

**CHAPTER**

**74**

**IGNITION**

**(GE90-100 SERIES ENGINES)**

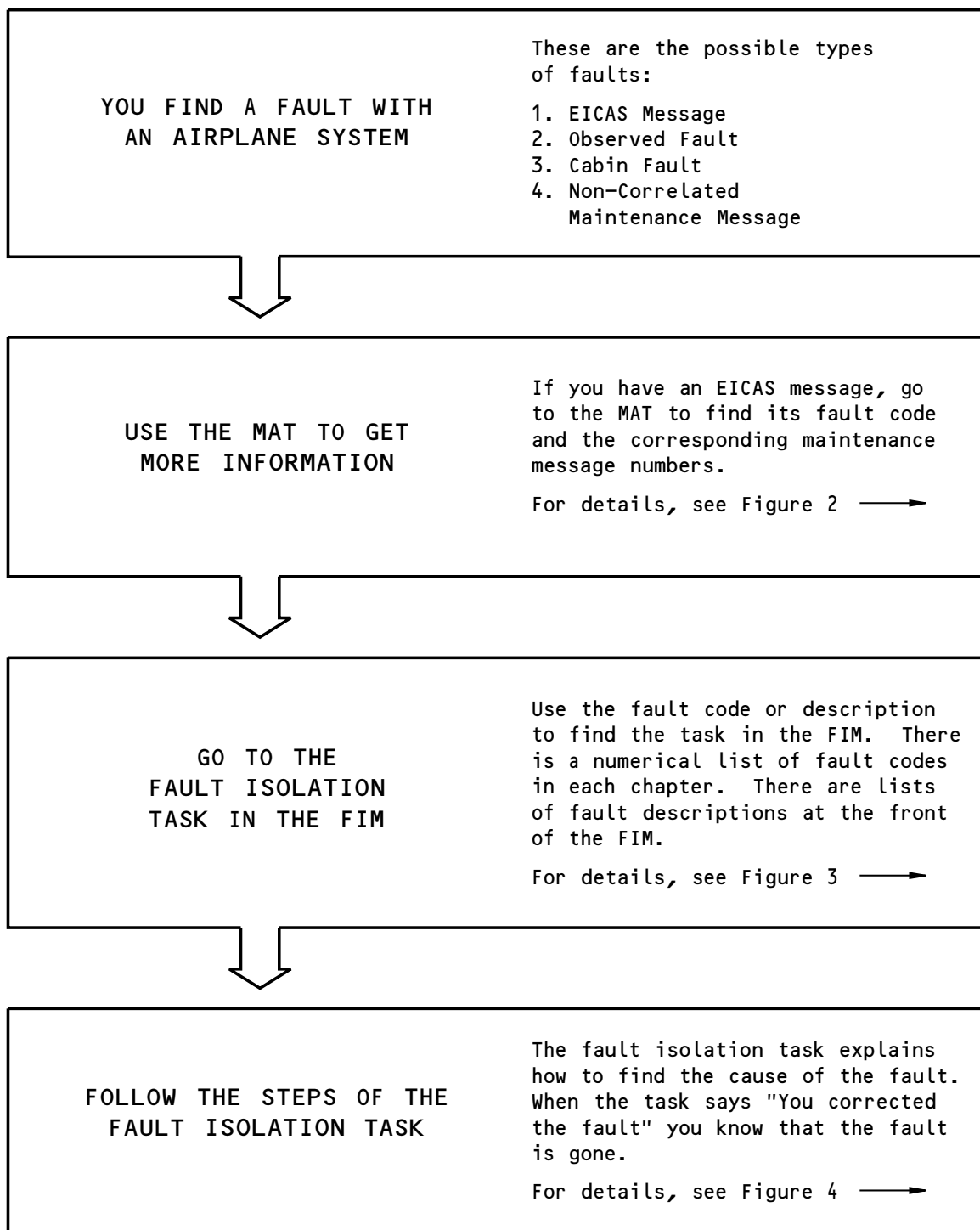
## 777-200/300 FAULT ISOLATION MANUAL

### CHAPTER 74 IGNITION

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| 74-EFFECTIVE PAGES    |             |     | 74-21 TASKS (cont) |             |     |              |      |     |
| 1                     | SEP 05/2017 |     | O 209              | Sep 05/2017 |     |              |      |     |
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| 74-HOW TO USE THE FIM |             |     | O 211              | Sep 05/2017 |     |              |      |     |
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| 6                     | Jan 05/2013 |     | 74-98 TASKS        |             |     |              |      |     |
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| R 102                 | Sep 05/2017 |     |                    |             |     |              |      |     |
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| 74-MAINT MSG INDEX    |             |     |                    |             |     |              |      |     |
| 101                   | Jan 05/2013 |     |                    |             |     |              |      |     |
| 102                   | BLANK       |     |                    |             |     |              |      |     |
| 74-21 TASKS           |             |     |                    |             |     |              |      |     |
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| 202                   | Sep 05/2016 |     |                    |             |     |              |      |     |
| O 203                 | Sep 05/2017 |     |                    |             |     |              |      |     |
| O 204                 | Sep 05/2017 |     |                    |             |     |              |      |     |
| O 205                 | Sep 05/2017 |     |                    |             |     |              |      |     |
| O 206                 | Sep 05/2017 |     |                    |             |     |              |      |     |
| O 207                 | Sep 05/2017 |     |                    |             |     |              |      |     |
| O 208                 | Sep 05/2017 |     |                    |             |     |              |      |     |

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

## 74-EFFECTIVE PAGES

**777-200/300  
FAULT ISOLATION MANUAL**

E84424 S0000132469\_V1

**Basic Fault Isolation Process**  
**Figure 1**

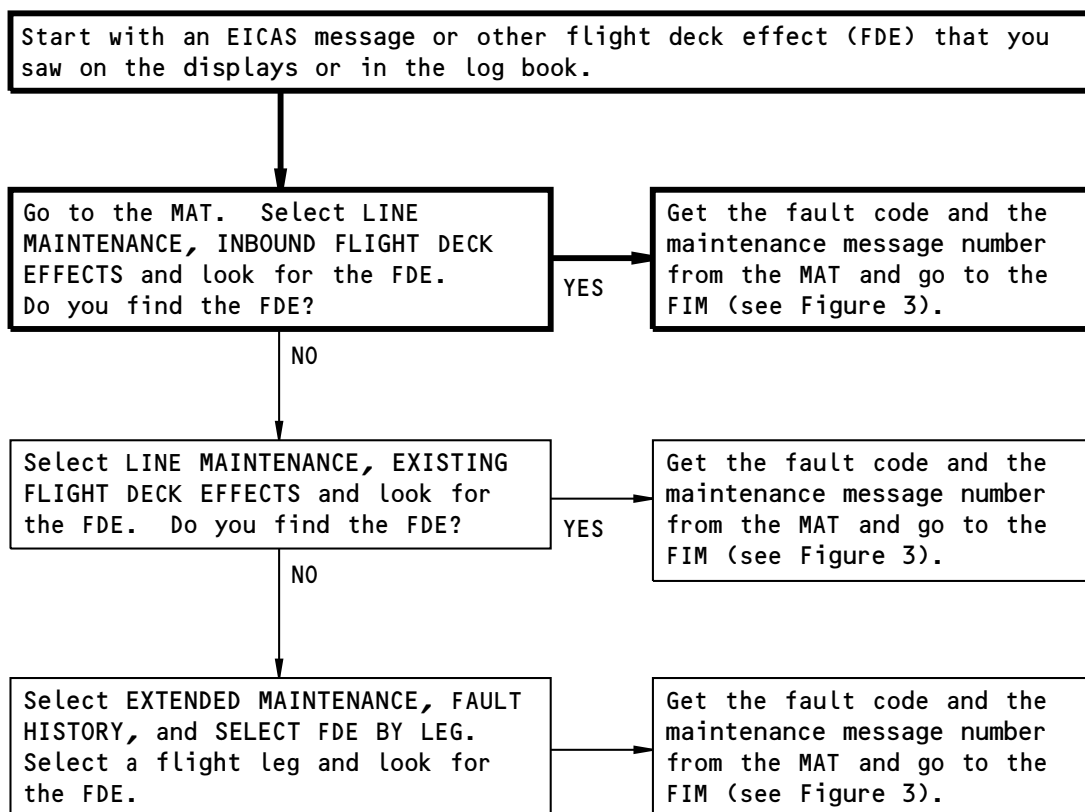
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**NOTE:** The bold lines show the most common path.

