CHAPTER

79

OIL

(GE90-100 SERIES ENGINES)

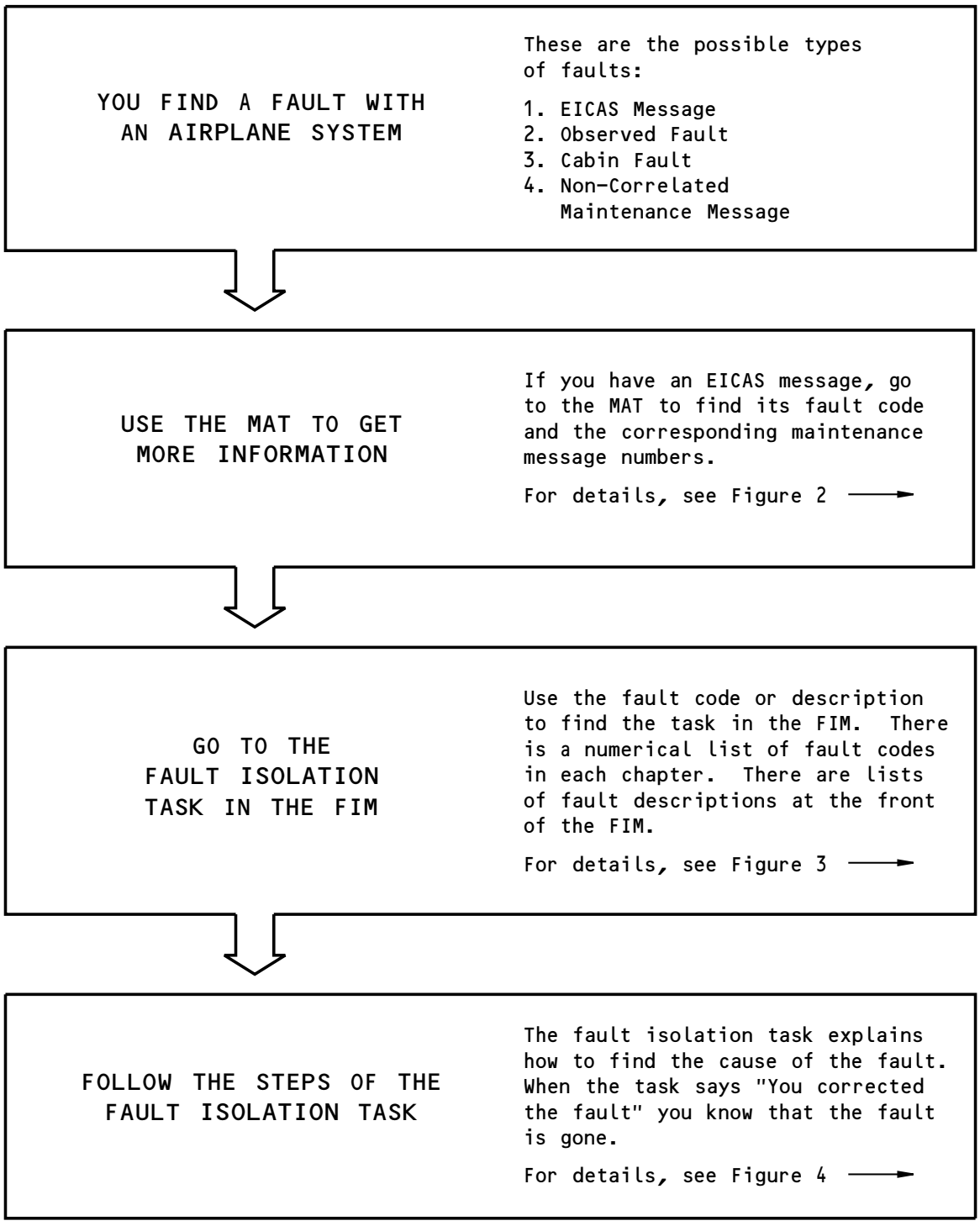
BOEING

777-200/300
FAULT ISOLATION MANUAL

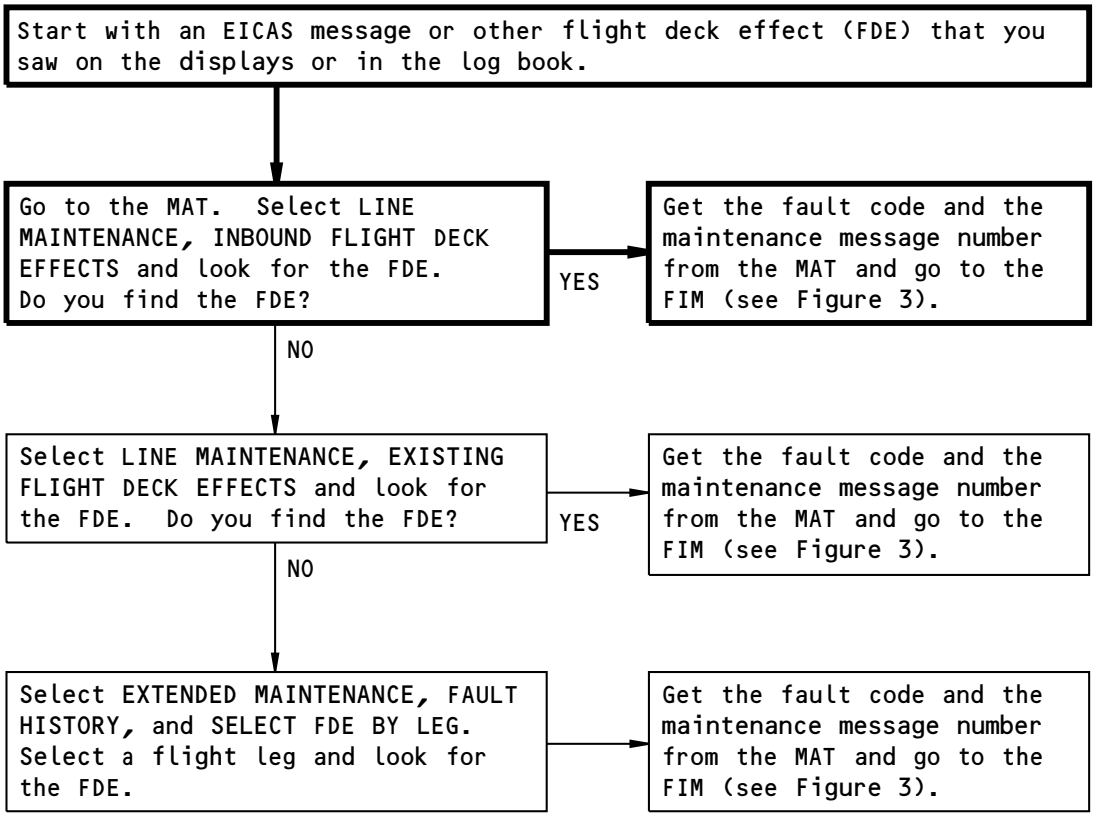
CHAPTER 79
OIL

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

79-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

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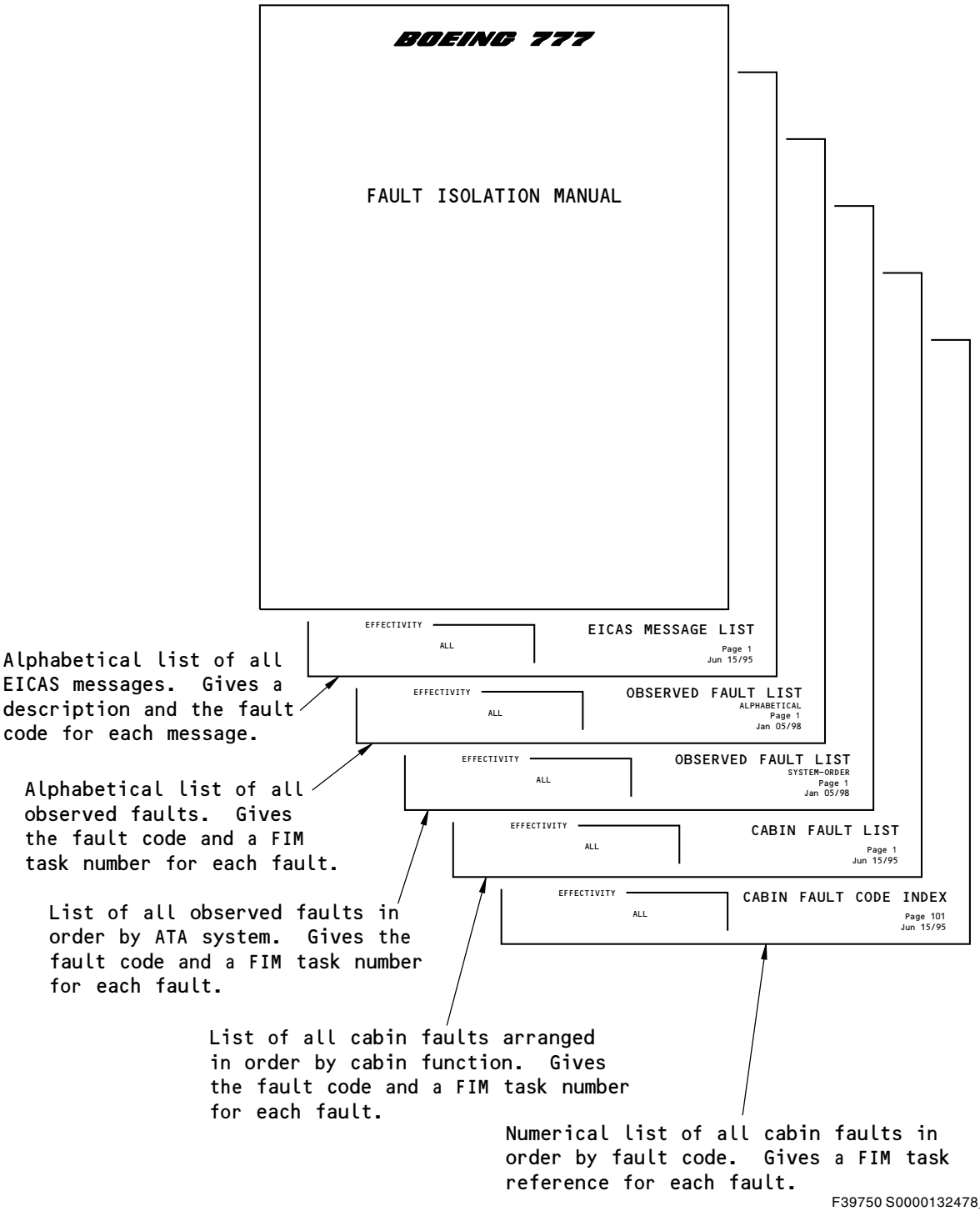
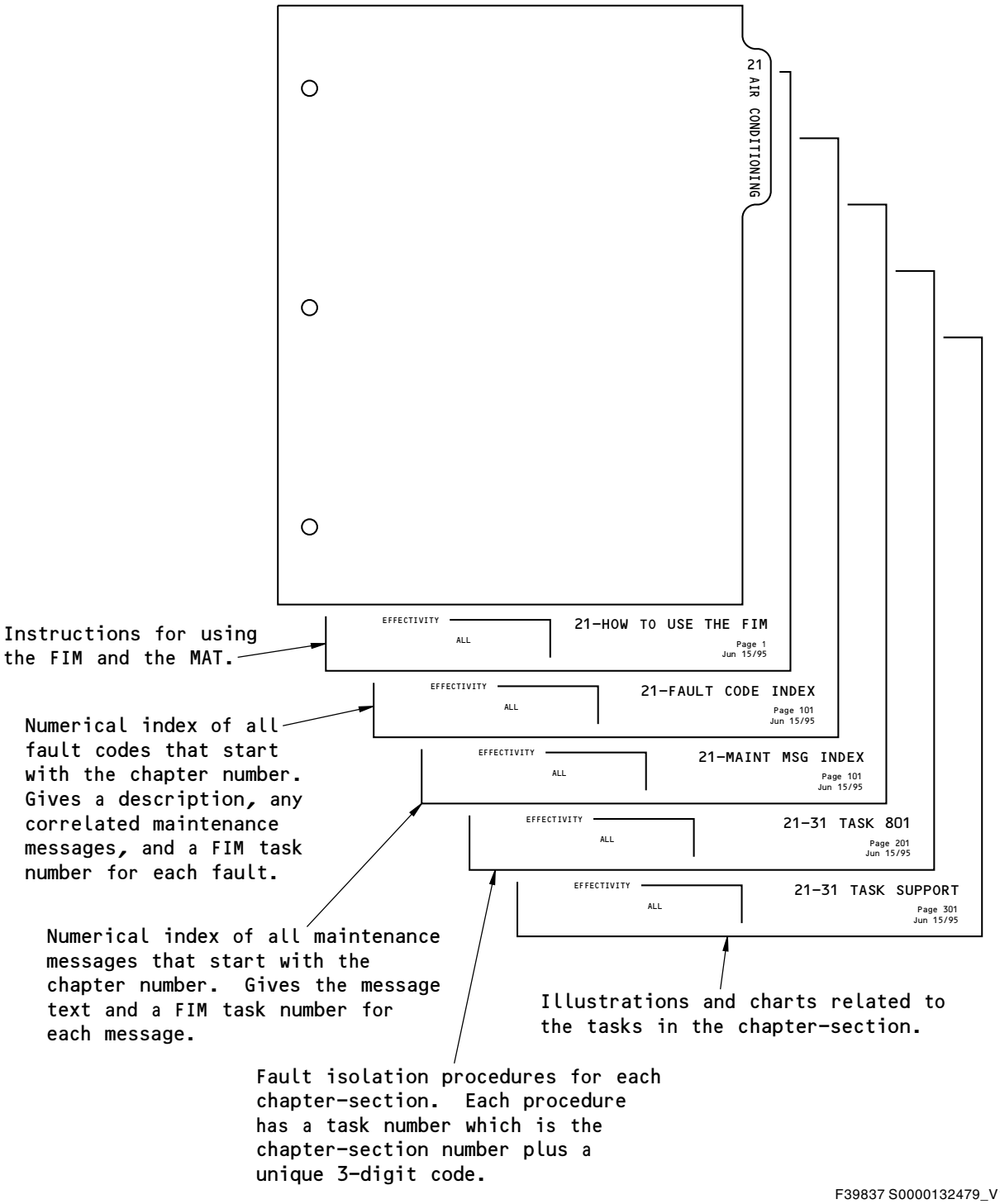
Doing the Fault Isolation Task
Figure 4



Subjects at Front of FIM
Figure 5



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Subjects in Each FIM Chapter
Figure 6

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
793 001 51	OIL QTY SENSOR L (EICAS STATUS) Before you do any task listed here, see FIM 79-21 TASK 815. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	31-84011 31-84012 79-00011	31-48 TASK 806 31-48 TASK 807 79-31 TASK 801
793 001 52	OIL QTY SENSOR R (EICAS STATUS) Before you do any task listed here, see FIM 79-21 TASK 815. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	31-84021 31-84022 79-00012	31-48 TASK 808 31-48 TASK 809 79-31 TASK 802
793 011 51	ENG OIL PRESS L (EICAS CAUTION)	79-34491	79-21 TASK 823
793 011 52	ENG OIL PRESS R (EICAS CAUTION)	79-34492	79-21 TASK 823
793 021 51	OIL PRESS SENSORS L (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-34481	79-21 TASK 822
793 021 52	OIL PRESS SENSORS R (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-34482	79-21 TASK 822
