CHAPTER

75

AIR

(GE90-100 SERIES ENGINES)

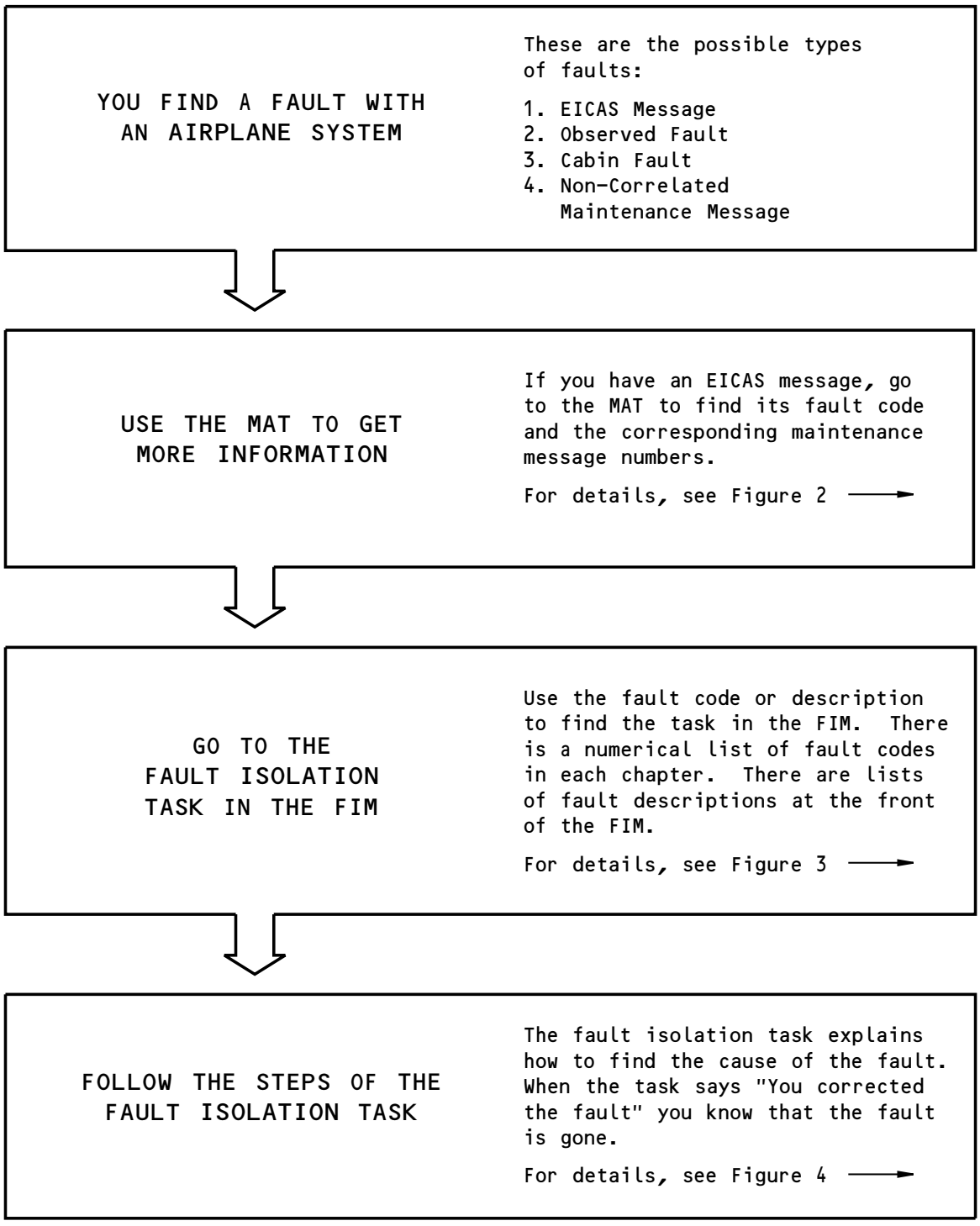
BOEING

777-200/300
FAULT ISOLATION MANUAL

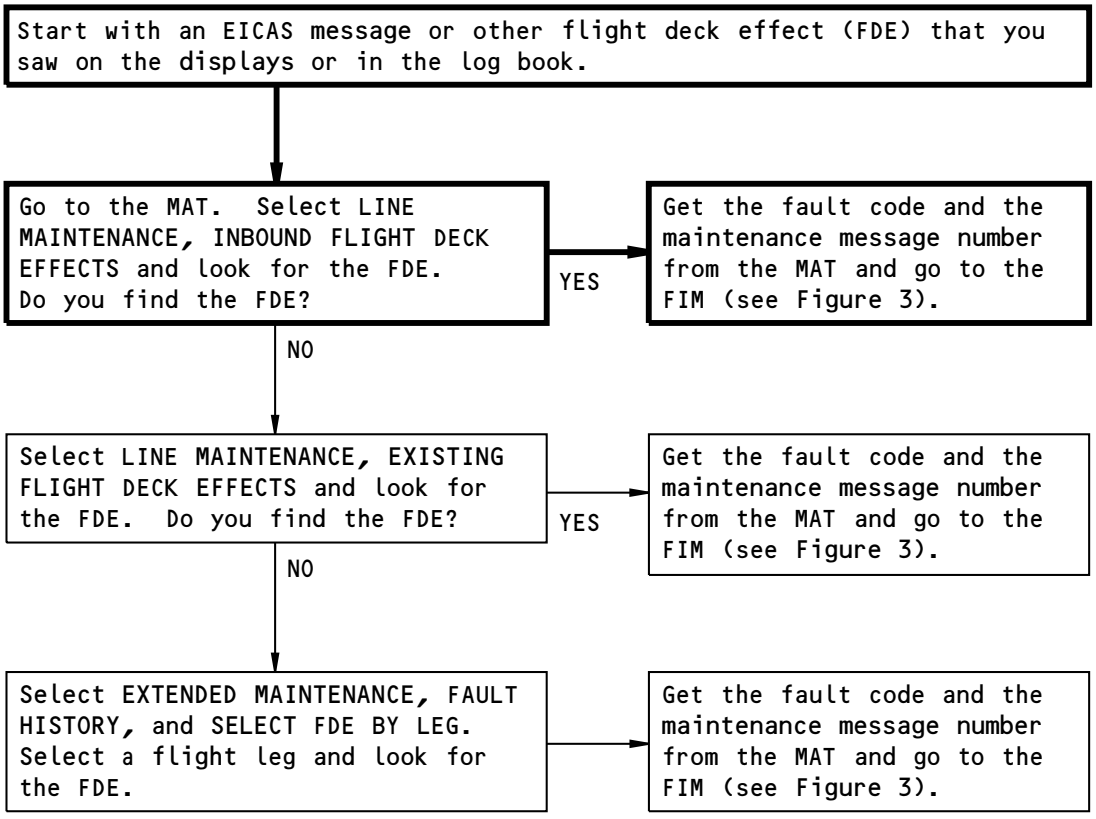
CHAPTER 75
AIR

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

75-EFFECTIVE PAGES



Basic Fault Isolation Process
Figure 1



NOTE: The bold lines show the most common path.

E84425 S0000132475_V1

Getting Fault Information from the MAT
Figure 2

IF YOU HAVE:	THEN DO THIS TO FIND THE TASK IN THE FIM:
FAULT CODE with maintenance message number (if applicable)	1. The first two digits of the fault code are the FIM chapter that you need. Go to the Fault Code Index in that chapter and find the fault code. If the fault code starts with a letter, then go to the Cabin Fault Code Index at the front of the FIM. 2. Find the maintenance message number (if there is one) to the right of the fault code. 3. Find the task number on the same line as the maintenance message number. Go to the task in the FIM and do the steps in the task (see Figure 4).
EICAS MESSAGE TEXT with no fault code	1. Go to the MAT. Find the fault code and the correlated maintenance message number (see Figure 2). Then do the FAULT CODE procedure above.
OBSERVED FAULT DESCRIPTION or cabin fault description	1. Go to the Observed Fault List or Cabin Fault List at the front of the FIM and find the best description for the fault. 2. Find the task number on the same line as the fault description. Go to the task in the FIM and do the steps of the task (see Figure 4).
MAINTENANCE MESSAGE NUMBER with no correlated EICAS message	1. The first two digits of the maintenance message number are the FIM chapter you need. Go to the Maintenance Message Index in that chapter and find the maintenance message number. 2. Find the task number on the same line as the maintenance message number. Go to the task in the FIM and do the steps in the task (see Figure 4). NOTE: When you troubleshoot Non-correlated Maintenance Messages, you must plan for sufficient resources and the necessary time and parts to perform the applicable FIM Procedure from Start to Finish (or until the fault goes away). If you do not complete the procedure and clear the fault, in some cases additional faults can be set which could possibly cause unscheduled delays and/or Airplane-on-Ground (AOG) conditions.

E84427 S0000132476_V2

Finding the Fault Isolation Task in the FIM
Figure 3

ASSUMED CONDITIONS AT START OF TASK

- External electrical power is ON
- Hydraulic power and pneumatic power are OFF
- Engines are shut down
- No equipment in the system is deactivated

INITIAL EVALUATION PARAGRAPH

- The Initial Evaluation paragraph at the start of the task helps you determine whether you can detect the fault right now.
- If you cannot detect the fault right now, then the task cannot isolate the fault and the Initial Evaluation paragraph will say that there was an intermittent fault.
- If you have an intermittent fault, you must use your judgement (and follow your airline's policy) to decide which components to replace. Then monitor the airplane to see if the fault happens again on subsequent flights.

FAULT ISOLATION STEPS

- The FIM task steps are presented in a specified order. "The If... then" statements will guide you along a logical path. But if you do not plan to follow the FIM task exactly, make sure that you read it before you start to isolate the fault. Some FIM procedures start with important steps that have an effect on the other steps in the procedure.
- When you are at the endpoint of the path, the step says "You corrected the fault." Complete the step and exit the procedure.
- The Recommended Maintenance Action that shows on the MAT for the maintenance message gives a list of possible causes in order by probability of failure. In the FIM procedure, the possible causes can be in a different order from the MAT.