E84425 S0000132475\_V1

Getting Fault Information from the MAT  
Figure 2

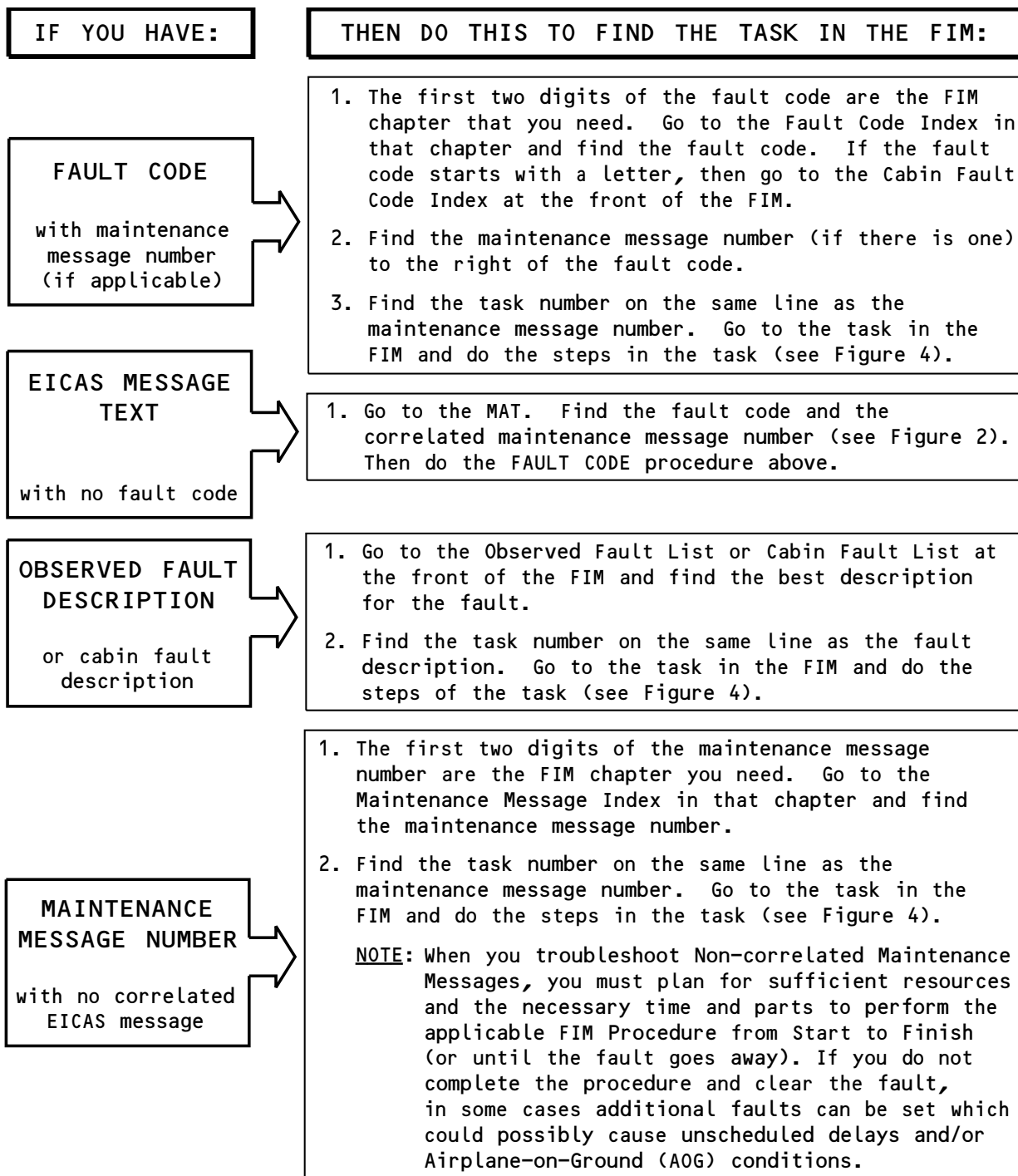
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E84427 S0000132476\_V2

Finding the Fault Isolation Task in the FIM  
Figure 3

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**777-200/300  
FAULT ISOLATION MANUAL****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**

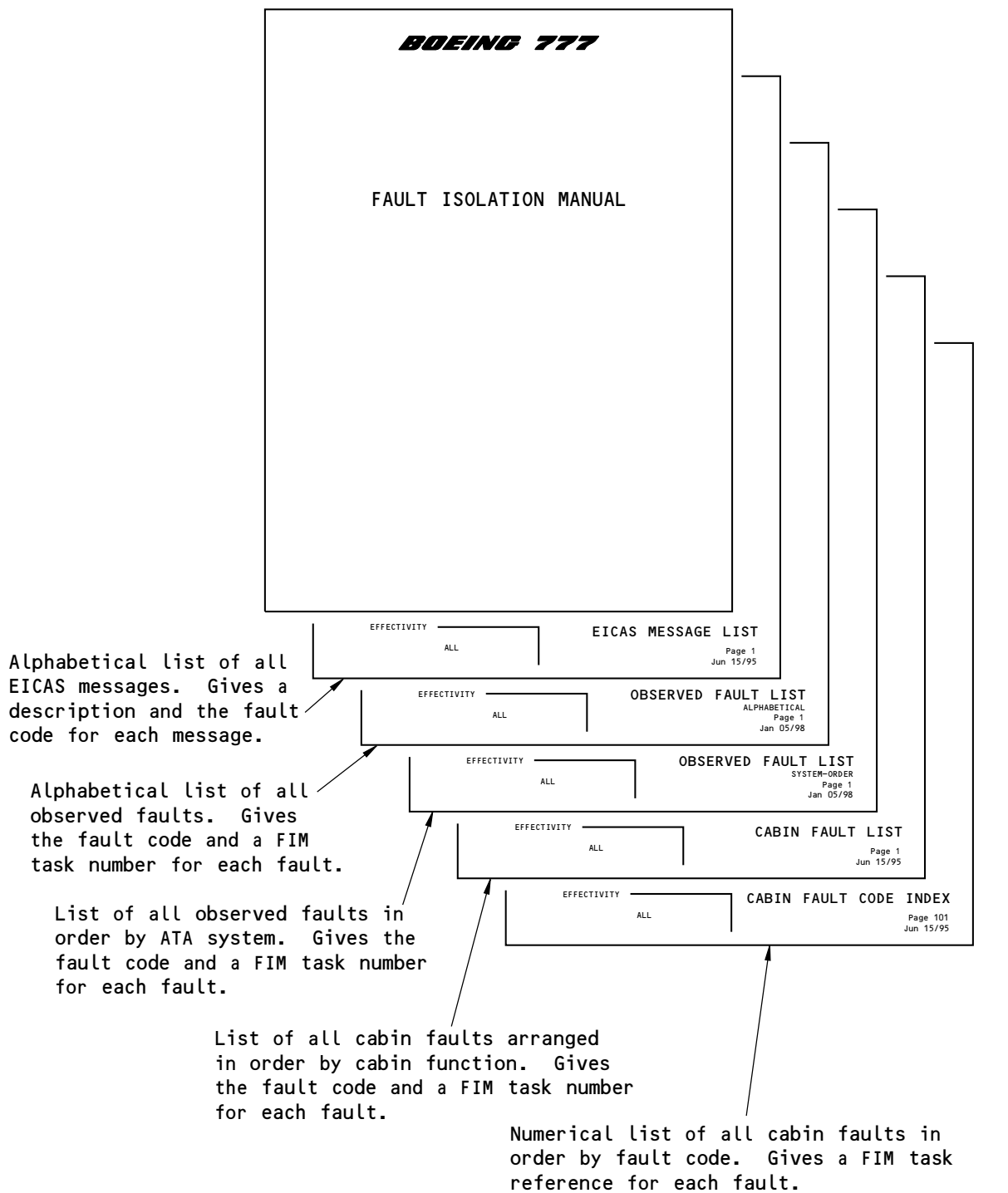
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F39750 S0000132478\_V1