793 031 51	ENG OIL TEMP L (EICAS ADVISORY)	79-34531	79-21 TASK 826
793 031 52	ENG OIL TEMP R (EICAS ADVISORY)	79-34532	79-21 TASK 826
793 041 51	OIL TEMP SENSORS L (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-34521	79-21 TASK 825
793 041 52	OIL TEMP SENSORS R (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-34522	79-21 TASK 825

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
793 051 51	ENG OIL FILTER L (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-34451 79-34461	79-21 TASK 818 79-21 TASK 819
793 051 52	ENG OIL FILTER R (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-34452 79-34462	79-21 TASK 818 79-21 TASK 819
793 052 51	ENG OIL FILTER L (EICAS ADVISORY)	79-34451	79-21 TASK 818
793 052 52	ENG OIL FILTER R (EICAS ADVISORY)	79-34452	79-21 TASK 818
793 061 51	ENG OIL FILT SNSR L (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-34441	79-21 TASK 817
793 061 52	ENG OIL FILT SNSR R (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-34442	79-21 TASK 817
793 071 51	ENG DMS L (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-14561 79-15231	79-21 TASK 828 79-21 TASK 828
793 071 52	ENG DMS R (EICAS STATUS) Before you do any task listed here, see FIM 79-98 TASK 802. **NOTE:** AIMS CAN LATCH THIS MESSAGE.	79-14562 79-15232	79-21 TASK 828 79-21 TASK 828
793 301 51	Oil quantity (engine): low - left engine.		71-05 TASK 805
793 301 52	Oil quantity (engine): low - right engine.		71-05 TASK 805

