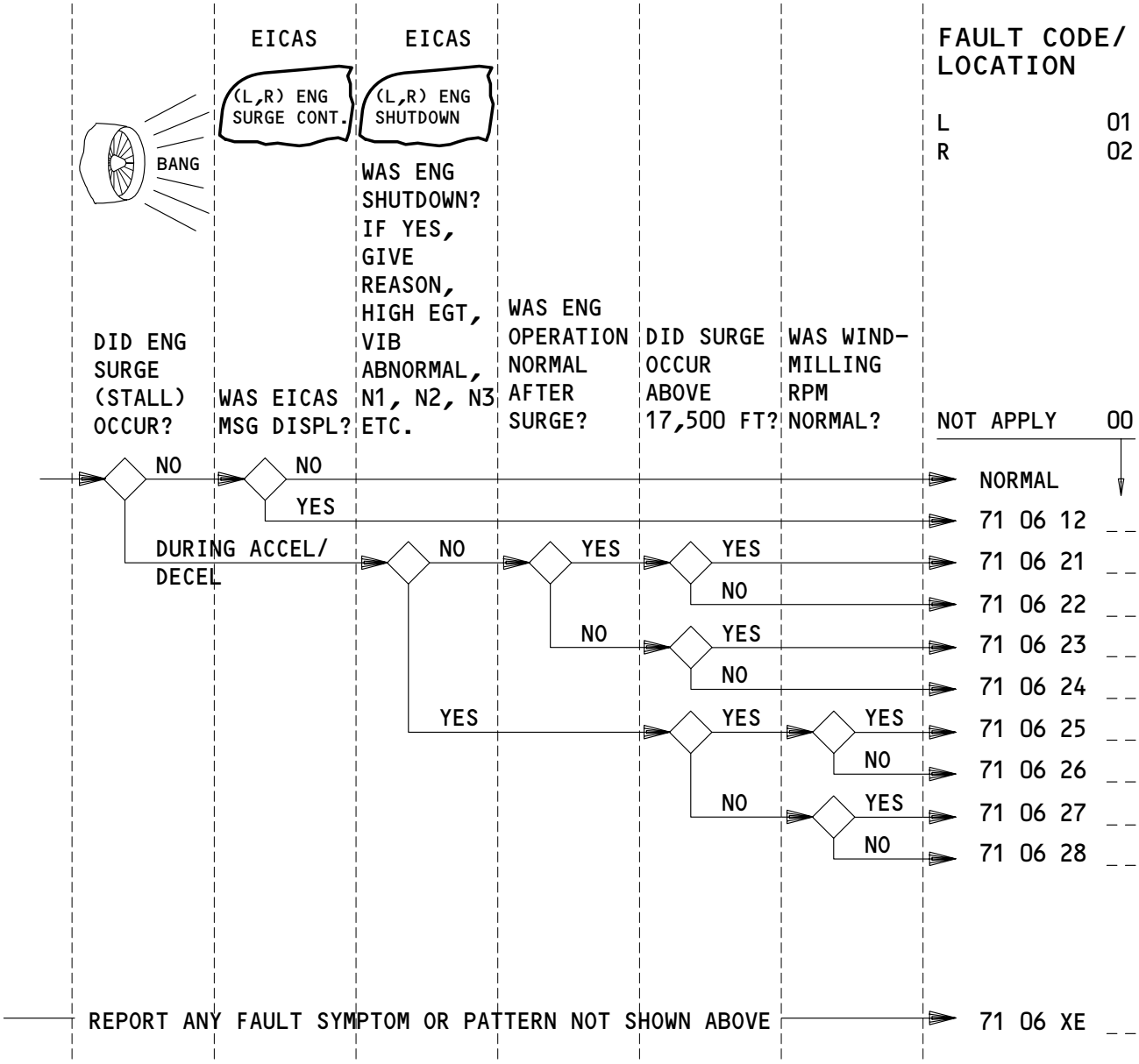
APPLICABLE CIRCUIT BREAKERS

11D21	HP BLD VLV LEFT
11D22	HP BLD VLV RIGHT

SURGE (STALL) T.O. & CONSTANT POWER – FAULT CODES

EFFECTIVITY
ALL

71-FAULT CODE DIAGRAM



APPLICABLE CIRCUIT BREAKERS

11D21	HP BLD VLV LEFT
11D22	HP BLD VLV RIGHT

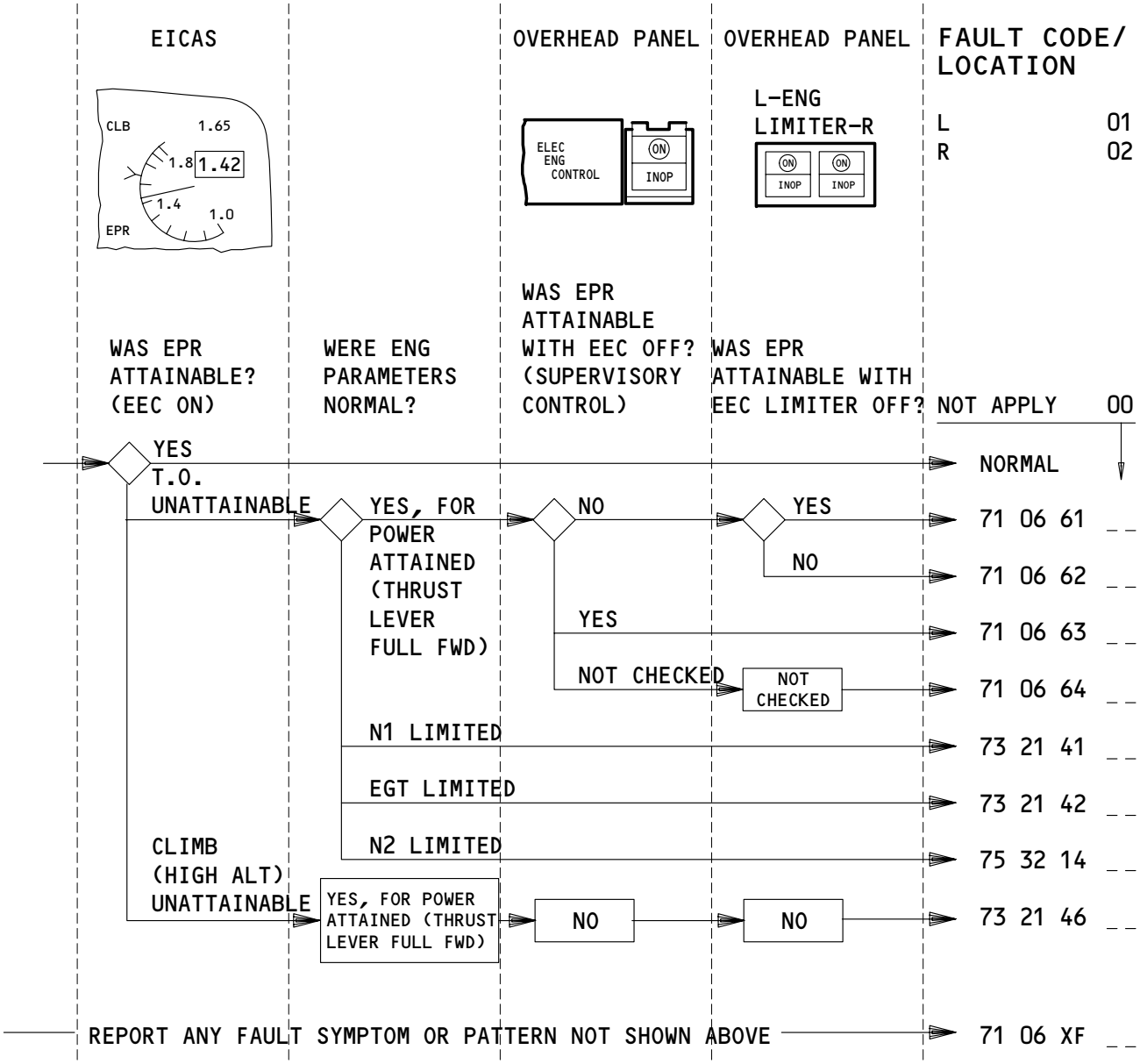
SURGE (STALL) ACCEL, DECEL, CONT MSG – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

187851



APPLICABLE CIRCUIT BREAKERS

11L4	LEFT ELECTRONIC ENGINE CONTROL LIMITER
11L5	LEFT ELECTRONIC ENGINE CONTROL SUPV
11L31	RIGHT ELECTRONIC ENGINE CONTROL LIMITER
11L32	RIGHT ELECTRONIC ENGINE CONTROL SUPV

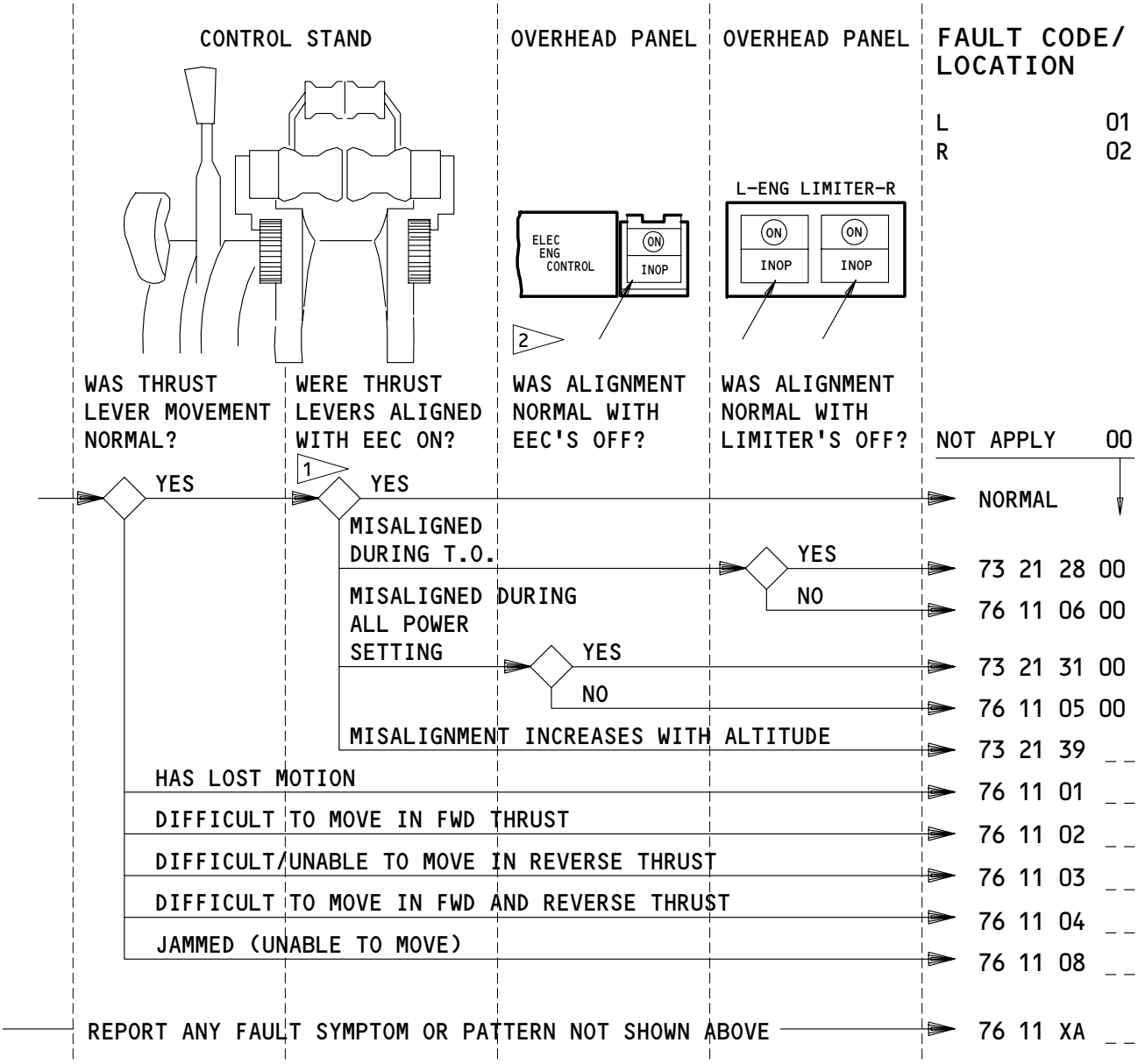
T.O./CLIMB EPR UNATTAINABLE – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

597873



1 BELOW 35000 FEET THRUST LEVERS SHOULD BE ALIGNED WITHIN 3/4 KNOB.
35000 FEET AND ABOVE THRUST LEVERS SHOULD BE ALIGNED WITHIN 1-1/4 KNOBS.

2 REDUCE POWER TO 80% N3 OR LOWER BEFORE TURNING EEC OFF.

APPLICABLE CIRCUIT BREAKERS

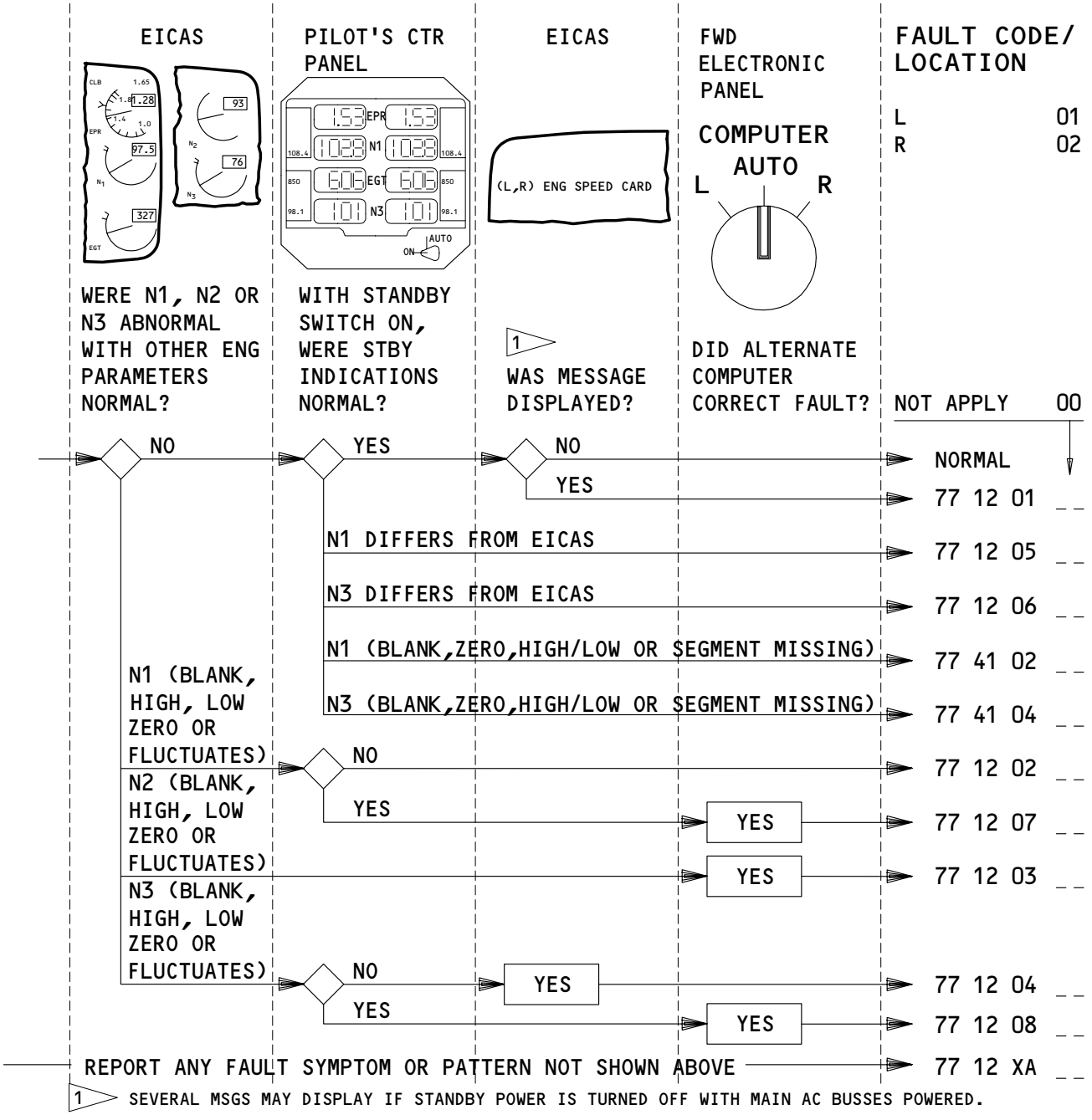
11L4	LEFT ELECTRONIC ENGINE CONTROL LIMITER
11L5	LEFT ELECTRONIC ENGINE CONTROL SUPV
11L31	RIGHT ELECTRONIC ENGINE CONTROL LIMITER
11L32	RIGHT ELECTRONIC ENGINE CONTROL SUPV

THRUST LEVER MOVEMENT DIFFICULT, LOST MOTION, OUT OF ALIGNMENT - FAULT CODES

EFFECTIVITY
ALL

71-FAULT CODE DIAGRAM

597881



APPLICABLE CIRCUIT BREAKERS

11B31	SPEED CARD LEFT	11J2	EICAS CMPTR LEFT
11B32	SPEED CARD RIGHT	11J3	EICAS UPPER DISPLAY
11D23	STBY IND	11J29	EICAS CMPTR RIGHT
		11J30	EICAS LOWER DISPLAY

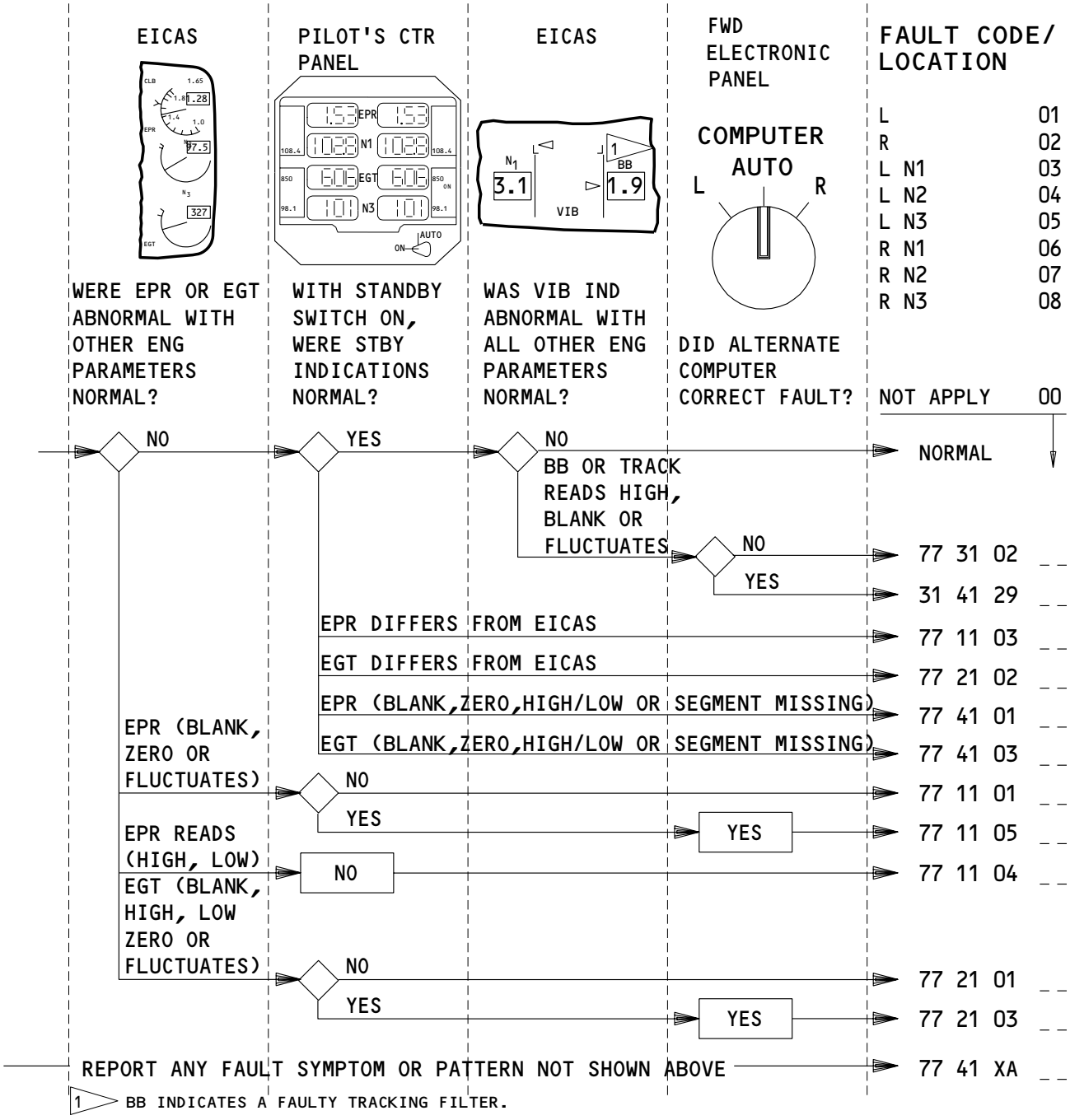
N1, N2, N3 INDICATORS & ENG SPEED CARD – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

860113



APPLICABLE CIRCUIT BREAKERS

11D23	STBY IND	11J30	EICAS LOWER DISPLAY	11L36	RIGHT ENGINE EPR XMTR
11J2	EICAS CMPTR LEFT	11K2	VIB MONITOR LEFT		
11J3	EICAS UPPER DISPLAY	11K28	VIB MONITOR RIGHT		
11J29	EICAS CMPTR RIGHT	11L9	LEFT ENGINE EPR XMTR		

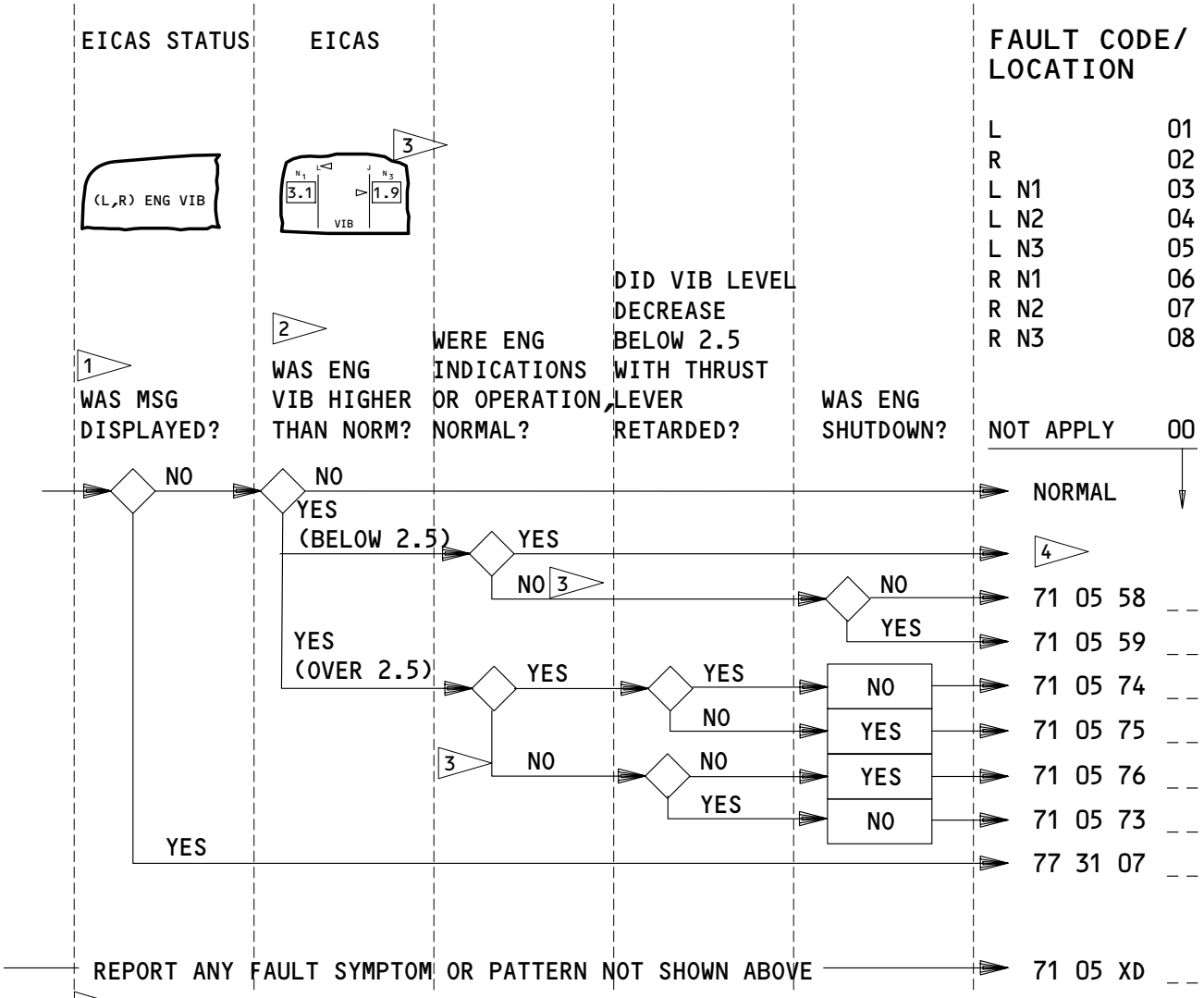
EPR, EGT, VIBRATION INDICATOR – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

860114



1 (L, R) ENG VIB IS INDICATION PROBLEM .

2 SEVERE ICING MAY CAUSE HIGH VIBRATION. DO NOT REPORT.

3 ABNORMAL INDICATIONS
- ENG SURGE
- OIL FILTER MSG
- INDICATIONS FOLLOW THRUST LEVER MOVEMENTS
- ABNORMAL ENGINE INDICATIONS (PARAMETERS, OIL PRESS & OIL TEMP)
- AIRPLANE, THRUST LEVER VIBRATION

4 SEE "EPR, EGT, VIBRATION INDICATOR" FAULT CODES.

APPLICABLE CIRCUIT BREAKERS

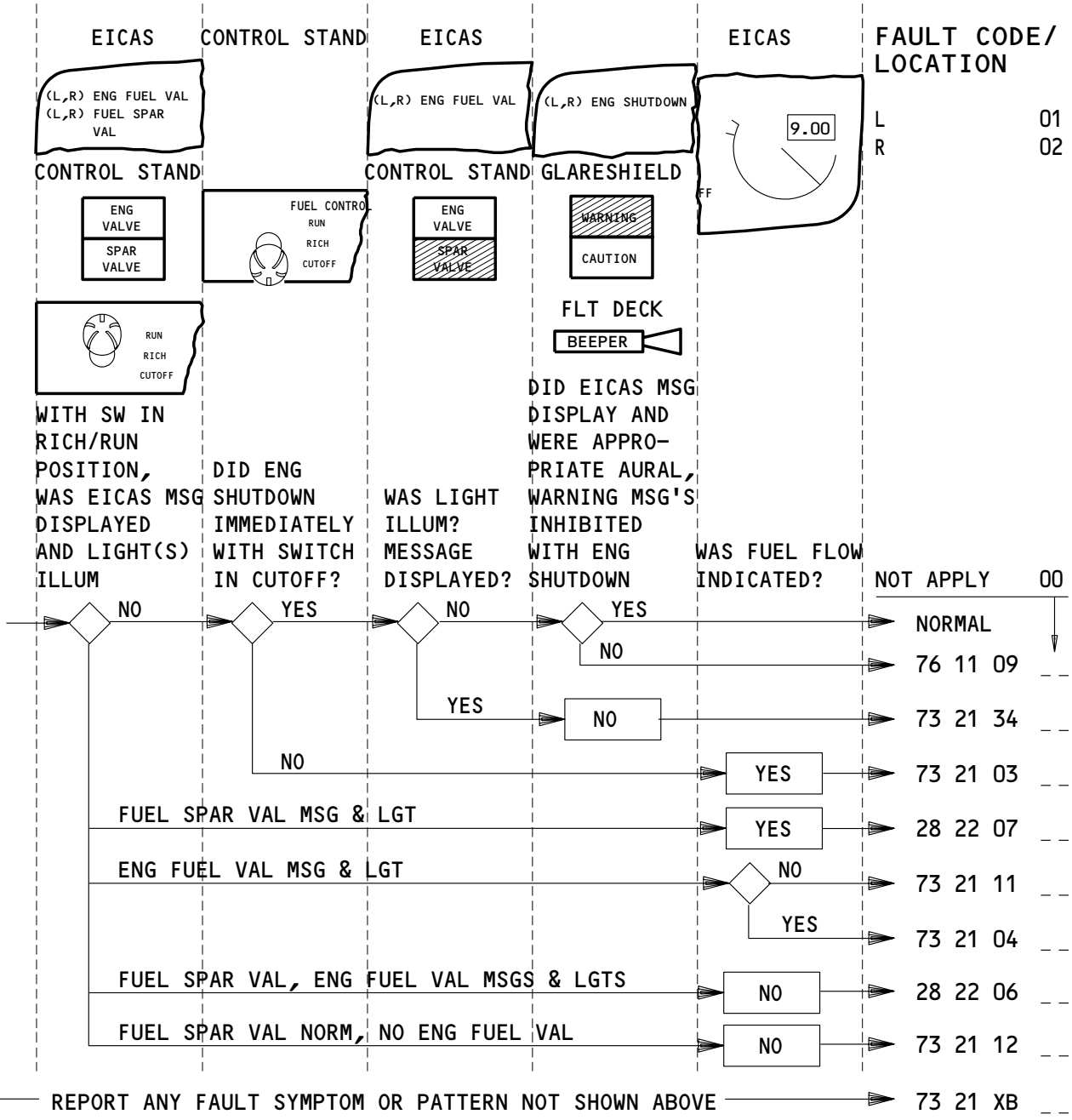
11K2	VIB MONITOR LEFT
11K28	VIB MONITOR RIGHT

VIBRATION HIGH – FAULT CODES

EFFECTIVITY
ALL

71-FAULT CODE DIAGRAM

649237



APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6C1	L FUEL COND CONT	11D33	FUEL DISAGREE ENABLE (L, LEFT)
6C2	R FUEL COND CONT	11D34	FUEL DISAGREE ENABLE (R, RIGHT)
6E1	L SPAR FUEL VALVES		
6E2	R SPAR FUEL VALVES		

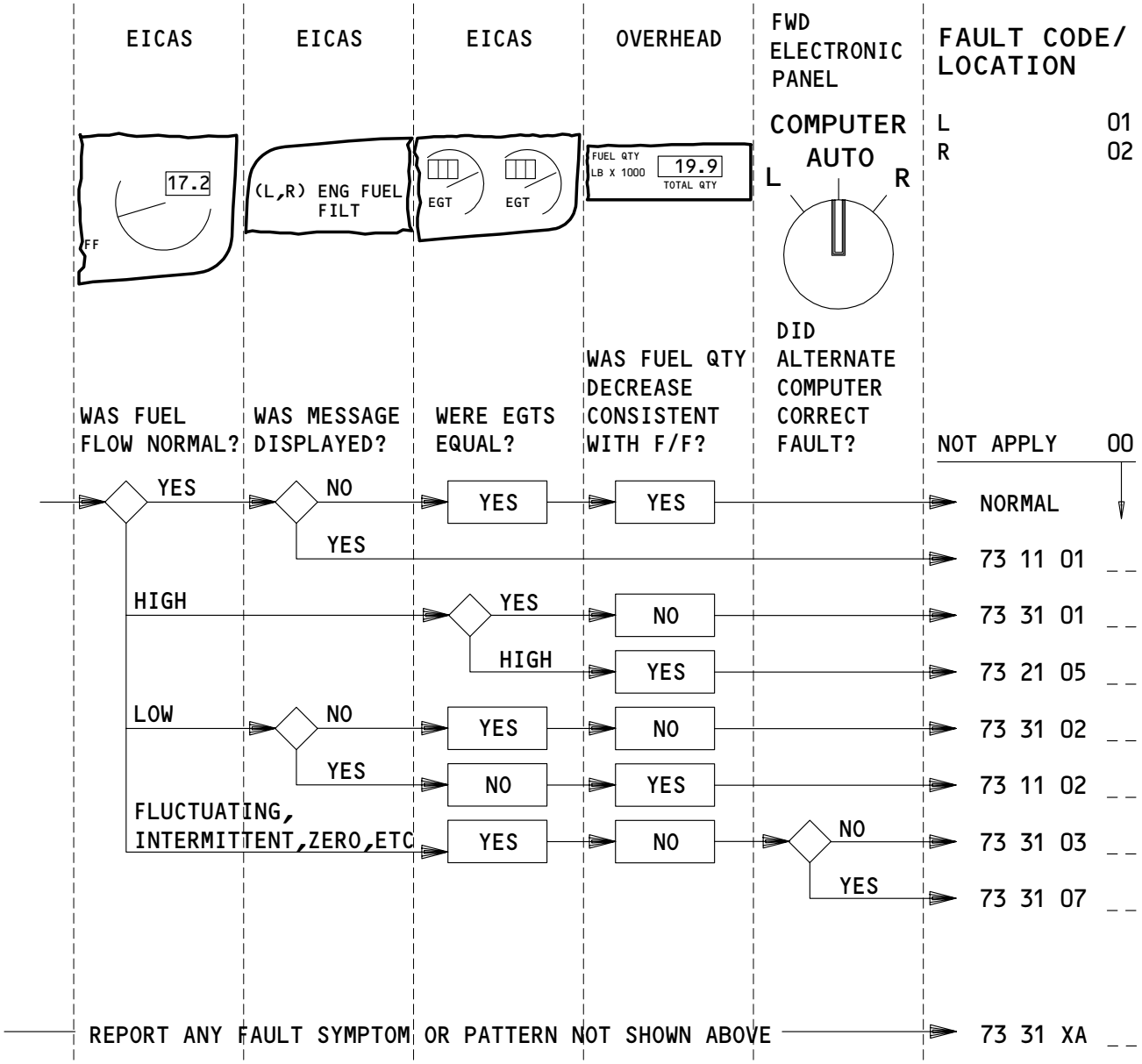
FUEL CONTROL SWITCH – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

187857



APPLICABLE CIRCUIT BREAKERS

NONE

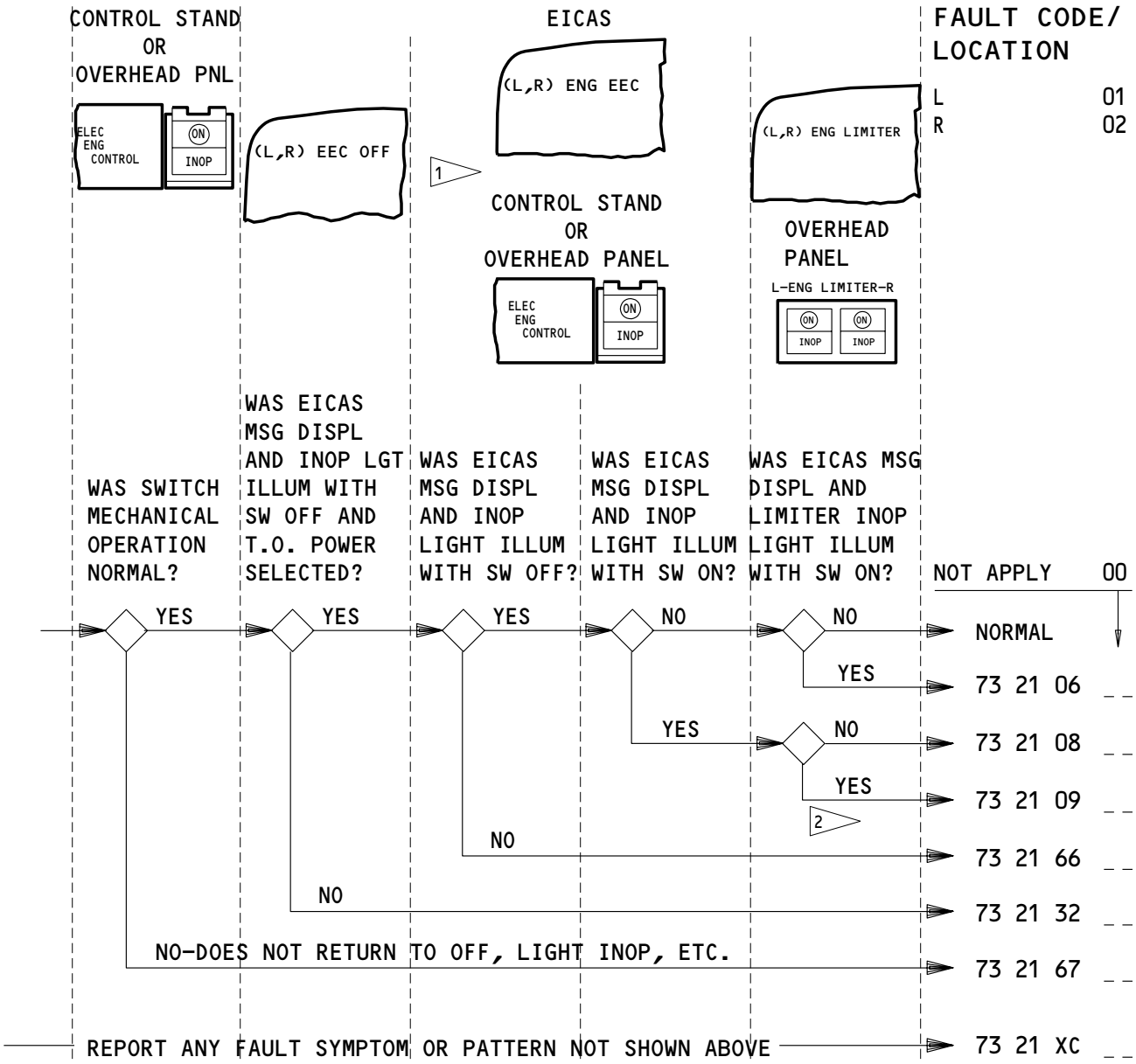
HIGH/LOW FUEL FLOW, ENG FUEL FILTER & INDICATORS – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

54307



1 (L, R) ENG EEC MSG WILL DISPLAY AND INOP LIGHT WILL ILLUM IF EEC SWITCHED OFF AND ENGINES RUNNING. THIS MESSAGE WILL BE INHIBITED BY RESPECTIVE EEC OFF MSG.

2 RECORD ENGINE EPR, N1, N2, N3, EGT AND FF IF BOTH EEC AND LIMITER ARE INOP.

APPLICABLE CIRCUIT BREAKERS AS INSTALLED

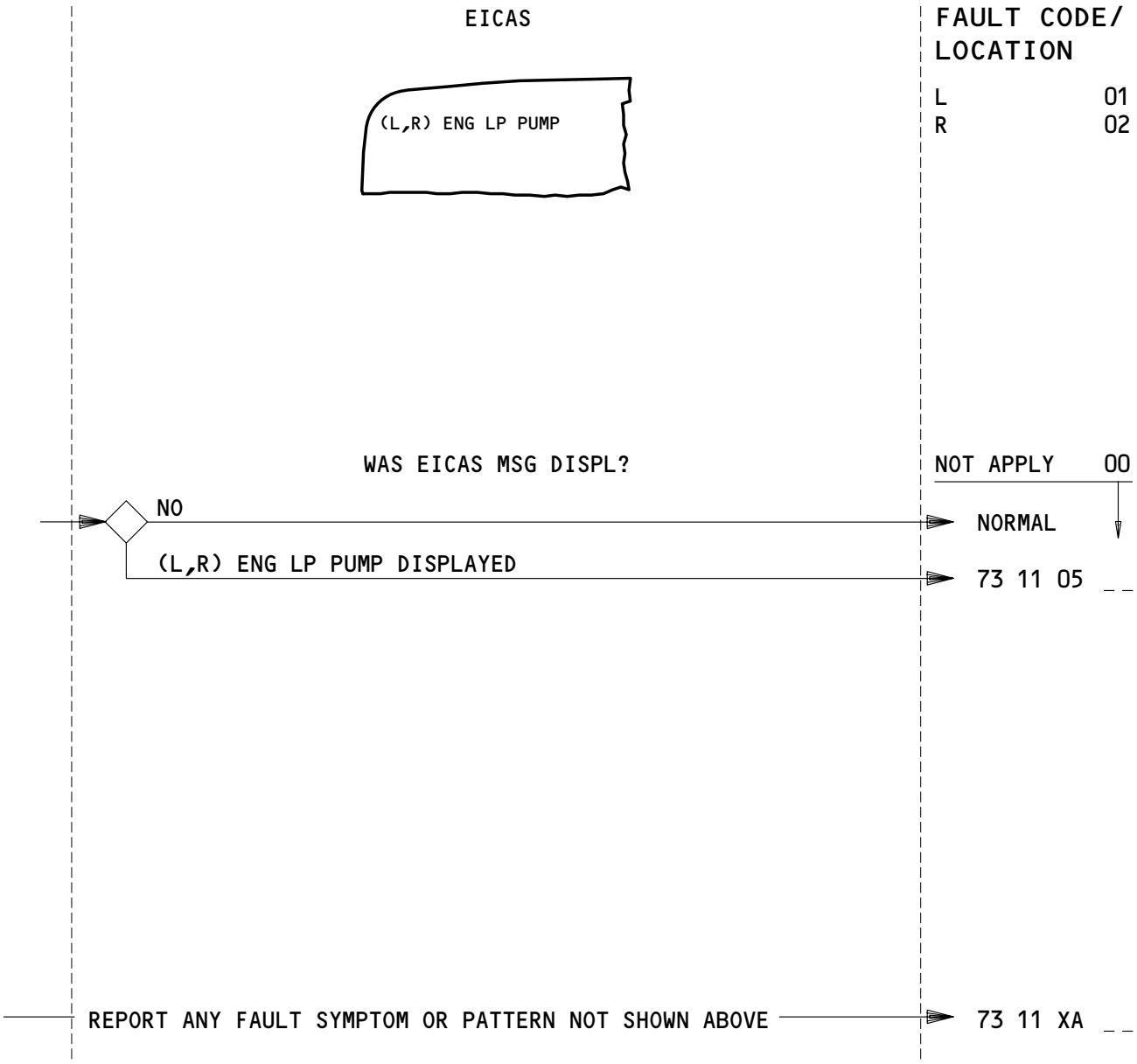
11L4	LEFT ELECTRONIC ENGINE CONTROL LIMITER	11L31	RIGHT ELECTRONIC ENGINE CONTROL LIMITER
11L4	LEFT ENGINE EEC LIMITER	11L31	RIGHT ENGINE EEC LIMITER
11L5	LEFT ELECTRONIC ENGINE CONTROL SUPV	11L32	RIGHT ELECTRONIC ENGINE CONTROL SUPV
11L5	LEFT ENGINE EEC SUPV	11L32	RIGHT ENGINE EEC SUPV

ELECTRONIC ENGINE CONTROL (EEC)- FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM



APPLICABLE CIRCUIT BREAKERS

NONE

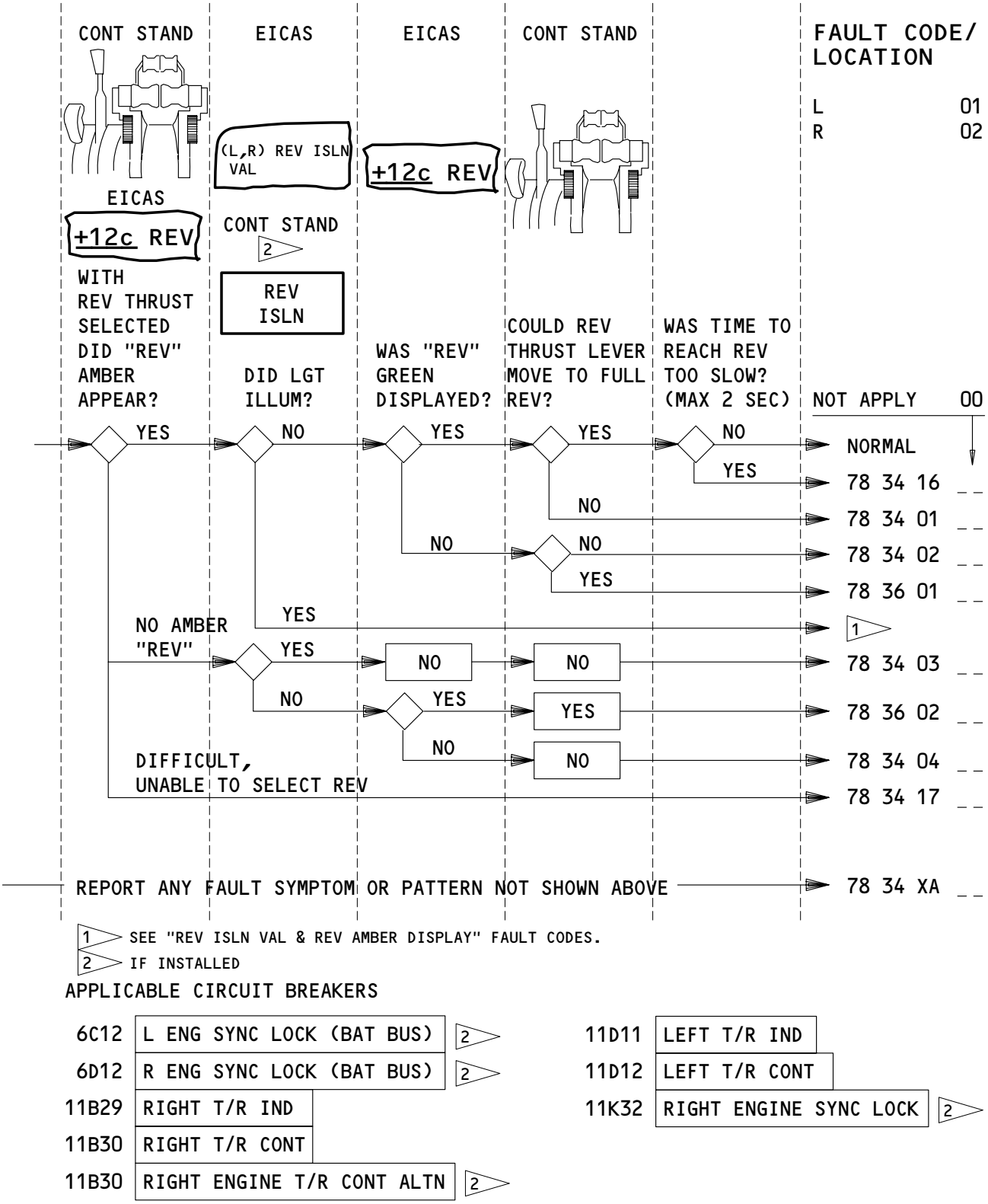
ENG LP PUMP – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