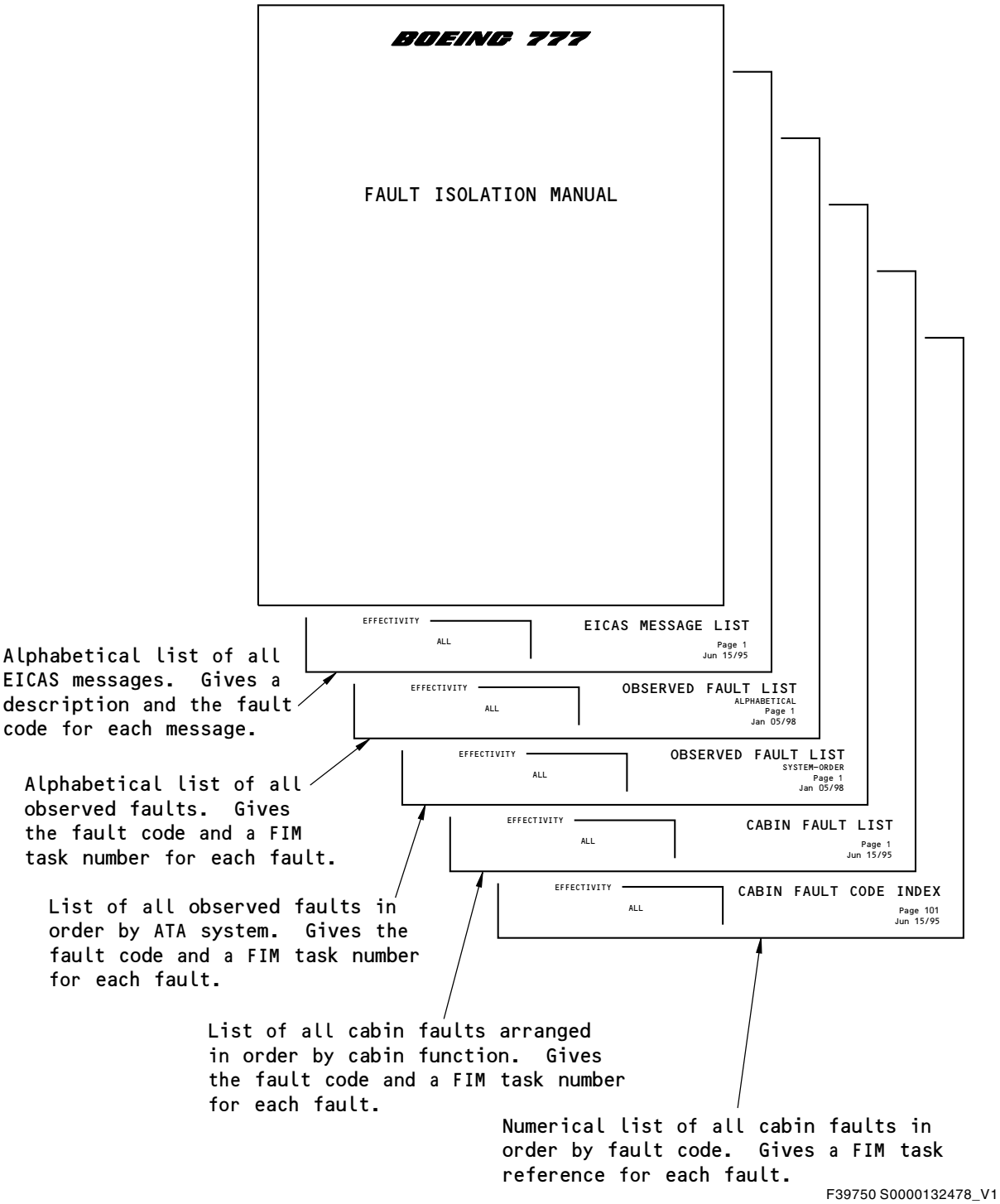
WIRING CHECKS

When a step says "Do a wiring check", do these three types of electrical checks for the specified contacts (pins):

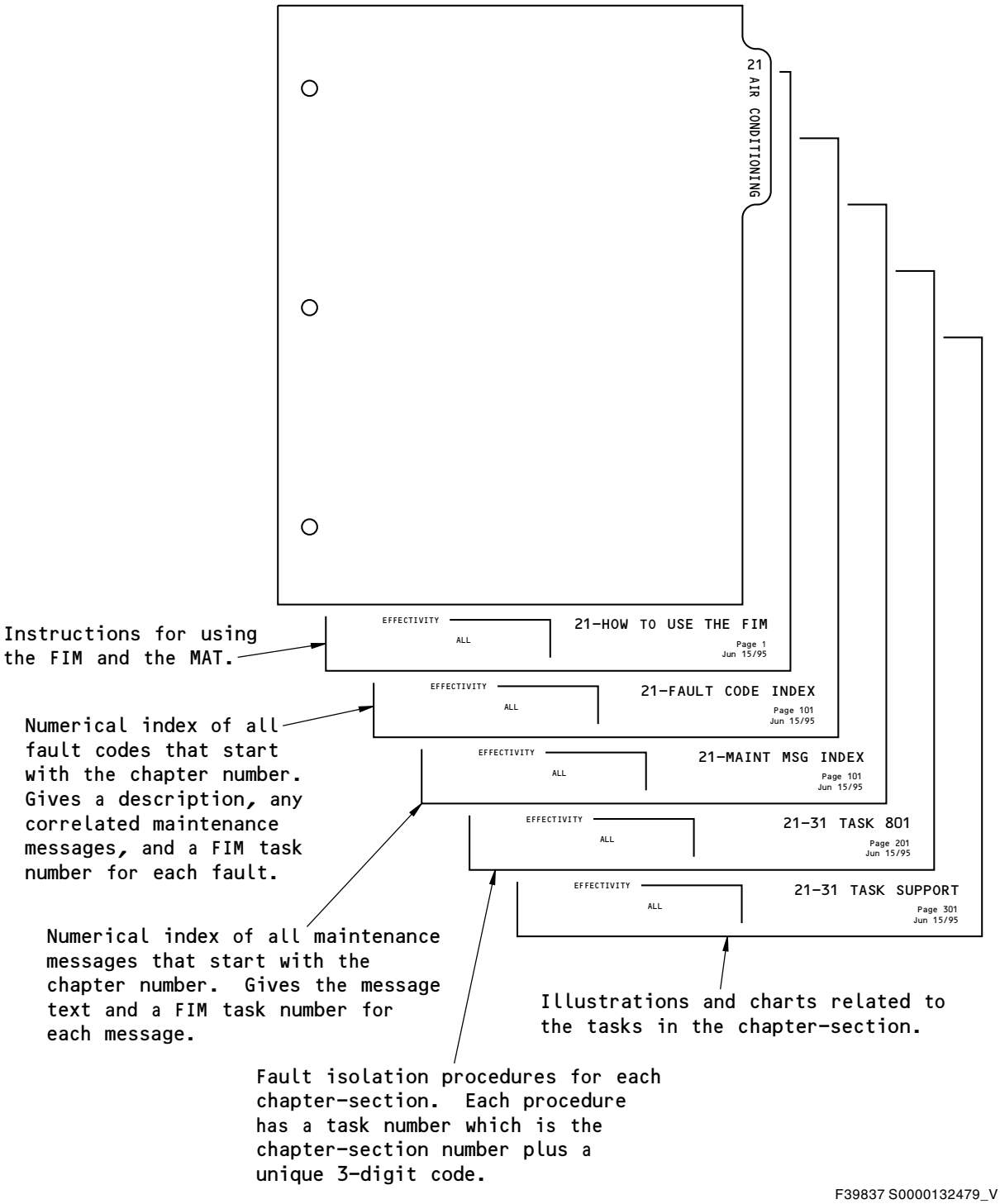
- continuity from contact to contact
- shorts between the contacts
- shorts from each contact to ground

E84428 S0000132477_V3

Doing the Fault Isolation Task
Figure 4



Subjects at Front of FIM
Figure 5



F39837 S0000132479_V1

Subjects in Each FIM Chapter
Figure 6

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
751 101 51	ENG LPC ANTI-ICE L (EICAS ADVISORY)	73-13301	75-21 TASK 856
		73-23301	75-21 TASK 857
		75-13361	75-98 TASK 801
		75-23361	75-98 TASK 801
751 101 52	ENG LPC ANTI-ICE R (EICAS ADVISORY)	73-13302	75-21 TASK 856
		73-23302	75-21 TASK 857
		75-13362	75-98 TASK 801
		75-23362	75-98 TASK 801
751 102 51	ENG LPC AI VALVE L (EICAS STATUS) Before you do any task listed here, see FIM 75-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	73-13261	75-21 TASK 854
		73-13271	75-21 TASK 851
		73-13291	75-21 TASK 856
		73-13301	75-21 TASK 856
		73-23261	75-21 TASK 855
		73-23271	75-21 TASK 852
		73-23291	75-21 TASK 857
		73-23301	75-21 TASK 857
		75-13361	75-98 TASK 801
		75-23361	75-98 TASK 801
751 102 52	ENG LPC AI VALVE R (EICAS STATUS) Before you do any task listed here, see FIM 75-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	73-13262	75-21 TASK 854
		73-13272	75-21 TASK 851
		73-13292	75-21 TASK 856
		73-13302	75-21 TASK 856
		73-23262	75-21 TASK 855
		73-23272	75-21 TASK 852
		73-23292	75-21 TASK 857
		73-23302	75-21 TASK 857
		75-13362	75-98 TASK 801
		75-23362	75-98 TASK 801

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
752 001 51	ENG CCC VALVE L (EICAS STATUS) Before you do any task listed here, see FIM 75-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	75-24341 75-24351	75-21 TASK 848 75-21 TASK 849
752 001 52	ENG CCC VALVE R (EICAS STATUS) Before you do any task listed here, see FIM 75-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	75-24342 75-24352	75-21 TASK 848 75-21 TASK 849
752 011 51	ENG HPTACC VALVE L (EICAS STATUS) Before you do any task listed here, see FIM 75-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	73-14251 73-14411 73-24251 73-24411 75-14261 75-14271 75-24261 75-24271	73-22 TASK 837 73-21 TASK 852 73-22 TASK 837 73-21 TASK 852 75-21 TASK 839 75-21 TASK 840 75-21 TASK 839 75-21 TASK 840
752 011 52	ENG HPTACC VALVE R (EICAS STATUS) Before you do any task listed here, see FIM 75-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	73-14252 73-14412 73-24252 73-24412 75-14262 75-14272 75-24262 75-24272	73-22 TASK 837 73-21 TASK 852 73-22 TASK 837 73-21 TASK 852 75-21 TASK 839 75-21 TASK 840 75-21 TASK 839 75-21 TASK 840

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
752 012 51	ENG LPTACC VALVE L (EICAS STATUS) Before you do any task listed here, see FIM 75-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	73-13651	73-21 TASK 843
		73-13661	73-21 TASK 844
		73-23651	73-21 TASK 843
		73-23661	73-21 TASK 844
		75-14161	75-21 TASK 841
		75-14171	75-21 TASK 842
		75-14181	75-21 TASK 843
752 012 52	ENG LPTACC VALVE R (EICAS STATUS) Before you do any task listed here, see FIM 73-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	73-13652	73-21 TASK 843
		73-13662	73-21 TASK 844
		73-23652	73-21 TASK 843
		73-23662	73-21 TASK 844
		75-14162	75-21 TASK 841
		75-14172	75-21 TASK 842
		75-14182	75-21 TASK 843
753 001 51	ENG START BLEED L (EICAS STATUS) Before you do any task listed here, see FIM 75-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	73-14251	73-22 TASK 837
		73-24251	73-22 TASK 837
		75-14281	75-21 TASK 845
		75-14301	75-21 TASK 847
		75-14311	75-21 TASK 846
		75-24281	75-21 TASK 845
		75-24301	75-21 TASK 847
		75-24311	75-21 TASK 846
		75-34291	75-21 TASK 844

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
753 001 52	ENG START BLEED R (EICAS STATUS) Before you do any task listed here, see FIM 75-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.		
		73-14252	73-22 TASK 837
		73-24252	73-22 TASK 837
		75-14282	75-21 TASK 845
		75-14302	75-21 TASK 847
		75-14312	75-21 TASK 846
		75-24282	75-21 TASK 845
		75-24302	75-21 TASK 847
		75-24312	75-21 TASK 846
		75-34292	75-21 TASK 844
753 031 51	ENG ANTI-ICE AIR L (EICAS ADVISORY)	73-14251	73-22 TASK 837
		73-24251	73-22 TASK 837
		75-14301	75-21 TASK 847
		75-24301	75-21 TASK 847
753 031 52	ENG ANTI-ICE AIR R (EICAS ADVISORY)	73-14252	73-22 TASK 837
		73-24252	73-22 TASK 837
		75-14302	75-21 TASK 847
		75-24302	75-21 TASK 847

MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
75-13361*	Low Pressure Compressor (LPC) Anti-Ice Duct Pressure (L Eng ch A) does not agree with scheduled pressure.	75-98 TASK 801
75-13362*	Low Pressure Compressor (LPC) Anti-Ice Duct Pressure (R Eng ch A) does not agree with scheduled pressure.	75-98 TASK 801
75-13991*	Variable Stator Vane Actuator (L Eng ch A) does not follow command.	75-21 TASK 834
75-13992*	Variable Stator Vane Actuator (R Eng ch A) does not follow command.	75-21 TASK 834
75-14021*	Variable Stator Vane Actuator (Right) (L Eng ch A) feedback is out of range.	75-21 TASK 831
75-14022*	Variable Stator Vane Actuator (Right) (R Eng ch A) feedback is out of range.	75-21 TASK 831
75-14071*	Variable Bypass Valve Actuator (Left) (L Eng) channel A feedback is out of range.	75-21 TASK 836
75-14072*	Variable Bypass Valve Actuator (Left) (R Eng) channel A feedback is out of range.	75-21 TASK 836
75-14101*	Variable Bypass Valve Actuator (L Eng ch A) does not follow command.	75-21 TASK 838
75-14102*	Variable Bypass Valve Actuator (R Eng ch A) does not follow command.	75-21 TASK 838
75-14111	Engine control system (L Eng ch A) has fault #3.	75-98 TASK 801
75-14112	Engine control system (R Eng ch A) has fault #3.	75-98 TASK 801
75-14161*	LPT Active Clearance Control Valve (L Eng ch A) Solenoid current is out of range.	75-21 TASK 841
75-14162*	LPT Active Clearance Control Valve (R Eng ch A) Solenoid current is out of range.	75-21 TASK 841
75-14171*	LPT Active Clearance Control Valve (L Eng) is failed closed.	75-21 TASK 842
75-14172*	LPT Active Clearance Control Valve (R Eng) is failed closed.	75-21 TASK 842
75-14181*	LPT Active Clearance Control Valve (L Eng) is failed open.	75-21 TASK 843
75-14182*	LPT Active Clearance Control Valve (R Eng) is failed open.	75-21 TASK 843
75-14261*	HPT Active Clearance Control Valve (L Eng ch A) feedback is out of range.	75-21 TASK 839
75-14262*	HPT Active Clearance Control Valve (R Eng ch A) feedback is out of range.	75-21 TASK 839
75-14271*	HPT Active Clearance Control Valve (L Eng ch A) does not follow command.	75-21 TASK 840
75-14272*	HPT Active Clearance Control Valve (R Eng ch A) does not follow command.	75-21 TASK 840

*If the MAT shows LATCHED for the correlated EICAS message, then you must erase the EICAS message after you complete the FIM task.

MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
75-14281*	Start/Transient Bleed Valve (L Eng ch A) feedback is out of range.	75-21 TASK 845
75-14282*	Start/Transient Bleed Valve (R Eng ch A) feedback is out of range.	75-21 TASK 845
75-14301*	Start/Transient Bleed Valve (L Eng ch A) is failed open.	75-21 TASK 847
75-14302*	Start/Transient Bleed Valve (R Eng ch A) is failed open.	75-21 TASK 847
75-14311*	Start/Transient Bleed Valve (L Eng ch A) is failed closed.	75-21 TASK 846
75-14312*	Start/Transient Bleed Valve (R Eng ch A) is failed closed.	75-21 TASK 846
75-21041	Position signals from Variable Stator Vane Actuators (Left and Right) on Left Engine do not agree.	73-98 TASK 801
75-21042	Position signals from Variable Stator Vane Actuator (Left and Right) on Right Engine do not agree.	73-98 TASK 801
75-23361*	Low Pressure Compressor (LPC) Anti-Ice Duct Pressure (L Eng ch B) does not agree with scheduled pressure.	75-98 TASK 801
75-23362*	Low Pressure Compressor (LPC) Anti-Ice Duct Pressure (R Eng ch B) does not agree with scheduled pressure.	75-98 TASK 801
75-23991*	Variable Stator Vane Actuator (L Eng ch B) does not follow command.	75-21 TASK 834
75-23992*	Variable Stator Vane Actuator (R Eng ch B) does not follow command.	75-21 TASK 834
75-24021*	Variable Stator Vane Actuator (Left) (L Eng ch B) feedback is out of range.	75-21 TASK 833
75-24022*	Variable Stator Vane Actuator (Left) (R Eng ch B) feedback is out of range.	75-21 TASK 833
75-24071*	Variable Bypass Valve Actuator (Right) (L Eng) channel B feedback is out of range.	75-21 TASK 837
75-24072*	Variable Bypass Valve Actuator (Right) (R Eng) channel B feedback is out of range.	75-21 TASK 837
75-24101*	Variable Bypass Valve Actuator (L Eng ch B) does not follow command.	75-21 TASK 838
75-24102*	Variable Bypass Valve Actuator (R Eng ch B) does not follow command.	75-21 TASK 838
75-24111	Engine control system (L Eng ch B) has fault #3.	75-98 TASK 801
75-24112	Engine control system (R Eng ch B) has fault #3.	75-98 TASK 801
75-24261*	HPT Active Clearance Control Valve (L Eng ch B) feedback is out of range.	75-21 TASK 839
75-24262*	HPT Active Clearance Control Valve (R Eng ch B) feedback is out of range.	75-21 TASK 839

*If the MAT shows LATCHED for the correlated EICAS message, then you must erase the EICAS message after you complete the FIM task.

MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
75-24271*	HPT Active Clearance Control Valve (L Eng ch B) does not follow command.	75-21 TASK 840
75-24272*	HPT Active Clearance Control Valve (R Eng ch B) does not follow command.	75-21 TASK 840
75-24281*	Start/Transient Bleed Valve (L Eng ch B) feedback is out of range.	75-21 TASK 845
75-24282*	Start/Transient Bleed Valve (R Eng ch B) feedback is out of range.	75-21 TASK 845
75-24301*	Start/Transient Bleed Valve (L Eng ch B) is failed open.	75-21 TASK 847
75-24302*	Start/Transient Bleed Valve (R Eng ch B) is failed open.	75-21 TASK 847
75-24311*	Start/Transient Bleed Valve (L Eng ch B) is failed closed.	75-21 TASK 846
75-24312*	Start/Transient Bleed Valve (R Eng ch B) is failed closed.	75-21 TASK 846
75-24341*	Core Compartment Cooling Valve (L Eng ch B) Solenoid current is out of range.	75-21 TASK 848
75-24342*	Core Compartment Cooling Valve (R Eng ch B) Solenoid current is out of range.	75-21 TASK 848
75-24351*	Core Compartment Cooling Valve (L Eng) is failed closed.	75-21 TASK 849
75-24352*	Core Compartment Cooling Valve (R Eng) is failed closed.	75-21 TASK 849
75-24361	Core Compartment Cooling Valve (L Eng) is failed open.	75-21 TASK 850
75-24362	Core Compartment Cooling Valve (R Eng) is failed open.	75-21 TASK 850
75-34041*	Position signals from Variable Stator Vane Actuators (Left and Right) on Left Engine do not agree.	75-21 TASK 832
75-34042*	Position signals from Variable Stator Vane Actuators (Left and Right) on Right Engine do not agree.	75-21 TASK 832
75-34091*	Position signals from Variable Bypass Valve Actuators (Left and Right) on Left Eng do not agree.	75-21 TASK 835
75-34092*	Position signals from Variable Bypass Valve Actuators (Left and Right) on Right Eng do not agree.	75-21 TASK 835
75-34291*	Position signals from Start/Transient Bleed Valve (L Eng) channels A and B do not agree.	75-21 TASK 844
75-34292*	Position signals from Start/Transient Bleed Valve (R Eng) channels A and B do not agree.	75-21 TASK 844

*If the MAT shows LATCHED for the correlated EICAS message, then you must erase the EICAS message after you complete the FIM task.

831. VSV Feedback Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14021, 75-14022.

B. Description

(1) The (right) variable stator vane (VSV) feedback signal is failed, or the EEC input circuitry is failed. This fault is reported whenever the EEC is powered. The fault report is cleared after the signal is valid for 20 seconds.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect connector DP72104 from the right VSV actuator, M75002.

(3) Measure the resistance between these pairs of receptacle pins:

DP72104	DP72104	
1	2	5 - 5K ohms
3	4	5 - 5K ohms
4	5	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the right VSV actuator, M75002.

These are the tasks:

Right Variable Stator Vane (VSV) Actuator Removal, AMM TASK 75-31-02-000-803-H01

Right Variable Stator Vane (VSV) Actuator Installation, AMM TASK 75-31-02-400-803-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the resistance is in the specified range for each pair of pins, re-connect the connector DP72104 to the right VSV actuator, M75002.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(6) Disconnect connector DP70109 from the EEC (FADEC), M73003.

(7) Measure the resistance between these pairs of connector pins:

DP70109	DP70109	
P	k	5 - 5K ohms
N	z	5 - 5K ohms
z	h	5 - 5K ohms
P	GND	> 100K ohms
k	GND	> 100K ohms
N	GND	> 100K ohms
z	GND	> 100K ohms
h	GND	> 100K ohms

(8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(9) If the resistance is in the specified range for each pair of pins, or if the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(10) If the problem continues, do the tasks that follow:

(a) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(b) Do a check of the VBV Feedback Soft; Do the Resistance checks of VBV Feedback Soft Fault - Fault Isolation, 75-21 TASK 835.

(c) Do a check of the HPT ACC Feedback; Do the Resistance checks of HPTACC Feedback Fault - Fault Isolation, 75-21 TASK 839.

(d) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

832. VSV Feedback Soft Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-34041, 75-34042.

B. Description

(1) The left and right variable stator vane (VSV) feedback signals do not agree. This fault can be reported whenever the EEC is powered.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Do an inspection of the VSV system hardware as follows. Refer to High Pressure Compressor Section (HPC) Inspection, AMM TASK 72-30-00-200-801-H01 in or less than 10 flight cycles. Give special attention to VSV guide pads:

(a) IGV and VSV actuation rings

(b) VSV guide pads

(c) Lever arms and bushings

(d) Connector links

(e) VSV actuation shaft

(2) Do an inspection of the fan hub frame IGV guide pads (Fan Hub Frame IGV Guide Pads Inspection, AMM TASK 72-23-00-200-802-H00) in or less than 10 flight cycles.

(3) Make sure that the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(4) Disconnect connector DP72204 from the left VSV actuator, M75009, and connector DP72104 from the right VSV actuator, M75002.

(5) For the left VSV actuator, M75009, measure the resistance between these pairs of pins on connector DP72204:

DP72204	DP72204	
5	4	5 - 5K ohms
4	3	5 - 5K ohms
2	1	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(6) If the resistance is not in the specified range for each pair of pins, replace the left VSV actuator, M75009.

These are the tasks:

Left Variable Stator Vane (VSV) Actuator Removal, AMM TASK 75-31-02-000-802-H01

Left Variable Stator Vane (VSV) Actuator Installation, AMM TASK 75-31-02-400-802-H01

(7) For the right VSV actuator, M75002, measure the resistance between these pairs of pins on connector DP72104:

DP72104	DP72104	
5	4	5 - 5K ohms
4	3	5 - 5K ohms
2	1	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(8) If the resistance is not in the specified range for each pair of pins, replace the right VSV actuator, M75002.

These are the tasks:

Right Variable Stator Vane (VSV) Actuator Removal, AMM TASK 75-31-02-000-803-H01

Right Variable Stator Vane (VSV) Actuator Installation, AMM TASK 75-31-02-400-803-H01.

(a) Do the repair confirmation procedure at the end of this task.

(9) If the resistance is in the specified range for each pair of pins, re-connect connector DP72204 to the left VSV actuator, M75009, and connector DP72104 to the right VSV actuator, M75002.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(10) Disconnect connectors DP70109 and DP70210 from the EEC (FADEC), M73003.

(11) Measure the resistance between these pairs of pins on connector DP70109:

DP70109	DP70109	
P	k	5 - 5K ohms
N	z	5 - 5K ohms
z	h	5 - 5K ohms
P	GND	> 100K ohms
k	GND	> 100K ohms
N	GND	> 100K ohms
z	GND	> 100K ohms
h	GND	> 100K ohms

(12) Measure the resistance between these pairs of pins on connector DP70210:

DP70210	DP70210	
N	h	5 - 5K ohms
P	z	5 - 5K ohms
z	k	5 - 5K ohms
P	GND	> 100K ohms
k	GND	> 100K ohms
N	GND	> 100K ohms
z	GND	> 100K ohms
h	GND	> 100K ohms

(13) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(14) If the problem continues, replace the left VSV actuator, M75009.

These are the tasks:

Left Variable Stator Vane (VSV) Actuator Removal, AMM TASK 75-31-02-000-802-H01

Left Variable Stator Vane (VSV) Actuator Installation, AMM TASK 75-31-02-400-802-H01.

(a) Do the repair confirmation procedure at the end of this task.

(15) If the problem continues, replace the right VSV actuator, M75002.

These are tasks:

Right Variable Stator Vane (VSV) Actuator Removal, AMM TASK 75-31-02-000-803-H01

Right Variable Stator Vane (VSV) Actuator Installation, AMM TASK 75-31-02-400-803-H01.