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
793 302 51	Oil quantity indication (engine): blank - left engine.	31-84011	31-48 TASK 806
		31-84012	31-48 TASK 807
		79-00011	79-31 TASK 801
793 302 52	Oil quantity indication (engine): blank - right engine.	31-84021	31-48 TASK 808
		31-84022	31-48 TASK 809
		79-00012	79-31 TASK 802
793 311 51	Oil pressure indication (engine): blank - left engine.	23-81004	23-91 TASK 804
		23-81005	23-91 TASK 805
		23-81007	23-91 TASK 807
		31-52013	31-43 TASK 866
		31-52014	31-43 TASK 867
		31-52121	31-41 TASK 821
		31-52122	31-41 TASK 822
		31-56013	31-43 TASK 870
		31-56014	31-43 TASK 871
		31-56121	31-41 TASK 848
		31-56122	31-41 TASK 849
		31-58013	31-43 TASK 872
		31-58014	31-43 TASK 873
		31-58121	31-41 TASK 856
		31-58122	31-41 TASK 857
		31-69401	31-42 TASK 825
		31-69402	31-42 TASK 825
		31-69469	31-42 TASK 850
		31-69470	31-42 TASK 850
		31-69471	31-42 TASK 850
		31-69472	31-42 TASK 850
		31-69501	31-42 TASK 852
		31-69502	31-42 TASK 852
		31-69569	31-42 TASK 856
		31-69570	31-42 TASK 856
		31-69573	31-42 TASK 856
		31-69574	31-42 TASK 856
		31-69701	31-42 TASK 879

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
793 311 51	Oil pressure indication (engine): blank - left engine.	(continued)	
		31-69702	31-42 TASK 879
		31-69771	31-42 TASK 880
		31-69772	31-42 TASK 880
		31-69773	31-42 TASK 880
		31-69774	31-42 TASK 880
		73-08801	73-27 TASK 805
		73-08803	73-27 TASK 810
		73-08805	73-27 TASK 810
		73-08807	73-27 TASK 810
		73-08841	73-27 TASK 806
		73-08843	73-27 TASK 806
		73-08851	73-27 TASK 806
		73-08855	73-27 TASK 806
		73-08873	73-27 TASK 806
		73-08875	73-27 TASK 806
		73-09401	73-27 TASK 808
		73-09403	73-27 TASK 808
		73-09501	73-27 TASK 808
		73-09505	73-27 TASK 808
		73-09703	73-27 TASK 808
		73-09705	73-27 TASK 808
		73-13111	73-21 TASK 842
		73-23111	73-21 TASK 842
		79-34481	79-21 TASK 822
793 311 52	Oil pressure indication (engine): blank - right engine.	23-81005	23-91 TASK 805
		23-81006	23-91 TASK 806
		23-81007	23-91 TASK 807
		31-52013	31-43 TASK 866
		31-52014	31-43 TASK 867
		31-52121	31-41 TASK 821
		31-52122	31-41 TASK 822
		31-54013	31-43 TASK 868
		31-54014	31-43 TASK 869

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
793 311 52	Oil pressure indication (engine): blank - right engine.	(continued)	
		31-54121	31-41 TASK 838
		31-54122	31-41 TASK 839
		31-56013	31-43 TASK 870
		31-56014	31-43 TASK 871
		31-56121	31-41 TASK 848
		31-56122	31-41 TASK 849
		31-69501	31-42 TASK 852
		31-69502	31-42 TASK 852
		31-69577	31-42 TASK 856
		31-69578	31-42 TASK 856
		31-69579	31-42 TASK 856
		31-69580	31-42 TASK 856
		31-69601	31-42 TASK 857
		31-69602	31-42 TASK 857
		31-69675	31-42 TASK 877
		31-69676	31-42 TASK 877
		31-69677	31-42 TASK 877
		31-69678	31-42 TASK 877
		31-69701	31-42 TASK 879
		31-69702	31-42 TASK 879
		31-69775	31-42 TASK 880
		31-69776	31-42 TASK 880
		31-69779	31-42 TASK 880
		31-69780	31-42 TASK 880
		73-08802	73-27 TASK 805
		73-08804	73-27 TASK 810
		73-08806	73-27 TASK 810
		73-08808	73-27 TASK 810
		73-08854	73-27 TASK 807
		73-08856	73-27 TASK 807
		73-08862	73-27 TASK 807
		73-08864	73-27 TASK 807
		73-08872	73-27 TASK 807
		73-08876	73-27 TASK 807

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
793 311 52	Oil pressure indication (engine): blank - right engine.	(continued)	
		73-09504	73-27 TASK 809
		73-09506	73-27 TASK 809
		73-09602	73-27 TASK 809
		73-09604	73-27 TASK 809
		73-09702	73-27 TASK 809
		73-09706	73-27 TASK 809
		73-13112	73-21 TASK 842
		73-23112	73-21 TASK 842
		79-34482	79-21 TASK 822
793 312 51	Oil pressure indication (engine): red - left engine.	79-34491	79-21 TASK 823
793 312 52	Oil pressure indication (engine): red - right engine.	79-34492	79-21 TASK 823
793 314 51	Oil pressure indication (engine): amber - left engine.	79-34491	79-21 TASK 823
793 314 52	Oil pressure indication (engine): amber - right engine.	79-34492	79-21 TASK 823
793 321 51	Oil temperature indication (engine): blank - left engine.	23-81004	23-91 TASK 804
		23-81005	23-91 TASK 805
		23-81007	23-91 TASK 807
		31-52013	31-43 TASK 866
		31-52014	31-43 TASK 867
		31-52121	31-41 TASK 821
		31-52122	31-41 TASK 822
		31-56013	31-43 TASK 870
		31-56014	31-43 TASK 871
		31-56121	31-41 TASK 848
		31-56122	31-41 TASK 849
		31-58013	31-43 TASK 872
		31-58014	31-43 TASK 873
		31-58121	31-41 TASK 856
		31-58122	31-41 TASK 857
		31-69401	31-42 TASK 825
		31-69402	31-42 TASK 825

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
793 321 51	Oil temperature indication (engine): blank - left engine.	(continued)	
		31-69469	31-42 TASK 850
		31-69470	31-42 TASK 850
		31-69471	31-42 TASK 850
		31-69472	31-42 TASK 850
		31-69501	31-42 TASK 852
		31-69502	31-42 TASK 852
		31-69569	31-42 TASK 856
		31-69570	31-42 TASK 856
		31-69573	31-42 TASK 856
		31-69574	31-42 TASK 856
		31-69701	31-42 TASK 879
		31-69702	31-42 TASK 879
		31-69771	31-42 TASK 880
		31-69772	31-42 TASK 880
		31-69773	31-42 TASK 880
		31-69774	31-42 TASK 880
		73-08801	73-27 TASK 805
		73-08803	73-27 TASK 810
		73-08805	73-27 TASK 810
		73-08807	73-27 TASK 810
		73-08841	73-27 TASK 806
		73-08843	73-27 TASK 806
		73-08851	73-27 TASK 806
		73-08855	73-27 TASK 806
		73-08873	73-27 TASK 806
		73-08875	73-27 TASK 806
		73-09401	73-27 TASK 808
		73-09403	73-27 TASK 808
		73-09501	73-27 TASK 808
		73-09505	73-27 TASK 808
		73-09703	73-27 TASK 808
		73-09705	73-27 TASK 808
		73-13111	73-21 TASK 842
		73-23111	73-21 TASK 842

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
793 321 51	Oil temperature indication (engine): blank - left engine.	(continued)	
		79-34521	79-21 TASK 825
		79-34591	79-21 TASK 824
793 321 52	Oil temperature indication (engine): blank - right engine.	23-81005	23-91 TASK 805
		23-81006	23-91 TASK 806
		23-81007	23-91 TASK 807
		31-52013	31-43 TASK 866
		31-52014	31-43 TASK 867
		31-52121	31-41 TASK 821
		31-52122	31-41 TASK 822
		31-54013	31-43 TASK 868
		31-54014	31-43 TASK 869
		31-54121	31-41 TASK 838
		31-54122	31-41 TASK 839
		31-56013	31-43 TASK 870
		31-56014	31-43 TASK 871
		31-56121	31-41 TASK 848
		31-56122	31-41 TASK 849
		31-69501	31-42 TASK 852
		31-69502	31-42 TASK 852
		31-69577	31-42 TASK 856
		31-69578	31-42 TASK 856
		31-69579	31-42 TASK 856
		31-69580	31-42 TASK 856
		31-69601	31-42 TASK 857
		31-69602	31-42 TASK 857
		31-69675	31-42 TASK 877
		31-69676	31-42 TASK 877
		31-69677	31-42 TASK 877
		31-69678	31-42 TASK 877
		31-69701	31-42 TASK 879
		31-69702	31-42 TASK 879
		31-69775	31-42 TASK 880
		31-69776	31-42 TASK 880