70269



1 SEE "REV ISLN VAL & REV AMBER DISPLAY" FAULT CODES.
2 IF INSTALLED

APPLICABLE CIRCUIT BREAKERS

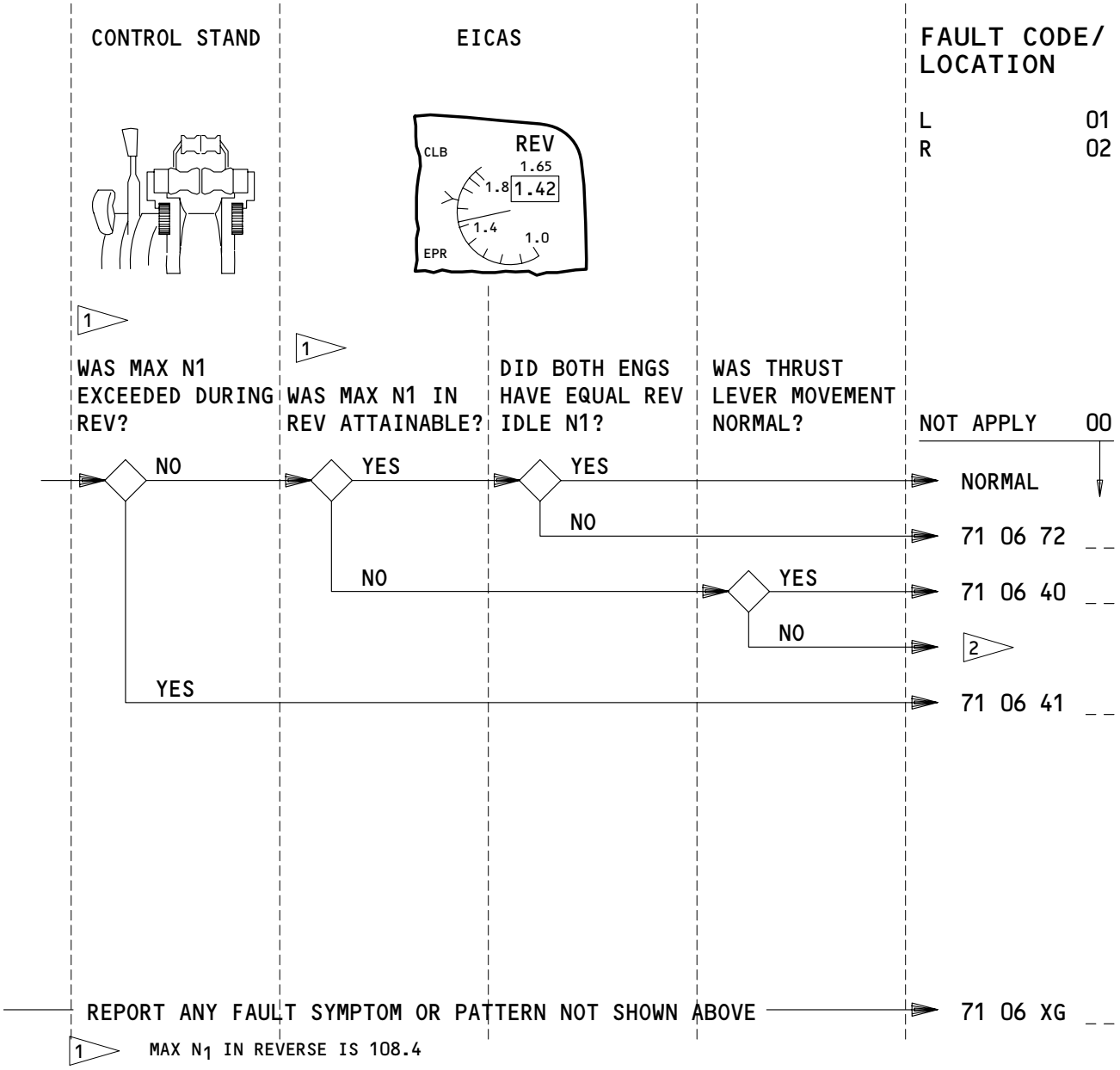
6C12	L ENG SYNC LOCK (BAT BUS)	2
6D12	R ENG SYNC LOCK (BAT BUS)	2
11B29	RIGHT T/R IND	
11B30	RIGHT T/R CONT	
11B30	RIGHT ENGINE T/R CONT ALTN	2
11D11	LEFT T/R IND	
11D12	LEFT T/R CONT	
11K32	RIGHT ENGINE SYNC LOCK	2

REVERSER DEPLOY - FAULT CODES

EFFECTIVITY
ALL

71-FAULT CODE DIAGRAM

A51858



1 MAX N_1 IN REVERSE IS 108.4

2 SEE "THRUST LEVER MOVEMENT DIFFICULT, LOST MOTION, OUT OF ALIGNMENT" FAULT CODES.

APPLICABLE CIRCUIT BREAKERS

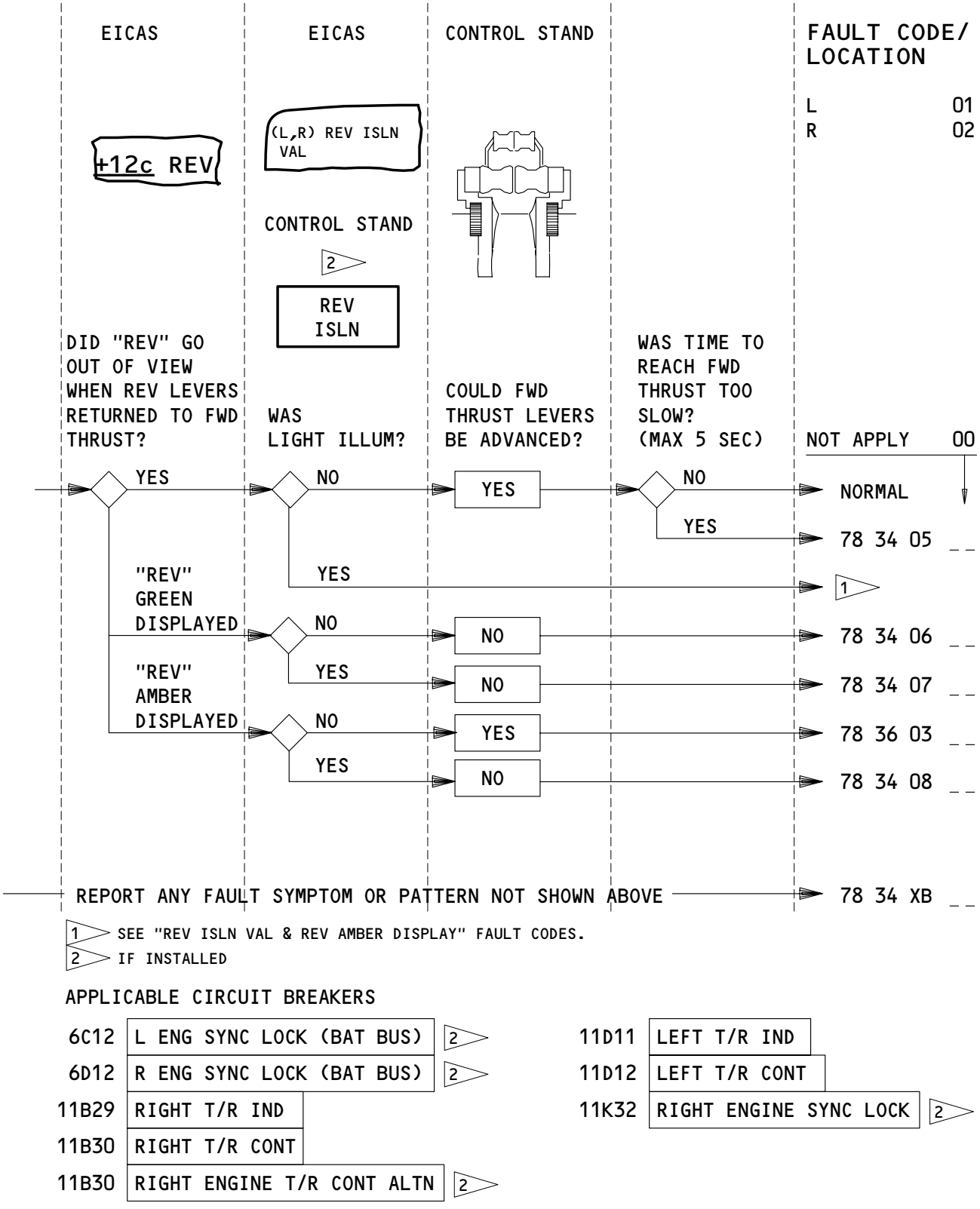
NONE

REVERSE THRUST N1 - FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM



1 SEE "REV ISLN VAL & REV AMBER DISPLAY" FAULT CODES.
2 IF INSTALLED

APPLICABLE CIRCUIT BREAKERS

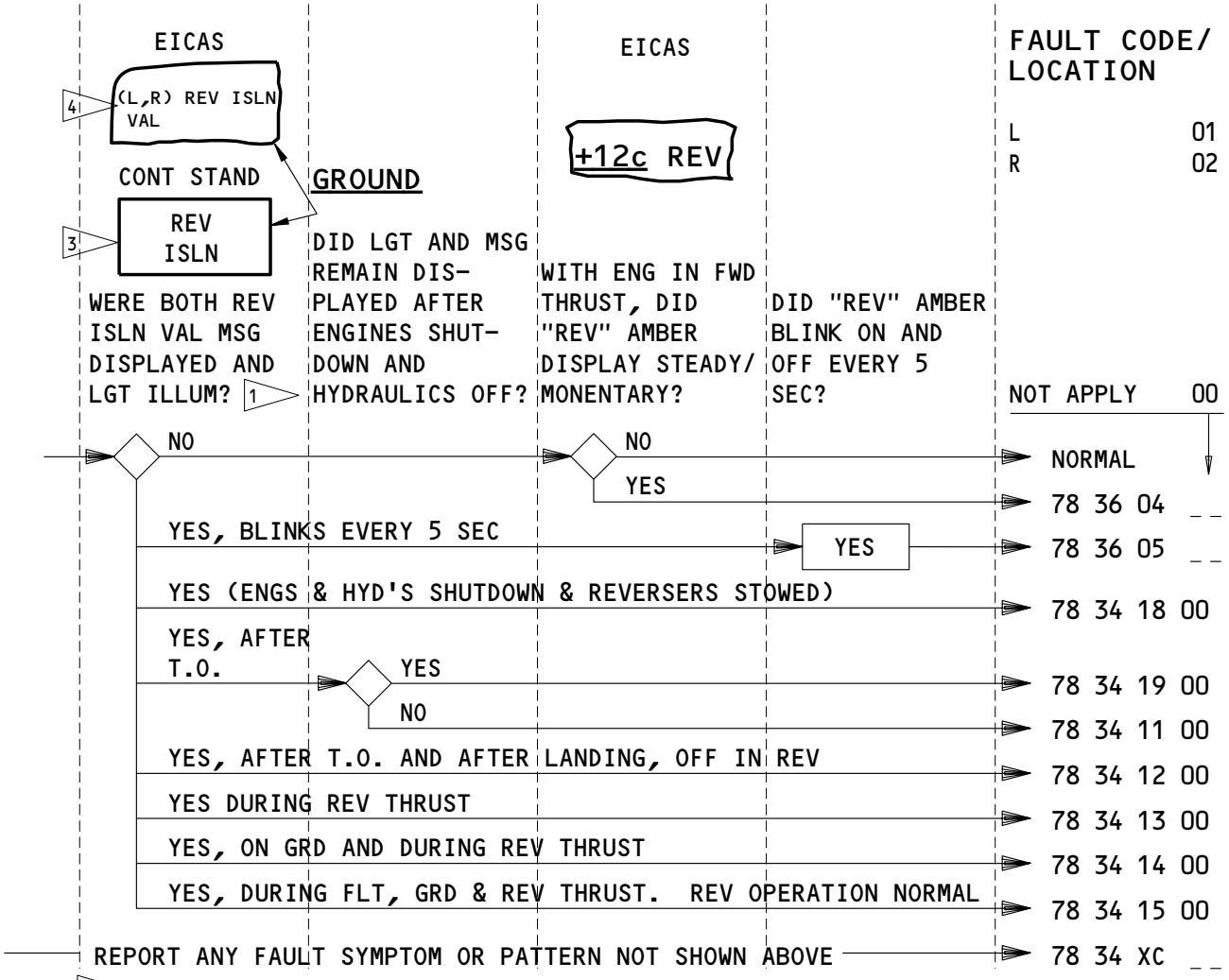
6C12	L ENG SYNC LOCK (BAT BUS)	2
6D12	R ENG SYNC LOCK (BAT BUS)	2
11B29	RIGHT T/R IND	
11B30	RIGHT T/R CONT	
11B30	RIGHT ENGINE T/R CONT ALTN	2
11D11	LEFT T/R IND	
11D12	LEFT T/R CONT	
11K32	RIGHT ENGINE SYNC LOCK	2

REVERSER STOW - FAULT CODES

EFFECTIVITY
ALL

71-FAULT CODE DIAGRAM

A51868



1 IN FLIGHT
REVERSE THRUST PROTECTION MAY BE INOPERATIVE. DO NOT LIFT THE REVERSE THRUST LEVER.

AFTER LANDING
REVERSE THRUST MAY BE INOP.

GROUND
INSPECT REVERSER IS STOWED & LOCKED BEFORE TAKEOFF.

2 IF CB IS TRIPPED, POWER IS REMOVED FROM REV ISLN VAL. VALVE SHOULD CLOSE & REV THRUST WILL BE INOP.

3 AS INSTALLED 4 DISPLAYED GROUND ONLY SOME AIRPLANES

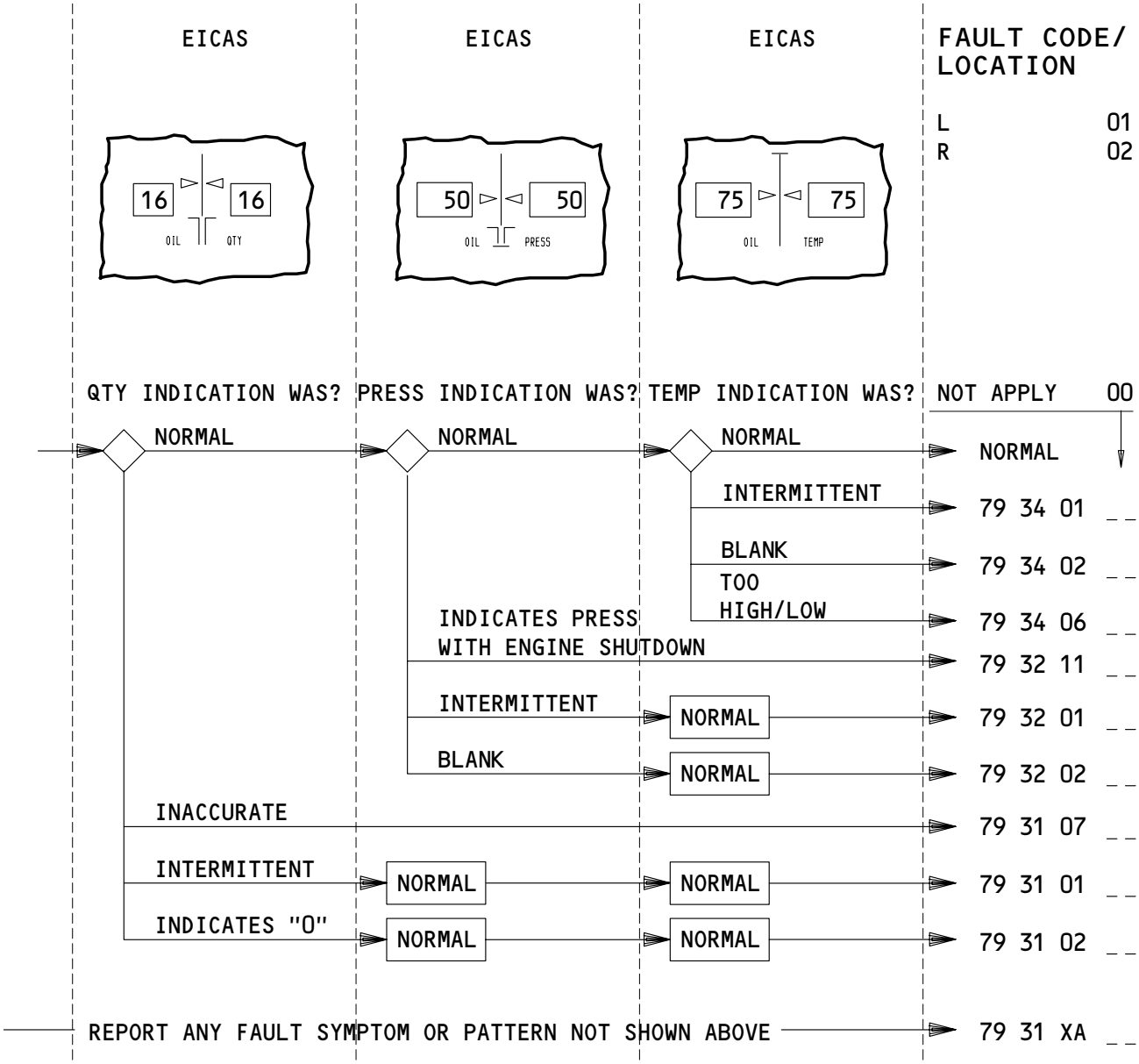
APPLICABLE CIRCUIT BREAKERS AS INSTALLED

6C12	L ENG SYNC LOCK (BAT BUS)	11D11	T/R L IND
6D12	R ENG SYNC LOCK (BAT BUS)	11D12	T/R L CONT
11B29	T/R R IND	11K6	LEFT ENGINE THRUST REVERSER CONT
11B30	RIGHT (ENGINE) T/R CONT ALTN	11K32	RIGHT ENGINE THRUST REVERSER IND
11B30	T/R R CONT	11K32	RIGHT ENGINE SYNC LOCK
11K5	LEFT ENGINE THRUST REVERSER IND	11K33	RIGHT ENGINE THRUST REVERSER CONT

REV ISLN VAL & REV AMBER DISPLAY - FAULT CODES

EFFECTIVITY
ALL

71-FAULT CODE DIAGRAM



APPLICABLE CIRCUIT BREAKERS

11K9	LEFT ENGINE OIL PRESS
11K35	RIGHT ENGINE OIL PRESS

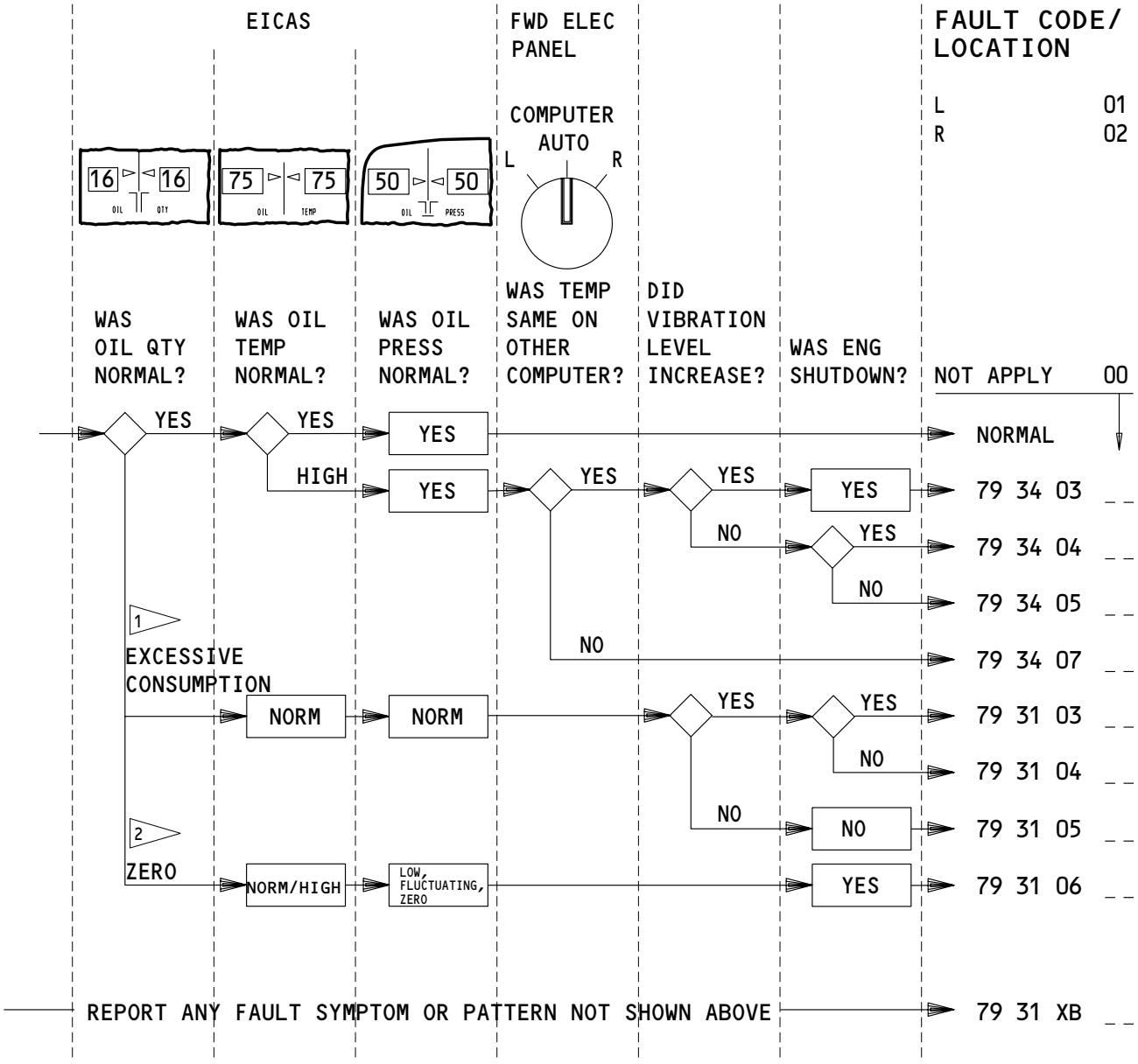
OIL INDICATORS – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

247387



1 OVER 2.2 PINTS (US) OR 1.05 LITERS PER HOUR OIL CONSUMPTION IS CAUSE FOR INVESTIGATION

2 IF START ABORTED UNDER COLD WEATHER CONDITIONS AND OIL QUANTITY IS REDUCED OR GOES TO ZERO AND LOW OIL PRESSURE IS INDICATED, DO NOT REPLENISH TANK. FURTHER STARTS MAY BE ATTEMPTED. IF START IS SUCCESSFUL INSURE INDICATORS RETURN TO NORMAL.

APPLICABLE CIRCUIT BREAKERS

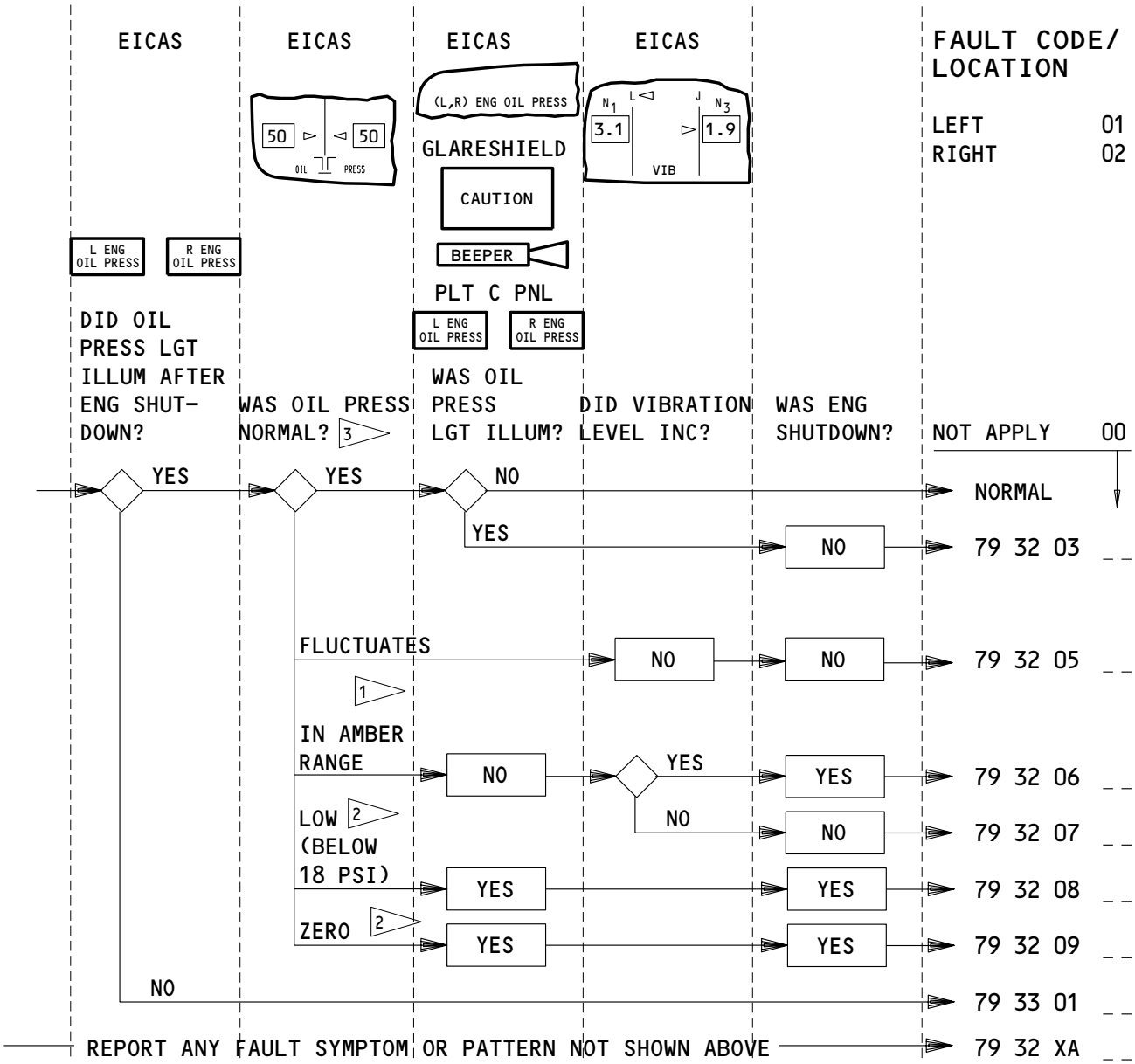
NONE

OIL QUANTITY AND TEMPERATURE – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM



1 LARGE REDUCTIONS IN ENGINE POWER TO BELOW 70% N3 MAY RESULT IN OIL PRESSURE BELOW 25 PSI TEMPORARILY. THIS REDUCTION IS ACCEPTABLE PROVIDING OIL PRESSURE DOES NOT GO BELOW 18 PSI AND RECOVERS TO AT LEAST 25 PSI WITHIN 5 MINUTES.

2 IF QUANTITY ZERO SEE "OIL QUANTITY AND TEMPERATURE" FAULT CODES. DURING ELECTRICAL POWER TRANSFER, OIL PRESSURE INDICATION MAY DROP MOMENTARILY.

3 REFER TO VARIABLE ENG OIL PRESS LIMITS (RB211-535) CHART.

APPLICABLE CIRCUIT BREAKERS

11K9	LEFT ENGINE OIL PRESS
11K35	RIGHT ENGINE OIL PRESS

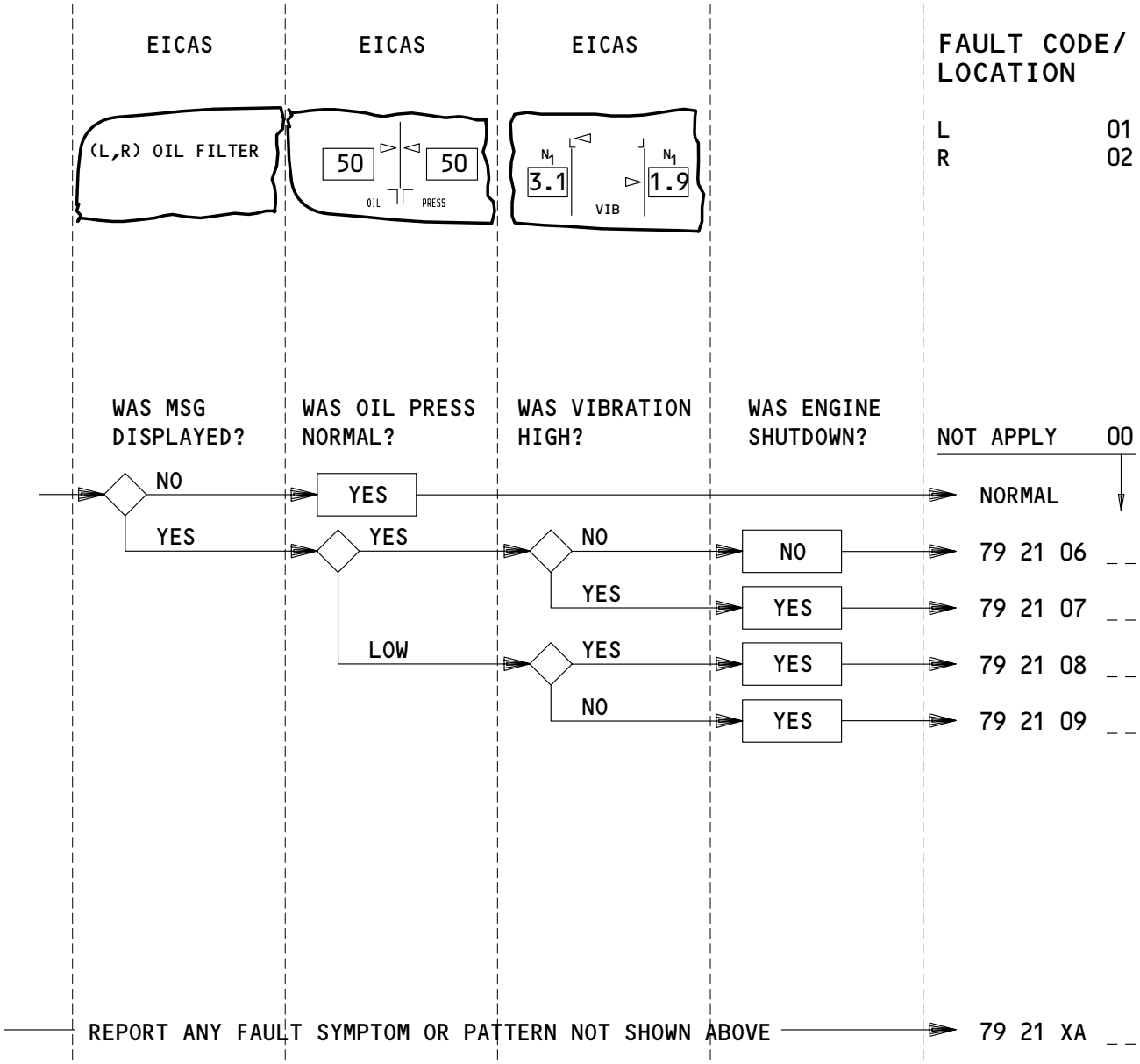
OIL PRESSURE - FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

196232



APPLICABLE CIRCUIT BREAKERS

11K9	LEFT ENGINE OIL PRESS
11K35	RIGHT ENGINE OIL PRESS

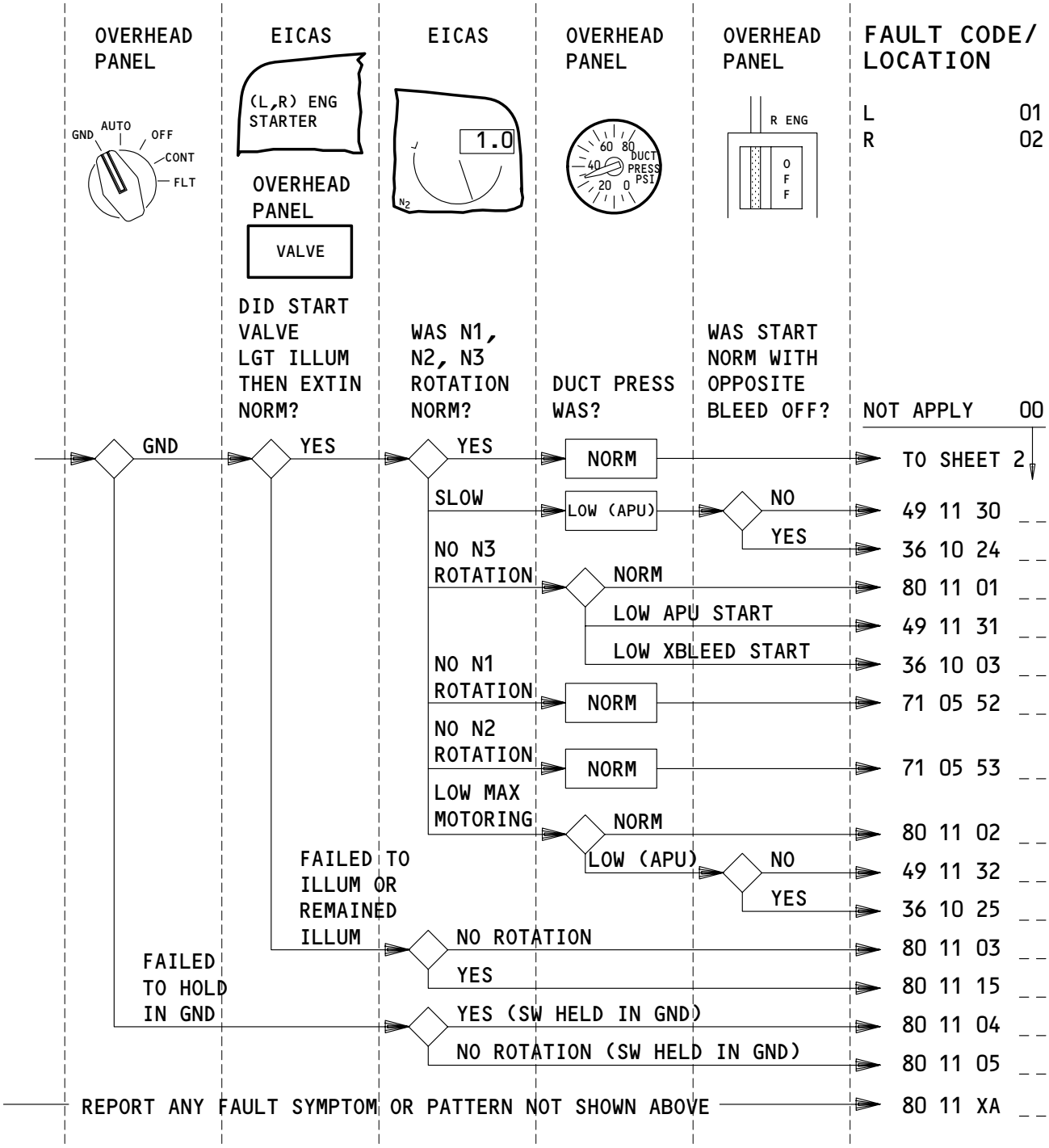
OIL FILTER BYPASS – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

196234



APPLICABLE CIRCUIT BREAKERS

11D19	START CONT LEFT	11Q10	ENG BLD L
11D20	START CONT RIGHT	11Q19	R ENG BLEED

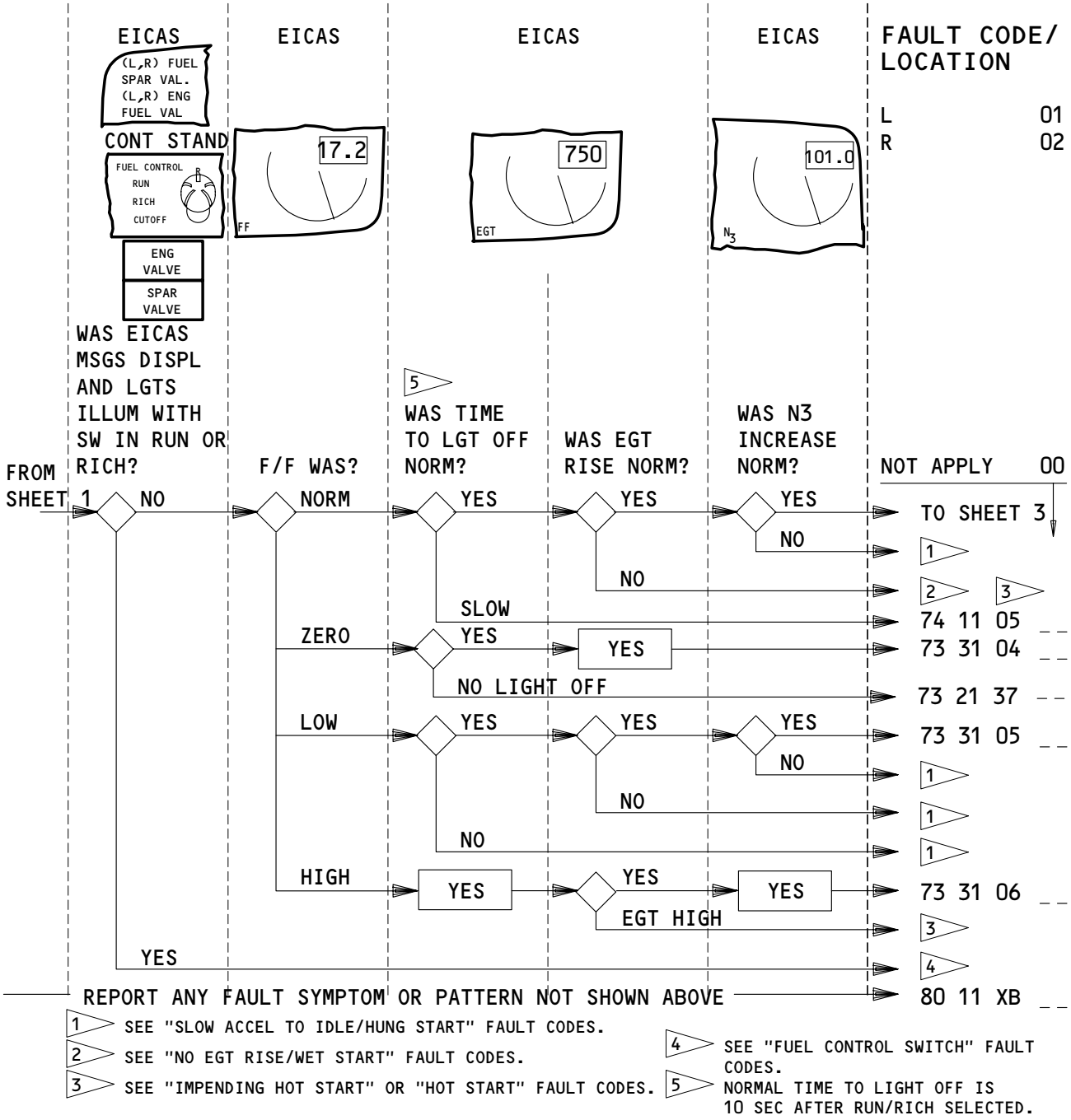
STARTING (SHEET 1) – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

187863



1 SEE "SLOW ACCEL TO IDLE/HUNG START" FAULT CODES.

2 SEE "NO EGT RISE/WET START" FAULT CODES.

3 SEE "IMPENDING HOT START" OR "HOT START" FAULT CODES.

4 SEE "FUEL CONTROL SWITCH" FAULT CODES.

5 NORMAL TIME TO LIGHT OFF IS 10 SEC AFTER RUN/RICH SELECTED.

APPLICABLE CIRCUIT BREAKERS

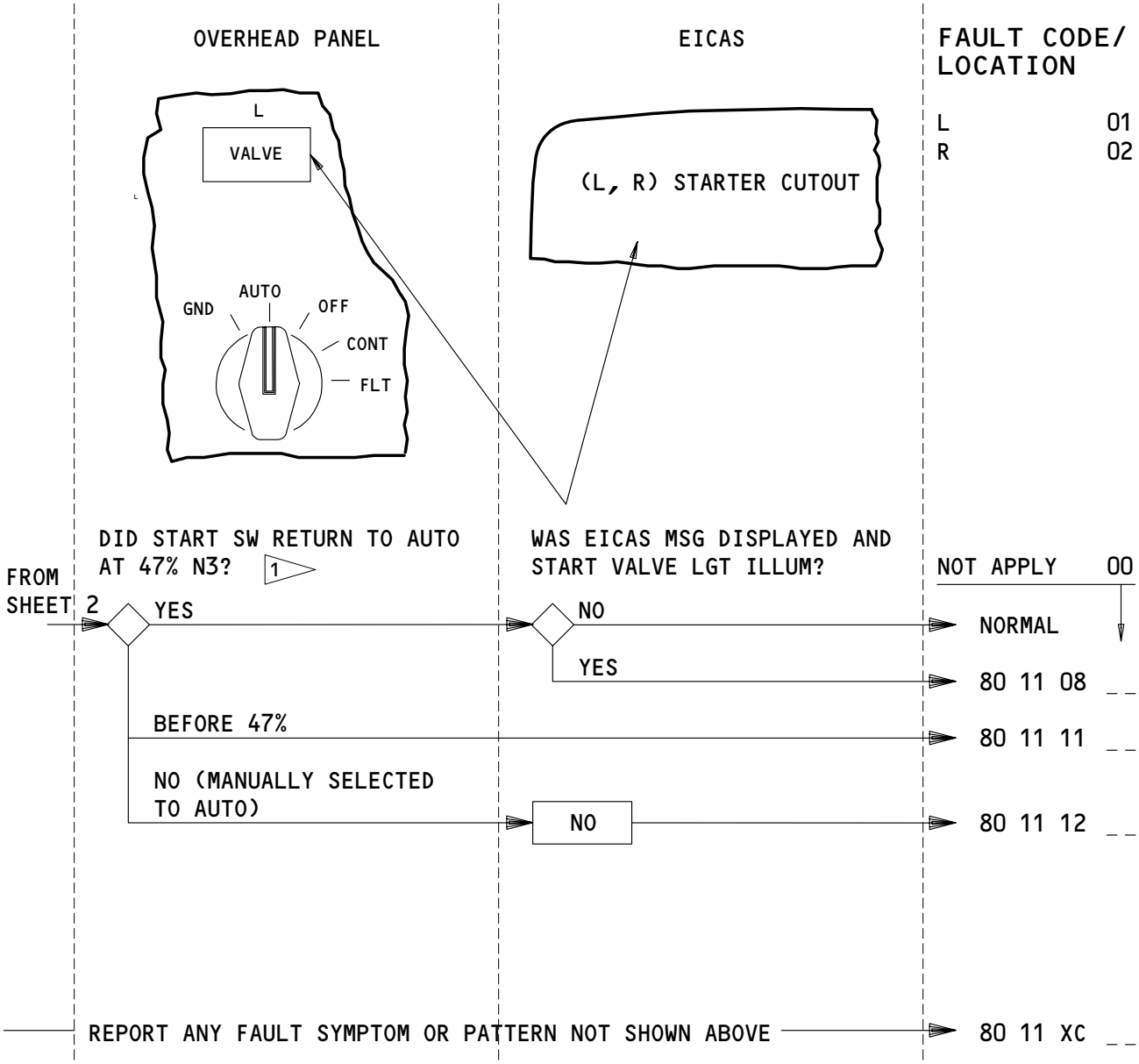
6C1	L FUEL COND CONT	11D7	STBY IGN L 1	11D19	START CONT L
6C2	R FUEL COND CONT	11D8	STBY IGN L 2	11D20	START CONT R
6E1	L SPAR FUEL VALVES	11D9	STBY IGN R 1	11L1	LEFT ENGINE IGN 1
6E2	R SPAR FUEL VALVES	11D10	STBY IGN R 2	11L28	RIGHT ENGINE IGN 1