(a) Do the repair confirmation procedure at the end of this task.

(16) If the problem continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(17) If the problem continues, do the tasks that follow:

(a) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(b) Do a check of the VBV Feedback Soft; Do the Resistance checks of VBV Feedback Soft Fault - Fault Isolation, 75-21 TASK 835.

(c) Do a check of the HPT ACC Feedback; Do the Resistance checks of HPTACC Feedback Fault - Fault Isolation, 75-21 TASK 839.

(d) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

833. VSV Feedback Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-24021, 75-24022.

B. Description

(1) The left variable stator vane (VSV) feedback signal is failed, or the EEC input circuitry is failed. This fault is reported whenever the EEC is powered. The fault report is cleared after the signal is valid for 20 seconds.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect connector DP72204 from the left VSV actuator, M75009.

(3) Measure the resistance between these pairs of receptacle pins:

DP72204	DP72204	
5	4	5 - 5K ohms
4	3	5 - 5K ohms
2	1	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the left VSV actuator, M75009.

These are the tasks:

Left Variable Stator Vane (VSV) Actuator Removal, AMM TASK 75-31-02-000-802-H01

Left Variable Stator Vane (VSV) Actuator Installation, AMM TASK 75-31-02-400-802-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the resistance is in the specified range for each pair of pins, re-connect connector DP72204 to the left VSV actuator, M75009.

(6) Disconnect connector DP70210 from the EEC (FADEC), M73003.

(7) Measure the resistance between these pairs of connector pins:

DP70210	DP70210	
N	h	5 - 5K ohms
P	z	5 - 5K ohms
z	k	5 - 5K ohms
P	GND	> 100K ohms
k	GND	> 100K ohms
N	GND	> 100K ohms
z	GND	> 100K ohms
h	GND	> 100K ohms

(8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(9) If the resistance is in the specified range for each pair of pins, or if the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(10) If the problem continues, do the tasks that follow:

(a) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(b) Do a check of the VBV Feedback Soft; Do the Resistance checks of VBV Feedback Soft Fault - Fault Isolation, 75-21 TASK 835.

(c) Do a check of the HPT ACC Feedback; Do the Resistance checks of HPTACC Feedback Fault - Fault Isolation, 75-21 TASK 839.

(d) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

834. VSV Position Error - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-13991, 75-13992, 75-23991, 75-23992.

B. Description

(1) The variable stator vanes (VSVs) are not in the commanded position. No problem is detected with the VSV torque motor and the core speed is greater than 15 percent. This fault is reported by the channel in control.

NOTE: This fault may be generated after fuel system maintenance, such as an engine installation, replacement of a fuel supply line, replacement of the fuel pump or replacement of the HMU. If this fault occurs after fuel system maintenance, do the repair confirmation at the end of this task. If the fault continues, then do the fault isolation procedure.

C. Fault Isolation Procedure

(1) Do an inspection of the Variable Stator Vane (VSV) system hardware that follow in 10 or less cycles (High Pressure Compressor Section (HPC) Inspection, AMM TASK 72-30-00-200-801-H01). Give special attention to the VSV guide pads.

- Inlet Guide Vane (IGV) and VSV actuation rings
- VSV guide pads
- Lever arms and bushings
- Connector links
- VSV actuation shaft.

(a) If you find problems during the visual inspection, repair and/or replace components as it is necessary, and then do the repair confirmation at the end of this task.

(2) Do an inspection of the fan hub frame IGV guide pads in 10 or less cycles (Fan Hub Frame IGV Guide Pads Inspection, AMM TASK 72-23-00-200-802-H00).

(a) If you find problems during the visual inspection, repair and/or replace components as it is necessary, and then do the repair confirmation at the end of this task.

(3) If the problem continues, replace the HMU, M76001.

These are the tasks:

Hydromechanical Unit Removal, AMM TASK 73-21-14-000-801-H01

Hydromechanical Unit Installation, AMM TASK 73-21-14-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(4) If the problem continues, replace the left VSV actuator, M75009.

These are the tasks:

Left Variable Stator Vane (VSV) Actuator Removal, AMM TASK 75-31-02-000-802-H01

Left Variable Stator Vane (VSV) Actuator Installation, AMM TASK 75-31-02-400-802-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the problem continues, replace the right VSV actuator, M75002.

These are the tasks:

Right Variable Stator Vane (VSV) Actuator Removal, AMM TASK 75-31-02-000-803-H01

Right Variable Stator Vane (VSV) Actuator Installation, AMM TASK 75-31-02-400-803-H01.

(a) Do the repair confirmation procedure at the end of this task.

(6) If the problem continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(7) If the problem continues, do the tasks that follow:

(a) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(b) Do a check of the VBV Feedback Soft; Do the Resistance checks of VBV Feedback Soft Fault - Fault Isolation, 75-21 TASK 835.

(c) Do a check of the HPT ACC Feedback; Do the Resistance checks of HPTACC Feedback Fault - Fault Isolation, 75-21 TASK 839.

(d) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

D. Repair Confirmation

(1) Do this task: Test No. 14 - Engine Fuel Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-813-H01.

(a) If the maintenance message does not show on the ground test display, then you corrected the fault.

(b) If the maintenance message shows on the ground test display, then continue with the subsequent step of this fault isolation task.

(2) Do this task: Test No. 7 - Power Assurance Test, AMM TASK 71-00-00-700-806-H01.

END OF TASK

835. VBV Feedback Soft Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-34091, 75-34092.

B. Description

(1) The left and right variable bleed valve (VBV) feedback signals do not agree. This fault can be reported whenever the EEC is powered.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect connector DP72109 from the left VBV actuator, M75001, and connector DP7209 from the right VBV actuator, M75010.

(3) Measure the resistance between these pairs of pins on connector DP72109:

DP72109	DP72109	
1	2	5 - 5K ohms
3	4	5 - 5K ohms
4	5	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the left VBV actuator, M75001.

These are the tasks:

Left Variable Bypass Valve (VBV) Actuator Removal, AMM TASK 75-32-01-000-801-H01

Left Variable Bypass Valve (VBV) Actuator Installation, AMM TASK 75-32-01-400-801-H01.

(5) Measure the resistance between these pairs of pins on connector DP72209:

DP72209	DP72209	
1	2	5 - 5K ohms
3	4	5 - 5K ohms
4	5	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(6) If the resistance is not in the specified range for each pair of pins, replace the right VBV actuator, M75010.

These are the tasks:

Right Variable Bypass Valve (VBV) Actuator Removal, AMM TASK 75-32-02-000-801-H01

Right Variable Bypass Valve (VBV) Actuator Installation, AMM TASK 75-32-02-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(7) If the resistance is in the specified range for each pair of pins, re-connect connector DP72109 to the left VBV actuator, M75001 and connector DP72209 to the right VBV actuator, M75010.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(8) Disconnect the connectors DP70109 and DP70210 from the EEC (FADEC), M73003.

(9) Measure the resistance between these pairs of pins on connector DP70109:

DP70109	DP70109	
R	m	5 - 5K ohms
AA	GG	5 - 5K ohms
GG	BB	5 - 5K ohms
R	GND	> 100K ohms
m	GND	> 100K ohms
AA	GND	> 100K ohms
GG	GND	> 100K ohms
BB	GND	> 100K ohms

(10) Measure the resistance between these pairs of pins on connector DP70210:

DP70210	DP70210	
S	n	5 - 5K ohms
m	AA	5 - 5K ohms
AA	R	5 - 5K ohms
S	GND	> 100K ohms
n	GND	> 100K ohms
m	GND	> 100K ohms
AA	GND	> 100K ohms
R	GND	> 100K ohms

(11) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(12) Do the visual inspection of the VBV actuation mechanical system (AMM TASK 75-30-00-210-801-H01).

NOTE: Make sure to do the step to 'Do an inspection of the linkage connections between the VBV actuator and VBV door bellcranks to unison ring'.

(a) If you find problems during the visual inspection, repair and replace components as necessary, and do the repair confirmation at the end of this task.

(13) If the problem continues, replace the left VBV actuator, M75001.

These are the tasks:

Left Variable Bypass Valve (VBV) Actuator Removal, AMM TASK 75-32-01-000-801-H01

Left Variable Bypass Valve (VBV) Actuator Installation, AMM TASK 75-32-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(14) If the problem continues, replace the right VBV actuator, M75010.

These are the tasks:

Right Variable Bypass Valve (VBV) Actuator Removal, AMM TASK 75-32-02-000-801-H01

Right Variable Bypass Valve (VBV) Actuator Installation, AMM TASK 75-32-02-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(15) If the problem continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(16) If the problem continues, do the tasks that follow:

(a) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(b) Do a check of the VSV Feedback Soft; Do the Resistance checks of VSV Feedback Soft Fault - Fault Isolation, 75-21 TASK 832.

(c) Do a check of the HPT ACC Feedback; Do the Resistance checks of HPTACC Feedback Fault - Fault Isolation, 75-21 TASK 839.

(d) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

836. VBV Feedback Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14071, 75-14072.

B. Description

(1) The left variable bleed valve (VBV) feedback signal is failed, or the EEC input circuitry is failed. This fault can be reported whenever the EEC is powered.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect the connector DP72109 from the left VBV actuator, M75001.

(3) Measure the resistance between these pairs of receptacle pins:

DP72109	DP72109	
1	2	5 - 5K ohms
3	4	5 - 5K ohms
4	5	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the left VBV actuator, M75001.

These are the tasks:

Left Variable Bypass Valve (VBV) Actuator Removal, AMM TASK 75-32-01-000-801-H01

Left Variable Bypass Valve (VBV) Actuator Installation, AMM TASK 75-32-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the resistance is in the specified range for each pair of pins, re-connect the connector DP72109 to the left VBV actuator, M75001.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(6) Disconnect the connector DP70109 from the EEC (FADEC), M73003.

(7) Measure the resistance between these pairs of connector pins:

DP70109	DP70109	
R	m	5 - 5K ohms
AA	GG	5 - 5K ohms
GG	BB	5 - 5K ohms
R	GND	> 100K ohms
m	GND	> 100K ohms
AA	GND	> 100K ohms
GG	GND	> 100K ohms
BB	GND	> 100K ohms

(8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(9) If the resistance is in the specified range for each pair of pins, or if the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(10) If the problem continues, do the tasks that follow:

(a) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(b) Do a check of the VSV Feedback Soft; Do the Resistance checks of VSV Feedback Soft Fault - Fault Isolation, 75-21 TASK 832.

(c) Do a check of the HPT ACC Feedback; Do the Resistance checks of HPTACC Feedback Fault - Fault Isolation, 75-21 TASK 839.

(d) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

END OF TASK

837. VBV Feedback Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-24071, 75-24072.

B. Description

(1) The right variable bleed valve (VBV) feedback signal is failed, or the EEC input circuitry is failed. This fault can be reported whenever the EEC is powered.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect the connector DP72209 from the right VBV actuator, M75010.

(3) Measure the resistance between these pairs of receptacle pins:

DP72209	DP72209	
1	2	5 - 5K ohms
3	4	5 - 5K ohms
4	5	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the right VBV actuator, M75010.

These are the tasks:

Right Variable Bypass Valve (VBV) Actuator Removal, AMM TASK 75-32-02-000-801-H01

Right Variable Bypass Valve (VBV) Actuator Installation, AMM TASK 75-32-02-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the resistance is in the specified range for each pair of pins, re-connect the connector DP72209 to the right VBV actuator, M75010.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(6) Disconnect the connector DP70210 from the EEC (FADEC), M73003.

(7) Measure the resistance between these pairs of connector pins:

DP70210	DP70210	
S	n	5 - 5K ohms
m	AA	5 - 5K ohms
AA	R	5 - 5K ohms
S	GND	> 100K ohms
n	GND	> 100K ohms
m	GND	> 100K ohms
AA	GND	> 100K ohms
R	GND	> 100K ohms

(8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(9) If the resistance is in the specified range for each pair of pins, or if the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(10) If the problem continues, do the tasks that follow:

(a) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(b) Do a check of the VSV Feedback Soft; Do the Resistance checks of VSV Feedback Soft Fault - Fault Isolation, 75-21 TASK 832.