**Subjects at Front of FIM  
Figure 5**

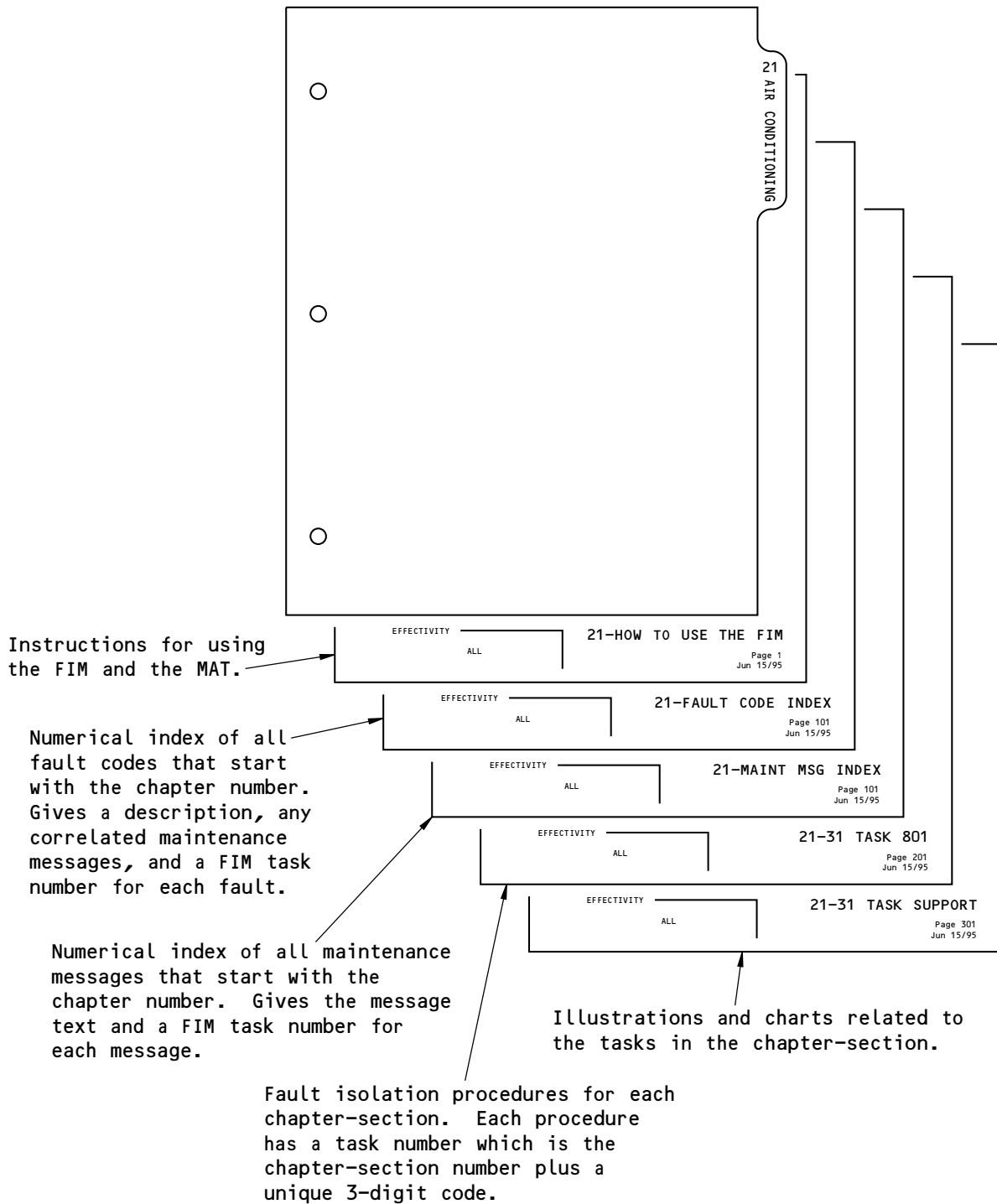
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F39837 S0000132479\_V1

**Subjects in Each FIM Chapter**  
**Figure 6**

|             |  |
|-------------|--|
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| FAULT CODE | FAULT DESCRIPTION                                                                                                                         | MAINT MSG                                                            | GO TO FIM TASK                                                                                           |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 742 001 51 | ENG IGNITOR L1 (EICAS STATUS)<br>Before you do any task listed here, see FIM 74-98 TASK 802.<br><b>NOTE:</b> AIMS CAN LATCH THIS MESSAGE. | 24-11786<br>24-13817<br>74-33921<br>74-33941                         | 24-51 TASK 833<br>24-33 TASK 818<br>74-21 TASK 807<br>74-21 TASK 812                                     |
| 742 001 52 | ENG IGNITOR R1 (EICAS STATUS)<br>Before you do any task listed here, see FIM 74-98 TASK 802.<br><b>NOTE:</b> AIMS CAN LATCH THIS MESSAGE. | 24-12127<br>24-13817<br>74-33922<br>74-33942                         | 24-51 TASK 842<br>24-33 TASK 818<br>74-21 TASK 807<br>74-21 TASK 813                                     |
| 742 002 51 | ENG IGNITOR L2 (EICAS STATUS)<br>Before you do any task listed here, see FIM 74-98 TASK 802.<br><b>NOTE:</b> AIMS CAN LATCH THIS MESSAGE. | 24-12127<br>24-13817<br>74-33931<br>74-33951                         | 24-51 TASK 842<br>24-33 TASK 818<br>74-21 TASK 808<br>74-21 TASK 815                                     |
| 742 002 52 | ENG IGNITOR R2 (EICAS STATUS)<br>Before you do any task listed here, see FIM 74-98 TASK 802.<br><b>NOTE:</b> AIMS CAN LATCH THIS MESSAGE. | 24-11786<br>24-13817<br>74-33932<br>74-33952                         | 24-51 TASK 833<br>24-33 TASK 818<br>74-21 TASK 808<br>74-21 TASK 816                                     |
| 743 499 50 | CON IGNITION ON L+R (EICAS MEMO)                                                                                                          | 23-41420<br>23-41530<br>23-41540<br>23-41550<br>23-41560<br>23-41870 | 23-93 TASK 801<br>23-93 TASK 801<br>23-93 TASK 801<br>23-93 TASK 801<br>23-93 TASK 801<br>23-93 TASK 803 |