STARTING (SHEET 2) - FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM



1 START SW SHOULD RETURN TO AUTO BY 50% N3

APPLICABLE CIRCUIT BREAKERS

11D19	START CONT LEFT
11D20	START CONT RIGHT

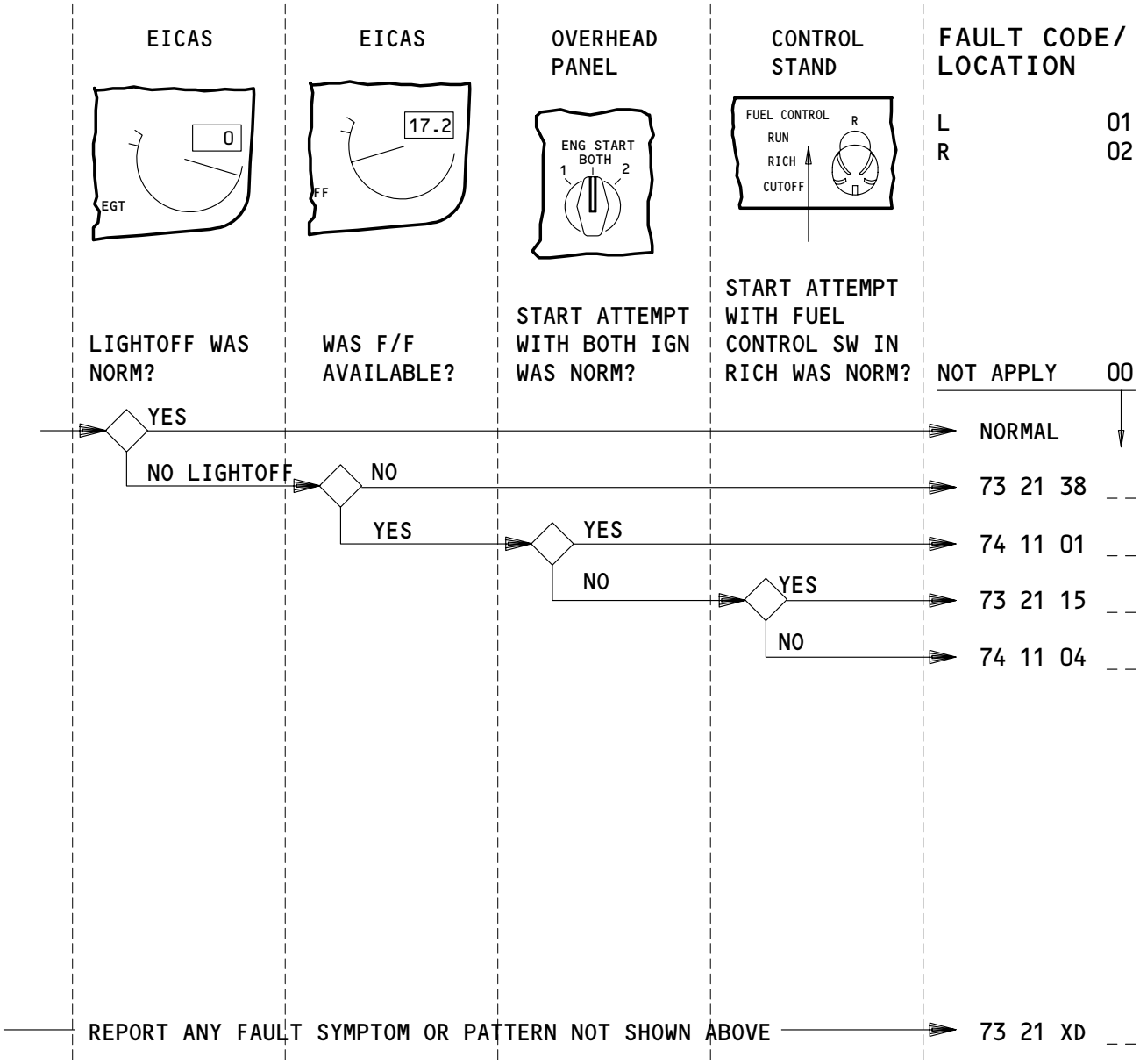
STARTING (SHEET 3) – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

187865



APPLICABLE CIRCUIT BREAKERS

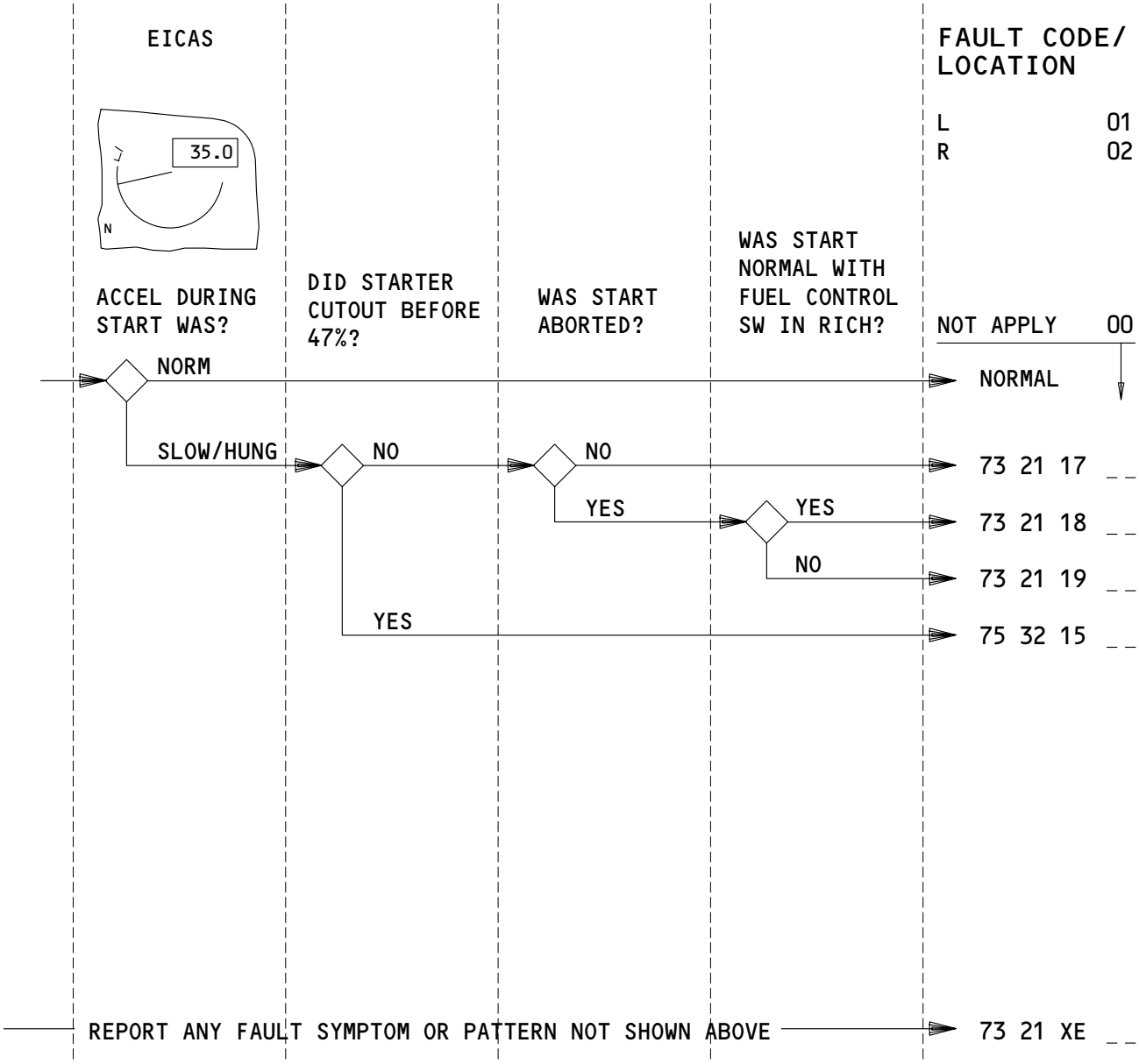
11D7	STBY IGNITION LEFT 1	11D10	STBY IGNITION RIGHT 2
11D8	STBY IGNITION LEFT 2	11L1	LEFT ENGINE IGN 1
11D9	STBY IGNITION RIGHT 1	11L28	RIGHT ENGINE IGN 1

NO EGT RISE/WET START – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM



APPLICABLE CIRCUIT BREAKERS

NONE

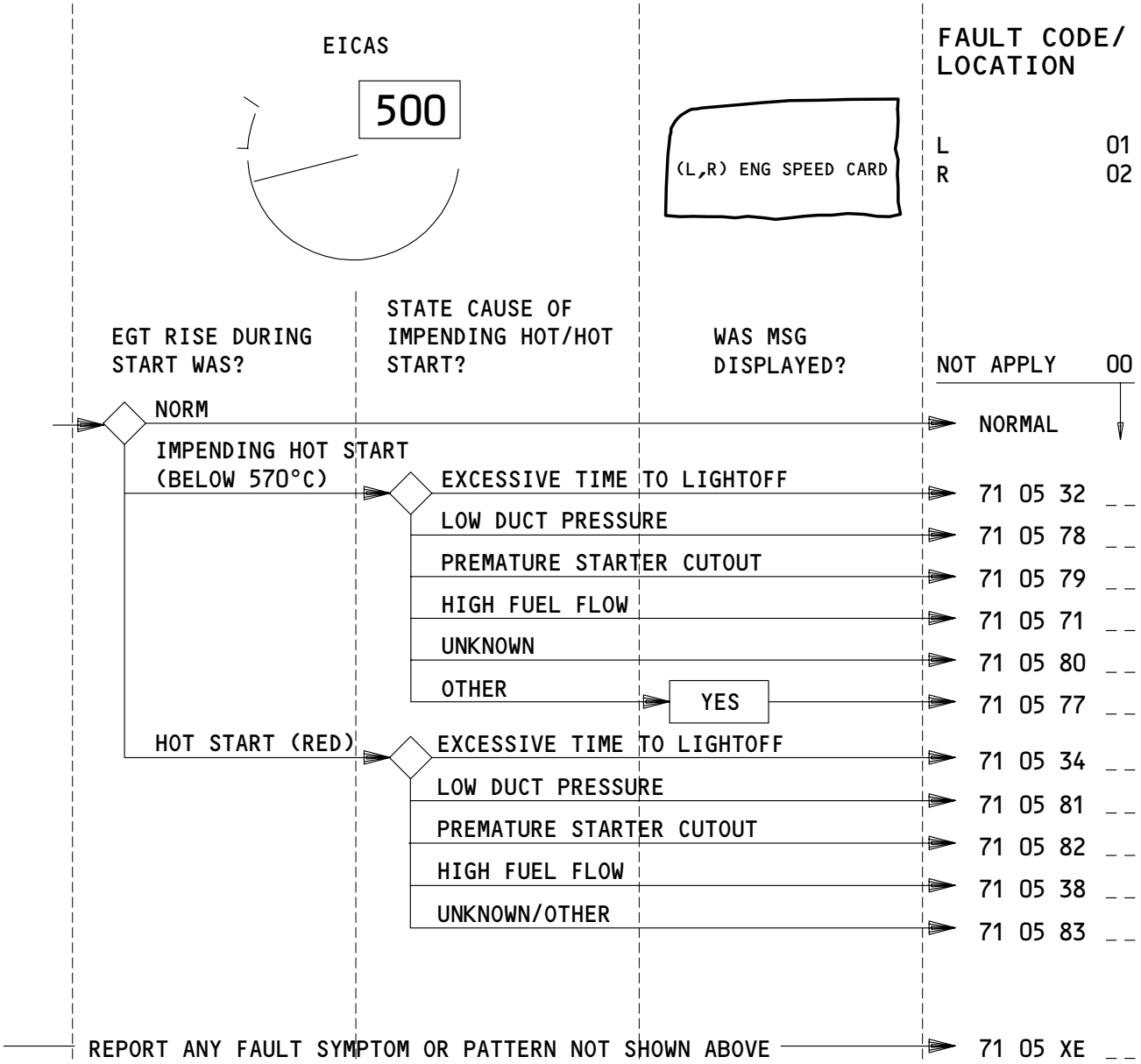
SLOW ACCEL TO IDLE/HUNG START – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

187868



APPLICABLE CIRCUIT BREAKERS

NONE

IMPENDING HOT/HOT START – FAULT CODES

EFFECTIVITY

ALL

71-FAULT CODE DIAGRAM

54336

CHART 1

VARIABLE ENG OIL PRESS LIMITS (RB211-535)

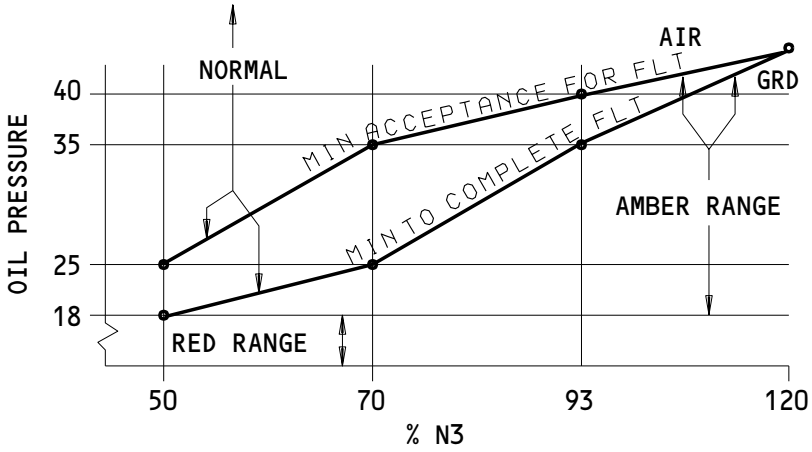


CHART 2

EGT RISE FOR OPEN BLEED VALVE

RB211-535 E4				
ENG POWER	NAME OF VALVE	NO. OF VALVES OPEN		
		1	2	3
		APPROX EGT RISE		
T.O., CLIMB	H.P.	41°	103°	1 164°
	I.P.	27°	81°	148°
CRUISE M.80 35,000'	H.P.	34°	84°	1 133°
	I.P.	25°	73°	133°

1 2 HP3 + 1 HP2 VALVE

ENGINE CHARTS

CHECK 1

MIN/APPR IDLE RPM CHECK

PERFORM THIS CHECK IF MIN OR APPR IDLE RPM IS ABNORMAL. (CHECK IS PERFORMED ON THE GROUND).

CAUTION: ENGINE WILL ACCELERATE RAPIDLY TO APPR IDLE WHEN APPROPRIATE IDLE CONT CB 11L7 OR 11L33 IS PULLED. INSURE ADEQUATE BRAKING EXISTS AND THAT JET BLAST IS NO HAZARD TO PERSONNEL OR EQUIPMENT.

CLOSE ENGINE BLEED AIR VALVE AND NACELLE ANTI-ICE VALVE.

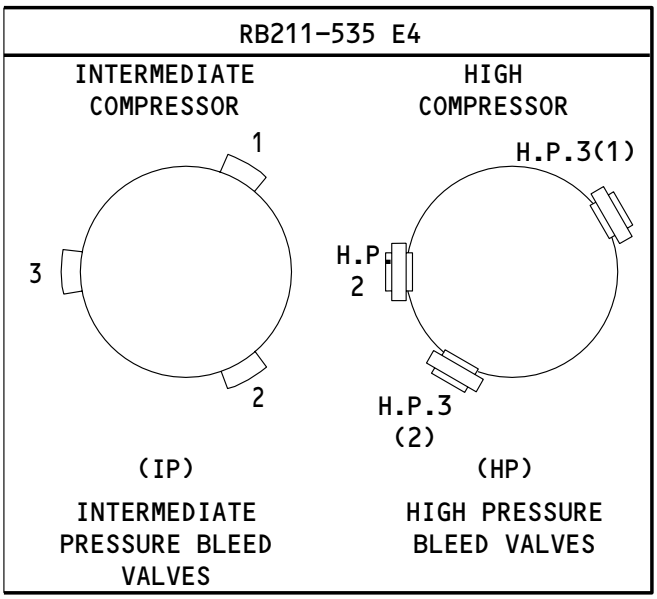
TO CHECK MIN IDLE N1 RPM
RECORD IDLE N1 RPM AND OAT/TAT.

TO CHECK APPR IDLE RPM
PULL APPROPRIATE IDLE CONT CB (11L7 OR 11L33). SEE CAUTION.
RECORD IDLE N1 RPM AND OAT/TAT.
RESET CB.

OPEN ENGINE BLEED AIR VALVE. OPEN NACELLE ANTI-ICE VALVE IF REQUIRED.

CHECK 2

ENGINE SURGE BLEED VALVE CHECK (GROUND)



TO CHECK SURGE BLEED VALVE SCHEDULE, SLOWLY MOVE THRUST LEVER TOWARD CHART EPR. SUDDEN EPR AND EGT CHANGES INDICATE VALVES OPERATING. RECORD EPR AND AMOUNT OF EGT CHANGE. DIFFERENCES BETWEEN CHART EPR & EGT CHANGE TO ACTUAL CHANGES MAY INDICATE A MALFUNCTION.

RB211-535 E4

ACTION	EPR	BLEED VALVES	~EGT CHANGE
ADVANCE TRUST LEVERS TO CLOSE VALVES	1.08-1.15	HP VALVES CLOSE	DECREASE 10-20°C
	1.17-1.24	IP VALVES CLOSE	DECREASE 10-20°C
RETARD THRUST LEVERS TO OPEN VALVES	1.21-1.14	IP VALVES OPEN	INCREASE 10-20°C
	1.14-1.04	HP VALVES OPEN	INCREASE 10-20°C

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 05 XA --	A (01=L,02=R) bird strike problem was encountered by the flight crew which is not covered by the fault code diagrams.	FIM 71-05-00/101, Fig. 105, Block 1
71 05 XB --	An (01=L,02=R) engine overlimits (not starting) problem was encountered by the flight crew which is not covered by the fault code diagrams.	Borescope engine (AMM 72-00-00).
71 05 XC --	A (01=L,02=R) flameout problem was encountered by the flight crew which is not covered by the fault code diagrams.	FIM 71-05-00/101, Fig. 106, Block 1 FIM 71-05-00/101, Fig. 107, Block 1
71 05 XD --	A (01=L,02=R) vibration problem was encountered by the flight crew which is not covered by the fault code diagrams.	FIM 71-05-00/101, Fig. 108, Block 1
71 05 XE --	An (01=L,02=R) impending hot start problem was encountered by the flight crew which is not covered by the fault code diagrams.	FIM 71-05-00/101, Fig. 114, Block 4
71 05 XF --	An (01=L,02=R) impending hot start problem was encountered by the flight crew which is not covered by the fault code diagrams.	FIM 71-05-00/101, Fig. 114, Block 1
71 05 XG --	A (01=L,02=R) reverse thrust limit problem was encountered by the flight crew which is not covered by the fault code diagrams.	SSM 78-34-01
71 06 XA --	An (01=L,02=R) engine accel rate/auto decel problem was encountered by the flight crew which is not covered by the fault code diagrams.	FIM 71-06-00/101, Fig. 101, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 06 XB --	An (01=L,02=R) engine power fluctuation problem was encountered by the flight crew which is not covered by the fault code diagrams.	FIM 71-06-00/101, Fig. 102, Block 1
71 06 XC --	A (01=L,02=R) problem where an engine had the same EPR with other parameters not equal was encountered by the flight crew which is not covered by the fault code diagrams.	SSM 73-21-01
71 06 XD --	An (01=L,02=R) engine having a surge (stall) T.O. and constant power problem was encountered by the flight crew which is not covered by the fault code diagrams.	FIM 71-06-00/101, Fig. 103, Block 1
71 06 XE --	An (01=L,02=R) engine having a surge (stall) accel, decel, cont msg symptoms problem was encountered by the flight crew which is not covered by the fault code diagrams.	SSM 75-32-01
71 06 XF --	A (01=L,02=R) T.O./climb EPR unattainable problem was encountered by the flight crew which is not covered by the fault code diagrams.	FIM 71-06-00/101, Fig. 106, Block 1
71 06 XG --	A (01=L,02=R) reverse thrust EPR problem was encountered by the flight crew which is not covered by the fault code diagrams.	SSM 73-21-04, SSM 73-21-05
71 05 01 --	(01=L,02=R) Engine had bird strike. Engine had nonrecoverable stall and was shut down.	FIM 71-05-00/101, Fig. 101, Block 1
71 05 02 --	(01=L,02=R) Engine had bird strike. Engine stalled momentarily, then recovered with normal operation.	FIM 71-05-00/101, Fig. 102, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 05 03 --	(01=L,02=R) Engine had bird strike. Engine stalled momentarily. Engine parameters abnormal after stall. Engine was shut down (record data).	FIM 71-05-00/101, Fig. 101, Block 1
71 05 04 --	(01=L,02=R) Engine had bird strike. Engine stalled momentarily. Engine parameters abnormal after stall. Engine was not shut down (record data).	FIM 71-05-00/101, Fig. 101, Block 1
71 05 05 --	(01=L,02=R) Engine had bird strike. Engine operation normal.	FIM 71-05-00/101, Fig. 103, Block 1
71 05 06 --	(01=L,02=R) Engine had bird strike. Engine parameters abnormal. Engine was shut down (record data).	FIM 71-05-00/101, Fig. 104, Block 1
71 05 07 --	(01=L,02=R) Engine had bird strike. Engine parameters abnormal. Engine was not shut down (record data).	FIM 71-05-00/101, Fig. 104, Block 1
71 05 08 00	Airplane had bird strike (state area).	FIM 71-05-00/101, Fig. 105, Block 2
71 05 09 --	Airplane had bird strike, area unknown.	FIM 71-05-00/101, Fig. 105, Block 1
71 05 15 --	(01=L,02=R) Engine EGT exceeded limits. Temp did not decrease when thrust lever retarded. Engine was shut down.	FIM 71-05-00/101, Fig. 116, Block 1
71 05 16 --	(01=L,02=R) Engine EGT exceeded limits with Engine Limiter Control (ELC) on. EGT returned to within limits when thrust reduced. Engine not shut down.	FIM 71-05-00/101, Fig. 116, Block 1
71 05 20 --	(01=L,02=R) Engine flameout or rundown below sub-idle power. Engine had normal restart.	FIM 71-05-00/101, Fig. 106, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 05 21 --	(01=L,02=R) Engine flameout or rundown below sub-idle power. Restart not attempted due to no N3 RPM.	FIM 71-05-00/101, Fig. 107
71 05 23 --	(01=L,02=R) Engine flameout or rundown below sub-idle power. Restart not attempted (note reason for no attempt).	FIM 71-05-00/101, Fig. 107, Block 1
71 05 24 --	(01=L,02=R) Engine flameout or rundown below sub-idle power. Restart unsuccessful due to no fuel flow.	FIM 71-05-00/101, Fig. 107, Block 11
71 05 25 --	(01=L,02=R) Engine flameout or rundown below sub-idle power. Restart unsuccessful due to low fuel flow.	FIM 71-05-00/101, Fig. 107, Block 11
71 05 32 --	(01=L,02=R) Engine had impending hot start. EGT peaked below 570°C. Time to lightoff was ____ sec.	FIM 71-05-00/101, Fig. 112, Block 1
71 05 32 --	(01=L,02=R) Engine had hot hot start. Time to lightoff was ____ sec.	FIM 71-05-00/101, Fig. 114, Block 1
71 05 38 --	(01=L,02=R) Engine had hot start. F/F was high, ____ lb/hr (kg/hr).	FIM 71-05-00/101, Fig. 114
71 05 52 --	(01=L,02=R) Engine N1 failed to rotate during start attempt.	FIM 71-05-00/101, Fig. 109, Block 1
71 05 53 --	(01=L,02=R) Engine N2 failed to rotate during start attempt.	FIM 71-05-00/101, Fig. 110, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 05 58 --	(03=L N1,04=L N2,05=L N3,06=R N1,07=R N2,08=R N3) Engine vibration higher than normal, reads ____. Engine had surge, indications followed thrust lever movements, indications abnormal, high oil temp, low oil pressure, oil filter msg, airplane/thrust lever vibration. Engine was not shut down.	FIM 71-05-00/101, Fig. 108, Block 1
71 05 59 --	(03=L N1,04=L N2,05=L N3,06=R N1,07=R N2,08=R N3) Engine vibration higher than normal, reads ____. Engine had surge, indications followed thrust lever movements, indications abnormal, high oil temp, low oil pressure, oil filter msg, airplane/thrust lever vibration. Engine was shut down.	FIM 71-05-00/101, Fig. 108, Block 1
71 05 65 --	(01=L,02=R) Engine N1 RPM went to overspeed with ELC on.	FIM 71-05-00/101, Fig. 115, Block 1
71 05 66 --	(01=L,02=R) Engine N2 RPM went to overspeed.	FIM 71-05-00/101, Fig. 115, Block 1
71 05 67 --	(01=L,02=R) Engine N3 RPM went to overspeed.	FIM 71-05-00/101, Fig. 115, Block 1
71 05 71 --	(01=L,02=R) Engine had impending hot start. EGT peaked below 570°C. Fuel flow was high, ____ lbs/kgs/hr.	FIM 71-05-00/101, Fig. 113, Block 1
71 05 73 --	(03=L N1,04=L N2,05=L N3,06=R N1,07=R N2,08=R N3) Engine vibration high, reads ____. Engine had engine surge, oil filter msg, abnormal indication, high oil temp, low oil pressure, airplane/thrust lever vibration, etc. Vibration returned below 2.5 with thrust lever retarded.	FIM 71-05-00/101, Fig. 108, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 05 74 --	(03=L N1,04=L N2,05=L N3,06=R N1,07=R N2,08=R N3) Engine vibration high, reads ____. Engine indications normal. Vibration returned below 2.5 with thrust lever retarded. Engine was not shut down.	FIM 71-05-00/101, Fig. 108, Block 1
71 05 75 --	(03=L N1,04=L N2,05=L N3,06=R N1,07=R N2,08=R N3) Engine vibration high, reads ____. Engine indications normal. Vibration remained above 2.5 with thrust lever retarded to idle. Engine was shut down.	FIM 71-05-00/101, Fig. 108, Block 1
71 05 76 --	(03=L N1,04=L N2,05=L N3,06=R N1,07=R N2,08=R N3) Engine vibration high, reads ____. Engine had engine surge, oil filter msg, abnormal indication, high oil temp, low oil pressure, airplane/thrust lever vibration, etc. Vibration remained above 2.5 with thrust retarded to idle. Engine was shut down.	FIM 71-05-00/101, Fig. 108, Block 1
71 05 77 --	(01=L,02=R) Engine had impending hot start. EGT peaked below 570°C. (L,R) ENG SPEED CARD EICAS msg displayed.	FIM 77-12-00/101, Fig. 103, Block 1
71 05 78 --	(01=L,02=R) Engine had impending hot start. EGT peaked below 570°C. Duct pressyre was low, ____ psi during start.	FIM 71-05-00/101, Fig. 114, Block 1
71 05 79 --	(01=L,02=R) Engine had impending hot start. EGT peaked below 570°C. Starter cutout early, at ____% N3.	FIM 71-05-00/101, Fig. 114, Block 8
71 05 80 --	(01=L,02=R) Engine had impending hot start. EGT peaked below 570°C. Impending hot start cause, unknown.	FIM 71-05-00/101, Fig. 114, Block 4

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 05 81 --	(01=L,02=R) Engine had hot start. Duct press was low, ____ psi during start.	FIM 71-05-00/101, Fig. 114, Block 1
71 05 82 --	(01=L,02=R) Engine had hot start. Starter cutout early, at ____% N3.	FIM 71-05-00/101, Fig. 114, Block 1
71 05 83 --	(01=L,02=R) Engine had hot start. Hot start cause, state cause/unknown.	FIM 71-05-00/101, Fig. 114, Block 1
71 06 01 --	(01=L,02=R) Engine had auto decel with no thrust lever movement. Engine operation normal with EEC off.	FIM 71-06-00/101, Fig. 108, Block 1
71 06 02 --	(01=L,02=R) Engine was slow to accel during takeoff or in flight. Acceleration rate was normal with engine bleedoff.	FIM 71-06-00/101, Fig. 101, Block 2
71 06 03 --	(01=L,02=R) Engine was slow to accel during takeoff or in flight. Acceleration still slow with engine bleedoff.	FIM 71-06-00/101, Fig. 101, Block 2
71 06 04 --	(01=L,02-R) Engine would not accel.	FIM 71-06-00/101, Fig. 101A, Block 1
71 06 06 --	(01=L,02=R) Engine power fluctuates. Engine still unstable with EEC off. Duct pressure not cycling between low and hi stage.	FIM 71-06-00/101, Fig. 102, Block 1
71 06 12 --	EICAS MSG (01=L,02=R) ENG SURGE CONT displayed.	FIM 75-32-00/101, Fig. 106, Block 1
71 06 13 --	(01=L,02=R) Engine surged during T.O. Engine operation normal after surge.	FIM 71-06-00/101, Fig. 103, Block 1
71 06 14 --	(01=L,02=R) Engine surged during T.O. Engine operation abnormal. Engine was not shut down (give abnormal indication).	FIM 71-06-00/101, Fig. 103, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 06 15 --	(01=L,02=R) Engine surged during T.O. Engine shutdown.	FIM 71-06-00/101, Fig. 103, Block 1
71 06 16 --	(01=L,02=R) Engine surged during constant power at _____ feet. Engine operation normal after surge.	FIM 71-06-00/101, Fig. 104, Block 1
71 06 17 --	(01=L,02=R) Engine surged during constant power at _____ feet. Engine operation abnormal. Engine was not shut down (give abnormal ind).	FIM 71-06-00/101, Fig. 104A, Block 1
71 06 18 --	(01=L,02=R) Engine surged during constant power at _____ feet. Engine shutdown. Windmilling RPM was normal.	FIM 71-06-00/101, Fig. 104A, Block 1
71 06 19 --	(01=L,02=R) Engine surged during constant power at _____ feet. Engine shutdown. Windmilling RPM was abnormal (give normal vs windmilling RPM).	FIM 71-06-00/101, Fig. 104A, Block 1
71 06 21 --	(01=L,02=R) Engine surged during (accel, decel) at _____ feet (above 17,500 feet). Engine operation normal after surge.	FIM 71-06-00/101, Fig. 105, Block 1
71 06 22 --	(01=L,02=R) Engine surged during (accel, decel) at _____ feet (below 17,500 feet). Engine operation normal after surge.	FIM 71-06-00/101, Fig. 105A, Block 1
71 06 23 --	(01=L,02=R) Engine surged during (accel, decel) at _____ feet (above 17,500 feet). Engine operation abnormal after surge. Engine was not shut down (give abnormal indications).	FIM 71-06-00/101, Fig. 105, Block 1
71 06 24 --	(01=L,02=R) Engine surged during (accel, decel) at _____ feet (below 17,500 feet). Engine operation abnormal after surge. Engine was not shut down (give abnormal indications).	FIM 71-06-00/101, Fig. 105A, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 06 25 --	(01=L,02=R) Engine surged during (accel, decel) at _____ feet (above 17,500 ft). Engine shutdown. Engine windmilling rpm was normal.	FIM 71-06-00/101, Fig. 105, Block 1
71 06 26 --	(01=L,02=R) Engine surged during (accel, decel) at _____ feet (above 17,500 feet). Engine shutdown. Engine windmilling rpm not normal (give normal vs windmilling rpm).	FIM 71-06-00/101, Fig. 105, Block 1
71 06 27 --	(01=L,02=R) Engine surged during (accel, decel) at _____ feet (below 17,500 feet). Engine shutdown. Engine windmilling rpm not normal.	FIM 71-06-00/101, Fig. 105A, Block 1
71 06 28 --	(01=L,02=R) Engine surged during (accel, decel) at _____ feet (below 17,500 feet). Engine shutdown. Engine windmilling rpm not normal (give normal vs windmilling rpm).	FIM 71-06-00/101, Fig. 105A, Block 1
71 06 40 --	(01=L,02=R) Engine would not attain max rev (EPR/N1). _____ N1 was reached. Thrust lever movement was normal.	Perform Power Plant Test No. 15 (AMM 71-00-00). If unable to adjust within limits, replace fuel flow governor (AMM 73-21-01).
71 06 41 --	(01=L,02=R) Engine exceeded MAX REV (N1). _____ N1 was reached.	Perform Power Plant Test No. 15 (AMM 71-00-00). If unable to adjust within limits, replace fuel flow governor (AMM 73-21-01).
71 06 42 --	(01=L,02=R) Engime F/F and EGT is _____°C higher than other eng at same EPR during (T.O., climb, cruise).	FIM 71-06-00/101, Fig. 104, Block 2
71 06 53 --	(01=L,02=R) Engine F/F and EGT is _____°C higher than other eng at same EPR during (T.O., climb, cruise). Surge bleed valve check was normal.	FIM 71-06-00/101, Fig. 104, Block 2

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 06 54 --	(O1=L,O2=R) Engine F/F and EGT is _____°C higher than other eng at same EPR during (T.O., climb, cruise). Surge bleed valve check shows no EGT change between 1.10-1.12 EPR.	FIM 71-06-00/101, Fig. 104, Block 2
71 06 55 --	(O1=L,O2=R) Engine F/F and EGT is _____°C higher than other eng at same EPR during (T.O., climb, cruise). Surge bleed valve check shows less than 60° EGT changed between 1.10-1.12 EPR.	FIM 71-06-00/101, Fig. 104, Block 2
71 06 56 --	(O1=L,O2=R) Engine F/F and EGT is _____°C higher than other eng at same EPR during (T.O., climb, cruise). Surge bleed valve check shows no EGT change between 1.17-1.20 EPR.	FIM 71-06-00/101, Fig. 104, Block 2
71 06 57 --	(O1=L,O2=R) Engine F/F and EGT is _____°C higher than other eng at same EPR during (T.O., climb, cruise). Surge bleed valve check less than 18° EGT change between 1.17-1.20 EPR.	FIM 71-06-00/101, Fig. 104, Block 2
71 06 58 --	(O1=L,O2=R) Engine F/F and EGT is _____°C higher than other eng at same EPR during (T.O., climb, cruise). Check indicates IP valve(s) open.	FIM 71-06-00/101, Fig. 104, Block 2
71 06 59 --	(O1=L,O2=R) Engine F/F and EGT is _____°C higher than other eng at same EPR during (T.O., climb, cruise). Check indicates HP valve(s) open.	FIM 71-06-00/101, Fig. 104, Block 2
71 06 60 --	(O1=L,O2=R) Engine F/F and EGT is _____°C higher than other eng at same EPR during (T.O., climb, cruise). Unable to determine faulty valve.	FIM 71-06-00/101, Fig. 104, Block 2

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 06 61 --	(01=L,02=R) Engine would not reach T.O EPR with thrust lever full fwd and Engine Limiter ON. T.O. power available with Engine Limiter OFF.	FIM 71-06-00/101, Fig. 106, Block 11
71 06 62 --	(01=L,02=R) Engine would not reach T.O. EPR with thrust lever full fwd and EEC or Engine Limiter ON or OFF. Engine parameters were normal for low EPR.	FIM 71-06-00/101, Fig. 106, Block 1
71 06 63 --	(01=L,02=R) Engine would not reach T.O. EPR with thrust lever full fwd and EEC ON. T.O. power available with EEC OFF.	FIM 71-06-00/101, Fig. 106, Block 11
71 06 64 --	(01=L,02=R) Engine would not reach T.O. EPR with EEC and Engine Limiter ON. Engine parameters normal for low EPR. T.O. with EEC and Engine Limiter OFF not checked.	FIM 71-06-00/101, Fig. 106, Block 1
71 06 65 --	(01=L,02=R) Engine was slow to accel during T.O. Acceleration rate was normal with eng bleed off.	FIM 71-06-00/101, Fig. 107, Block 3
71 06 66 --	(01=L,02=R) Engine was slow to accel during T.O. Acceleration still slow with eng bleed off. Minimum idle rpm not checked.	FIM 71-06-00/101, Fig. 107, Block 1
71 06 67 --	(01=L,02=R) Engine was slow to accel during T.O. Acceleration still slow with eng bleed off. Minimum idle rpm is low ____%N1.	FIM 71-06-00/101, Fig. 107, Block 1
71 06 68 --	(01=L,02=R) Engine was slow to accel during T.O. Acceleration still slow with eng bleed off. Minimum idle rpm is normal.	FIM 71-06-00/101, Fig. 106, Block 1
71 06 69 --	EICAS msg (01=L,02=R) ENG SURGE CONT displayed. Engine parameters normal.	FIM 75-32-00/101, Fig. 106, Block 1

FAULT CODE	LOG BOOK REPORT	FAULT ISOLATION REFERENCE
71 06 71 --	(01=L,02=R) Engine EGT is ____°C higher than other eng at same EPR during all power settings. EICAS msg (L,R) ENG SURGE CONT was displayed.	FIM 75-32-00/101, Fig. 106, Block 1
71 06 72 --	(01=L,02=R) Engine rev idle N1 higher than other eng (record N1 both engines).	Perform Power Plant Test No. 15 (AMM 71-00-00). If unable to adjust within limits, replace fuel flow governor (AMM 73-21-01).

BITE Index

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

LRU/System Name	Acronym	FIM Reference
Air Data Computer	ADC	34-12
Air Data Inertial Reference Unit	ADIRU	34-26
Air Traffic Control Transponder	ATC	34-53
Airborne Vibration Monitor Signal Conditioner	AVM	77-31
Antiskid/Autobrake Control Unit		32-42
APU Fire Detection System		26-15
Automatic Direction Finder Receiver	ADF	34-57
APU Control Unit	ECU	49-11
Brake Temperature Monitor Unit		32-46
Bus Power Control Unit	BPCU	24-20
Cabin Pressure Controller		21-30
Digital Flight Data Acquisition Unit	DFDAU	31-31
Distance Measuring Equipment Interrogator	DME	34-55
Duct Leak (Wing and Body)		26-18
E/E Cooling Control Card (If cards installed)		21-58
ECS Bleed Configuration Card		36-10
Electronic Engine Control (RR Engines)	EEC	73-21
Electronic Engine Control Monitor Unit (PW Engines)	EECM	71-EPCS Message Index
Electronic Flight Instrument System	EFIS	34-22
Electronic Propulsion Control System (PW Engines)	EPCS	71-EPCS Message Index
Engine Fire/Overheat Detection System		26-11
Engine Indication and Crew Alerting System Computer	EICAS	31-41

Bite Index
Figure 1 (Sheet 1)

EFFECTIVITY
ALL

H55943

LRU/System Name	Acronym	FIM Reference
Engine Turbine Cooling Overheat Detection System (RR Engines)		26-13
Enhanced Ground Proximity Warning Computer	EGPWC	34-46
Flap/Slat Accessory Module	FSAM	27-51
Flap/Slat Electronic Unit	FSEU	27-51
Flight Management Computer	FMC	34-61
Fuel Quantity Indicating System Processor	FQIS	28-41
Ground Proximity Warning Computer	GPWC	34-46
HF (High Frequency) Communication		23-11
Inertial Reference Unit	IRU	34-21
Instrument Comparator Unit	ICU	34-25
Instrument Landing System Receiver	ILS	34-31
Lower Cargo Compartment Smoke Detection System		26-16
Maintenance Control Display Panel	MCDP	22-00
PA (Passenger Address) Amplifier		23-31
Pack Standby Temperature Controller		21-51
Pack Temperature Controller		21-51
Passenger Entertainment System	PES	23-34
Power Supply Module (Control System Electronics Units)	PSM	27-09
Propulsion Discrete Interface Unit (PW Engines)	PDIU	73-21
Proximity Switch Electronics Unit	PSEU	32-09
Radio Altimeter Transmitter/Receiver	RA	34-33
Rudder Ratio Changer Module	RRCM	27-09
Spoiler Control Module	SCM	27-09
Stabilizer Position Module	SPM	27-48
Stabilizer Trim/Elevator Asymmetry Limit Module	SAM	27-09
Stall Warning Computer/Module (in Warning Electronic Unit)	SWC	27-32
Strut Overheat Detection System (RR Engines)		26-12

Bite Index
Figure 1 (Sheet 2)

H55944

LRU/System Name	Acronym	FIM Reference
Thrust Management Computer/Autothrottle	TMC	22-00
Traffic Alert and Collision Avoidance Computer	TCAS	34-45
VHF (Very High Frequency) Communication		23-12
VOR/Marker Beacon Receiver	VOR/MKR	34-51
Warning Electronic Unit BITE Module (Stall Warning)	WEU	27-32
Weather Radar Transceiver	WXR	34-43
Wheel Well Fire Detection		26-17
Window Heat Control Unit	WHCU	30-41
Yaw Damper Module	YDM	22-21
Yaw Damper/Stabilizer Trim Module	YSM	27-09
Zone Temperature Controller		21-60

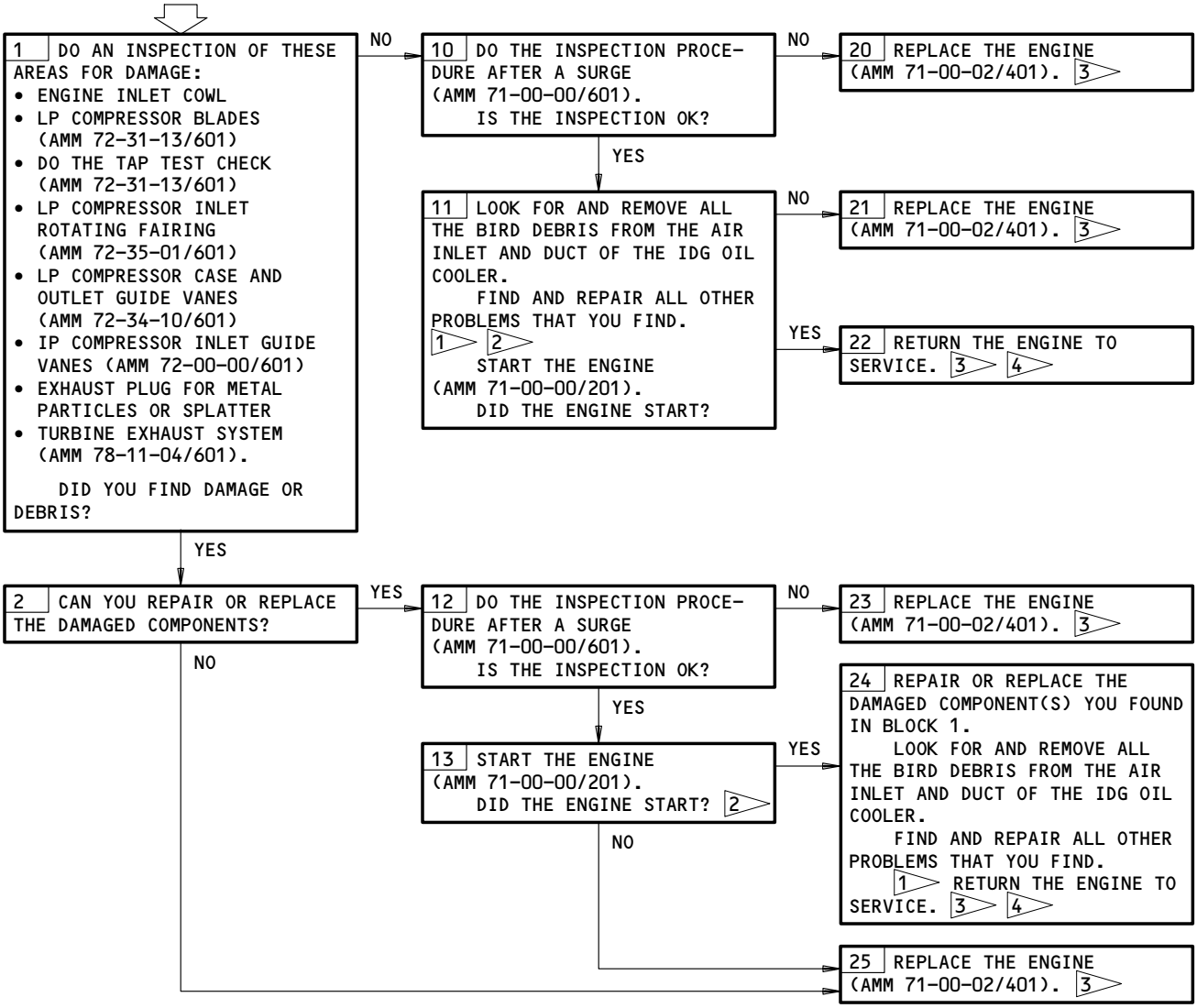
Bite Index
Figure 1 (Sheet 3)

POWER PLANT (NONPOWER RELATED) - FAULT ISOLATION

1. General
   A. This section contains nonpower related Power Plant fault isolation procedures. For power related Power Plant fault isolation procedures, refer to 71-06-00.

BIRDSTRIKE WITH SURGE AND ABNORMAL ENGINE INDICATIONS

PREREQUISITES
NONE



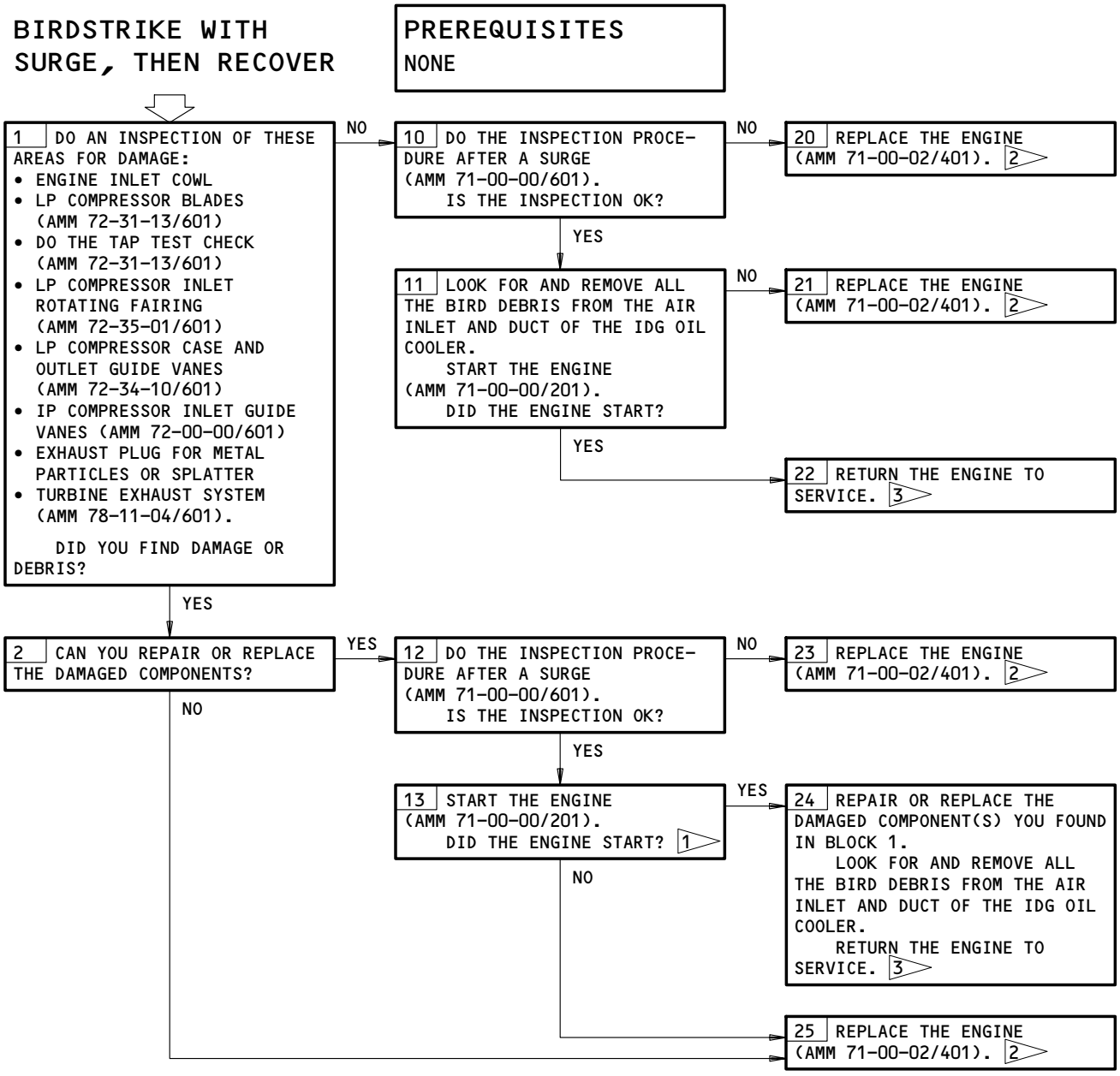
1 YOU CAN IGNORE ALL OTHER ENGINE PARAMETER MALFUNCTIONS FROM THE RECORD IN THE EICAS IF THESE CONDITIONS OCCUR:
1. THE MALFUNCTIONS ONLY OCCURRED MOMENTARILY
2. THE ENGINE PARAMETERS WERE NORMAL IMMEDIATELY AFTER THE BIRDSTRIKE.