(c) Do a check of the HPT ACC Feedback; Do the Resistance checks of HPTACC Feedback Fault - Fault Isolation, 75-21 TASK 839.

(d) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

838. VBV Position Error - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14101, 75-14102, 75-24101, 75-24102.

B. Description

(1) The variable bleed valve (VBV) error is greater than 5% with the engine running or 20% with N2 below idle for 5 seconds. No problem is detected with the VSV torque motor and the VBV torque motor driver is connected. Core speed is greater than 20%. This fault can be reported by the channel in control. The fault can be generated during the fuel driven actuators initiated test. The fault is cleared when the error is less than 5% at idle or 20% for 5 seconds below idle.

NOTE: This fault may be generated after fuel system maintenance, such as an engine installation, replacement of a fuel supply line, replacement of the fuel pump or replacement of the HMU. If this fault occurs after fuel system maintenance, do the repair confirmation at the end of this task. If the fault continues, then do the fault isolation procedure.

C. Fault Isolation Procedure

(1) Do the visual inspection of the VBV system (AMM TASK 75-30-00-210-801-H01).

(a) If you find problems during the visual inspection, repair and/or replace components as it is necessary, and then do the repair confirmation at the end of this task.

(2) If the problem continues, replace the HMU, M76001.

These are the tasks:

Hydromechanical Unit Removal, AMM TASK 73-21-14-000-801-H01

Hydromechanical Unit Installation, AMM TASK 73-21-14-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(3) If the problem continues, replace the left VBV actuator, M75010.

These are the tasks:

Left Variable Bypass Valve (VBV) Actuator Removal, AMM TASK 75-32-01-000-801-H01

Left Variable Bypass Valve (VBV) Actuator Installation, AMM TASK 75-32-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(4) If the problem continues, replace the right VBV actuator, M75010.

These are the tasks:

Right Variable Bypass Valve (VBV) Actuator Removal, AMM TASK 75-32-02-000-801-H01

Right Variable Bypass Valve (VBV) Actuator Installation, AMM TASK 75-32-02-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the problem continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(6) If the problem continues, do the tasks that follow:

(a) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(b) Do a check of the VSV Feedback Soft; Do the Resistance checks of VSV Feedback Soft Fault - Fault Isolation, 75-21 TASK 832.

(c) Do a check of the HPT ACC Feedback; Do the Resistance checks of HPTACC Feedback Fault - Fault Isolation, 75-21 TASK 839.

(d) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

D. Repair Confirmation

(1) Do this task: Test No. 14 - Engine Fuel Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-813-H01.

(a) If the maintenance message does not show on the ground test display, then you corrected the fault.

(b) If the maintenance message shows on the ground test display, then continue with the subsequent step of this fault isolation task.

(2) Do this task: Test No. 7 - Power Assurance Test, AMM TASK 71-00-00-700-806-H01.

——— END OF TASK ———

839. HPTACC Feedback Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14261, 75-14262, 75-24261, 75-24262.

B. Description

(1) The high pressure turbine active clearance control (HPTACC) LVDT feedback signal failed sum-of-squares test, or exceeds valid electrical range (-5.0% to 105.0%) or EEC input circuitry is failed for 20 seconds. This fault can be reported whenever the EEC is powered. This fault can be generated during the fuel driven actuators and EEC test initiated tests. The fault is cleared after the signal is valid for 20 seconds.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect the connector DP72107 (CH A) or the DP72207 (CH B) from the HPTACC valve, M75004.

(3) Measure the resistance between these pairs of receptacle pins:

DP72107	DP72107	
1	2	5 - 5K ohms
3	4	5 - 5K ohms
4	5	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

DP72207		DP72207	
1	. . . . .	2	5 - 5K ohms
3	. . . . .	4	5 - 5K ohms
4	. . . . .	5	5 - 5K ohms
1	. . . . .	GND	> 100K ohms
2	. . . . .	GND	> 100K ohms
3	. . . . .	GND	> 100K ohms
4	. . . . .	GND	> 100K ohms
5	. . . . .	GND	> 100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the HPTACC valve, M75004.

These are the tasks:

High Pressure Turbine Active Clearance Control (HPTACC) Valve Removal, AMM TASK 75-24-04-000-801-H01

High Pressure Turbine Active Clearance Control (HPTACC) Valve Installation, AMM TASK 75-24-04-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the resistance is in the specified range for each pair of pins, re-connect the connector DP72107 or connector DP72207 to the HPTACC valve, M75004.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(6) Disconnect the connector DP70109 (CH A) or DP70210 (CH B) from the EEC (FADEC), M73003.

(7) Measure the resistances between these pairs of connector pins:

DP70109		DP70109	
B	. . . . .	U	5 - 5K ohms
C	. . . . .	q	5 - 5K ohms
q	. . . . .	V	5 - 5K ohms
B	. . . . .	GND	> 100K ohms
U	. . . . .	GND	> 100K ohms
C	. . . . .	GND	> 100K ohms
q	. . . . .	GND	> 100K ohms
V	. . . . .	GND	> 100K ohms

DP70210	DP70210	
Y	F	5 - 5K ohms
G	t	5 - 5K ohms
t	Z	5 - 5K ohms
Y	GND	> 100K ohms
F	GND	> 100K ohms
G	GND	> 100K ohms
t	GND	> 100K ohms
Z	GND	> 100K ohms

(8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(9) If the resistance is in the specified range for each pair of pins, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(10) If the problem continues, replace the HPTACC valve, M75004.

These are the tasks:

High Pressure Turbine Active Clearance Control (HPTACC) Valve Removal, AMM TASK 75-24-04-000-801-H01

High Pressure Turbine Active Clearance Control (HPTACC) Valve Installation, AMM TASK 75-24-04-400-801-H01.

(11) If the problem continues, do the tasks that follow:

(a) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

(b) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(c) Do a check of the VBV Feedback Soft; Do the Resistance checks of VBV Feedback Soft Fault - Fault Isolation, 75-21 TASK 835.

(d) Do a check of the VSV Feedback Soft; Do the Resistance checks of VSV Feedback Soft Fault - Fault Isolation, 75-21 TASK 832.

E. Repair Confirmation

(1) Set the applicable EEC MAINT L(R) ENG POWER switch on the P61 panel to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

840. HPTACC Position Error - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14271, 75-14272, 75-24271, 75-24272.

B. Description

(1) The high pressure turbine active clearance control (HPTACC) position error is greater than 5% with the engine running or greater than 20% with the engine not running for 20 seconds. The HPTACC driver is connected. N2 is greater than 20%. A valid HPTACC feedback is available. This fault can be reported by the channel in control. This fault can be generated during the fuel driven actuators initiated test. The fault report is cleared when the error is less than 5% with engine running or less than 20% when below idle for 20 seconds.

C. Initial Evaluation

(1) Do this task: Test No. 14 - Engine Fuel Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-813-H01.

(a) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(b) If the MAT shows NOT ACTIVE for the maintenance message, (or if the message does not show) then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect the connector DP72107 (CH A) or the DP72207 (CH B) from the HPTACC valve, M75004.

(3) Measure the resistance between these pairs of receptacle pins:

DP72107	DP72107	
1	2	5 - 5K ohms
3	4	5 - 5K ohms
4	5	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

DP72207	DP72207	
1	2	5 - 5K ohms
3	4	5 - 5K ohms
4	5	5 - 5K ohms
1	GND	> 100K ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the HPTACC valve, M75004.

These are the tasks:

High Pressure Turbine Active Clearance Control (HPTACC) Valve Removal, AMM TASK 75-24-04-000-801-H01

High Pressure Turbine Active Clearance Control (HPTACC) Valve Installation, AMM TASK 75-24-04-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the resistance is in the specified range for each pair of pins, re-connect the connector DP72107 or connector DP72207 to the HPTACC valve, M75004.

CAUTION REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(6) Disconnect the connector DP70109 (CH A) or DP70210 (CH B) from the EEC (FADEC), M73003.

(7) Measure the resistances between these pairs of connector pins:

DP70109	DP70109	
B	U	5 - 5K ohms
C	q	5 - 5K ohms
q	V	5 - 5K ohms
B	GND	> 100K ohms
U	GND	> 100K ohms
C	GND	> 100K ohms
q	GND	> 100K ohms
V	GND	> 100K ohms

DP70210	DP70210	
Y	F	5 - 5K ohms
G	t	5 - 5K ohms
t	Z	5 - 5K ohms
Y	GND	> 100K ohms
F	GND	> 100K ohms
G	GND	> 100K ohms
t	GND	> 100K ohms
Z	GND	> 100K ohms

(8) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(9) If the resistance is in the specified range for each pair of pins, replace the HPTACC valve, M75004.

These are the tasks:

High Pressure Turbine Active Clearance Control (HPTACC) Valve Removal, AMM TASK 75-24-04-000-801-H01

High Pressure Turbine Active Clearance Control (HPTACC) Valve Installation, AMM TASK 75-24-04-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(10) If the problem continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(11) If the problem continues, replace the HMU, M76001.

These are the tasks:

Hydromechanical Unit Removal, AMM TASK 73-21-14-000-801-H01

Hydromechanical Unit Installation, AMM TASK 73-21-14-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(12) If the problem continues, do the tasks that follow:

(a) Do a check of the Thrust Reverser Position Signals as applicable:

1) For the Left Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 867.

b) Position Signals from Thrust Reverser Sleeve (Left) (L Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 869.

2) For the Right Engine, do these tasks:

a) Position Signals from Thrust Reverser Sleeve (Right) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 868.

b) Position Signals from Thrust Reverser Sleeve (Left) (R Eng) Ch A and B Do Not Agree - Fault Isolation, 78-36 TASK 870.

(b) Do a check of the FMV Feedback Soft; Do the Resistance checks of FMV Feedback Soft Fault - Fault Isolation, 73-21 TASK 847.

(c) Do a check of the VBV Feedback Soft; Do the Resistance checks of VBV Feedback Soft Fault - Fault Isolation, 75-21 TASK 835.

(d) Do a check of the VSV Feedback Soft; Do the Resistance checks of VSV Feedback Soft Fault - Fault Isolation, 75-21 TASK 832.

E. Repair Confirmation

(1) Do this task: Test No. 14 - Engine Fuel Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-813-H01.

(a) If the maintenance message does not show on the ground test display, then you corrected the fault.

(b) If the maintenance message shows on the ground test display, then continue with the subsequent step of this fault isolation task.

END OF TASK

841. LPTACC Solenoid Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14161, 75-14162.

B. Description

(1) The low pressure turbine active clearance control (LPTACC) valve solenoid is failed or the EEC output circuit is failed. This fault can be reported by channel A only when the LPTACC valve is actuated.

C. Initial Evaluation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the maintenance message shows on the ground test display, then do the fault isolation procedure below.

(b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect electrical connector DP72106 from the LPTACC valve, V75002.

(3) Measure the resistances between these pairs of receptacle pins:

DP72106	DP72106	
1	2	10 - 300 ohms
1	GND	> 100K ohms
2	GND	> 100K ohms

(4) If the resistance is not in the range specified for each pair of pins, replace the LPTACC valve, V75002.

These are the tasks:

Low Pressure Turbine Active Clearance Control (LPTACC) Valve Removal, AMM TASK 75-24-01-000-801-H01

Low Pressure Turbine Active Clearance Control (LPTACC) Valve Installation, AMM TASK 75-24-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the resistance is in the range specified for each pair of pins, re-connect connector DP72106 to the LPTACC valve, V75002.

(a) Do the repair confirmation procedure at the end of this task.

CAUTION REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(6) Disconnect connector DP70109 from the EEC (FADEC), M73003.

(7) Measure the resistances between these pairs of connector pins:

DP70109	DP70109	
A	T	10 - 300 ohms
T	GND	> 100K ohms
A	GND	> 100K ohms

(8) If the resistance is not in the range specified for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(9) If the resistance is in the range specified for each pair of pins, or if the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

E. Repair Confirmation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.

(b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

END OF TASK

842. LPTACC Valve Failed Closed - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14171, 75-14172.

B. Description

(1) The low pressure turbine active clearance control (LPTACC) feedback switch indicates the valve is still in the closed position after being demanded open. This fault is reported on channel A only.