FAULT CODE	FAULT DESCRIPTION	MAINT MSG	GO TO FIM TASK
793 321 52	Oil temperature indication (engine): blank - right engine.	(continued)	
		31-69779	31-42 TASK 880
		31-69780	31-42 TASK 880
		73-08802	73-27 TASK 805
		73-08804	73-27 TASK 810
		73-08806	73-27 TASK 810
		73-08808	73-27 TASK 810
		73-08854	73-27 TASK 807
		73-08856	73-27 TASK 807
		73-08862	73-27 TASK 807
		73-08864	73-27 TASK 807
		73-08872	73-27 TASK 807
		73-08876	73-27 TASK 807
		73-09504	73-27 TASK 809
		73-09506	73-27 TASK 809
		73-09602	73-27 TASK 809
		73-09604	73-27 TASK 809
		73-09702	73-27 TASK 809
		73-09706	73-27 TASK 809
		73-13112	73-21 TASK 842
		73-23112	73-21 TASK 842
		79-34522	79-21 TASK 825
		79-34592	79-21 TASK 824
793 322 51	Oil temperature high indication (engine): red - left engine.	79-34531	79-21 TASK 826
793 322 52	Oil temperature high indication (engine): red - right engine.	79-34532	79-21 TASK 826
793 324 51	Oil temperature high indication (engine): amber - left engine.	79-34531	79-21 TASK 826
793 324 52	Oil temperature high indication (engine): amber - right engine.	79-34532	79-21 TASK 826

MAINT MESSAGE	MESSAGE TEXT	GO TO FIM TASK
79-00011*	**AIMS-2, CMCF LDI 3114-BCG-00W-16;** Oil Quantity Transmitter (L Eng) Signals are out of range. **AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;** **AIMS-2, CMCF LDI 3111-BCG-00W-13;** **AIMS-2, CMCF LDI 3116-BCG-00W-14;** **AIMS-2, CMCF LDI 3117-BCG-00W-15;** Oil Quantity Transmitter (L Eng) signals are out of range.	79-31 TASK 801
79-00012*	**AIMS-2, CMCF LDI 3114-BCG-00W-16;** Oil Quantity Transmitter (R Eng) Signals are out of range. **AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;** **AIMS-2, CMCF LDI 3111-BCG-00W-13;** **AIMS-2, CMCF LDI 3116-BCG-00W-14;** **AIMS-2, CMCF LDI 3117-BCG-00W-15;** Oil Quantity Transmitter (R Eng) signals are out of range.	79-31 TASK 802
79-14551*	Debris Monitoring System (L Eng) is failed.	79-21 TASK 827
79-14552*	Debris Monitoring System (R Eng) is failed.	79-21 TASK 827
79-14561*	Debris Monitoring System (L Eng) has detected debris.	79-21 TASK 828
79-14562*	Debris Monitoring System (R Eng) has detected debris.	79-21 TASK 828
79-15121	Engine control system (L Eng ch A) has fault #6.	79-98 TASK 801
79-15122	Engine control system (R Eng ch A) has fault #6.	79-98 TASK 801
79-15231*	Debris Monitoring System (L Eng) has detected debris.	79-21 TASK 828
79-15232*	Debris Monitoring System (R Eng) has detected debris.	79-21 TASK 828
79-25121	Engine control system (L Eng ch B) has fault #6.	79-98 TASK 801
79-25122	Engine control system (R Eng ch B) has fault #6.	79-98 TASK 801
79-32191	Debris Monitoring System (L Eng) is deactivated.	79-98 TASK 801
79-32192	Debris Monitoring System (R Eng) is deactivated.	79-98 TASK 801
79-34441*	Oil Filter Differential Pressure Sensor (L Eng) signal is out of range.	79-21 TASK 817
79-34442*	Oil Filter Differential Pressure Sensor (R Eng) signal is out of range.	79-21 TASK 817
79-34451*	Oil Filter (L Eng) bypass.	79-21 TASK 818
79-34452*	Oil Filter (R Eng) bypass.	79-21 TASK 818
79-34461*	Oil Filter (L Eng) is at impending bypass.	79-21 TASK 819
79-34462*	Oil Filter (R Eng) is at impending bypass.	79-21 TASK 819
79-34471	Oil Filter (L Eng) maintenance is needed.	79-21 TASK 820
79-34472	Oil Filter (R Eng) maintenance is needed.	79-21 TASK 820
79-34481*	Oil Pressure Sensor (L Eng) signal is out of range.	79-21 TASK 822
79-34482*	Oil Pressure Sensor (R Eng) signal is out of range.	79-21 TASK 822

*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
79-34491	Left Engine Oil Pressure is low.	79-21 TASK 823
79-34492	Right Engine Oil Pressure is low.	79-21 TASK 823
79-34511	**AIMS-2, CMCF LDI 3114-BCG-00W-16;** Pressure signals from Oil Filter Differential Pressure Sensor (L Eng) channe and B do not agree. **AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;** **AIMS-2, CMCF LDI 3111-BCG-00W-13;** **AIMS-2, CMCF LDI 3116-BCG-00W-14;** **AIMS-2, CMCF LDI 3117-BCG-00W-15;** Pressure signals from Oil Filter Differential Pressure Sensor (L Eng) channel A and B do not agree.	79-21 TASK 816
79-34512	**AIMS-2, CMCF LDI 3114-BCG-00W-16;** Pressure signals from Oil Filter Differential Pressure Sensor (R Eng) channe and B do not agree. **AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;** **AIMS-2, CMCF LDI 3111-BCG-00W-13;** **AIMS-2, CMCF LDI 3116-BCG-00W-14;** **AIMS-2, CMCF LDI 3117-BCG-00W-15;** Pressure signals from Oil Filter Differential Pressure Sensor (R Eng) channel A and B do not agree.	79-21 TASK 816
79-34521*	Oil Temperature Sensor (L Eng) signal is out of range.	79-21 TASK 825
79-34522*	Oil Temperature Sensor (R Eng) signal is out of range.	79-21 TASK 825
79-34531	Left Engine oil temperature is high.	79-21 TASK 826
79-34532	Right Engine oil temperature is high.	79-21 TASK 826
79-34571	Pressure signals from Oil Pressure Sensor (L Eng) channel A and B do not agree.	79-21 TASK 821
79-34572	Pressure signals from Oil Pressure Sensor (R Eng) channel A and B do not agree.	79-21 TASK 821
79-34581	Left Engine oil quantity is high.	79-21 TASK 829
79-34582	Right Engine oil quantity is high.	79-21 TASK 829
79-34591	Temperature signals from Oil Temperature Sensor (L Eng) channel A and B do not agree.	79-21 TASK 824
79-34592	Temperature signals from Oil Temperature Sensor (R Eng) channel A and B do not agree.	79-21 TASK 824

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

815. EICAS Message OIL QTY SENSOR L and R Displayed and Oil Quantity Blank - Fault Isolation

A. Description

(1) This task is for the condition when the EICAS messages OIL QTY SENSOR L and R are displayed and the oil quantity indication on the secondary EICAS display is blank for the L and R engine.

B. Fault Isolation Procedure

(1) Check for fuel in the engine oil (Engine Oil System (Fluids and Solids Contamination) Inspection, AMM TASK 79-00-00-200-807-H01).

(2) Look at the MAT for one of these related maintenance messages:

(a) 31-51161, 31-51162

(b) 31-51361, 31-51362

(c) 31-51561, 31-51562

(d) 31-51761, 31-51762

(3) If there are related maintenance messages, then find each maintenance message in the Maintenance Message Index and do the specified fault isolation task.

END OF TASK

816. Oil Filter Differential Pressure Sensor Soft Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34511, 79-34512.

B. Description

(1) The channel A and channel B oil filter differential pressure signals disagree by more than 10 psid for 60 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 DP73905 from the engine oil filter differential pressure sensor, M79011.

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

DP73905	DP73905	
11	3	500 - 5K ohms
12	4	500 - 5K ohms
9	2	500 - 5K ohms
8	7	500 - 5K ohms
2	GND	>100K ohms
3	GND	>100K ohms
4	GND	>100K ohms
7	GND	>100K ohms
8	GND	>100K ohms
9	GND	>100K ohms
11	GND	>100K ohms
12	GND	>100K ohms

(4) If any resistance is not in the limits, replace the engine oil filter differential pressure sensor, M79011.

These are the tasks:

Oil Filter Differential Pressure Sensor Removal, AMM TASK 79-35-01-000-801-H01

Oil Filter Differential Pressure Sensor Installation, AMM TASK 79-35-01-400-801-H01.

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

(5) If all the resistances are in the limits, re-connect connector DP73905 to the sensor, M79011.

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 two electrical connectors DP70913 (CH A) and DP70912 (CH B) from the EEC (FADEC) M73003.

(7) Measure the resistances between these pairs of pins for the channel A and channel B harness connectors:

DP70913	DP70913	
R	S	500 - 5K ohms
g	h	500 - 5K ohms
R	GND	>100K ohms
S	GND	>100K ohms
g	GND	>100K ohms
h	GND	>100K ohms

DP70912	DP70912	
R	S	500 - 5K ohms
g	h	500 - 5K ohms
R	GND	>100K ohms
S	GND	>100K ohms
g	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.

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

817. Oil Filter Differential Pressure Sensor - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34441, 79-34442.

B. Description

(1) The engine oil filter differential pressure signal exceeds valid range, 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.