2 YOU CAN RUN THE ENGINE WITH BENT LP COMPRESSOR BLADES IF THE ENGINE TURNS FREELY AND THE GROUND IDLE IS NOT HIGHER THAN THE LIMITS. A HOT START AFTER A BIRDSTRIKE IS A SIGN OF DAMAGE TO THE STAGE 1 HP COMPRESSOR.

3 DO THIS PROCEDURE: EICAS AUTO EVENT MESSAGE VERIFICATION/ERASE PROCEDURE (FIG. 111).

4 ERASE THE TPU FAULT CODES IF YOU FIND THE FAULT CODE 40 (AMM 75-32-15/201).

Birdstrike with Surge and Abnormal Engine Indications
Figure 101



1 YOU CAN RUN THE ENGINE WITH BENT LP COMPRESSOR BLADES IF THE ENGINE TURNS FREELY AND THE GROUND IDLE IS NOT HIGHER THAN THE LIMITS. A HOT START AFTER A BIRDSTRIKE IS A SIGN OF DAMAGE TO THE STAGE 1 HP COMPRESSOR.

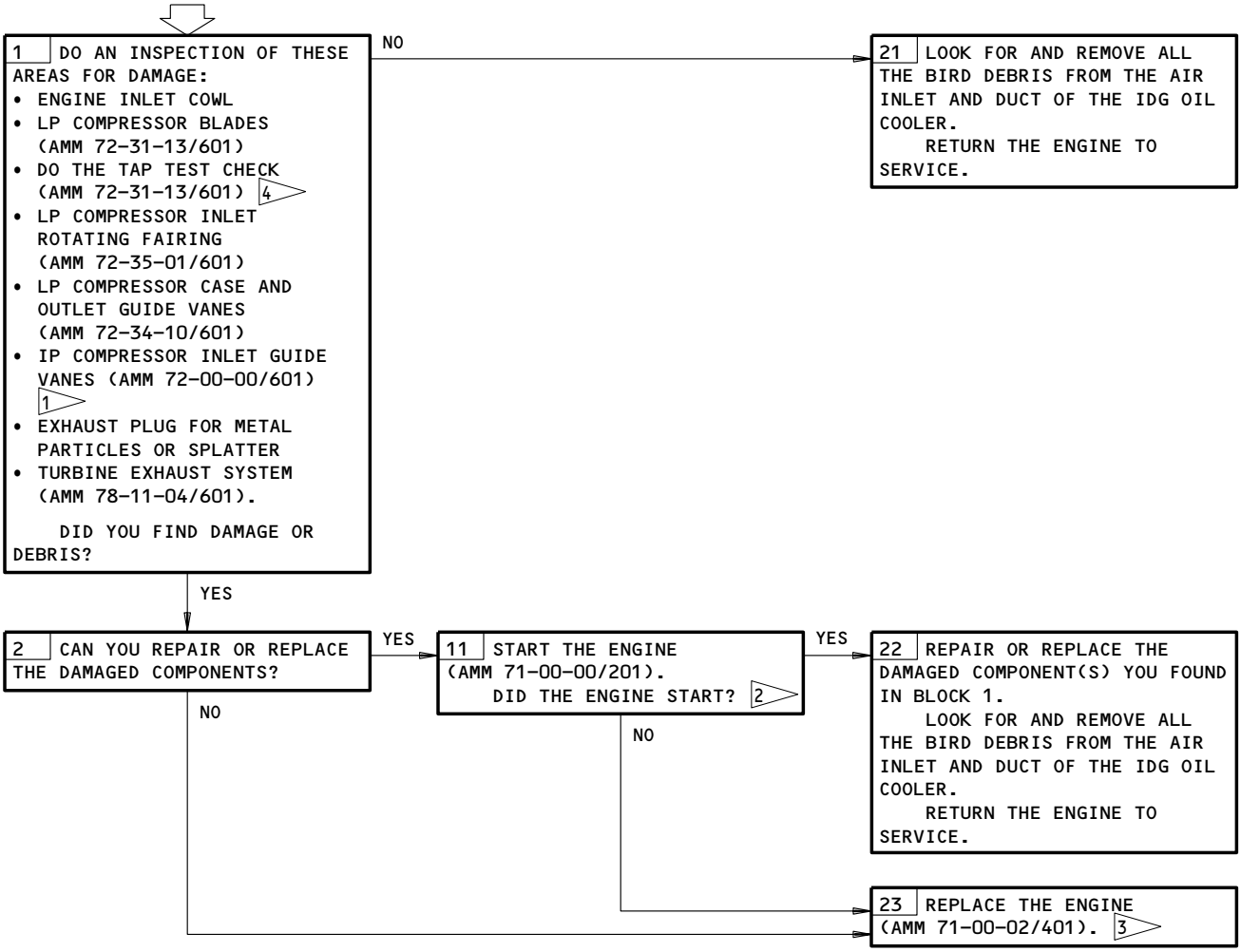
2 DO THIS PROCEDURE: EICAS AUTO EVENT MESSAGE VERIFICATION/ERASE PROCEDURE (FIG. 111).

3 ERASE THE TPU FAULT CODES IF YOU FIND THE FAULT CODE 40 (AMM 75-32-15/201).

Birdstrike with Surge, then Recover
Figure 102

BIRDSTRIKE WITHOUT SURGE, ENGINE INDICATIONS NORMAL

PREREQUISITES
NONE



1 WHEN YOU DO THE INSPECTION OF THE INLET GUIDE VANES OF THE IP COMPRESSOR, IF YOU SEE OR THINK THAT DEBRIS HAVE GONE THROUGH THE GAS GENERATOR, DO AN INSPECTION OF THE STAGE 1 ROTOR BLADES OF THE IP AND HP COMPRESSOR (AMM 72-00-00/601). IF THE DAMAGE IS NOT MORE THAN THE INSPECTION LIMITS, DO AN INSPECTION OF THE METER PANEL OF THE COMBUSTION CHAMBER FOR BOWING AND/OR DISTORTION (AMM 72-00-00/601). ONE SIGN THAT A BIRDSTRIKE IN THE GAS GENERATOR HAS OCCURRED IS AN UNUSUAL ODOR IN THE CABIN.

2 YOU CAN RUN THE ENGINE WITH BENT LP COMPRESSOR BLADES IF THE ENGINE TURNS FREELY AND THE GROUND IDLE IS NOT HIGHER THAN THE LIMITS. A HOT START AFTER A BIRDSTRIKE IS A SIGN OF DAMAGE TO THE STAGE 1 HP COMPRESSOR.

3 DO THIS PROCEDURE: EICAS AUTO EVENT MESSAGE VERIFICATION/ERASE PROCEDURE (FIG. 111).

4 UP TO 5 MORE FLIGHTS ARE PERMISSIBLE BEFORE TAP TEST CHECK MUST BE DONE.

Birdstrike without Surge, Engine Indications Normal
Figure 103

BIRDSTRIKE WITHOUT SURGE, ENGINE INDICATIONS ABNORMAL

PREREQUISITES
NONE

1 DO AN INSPECTION OF THESE AREAS FOR DAMAGE:
- ENGINE INLET COWL
- LP COMPRESSOR BLADES (AMM 72-31-13/601)
- DO THE TAP TEST CHECK (AMM 72-31-13/601)
- LP COMPRESSOR INLET ROTATING FAIRING (AMM 72-35-01/601)
- LP COMPRESSOR CASE AND OUTLET GUIDE VANES (AMM 72-34-10/601)
- IP COMPRESSOR INLET GUIDE VANES (AMM 72-00-00/601) 1
- EXHAUST PLUG FOR METAL PARTICLES OR SPLATTER
- TURBINE EXHAUST SYSTEM (AMM 78-11-04/601).

DID YOU FIND DAMAGE OR DEBRIS?

NO → 21 LOOK FOR AND REMOVE ALL THE BIRD DEBRIS FROM THE AIR INLET AND DUCT OF THE IDG OIL COOLER.
FIND AND REPAIR ALL OTHER PROBLEMS THAT YOU FIND. 2
RETURN THE ENGINE TO SERVICE. 3

YES ↓

2 CAN YOU REPAIR OR REPLACE THE DAMAGED COMPONENTS?

YES → 11 START THE ENGINE (AMM 71-00-00/201).
DID THE ENGINE START? 2

YES → 22 REPAIR OR REPLACE THE DAMAGED COMPONENT(S) YOU FOUND IN BLOCK 1.
LOOK FOR AND REMOVE ALL THE BIRD DEBRIS FROM THE AIR INLET AND DUCT OF THE IDG OIL COOLER.
FIND AND REPAIR ALL OTHER PROBLEMS THAT YOU FIND. 2
RETURN THE ENGINE TO SERVICE. 3

NO → 23 REPLACE THE ENGINE (AMM 71-00-02/401). 3

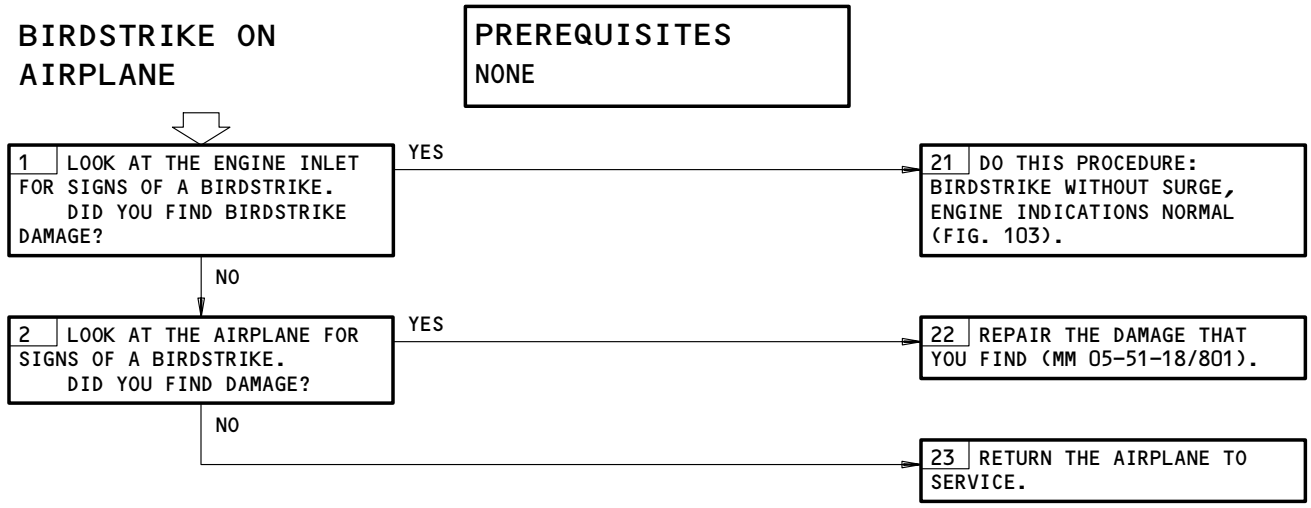
NO ↓

1 WHEN YOU DO THE INSPECTION OF THE INLET GUIDE VANES OF THE IP COMPRESSOR, IF YOU SEE OR THINK THAT DEBRIS HAVE GONE THROUGH THE GAS GENERATOR, DO AN INSPECTION OF THE STAGE 1 ROTOR BLADES OF THE IP AND HP COMPRESSOR (AMM 72-00-00/601). IF THE DAMAGE IS NOT MORE THAN THE INSPECTION LIMITS, DO AN INSPECTION OF THE METER PANEL OF THE COMBUSTION CHAMBER FOR BOWING AND/OR DISTORTION (AMM 72-00-00/601). ONE SIGN THAT A BIRDSTRIKE IN THE GAS GENERATOR HAS OCCURRED IS AN UNUSUAL ODOR IN THE CABIN.

2 YOU CAN RUN THE ENGINE WITH BENT LP COMPRESSOR BLADES IF THE ENGINE TURNS FREELY AND THE GROUND IDLE IS NOT HIGHER THAN THE LIMITS. A HOT START AFTER A BIRDSTRIKE IS A SIGN OF DAMAGE TO THE STAGE 1 HP COMPRESSOR.

3 DO THIS PROCEDURE: EICAS AUTO EVENT MESSAGE VERIFICATION/ERASE PROCEDURE (FIG. 111).

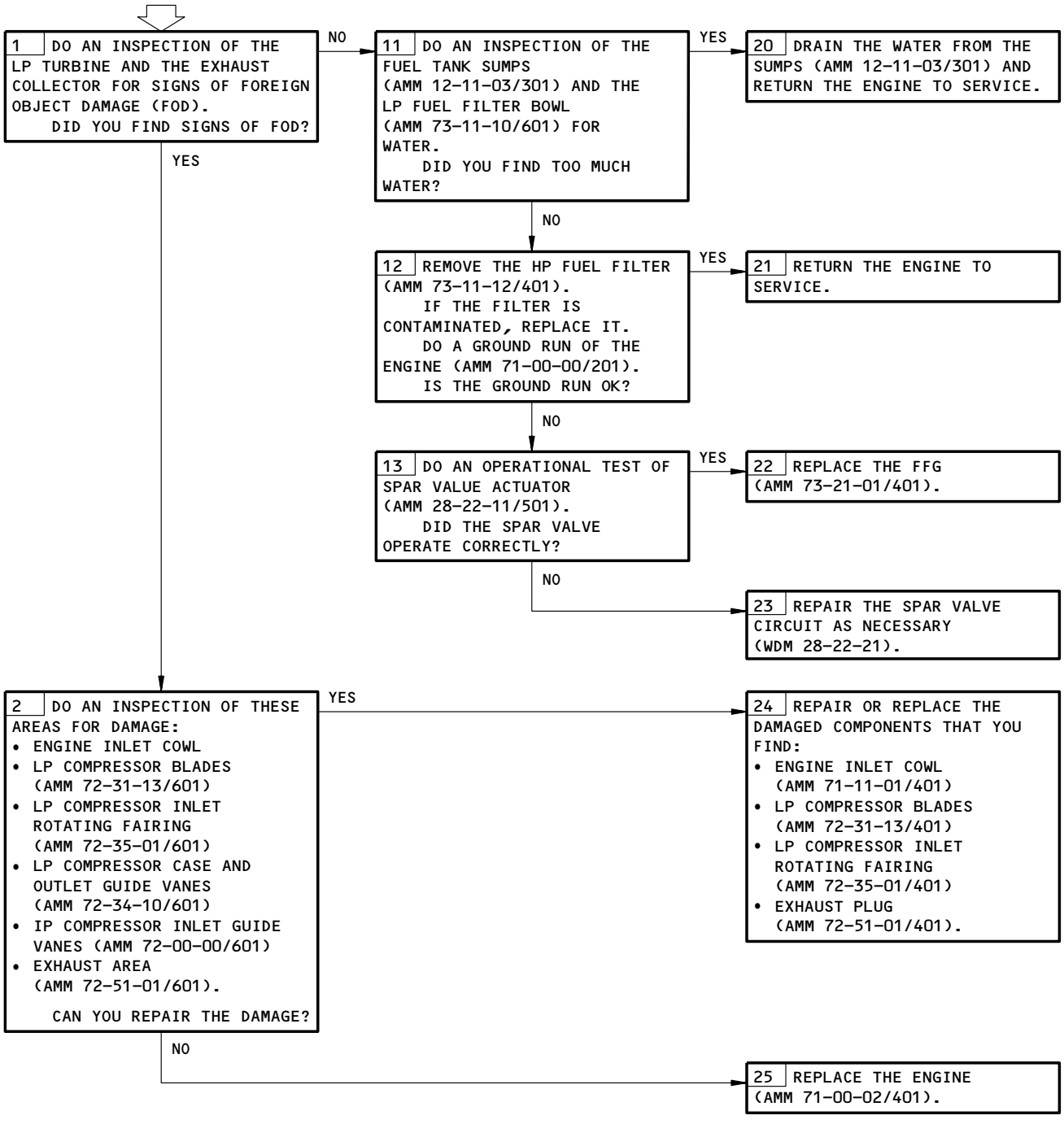
Birdstrike without Surge, Engine Indications Abnormal
Figure 104



Birdstrike on Airplane
Figure 105

ENGINE FLAMEOUT WITH RESTART

PREREQUISITES
NONE



Engine Flameout with Restart
Figure 106

ENGINE FLAMEOUT OR RUNDOWN BELOW SUB-IDLE POWER

PREREQUISITES

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

1 TRY TO MANUALLY TURN THE N3 ROTOR (AMM 72-00-00/701).

NOTE: TO SEE THE N3 ROTOR TURN, YOU MUST USE A BORESCOPE (AMM 72-00-00/601).

DID N3 TURN?

YES → 10 DO AN OPERATIONAL TEST OF SPAR VALUE ACTUATOR (AMM 28-22-11/501).
DID THE SPAR VALVE OPERATE CORRECTLY?

NO → 20 REPAIR THE SPAR VALVE CIRCUIT AS NECESSARY (WDM 28-22-21).

YES → 11 REMOVE THE HP FUEL PUMP (AMM 73-11-03/401) AND DO AN INSPECTION OF THE DRIVE TO THE HP FUEL PUMP (AMM 72-60-00/601).
IS THE DRIVE OK?

NO → 21 REPLACE THE HS EXTERNAL GEARBOX (AMM 72-00-61/401).
REPLACE THE FILTER ELEMENT FOR THE PRESSURE OIL FILTER (AMM 79-21-07/401) AND THE FILTER ELEMENT FOR THE SCAVENGE OIL FILTER (AMM 79-21-08/401).

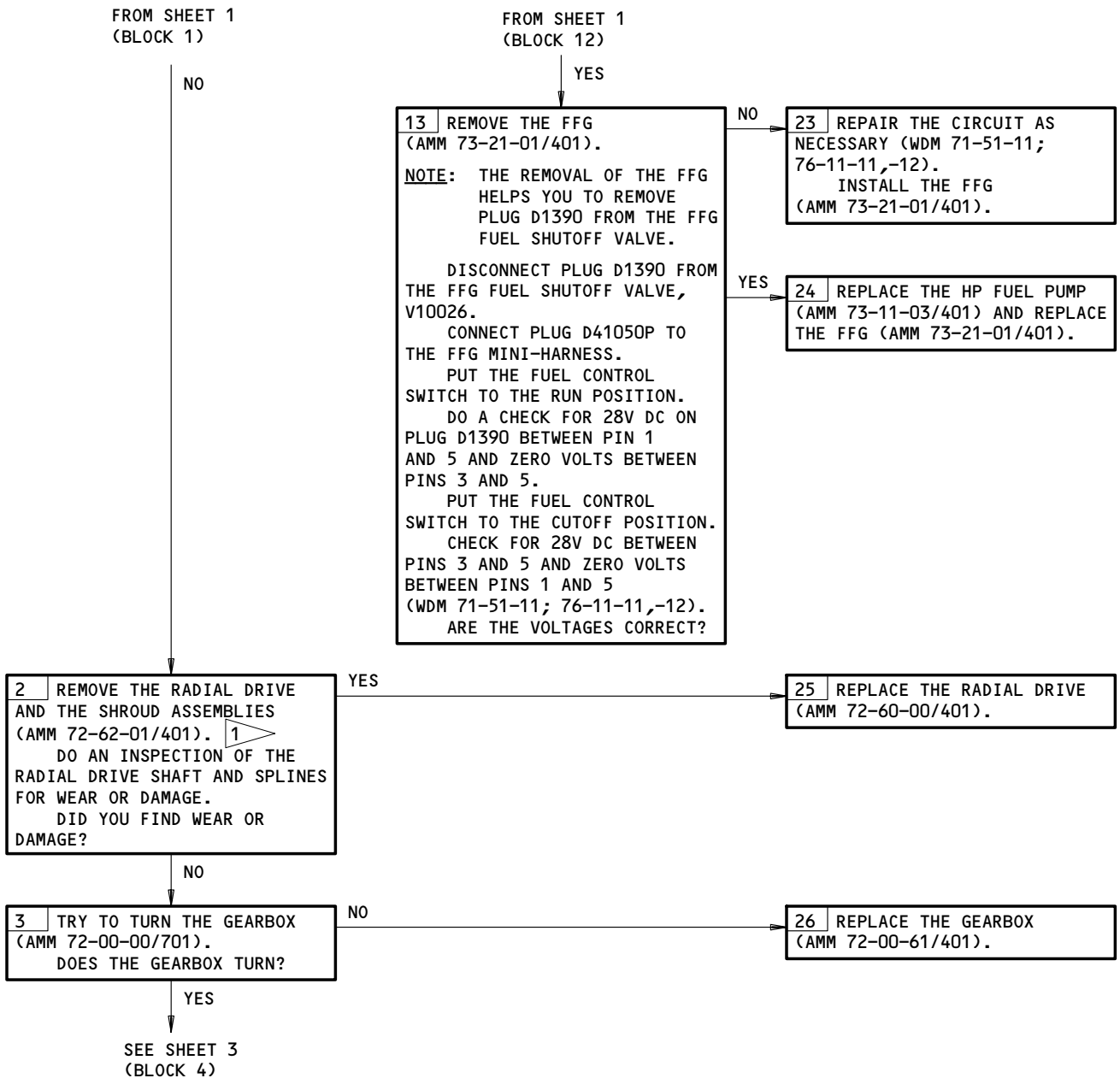
YES → 12 DISCONNECT PLUG D41050P FROM THE FFG MINI-HARNESS.
PUT THE FUEL CONTROL SWITCH TO THE RUN POSITION.
DO A CHECK FOR 28V DC BETWEEN PIN 1 AND PIN 5 AND ZERO VOLTS BETWEEN PIN 3 AND PIN 5.
PUT THE FUEL CONTROL SWITCH TO THE CUTOFF POSITION.
DO A CHECK FOR 28V DC BETWEEN PIN 3 AND PIN 5 AND ZERO VOLTS BETWEEN PIN 1 AND PIN 5 (WDM 71-51-11; 76-11-11, -12).
ARE THE VOLTAGES CORRECT?

NO → 22 REPAIR THE CIRCUIT AS NECESSARY (WDM 71-51-11; 76-11-11, -12).

NO → SEE SHEET 2 (BLOCK 2)

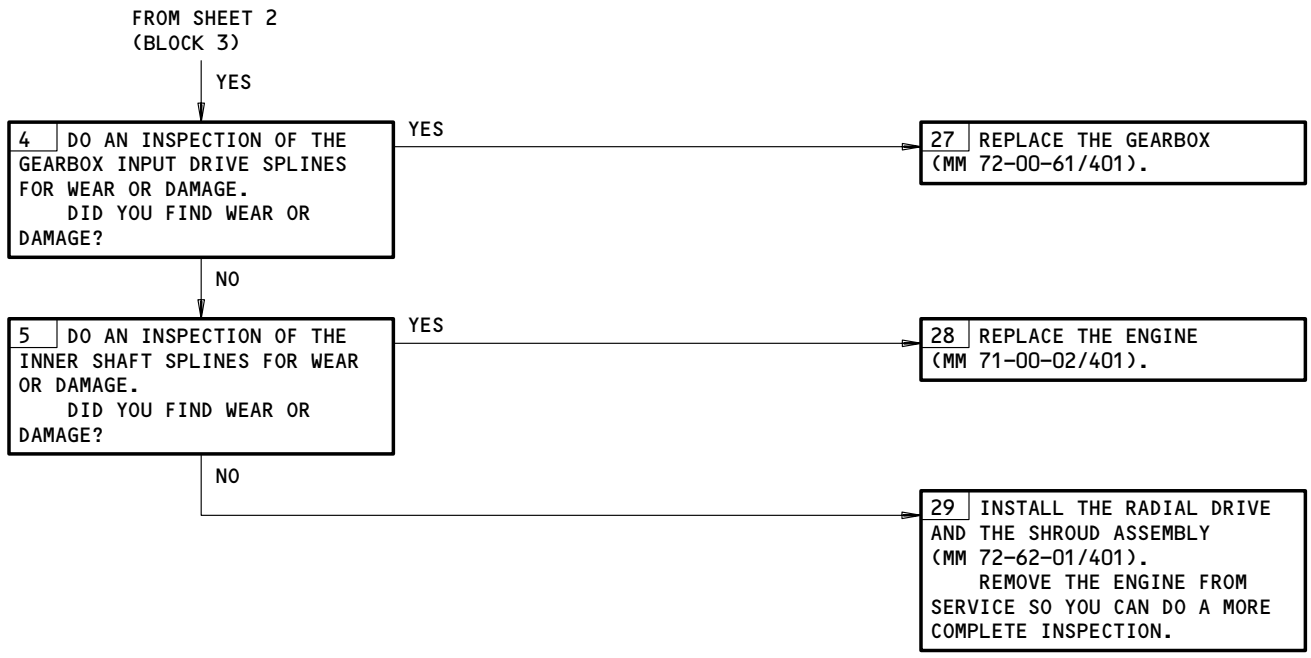
YES → SEE SHEET 2 (BLOCK 13)

Engine Flameout or Rundown Below Sub-Idle Power
Figure 107 (Sheet 1)

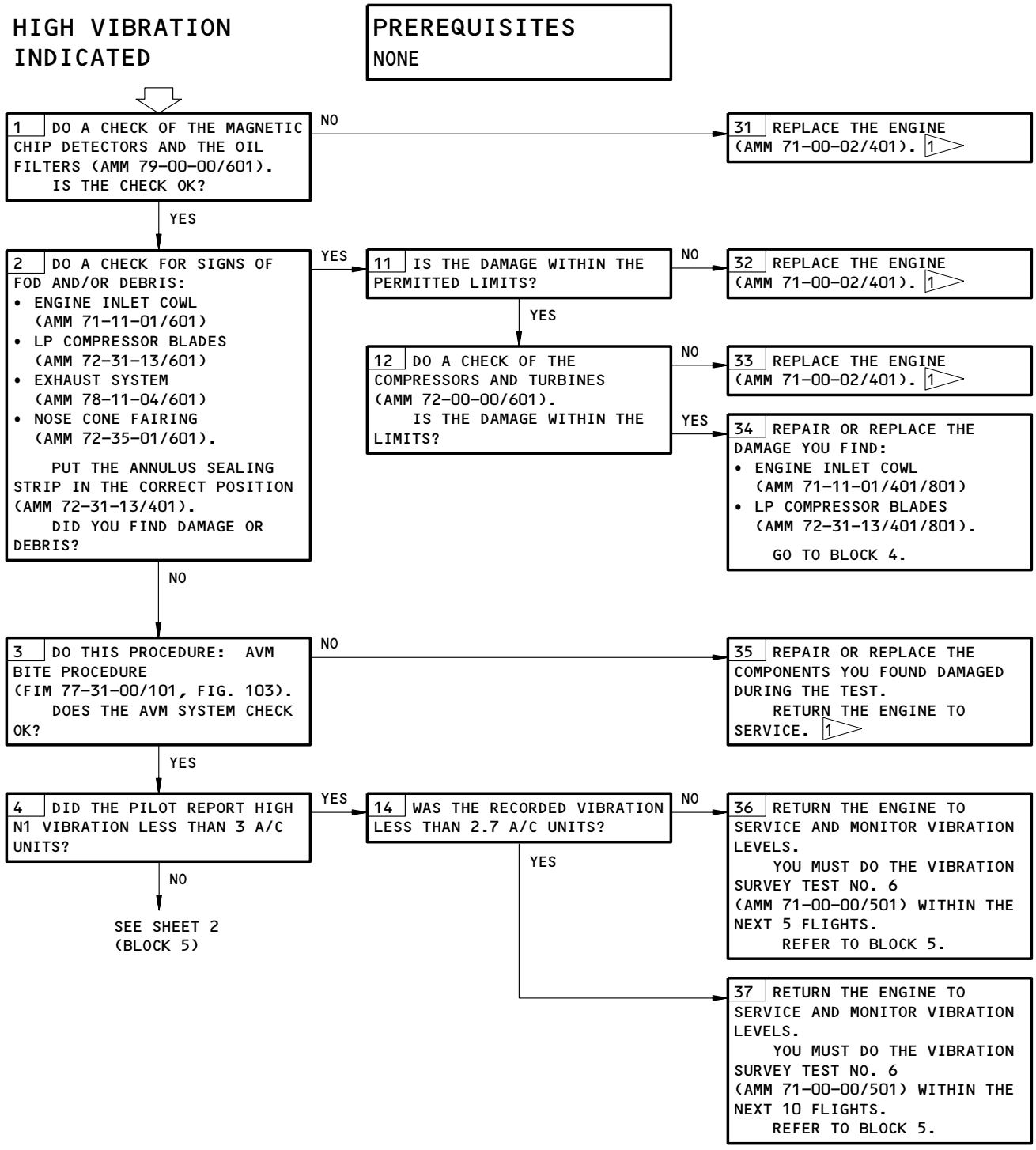


1 IF A STARTER ASSISTED RELIGHT OR A GROUND START OF THE ENGINE RESULTS IN A FAILED RADIAL DRIVE, THERE CAN BE OIL LEAKS INTO THE HP DRUM. REPLACE THE ENGINE.

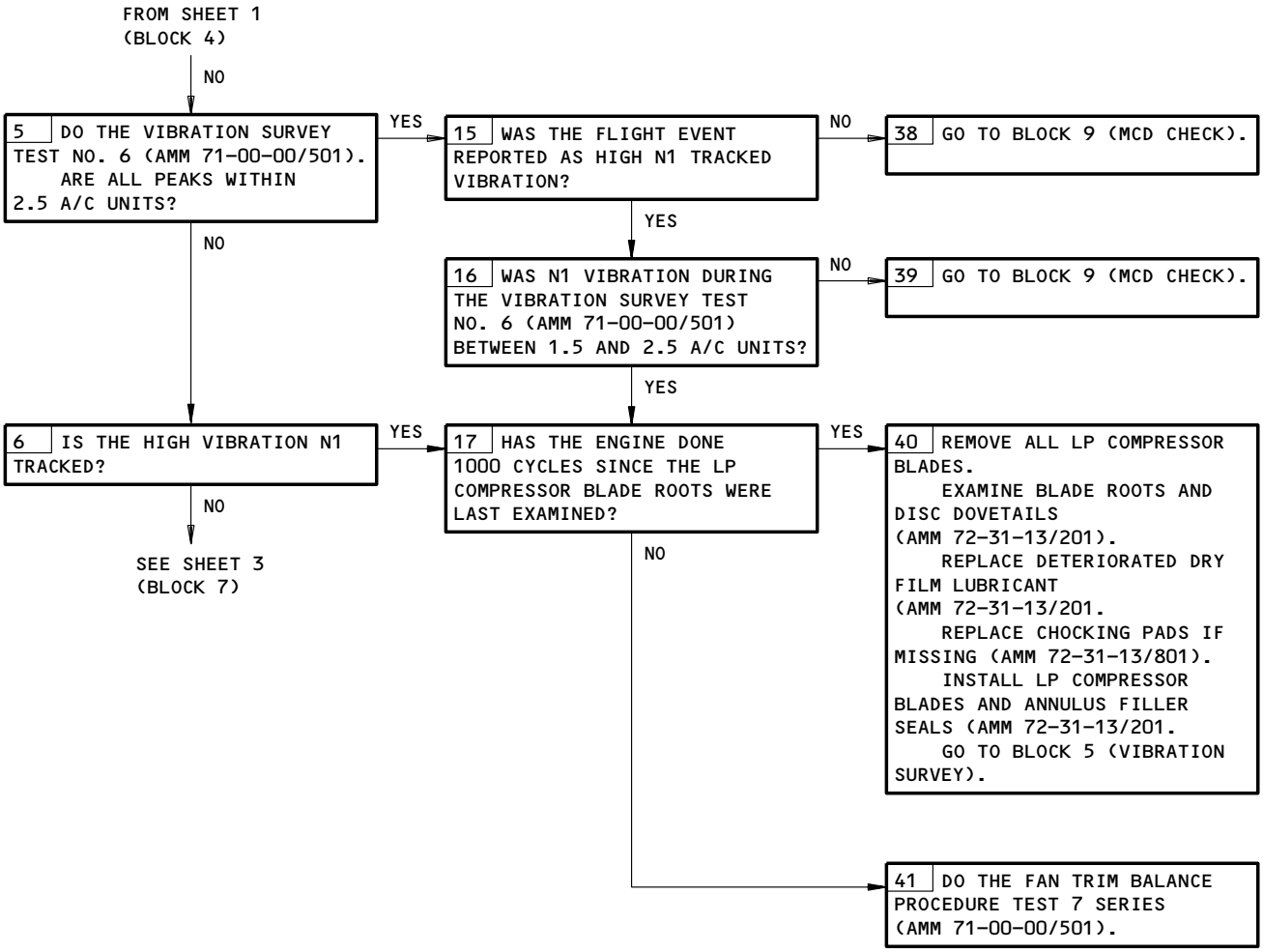
Engine Flameout or Rundown Below Sub-Idle Power
Figure 107 (Sheet 2)



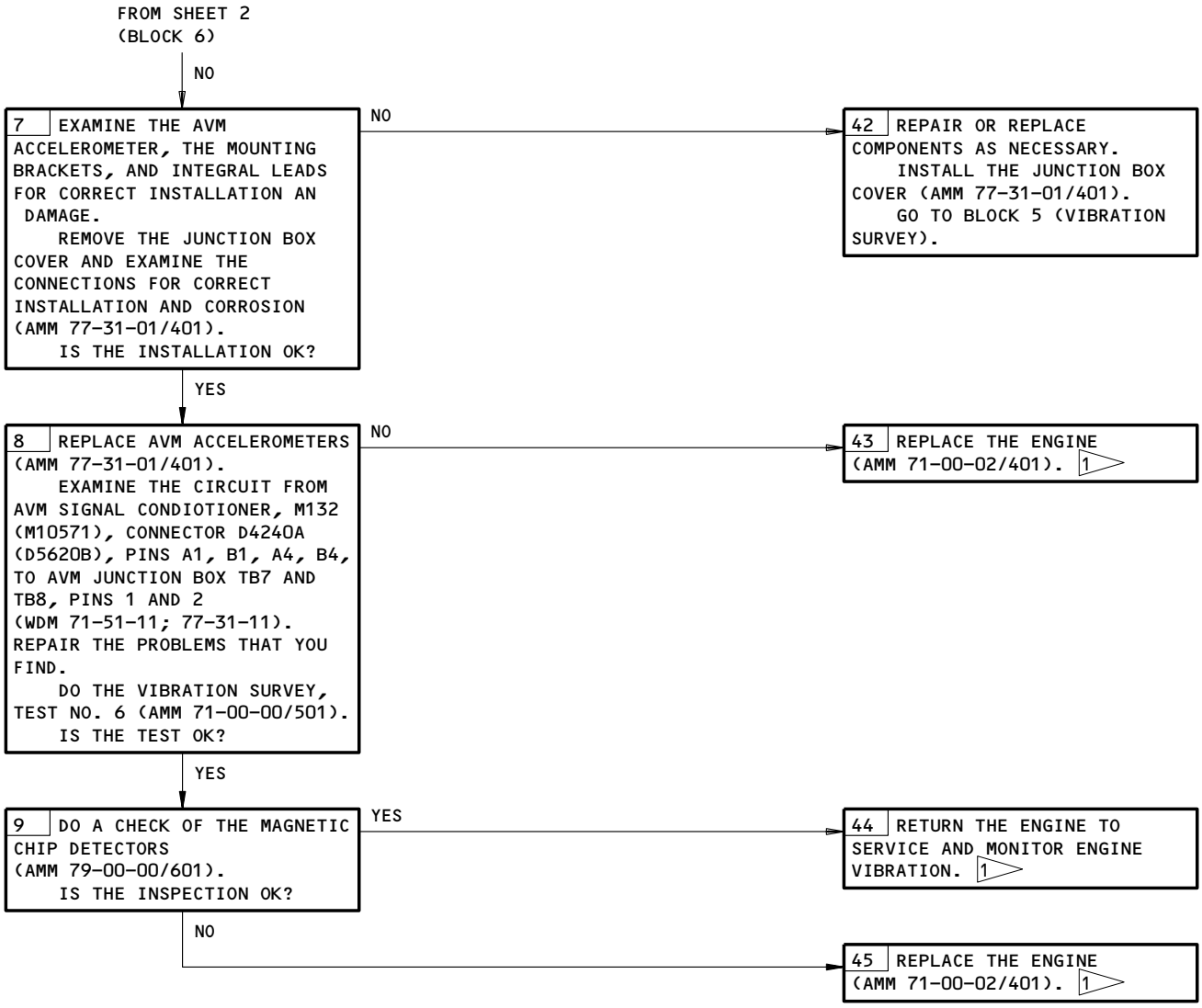
Engine Flameout or Rundown Below Sub-Idle Power
Figure 107 (Sheet 3)



High Vibration Indicated
Figure 108 (Sheet 1)



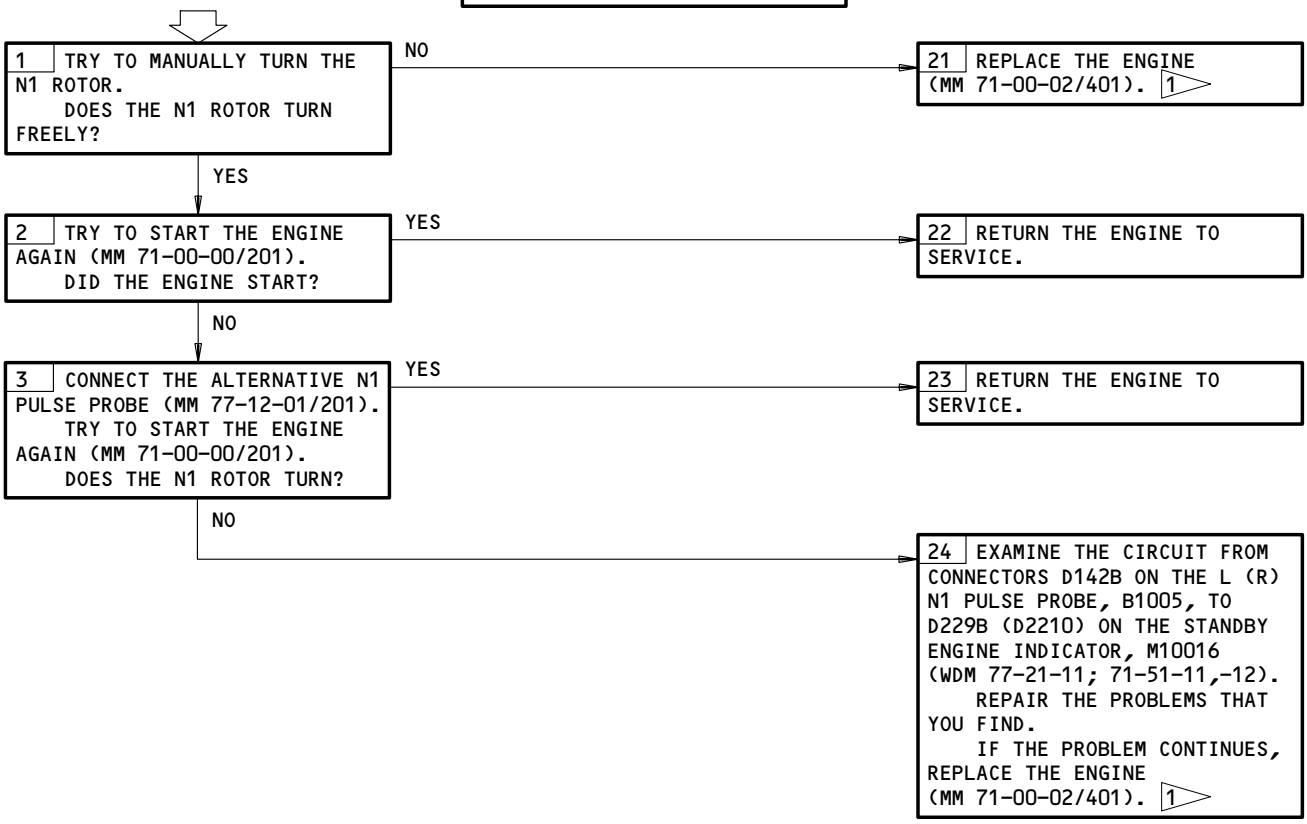
High Vibration Indicated
Figure 108 (Sheet 2)



High Vibration Indicated
Figure 108 (Sheet 3)

NO N1 ROTATION

PREREQUISITES
NONE



1 DO THIS PROCEDURE: EICAS AUTO EVENT MESSAGE VERIFICATION/ERASE PROCEDURE (71-05-00/101, FIG. 111).

No N1 Rotation
Figure 109

NO N2 ROTATION

PREREQUISITES
NONE

1 TRY TO MANUALLY TURN THE N2 ROTOR (MM 72-00-00/601).
DOES THE N2 ROTOR TURN?

NO → 21 REPLACE THE ENGINE (MM 71-00-02/401). 1

YES ↓

2 CONNECT THE ALTERNATE N2 PULSE PROBE (MM 77-12-01/201).
DRY MOTOR THE ENGINE (MM 71-00-00/201) AND OBSERVE THE N2 TURN.
DOES THE N2 ROTOR TURN?

YES → 22 RETURN THE ENGINE TO SERVICE.