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| FAULT CODE | FAULT DESCRIPTION                | MAINT MSG   | GO TO FIM TASK |
|------------|----------------------------------|-------------|----------------|
| 743 499 50 | CON IGNITION ON L+R (EICAS MEMO) | (continued) |                |
|            |                                  | 23-41900    | 23-93 TASK 803 |
|            |                                  | 23-41910    | 23-93 TASK 803 |
|            |                                  | 23-42420    | 23-93 TASK 802 |
|            |                                  | 23-42530    | 23-93 TASK 802 |
|            |                                  | 23-42540    | 23-93 TASK 802 |
|            |                                  | 23-42550    | 23-93 TASK 802 |
|            |                                  | 23-42560    | 23-93 TASK 802 |
|            |                                  | 23-42870    | 23-93 TASK 804 |
|            |                                  | 23-42900    | 23-93 TASK 804 |
|            |                                  | 23-42910    | 23-93 TASK 804 |
|            |                                  | 23-43420    | 73-29 TASK 824 |
|            |                                  | 23-43530    | 28-22 TASK 810 |
|            |                                  | 23-43540    | 28-22 TASK 812 |
|            |                                  | 23-43550    | 30-21 TASK 809 |
|            |                                  | 23-43560    | 74-21 TASK 805 |
|            |                                  | 23-43870    | 73-29 TASK 825 |
|            |                                  | 23-43900    | 30-21 TASK 810 |
|            |                                  | 23-43910    | 74-21 TASK 806 |
|            |                                  | 23-45010    | 23-93 TASK 881 |
|            |                                  | 23-46010    | 23-93 TASK 806 |
|            |                                  | 23-47010    | 23-93 TASK 801 |
|            |                                  | 23-47020    | 23-93 TASK 802 |
|            |                                  | 23-48010    | 23-93 TASK 803 |
|            |                                  | 23-48020    | 23-93 TASK 804 |
|            |                                  | 23-81001    | 23-91 TASK 801 |
|            |                                  | 23-81002    | 23-91 TASK 802 |
|            |                                  | 23-81003    | 23-91 TASK 803 |
|            |                                  | 23-81004    | 23-91 TASK 804 |
|            |                                  | 23-81005    | 23-91 TASK 805 |
|            |                                  | 23-81006    | 23-91 TASK 806 |
|            |                                  | 23-81007    | 23-91 TASK 807 |
|            |                                  | 23-91010    | 23-93 TASK 816 |
|            |                                  | 23-91020    | 23-93 TASK 878 |
|            |                                  | 23-92010    | 23-93 TASK 879 |
|            |                                  | 23-92020    | 23-93 TASK 880 |

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| FAULT CODE | FAULT DESCRIPTION                | MAINT MSG   | GO TO FIM TASK |
|------------|----------------------------------|-------------|----------------|
| 743 499 50 | CON IGNITION ON L+R (EICAS MEMO) | (continued) |                |
|            |                                  | 24-11787    | 24-32 TASK 817 |
|            |                                  | 24-12051    | 24-32 TASK 819 |
|            |                                  | 24-12056    | 24-32 TASK 820 |
|            |                                  | 24-12124    | 24-51 TASK 840 |
|            |                                  | 24-12127    | 24-51 TASK 842 |
|            |                                  | 24-13801    | 24-61 TASK 805 |
|            |                                  | 24-13815    | 24-61 TASK 806 |
|            |                                  | 24-13816    | 24-32 TASK 831 |
|            |                                  | 24-13817    | 24-33 TASK 818 |
|            |                                  | 24-13818    | 24-53 TASK 807 |
|            |                                  | 27-20251    | 27-51 TASK 863 |
|            |                                  | 27-20252    | 27-52 TASK 809 |
|            |                                  | 27-20261    | 27-51 TASK 809 |
|            |                                  | 27-20262    | 27-52 TASK 810 |
|            |                                  | 27-20271    | 27-51 TASK 810 |
|            |                                  | 27-20272    | 27-52 TASK 811 |
|            |                                  | 27-20891    | 27-51 TASK 823 |
|            |                                  | 27-20892    | 27-52 TASK 826 |
|            |                                  | 27-21241    | 27-51 TASK 838 |
|            |                                  | 27-21242    | 27-52 TASK 832 |
|            |                                  | 27-28801    | 27-51 TASK 841 |
|            |                                  | 27-28802    | 27-52 TASK 835 |
|            |                                  | 27-28851    | 27-51 TASK 869 |
|            |                                  | 27-28852    | 27-52 TASK 837 |
|            |                                  | 31-50007    | 31-44 TASK 821 |
|            |                                  | 31-50008    | 31-44 TASK 822 |
|            |                                  | 31-50017    | 31-44 TASK 823 |
|            |                                  | 31-50018    | 31-44 TASK 824 |
|            |                                  | 31-50027    | 31-44 TASK 825 |
|            |                                  | 31-50028    | 31-44 TASK 826 |
|            |                                  | 31-50201    | 31-43 TASK 852 |
|            |                                  | 31-50202    | 31-43 TASK 853 |
|            |                                  | 31-50417    | 31-44 TASK 884 |
|            |                                  | 31-50418    | 31-44 TASK 885 |
|            |                                  | 31-50427    | 31-44 TASK 886 |

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| FAULT CODE | FAULT DESCRIPTION                | MAINT MSG   | GO TO FIM TASK |
|------------|----------------------------------|-------------|----------------|
| 743 499 50 | CON IGNITION ON L+R (EICAS MEMO) | (continued) |                |
|            |                                  | 31-50428    | 31-44 TASK 887 |
|            |                                  | 31-50437    | 31-44 TASK 888 |
|            |                                  | 31-50438    | 31-44 TASK 889 |
|            |                                  | 31-50447    | 31-44 TASK 890 |
|            |                                  | 31-50448    | 31-44 TASK 891 |
|            |                                  | 31-52013    | 31-43 TASK 866 |
|            |                                  | 31-52014    | 31-43 TASK 867 |
|            |                                  | 31-52101    | 31-41 TASK 817 |
|            |                                  | 31-52112    | 31-41 TASK 820 |
|            |                                  | 31-52121    | 31-41 TASK 821 |
|            |                                  | 31-52122    | 31-41 TASK 822 |
|            |                                  | 31-52601    | 31-41 TASK 832 |
|            |                                  | 31-52602    | 31-41 TASK 833 |
|            |                                  | 31-54013    | 31-43 TASK 868 |
|            |                                  | 31-54014    | 31-43 TASK 869 |
|            |                                  | 31-54101    | 31-41 TASK 834 |
|            |                                  | 31-54102    | 31-41 TASK 835 |
|            |                                  | 31-54121    | 31-41 TASK 838 |
|            |                                  | 31-54122    | 31-41 TASK 839 |
|            |                                  | 31-54601    | 31-41 TASK 840 |
|            |                                  | 31-54602    | 31-41 TASK 841 |
|            |                                  | 31-56013    | 31-43 TASK 870 |
|            |                                  | 31-56014    | 31-43 TASK 871 |
|            |                                  | 31-56102    | 31-41 TASK 845 |
|            |                                  | 31-56111    | 31-41 TASK 846 |
|            |                                  | 31-56121    | 31-41 TASK 848 |
|            |                                  | 31-56122    | 31-41 TASK 849 |
|            |                                  | 31-56601    | 31-41 TASK 842 |
|            |                                  | 31-56602    | 31-41 TASK 843 |
|            |                                  | 31-58013    | 31-43 TASK 872 |
|            |                                  | 31-58014    | 31-43 TASK 873 |
|            |                                  | 31-58101    | 31-41 TASK 852 |
|            |                                  | 31-58102    | 31-41 TASK 853 |
|            |                                  | 31-58121    | 31-41 TASK 856 |
|            |                                  | 31-58122    | 31-41 TASK 857 |