NOTE: Do a check of the MAT and verify if EICAS message ENG OIL FILT SNSR L(R) is displayed and correlated to maintenance message 79-34441 or 79-34442. If you see the EICAS message ENG OIL FILT SNSR L(R) is correlated to maintenance message 79-34441 or 79-34442, then the differential pressure sensor fault is a dual channel failure, and any of the maintenance messages reporting oil filter blockage will be inhibited. If you see EICAS message ENG OIL FILT SNSR L(R), then after you do the following fault isolation procedure, make sure you monitor the airplane on the subsequent flight or during the idle leak check (if you change the sensor) for maintenance messages indicating oil filter bypass problems.

(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 DP73905 from the engine oil filter differential pressure sensor M79011.

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

DP73905		DP73905	
11	. . . . .	3	500 - 5K ohms
12	. . . . .	4	500 - 5K ohms
9	. . . . .	2	500 - 5K ohms
8	. . . . .	7	500 - 5K ohms
2	. . . . .	GND	>100K ohms
3	. . . . .	GND	>100K ohms
4	. . . . .	GND	>100K ohms
7	. . . . .	GND	>100K ohms
8	. . . . .	GND	>100K ohms
9	. . . . .	GND	>100K ohms
11	. . . . .	GND	>100K ohms
12	. . . . .	GND	>100K ohms

(4) If a resistance is not in the limits, replace the engine oil filter differential pressure sensor, M79011.

These are the tasks:

Oil Filter Differential Pressure Sensor Removal, AMM TASK 79-35-01-000-801-H01

Oil Filter Differential Pressure Sensor Installation, AMM TASK 79-35-01-400-801-H01.

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

(5) If all the resistances are in the limits, re-connect the connector DP73905 to the sensor M79011.

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 two electrical connectors DP70913 (CH A) and DP70912 (CH B) from the EEC (FADEC) M73003.

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

DP70913		DP70913	
R	. . . . .	S	500 - 5K ohms
g	. . . . .	h	500 - 5K ohms
R	. . . . .	GND	>100K ohms
S	. . . . .	GND	>100K ohms
g	. . . . .	GND	>100K ohms
h	. . . . .	GND	>100K ohms

DP70912		DP70912	
R	. . . . .	S	500 - 5K ohms
g	. . . . .	h	500 - 5K ohms
R	. . . . .	GND	>100K ohms
S	. . . . .	GND	>100K ohms
g	. . . . .	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,

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 ———

818. Oil Filter Actual Bypass - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34451, 79-34452.

B. Description

(1) The engine oil filter differential pressure sensor indicates that the oil filter has gone on bypass. This fault can be reported whenever the engine is running at high power and engine oil temperature is greater than 50 deg C.

C. Initial Evaluation

(1) This fault is set at high power only and an initial evaluation is not necessary.

D. Fault Isolation Procedure

(1) Do these steps:

(a) Replace the main engine oil filter.

These are the tasks:

Oil Filter Element Removal, AMM TASK 79-21-07-000-801-H01

Oil Filter Element Installation, AMM TASK 79-21-07-400-801-H01.

(b) Do this task: Engine Oil System (DMS) (Scheduled Maintenance Task) Inspection, AMM TASK 79-00-00-200-804-H01.

(c) Do this task: Scavenge Oil Inlet Screens Inspection, AMM TASK 79-21-04-210-801-H01.

(d) Do this task: Engine Oil System (Internal) Inspection, AMM TASK 79-00-00-200-803-H01.

(e) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

(f) Operate the engine at idle for a minimum of 15 minutes and an oil temperature greater than or equal to 50 degrees C.

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

(h) Do this task: Engine Oil System (Internal) Inspection, AMM TASK 79-00-00-200-803-H01.

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

(2) If the fault continues, replace the engine oil filter differential pressure sensor, M79011.

These are the tasks:

Oil Filter Differential Pressure Sensor Removal, AMM TASK 79-35-01-000-801-H01

Oil Filter Differential Pressure Sensor Installation, AMM TASK 79-35-01-400-801-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) Make a record of the steps you did to find and repair this fault, and then look for this fault on the subsequent flight.

——— END OF TASK ———

819. Oil Filter Impending Bypass - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34461, 79-34462.

B. Description

(1) The engine oil filter differential pressure sensor indicates that the oil filter is close to bypassing. This fault can be reported whenever the engine is running at high power and the engine oil temperature is greater than 50 deg C.

C. Initial Evaluation

(1) An initial evaluation is not necessary.

D. Fault Isolation Procedure

(1) Do these steps:

(a) Replace the main engine oil filter.

These are the tasks:

Oil Filter Element Removal, AMM TASK 79-21-07-000-801-H01

Oil Filter Element Installation, AMM TASK 79-21-07-400-801-H01.

(b) Do this task: Engine Oil System (DMS) (Scheduled Maintenance Task) Inspection, AMM TASK 79-00-00-200-804-H01.

(c) Do this task: Scavenge Oil Inlet Screens Inspection, AMM TASK 79-21-04-210-801-H01.

(d) Do this task: Engine Oil System (Internal) Inspection, AMM TASK 79-00-00-200-803-H01.

(e) Do this task: Engine Start (Selection), AMM TASK 71-00-00-800-835-H00.

(f) Operate the engine at idle for a minimum of 5 minutes and an oil temperature greater than or equal to 50 degrees C.

(g) Do this task: Test No. 6 - Part-Power Leak Check, AMM TASK 71-00-00-700-805-H01.

(h) Do this task: Engine Oil System (Internal) Inspection, AMM TASK 79-00-00-200-803-H01.

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

(2) If the fault continues, replace the engine oil filter differential pressure sensor, M79011.

These are the tasks:

Oil Filter Differential Pressure Sensor Removal, AMM TASK 79-35-01-000-801-H01

Oil Filter Differential Pressure Sensor Installation, AMM TASK 79-35-01-400-801-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) Make a record of the steps you did to find and repair this fault, and then look for this fault on the subsequent flight.

——— END OF TASK ———

820. Oil Filter Maintenance - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34471, 79-34472.

B. Description

(1) The engine oil filter differential pressure sensor indicates that the oil filter differential pressure is increasing. This fault is reported whenever the engine is running at high power and the engine oil temperature is greater than 50 deg C.

C. Initial Evaluation

(1) An initial evaluation is not necessary.

D. Fault Isolation Procedure

(1) Replace the main engine oil filter.

These are the tasks:

Oil Filter Element Removal, AMM TASK 79-21-07-000-801-H01

Oil Filter Element Installation, AMM TASK 79-21-07-400-801-H01.

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

(2) If the fault continues, replace the engine oil filter differential pressure sensor, M79011.

These are the tasks:

Oil Filter Differential Pressure Sensor Removal, AMM TASK 79-35-01-000-801-H01

Oil Filter Differential Pressure Sensor Installation, AMM TASK 79-35-01-400-801-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) Make a record of the steps you did to find and repair this fault, and then look for this fault on the subsequent flight.

END OF TASK

821. Oil Pressure Sensor Soft Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34571, 79-34572.

B. Description

(1) The channel A and channel B engine oil pressure signals disagree by more than 10 psid for 60 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 DP72903 from the engine oil pressure sensor M79002.

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

DP72903	DP72903	
11	3	500 - 5K ohms
12	4	500 - 5K ohms
9	2	500 - 5K ohms
8	7	500 - 5K ohms
2	GND	>100K ohms
3	GND	>100K ohms
4	GND	>100K ohms
7	GND	>100K ohms
8	GND	>100K ohms
9	GND	>100K ohms
11	GND	>100K ohms
12	GND	>100K ohms

(4) If the resistance is not in the specified range for each pair of pins, replace the oil pressure sensor, M79002.

These are the tasks:

Oil Pressure Sensor Removal, AMM TASK 79-32-01-000-801-H01

Oil Pressure Sensor Installation, AMM TASK 79-32-01-400-801-H01.

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

(5) If the resistance is not in the specified range for each pair of pins, re-connect the connector DP72903 to the sensor, M79002.

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 two electrical connectors DP70912 (CH A) and DP70913 (CH B) from the EEC (FADEC) M73003.

(7) Measure the resistances between these pairs of pins for the channel A and channel B harness connectors:

DP70913	DP70913	
p	t	500 - 5K ohms
a	n	500 - 5K ohms
p	GND	>100K ohms
t	GND	>100K ohms
a	GND	>100K ohms
n	GND	>100K ohms

DP70912	DP70912	
p	t	500 - 5K ohms
a	n	500 - 5K ohms
p	GND	>100K ohms
t	GND	>100K ohms
a	GND	>100K ohms
n	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.

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 ———

822. Oil Pressure Sensor - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34481, 79-34482.

B. Description

(1) The engine oil pressure signal (PEO) exceeds valid range or the EEC input circuitry is failed. This fault can be reported whenever the EEC is powered.