NO ↓

23 CONNECT THE ORIGINAL N2 PULSE PROBE (MM 77-12-01/201).
EXAMINE THE CIRCUIT FROM CONNECTOR D1432 FOR NO. 1 PULSE PROBE OR D1434 FOR NO. 2 PULSE PROBE TO PIN YC7 (YA7) AND YC8 (YA8) ON TB207 (WDM 71-51-11; 77-12-21).
REPAIR THE PROBLEMS THAT YOU FIND.
IF THE PROBLEM CONTINUES, REPLACE THE ENGINE (MM 71-00-02/401). 1

1 DO THIS PROCEDURE: EICAS AUTO EVENT MESSAGE VERIFICATION/ERASE PROCEDURE (71-05-00/101, FIG. 111).

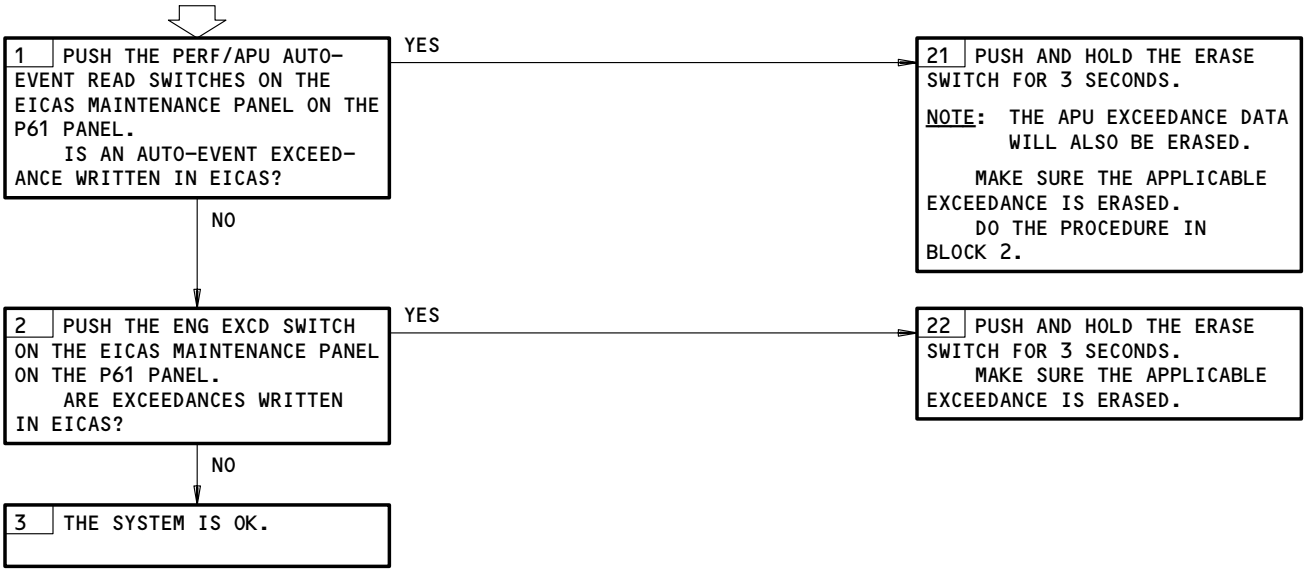
No N2 Rotation
Figure 110

EICAS AUTO EVENT MESSAGE VERIFICATION/ ERASE PROCEDURE

PREREQUISITES

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

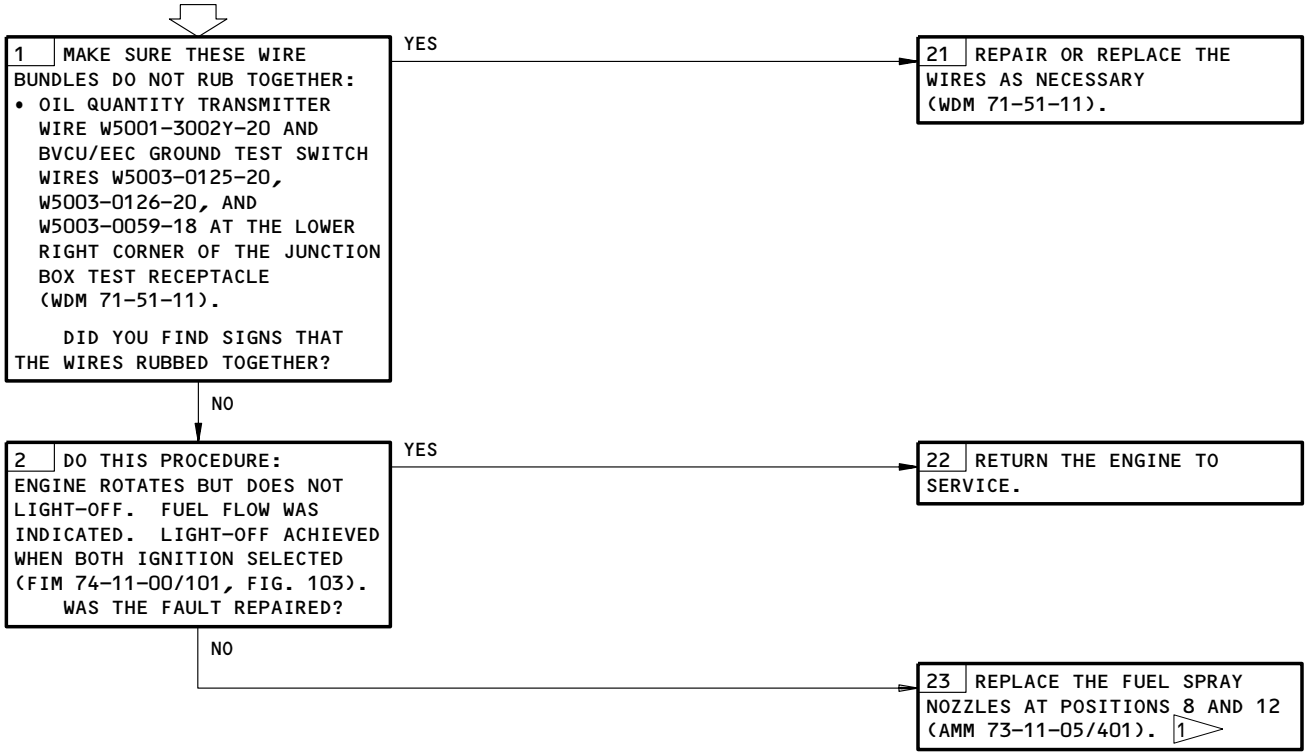
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (MM 24-22-00/201)



EICAS Auto Event Message Verification/Erase Procedure
Figure 111

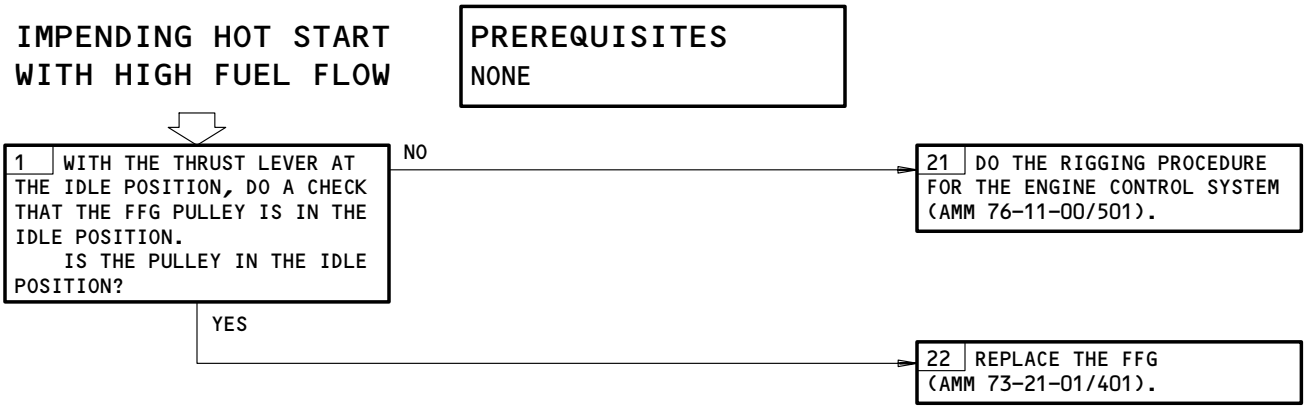
IMPENDING HOT/HUNG START WITH EXCESSIVE TIME TO LIGHT-OFF

PREREQUISITES
NONE



1 CAUTION: WHEN YOU REPLACE THE FUEL SPRAY NOZZLES, YOU MUST OBEY THE PROCEDURE IN AMM 73-11-05/401. IF YOU INSTALL THE FUEL SPRAY NOZZLE INCORRECTLY, A SERIOUS ENGINE FIRE CAN OCCUR WHEN YOU OPERATE THE ENGINE. YOU WILL ALSO CAUSE DISTORTION OF THE FUEL MANIFOLD TO BURNER FUEL TUBE.

Impending Hot/Hung Start with Excessive Time to Light-Off
Figure 112



Impending Hot Start with High Fuel Flow
Figure 113

PREREQUISITES

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

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

ENGINE HAD A HOT START 2

1 PUSH THE ENG EXCD DISPLAY SELECT SWITCH ON THE EICAS MAINTENANCE PANEL P61.
LOOK ON THE ENG EXCD PAGE. FIND THE TEMPERATURE AND THE TIME GIVEN FOR THE ENGINE. MAKE A RECORD OF THE TEMPERATURE AND THE TIME IN THE ENGINE LOGBOOK. 1
DO THIS PROCEDURE: VERIFICATION/ERASE PROCEDURE (FIG. 111).
EXAMINE THE EXHAUST AREA FOR EVIDENCE OF INTERNAL ENGINE FAILURE.
DID YOU FIND EVIDENCE OF INTERNAL ENGINE FAILRUE?

YES → 21 REPLACE THE ENGINE (AMM 71-00-02/401).

NO

2 COMPARE THE TEMPERATURE AND THE TIME FROM THE ENG EXCD PAGE WITH THE OVERTEMPERATURE INSPECTION REQUIREMENT (BELOW 50% N3) FIG. 120.
DID THE ENGINE OPERATE WITH AN EGT IN AREA D?

YES → 22 REPLACE THE ENGINE (AMM 71-00-02/401).

NO

3 DO THE INSPECTION FOR THE HP COMPRESSOR STAGE 6 BLADES, IF THE ENGINE OPERATED WITH AN EGT IN AREA B OR C (AMM 72-00-00/601).
IS THE DAMAGE IN THE LIMITS?

NO → 23 REPLACE THE ENGINE (AMM 71-00-02/401).

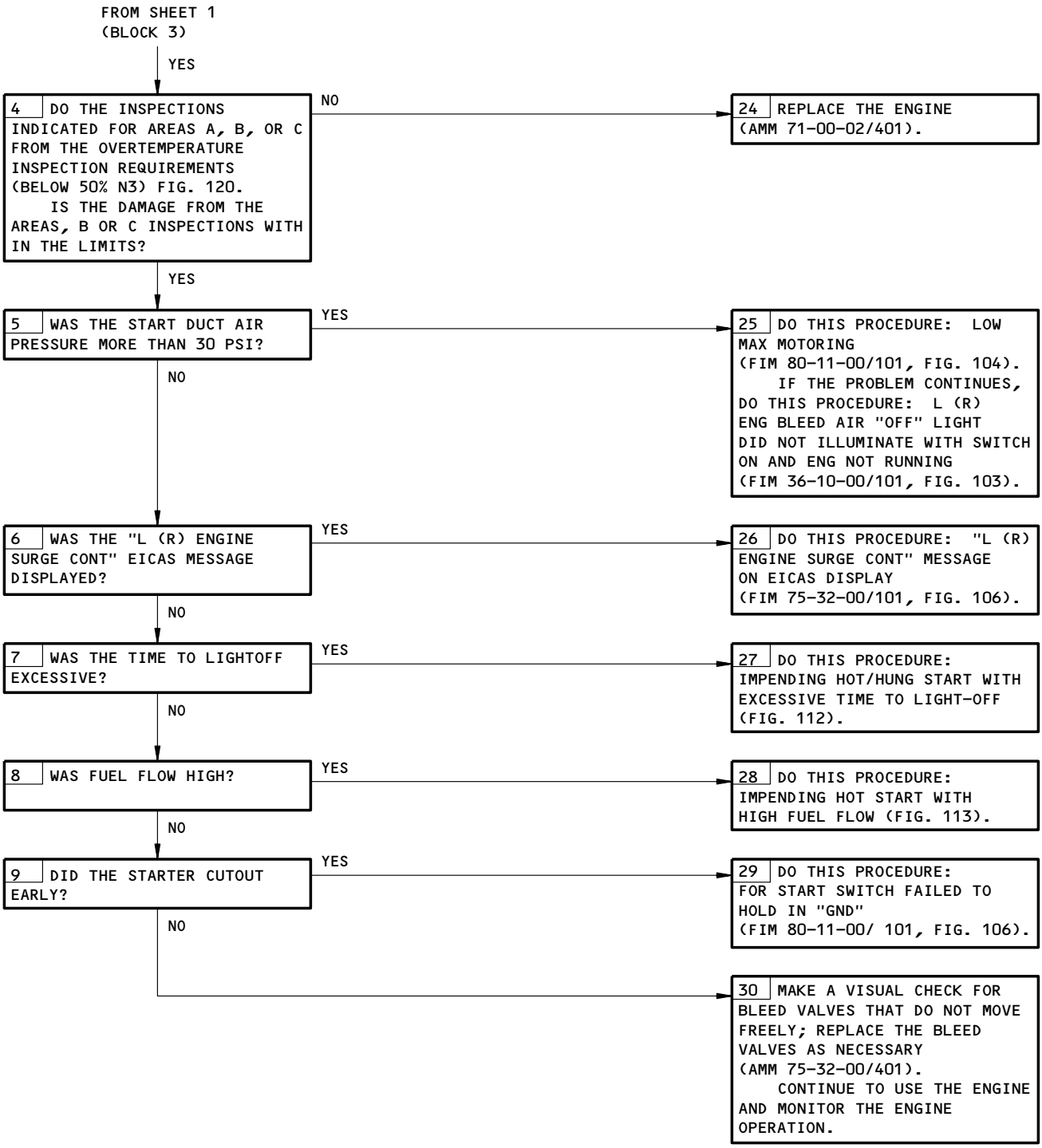
YES

SEE SHEET 2
(BLOCK 4)

1 THE TEMPERATURE SHOWN ON THE ENG EXCD PAGE IS THE HIGHEST EGT AT WHICH THE ENGINE OPERATED. THE TIME SHOWN WITH THE EGT IS THE MEASURE OF TIME THE ENGINE OPERATED WITH THE EGT MORE THAN THE LIMIT.

2 DO NOT USE THE EICAS TEMPERATURE PROFILE DATA TO DETERMINE THE OVERTEMP INSPECTION REQUIREMENTS

Engine Had a Hot Start
Figure 114 (Sheet 1)



Engine Had a Hot Start
Figure 114 (Sheet 2)

N1,N2 OR N3 ROTOR SPEED WAS MORE THAN THE LIMIT

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 PUSH THE ENG EXCD DISPLAY SELECT SWITCH ON THE EICAS MAINTENANCE PANEL P61.

LOOK ON THE ENG EXCD PAGE. FIND THE ROTOR SPEED, TEMPERATURE, AND THE TIMES THE ENGINE OPERATED AT MORE THAN THE LIMIT. MAKE A RECORD OF THE TEMPERATURE, SPEED, AND THE TIMES IN THE AIRPLANE LOGBOOK. 1

DO THIS PROCEDURE: VERIFICATION/ERASE PROCEDURE (FIG. 111).

COMPARE THE TEMPERATURE AND SPEED FROM THE ENG EXCD PAGE WITH THE INSPECTION REQUIREMENTS THAT FOLLOW:

- COMBINED OVERTEMPERATURE AND N1 OVERSPEED, FIG. 117
- COMBINED OVERTEMPERATURE AND N2 OVERSPEED, FIG. 118
- COMBINED OVERTEMPERATURE AND N3 OVERSPEED, FIG. 119.

DID THE ENGINE OPERATE AT A SPEED AND AN EGT MORE THAN THE LIMITS?

YES → 21 REPLACE THE ENGINE (AMM 71-00-02/401) IF THE ENGINE IS REJECTED FOR EXAMINATION.

NO ↓

2 COMPARE THE SPEED AND THE TIME FROM THE ENG EXCD PAGE WITH THE INSPECTION REQUIREMENTS THAT FOLLOW: 2

- N1 OVERSPEED, FIG. 122
- N2 OVERSPEED, FIG. 123
- N3 OVERSPEED, FIG. 124.

DID THE N1, N2, OR N3 ROTOR OPERATE AT A SPEED MORE THAN THE LIMITS?

YES → 22 DO THE INSPECTIONS INDICATED FOR AREAS A, B, C, OR D FROM THE N1, N2, OR N3 OVERSPEED INSPECTION REQUIREMENTS, FIG. 122, FIG. 123 AND FIG. 124.

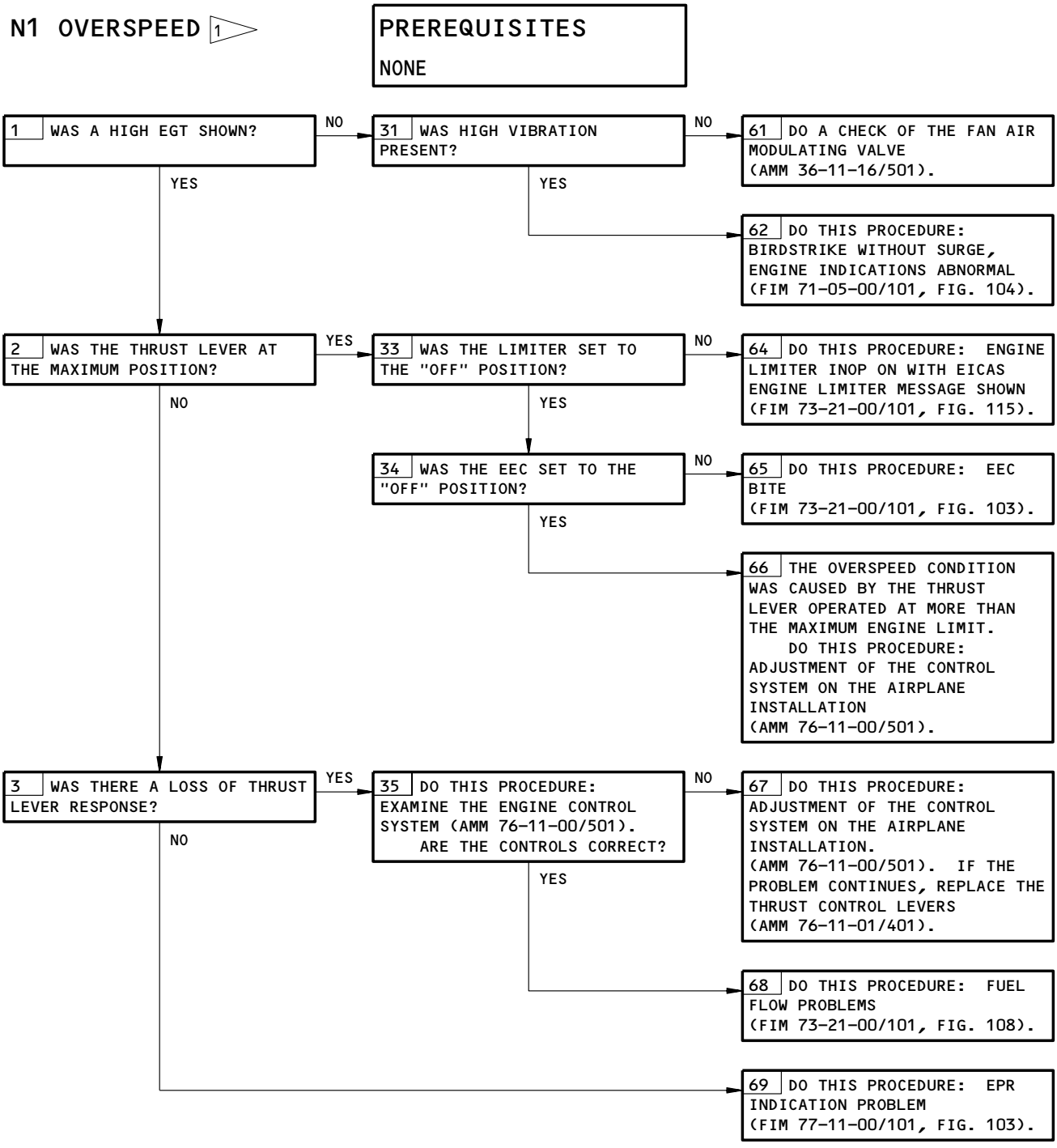
REPLACE THE ENGINE (AMM 71-00-02/401) IF; THE ENGINE IS REJECTED FOR EXAMINATION OR THE DAMAGE FOUND FROM THE INSPECTIONS ARE NOT IN THE LIMITS.

NO → 23 YOU CAN USE THE ENGINE.

1 THE SPEED SHOWN ON THE ENG EXCD PAGE IS THE HIGHEST SPEED AT WHICH EACH ROTOR OPERATED. THE TIME SHOWN WITH THE ROTOR SPEED IS THE MEASURE OF TIME THE ROTOR OPERATED AT A SPEED MORE THAN THE LIMIT.

2 IT IS POSSIBLE TO EXPERIENCE NUISANCE "N1" OVERSPEED INDICATIONS WHEN THE ENGINE IS SHUTDOWN DUE TO NOISE ON THE "EICAS" INPUT FOR THE "N1" SIGNAL. IF AN "N1" OVERSPEED OCCURS BUT THE ENGINE "N2, N3", AND OIL PRESSURE INDICATIONS ON THE "EICAS ENG EXCD" SHOW THAT THE ENGINE WAS NOT OPERATING, NO TORUBLESHOOTING IS REQUIRED. FOR ADDITONAL INFORMATION REGARDING THIS NUISANCE "N1" OVERSPEED INDICATION, SEE MAINTENANCE TIP 757 MT 31-004.

N1,N2, or N3 Rotor Speed was More than the Limit
Figure 115



1 REFER TO FIGURE 122 FOR OVERSPEED INSPECTION REQUIREMENTS.

N1 Overspeed - Fault Isolaton
Figure 115A

N2 OVERSPEED 1

PREREQUISITES

NONE

1 WAS A HIGH TGT SHOWN?
- NO → 61 DO THIS PROCEDURE: N2 INDICATOR READS ZERO/ FLUCTUATES (FIM 77-12-00/101, FIG. 104A).
- YES ↓

2 WAS THERE A LOSS OF THRUST LEVER RESPONSE?
- YES → 31 DO THIS PROCEDURE: EXAMINE THE ENGINE CONTROL SYSTEM (AMM 76-11-00/501). ARE THE CONTROLS CORRECT?
  - NO → 62 DO THIS PROCEDURE: FUEL FLOW PROBLEMS (FIM 73-21-00/101, FIG. 108).
  - YES → 63 DO THIS PROCEDURE: ADJUSTMENT OF THE CONTROL SYSTEM ON THE AIRPLANE INSTALLATION. (AMM 76-11-00/501). IF THE PROBLEM CONTINUES, REPLACE THE THRUST CONTROL LEVERS (AMM 76-11-01/401).
- NO ↓

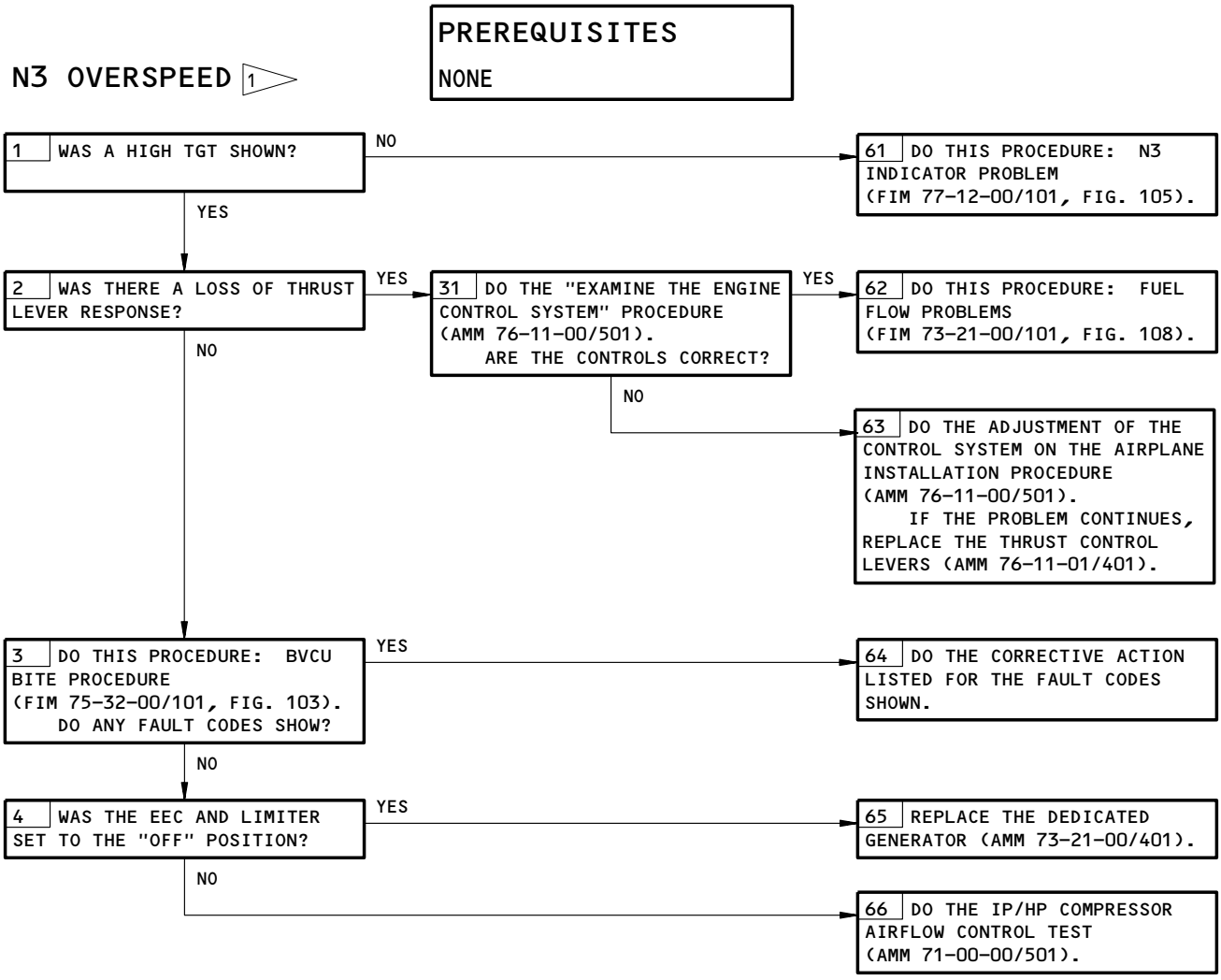
3 DO THIS PROCEDURE: BVCU BITE PROCEDURE (FIM 75-32-00/101, FIG. 103). ARE ANY FAULT CODES DISPAYED?
- YES → 64 DO THE CORRECTIVE ACTION LISTED FOR THE FAULT CODES DISPLAYED.
- NO ↓

4 WAS THE EEC AND LIMITER SET TO THE "OFF" POSITION?
- YES → 65 REPLACE THE DEDICATED GENERATOR (AMM 73-21-00/401).
- NO → 66 DO THIS PROCEDURE: IP/HP COMPRESSOR AIRFLOW CONTROL TEST (AMM 71-00-00/501).

1 REFER TO FIGURE 123 FOR OVERSPEED INSPECTION REQUIREMENTS.

N2 Overspeed - Fault Isolaton
Figure 115B

K75473



1 REFER TO FIGURE 124 FOR OVERSPEED INSPECTION REQUIREMENTS.

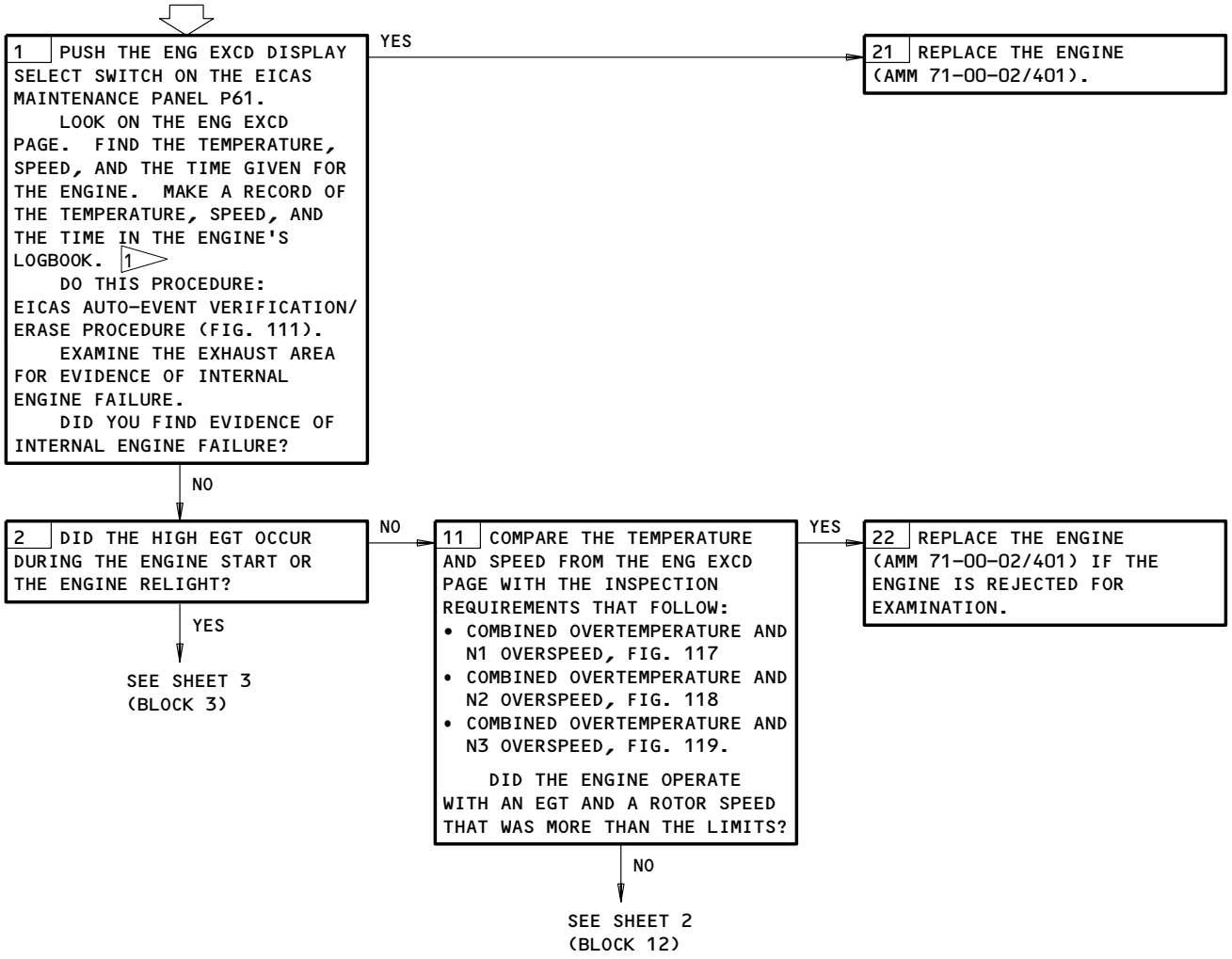
N3 Overspeed - Fault Isolation
Figure 115C

ENGINE EGT WAS MORE THAN THE LIMIT [2]

PREREQUISITES

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

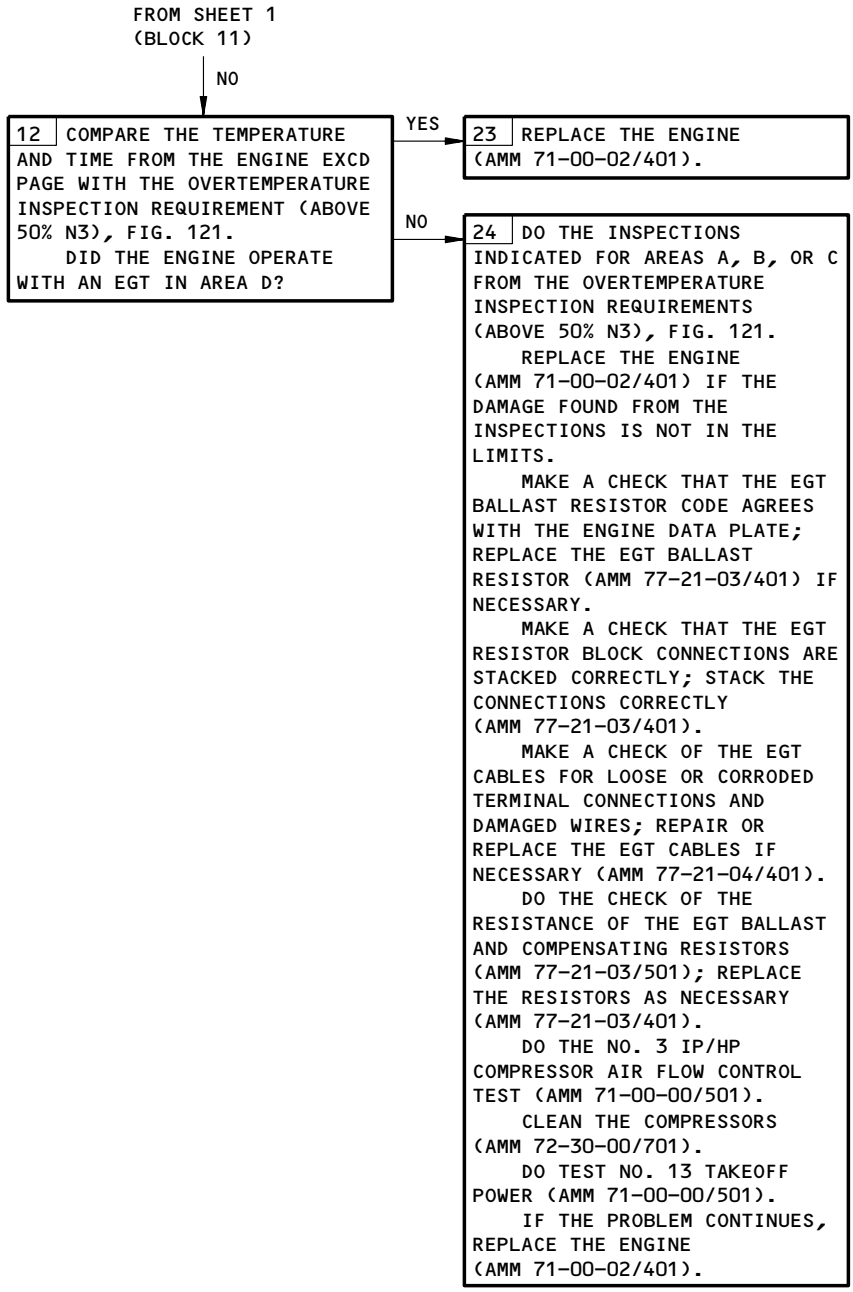
MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION:
ELECTRICAL POWER IS ON (AMM 24-22-00/201)



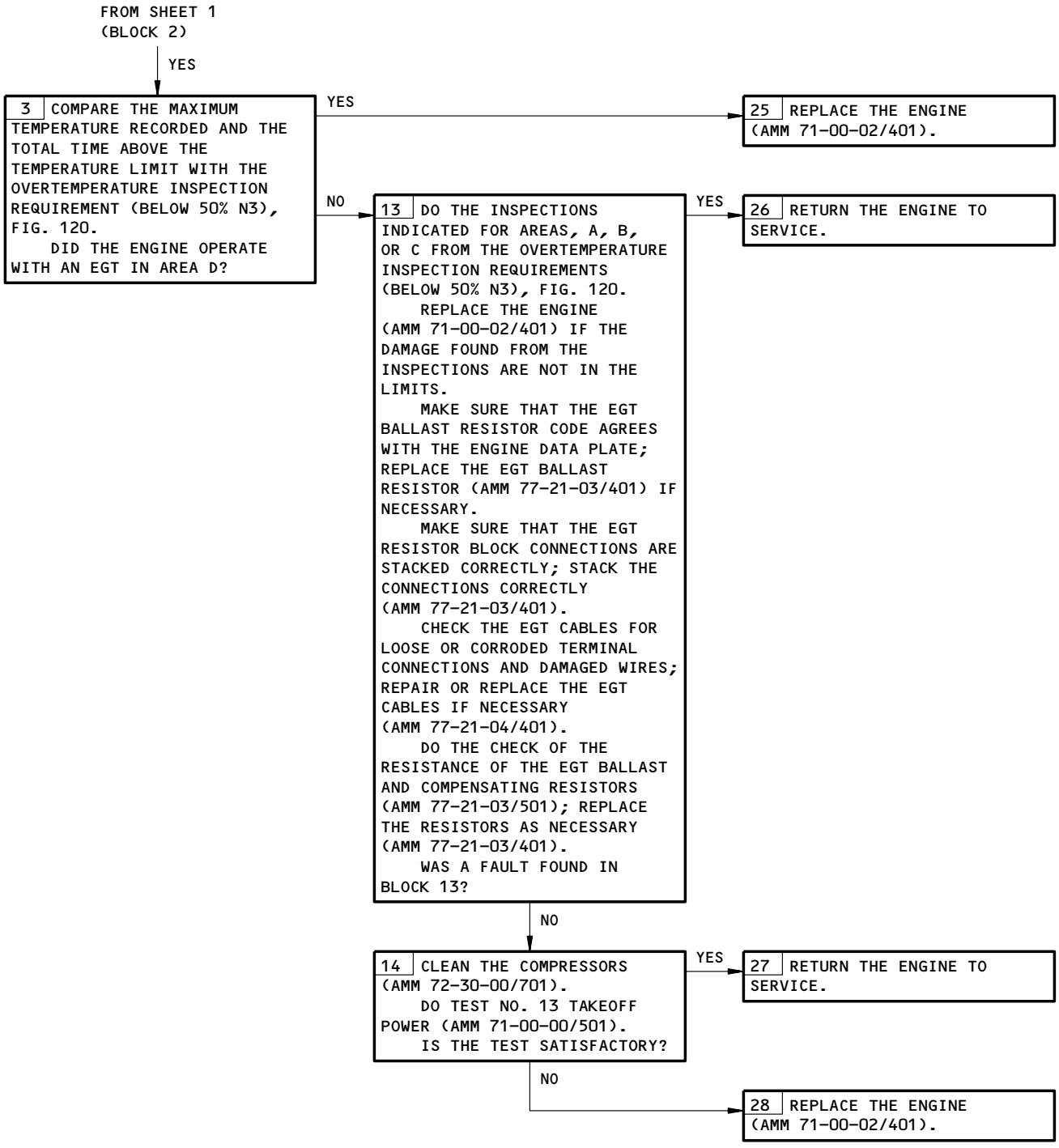
[1] THE TEMPERATURE SHOWN ON THE ENG EXCD PAGE IS THE HIGHEST EGT AT WHICH THE ENGINE OPERATED. THE N1, N2 AND N3 SPEEDS SHOWN ON THE EXCD PAGE ARE THE HIGHEST SPEEDS AT WHICH EACH ROTOR OPERATED. THE TIME SHOWN WITH N1, N2 AND N3 SPEEDS ARE THE MEASURE OF TIME THE ENGINE OPERATED WITH THE ROTOR SPEED MORE THAN THE LIMIT. THE TIME SHOWN WITH THE EGT IS THE MEASURE OF TIME THE ENGINE OPERATED WITH THE EGT MORE THAN THE LIMIT.

[2] DO NOT USE THE EICAS TEMPERATURE PROFILE DATA TO DETERMINE THE OVERTEMP INSPECTION REQUIREMENTS.

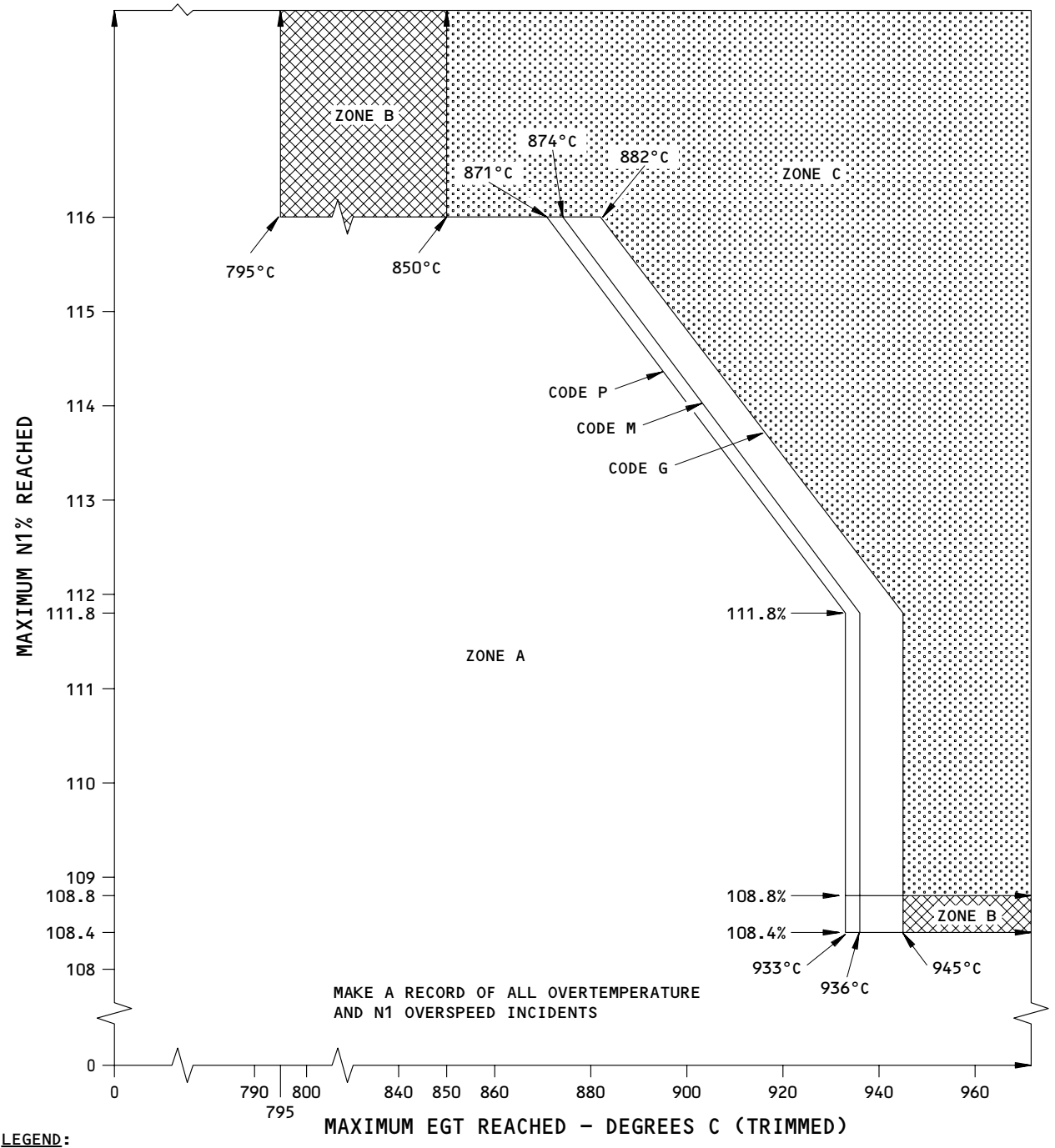
Engine EGT Was More Than the Limit
Figure 116 (Sheet 1)



Engine EGT Was More Than the Limit
Figure 116 (Sheet 2)



Engine EGT Was More Than the Limit
Figure 116 (Sheet 3)



LEGEND:

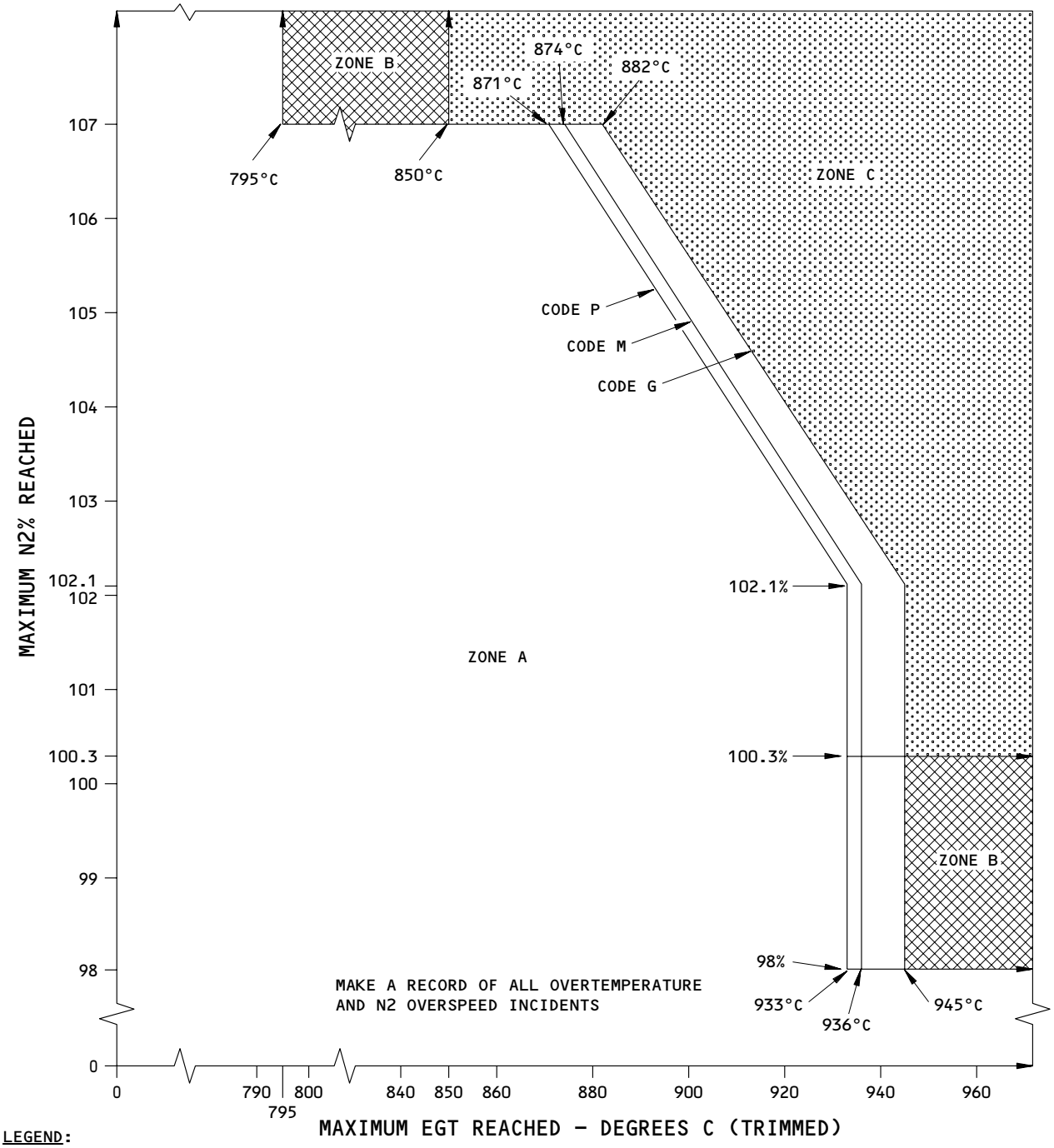
ZONE A — REFER TO EGT/TIME (FIG. 121) AND N1/TIME (FIG. 122).

ZONE B — IF THE TIME OF THE INCIDENT IS MORE THAN 10 MINUTES, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (RR ENGINE MANUAL 72-00-00/201).

ZONE C — REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (RR ENGINE MANUAL 72-00-00/201).

C7909

Combined Overtemperature (Above 50% N3) and N1 Overspeed Inspection Requirements
Figure 117



LEGEND:

ZONE A — REFER TO EGT/TIME (FIG. 121) AND N2/TIME (FIG. 123).

ZONE B — IF THE TIME OF THE INCIDENT IS MORE THAN 10 MINUTES, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (RR EMM 72-00-00/201).