C. Initial Evaluation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the maintenance message shows on the ground test display, then do the fault isolation procedure below.

(b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

CAUTION REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(1) Disconnect connector DP70109 from the EEC (FADEC), M73003.

(2) Disconnect connector DP72106 from the LPTACC valve, V75005.

(3) Attach a jumper wire from pin 1 to pin 2 of the harness connector DP72106.

(4) Do these two electrical checks:

(a) Do a check for continuity between pin T and pin A of connector DP70109:

DP70109	DP70109	
T	A	0 ohms

(b) Measure the resistance between the pin A to GND and pin T to GND:

NOTE: Use the harness shielding for the GND in this measurement.

DP70109	DP70109	
T	GND	>100K ohms
A	GND	>100K ohms

(5) If you did not see continuity, or if the resistance is not in the range specified, replace the applicable wire harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

ARO ALL POST SB 777-GE100-75-0036; AIRPLANES WITH IN-LINE FILTER

(6) If the fail continues, remove and do the inspection of the LPTACC in-line filter.

(a) Do this task: Low Pressure Turbine Active Clearance Control (LPTACC) Valve In-Line Filter Removal, AMM TASK 75-24-03-000-801-H00.

WARNING USE AIR PRESSURE OF 25 PSIG OR LESS TO CLEAN AND DRY THE FILTER. DO NOT POINT THE AIRFLOW TOWARD YOURSELF OR OTHER PERSONS. YOU CAN BE INJURED BY AIRBORNE PARTICLES.

(7) If you find unwanted material, use dry, compressed air to clean the in-line filter.

NOTE: If the in-line filter is clean, you can use the in-line filter again.

(a) Do this task: Low Pressure Turbine Active Clearance Control (LPTACC) Valve In-Line Filter Installation, AMM TASK 75-24-03-400-801-H00.

(b) Do the repair confirmation procedure at the end of this task.

(8) If you find damage, replace the in-line filter.

ARO ALL

(9) If the fault continues, replace the LPTACC valve, V75005.

These are the tasks:

Low Pressure Turbine Active Clearance Control (LPTACC) Valve Removal, AMM TASK 75-24-01-000-801-H01

Low Pressure Turbine Active Clearance Control (LPTACC) Valve Installation, AMM TASK 75-24-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(10) If the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

E. Repair Confirmation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the maintenance message does not show on the ground test display, then you corrected the fault.

(b) If the maintenance message shows on the ground test display, then continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

843. LPTACC Valve Failed Open - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14181, 75-14182.

B. Description

(1) The low pressure turbine active clearance control (LPTACC) feedback switch indicates the valve is still in the open position after being demanded closed. This fault is reported on channel A only.

C. Initial Evaluation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the maintenance message shows on the ground test display, then do the fault isolation procedure below.

(b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(1) Disconnect connector DP70109 from the EEC (FADEC), M73003.

(2) Measure the resistances between these pairs of connector pins:

DP70109	DP70109	
x	FF	> 100K ohms
x	GND	> 100K ohms
FF	GND	> 100K ohms

(3) If the resistance is not in the range specified for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

ARO ALL POST SB 777-GE100-75-0036; AIRPLANES WITH IN-LINE FILTER

(4) If the fail continues, remove and do the inspection of the LPTACC in-line filter.

(a) Do this task: Low Pressure Turbine Active Clearance Control (LPTACC) Valve In-Line Filter Removal, AMM TASK 75-24-03-000-801-H00.

WARNING USE AIR PRESSURE OF 25 PSIG OR LESS TO CLEAN AND DRY THE FILTER. DO NOT POINT THE AIRFLOW TOWARD YOURSELF OR OTHER PERSONS. YOU CAN BE INJURED BY AIRBORNE PARTICLES.

(5) If you find unwanted material, use dry, compressed air to clean the in-line filter.

NOTE: If the in-line filter is clean, you can use the in-line filter again.

(a) Do this task: Low Pressure Turbine Active Clearance Control (LPTACC) Valve In-Line Filter Installation, AMM TASK 75-24-03-400-801-H00.

(b) Do the repair confirmation procedure at the end of this task.

(6) If you find damage, replace the in-line filter.

ARO ALL

(7) Replace the LPTACC valve, V75005.

These are the tasks:

Low Pressure Turbine Active Clearance Control (LPTACC) Valve Removal, AMM TASK 75-24-01-000-801-H01

Low Pressure Turbine Active Clearance Control (LPTACC) Valve Installation, AMM TASK 75-24-01-400-801-H01.

(8) If the resistance is in the range specified for each pair of pins, or if the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

E. Repair Confirmation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the maintenance message does not show on the ground test display, then you corrected the fault.

(b) If the maintenance message shows on the ground test display, then continue with the subsequent step of this fault isolation task.

END OF TASK

844. STB Valve Feedback Soft Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-34291, 75-34292.

B. Description

(1) The channel A and channel B start transient bleed (STB) valve LVDT feedback signals disagree. This fault can be reported whenever the EEC is powered.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect the connectors DP70109 (Ch A) and DP70210 (Ch B) from the EEC (FADEC), M73003:

(3) Measure the resistances between these pairs of pins on connectors DP70109 and DP70210:

DP70109	DP70109	
CC	s	5 - 5K ohms
DD	EE	5 - 5K ohms
CC	GND	> 100K ohms
s	GND	> 100K ohms
DD	GND	> 100K ohms
EE	GND	> 100K ohms

DP70210	DP70210	
T	p	5 - 5K ohms
q	BB	5 - 5K ohms
T	GND	> 100K ohms
p	GND	> 100K ohms
q	GND	> 100K ohms
BB	GND	> 100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the resistance is in the specified range for each pair of pins, reconnect connectors DP70109 and DP70210 to the EEC (FADEC), M73003.

(a) Do the repair confirmation procedure at the end of this task.

(6) If the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

845. STB Valve Feedback Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14281, 75-14282, 75-24281, 75-24282.

B. Description

(1) The start transient bleed (STB) valve LVDT feedback signal fails the range check, or the EEC input circuitry is failed. This fault is reported whenever the EEC is powered.

(a) For maintenance message 73-14211, 73-14212, do the fault isolation for channel A.

(b) For maintenance message 73-24211, 73-24212, do the fault isolation for channel B.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the fault isolation procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(2) Disconnect the applicable connectors from the EEC (FADEC), M73003:

(a) For maintenance message 75-14281 or 75-14282 (CH A), disconnect connector DP70109

(b) For maintenance message 75-24281 or 75-24282 (CH B), disconnect connector DP70210.

(3) Measure the resistances between these pairs of connector pins:

DP70109	**DP70109**	
CC	s	5 - 5K ohms
DD	EE	5 - 5K ohms
CC	GND	> 100K ohms
s	GND	> 100K ohms
DD	GND	> 100K ohms
EE	GND	> 100K ohms

DP70210	**DP70210**	
T	p	5 - 5K ohms
q	BB	5 - 5K ohms
T	GND	> 100K ohms
p	GND	> 100K ohms
q	GND	> 100K ohms
BB	GND	> 100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the resistance is in the specified range for each pair of pins, reconnect the applicable connector and do the repair confirmation procedure at the end of this task.

(6) Replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

E. Repair Confirmation

(1) Set the applicable EEC MAINT L(R) ENG POWER switch on the P61 panel to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

846. STB Valve Failed Closed - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14311, 75-14312, 75-24311, 75-24312.

B. Description

(1) The start transient bleed (STB) valve feedback indicates that the valve is still closed after being demanded open. The core speed is greater than 20 percent. This fault is reported by the channel in control.

C. Initial Evaluation

(1) Do this task: Test No. 14 - Engine Fuel Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-813-H01.

(a) If the maintenance message shows on the ground test display, then do the fault isolation procedure below.

(b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

(2) Replace the HMU, M76001.

These are the tasks:

Hydromechanical Unit Removal, AMM TASK 73-21-14-000-801-H01

Hydromechanical Unit Installation, AMM TASK 73-21-14-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(3) If the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

E. Repair Confirmation

(1) Do this task: Test No. 14 - Engine Fuel Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-813-H01.

(a) If the maintenance message does not show on the ground test display, then you corrected the fault.

(b) If the maintenance message shows on the ground test display, then continue with the subsequent step of this fault isolation task.

——— END OF TASK ———

847. STB Valve Failed Open - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-14301, 75-14302, 75-24301, 75-24302.

B. Description

(1) The start transient bleed (STB) valve feedback indicates that the valve is still open after being demanded closed. The core speed is greater than 20 percent. This fault is reported by the channel in control.

C. Initial Evaluation

(1) Do this task: Test No. 14 - Engine Fuel Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-813-H01.

(a) If the maintenance message shows on the ground test display, then do the fault isolation procedure below.

(b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

(2) Replace the HMU, M76001.

These are the tasks:

Hydromechanical Unit Removal, AMM TASK 73-21-14-000-801-H01

Hydromechanical Unit Installation, AMM TASK 73-21-14-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(3) If the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

E. Repair Confirmation

(1) Do this task: Test No. 14 - Engine Fuel Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-813-H01.

(a) If the maintenance message does not show on the ground test display, then you corrected the fault.

(b) If the maintenance message shows on the ground test display, then continue with the subsequent step of this fault isolation task.

——— END OF TASK ———

848. CCC Solenoid Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-24341, 75-24342.

B. Description

(1) The core compartment cooling (CCC) valve solenoid is failed or the EEC output circuit is failed. This fault can be reported by channel B only when the CCC valve is actuated.

C. Initial Evaluation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the maintenance message shows on the ground test display, then do the fault isolation procedure below.

(b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

CAUTION

REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(1) Disconnect connector DP70210 from the EEC (FADEC), M73003.

(2) Measure the resistances between these pairs of connector pins:

DP70210	DP70210	
L	M	10 - 300 ohms
L	GND	> 100K ohms
M	GND	> 100K ohms

(3) If the resistance is in the range specified for each pair of pins, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(4) If the resistance is not in the range specified for each pair of pins, disconnect connector DP72206 from the CCC solenoid.

(5) Attach a jumper wire from pin M to pin L on connector DP70210.

(6) Measure the resistances between these pairs of connector pins:

DP72206		DP72206	
1	. . . . .	2	10 - 300 ohms
1	. . . . .	GND	> 100K ohms
2	. . . . .	GND	> 100K ohms

(7) If the resistance is not in the range specified for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(8) If the resistance is in the range specified for each pair of pins, or if the fault continues, replace the CCC valve, V75000.

These are the tasks:

Core Compartment Cooling (CCC) Valve Removal, AMM TASK 75-23-01-000-801-H01

Core Compartment Cooling (CCC) Valve Installation, AMM TASK 75-23-01-400-801-H01.

E. Repair Confirmation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.

(b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

849. CCC Valve Failed Closed - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-24351, 75-24352.

B. Description

(1) Core compartment cooling (CCC) feedback indicates that the valve is still closed after being demanded open. This fault is reported on channel B only.

C. Initial Evaluation

(1) Do this task:

Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the maintenance message shows on the ground test display, then do the fault isolation procedure below.

(b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

CAUTION REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU DISCONNECT THE ELECTRICAL CONNECTORS. IF YOU DO NOT OBEY THIS INSTRUCTION, DAMAGE TO THE EEC CAN OCCUR.

(1) Disconnect connector DP70210 from the EEC (FADEC), M73003.

(2) Measure the resistances between these pairs of connector pins:

DP70210	DP70210	
s	CC	> 100K ohms
s	GND	> 100K ohms
CC	GND	> 100K ohms

(3) If the resistance is not in the range specified for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(4) Replace the CCC valve, V75001.

These are the tasks:

Core Compartment Cooling (CCC) Valve Removal, AMM TASK 75-23-01-000-801-H01

Core Compartment Cooling (CCC) Valve Installation, AMM TASK 75-23-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

E. Repair Confirmation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the maintenance message does not show on the ground test display, then you corrected the fault.