C. Initial Evaluation

(1) Do these steps if this fault occurred during a start of a cold engine:

NOTE: In service experience shows that the oil pressure can go above the upper range check limit (monitored by the EEC) during a start of a cold engine or during takeoff on engines operating FADEC software version A046 or earlier. If this occurs, the oil pressure indication will blank until the oil temperature increases sufficiently for the oil pressure to decrease into range and show on the display.

(a) If the oil pressure indication went blank, but then showed when the engine oil temperature increased, then do these steps:

1) Erase the correlated EICAS STATUS message OIL PRESS SENSORS L (R) as it is necessary.

2) No more action is necessary.

(b) If the oil pressure indication did not show when the engine oil temperature increased, then continue.

(2) 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 DP72904 from the Engine Oil Pressure Sensor, M79002.

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

DP72904	DP72904	Resistance
11	3	500 - 5K ohms
12	4	500 - 5K ohms
9	2	500 - 5K ohms
8	7	500 - 5K ohms
2	GND	>100K ohms
3	GND	>100K ohms
4	GND	>100K ohms
7	GND	>100K ohms
8	GND	>100K ohms
9	GND	>100K ohms
11	GND	>100K ohms
12	GND	>100K ohms

(a) If the resistance is not in the specified range for each pair of pins, replace the Oil Pressure Sensor, M79002. These are the tasks:

- Oil Pressure Sensor Removal, AMM TASK 79-32-01-000-801-H01
- Oil Pressure Sensor Installation, AMM TASK 79-32-01-400-801-H01

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

(b) If the resistance is in the specified range for each pair of pins, re-connect the Connector DP72904 to the Sensor M79002.

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 the Connectors DP70912 (CH A) or DP70913 (CH B) from the EEC (FADEC) M73003.

(5) Measure the resistances between these pairs of pins on the harness connector:

DP70913	DP70913	Resistance
p	t	500 - 5K ohms
a	n	500 - 5K ohms
p	GND	>100K ohms
t	GND	>100K ohms
a	GND	>100K ohms
n	GND	>100K ohms

DP70912	DP70912	Resistance
p	t	500 - 5K ohms
a	n	500 - 5K ohms
p	GND	>100K ohms
t	GND	>100K ohms
a	GND	>100K ohms
n	GND	>100K ohms

(6) 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.

(7) 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

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 ———

823. Oil Pressure Low Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34491, 79-34492.

B. Description

(1) The engine oil pressure (PEO) is in the low amber band region, or PEO is below redline (10 psid). This fault can be reported whenever the PEO signal is valid and the engine is running.

C. Initial Evaluation

CAUTION

DO NOT OPERATE THE ENGINE AT OR ABOVE IDLE WITHOUT SUFFICIENT OIL PRESSURE. DAMAGE TO THE ENGINE BEARINGS CAN OCCUR.

(1) Start the engine and permit the engine to stabilize at ground idle for 15 minutes (Engine Automatic Start, AMM TASK 71-00-00-800-805-H01).

NOTE: If the oil pressure is less than 10 psid at idle, do the engine shutdown procedure (AMM TASK 71-00-00-800-837-H00).

(a) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the fault isolation procedure below.

(b) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, 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.

(2) Stop the engine (AMM TASK 71-00-00-800-837-H00).

D. Fault Isolation Procedure

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

(2) Do this task: No or Low Oil Pressure Inspection, AMM TASK 71-00-00-200-803-H01.

(a) If the engine is not in the limits, replace the engine.

These are the tasks:

Power Plant Removal, AMM TASK 71-00-02-000-811-H00

Power Plant Installation, AMM TASK 71-00-02-400-811-H00.

(b) If the engine is in the limits, then continue.

(3) Do a check of the engine oil quantity (AMM TASK 12-13-01-130-803-002).

(a) If the oil quantity is low, do the troubleshooting task for LOW OIL QUANTITY - FAULT ISOLATION (an observed fault).

(4) Do a check for fuel in the oil (AMM TASK 79-00-00-200-807-H01).

(5) If the oil quantity is correct and you do not find contamination in the engine oil, do a check of the oil system for leaks or damaged tubes.

(a) Repair or replace damaged tubes as it is necessary.

(6) If you do not find damage to oil system tubes or evidence of leaks, replace the lube and scavenge pump.

These are the tasks:

Lube and Scavenge Pump Removal, AMM TASK 79-21-03-000-801-H01

Lube and Scavenge Pump Installation, AMM TASK 79-21-03-400-801-H01.

(7) If the low oil pressure continues, replace the oil pressurizing valve.

These are the tasks:

Oil Pressurizing Valve Removal, AMM TASK 79-21-18-000-801-H01

Oil Pressurizing Valve Installation, AMM TASK 79-21-18-400-801-H01.

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

824. Oil Temperature Sensor Soft Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34591, 79-34592.

B. Description

(1) The channel A and channel B engine oil temperature signals disagree by more than 20 degrees centigrade for 60 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 electrical connector DP72404 from the oil temperature sensor, M79003.

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.

(3) Disconnect the electrical connector DP70406 from the EEC (FADEC), M73003.

(4) Attach a jumper wire from pin 2 to pin 3 and a jumper wire from pin 4 to pin 5 on harness connector DP72404.

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

DP70406	DP70406	
R	S	< 5 ohms
N	P	< 5 ohms
R	GND	> 100K ohms
S	GND	> 100K ohms
N	GND	> 100K ohms
P	GND	> 100K ohms

(6) 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.

(7) If the resistance is in the specified range for each pair of harness pins, remove the oil temperature sensor, M79003 (AMM TASK 79-34-01-000-801-H01).

NOTE: It is difficult to access the pins on the sensor while the sensor is installed. You must remove the sensor to get better access to do the resistance check.

(8) Measure the resistance between these pairs of pins on the oil temperature sensor receptacle:

DP72404		DP72404	
2	. . . . .	3	100 - 500 ohms
4	. . . . .	5	100 - 500 ohms
2	. . . . .	GND	> 100K ohms
3	. . . . .	GND	> 100K ohms
4	. . . . .	GND	> 100K ohms
5	. . . . .	GND	> 100K ohms

(9) If the resistance is not in the specified range for each pair of pins, replace the oil temperature sensor, M79003.

These are the tasks:

Oil Temperature Sensor Removal, AMM TASK 79-34-01-000-801-H01

Oil Temperature Sensor Installation, AMM TASK 79-34-01-400-801-H01.

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

(10) If the resistance is in the specified range for each pair of pins, do these steps:

(a) Remove the jumper wires.

(b) Install the oil temperature sensor, M79003 (AMM TASK 79-34-01-400-801-H01).

(c) Re-connect connector DP72404 to the oil temperature sensor, M79003.

(d) 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) Set the applicable EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position. If there is a fault, then the MAT will show the maintenance message in 120 seconds or less.

(a) 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).

(b) 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

825. Oil Temperature Sensor Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34521, 79-34522.

B. Description

(1) The engine oil temperature (TEO) signal exceeds valid range 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 electrical connector DP72404 from the oil temperature sensor, M79003.

(3) Attach a jumper wire from pin 2 to pin 3 and a jumper wire from pin 4 to pin 5 on harness connector DP72404.

CAUTION

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

(4) Disconnect connector DP70406 from the EEC (FADEC), M73003.

(5) Measure the resistance between these pairs of pins on the DP70406 connector on the EEC harness M73003:

DP70406	DP70406	
R	S	< 5 ohms
N	P	< 5 ohms
R	GND	> 100K ohms
S	GND	> 100K ohms
N	GND	> 100K ohms
P	GND	> 100K ohms

(6) 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.

(7) If the resistance is in the specified range for each pair of pins, remove the oil temperature sensor, M79003 (AMM TASK 79-34-01-000-801-H01).

NOTE: It is difficult to access the pins on the sensor while the sensor is installed. You must remove the sensor to get better access to do the resistance check.

(8) Measure the resistance between these pairs of pins on the oil temperature sensor receptacle:

DP72404	DP72404	
2	3	100 - 500 ohms
4	5	100 - 500 ohms
2	GND	> 100K ohms
3	GND	> 100K ohms
4	GND	> 100K ohms
5	GND	> 100K ohms

(9) If the resistance is not in the specified range for each pair of pins, replace the oil temperature sensor, M79003.

These are the tasks:

Oil Temperature Sensor Removal, AMM TASK 79-34-01-000-801-H01

Oil Temperature Sensor Installation, AMM TASK 79-34-01-400-801-H01.

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

(10) If the resistance is in the specified range for each pair of pins, do these steps:

(a) Remove the jumper wires.

(b) Install the oil temperature sensor, M79003 (AMM TASK 79-34-01-400-801-H01).

(c) Re-connect connector DP72404 to the oil temperature sensor, M79003.

(d) 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) 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

826. Oil Temperature High Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34531, 79-34532.

B. Description

(1) The engine oil temperature (TEO) is high (in the low amber band region), or TEO is above redline. This fault can be reported whenever the TEO signal is valid and 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.