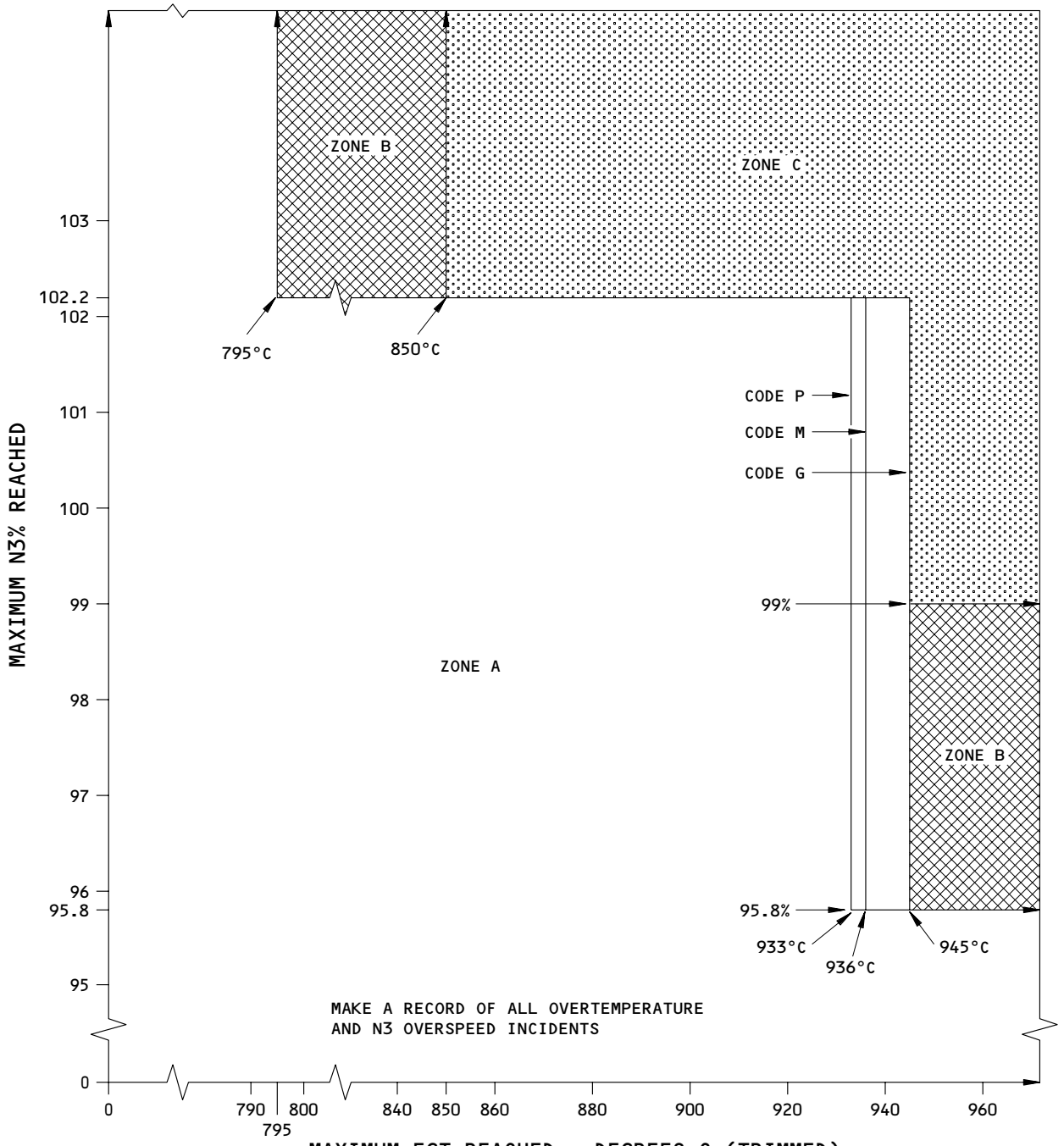
ZONE C — REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (RR EMM 72-00-00/201).

DEE0006642A

Combined Overtemperature (Above 50% N3) and N2 Overspeed Inspection Requirements
Figure 118

EFFECTIVITY
RB211-535E4 ENGINES WITH BALLAST
RESISTOR CODES G, M, P

766312



LEGEND:

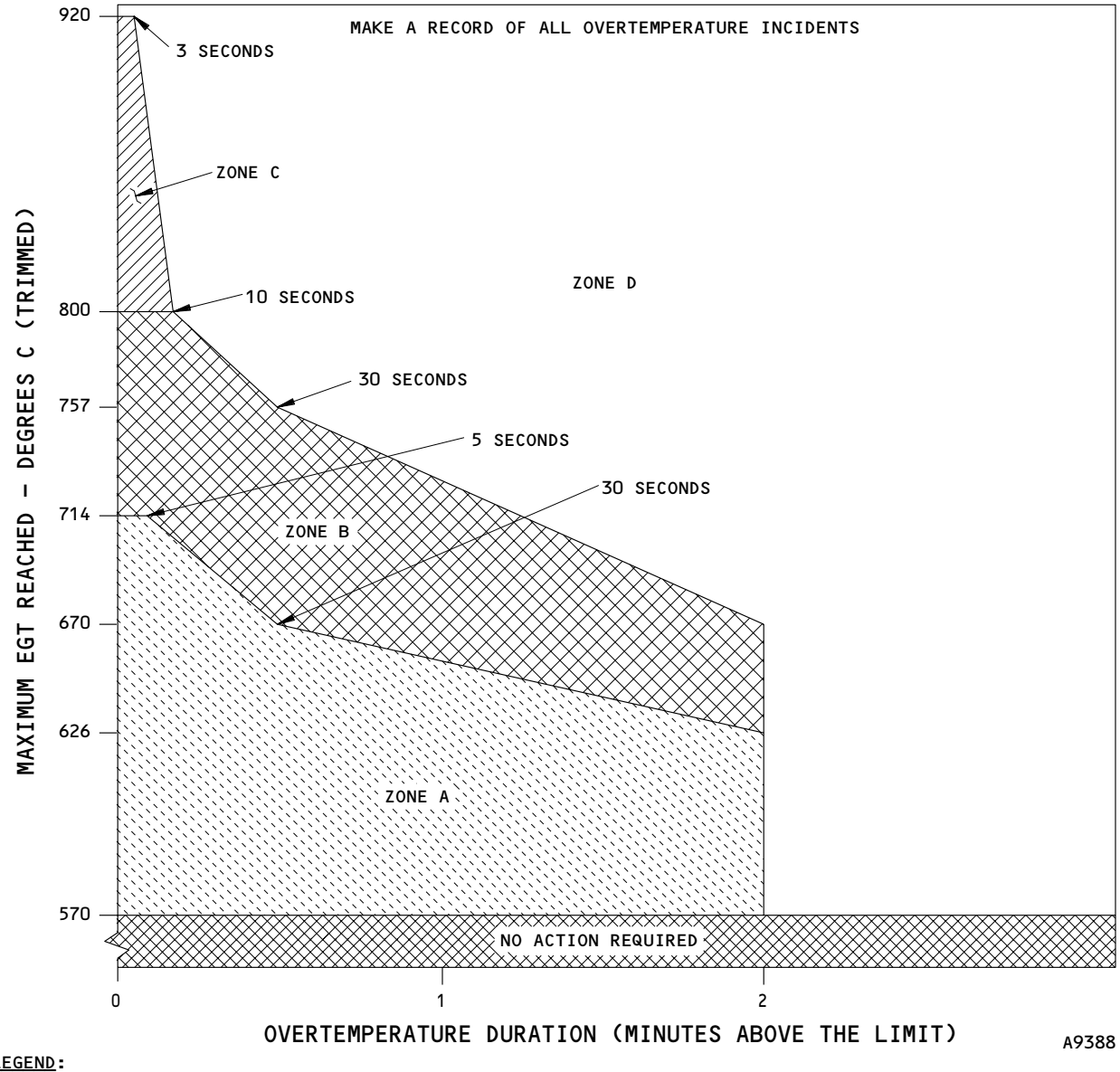
ZONE A — REFER TO EGT/TIME (FIG. 121) AND N3/TIME (FIG. 124).

ZONE B — IF THE TIME OF THE INCIDENT IS MORE THAN 10 MINUTES, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (RR EMM 72-00-00/201).

ZONE C — REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (RR EMM 72-00-00/201).

DEE0006644A

Combined Overtemperature (Above 50% N3) and N3 Overspeed Inspection Requirements
Figure 119



LEGEND:

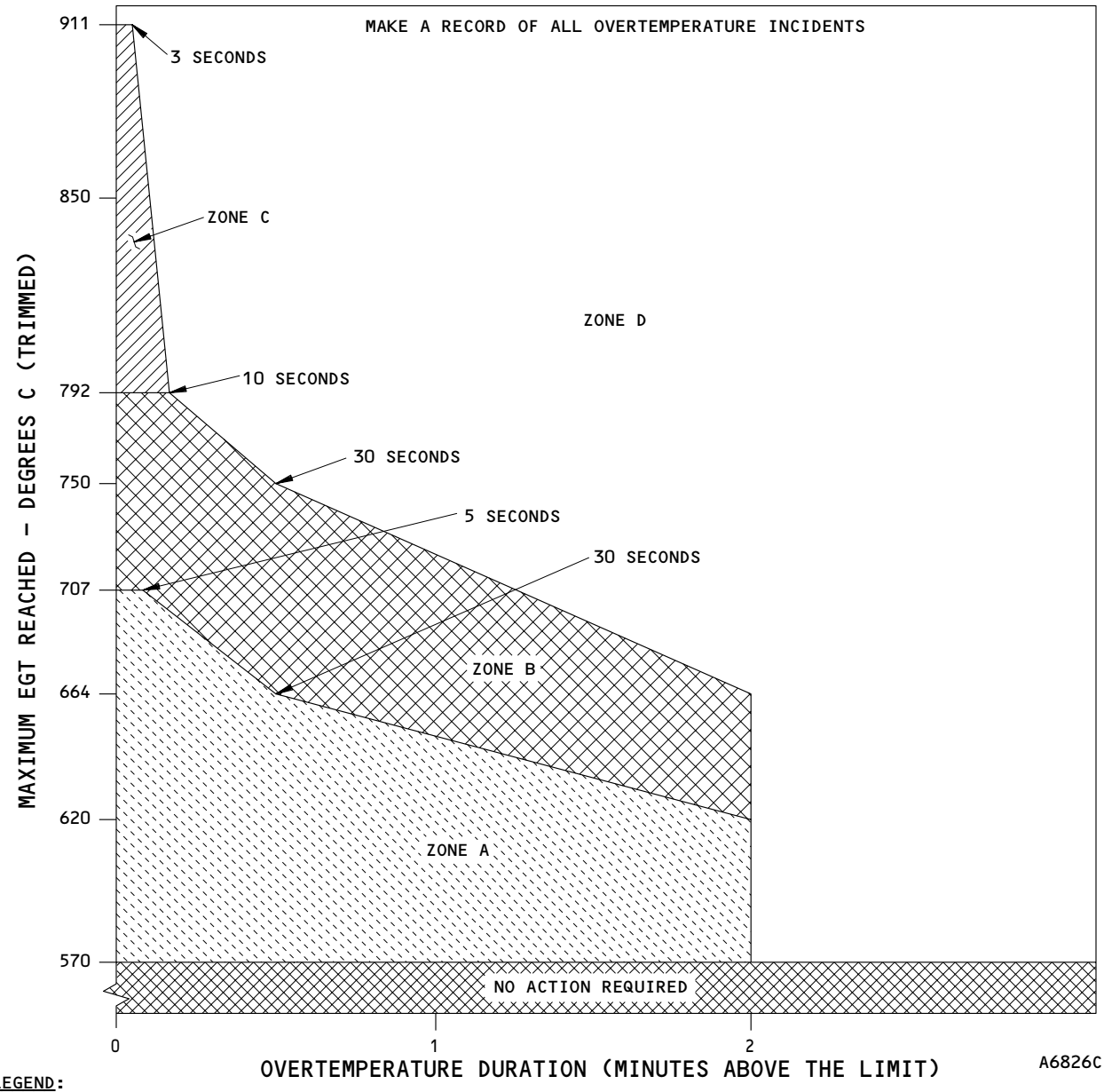
ZONE A — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. DO A VISUAL INSPECTION OF THE L.P. TURBINE AND THE INTERNAL PART OF THE EXHAUST COLLECTOR (AMM 78-11-04/601) FOR DAMAGE.

ZONE B — DO THE PROCEDURE FOR ZONE A. DO A BORESCOPE INSPECTION OF THE H.P., I.P. AND L.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601).

ZONE C — DO THE PROCEDURE FOR ZONE A AND ZONE B. DO A BORESCOPE INSPECTION OF THE I.P. TURBINE SYSTEM (AMM 72-00-00/601). IF THE DAMAGE IS IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, YOU CAN CONTINUE TO USE THE ENGINE IF THE ENGINE IS REMOVED IN 60 FLIGHT HOURS TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

ZONE D — ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

Overtemperature Inspection Requirements (Below 50% N3)
Figure 120 (Sheet 1)



LEGEND:

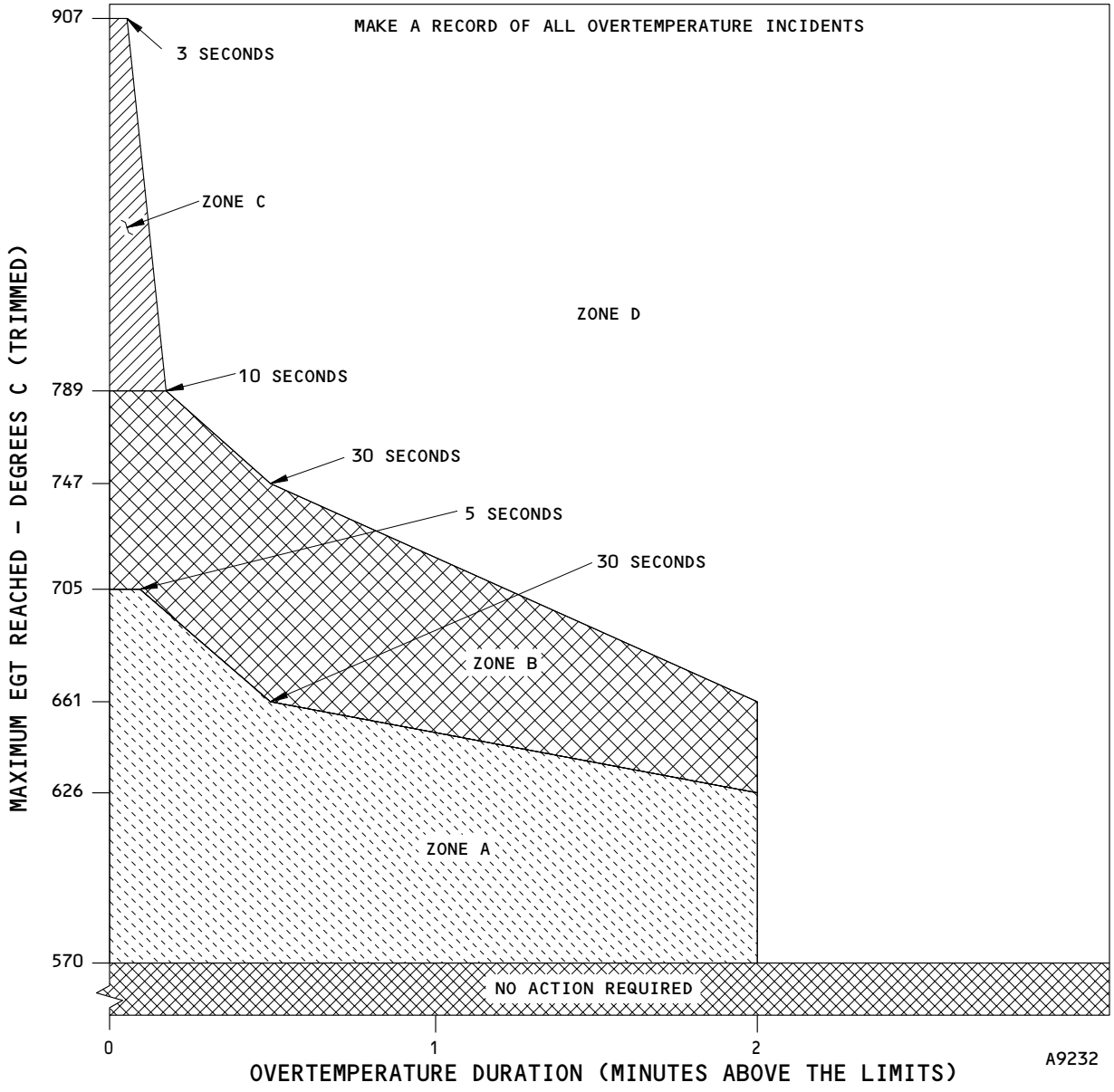
ZONE A — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. DO A VISUAL INSPECTION OF THE L.P. TURBINE AND THE INTERNAL PART OF THE EXHAUST COLLECTOR (AMM 78-11-04/601) FOR DAMAGE.

ZONE B — DO THE PROCEDURE FOR ZONE A. DO A BORESCOPE INSPECTION OF THE H.P., I.P. AND L.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601).

ZONE C — DO THE PROCEDURE FOR ZONE A AND ZONE B. DO A BORESCOPE INSPECTION OF THE I.P. TURBINE SYSTEM (AMM 72-00-00/601). IF IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 60 FLIGHT HOURS TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

ZONE D — ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

Overtemperature Inspection Requirements (Below 50% N3)
Figure 120 (Sheet 2)



LEGEND:

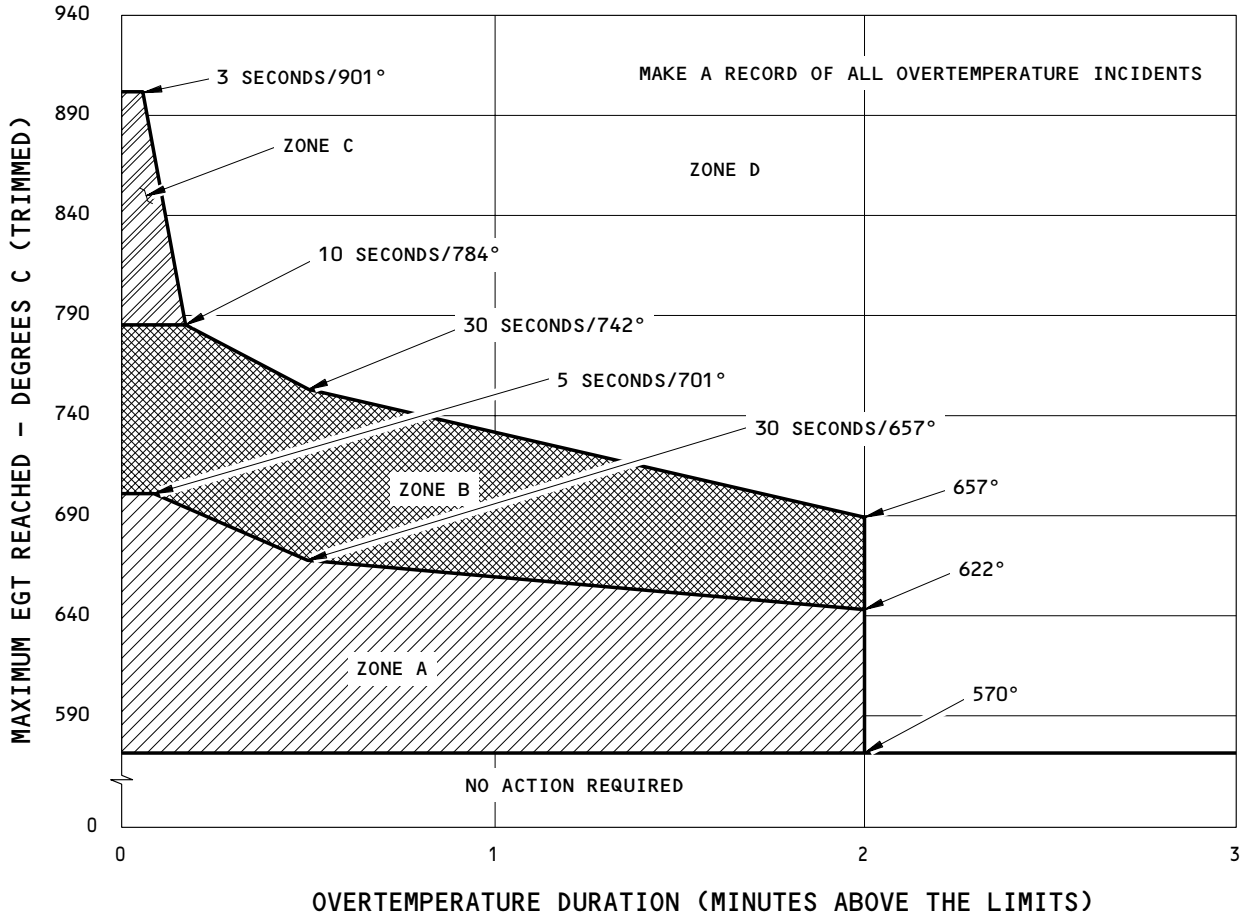
ZONE A — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. DO A VISUAL INSPECTION OF THE L.P. TURBINE AND THE INTERNAL PART OF THE EXHAUST COLLECTOR (AMM 78-11-04/601) FOR DAMAGE.

ZONE B — DO THE PROCEDURE FOR ZONE A. DO A BORESCOPE INSPECTION OF THE H.P., I.P. AND L.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601).

ZONE C — DO THE PROCEDURE FOR ZONE A AND ZONE B. DO A BORESCOPE INSPECTION OF THE I.P. TURBINE SYSTEM (AMM 72-00-00/601). IF IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 60 FLIGHT HOURS TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

ZONE D — ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

Overtemperature Inspection Requirements (Below 50% N3)
Figure 120 (Sheet 3)



ZONE A FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. DO A VISUAL INSPECTION OF THE L.P. TURBINE AND THE INTERNAL PART OF THE EXHAUST COLLECTOR (AMM 78-11-00/601) FOR DAMAGE.

ZONE B DO THE PROCEDURE FOR ZONE A. DO A BORESCOPE INSPECTION OF THE H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601). IF IN THE LIMITS, DO THE BORESCOPE INSPECTION AGAIN BETWEEN 25 AND 50 FLIGHT HOURS.

ZONE C DO THE PROCEDURE FOR ZONE A AND ZONE B. DO A BORESCOPE INSPECTION OF THE I.P. TURBINE SYSTEM (AMM 72-00-00/601). IF IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 60 FLIGHTS HOURS TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

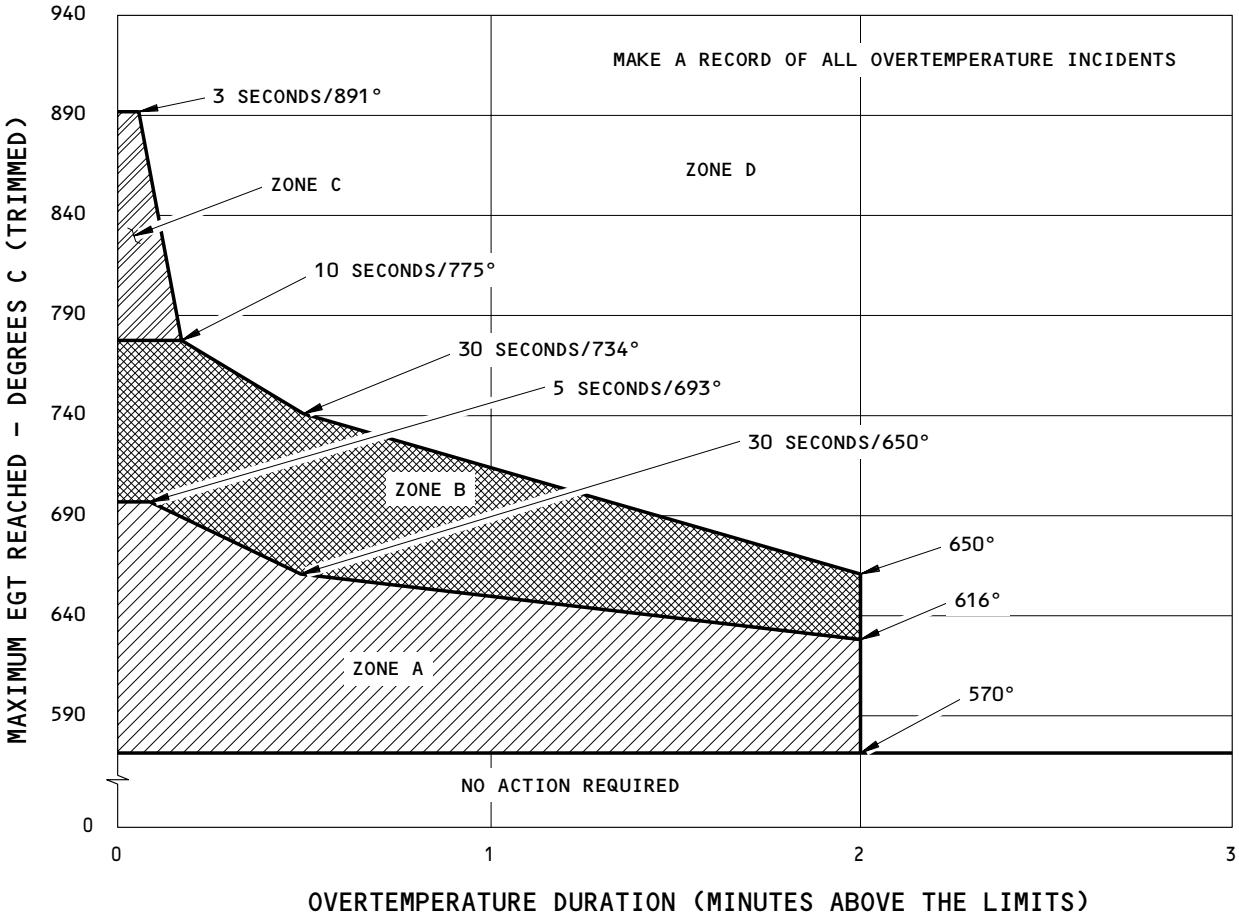
ZONE D ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

DEE0008019

Overtemperature Inspection Requirements (Below 50% N3)
Figure 120 (Sheet 4)

EFFECTIVITY
RB211-535E4 ENGINES WITH BALLAST RESISTOR CODE U

1541155



ZONE A FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. DO A VISUAL INSPECTION OF THE L.P. TURBINE AND THE INTERNAL PART OF THE EXHAUST COLLECTOR (AMM 78-11-00/601) FOR DAMAGE.

ZONE B DO THE PROCEDURE FOR ZONE A. DO A BORESCOPE INSPECTION OF THE H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601). IF IN THE LIMITS, DO THE BORESCOPE INSPECTION AGAIN BETWEEN 25 AND 50 FLIGHT HOURS.

ZONE C DO THE PROCEDURE FOR ZONE A AND ZONE B. DO A BORESCOPE INSPECTION OF THE I.P. TURBINE SYSTEM (AMM 72-00-00/601). IF IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 60 FLIGHTS HOURS TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

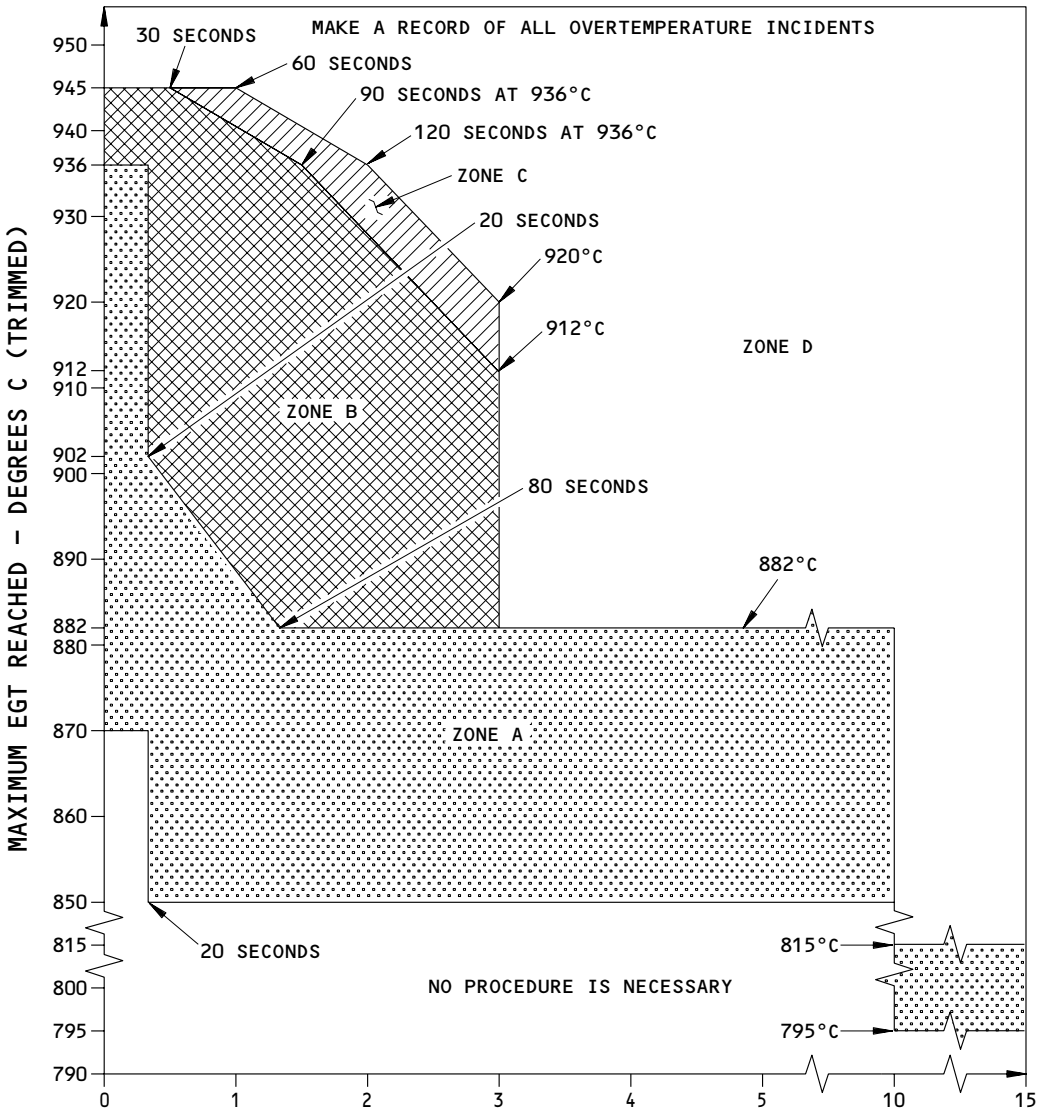
ZONE D ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/SPECIAL PROCEDURES).

DEE0008020

Overtemperature Inspection Requirements (Below 50% N3)
Figure 120 (Sheet 5)

EFFECTIVITY
RB211-535E4 ENGINES POST
SB72-C230 WITH BALLAST RESISTOR
CODE AA

1543288



LEGEND:

ZONE A — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT (FIG 116). IF AN ENGINE HAS MORE THAN 5 EXCURSIONS INTO ZONE A WITHOUT THE CAUSE BEING FOUND WITHIN 90 DAYS,DO THE PROCEDURE FOR ZONE B IN 5 FLIGHTS OR LESS IF AN ENGINE IS DECLARED SERVICEABLE AFTER THE INSPECTION PROCEDURE FOR ZONE B IS DONE, A FURTHER PERIOD OF 90 DAYS STARTS FROM THIS TIME.

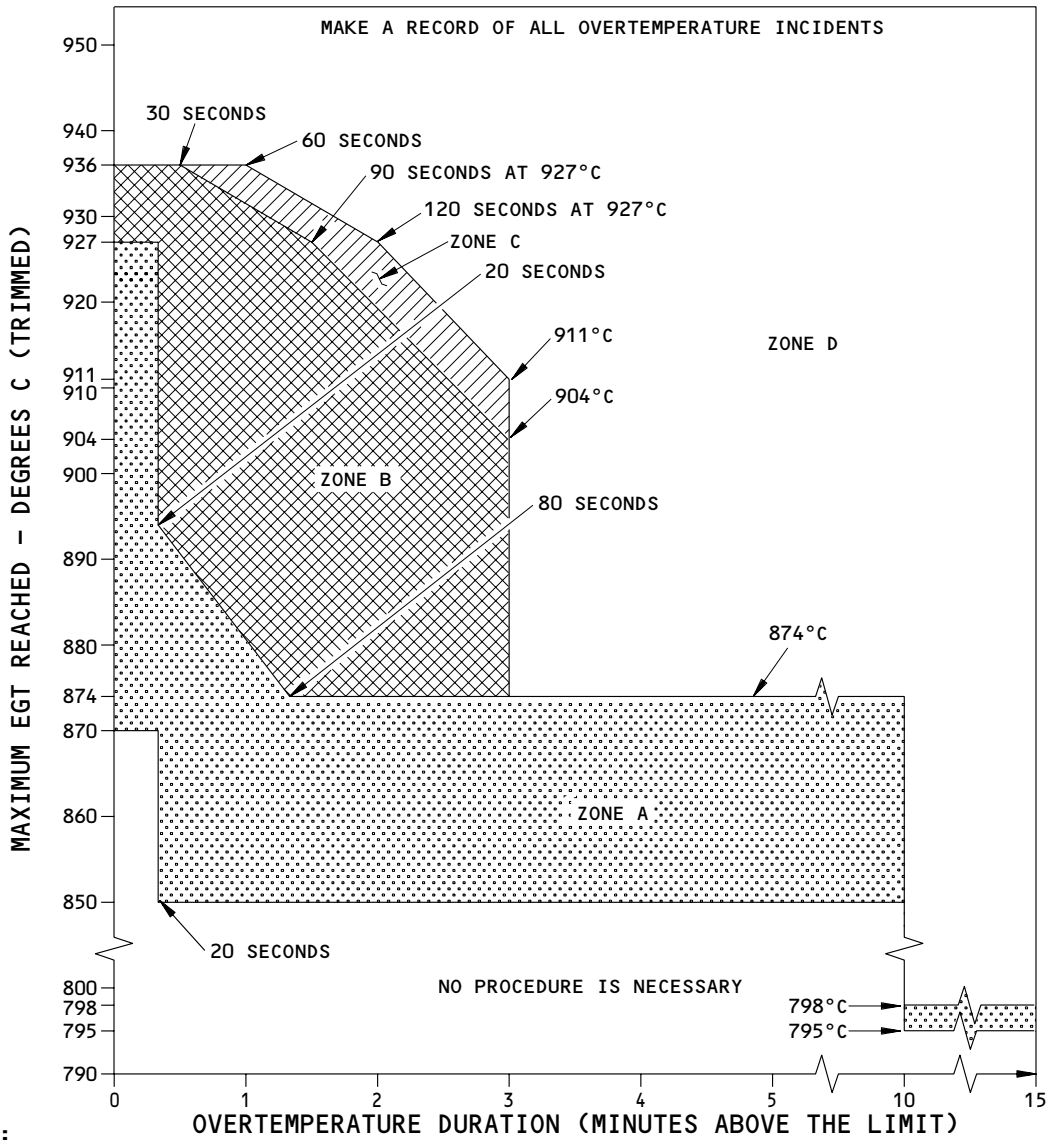
ZONE B — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. IF NO CAUSE FOUND, DO A VISUAL INSPECTION OF THE L.P. TURBINE. IF THE DAMAGE IS MORE THAN THE LIMITS, REJECT THE ENGINE. IF THE DAMAGE IS IN THE LIMITS, DO A BORESCOPE INSPECTION OF THE I.P. TURBINE, H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601).

ZONE C — DO THE PROCEDURE FOR ZONE B. IF THE DAMAGE IS IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 25 HOURS OR 6 FLIGHTS (WHICHEVER OCCURS FIRST) TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

ZONE D — ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

Overtemperature Inspection Requirements (Above 50% N3)
Figure 121 (Sheet 1)

766417



C7919

LEGEND:

ZONE A — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT (FIG 116). IF AN ENGINE HAS MORE THAN 5 EXCURSIONS INTO ZONE A WITHOUT THE CAUSE BEING FOUND WITHIN 90 DAYS,DO THE PROCEDURE FOR ZONE B IN 5 FLIGHTS OR LESS IF AN ENGINE IS DECLARED SERVICEABLE AFTER THE INSPECTION PROCEDURE FOR ZONE B IS DONE, A FURTHER PERIOD OF 90 DAYS STARTS FROM THIS TIME.

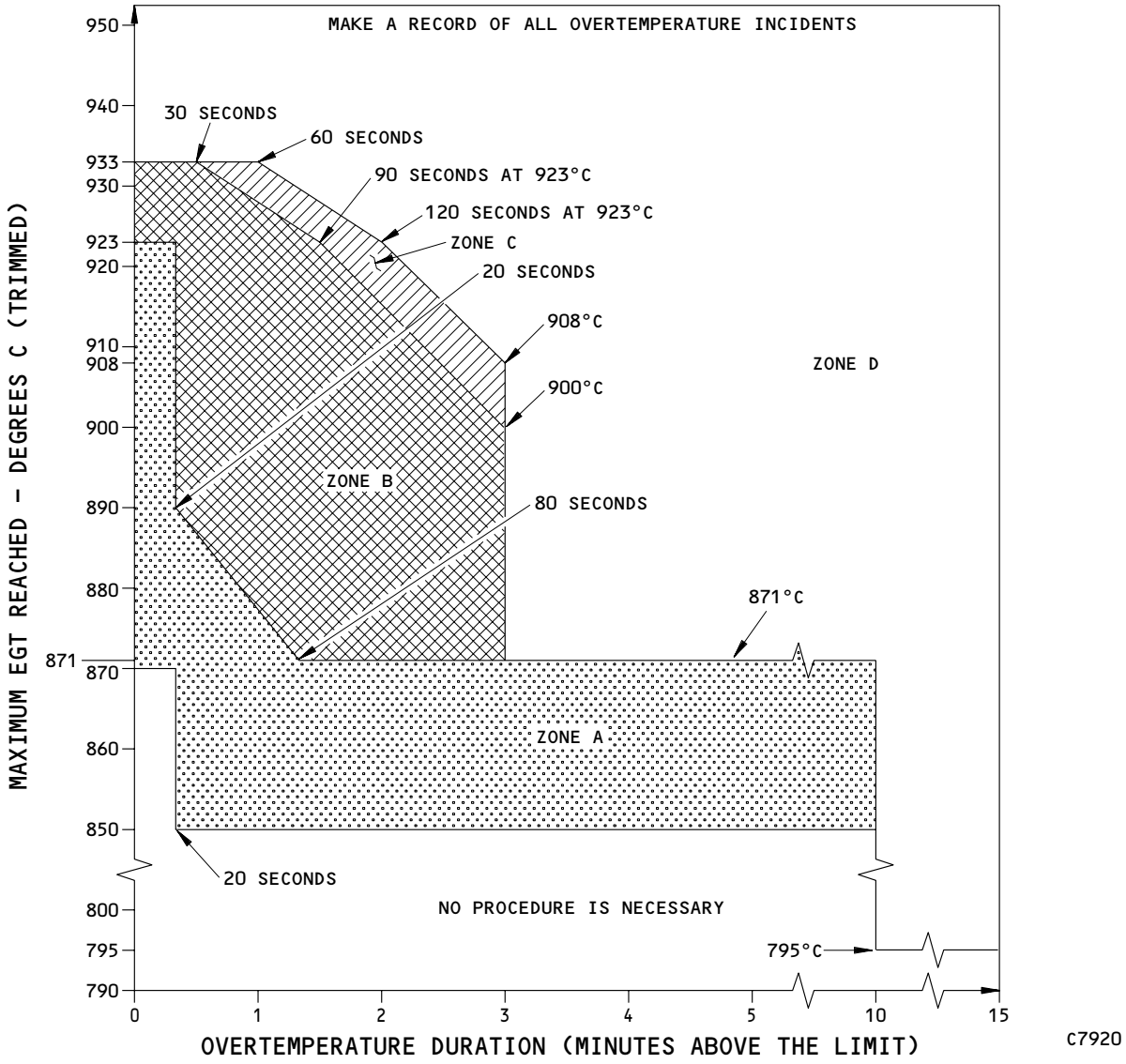
ZONE B — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. IF NO CAUSE FOUND, DO A VISUAL INSPECTION OF THE L.P. TURBINE. IF THE DAMAGE IS MORE THAN THE LIMITS, REJECT THE ENGINE. IF THE DAMAGE IS IN THE LIMITS, DO A BORESCOPE INSPECTION OF THE I.P. TURBINE, H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601).

ZONE C — DO THE PROCEDURE FOR ZONE B. IF THE DAMAGE IS IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 25 HOURS OR 6 FLIGHTS (WHICHEVER OCCURS FIRST) TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

ZONE D — ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

Overtemperature Inspection Requirements (Above 50% N3)
Figure 121 (Sheet 2)

766423



LEGEND:

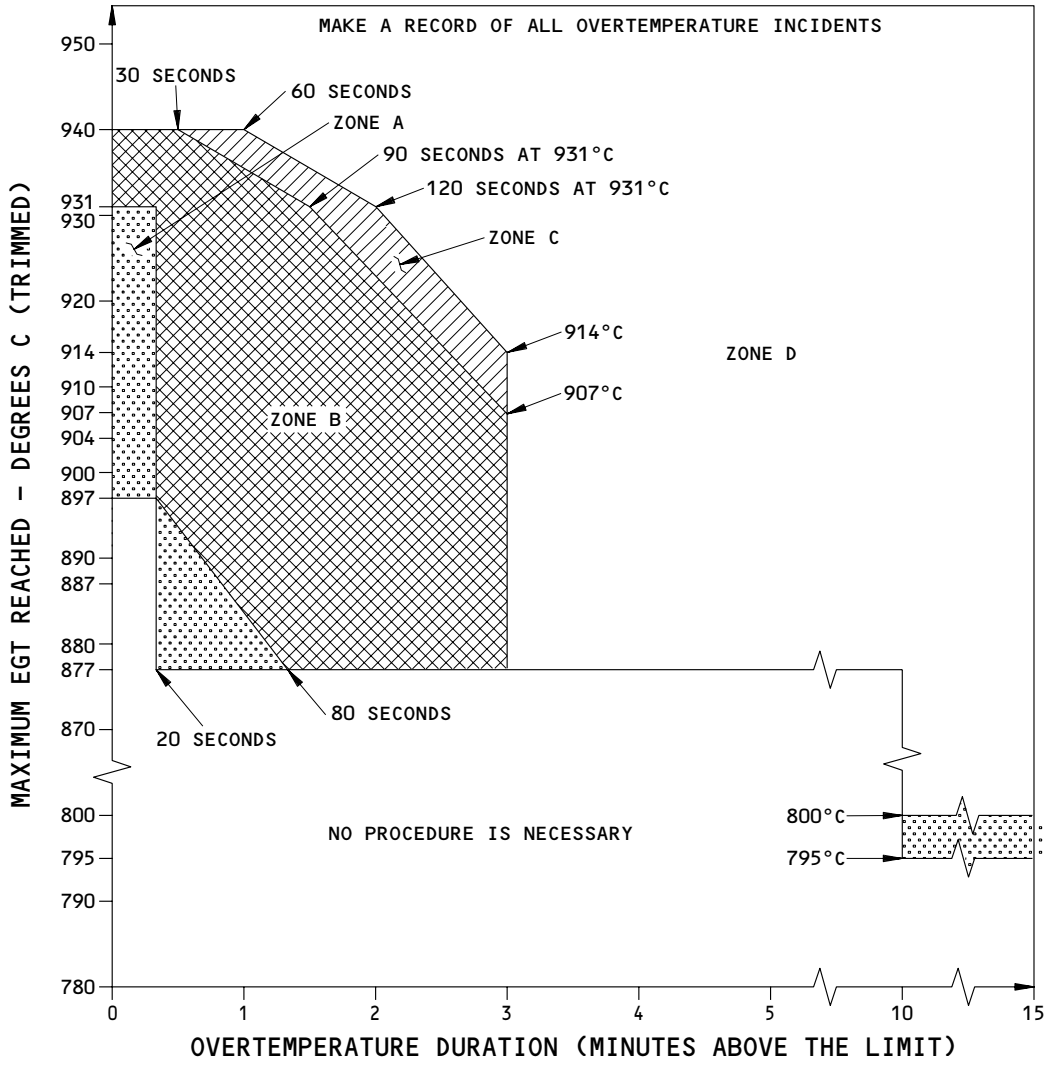
ZONE A FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT (FIG 116). IF AN ENGINE HAS MORE THAN 5 EXCURSIONS INTO ZONE A WITHOUT THE CAUSE BEING FOUND WITHIN 90 DAYS, DO THE PROCEDURE FOR ZONE B IN 5 FLIGHTS OR LESS IF AN ENGINE IS DECLARED SERVICEABLE AFTER THE INSPECTION PROCEDURE FOR ZONE B IS DONE, A FURTHER PERIOD OF 90 DAYS STARTS FROM THIS TIME.

ZONE B FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. IF NO CAUSE FOUND, DO A VISUAL INSPECTION OF THE L.P. TURBINE. IF THE DAMAGE IS MORE THAN THE LIMITS, REJECT THE ENGINE. IF THE DAMAGE IS IN THE LIMITS, DO A BORESCOPE INSPECTION OF THE I.P. TURBINE, H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601).

ZONE C DO THE PROCEDURE FOR ZONE B. IF THE DAMAGE IS IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 25 HOURS OR 6 FLIGHTS (WHICHEVER OCCURS FIRST) TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

ZONE D ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

Overtemperature Inspection Requirements (Above 50% N3)
Figure 121 (Sheet 3)



LEGEND:

ZONE A — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT (FIG 116). IF AN ENGINE HAS MORE THAN 5 EXCURSIONS INTO ZONE A WITHOUT THE CAUSE BEING FOUND WITHIN 90 DAYS, DO THE PROCEDURE FOR ZONE B IN 5 FLIGHTS OR LESS IF AN ENGINE IS DECLARED SERVICEABLE AFTER THE INSPECTION PROCEDURE FOR ZONE B IS DONE, A FURTHER PERIOD OF 90 DAYS STARTS FROM THIS TIME.

ZONE B — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. IF NO CAUSE FOUND, DO A VISUAL INSPECTION OF THE L.P. TURBINE. IF THE DAMAGE IS MORE THAN THE LIMITS, REJECT THE ENGINE. IF THE DAMAGE IS IN THE LIMITS, DO A BORESCOPE INSPECTION OF THE I.P. TURBINE, H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601).