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|------------|----------------------------------|-------------|----------------|
| 743 499 50 | CON IGNITION ON L+R (EICAS MEMO) | (continued) |                |
|            |                                  | 31-58601    | 31-41 TASK 992 |
|            |                                  | 31-58602    | 31-41 TASK 993 |
|            |                                  | 31-61031    | 31-41 TASK 862 |
|            |                                  | 31-61032    | 31-41 TASK 891 |
|            |                                  | 31-61041    | 31-43 TASK 835 |
|            |                                  | 31-61042    | 31-43 TASK 836 |
|            |                                  | 31-61111    | 31-43 TASK 856 |
|            |                                  | 31-61112    | 31-43 TASK 856 |
|            |                                  | 31-61113    | 31-43 TASK 856 |
|            |                                  | 31-61114    | 31-43 TASK 856 |
|            |                                  | 31-61115    | 31-43 TASK 856 |
|            |                                  | 31-61116    | 31-43 TASK 856 |
|            |                                  | 31-61117    | 31-43 TASK 856 |
|            |                                  | 31-61118    | 31-43 TASK 856 |
|            |                                  | 31-62031    | 31-43 TASK 846 |
|            |                                  | 31-62032    | 31-43 TASK 847 |
|            |                                  | 31-62041    | 31-43 TASK 848 |
|            |                                  | 31-62042    | 31-43 TASK 849 |
|            |                                  | 31-69501    | 31-42 TASK 852 |
|            |                                  | 31-69502    | 31-42 TASK 852 |
|            |                                  | 31-69533    | 31-42 TASK 854 |
|            |                                  | 31-69534    | 31-42 TASK 854 |
|            |                                  | 31-69535    | 31-42 TASK 854 |
|            |                                  | 31-69536    | 31-42 TASK 854 |
|            |                                  | 73-03021    | 73-26 TASK 801 |
|            |                                  | 73-03022    | 73-26 TASK 802 |
|            |                                  | 73-03051    | 73-26 TASK 805 |
|            |                                  | 73-03052    | 73-26 TASK 806 |
|            |                                  | 73-03101    | 73-28 TASK 810 |
|            |                                  | 73-03102    | 73-28 TASK 811 |
|            |                                  | 73-03111    | 73-28 TASK 814 |
|            |                                  | 73-03112    | 73-28 TASK 815 |
|            |                                  | 73-03221    | 73-26 TASK 833 |
|            |                                  | 73-03222    | 73-26 TASK 834 |
|            |                                  | 73-03251    | 73-26 TASK 845 |

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| 743 499 50 | CON IGNITION ON L+R (EICAS MEMO) | (continued) |                |
|            |                                  | 73-03252    | 73-26 TASK 846 |
|            |                                  | 73-04011    | 73-27 TASK 801 |
|            |                                  | 73-04012    | 73-27 TASK 802 |
|            |                                  | 73-04031    | 73-27 TASK 801 |
|            |                                  | 73-04032    | 73-27 TASK 802 |
|            |                                  | 73-04131    | 73-28 TASK 830 |
|            |                                  | 73-04132    | 73-28 TASK 830 |
|            |                                  | 73-04141    | 73-28 TASK 830 |
|            |                                  | 73-04142    | 73-28 TASK 830 |
|            |                                  | 73-04151    | 73-28 TASK 830 |
|            |                                  | 73-04152    | 73-28 TASK 830 |
|            |                                  | 73-09401    | 73-27 TASK 808 |
|            |                                  | 73-09403    | 73-27 TASK 808 |
|            |                                  | 73-09602    | 73-27 TASK 809 |
|            |                                  | 73-09604    | 73-27 TASK 809 |
|            |                                  | 73-15241    | 73-26 TASK 837 |
|            |                                  | 73-15242    | 73-26 TASK 838 |
|            |                                  | 73-15251    | 73-26 TASK 839 |
|            |                                  | 73-15252    | 73-26 TASK 840 |
|            |                                  | 73-25261    | 73-26 TASK 841 |
|            |                                  | 73-25262    | 73-26 TASK 842 |
|            |                                  | 73-25271    | 73-26 TASK 843 |
|            |                                  | 73-25272    | 73-26 TASK 844 |
|            |                                  | 73-35301    | 73-28 TASK 847 |
|            |                                  | 73-35302    | 73-28 TASK 848 |
|            |                                  | 73-35521    | 73-29 TASK 820 |
|            |                                  | 73-35522    | 73-29 TASK 821 |
|            |                                  | 73-35581    | 73-34 TASK 812 |
|            |                                  | 73-35582    | 73-34 TASK 812 |
| 743 499 51 | CON IGNITION ON L (EICAS MEMO)   | 23-41420    | 23-93 TASK 801 |
|            |                                  | 23-41530    | 23-93 TASK 801 |
|            |                                  | 23-41540    | 23-93 TASK 801 |
|            |                                  | 23-41550    | 23-93 TASK 801 |
|            |                                  | 23-41560    | 23-93 TASK 801 |
|            |                                  | 23-42420    | 23-93 TASK 802 |

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|------------|--------------------------------|-------------|----------------|
| 743 499 51 | CON IGNITION ON L (EICAS MEMO) | (continued) |                |
|            |                                | 23-42530    | 23-93 TASK 802 |
|            |                                | 23-42540    | 23-93 TASK 802 |
|            |                                | 23-42550    | 23-93 TASK 802 |
|            |                                | 23-42560    | 23-93 TASK 802 |
|            |                                | 23-43420    | 73-29 TASK 824 |
|            |                                | 23-43530    | 28-22 TASK 810 |
|            |                                | 23-43540    | 28-22 TASK 812 |
|            |                                | 23-43550    | 30-21 TASK 809 |
|            |                                | 23-43560    | 74-21 TASK 805 |
|            |                                | 23-45010    | 23-93 TASK 881 |
|            |                                | 23-46010    | 23-93 TASK 806 |
|            |                                | 23-47010    | 23-93 TASK 801 |
|            |                                | 23-47020    | 23-93 TASK 802 |
|            |                                | 23-81001    | 23-91 TASK 801 |
|            |                                | 23-81002    | 23-91 TASK 802 |
|            |                                | 23-81004    | 23-91 TASK 804 |
|            |                                | 23-81005    | 23-91 TASK 805 |
|            |                                | 23-81006    | 23-91 TASK 806 |
|            |                                | 23-91010    | 23-93 TASK 816 |
|            |                                | 23-91020    | 23-93 TASK 878 |
|            |                                | 24-11787    | 24-32 TASK 817 |
|            |                                | 24-12051    | 24-32 TASK 819 |
|            |                                | 24-12056    | 24-32 TASK 820 |
|            |                                | 24-12124    | 24-51 TASK 840 |
|            |                                | 24-12127    | 24-51 TASK 842 |
|            |                                | 24-13801    | 24-61 TASK 805 |
|            |                                | 24-13815    | 24-61 TASK 806 |
|            |                                | 24-13816    | 24-32 TASK 831 |
|            |                                | 24-13817    | 24-33 TASK 818 |
|            |                                | 24-13818    | 24-53 TASK 807 |
|            |                                | 27-20251    | 27-51 TASK 863 |
|            |                                | 27-20252    | 27-52 TASK 809 |
|            |                                | 27-20261    | 27-51 TASK 809 |
|            |                                | 27-20262    | 27-52 TASK 810 |
|            |                                | 27-20271    | 27-51 TASK 810 |