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

(3) If the MAT shows LATCHED for the maintenance message, then do these steps:

(a) Start the engine and permit the engine to stabilize at ground idle for 15 minutes (AMM TASK 71-00-00-800-835-H00).

1) If the MAT shows ACTIVE or LATCHED for the maintenance message while the engine operates, then do the fault isolation procedure below.

2) If the MAT shows NOT ACTIVE for the maintenance message while the engine operates, 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.

(b) Stop the engine (AMM TASK 71-00-00-800-837-H00).

D. Fault Isolation Procedure

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

(2) Do this task: Engine Oil System (DMS) (Scheduled Maintenance Task) Inspection, AMM TASK 79-00-00-200-804-H01.

(3) If the engine is serviceable, do these steps:

(a) Do a check of the engine oil quantity (AMM TASK 12-13-01-130-803-002).

(b) Do a check for contamination of the oil system by fuel or skydrol (AMM TASK 79-00-00-200-807-H01).

(4) If no fault is found, replace the main fuel/oil heat exchanger.

These are the tasks:

Main Fuel/Oil Heat Exchanger Removal, AMM TASK 79-21-01-000-803-H00

Main Fuel/Oil Heat Exchanger Installation, AMM TASK 79-21-01-400-801-H01.

END OF TASK

827. DMS System Fault - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-14551, 79-14552.

B. Description

(1) The DMS system 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, use your judgement (and your airlines policy) to decide to replace components and if so, which components to replace. Then monitor the airplane on the subsequent flight.

D. Fault Isolation Procedure

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

(2) Examine the DMS electrical harness as follows:

NOTE: The DMS is a very sensitive system. The conditions that follow can cause problems.

(a) Make sure that all electrical harness connectors and back shells are tight.

(b) Make sure that there is no damage on the electrical harness.

(3) Do a visual check of the DMS sensor for unwanted material (AMM TASK 79-00-00-200-804-H01).

(a) Remove the material.

(4) Disconnect electrical connector DP71901 from the DMS Signal Conditioner Unit.

(5) Do a resistance check of the electrical harness between these pins:

DP71901		DP71901	
Pin 3	. . . . .	Pin 4	120 to 160 Ohms
Pin 1	. . . . .	Pin 2	0.09 to 0.5 Ohms
Pin 3	. . . . .	Ground	>100K Ohms
Pin 4	. . . . .	Ground	>100K Ohms
Pin 1	. . . . .	Ground	>100K Ohms
Pin 2	. . . . .	Ground	>100K Ohms

(a) While measuring the resistance of the electrical harness, move the electrical harness from a straight position to a 90 degree bend.

(b) If the resistance values are not in limits, 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.

(6) Reconnect the electrical connector DP71901 to the DMS Signal Conditioner Unit.

(7) Disconnect the DP70913 electrical connector from the FADEC (EEC) and the DP70905 electrical connector from the DMS Signal Conditioner Unit.

(8) Do these steps to check the resistance of the electrical harness.

(a) Put a jumper between the pins of the DP70905 electrical connector that follows.

1) Pin 3 and Pin 4

2) Pin 1 and Pin 2.

(b) Do a resistance check of the electrical harness:

DP70913	DP70913	
Pin X	Pin A	< or = 2.0 Ohms
Pin W	Pin -j	< or = 2.0 Ohms
Pin X	Ground	>100K Ohms
Pin A	Ground	>100K Ohms
Pin W	Ground	>100K Ohms
Pin -j	Ground	>100K Ohms

(c) While measuring the resistance of the electrical harness, move the electrical harness along the length of the electrical harness.

(d) If the resistance values are not in limits, 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.

(9) If the fault continues, replace the DMS sensor.

These are the tasks:

Debris Monitoring System (DMS) Sensor Removal, AMM TASK 79-21-12-000-801-H01

Debris Monitoring System (DMS) Sensor Installation, AMM TASK 79-21-12-400-801-H01.

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

(10) If the fault continues, replace the DMS conditioner.

These are the tasks:

Debris Monitoring System (DMS) Conditioner Removal, AMM TASK 79-21-14-000-801-H01

Debris Monitoring System (DMS) Conditioner Installation, AMM TASK 79-21-14-400-801-H01.

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

(11) If the fault continues, replace the W709 and W719 wire harness.

These are the tasks:

EEC (FADEC) Electrical Harnesses (W701-W704, W707-W709, and W717-W719) Removal, AMM TASK 73-22-01-000-802-H01

EEC (FADEC) Electrical Harnesses (W701-W704, W707-W709, and W717-W719) Installation, AMM TASK 73-22-01-400-802-H01.

(12) If the fault continues, replace 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 ———

828. DMS System Debris - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-14561, 79-14562, 79-15231, 79-15232.

B. Description

(1) The DMS sensor has detected chips in the oil system. This fault can be reported whenever the DMS excitation and build-in test is valid.

C. Fault Isolation Procedure

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

(2) Examine the DMS electrical harness as follows:

NOTE: The DMS is a very sensitive system. The conditions that follow can cause problems.

(a) Make sure that all electrical harness connectors and back shells are tight.

(b) Make sure that there is no damage on the electrical harness.

(3) Do a visual check of the DMS sensor for unwanted material (AMM TASK 79-00-00-200-804-H01).

(a) Remove the unwanted material.

(4) Do this task: Test No. 18 - Debris Monitoring System Test (MAT Initiated Test), AMM TASK 71-00-00-700-817-H01.

NOTE: Make sure you select YES to the question "Did you remove the debris from the Debris Monitoring System Sensor?" while you do the test. When you select YES to this question, the EEC will reset the DMS chip counters.

(5) If no debris is found on the DMS sensor, disconnect electrical connector DP71901 from the DMS Signal Conditioner Unit.

(6) Do a resistance check of the electrical harness between these pins:

DP71901		DP71901	
Pin 3	. . . . .	Pin 4	120 to 160 Ohms
Pin 1	. . . . .	Pin 2	0.09 to 0.5 Ohms
Pin 3	. . . . .	Ground	>100K Ohms
Pin 4	. . . . .	Ground	>100K Ohms
Pin 1	. . . . .	Ground	>100K Ohms
Pin 2	. . . . .	Ground	>100K Ohms

(a) While measuring the resistance of the electrical harness, move the electrical harness from a straight position to a 90 degree bend.

(b) If the resistance values are not in limits, 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.

(7) Reconnect the electrical connector DP71901 to the DMS Signal Conditioner Unit.

(8) Disconnect the DP70913 electrical connector from the FADEC (EEC) and the DP70905 electrical connector from the DMS Signal Conditioner Unit.

(9) Do these steps to check the resistance of the electrical harness.

(a) Put a jumper between the pins of the DP70905 electrical connector that follows.

1) Pin 3 and Pin 4

2) Pin 1 and Pin 2.

(b) Do a resistance check of the electrical harness between these pins:

DP70913		DP70913	
Pin X	. . . . .	Pin A	< or = 2.0 Ohms
Pin W	. . . . .	Pin -j	< or = 2.0 Ohms
Pin X	. . . . .	Ground	>100K Ohms
Pin A	. . . . .	Ground	>100K Ohms
Pin W	. . . . .	Ground	>100K Ohms
Pin -j	. . . . .	Ground	>100K Ohms

(c) While measuring the resistance of the electrical harness, move the electrical harness from a straight position to a 90 degree bend.

(d) If the resistance values are not in limits, 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.

(10) If the problem continues, replace the DMS sensor, M79010.

These are the tasks:

Debris Monitoring System (DMS) Sensor Removal, AMM TASK 79-21-12-000-801-H01

Debris Monitoring System (DMS) Sensor Installation, AMM TASK 79-21-12-400-801-H01.

NOTE: Make sure all electrical connectors are installed correctly. A loose electrical connector can cause DMS counting errors.

(11) If the problem continues, replace the DMS conditioner, M79005.

These are the tasks:

Debris Monitoring System (DMS) Conditioner Removal, AMM TASK 79-21-14-000-801-H01

Debris Monitoring System (DMS) Conditioner Installation, AMM TASK 79-21-14-400-801-H01.

NOTE: Make sure all electrical connectors are installed correctly. A loose electrical connector can cause DMS counting errors.

(12) If the problem continues, replace the W719 electrical harness.

These are the tasks:

EEC (FADEC) Electrical Harnesses (W701-W704, W707-W709, and W717-W719) Removal, AMM TASK 73-22-01-000-802-H01

EEC (FADEC) Electrical Harnesses (W701-W704, W707-W709, and W717-W719) Installation, AMM TASK 73-22-01-400-802-H01.

NOTE: Make sure all electrical connectors are installed correctly. A loose electrical connector can cause DMS counting errors.

END OF TASK

829. High Oil Quantity - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-34581, 79-34582.

B. Description

(1) The engine oil quantity is more than 31 quarts, the sensor signal is valid, and the engine is running.