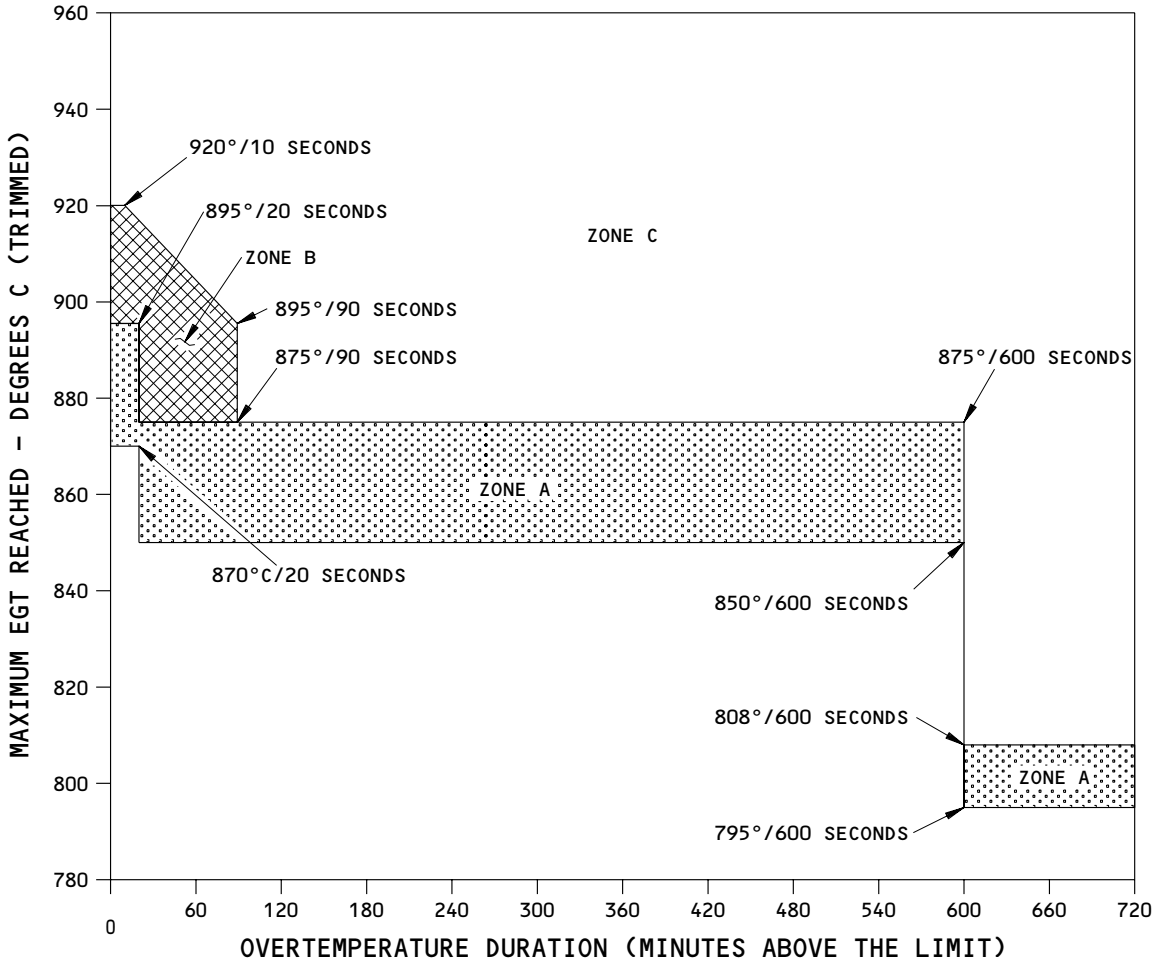
ZONE C — DO THE PROCEDURE FOR ZONE B. IF THE DAMAGE IS IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 25 HOURS OR 6 FLIGHTS (WHICHEVER OCCURS FIRST) TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

ZONE D — ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

Overtemperature Inspection Requirements (Above 50% N3)
Figure 121 (Sheet 4)

EFFECTIVITY
RB211-535E4-B ENGINES WITH
BALLAST RESISTOR CODE K

850512



LEGEND:

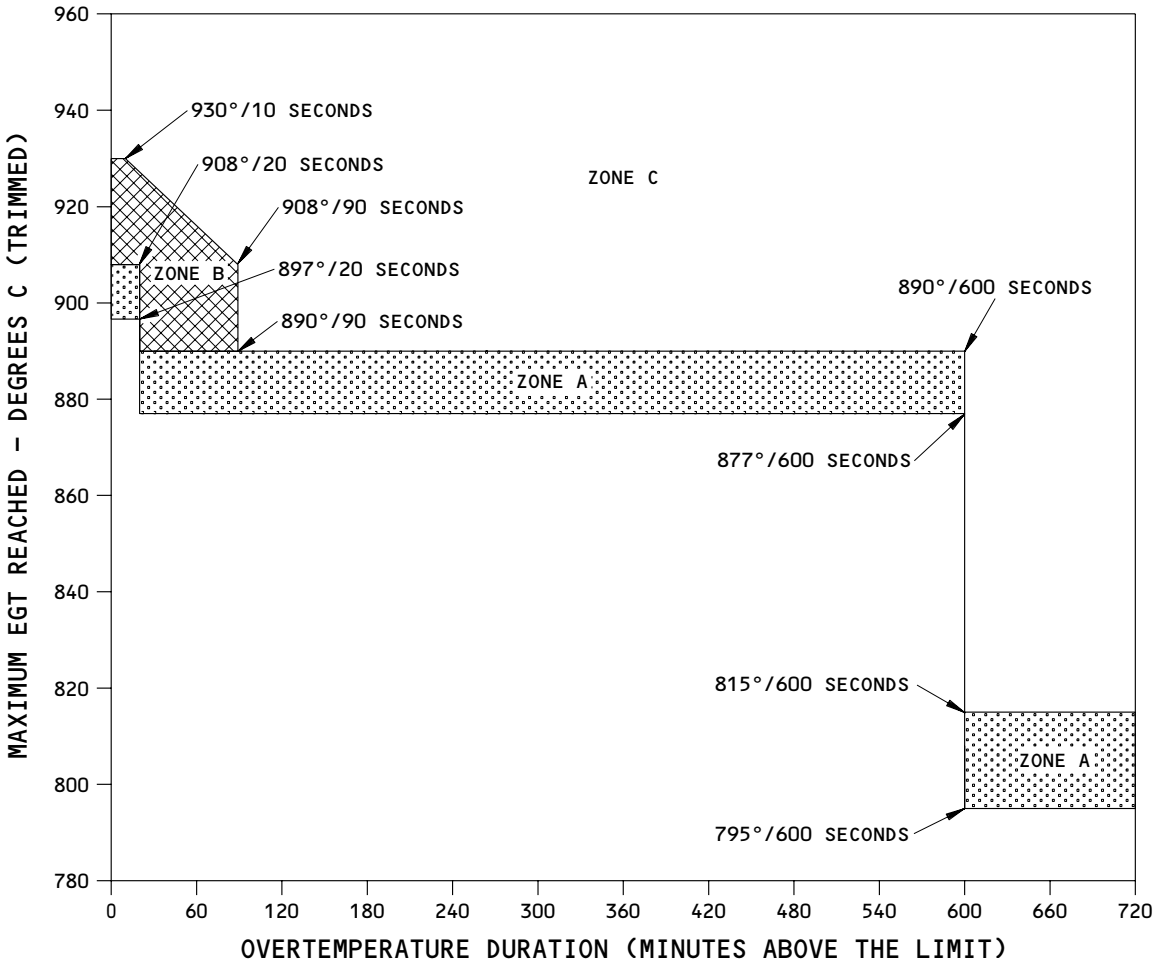
ZONE A — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT (FIG 116). IF AN ENGINE HAS MORE THAN 5 EXCURSIONS INTO ZONE A WITHOUT THE CAUSE BEING FOUND WITHIN 90 DAYS, DO THE PROCEDURE FOR ZONE B IN 5 FLIGHTS OR LESS IF AN ENGINE IS DECLARED SERVICEABLE AFTER THE INSPECTION PROCEDURE FOR ZONE B IS DONE, A FURTHER PERIOD OF 90 DAYS STARTS FROM THIS TIME.

ZONE B — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. IF NO CAUSE FOUND, DO A VISUAL INSPECTION OF THE L.P. TURBINE. IF THE DAMAGE IS MORE THAN THE LIMITS, REJECT THE ENGINE. IF THE DAMAGE IS IN THE LIMITS, DO A BORESCOPE INSPECTION OF THE I.P. TURBINE, H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601). IF NO DAMAGE IS FOUND OUTSIDE THE MANUAL LIMITS, RETURN THE ENGINE TO SERVICE.

ZONE C — ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

DEE0004300

Overtemperature Inspection Requirements (Above 50% N3)
Figure 121 (Sheet 5)



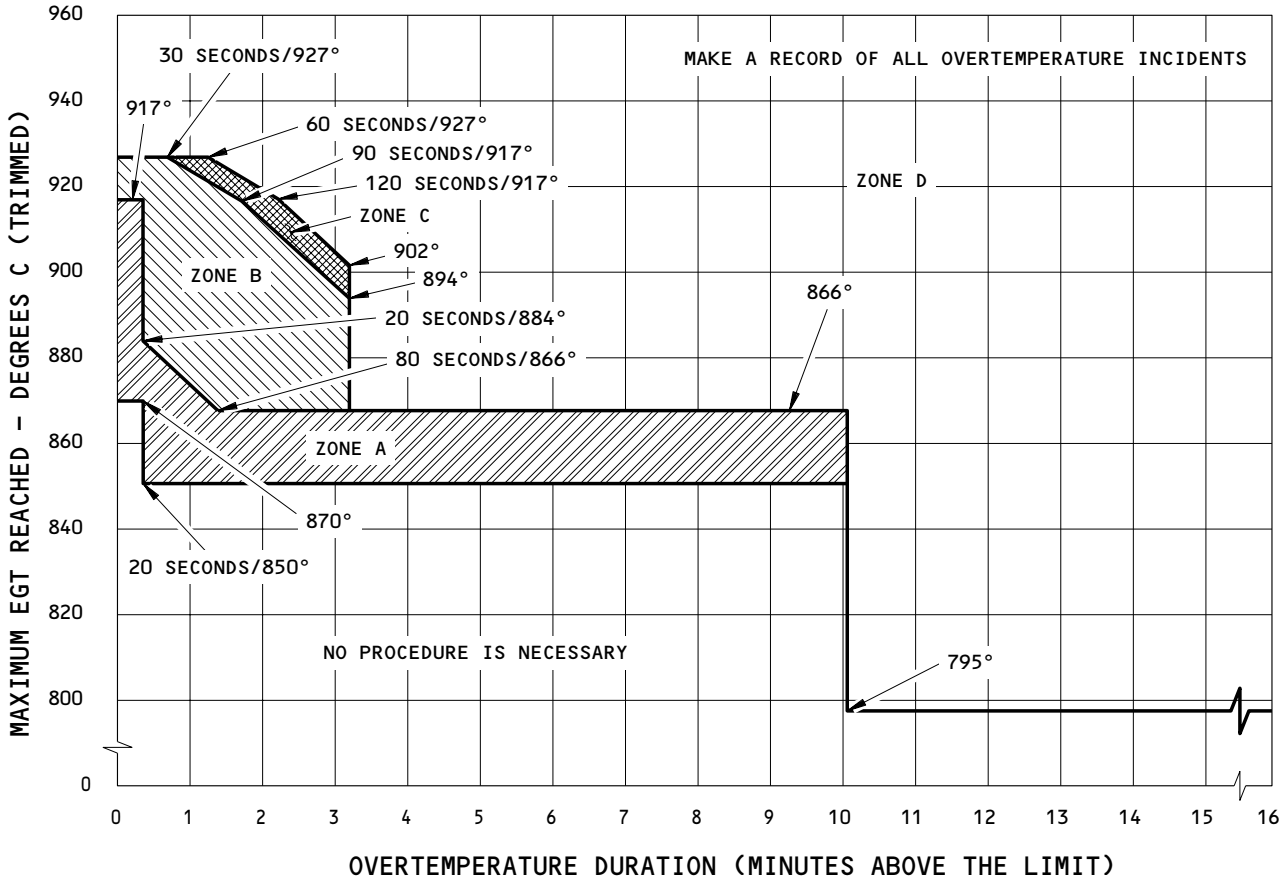
LEGEND:

ZONE A — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT (FIG 116). IF AN ENGINE HAS MORE THAN 5 EXCURSIONS INTO ZONE A WITHOUT THE CAUSE BEING FOUND WITHIN 90 DAYS, DO THE PROCEDURE FOR ZONE B IN 5 FLIGHTS OR LESS IF AN ENGINE IS DECLARED SERVICEABLE AFTER THE INSPECTION PROCEDURE FOR ZONE B IS DONE, A FURTHER PERIOD OF 90 DAYS STARTS FROM THIS TIME.

ZONE B — FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. IF NO CAUSE FOUND, DO A VISUAL INSPECTION OF THE L.P. TURBINE. IF THE DAMAGE IS MORE THAN THE LIMITS, REJECT THE ENGINE. IF THE DAMAGE IS IN THE LIMITS, DO A BORESCOPE INSPECTION OF THE I.P. TURBINE, H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601). IF NO DAMAGE IS FOUND OUTSIDE THE MANUAL LIMITS, RETURN THE ENGINE TO SERVICE.

ZONE C — ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201). DEE0004301

Overtemperature Inspection Requirements (Above 50% N3)
Figure 121 (Sheet 6)



ZONE A FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT (FIG. 116). IF AN ENGINE HAS MORE THAN 5 EXCURSIONS INTO ZONE A WITHOUT THE CAUSE BEING FOUND WITHIN 90 DAYS, DO THE PROCEDURE FOR ZONE B IN 5 FLIGHTS OR LESS. IF AN ENGINE IS DECLARED SERVICEABLE AFTER THE INSPECTION PROCEDURE FOR ZONE B IS DONE, A FURTHER PERIOD OF 90 DAYS STARTS FROM THIS TIME.

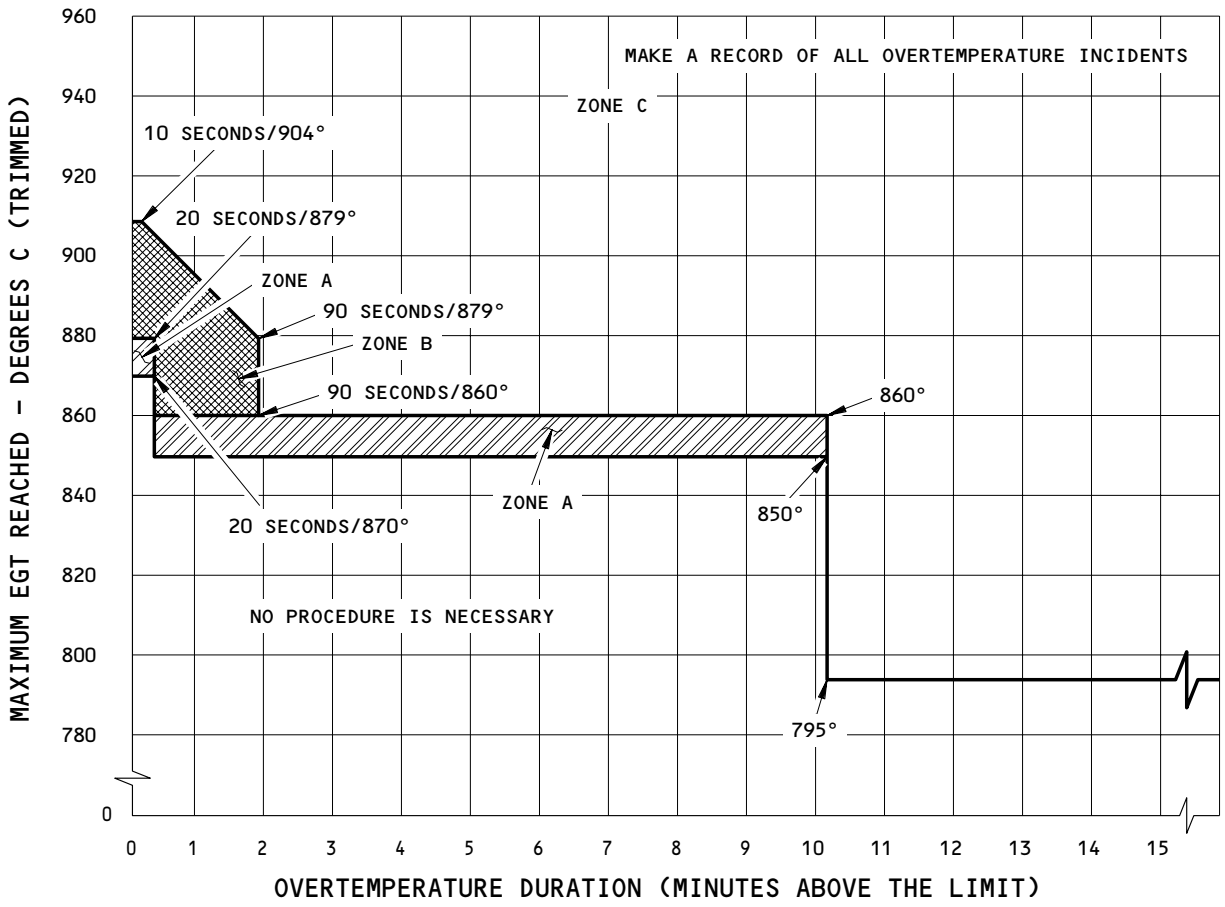
ZONE B FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. IF NO CAUSE IS FOUND, DO A VISUAL INSPECTION OF THE L.P. TURBINE. IF THE DAMAGE IS MORE THAN THE LIMITS, REJECT THE ENGINE. IF THE DAMAGE IS IN THE LIMITS, DO A BORESCOPE INSPECTION OF THE I.P. TURBINE, H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601).

ZONE C DO THE PROCEDURE FOR ZONE B. IF THE DAMAGE IS IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 25 HOURS OR 6 FLIGHTS (WHICHEVER OCCURS FIRST) TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

ZONE D ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

DEE0008021

Overtemperature Inspection Requirements (Above 50% N3)
Figure 121 (Sheet 7)



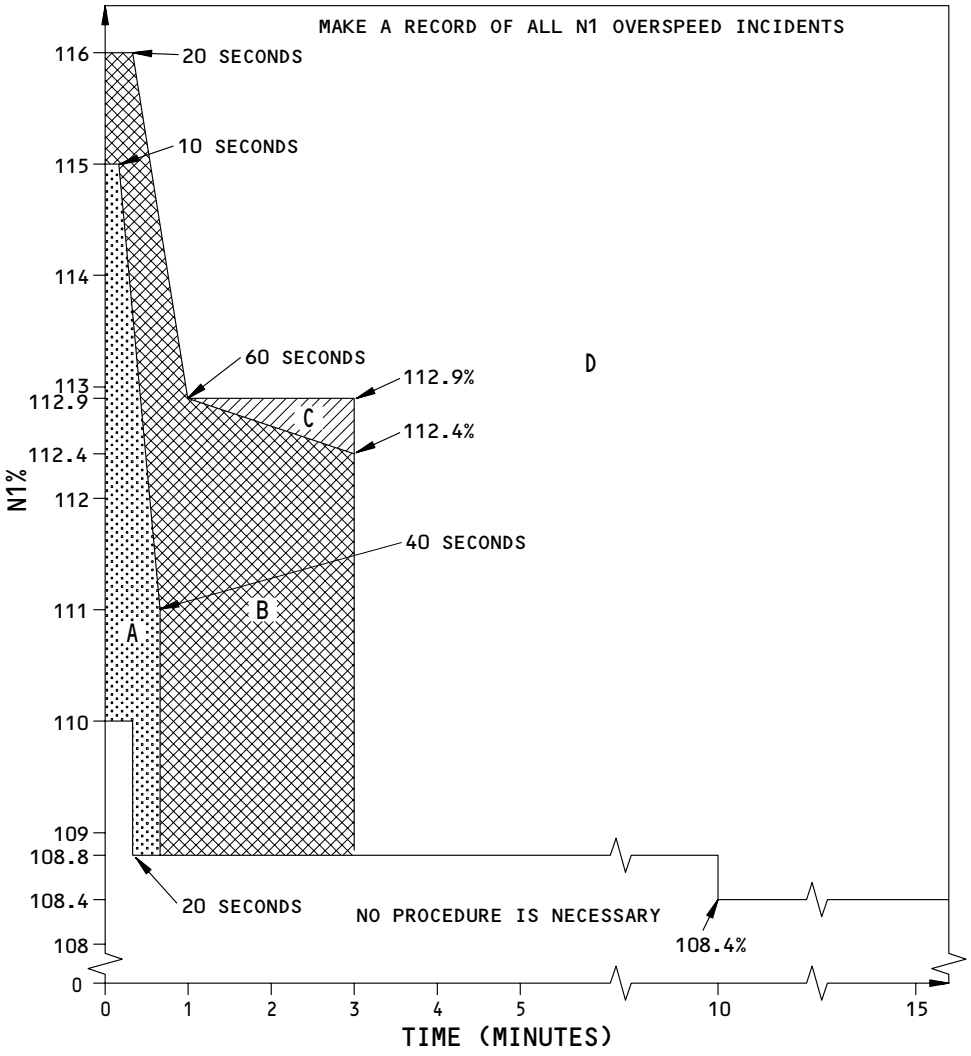
ZONE A ▨ FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT (FIG. 116). IF AN ENGINE HAS MORE THAN 5 EXCURSIONS INTO ZONE A WITHOUT THE CAUSE BEING FOUND WITHIN 90 DAYS, DO THE PROCEDURE FOR ZONE B IN 5 FLIGHTS OR LESS. IF AN ENGINE IS DECLARED SERVICEABLE AFTER THE INSPECTION PROCEDURE FOR ZONE B IS DONE, A FURTHER PERIOD OF 90 DAYS STARTS FROM THIS TIME.

ZONE B ▩ FIND THE CAUSE OF THE OVERTEMPERATURE AND CORRECT IT. IF NO CAUSE IS FOUND, DO A VISUAL INSPECTION OF THE L.P. TURBINE. IF THE DAMAGE IS MORE THAN THE LIMITS, REJECT THE ENGINE. IF THE DAMAGE IS IN THE LIMITS, DO A BORESCOPE INSPECTION OF THE I.P. TURBINE, H.P. TURBINE AND COMBUSTION SYSTEMS (AMM 72-00-00/601). IF NO DAMAGE IS FOUND OUTSIDE THE MANUAL LIMITS, RETURN THE ENGINE TO SERVICE

ZONE C ☐ ALL OVERTEMPERATURE INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

DEE0008022

Overtemperature Inspection Requirements (Above 50% N3)
Figure 121 (Sheet 8)



NOTE: FROM THE ENG EXCD PAGE, USE THE RPM AND THE LENGTH OF TIME SHOWN TO FIND THE APPLICABLE INSPECTION INSTRUCTION. FLIGHT RECORDER DATA MAY BE USED TO KNOW MAX RPM AND TIME DATA.
EXAMPLE: EICAS ENG EXCD PAGE DISPLAYS
RPM TIME
110% 30 SEC
PLOT 30 SECONDS AT 110%

ZONE

A FIND THE CAUSE OF THE OVERSPEED AND CORRECT IT (FIG. 115A).

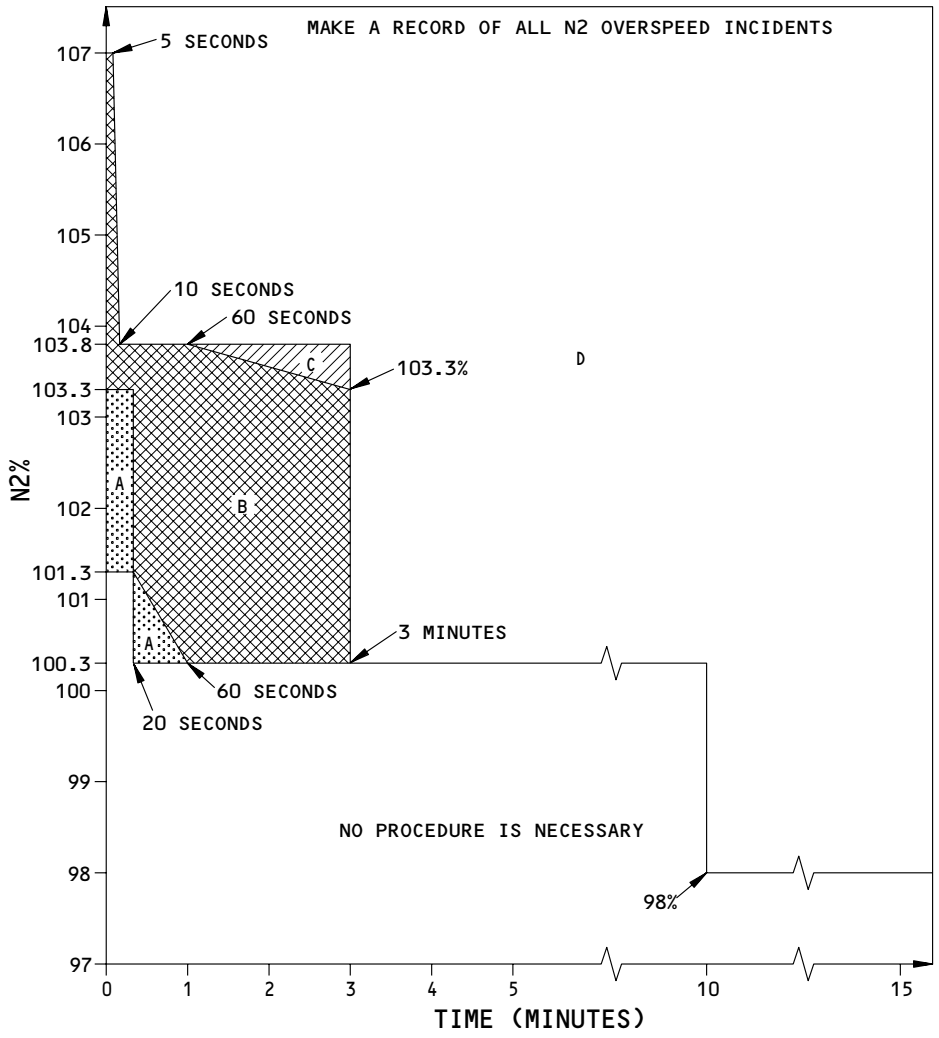
B IF THERE WAS A SURGE, DO THE "INSPECTION FOLLOWING ENGINE SURGE" (AMM 71-00-00/601). FIND THE CAUSE OF THE OVERSPEED AND CORRECT IT. IF NO CAUSE FOUND, DO A VISUAL INSPECTION OF THE L.P. COMPRESSOR (AMM 72-31-13/601). IF THE DAMAGE IS MORE THAN THE LIMITS, REJECT THE ENGINE. IF THE DAMAGE IS IN THE LIMITS, DO A BORESCOPE INSPECTION OF THE L.P. TURBINE SYSTEM (AMM 72-00-00/601).

C DO THE PROCEDURE FOR ZONE B. IF THE DAMAGE IS IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 25 HOURS OR 6 FLIGHTS (WHICHEVER OCCURS FIRST) TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

D ALL OVERSPEED INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

C7915

N1 Overspeed Inspection Requirements
Figure 122



NOTE: FROM THE ENG EXCD PAGE, USE THE RPM AND THE LENGTH OF TIME SHOWN TO FIND THE APPLICABLE INSPECTION INSTRUCTION. FLIGHT RECORDER DATA MAY BE USED TO KNOW MAX RPM AND TIME DATA.
EXAMPLE: EICAS ENG EXCD PAGE DISPLAYS
RPM TIME
102% 30 SEC
PLOT 30 SECONDS AT 102%

ZONE

A FIND THE CAUSE OF THE OVERSPEED AND CORRECT IT (FIG. 115B).

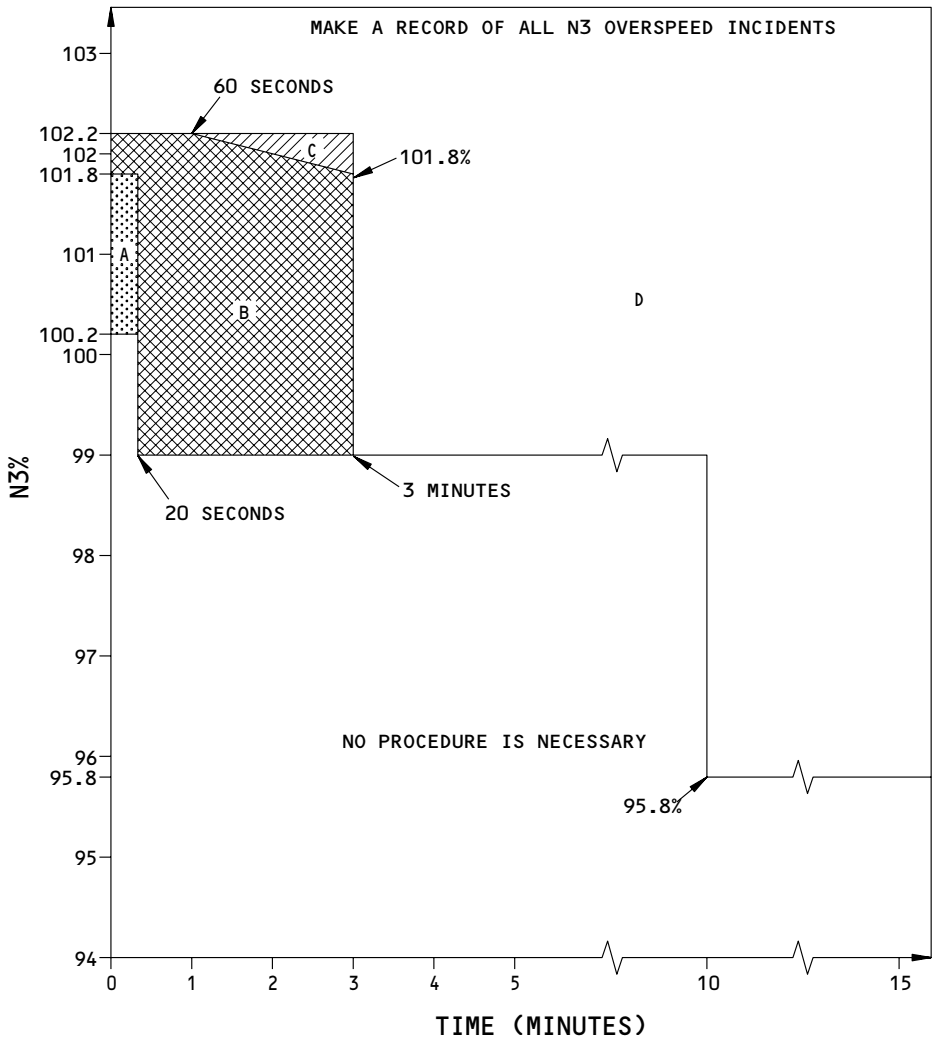
B IF THERE WAS A SURGE, DO THE "INSPECTION FOLLOWING ENGINE SURGE" (AMM 71-00-00/601). FIND THE CAUSE OF THE OVERSPEED AND CORRECT IT. IF NO CAUSE FOUND, DO A BORESCOPE INSPECTION OF THE I.P. COMPRESSOR AND I.P. TURBINE SYSTEMS (AMM 72-00-00/601).

C DO THE PROCEDURE FOR ZONE B. IF THE DAMAGE IS IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 25 HOURS OR 6 FLIGHTS (WHICHEVER OCCURS FIRST) TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

D ALL OVERSPEED INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

C7916

N2 Overspeed Inspection Requirements
Figure 123



NOTE: FROM THE ENG EXCD PAGE, USE THE RPM AND THE LENGTH OF TIME SHOWN TO FIND THE APPLICABLE INSPECTION INSTRUCTION. FLIGHT RECORDER DATA MAY BE USED TO KNOW MAX RPM AND TIME DATA.
EXAMPLE: EICAS ENG EXCD PAGE DISPLAYS
RPM TIME
101% 30 SEC
PLOT 30 SECONDS AT 101%

ZONE

A FIND THE CAUSE OF THE OVERSPEED AND CORRECT IT (FIG. 115C).

B IF THERE WAS A SURGE, DO THE "INSPECTION FOLLOWING ENGINE SURGE" (AMM 71-00-00/601). FIND THE CAUSE OF THE OVERSPEED AND CORRECT IT. IF NO CAUSE FOUND, DO A BORESCOPE INSPECTION OF THE H.P. COMPRESSOR AND H.P. TURBINE SYSTEM (AMM 72-00-00/601).

C DO THE PROCEDURE FOR ZONE B. IF THE DAMAGE IS IN THE LIMITS, AND ONLY ONE ENGINE IS AFFECTED, THE ENGINE MAY CONTINUE IN SERVICE IF THE ENGINE IS REMOVED IN 25 HOURS OR 6 FLIGHTS (WHICHEVER OCCURS FIRST) TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

D ALL OVERSPEED INCIDENTS THAT ARE MORE THAN THE LIMITS SHOWN, REJECT THE ENGINE TO PERMIT AN ENGINE STRIP EXAMINATION (REFER TO RR ENGINE MANUAL 72-00-00/201).

C7917

N3 Overspeed Inspection Requirements
Figure 124

ENGINE OIL/FUEL SMELL IDENTIFIED IN CABIN

PREREQUISITES
NONE

1 IS THE SMELL ONLY PRESENT FOR A SHORT TIME, AFTER ENGINE START?
- YES → 30 NOTE: OIL/FUEL SMELL CAN OCCUR UNDER SOME CONDITIONS DURING ENGINE START. THIS IS DUE TO THE REMAINING CONTAMINATION FROM THE PREVIOUS SHUTDOWN, WHICH GOES INTO THE CABIN AIR SYSTEM. SUCH A SMELL SHOULD DISSIPATE QUICKLY AND DOES NOT INDICATE AN ENGINE PROBLEM.
- NO ↓

2 DOES THE ENGINE EXHIBIT HIGH OIL CONSUMPTION?
- YES → 31 DO THIS PROCEDURE: EXCESSIVE OIL CONSUMPTION – OIL TEMPERATURE AND PRESSURE NORMAL PROCEDURE (FIM 79-31-00/101, FIG. 104).
- NO ↓

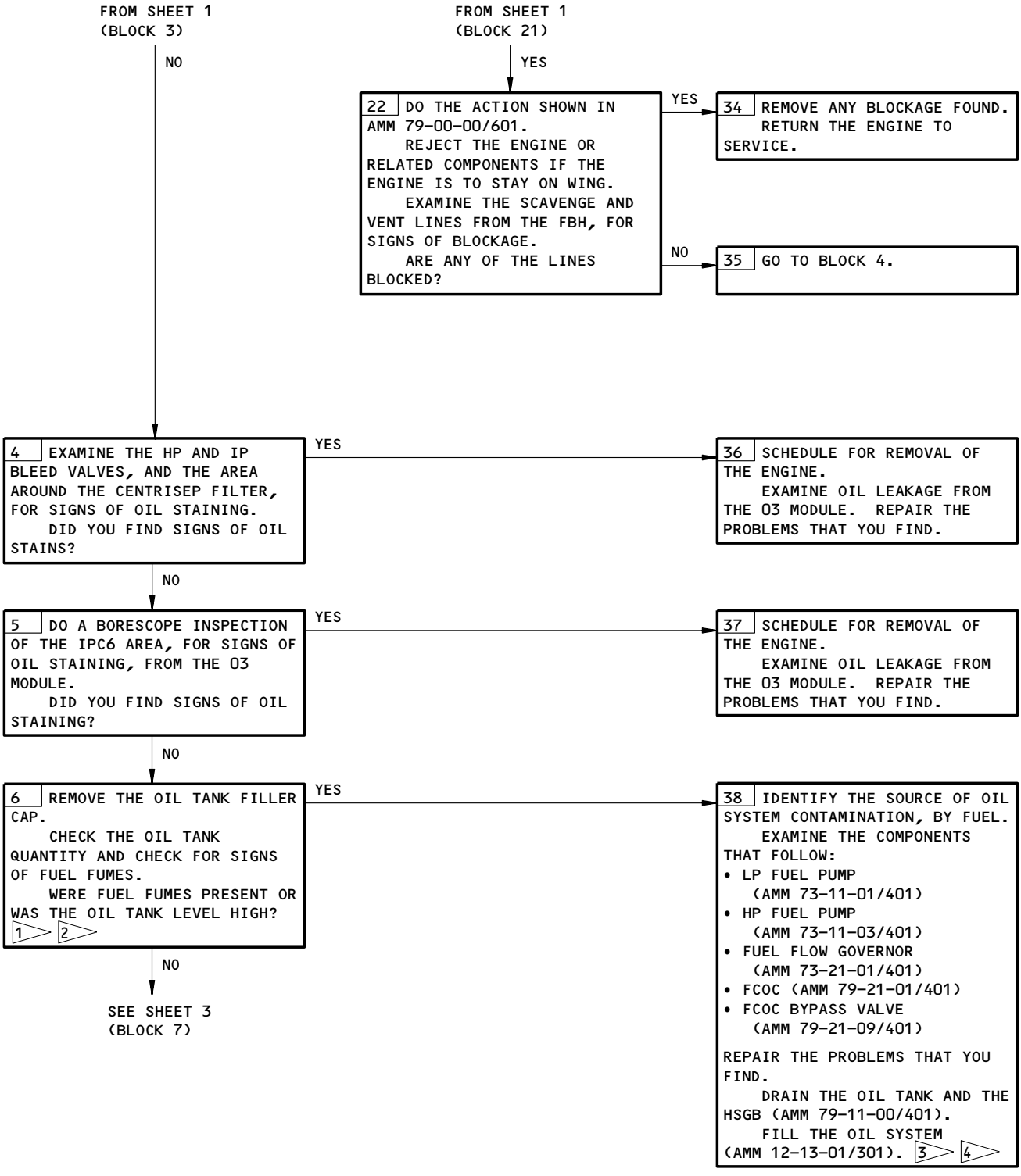
3 EXAMINE THE ENGINE FOR SIGNS OF OIL LEAKAGE, AT THE FAN TRACK LINER REAR OF THE FAN DISK, THE LP COMP BLADES, IPC IGV's, AND STAGE 1 BLADES. DID YOU FIND SIGNS OF OIL LEAKAGE?
- YES → 20 CHECK SERVICING HISTORY AND OIL TANK QUANTITY. HAS THE OIL TANK BEEN OVER-FILLED?
  - YES → 32 DRAIN ANY OIL THAT IS MORE THAN THE CORRECT LEVEL, FROM THE TANK (AMM 79-11-00/301). ADD OIL TO THE SYSTEM, AS NECESSARY (AMM 12-13-01/301).
  - NO ↓
- NO → SEE SHEET 2 (BLOCK 4)

21 DO AN INSPECTION OF THE MCDs AND FILTERS. DO THE OIL INSPECTION/ CHECK (AMM 79-00-00/601). WAS AN INTERNAL FAILURE IDENTIFIED?
- NO → 33 SCHEDULE REMOVAL OF THE ENGINE, FOR A CHECK INTO OIL LEAKAGE FROM THE FRONT BEARING HOUSING, 02 MODULE.
- YES → SEE SHEET 2 (BLOCK 22)

NOTE: A SMALL QUANTITY OF OIL, CAN STAY IN THE AIRPLANE PNEUMATIC SYSTEM AND CAUSE REPORTS OF CABIN ODOURS. THESE REPORTS CAN CONTINUE AFTER THE SOURCE OF THE OIL IS REMOVED. IF THE CAUSE OF THE CABIN ODOUR IS ENGINE OIL, REMOVE THE SOURCE. AFTER THE SOURCE IS REMOVED, REMOVE THE CONTAMINATION FROM THE AIR CONDITIONING SYSTEM (AMM 21-00-01/201).

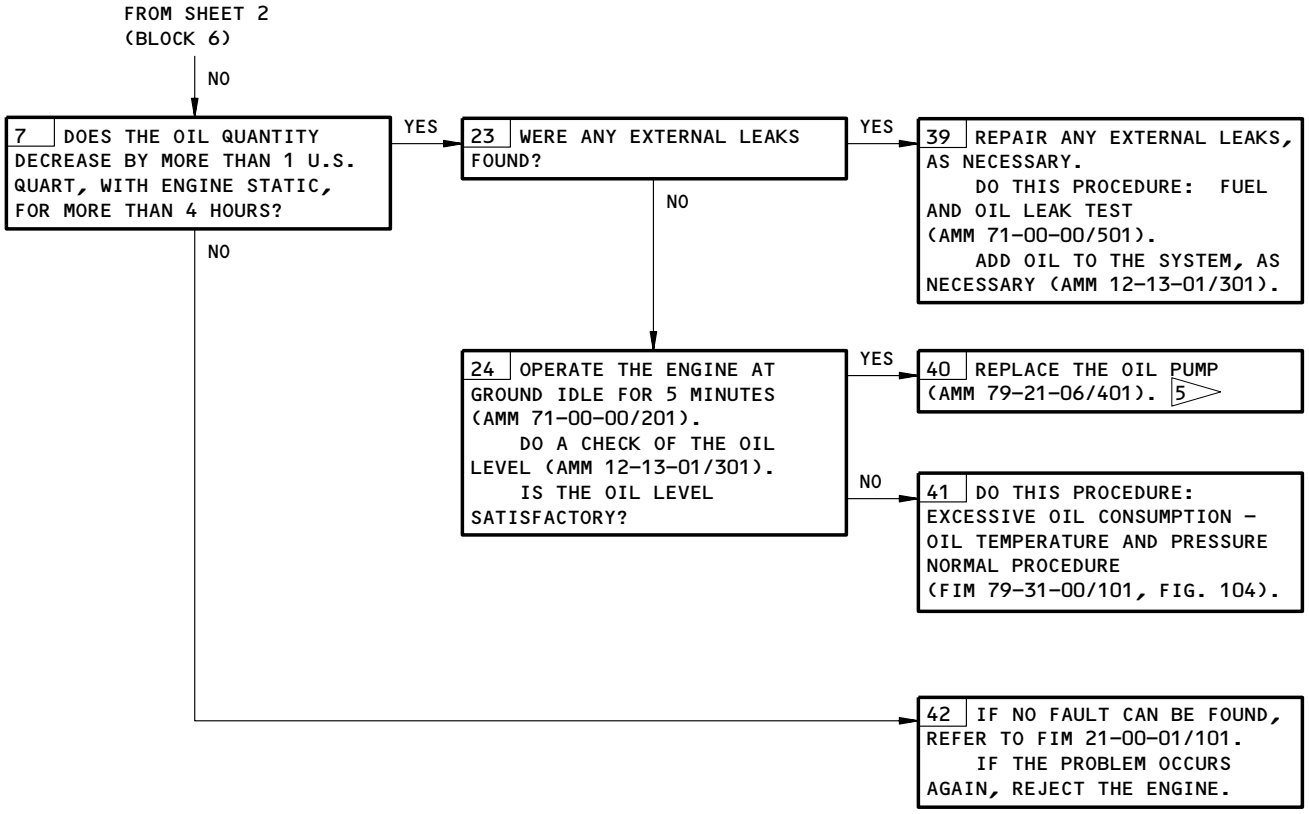
1. RR TOOL NUMBERS, 1013832 AND 1013833, SHOULD BE USED TO MEASURE FUEL FUMES.
2. ALTERNATIVELY, A COMBUSTABLE GAS DETECTOR RR PART NUMBER, 1018157, CAN BE USED (AMM 12-13-01/301).
3. EXAMINE THE CONDITION OF THE MAGNETIC CHIP DETECTORS, BEFORE AND AFTER THE NEXT FLIGHT.
4. IF THE SOURCE OF FUEL IS FROM THE FUEL FLOW GOVERNOR, THE HP FUEL PUMP OR LP FUEL PUMP, REMOVE AND INSPECT THE APPLICABLE UNIT DRAIN TUBE FOR BLOCKAGE.
5. STATIC DRAIN, DOWN FROM THE OIL TANK, IS USUALLY ASSOCIATED WITH A FAULTY OIL PUMP CARBON SEAL.

Engine Oil/Fuel Smell Identified in Cabin
Figure 125 (Sheet 1)



Engine Oil/Fuel Smell Identified in Cabin
Figure 125 (Sheet 2)

MD1414



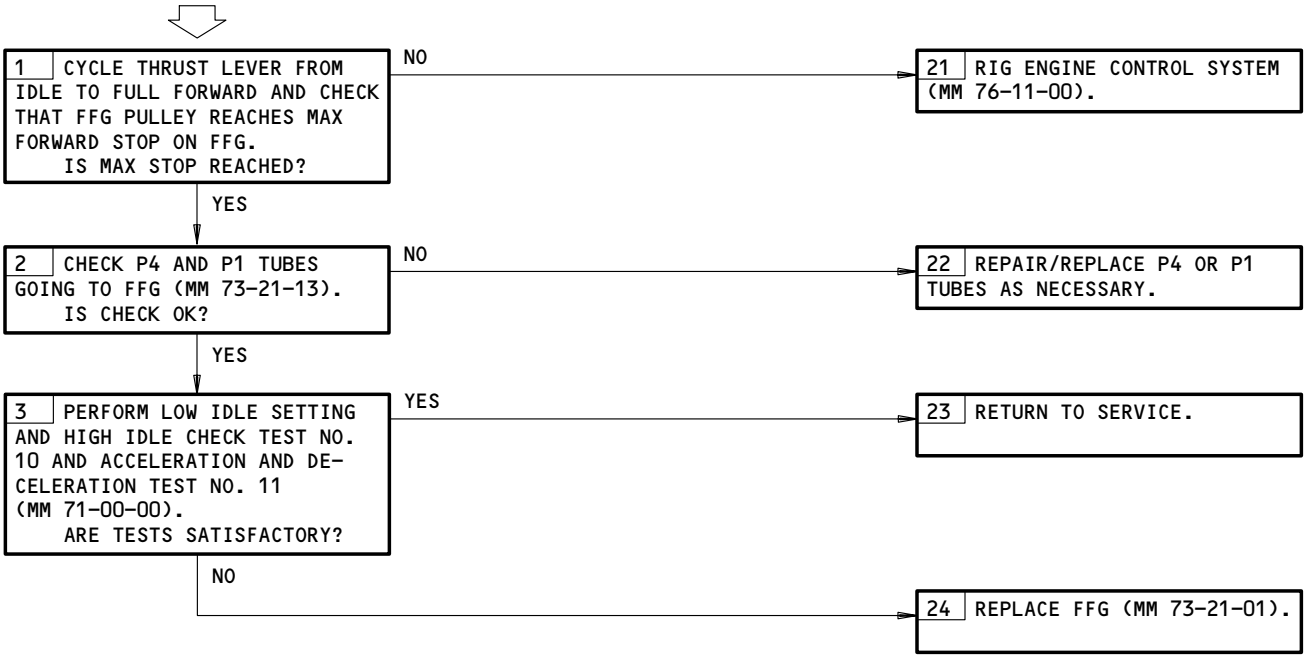
Engine Oil/Fuel Smell Identified in Cabin
Figure 125 (Sheet 3)

POWER PLANT (POWER RELATED) - FAULT ISOLATION

1. General
   A. This section contains power related Power Plant fault isolation procedures. For nonpower related Power Plant fault isolation procedures, refer to (FIM 71-05-00/101).