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|------------|--------------------------------|-------------|----------------|
| 743 499 51 | CON IGNITION ON L (EICAS MEMO) | (continued) |                |
|            |                                | 27-20272    | 27-52 TASK 811 |
|            |                                | 27-20891    | 27-51 TASK 823 |
|            |                                | 27-20892    | 27-52 TASK 826 |
|            |                                | 27-21241    | 27-51 TASK 838 |
|            |                                | 27-21242    | 27-52 TASK 832 |
|            |                                | 27-28802    | 27-52 TASK 835 |
|            |                                | 27-28852    | 27-52 TASK 837 |
|            |                                | 31-50007    | 31-44 TASK 821 |
|            |                                | 31-50008    | 31-44 TASK 822 |
|            |                                | 31-50017    | 31-44 TASK 823 |
|            |                                | 31-50018    | 31-44 TASK 824 |
|            |                                | 31-50027    | 31-44 TASK 825 |
|            |                                | 31-50028    | 31-44 TASK 826 |
|            |                                | 31-50201    | 31-43 TASK 852 |
|            |                                | 31-50202    | 31-43 TASK 853 |
|            |                                | 31-50427    | 31-44 TASK 886 |
|            |                                | 31-50428    | 31-44 TASK 887 |
|            |                                | 31-50437    | 31-44 TASK 888 |
|            |                                | 31-50438    | 31-44 TASK 889 |
|            |                                | 31-50447    | 31-44 TASK 890 |
|            |                                | 31-50448    | 31-44 TASK 891 |
|            |                                | 31-56013    | 31-43 TASK 870 |
|            |                                | 31-56014    | 31-43 TASK 871 |
|            |                                | 31-56102    | 31-41 TASK 845 |
|            |                                | 31-56111    | 31-41 TASK 846 |
|            |                                | 31-56121    | 31-41 TASK 848 |
|            |                                | 31-56122    | 31-41 TASK 849 |
|            |                                | 31-56601    | 31-41 TASK 842 |
|            |                                | 31-56602    | 31-41 TASK 843 |
|            |                                | 31-58013    | 31-43 TASK 872 |
|            |                                | 31-58014    | 31-43 TASK 873 |
|            |                                | 31-58101    | 31-41 TASK 852 |
|            |                                | 31-58102    | 31-41 TASK 853 |
|            |                                | 31-58121    | 31-41 TASK 856 |
|            |                                | 31-58122    | 31-41 TASK 857 |

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| 743 499 51 | CON IGNITION ON L (EICAS MEMO) | (continued) |                |
|            |                                | 31-58601    | 31-41 TASK 992 |
|            |                                | 31-58602    | 31-41 TASK 993 |
|            |                                | 31-61031    | 31-41 TASK 862 |
|            |                                | 31-61032    | 31-41 TASK 891 |
|            |                                | 31-61041    | 31-43 TASK 835 |
|            |                                | 31-61042    | 31-43 TASK 836 |
|            |                                | 31-61111    | 31-43 TASK 856 |
|            |                                | 31-61112    | 31-43 TASK 856 |
|            |                                | 31-61113    | 31-43 TASK 856 |
|            |                                | 31-61114    | 31-43 TASK 856 |
|            |                                | 31-69501    | 31-42 TASK 852 |
|            |                                | 31-69502    | 31-42 TASK 852 |
|            |                                | 31-69535    | 31-42 TASK 854 |
|            |                                | 31-69536    | 31-42 TASK 854 |
|            |                                | 73-03021    | 73-26 TASK 801 |
|            |                                | 73-03051    | 73-26 TASK 805 |
|            |                                | 73-03101    | 73-28 TASK 810 |
|            |                                | 73-03111    | 73-28 TASK 814 |
|            |                                | 73-03221    | 73-26 TASK 833 |
|            |                                | 73-03251    | 73-26 TASK 845 |
|            |                                | 73-04011    | 73-27 TASK 801 |
|            |                                | 73-04031    | 73-27 TASK 801 |
|            |                                | 73-04131    | 73-28 TASK 830 |
|            |                                | 73-04141    | 73-28 TASK 830 |
|            |                                | 73-04151    | 73-28 TASK 830 |
|            |                                | 73-09401    | 73-27 TASK 808 |
|            |                                | 73-09403    | 73-27 TASK 808 |
|            |                                | 73-15241    | 73-26 TASK 837 |
|            |                                | 73-15251    | 73-26 TASK 839 |
|            |                                | 73-25261    | 73-26 TASK 841 |
|            |                                | 73-25271    | 73-26 TASK 843 |
|            |                                | 73-35301    | 73-28 TASK 847 |
|            |                                | 73-35521    | 73-29 TASK 820 |
|            |                                | 73-35581    | 73-34 TASK 812 |

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|------------|--------------------------------|-----------|----------------|
| 743 499 52 | CON IGNITION ON R (EICAS MEMO) | 23-41870  | 23-93 TASK 803 |
|            |                                | 23-41900  | 23-93 TASK 803 |
|            |                                | 23-41910  | 23-93 TASK 803 |
|            |                                | 23-42870  | 23-93 TASK 804 |
|            |                                | 23-42900  | 23-93 TASK 804 |
|            |                                | 23-42910  | 23-93 TASK 804 |
|            |                                | 23-43870  | 73-29 TASK 825 |
|            |                                | 23-43900  | 30-21 TASK 810 |
|            |                                | 23-43910  | 74-21 TASK 806 |
|            |                                | 23-45010  | 23-93 TASK 881 |
|            |                                | 23-46010  | 23-93 TASK 806 |
|            |                                | 23-48010  | 23-93 TASK 803 |
|            |                                | 23-48020  | 23-93 TASK 804 |
|            |                                | 23-81002  | 23-91 TASK 802 |
|            |                                | 23-81003  | 23-91 TASK 803 |
|            |                                | 23-81004  | 23-91 TASK 804 |
|            |                                | 23-81005  | 23-91 TASK 805 |
|            |                                | 23-81006  | 23-91 TASK 806 |
|            |                                | 23-81007  | 23-91 TASK 807 |
|            |                                | 23-92010  | 23-93 TASK 879 |
|            |                                | 23-92020  | 23-93 TASK 880 |
|            |                                | 24-11787  | 24-32 TASK 817 |
|            |                                | 24-12051  | 24-32 TASK 819 |
|            |                                | 24-12056  | 24-32 TASK 820 |
|            |                                | 24-12124  | 24-51 TASK 840 |
|            |                                | 24-12127  | 24-51 TASK 842 |
|            |                                | 24-13801  | 24-61 TASK 805 |
|            |                                | 24-13815  | 24-61 TASK 806 |
|            |                                | 24-13816  | 24-32 TASK 831 |
|            |                                | 24-13817  | 24-33 TASK 818 |
|            |                                | 24-13818  | 24-53 TASK 807 |
|            |                                | 27-20251  | 27-51 TASK 863 |
|            |                                | 27-20252  | 27-52 TASK 809 |
|            |                                | 27-20261  | 27-51 TASK 809 |
|            |                                | 27-20262  | 27-52 TASK 810 |
|            |                                | 27-20271  | 27-51 TASK 810 |

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| 743 499 52 | CON IGNITION ON R (EICAS MEMO) | (continued) |                |
|            |                                | 27-20272    | 27-52 TASK 811 |
|            |                                | 27-20891    | 27-51 TASK 823 |
|            |                                | 27-20892    | 27-52 TASK 826 |
|            |                                | 27-21241    | 27-51 TASK 838 |
|            |                                | 27-21242    | 27-52 TASK 832 |
|            |                                | 27-28801    | 27-51 TASK 841 |
|            |                                | 27-28851    | 27-51 TASK 869 |
|            |                                | 31-50007    | 31-44 TASK 821 |
|            |                                | 31-50008    | 31-44 TASK 822 |
|            |                                | 31-50017    | 31-44 TASK 823 |
|            |                                | 31-50018    | 31-44 TASK 824 |
|            |                                | 31-50027    | 31-44 TASK 825 |
|            |                                | 31-50028    | 31-44 TASK 826 |
|            |                                | 31-50201    | 31-43 TASK 852 |
|            |                                | 31-50202    | 31-43 TASK 853 |
|            |                                | 31-50417    | 31-44 TASK 884 |
|            |                                | 31-50418    | 31-44 TASK 885 |
|            |                                | 31-50427    | 31-44 TASK 886 |
|            |                                | 31-50428    | 31-44 TASK 887 |
|            |                                | 31-50437    | 31-44 TASK 888 |
|            |                                | 31-50438    | 31-44 TASK 889 |
|            |                                | 31-50447    | 31-44 TASK 890 |
|            |                                | 31-50448    | 31-44 TASK 891 |
|            |                                | 31-52013    | 31-43 TASK 866 |
|            |                                | 31-52014    | 31-43 TASK 867 |
|            |                                | 31-52101    | 31-41 TASK 817 |
|            |                                | 31-52112    | 31-41 TASK 820 |
|            |                                | 31-52121    | 31-41 TASK 821 |
|            |                                | 31-52122    | 31-41 TASK 822 |
|            |                                | 31-52601    | 31-41 TASK 832 |
|            |                                | 31-52602    | 31-41 TASK 833 |
|            |                                | 31-54013    | 31-43 TASK 868 |
|            |                                | 31-54014    | 31-43 TASK 869 |
|            |                                | 31-54101    | 31-41 TASK 834 |
|            |                                | 31-54102    | 31-41 TASK 835 |