(b) If the maintenance message shows on the ground test display, then continue with this fault isolation procedure at the subsequent step.

END OF TASK

850. CCC Valve Failed Open - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-24361, 75-24362.

B. Description

(1) Core compartment cooling (CCC) feedback indicates that the valve is failed open after being demanded closed. This fault is reported on channel B only.

NOTE: There will be no troubleshooting is necessary for these maintenance messages if you have complied the GE90-100 Service Bulletin 75-0017.

C. Initial Evaluation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the maintenance message shows on the ground test display, then do the fault isolation procedure below.

(b) If the maintenance message does not show on the ground test display, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Disconnect connector DP70210 from the EEC (FADEC), M73003.

(2) Measure the resistances between these pairs of connector pins:

DP70210	DP70210	
s	CC	> 100K ohms
s	GND	> 100K ohms
CC	GND	> 100K ohms

(3) If the resistance is not in the range specified for each pair of pins, replace the applicable wiring harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(4) Replace the CCC valve, V75001.

These are the tasks:

Core Compartment Cooling (CCC) Valve Removal, AMM TASK 75-23-01-000-801-H01

Core Compartment Cooling (CCC) Valve Installation, AMM TASK 75-23-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(5) If the fault continues, replace the EEC (FADEC), M73003.

These are the tasks:

EEC (FADEC) Removal, AMM TASK 73-21-15-000-801-H01

EEC (FADEC) Installation, AMM TASK 73-21-15-400-801-H01.

E. Repair Confirmation

(1) Do this task: Test No. 15 - Engine Air Driven Actuator Test (MAT Initiated Test), AMM TASK 71-00-00-700-814-H01.

(a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then you corrected the fault.

(b) If the MAT shows ACTIVE for the maintenance message, then continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

851. LPC Anti-Ice Valve Feedback Fault (Ch A) - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 73-13271, 73-13272.

B. Description

(1) The LPC Anti-Ice valve channel A feedback exceeds the valid electrical range, or the EEC input circuitry is failed.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

(2) Disconnect connector DP73112 at the W731 electrical harness to W721 electrical harness junction.

(3) Measure the resistance between these pins on the DP73112 electrical connector through the LPC Anti-Ice valve:

(a) Pin 2 to pin 3, specified resistance 5 - 5K ohms

(b) Pin 1 to pin 5, specified resistance 5 - 5K ohms

(c) Pin 1 to pin 4, specified resistance 5 - 5K ohms

(d) Pin 1 to GND, specified resistance >100K ohms

(e) Pin 2 to GND, specified resistance >100K ohms

(f) Pin 3 to GND, specified resistance >100K ohms

(g) Pin 4 to GND, specified resistance >100K ohms

(h) Pin 5 to GND, specified resistance >100K ohms.

(4) If the resistances are in the specified ranges, connect a jumper between these pins of electrical connector DP73112 at the W731 electrical harness to W721 electrical harness junction.

(a) Pin 2 to pin 3

(b) Pin 1 to pin 5

(c) Pin 1 to pin 4

(d) Disconnect electrical connector DP70109 (J9) at the EEC (FADEC) and check for continuity between the following pins of the EEC (FADEC) electrical harness connection:

1) Pin E to pin X

2) Pin W to pin r

3) Pin D to pin r

4) Pin E to GND (check for no continuity)

5) Pin X to GND (check for no continuity)

6) Pin W to GND (check for no continuity)

7) Pin r to GND (check for no continuity)

8) Pin D to GND (check for no continuity)

(e) If the continuity is not in the specified range, replace the applicable electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(f) If the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(5) If the resistances are not in the specified ranges, disconnect electrical connector DP73101 at the LPC Anti-Ice valve.

(a) Measure the resistance between these pins on the LPC Anti-Ice valve, M75021.

1) Pin 8 to pin 9, specified resistance 5 - 5K ohms

2) Pin 10 to pin 11, specified resistance 5 - 5K ohms

3) Pin 11 to pin 12, specified resistance 5 - 5K ohms

4) Pin 8 to GND, specified resistance >100K ohms.

5) Pin 9 to GND, specified resistance >100K ohms.

6) Pin 10 to GND, specified resistance >100K ohms.

7) Pin 11 to GND, specified resistance >100K ohms.

8) Pin 12 to GND, specified resistance >100K ohms.

(6) If the resistances are not in the specified range for each pair of pins, replace the LPC Anti-Ice valve, M75021.

These are the tasks:

Low Pressure Compressor Anti-Ice (LPCAI) Valve Removal, AMM TASK 75-21-01-000-801-H01

Low Pressure Compressor Anti-Ice (LPCAI) Valve Installation, AMM TASK 75-21-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(7) If the resistances are in the specified ranges, replace the W731 electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

852. LPC Anti-Ice Valve Feedback Fault (Ch B) - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 73-23271, 73-23272.

B. Description

(1) The LPC Anti-Ice valve channel B feedback exceeds the valid electrical range, or the EEC input circuitry is failed.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

(2) Disconnect connector DP73212 at the W732 electrical harness to W722 electrical harness junction.

(3) Measure the resistance between these pins on the DP73212 electrical connector through the LPC Anti-Ice valve:

(a) Pin 2 to pin 3, specified resistance 5 - 5K ohms

(b) Pin 1 to pin 5, specified resistance 5 - 5K ohms

(c) Pin 1 to pin 4, specified resistance 5 - 5K ohms

(d) Pin 1 to GND, specified resistance >100K ohms

(e) Pin 2 to GND, specified resistance >100K ohms

(f) Pin 3 to GND, specified resistance >100K ohms

(g) Pin 4 to GND, specified resistance >100K ohms

(h) Pin 5 to GND, specified resistance >100K ohms.

(4) If the resistances are in the specified ranges, connect a jumper between these pins of electrical connector DP73212 at the W732 electrical harness to W722 electrical harness junction.

(a) Pin 2 to pin 3

(b) Pin 1 to pin 5

(c) Pin 1 to pin 4

(d) Disconnect electrical connector DP70210 (J10) at the EEC (FADEC) and check for continuity between the following pins of the EEC (FADEC) electrical harness connection:

1) Pin E to pin X

2) Pin W to pin r

3) Pin D to pin r

4) Pin E to GND (check for no continuity)

5) Pin X to GND (check for no continuity)

6) Pin W to GND (check for no continuity)

7) Pin r to GND (check for no continuity)

8) Pin D to GND (check for no continuity)

(e) If the continuity is not in the specified range, replace the applicable electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(f) If the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(5) If the resistances are not in the specified ranges, disconnect electrical connector DP73201 at the LPC Anti-Ice valve.

(a) Measure the resistance between these pins on the LPC Anti-Ice valve, M75021.

1) Pin 8 to pin 9, specified resistance 5 - 5K ohms
2) Pin 10 to pin 11, specified resistance 5 - 5K ohms
3) Pin 11 to pin 12, specified resistance 5 - 5K ohms
4) Pin 8 to GND, specified resistance >100K ohms.
5) Pin 9 to GND, specified resistance >100K ohms.
6) Pin 10 to GND, specified resistance >100K ohms.
7) Pin 11 to GND, specified resistance >100K ohms.
8) Pin 12 to GND, specified resistance >100K ohms.

(6) If the resistances are not in the specified range for each pair of pins, replace the LPC Anti-Ice valve, M75021.

These are the tasks:

Low Pressure Compressor Anti-Ice (LPCAI) Valve Removal, AMM TASK 75-21-01-000-801-H01

Low Pressure Compressor Anti-Ice (LPCAI) Valve Installation, AMM TASK 75-21-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(7) If the resistances are in the specified ranges, replace the W732 electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

853. LPC Anti-Ice Valve Feedback Soft Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 73-33281, 73-33282.

B. Description

(1) The LPC Anti-Ice valve feedback signals from channel A and B of the FADEC (EEC) do not agree.

C. Initial Evaluation

(1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure below.

(c) If the MAT shows NOT ACTIVE for the maintenance message, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

(2) Disconnect connector DP73112 at the W731 electrical harness to W721 electrical harness junction and the DP73212 at the W732 electrical harness to W722 electrical harness junction.

(3) Measure the resistance between these pins on both the DP73112 and DP73212 electrical connector through the LPC Anti-Ice valve:

(a) Pin 2 to pin 3, specified resistance 5 - 5K ohms

(b) Pin 1 to pin 5, specified resistance 5 - 5K ohms

(c) Pin 1 to pin 4, specified resistance 5 - 5K ohms

(d) Pin 1 to GND, specified resistance >100K ohms

(e) Pin 2 to GND, specified resistance >100K ohms

(f) Pin 3 to GND, specified resistance >100K ohms

(g) Pin 4 to GND, specified resistance >100K ohms

(h) Pin 5 to GND, specified resistance >100K ohms.

(4) If the resistances are in the specified ranges, connect a jumper between these pins of electrical connector DP73112 at the W731 electrical harness to W721 electrical harness junction and these pins of electrical connector DP73212 at the W732 electrical harness to W722 electrical harness junction.

(a) Pin 2 to pin 3

(b) Pin 1 to pin 5

(c) Pin 1 to pin 4

(d) Disconnect electrical connector DP70109 (J9) and DP70210 (J10) at the EEC (FADEC) and check for continuity between the following pins of the EEC (FADEC) electrical harness connection:

1) Pin E to pin X
2) Pin W to pin r
3) Pin D to pin r
4) Pin E to GND (check for no continuity)
5) Pin X to GND (check for no continuity)
6) Pin W to GND (check for no continuity)
7) Pin r to GND (check for no continuity)
8) Pin D to GND (check for no continuity)

(e) If the continuity is not in the specified range, replace the applicable electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(f) If the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(5) If the resistances are not in the specified ranges, disconnect electrical connectors DP73101 and DP73201 at the LPC Anti-Ice valve.

(a) Measure the resistance between these pins on the LPC Anti-Ice valve, M75021.

1) Pin 8 to pin 9, specified resistance 5 - 5K ohms
2) Pin 10 to pin 11, specified resistance 5 - 5K ohms
3) Pin 11 to pin 12, specified resistance 5 - 5K ohms
4) Pin 8 to GND, specified resistance >100K ohms
5) Pin 9 to GND, specified resistance >100K ohms
6) Pin 10 to GND, specified resistance >100K ohms
7) Pin 11 to GND, specified resistance >100K ohms
8) Pin 12 to GND, specified resistance >100K ohms.

(6) If the resistances are not in the specified range for each pair of pins, replace the LPC Anti-Ice valve, M75021.

These are the tasks:

Low Pressure Compressor Anti-Ice (LPCAI) Valve Removal, AMM TASK 75-21-01-000-801-H01

Low Pressure Compressor Anti-Ice (LPCAI) Valve Installation, AMM TASK 75-21-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(7) If the resistances are in the specified ranges, replace the W731 or W732 electrical harnesses.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

E. Repair Confirmation

(1) Set the applicable EEC MAINT POWER switch on the Overhead Maintenance Panel, P61, to the TEST position.

(a) If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(b) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), then put the EEC MAINT POWER switch back to the NORM position and no more action is necessary (you corrected the fault).

(c) If the MAT shows ACTIVE for the maintenance message, then put the EEC MAINT POWER switch back to the NORM position and continue with this fault isolation procedure at the subsequent step.

——— END OF TASK ———

854. LPC Anti-Ice Valve Torque Motor Fault (Ch A) - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 73-13261, 73-13262.

B. Description

(1) The LPC Anti-Ice valve torque motor current (channel A) is out of range.

C. Initial Evaluation

(1) Do this task: Test No. 16 - Engine Electronic Control (EEC) Test (MAT Initiated Test), AMM TASK 71-00-00-700-815-H01.

(a) If the maintenance message shows on the MAT, then do the Fault Isolation Procedure below.

(b) If the maintenance message does not show on the MAT, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

(2) Disconnect connector DP73112 at the W731 electrical harness to W721 electrical harness junction.