C. Initial Evaluation

(1) This is fault is only set during engine operation. It is not recommended that the engine be operated until this fault isolation procedure is completed. This will prevent more damage if there is a real fault with the engine.

D. Fault Isolation

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

(2) Do this task: Engine Oil System (Fluids and Solids Contamination) Inspection, AMM TASK 79-00-00-200-807-H01.

(3) If you find fuel in the oil, replace the main fuel/oil heat exchanger.

These are the tasks:

Main Fuel/Oil Heat Exchanger Removal, AMM TASK 79-21-01-000-803-H00

Main Fuel/Oil Heat Exchanger Installation, AMM TASK 79-21-01-400-801-H01.

(a) Do this task: Flush the Engine Oil System, AMM TASK 12-22-01-170-803-002.

(4) If you find hydraulic fluid, do these steps:

(a) Replace the engine driven (hydraulic) pump.

These are the tasks:

Engine-Driven Pump (EDP) Removal, AMM TASK 29-11-05-000-801-002

Engine-Driven Pump (EDP) Installation, AMM TASK 29-11-05-400-801-002.

(b) Do a check the hydraulic pump seal drain tube for unwanted material.

1) Clean or replace the drain tube as necessary.

(c) Do a check the AGB seal drain tube at the hydraulic pump mount pad for unwanted material.

1) Clean or replace the drain tube as necessary.

(d) Do this task: AMM TASK 12-22-01-170-803-002.

(5) If the fault continues, do these steps:

(a) Replace the anti-leak valve.

These are the tasks:

Anti-Leak Valve Removal, AMM TASK 79-21-08-000-801-H01

Anti-Leak Valve Installation, AMM TASK 79-21-08-400-801-H01.

(6) For the right engine, do these tasks:

R Eng Oil Quantity Sensor Out of Range (L AIMS)-Fault Isolation, 31-48 TASK 808

R Eng Oil Quantity Sensor Out of Range (R AIMS)-Fault Isolation, 31-48 TASK 809

(7) For the left engine, do these tasks:

L Eng Oil Quantity Sensor Out of Range (L AIMS)-Fault Isolation, 31-48 TASK 806

L Eng Oil Quantity Sensor Out of Range (R AIMS)-Fault Isolation, 31-48 TASK 807

——— END OF TASK ———

801. Oil Quantity Transmitter (L Eng) Signals Are Out of Range - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance message: 79-00011.

B. Description

(1) The engine oil quantity signal from the oil quantity transmitter, M79001, on the left engine is out of range.

C. Initial Evaluation

(1) Check for fuel in the engine oil (Engine Oil System (Fluids and Solids Contamination) Inspection, AMM TASK 79-00-00-200-807-H01).

(2) Look at the Extended Maintenance Existing Faults screen on the MAT for the maintenance message.

(a) Wait for 20 seconds.

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

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

D. Fault Isolation Procedure

(1) Look for a failure in the circuit between the left AIMS, M31101, and the oil quantity transmitter, M79001 (WDM 79-31-11, SSM 31-41-04).

(a) Remove the Input/Output Modules, M008 and M009 from the left and right AIMS cabinets (AMM TASK 31-41-11-000-801).

(b) Disconnect the electrical connector, DM79001, from the oil quantity transmitter, M79001.

(c) Do a wiring check between the Input/Output Module connectors, P8 and P9, in the left AIMS cabinet and the electrical connector, DM79001, for the oil quantity transmitter.

IOM (M008)	
J410-B	**DM79001**
D15	1
C15	2
C16	2
D14	3

IOM (M009)	
J420-A	**DM79001**
D15	1
C15	2
C16	2
D14	3
F18	2
G19	1

(d) If you find a problem in the wire harness, repair the wire harness as necessary:

(2) Look for a failure in the circuit between the right AIMS, M31201, and the oil quantity transmitter, M79001 (WDM 79-31-11, SSM 31-41-04).

(a) Disconnect the electrical connector, DM79001, from the oil quantity transmitter, M79001.

(b) Do a wiring check between the Input/Output Module connectors, P8 and P9, in the right AIMS cabinet and the electrical connector, DM79001, for the oil quantity transmitter.

IOM (M008) J410-B	DM79001
D15	1
C15	2
C16	2
D14	3

IOM (M009) J420-A	DM79001
D15	1
C15	2
C16	2
D14	3
F18	2
G19	1

(c) If you find a problem in the wire harness, repair the wire harness as necessary:

1) Re-connect the electrical connector, DM79001, to the oil quantity transmitter, M79001.

2) Install the Input/Output Modules, M008 and M009, to the left and right AIMS cabinets (AMM TASK 31-41-11-400-801).

3) Do the Repair Confirmation procedure at the end of this task.

(d) If you do not find problems with the wire harness, then do the subsequent step of this fault isolation procedure.

(3) Replace the oil quantity transmitter, M79001.

These are the tasks:

Oil Level Sensor Removal, AMM TASK 79-31-01-000-801-H01

Oil Level Sensor Installation, AMM TASK 79-31-01-400-801-H01.

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

E. Repair Confirmation

(1) Look at the Extended Maintenance Existing Faults screen on the MAT for the maintenance message.

(a) Wait for 20 seconds.

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

(3) If the MAT shows ACTIVE for the maintenance message, then continue with the subsequent steps of the fault isolation procedure.

——— END OF TASK ———

802. Oil Quantity Transmitter (R Eng) Signals Are Out of Range - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance message: 79-00012.

B. Description

(1) The engine oil quantity signal from the oil quantity transmitter, M79001, on the right engine is out of range.

C. Initial Evaluation

(1) Check for fuel in the engine oil (Engine Oil System (Fluids and Solids Contamination) Inspection, AMM TASK 79-00-00-200-807-H01).

(2) Look at the Extended Maintenance Existing Faults screen on the MAT for the maintenance message.

(a) Wait for 20 seconds.

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

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

D. Fault Isolation Procedure

(1) Look for a failure in the circuit between the left AIMS, M31101, and the oil quantity transmitter, M79001 (WDM 79-31-11, SSM 31-41-04).

(a) Remove the Input/Output Modules, M003 and M004 from the left and right AIMS cabinets (AMM TASK 31-41-11-000-801).

(b) Disconnect the electrical connector, DM79001, from the oil quantity transmitter, M79001.

(c) Do a wiring check between the Input/Output Module connectors, P3 and P4, in the left AIMS cabinet and the electrical connector, DM79001, for the oil quantity transmitter.

IOM (M003) J240-B	DM79001
D15	1
F18	1
C15	2
C16	2
D14	3

IOM (M004) J250-A	DM79001
D15	1
C15	2
C16	2
D14	3
F18	2
G19	1

(d) If you find a problem in the wire harness, repair the wire harness as necessary.

(2) Look for a failure in the circuit between the right AIMS, M31201, and the oil quantity transmitter, M79001 (WDM 79-31-11, SSM 31-41-04).

(a) Do a wiring check between the IO Module connectors, P3 and P4, in the right AIMS cabinet and the electrical connector, DM79001, for the oil quantity transmitter.

IOM (M003)

J240-B	**DM79001**
D15	1
C15	2
C16	2
D14	3

IOM (M004)

J250-A	**DM79001**
C15	2
C16	2
D14	3
F18	2
G19	1

(b) If you find a problem in the wire harness, repair the wire harness as necessary.

1) Re-connect the electrical connector, DM79001, to the oil quantity transmitter, M79001.

2) Install the Input/Output Modules, M003 and M004 to the left and right AIMS cabinets (AMM TASK 31-41-11-400-801).

3) Do the Repair Confirmation procedure at the end of this task.

(c) If you do not find problems with the wire harness, then continue with the subsequent step of this Fault Isolation Procedure.

(3) Replace the oil quantity transmitter, M79001.

These are the tasks:

Oil Level Sensor Removal, AMM TASK 79-31-01-000-801-H01

Oil Level Sensor Installation, AMM TASK 79-31-01-400-801-H01.

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

E. Repair Confirmation

(1) Look at the Extended Maintenance Existing Faults screen on the MAT for the maintenance message.

(a) Wait for 20 seconds.

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

(3) If the MAT shows ACTIVE for the maintenance message, then continue with the subsequent steps of the fault isolation procedure.

——— END OF TASK ———

801. Procedure To Be Determined - Fault Isolation

A. Maintenance Messages

(1) This task is for maintenance messages: 79-15121, 79-15122, 79-25121, 79-25122, 79-32191, 79-32192.

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 ———

803. Observed Fault with Correlated Maintenance Messages - Fault Isolation

A. Initial Evaluation

(1) Find the fault code to the right of the fault description in the Observed Faults List (at the front of the FIM).

(a) 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.

(b) Find the maintenance message to the right of the fault code.

(c) Find the task number on the same line as the maintenance message number.

(d) Go to the task in the FIM and do the steps in the task.

——— END OF TASK ———