SLOW RESPONSE TO THRUST LEVER MOVEMENT

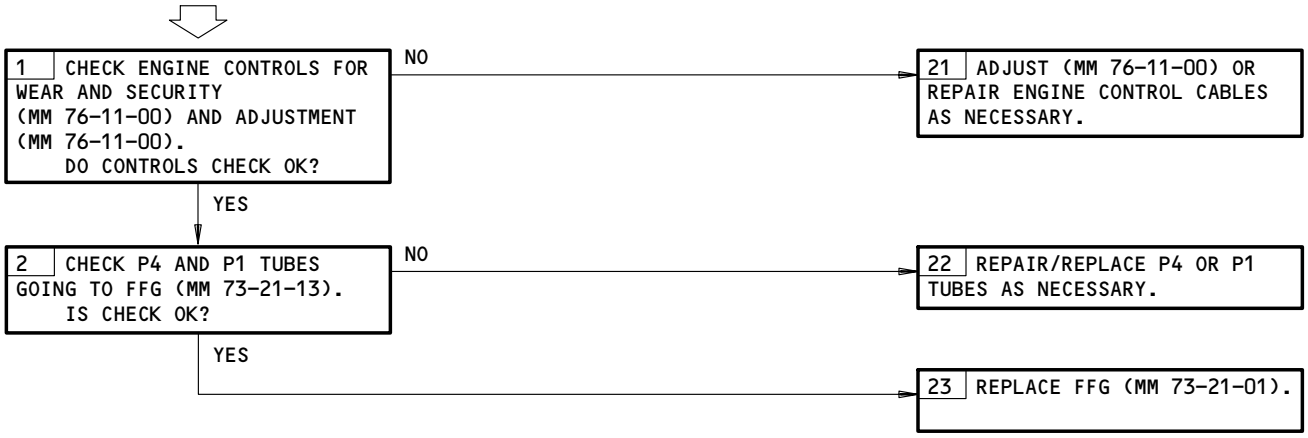
PREREQUISITES
NONE



Slow Response to Thrust Lever Movement
Figure 101

NO RESPONSE TO THRUST LEVER MOVEMENT

PREREQUISITES
NONE



No Response to Thrust Lever Movement
Figure 101A

ENGINE POWER FLUCTUATES

PREREQUISITES

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

1 DO A GROUND RUN OF THE ENGINE (AMM 71-00-00/201).
PUT THE EEC SUPERVISORY SWITCH TO THE OFF POSITION.
DO THE FLUCTUATIONS STOP?

YES → 21 DO THIS PROCEDURE: EEC BITE PROCEDURE (FIM 73-21-00/101, FIG. 103).

NO

2 DO A CHECK OF THE P1 AND P4 AIR TUBES UPSTREAM OF THE FFG.
ARE LEAKS FOUND?

YES → 11 REPAIR/REPLACE THE AIR TUBES AS NECESSARY.
DID THE FLUCTUATIONS STOP?

YES → 22 CONTINUE IN SERVICE.

NO → 23 GO TO BLOCK 3.

NO

3 EXAMINE EACH OF THE PF RAKES/PITOT HEADS.
ARE ALL PITOT HEADS THERE?

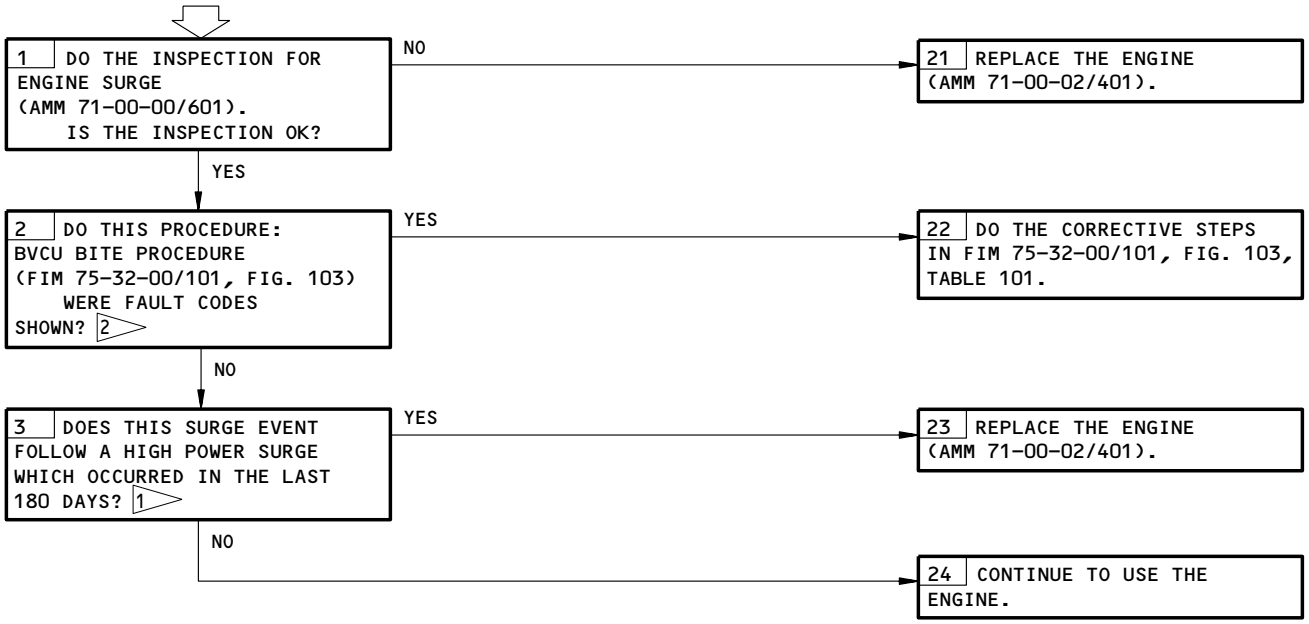
NO → 24 SEAL THE HOLES IF PITOT HEADS (TWO MAXIMUM) ARE NOT THERE (AMM77-11-04/201).
IF PROBLEMS CONTINUES, GO TO BLOCK 25.

YES → 25 IF THE PROBLEM CONTINUES, REPLACE FUEL FLOW GOVERNOR (AMM 73-21-01/401).
IF THE PROBLEM CONTINUES, REPLACE HP FUEL PUMP (AMM 73-11-03/401).

Engine Power Fluctuates
Figure 102

ENGINE SURGE (STALL) DURING TAKEOFF/CLIMB

PREREQUISITES
NONE



1 "HIGH POWER SURGE" IS DEFINED AS A SURGE AT CRUISE POWER AND ABOVE. TOP OF DESCENT DECEL SURGES ARE NOT INCLUDED.

2 IF ONLY CODE 04 ON BVCU AND CODE 40 ON TPU ARE SHOWN, NO CORRECTIVE ACTION IS NECESSARY. THEY ARE AN INDICATION OF THE SURGE AND NOT THE CAUSE.

Engine Surge (Stall) During Takeoff/Climb
Figure 103

ENGINE SURGE (STALL) DURING CONSTANT POWER OPERATION

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

1 DO THE INSPECTION FOLLOWING ENGINE SURGE (AMM 71-00-00/601). WAS THE INSPECTION OK?
- NO → 21 REPLACE THE ENGINE (AMM 71-00-02/401).
- YES →

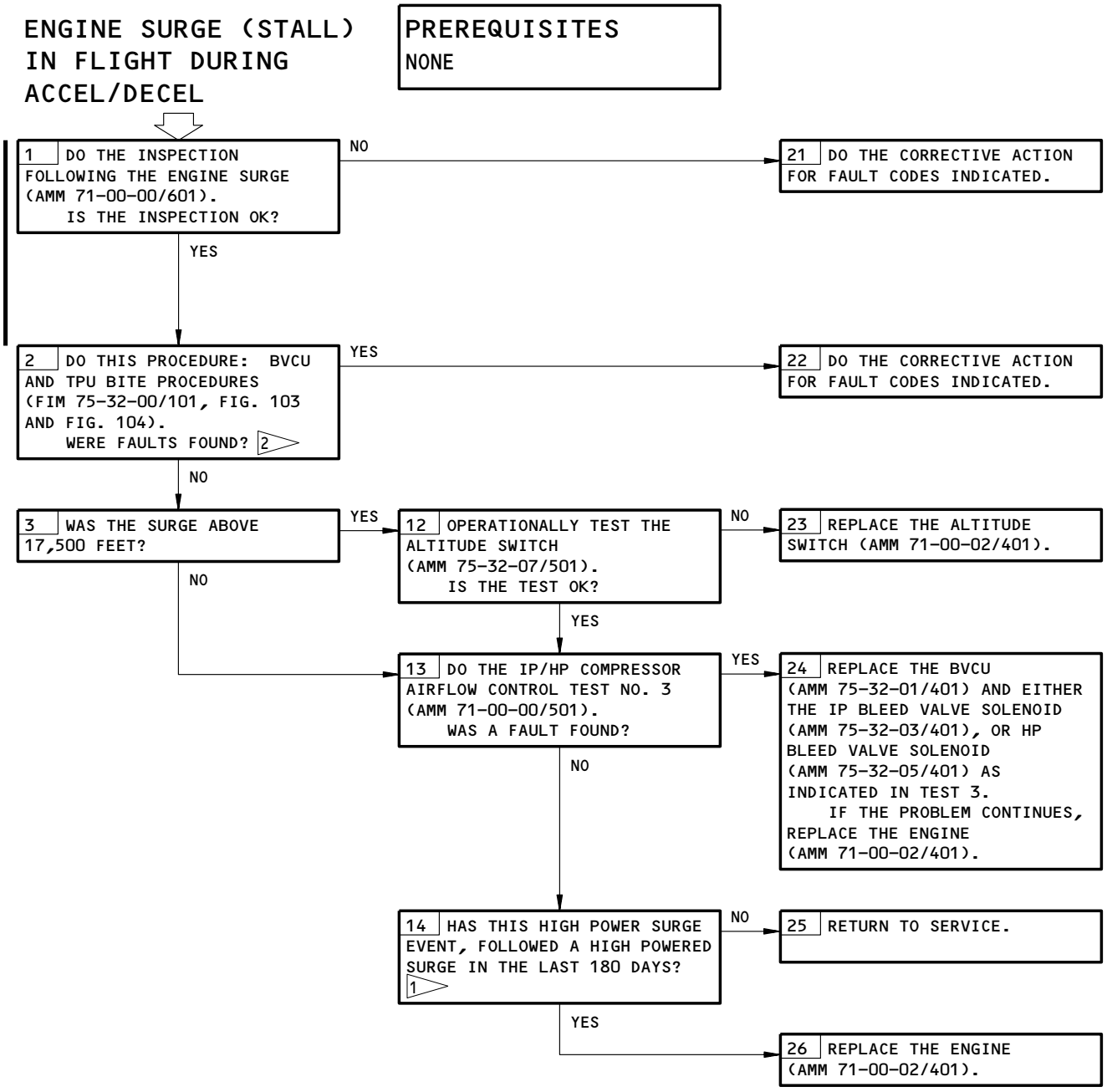
2 DO THE BVCU AND TPU BITE PROCEDURES (FIM 75-32-00/401, FIG. 103 AND FIG. 104). DID YOU FIND FAULTS? 2
- NO → 11 DO THE TEST FOR THE IP/HP COMPRESSOR AIRFLOW CONTROL, TEST 3 (AMM 71-00-00/501). DID YOU FIND FAULTS?
  - YES → 22 REPLACE THE BVCU (AMM 75-32-01/401) AND EITHER IP BLEED VALVE SOLENOID (AMM 75-32-05/401) OR HP BLEED VALVE SOLENOID (AMM 75-32-05/401) AS INDICATED IN TEST 3. IF THE PROBLEM CONTINUES, REPLACE THE ENGINE (AMM 71-00-02/401).
  - NO → 23 REPLACE THE ENGINE (AMM 71-00-02/401).
- YES →

3 DO THE PROCEDURES FOR EACH FAULT CODE(S) TO CORRECT THE PROBLEM. DID AN ENGINE SURGE (STALL) OCCUR AGAIN?
- NO → 12 HAS THIS HIGH POWER SURGE EVENT FOLLOWED A HIGH POWERED SURGE IN THE LAST 180 DAYS? 1
  - YES → 24 REPLACE THE ENGINE (AMM 71-00-02/401).
  - NO → 25 CONTINUE THE ENGINE IN SERVICE.
- YES → 13 DO THE TEST FOR THE IP/HP COMPRESSOR AIRFLOW CONTROL TEST 3 (AMM 71-00-00/501). DID YOU FIND FAULTS?
  - YES → 26 REPLACE THE BVCU (AMM 75-32-01/401) AND EITHER IP BLEED VALVE SOLENOID (AMM 75-32-05/401) OR HP BLEED VALVE SOLENOID (AMM 75-32-05/401) AS INDICATED IN TEST 3. IF THE PROBLEM CONTINUES, REPLACE THE ENGINE (AMM 71-00-02/401).
  - NO → 27 REPLACE THE ENGINE (AMM 71-00-02/401).

1 "HIGH POWER SURGE" IS DEFINED AS A SURGE AT CRUISE POWER AND ABOVE. TOP OF DESCENT DECEL SURGES ARE NOT INCLUDED.

2 IF ONLY CODE 04 ON BVCU AND CODE 40 ON TPU ARE SHOWN, NO CORRECTIVE ACTION IS NECESSARY. THEY ARE AN INDICATION OF THE SURGE AND NOT THE CAUSE.

Engine Surge (Stall) During Constant Power Operation
Figure 104



1 "HIGH POWER SURGE" IS DEFINED AS A SURGE AT CRUISE POWER AND ABOVE. TOP OF DESCENT DECEL SURGES ARE NOT INCLUDED.

2 IF ONLY CODE 04 ON BVCU AND CODE 40 ON TPU ARE SHOWN, NO CORRECTIVE ACTION IS NECESSARY.
THEY ARE AN INDICATION OF THE SURGE AND NOT THE CAUSE.

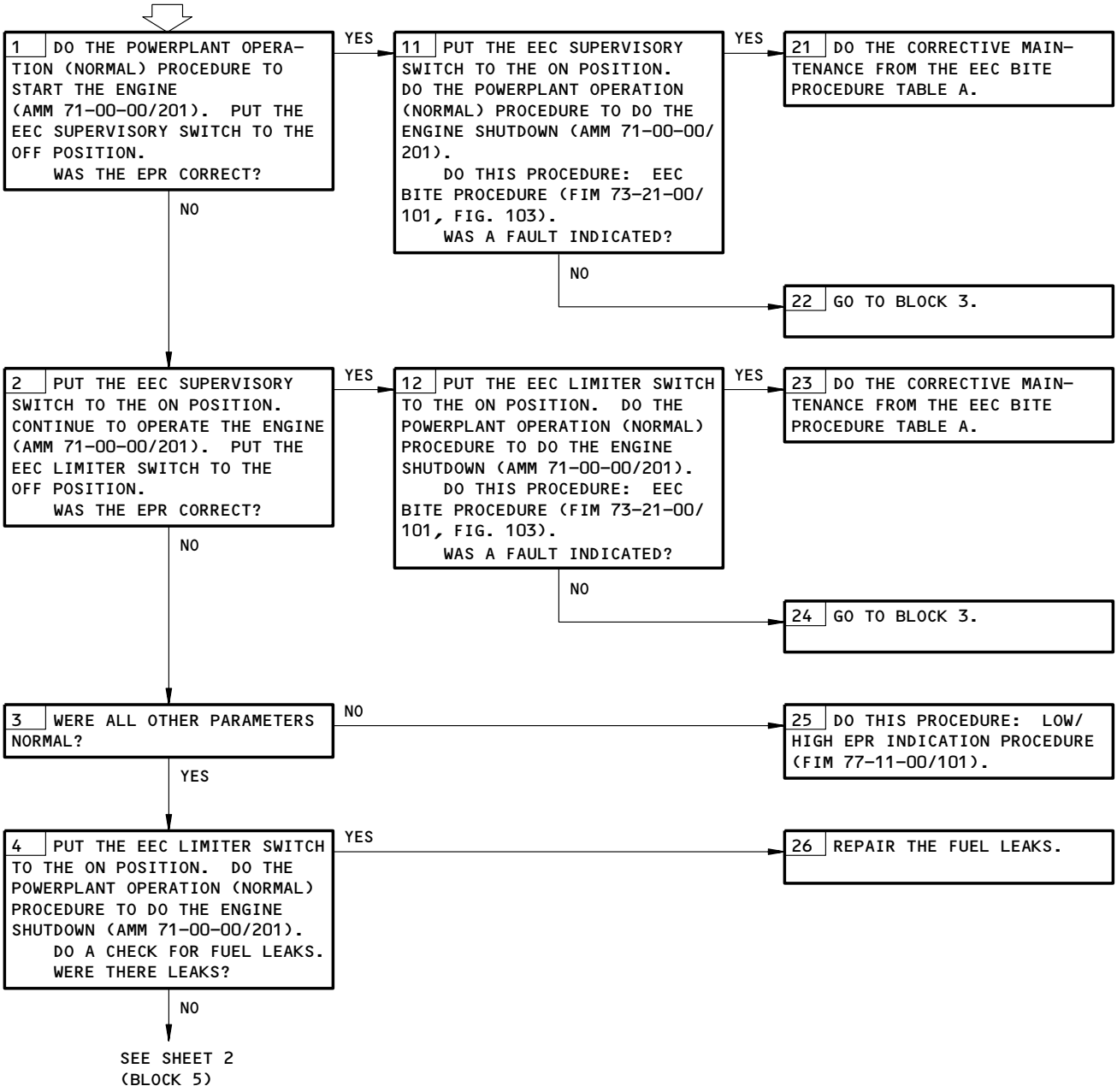
Engine Surge (Stall) in Flight During Accel/Decel
Figure 105

175371

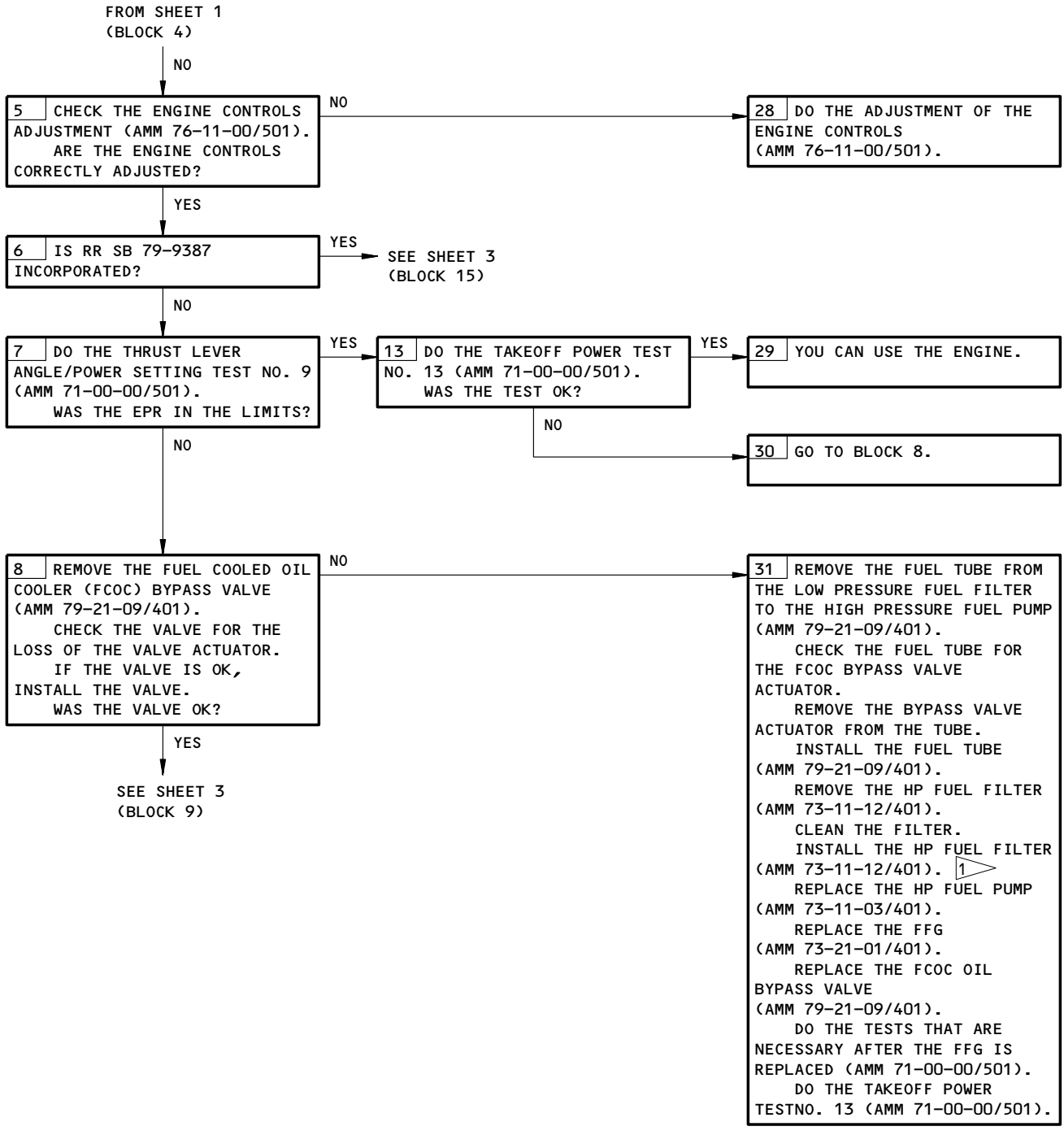
TAKEOFF EPR LIMITED WHEN THRUST LEVER FULLY ADVANCED, OTHER PARAMETERS NORMAL FOR THE POWER ATTAINED

PREREQUISITES

NONE

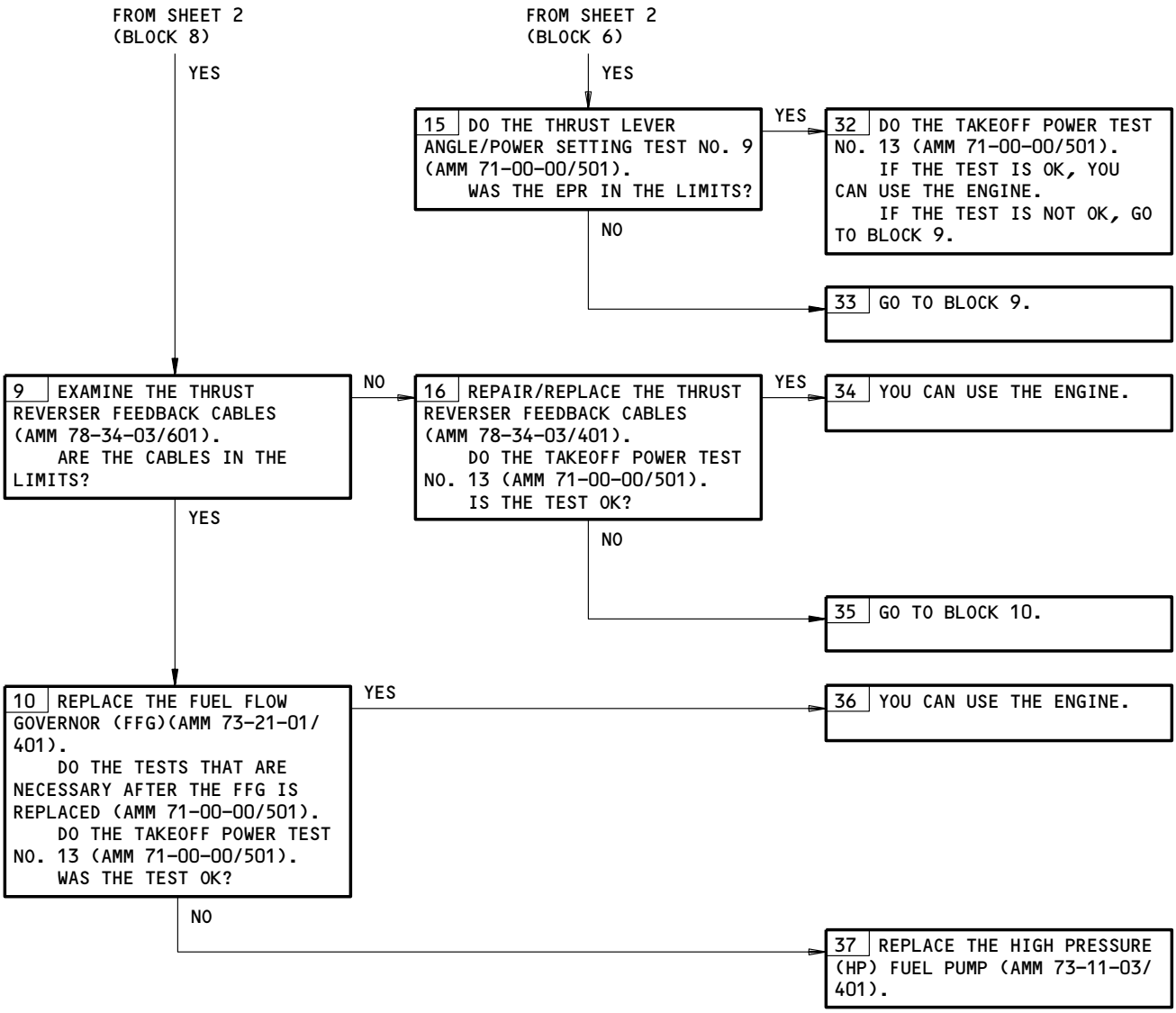


Takeoff EPR Limited When Thrust Lever Fully Advanced,
Other Parameters Normal for the Power Attained
Figure 106 (Sheet 1)



1 CAVITATION DAMAGE TO THE HP FUEL PUMP CAN OCCUR IF THE LP FUEL TUBE TO THE PUMP BECOMES BLOCKED. UNWANTED MATERIALS FROM THE DAMAGED PUMP WILL GO INTO THE FFG AND THE HP FUEL FILTER.

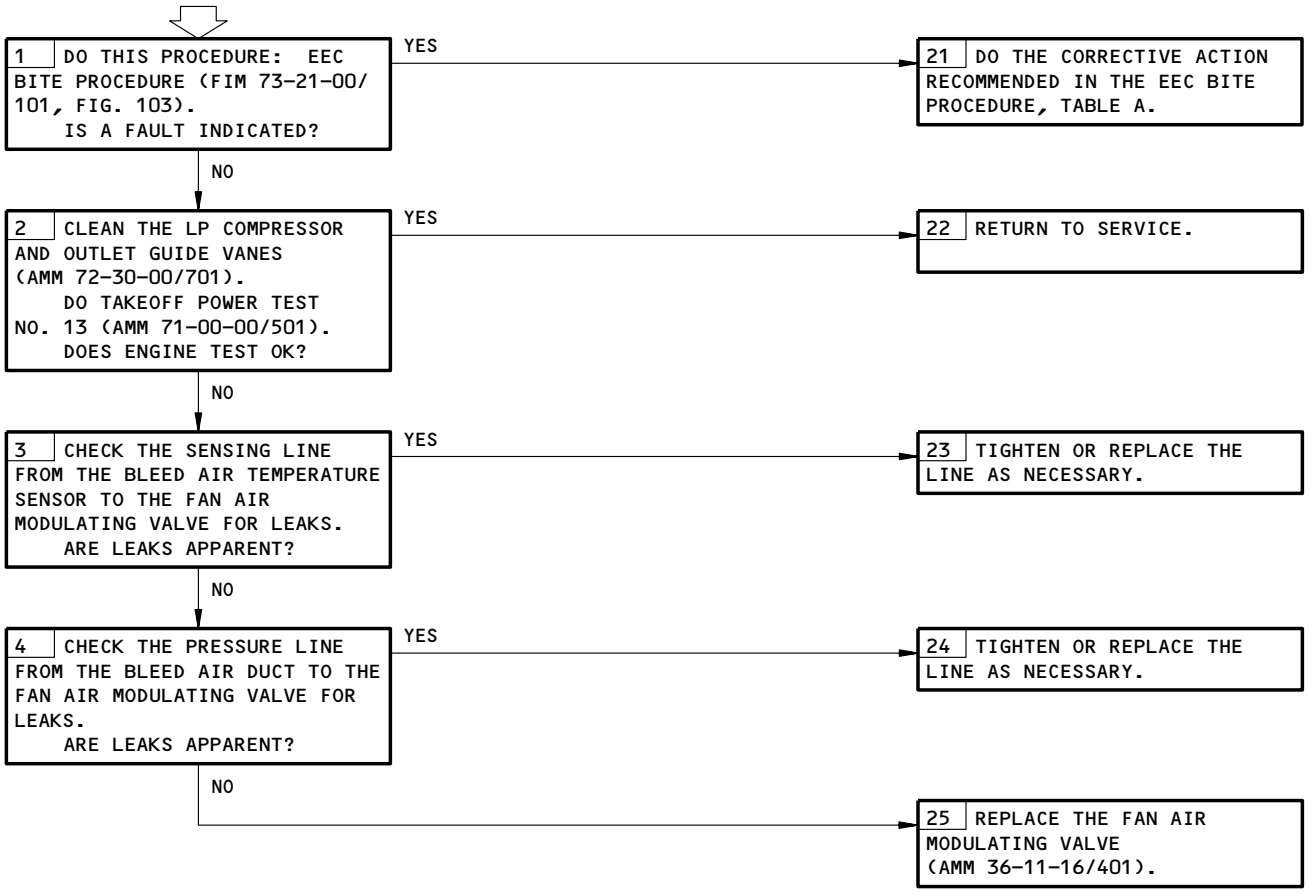
Takeoff EPR Limited When Thrust Lever Fully Advanced,
Other Parameters Normal for the Power Attained
Figure 106 (Sheet 2)



Takeoff EPR Limited When Thrust Lever Fully Advanced,
Other Parameters Normal for the Power Attained
Figure 106 (Sheet 3)

LOW POWER AT TAKE-OFF N1 LIMITED

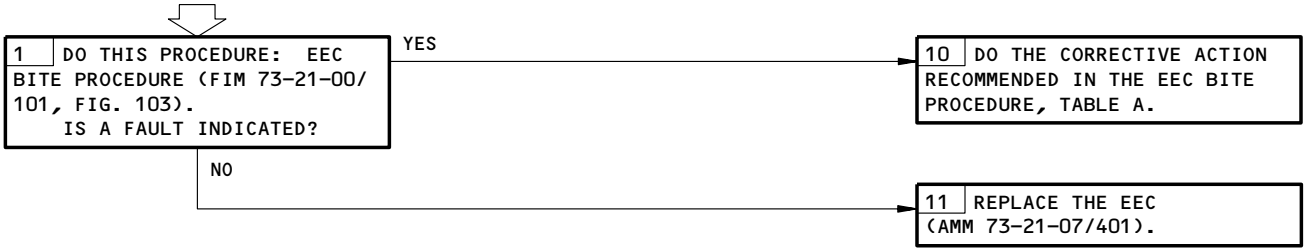
PREREQUISITES
NONE



Low Power at Takeoff, N1 Limited
Figure 107

ENGINE HAD AUTO DECELERATION, POWER RESTORED WHEN EEC SWITCHED OFF

PREREQUISITES
NONE



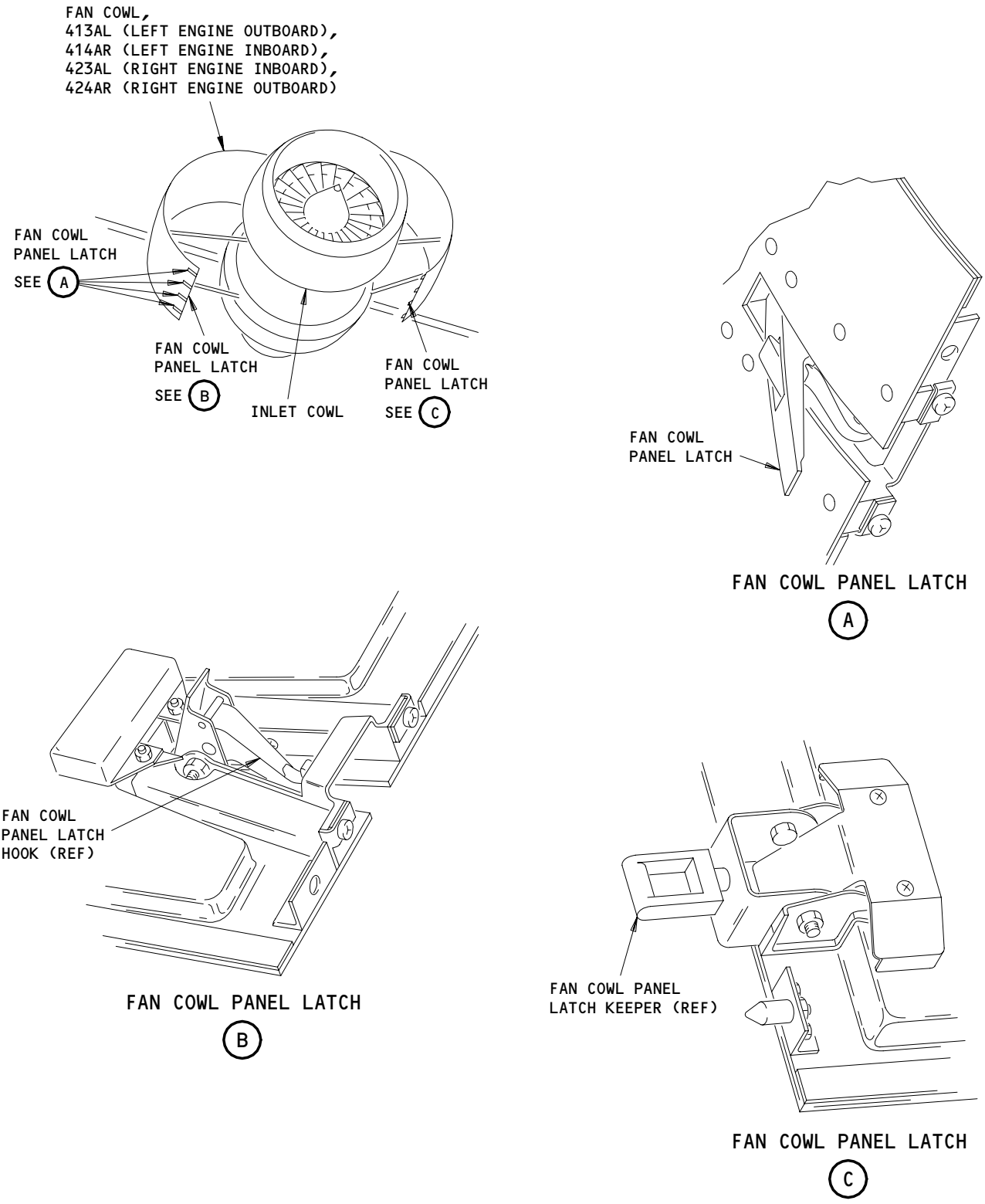
Engine Had Auto Deceleration, Power Restored When EEC Switched Off
Figure 108

ENGINE COWLING

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
COWL - INLET	--	2		71-11-01
LATCH - FAN COWL PANEL	--	8	413AL,414AR,423AL,424AR	71-11-05
PANELS - FAN COWL	--	4	413AL,414AR,423AL,424AR	71-11-04

Engine Cowling - Component Index
Figure 101

E46820

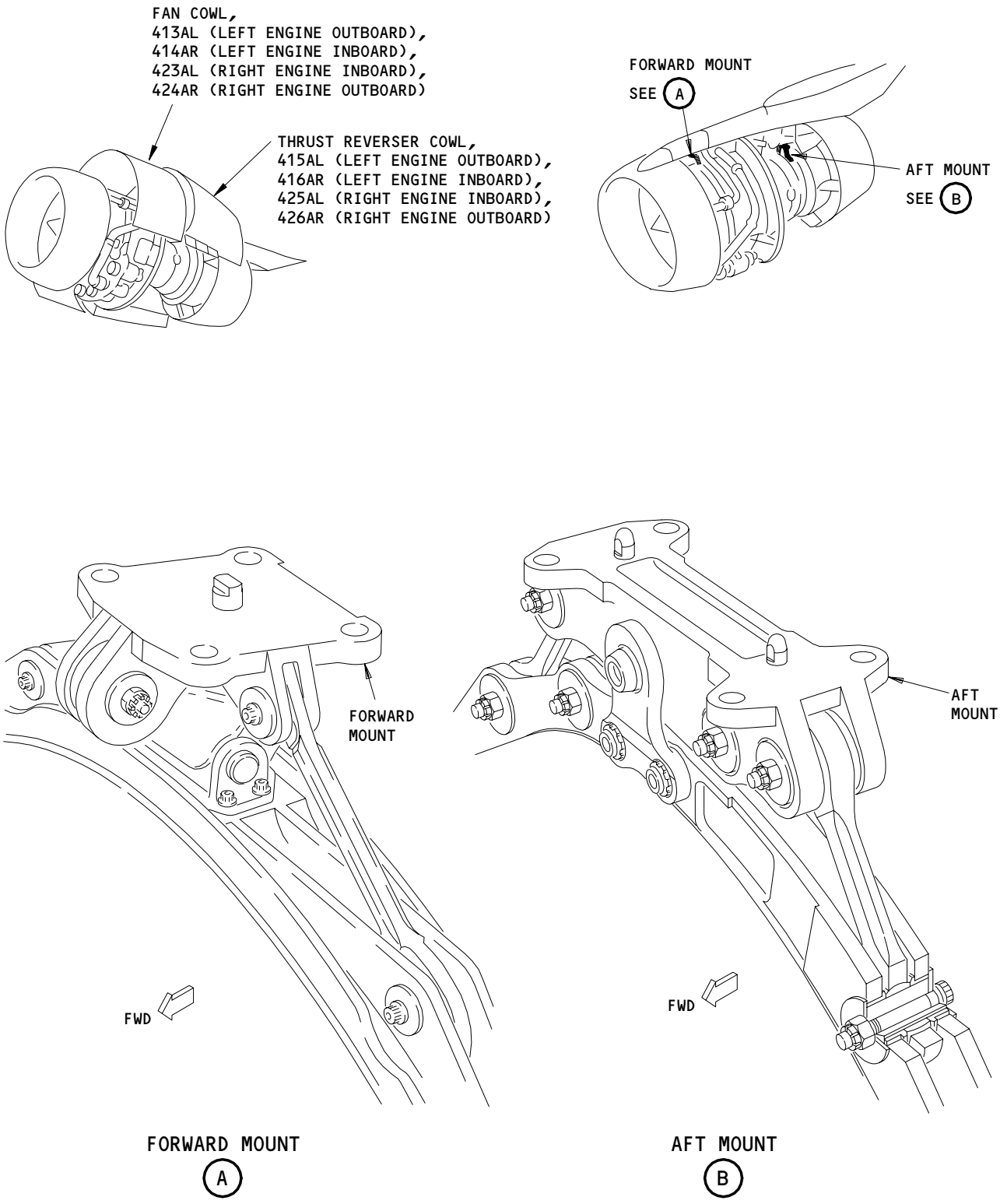


Engine Cowling - Component Location
Figure 102

ENGINE MOUNTS

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
MOUNT - AFT	--	2	415AL,416AR,425AL,426AR T/R COWL	71-21-02
MOUNT - FORWARD	--	2	413AL,414AR,423AL,424AR, FAN COWL	71-21-01

Engine Mounts - Component Index
Figure 101



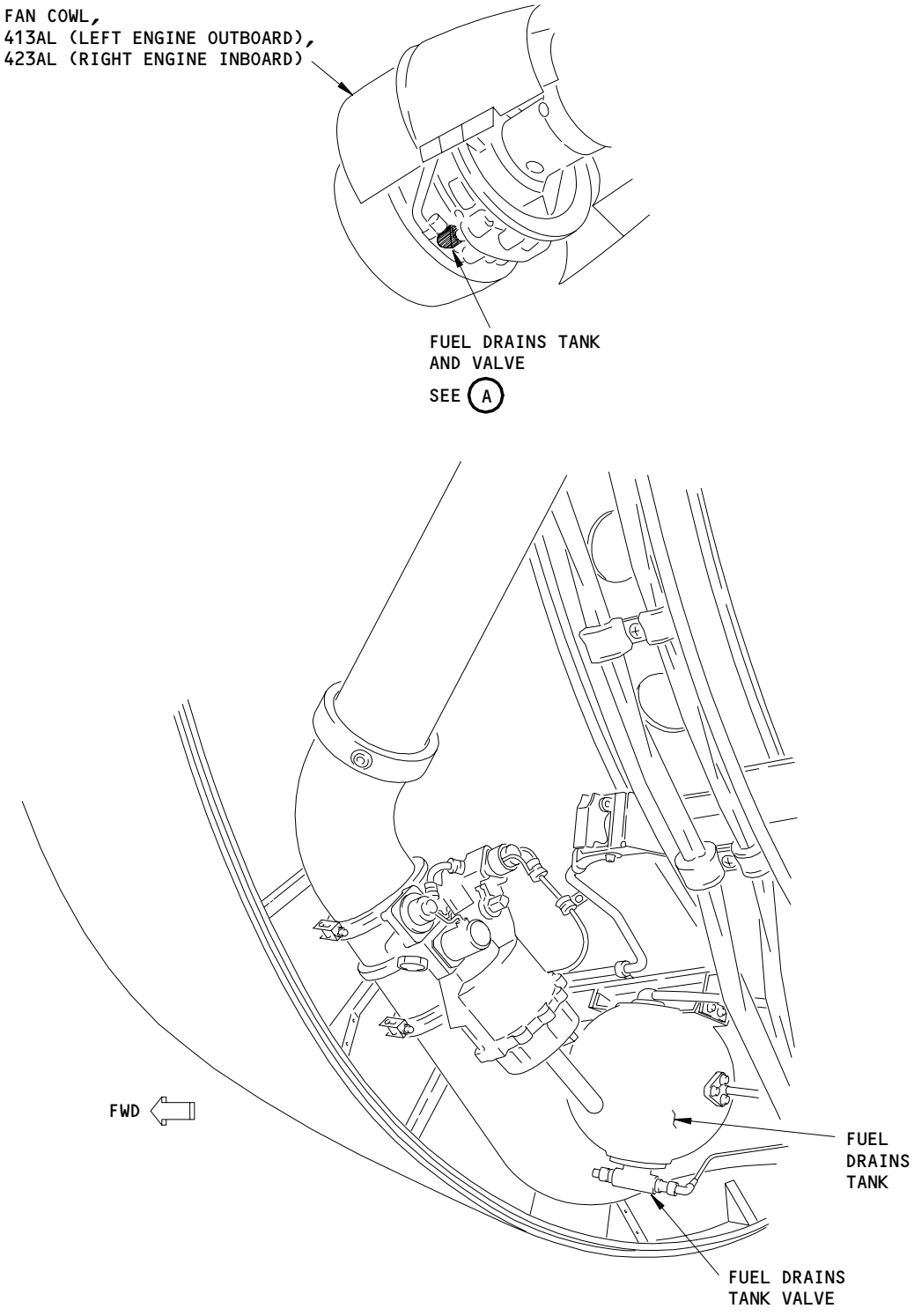
Engine Mounts - Component Location
Figure 102

ENGINE VENTS AND DRAINS

COMPONENT	FIG. 102 SHT	QTY	ACCESS/AREA	AMM REFERENCE
TANK - FUEL DRAINS	--	2	413AL, 423AL, FAN COWL	71-71-01
VALVE - FUEL DRAINS TANK	--	2	413AL, 423AL, FAN COWL	71-71-04

Engine Vents and Drains - Component Index
Figure 101

E46819



Engine Vents and Drains - Component Location
Figure 102

FUEL LEAKAGE FROM ACCESSORIES DRAIN

PREREQUISITES
NONE

1 LOOK FOR FUEL FROM THE FUEL DRAINS TANK OVERFLOW TUBE.
DOES FUEL COME OUT OF THE OVERFLOW TUBE?

YES → 21 CLEAN THE FUEL DRAINS TANK EJECTOR VALVE FILTER (MM 71-71-04/401).

NO ↓

2 MAKE A CHECK OF THE FUEL LEAKAGE RATE FROM TELL-TALE COMPONENT DRAIN TUBE (MM 71-71-00/601).
DID LP FUEL PUMP, HP FUEL PUMP, OR FUEL FLOW GOVERNOR FAIL?

YES → 11 REMOVE THE OIL FILLER TANK CAP. MAKE A CHECK FOR FUEL FUMES IN TANK. 2
WERE FUMES IN THE TANK?

YES → 22 DRAIN THE OIL TANK AND HS GEARBOX ONLY. FILL THE OIL SYSTEM (MM 79-11-00/301). GO TO BLOCK 23 1.

NO → 23 REPLACE THE FAILED COMPONENT,
LP FUEL PUMP (MM 73-11-01/401)
HP FUEL PUMP (MM 73-11-03/401)
FUEL FLOW GOVERNOR (MM 73-21-01/401)

NO ↓

3 RETURN ENGINE TO SERVICE.

1 MAKE A CHECK AND A RECORD OF THE MAGNETIC CHIP DETECTORS BEFORE AND AFTER THE NEXT FLIGHT

2 IT IS RECOMMENDED THAT A DRAEGER HAND PUMP (ROLLS-ROYCE 1013832) WITH A HYDROCARBON 2 TUBE (ROLLS-ROYCE 1013833) IS USED WITH THE MANUFACTURERS INSTRUCTIONS TO DO THIS CHECK

Fuel Leakage From Accessories Drain
Figure 103