(3) Measure the resistance between these pins on both the DP73112 electrical connector through the LPC Anti-Ice valve:

(a) Pin 8 to pin 9, specified resistance 5 - 150 ohms

(b) Pin 8 to GND, specified resistance >100K ohms

(c) Pin 9 to GND, specified resistance >100K ohms.

(4) If the resistances are in the specified ranges, connect a jumper between these pins of electrical connector DP73112 at the W731 electrical harness to W721 electrical harness junction.

(a) Pin 8 to pin 9

(b) Disconnect electrical connector DP70305 (J5) at the EEC (FADEC) and check for continuity between the following pins of the EEC (FADEC) electrical harness connection:

1) Pin L to pin K

2) Pin L to GND (check for no continuity)

3) Pin K to GND (check for no continuity).

(c) If the continuity is not in the specified range, replace the applicable electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(d) If the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(5) If the resistances are not in the specified ranges, disconnect electrical connectors DP73101 at the LPC Anti-Ice valve.

(a) Measure the resistance between these pins on the LPC Anti-Ice valve, M75021.

1) Pin 1 to pin 2, specified resistance 5 - 150 ohms

2) Pin 1 to GND, specified resistance >100K ohms.

3) Pin 2 to GND, specified resistance >100K ohms.

(6) If the resistances are not in the specified range for each pair of pins, replace the LPC Anti-Ice valve, M75021.

These are the tasks:

Low Pressure Compressor Anti-Ice (LPCAI) Valve Removal, AMM TASK 75-21-01-000-801-H01

Low Pressure Compressor Anti-Ice (LPCAI) Valve Installation, AMM TASK 75-21-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(7) If the resistances are in the specified ranges, replace the W731 electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

E. Repair Confirmation

(1) Do this task: Test No. 16 - Engine Electronic Control (EEC) Test (MAT Initiated Test), AMM TASK 71-00-00-700-815-H01.

(a) If the maintenance message shows on the MAT, then continue with this fault isolation procedure at the subsequent step.

(b) If the maintenance message does not show on the MAT, then no more action is necessary (you have corrected the fault).

END OF TASK

855. LPC Anti-Ice Valve Torque Motor Fault (Ch B) - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 73-23261, 73-23262.

B. Description

(1) The LPC Anti-Ice valve torque motor current (channel B) is out of range.

C. Initial Evaluation

(1) Do this task: Test No. 16 - Engine Electronic Control (EEC) Test (MAT Initiated Test), AMM TASK 71-00-00-700-815-H01.

(a) If the maintenance message shows on the MAT, then do the Fault Isolation Procedure below.

(b) If the maintenance message does not show on the MAT, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

(2) Disconnect connector DP73212 at the W732 electrical harness to W722 electrical harness junction.

(3) Measure the resistance between these pins on both the DP73212 electrical connector through the LPC Anti-Ice valve:

(a) Pin 8 to pin 9, specified resistance 5 - 150 ohms

(b) Pin 8 to GND, specified resistance >100K ohms

(c) Pin 9 to GND, specified resistance >100K ohms.

(4) If the resistances are in the specified ranges, connect a jumper between these pins of electrical connector DP73212 at the W732 electrical harness to W722 electrical harness junction.

(a) Pin 8 to pin 9

(b) Disconnect electrical connector DP70406 (J6) at the EEC (FADEC) and check for continuity between the following pins of the EEC (FADEC) electrical harness connection:

1) Pin L to pin K
2) Pin L to GND (check for no continuity)
3) Pin K to GND (check for no continuity).

(c) If the continuity is not in the specified range, replace the applicable electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(d) If the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(5) If the resistances are not in the specified ranges, disconnect electrical connectors DP73201 at the LPC Anti-Ice valve.

(a) Measure the resistance between these pins on the LPC Anti-Ice valve, M75021.

1) Pin 1 to pin 2, specified resistance 5 - 150 ohms
2) Pin 1 to GND, specified resistance >100K ohms
3) Pin 2 to GND, specified resistance >100K ohms.

(6) If the resistances are not in the specified range for each pair of pins, replace the LPC Anti-Ice valve, M75021.

These are the tasks:

Low Pressure Compressor Anti-Ice (LPCAI) Valve Removal, AMM TASK 75-21-01-000-801-H01

Low Pressure Compressor Anti-Ice (LPCAI) Valve Installation, AMM TASK 75-21-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(7) If the resistances are in the specified ranges, replace the W732 electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

E. Repair Confirmation

(1) Do this task: Test No. 16 - Engine Electronic Control (EEC) Test (MAT Initiated Test), AMM TASK 71-00-00-700-815-H01.

(a) If the maintenance message shows on the MAT, then continue with this fault isolation procedure at the subsequent step.

(b) If the maintenance message does not show on the MAT, then no more action is necessary (you have corrected the fault).

END OF TASK

856. LPC Anti-Ice Valve Torque Motor (Ch A) Position Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 73-13291, 73-13292, 73-13301, 73-13302.

B. Description

(1) The LPC Anti-Ice valve torque motor is failed open or closed.

C. Initial Evaluation

(1) Do this task: Test No. 16 - Engine Electronic Control (EEC) Test (MAT Initiated Test), AMM TASK 71-00-00-700-815-H01.

(a) If the maintenance message shows on the MAT, then do the Fault Isolation Procedure below.

(b) If the maintenance message does not show on the MAT, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

(2) Disconnect connector DP73112 at the W731 electrical harness to W721 electrical harness junction.

(3) Measure the resistance between these pins on both the DP73112 electrical connector through the LPC Anti-Ice valve:

(a) Pin 8 to pin 9, specified resistance 5 - 150 ohms

(b) Pin 8 to GND, specified resistance >100K ohms

(c) Pin 9 to GND, specified resistance >100K ohms.

(4) If the resistances are in the specified ranges, connect a jumper between these pins of electrical connector DP73112 at the W731 electrical harness to W721 electrical harness junction.

(a) Pin 8 to pin 9

(b) Disconnect electrical connector DP70305 (J5) at the EEC (FADEC) and check for continuity between the following pins of the EEC (FADEC) electrical harness connection:

1) Pin L to pin K

2) Pin L to GND (check for no continuity)

3) Pin K to GND (check for no continuity)

(c) If the continuity is not in the specified range, replace the applicable electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(d) If the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(5) If the resistances are not in the specified ranges, disconnect electrical connectors DP73101 at the LPC Anti-Ice valve.

(a) Measure the resistance between these pins on the LPC Anti-Ice valve, M75021.

1) Pin 1 to pin 2, specified resistance 5 - 150 ohms

2) Pin 1 to GND, specified resistance >100K ohms

3) Pin 2 to GND, specified resistance >100K ohms.

(6) If the resistances are not in the specified range for each pair of pins, replace the LPC Anti-Ice valve, M75021.

These are the tasks:

Low Pressure Compressor Anti-Ice (LPCAI) Valve Removal, AMM TASK 75-21-01-000-801-H01

Low Pressure Compressor Anti-Ice (LPCAI) Valve Installation, AMM TASK 75-21-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(7) If the resistances are in the specified ranges, replace the W731 electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

E. Repair Confirmation

(1) Do this task: Test No. 16 - Engine Electronic Control (EEC) Test (MAT Initiated Test), AMM TASK 71-00-00-700-815-H01.

(a) If the maintenance message shows on the MAT, then continue with this fault isolation procedure at the subsequent step.

(b) If the maintenance message does not show on the MAT, then no more action is necessary (you have corrected the fault).

——— END OF TASK ———

857. LPC Anti-Ice Valve Torque Motor (Ch B) Position Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 73-23291, 73-23292, 73-23301, 73-23302.

B. Description

(1) The LPC Anti-Ice valve torque motor is failed open or closed.

C. Initial Evaluation

(1) Do this task: Test No. 16 - Engine Electronic Control (EEC) Test (MAT Initiated Test), AMM TASK 71-00-00-700-815-H01.

(a) If the maintenance message shows on the MAT, then do the Fault Isolation Procedure below.

(b) If the maintenance message does not show on the MAT, then there was an intermittent fault.

NOTE: If you have an intermittent fault, you must use your judgement (and your airlines policy) to make a decision if you will replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

(1) Make sure the applicable EEC MAINT POWER switch is in the NORM position.

CAUTION

MAKE SURE YOU REMOVE ELECTRICAL POWER FROM THE EEC BEFORE YOU REMOVE ELECTRICAL CONNECTORS. IF YOU DO NOT, YOU CAN CAUSE DAMAGE TO THE EEC (FADEC).

(2) Disconnect connector DP73212 at the W732 electrical harness to W722 electrical harness junction.

(3) Measure the resistance between these pins on both the DP73212 electrical connector through the LPC Anti-Ice valve:

(a) Pin 8 to pin 9, specified resistance 5 - 150 ohms

(b) Pin 8 to GND, specified resistance >100K ohms

(c) Pin 9 to GND, specified resistance >100K ohms.

(4) If the resistances are in the specified ranges, connect a jumper between these pins of electrical connector DP73212 at the W732 electrical harness to W722 electrical harness junction.

(a) Pin 8 to pin 9

(b) Disconnect electrical connector DP70406 (J6) at the EEC (FADEC) and check for continuity between the following pins of the EEC (FADEC) electrical harness connection:

1) Pin L to pin K

2) Pin L to GND (check for no continuity)

3) Pin K to GND (check for no continuity).

(c) If the continuity is not in the specified range, replace the applicable electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(d) If the fault continues, replace the EEC (FADEC) M73003.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

1) Do the repair confirmation procedure at the end of this task.

(5) If the resistances are not in the specified ranges, disconnect electrical connectors DP73201 at the LPC Anti-Ice valve.

(a) Measure the resistance between these pins on the LPC Anti-Ice valve, M75021.

1) Pin 1 to pin 2, specified resistance 5 - 150 ohms
2) Pin 1 to GND, specified resistance >100K ohms.
3) Pin 2 to GND, specified resistance >100K ohms.

(6) If the resistances are not in the specified range for each pair of pins, replace the LPC Anti-Ice valve, M75021.

These are the tasks:

Low Pressure Compressor Anti-Ice (LPCAI) Valve Removal, AMM TASK 75-21-01-000-801-H01

Low Pressure Compressor Anti-Ice (LPCAI) Valve Installation, AMM TASK 75-21-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

(7) If the resistances are in the specified ranges, replace the W732 electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harness Removal, AMM TASK 73-22-01-000-801-H01

EEC (FADEC) Electrical Harness Installation, AMM TASK 73-22-01-400-801-H01.

(a) Do the repair confirmation procedure at the end of this task.

E. Repair Confirmation

(1) Do this task: Test No. 16 - Engine Electronic Control (EEC) Test (MAT Initiated Test), AMM TASK 71-00-00-700-815-H01..

(a) If the maintenance message shows on the MAT, then continue with this fault isolation procedure at the subsequent step.

(b) If the maintenance message does not show on the MAT, then no more action is necessary (you have corrected the fault).

END OF TASK

801. Procedure To Be Determined - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 75-13361, 75-13362, 75-14111, 75-14112, 75-23361, 75-23362, 75-24111, 75-24112.

B. Fault Isolation Procedure

(1) At this time the FIM does not have a procedure for this fault. The FIM will contain a procedure for this fault in the future.

——— END OF TASK ———

802. EICAS Message Latched by AIMS - Fault Isolation

A. Initial Evaluation

NOTE: AIMS can latch this EICAS message when it occurs. After you find the cause of the fault and correct it, it is possible that the EICAS message will continue to show.

(1) Do not erase the EICAS message until you complete the task for the correlated maintenance message.

(2) When this EICAS message occurs, do these steps:

(a) Make sure that you have the correlated maintenance message number that shows on the MAT with the EICAS message.

(b) Go back to the FIM Fault Code Index and find the fault code for the EICAS message.

(c) Find the correlated maintenance message number and the task number to the right of the fault code.

(d) Go to the specified task in the FIM and do the steps in the task.

(e) After you do the actions in the task to correct the fault, do these steps:

1) Look at the MAT for the EICAS message.

2) If the MAT shows LATCHED for the EICAS message, then you must erase it from the EICAS status display (AMM TASK 31-61-00-800-802).

——— END OF TASK ———