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|------------|--------------------------------|-------------|----------------|
| 743 499 52 | CON IGNITION ON R (EICAS MEMO) | (continued) |                |
|            |                                | 31-54121    | 31-41 TASK 838 |
|            |                                | 31-54122    | 31-41 TASK 839 |
|            |                                | 31-54601    | 31-41 TASK 840 |
|            |                                | 31-54602    | 31-41 TASK 841 |
|            |                                | 31-56013    | 31-43 TASK 870 |
|            |                                | 31-56014    | 31-43 TASK 871 |
|            |                                | 31-56121    | 31-41 TASK 848 |
|            |                                | 31-56122    | 31-41 TASK 849 |
|            |                                | 31-61115    | 31-43 TASK 856 |
|            |                                | 31-61116    | 31-43 TASK 856 |
|            |                                | 31-61117    | 31-43 TASK 856 |
|            |                                | 31-61118    | 31-43 TASK 856 |
|            |                                | 31-62031    | 31-43 TASK 846 |
|            |                                | 31-62032    | 31-43 TASK 847 |
|            |                                | 31-62041    | 31-43 TASK 848 |
|            |                                | 31-62042    | 31-43 TASK 849 |
|            |                                | 31-69501    | 31-42 TASK 852 |
|            |                                | 31-69502    | 31-42 TASK 852 |
|            |                                | 31-69533    | 31-42 TASK 854 |
|            |                                | 31-69534    | 31-42 TASK 854 |
|            |                                | 73-03022    | 73-26 TASK 802 |
|            |                                | 73-03052    | 73-26 TASK 806 |
|            |                                | 73-03102    | 73-28 TASK 811 |
|            |                                | 73-03112    | 73-28 TASK 815 |
|            |                                | 73-03222    | 73-26 TASK 834 |
|            |                                | 73-03252    | 73-26 TASK 846 |
|            |                                | 73-04012    | 73-27 TASK 802 |
|            |                                | 73-04032    | 73-27 TASK 802 |
|            |                                | 73-04132    | 73-28 TASK 830 |
|            |                                | 73-04142    | 73-28 TASK 830 |
|            |                                | 73-04152    | 73-28 TASK 830 |
|            |                                | 73-09602    | 73-27 TASK 809 |
|            |                                | 73-09604    | 73-27 TASK 809 |
|            |                                | 73-15242    | 73-26 TASK 838 |
|            |                                | 73-15252    | 73-26 TASK 840 |

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|------------|--------------------------------|-------------|----------------|
| 743 499 52 | CON IGNITION ON R (EICAS MEMO) | (continued) |                |
|            |                                | 73-25262    | 73-26 TASK 842 |
|            |                                | 73-25272    | 73-26 TASK 844 |
|            |                                | 73-35302    | 73-28 TASK 848 |
|            |                                | 73-35522    | 73-29 TASK 821 |
|            |                                | 73-35582    | 73-34 TASK 812 |

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| <b>MAINT MESSAGE</b> | <b>MESSAGE TEXT</b>                                   | <b>GO TO FIM TASK</b> |
|----------------------|-------------------------------------------------------|-----------------------|
| 74-33921*            | Upper Ignition System (L Eng) is failed.              | 74-21 TASK 807        |
| 74-33922*            | Upper Ignition System (R Eng) is failed.              | 74-21 TASK 807        |
| 74-33931*            | Lower Ignition System (L Eng) is failed.              | 74-21 TASK 808        |
| 74-33932*            | Lower Ignition System (R Eng) is failed.              | 74-21 TASK 808        |
| 74-33941*            | Upper Ignition System (L Eng) power is not available. | 74-21 TASK 812        |
| 74-33942*            | Upper Ignition System (R Eng) power is not available. | 74-21 TASK 813        |
| 74-33951*            | Lower Ignition System (L Eng) power is not available. | 74-21 TASK 815        |
| 74-33952*            | Lower Ignition System (R Eng) power is not available. | 74-21 TASK 816        |

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

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### 805. L Start/Ignition Selector Switch is Failed - Fault Isolation

#### A. Maintenance Messages

- (1) This task is for maintenance message: 23-43560.

#### B. Fault Isolation Procedure

- (1) Replace the L START/IGNITION selector switch, S80100 (WDM 74-11-11).
  - (a) Do the repair confirmation procedure at the end of this task.
- (2) Look for a failure in the wire harness between the L START/IGNITION selector switch, S80100, and the left overhead panel card file (OPCF), M23117.
  - (a) Disconnect the electrical connectors, DS80100 from the L START/IGNITION selector switch, S80100, and DM23117K from the left OPCF, M23117.
  - (b) Look for wire to wire shorts, shorts to ground, and continuity in the circuit as shown below (WDM 74-11-11):

**NOTE:** When you look for shorts to ground, the insulation resistance must be more than 100K ohms.

| DS80100  | DM23117K |
|----------|----------|
| 40 ..... | A7       |
| 38 ..... | A8       |

- (c) If you find a problem in the wire harness, repair the wire harness.
  - (d) Do the repair confirmation procedure at the end of this task.
- (3) Replace the left OPCF, M23117.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802

Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

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

#### C. Repair Confirmation

- (1) Select the Existing Fault Screen on the MAT.
- (2) If the MAT shows the maintenance message, then continue with the subsequent step of this fault isolation procedure.
- (3) If the MAT does not show the maintenance message, then you corrected the fault.

————— **END OF TASK** —————

### 806. R Start/Ignition Selector Switch is Failed - Fault Isolation

#### A. Maintenance Messages

- (1) This task is for maintenance message: 23-43910.

#### B. Fault Isolation Procedure

- (1) Replace the R START/IGNITION selector switch, S80200 (WDM 74-11-21).
  - (a) Do the repair confirmation procedure at the end of this task.
- (2) Look for a failure in the wire harness between the R START/IGNITION selector switch, S80200, and the right overhead panel card file (OPCF), M23217.
  - (a) Disconnect the electrical connectors, DS80200 from the R START/IGNITION selector switch, S80200, and DM23217J from the right OPCF, M23217.

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- (b) Look for wire to wire shorts, shorts to ground, and continuity in the circuit as shown below (WDM 74-11-21):

NOTE: When you look for shorts to ground, the insulation resistance must be more than 100K ohms.

| <b>DS80200</b> | <b>DM23217J</b> |
|----------------|-----------------|
| 40 .....       | B14             |
| 38 .....       | B15             |

- (c) If you find a problem in the wire harness, repair the wire harness.  
 (d) Do the repair confirmation procedure at the end of this task.  
 (3) Replace the right OPCF, M23217.

These are the tasks:

Overhead Panel Card File (OPCF) Removal, AMM TASK 23-93-02-000-802

Overhead Panel Card File (OPCF) Installation, AMM TASK 23-93-02-400-802.

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

### C. Repair Confirmation

- (1) Select the Existing Fault Screen on the MAT.  
 (2) If the MAT shows the maintenance message, then continue with the subsequent step of this fault isolation procedure.  
 (3) If the MAT does not show the maintenance message, then you corrected the fault.

————— **END OF TASK** —————

## 807. Ignition System #1 (Upper) Failed - Fault Isolation

### A. Maintenance Messages

- (1) This task is for maintenance messages: 74-33921, 74-33922.

### B. Description

- (1) The engine did not light-off when using ignition system #1 (upper) during a start sequence. Power is available from the aircraft for exciter power. This fault can be reported whenever the EEC is powered.

NOTE: This maintenance message may occur during a ground start in extremely cold conditions. If this message occurs during an attempted ground start after a cold soak condition, repeat the start attempt. If the message occurs after the second attempted start, do the fault isolation procedure below.

### C. Fault Isolation Procedure

- (1) Do the procedure to examine the ignitor, and look for damage to the ceramic insulation and tip of the ignitor (AMM TASK 74-21-02-200-801-H01).  
 (a) If you see damage that is not in the limits, replace the system 1 (upper) ignitor.  
 These are the tasks:  
 Igniter (System 1 or System 2) Removal, AMM TASK 74-21-02-000-801-H01  
 Igniter (System 1 or System 2) Installation, AMM TASK 74-21-02-400-801-H01.  
 1) Do the repair confirmation procedure at the end of this task.  
 (b) If the ignitor inspection is satisfactory, then continue.

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



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 connector DM74001 from the ignition exciter, M74001.



MAKE SURE YOU DISCONNECT CONNECTOR DM73003B FROM THE EEC (FADEC). IF YOU DO NOT, IGNITOR 2 COULD FIRE WHEN YOU APPLY POWER, AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (4) Disconnect connector DM73003B from the EEC (FADEC), M73003.

NOTE: You do this step to disable the other half of the ignition system while you do the MAT initiated ignition system tests.

- (5) Do this task: Test No. 17 - Engine Ignition System Test (MAT Initiated Test), AMM TASK 71-00-00-700-816-H01.

- (a) Select the ignitor circuit #1.



BE CAREFUL. 115 VAC CAN CAUSE SERIOUS INJURY TO PERSONS.

- (6) Do a check for 115 VAC between pins A and B on connector DM74001.

- (7) If there is not 115 VAC between pins A and B, do these steps:

- (a) Stop the ignitor test on the MAT.



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.

- (b) Disconnect connector DM73003A from the EEC (FADEC), M73003.

- (c) Attach a jumper from pin A to pin B on connector DM74001.

- (d) Do a check for continuity from pins G and H on connector DM73003A.

- (e) If there is not continuity between pins G and H, connect connector DM73003B to the EEC (FADEC), M73003, and 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.

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

- (f) If there is continuity, or if the fault continues, then remove the jumper from pins A and B on connector DM74001 and measure the resistance between these pins on connector DM73003A and the electrical harness sheathing (ground):

- 1) Pin G to GND, specified resistance >100K ohms

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- 2) Pin H to GND, specified resistance >100K ohms.
- (g) 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.
- (h) 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.
- (i) Do these steps:
- 1) Connect connector DM74001 to the ignition exciter, M74001.
  - 2) Connect connector DM73003B to the EEC (FADEC), M73003.
  - 3) Do the repair confirmation procedure at the end of this task.
- (8) If there is 115 VAC between pins A and B, replace the applicable ignitor.
- These are the tasks:
- Igniter (System 1 or System 2) Removal, AMM TASK 74-21-02-000-801-H01
- Igniter (System 1 or System 2) Installation, AMM TASK 74-21-02-400-801-H01.
- (a) Do these steps:
- 1) Connect connector DM74001 to the ignition exciter, M74001.
  - 2) Connect connector DM73003B to the EEC (FADEC), M73003.
  - 3) Do the repair confirmation procedure at the end of this task.
- (9) Do an inspection of the combustion section of the engine (AMM TASK 72-00-00-290-804-H01).
- (10) If the fault continues, replace the ignition exciter.
- These are the tasks:
- Ignition Exciter (System 1 or System 2) Removal, AMM TASK 74-11-01-000-801-H01
- Ignition Exciter (System 1 or System 2) Installation, AMM TASK 74-11-01-400-801-H01.
- (a) Do the repair confirmation procedure at the end of this task.
- (11) If the fault continues, replace the ignition lead.
- These are the tasks:
- Ignition Lead (System 1 or System 2) Installation, AMM TASK 74-21-01-400-801-H01
- Ignition Lead (System 1 or System 2) Installation, AMM TASK 74-21-01-400-801-H01.
- (12) If the fault continues, replace the fuel nozzle closest to the igniter.
- These are the tasks:
- Fuel Nozzle Removal, AMM TASK 73-11-05-000-801-H01
- Fuel Nozzle Installation, AMM TASK 73-11-05-400-801-H01.

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**D. Repair Confirmation**

- (1) Do this task: Test No. 17 - Engine Ignition System Test (MAT Initiated Test), AMM TASK 71-00-00-700-816-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** —————

**808. Ignition System #2 (Lower) Failed - Fault Isolation****A. Maintenance Messages**

- (1) This task is for maintenance messages: 74-33931, 74-33932.

**B. Description**

- (1) The engine did not light-off when using ignition system #2 (lower) during a start sequence. Power is available from the aircraft for exciter power. This fault can be reported whenever the EEC is powered.

NOTE: This maintenance message may occur during a ground start in extremely cold conditions. If this message occurs during an attempted ground start after a cold soak condition, repeat the start attempt. If the message occurs after the second attempted start, do the fault isolation procedure below.

**C. Fault Isolation Procedure**

- (1) Do the procedure to examine the ignitor, and look for damage to the ceramic insulation and tip of the ignitor (AMM TASK 74-21-02-200-801-H01).
  - (a) If you see damage that is not in the limits, replace the system 2 (lower) ignitor.  
These are the tasks:  
Igniter (System 1 or System 2) Removal, AMM TASK 74-21-02-000-801-H01  
Igniter (System 1 or System 2) Installation, AMM TASK 74-21-02-400-801-H01.
    - 1) Do the repair confirmation procedure at the end of this task.
  - (b) If the ignitor is satisfactory, then continue.
- (2) Make sure the applicable EEC MAINT POWER switch is in the NORM position.



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 connector DM74002 from the ignition exciter, M74002.



MAKE SURE YOU DISCONNECT CONNECTOR DM73003A FROM THE EEC (FADEC). IF YOU DO NOT, IGNITOR 1 COULD FIRE WHEN YOU APPLY POWER, AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

- (4) Disconnect connector DM73003A from the EEC (FADEC), M73003.

NOTE: You do this step to disable the other half of the ignition system while you do the MAT initiated tests.

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- (5) Do this task: Test No. 17 - Engine Ignition System Test (MAT Initiated Test), AMM TASK 71-00-00-700-816-H01.
- (a) Select the ignitor circuit #2.

**WARNING**

BE CAREFUL. 115 VAC CAN CAUSE SERIOUS INJURY TO PERSONS.

- (6) Do a check for 115 VAC between pins A and B on connector DM74002.
- (7) If there is not 115 VAC between pins A and B, do these steps:
- (a) Stop the ignitor test on the MAT.

**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.

- (b) Disconnect connector DM73003B from the EEC (FADEC), M73003.
- (c) Attach a jumper wire from pin A to pin B on connector DM74002.
- (d) Do a check for continuity from pins G and H on connector DM73003B.
- (e) If there is not continuity between pins G and H, connect connector DM73003B to the EEC (FADEC), M73003, and 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.

- 1) Do the repair confirmation procedure at the end of this task.
  - (f) If there is continuity, or if the fault continues, then remove the jumper from pins A and B on connector DM74002 and measure the resistance between these pins on connector DM73003B and the electrical harness sheathing (ground):
    - 1) Pin G to GND, specified resistance >100K ohms.
    - 2) Pin H to GND, specified resistance >100K ohms.
  - (g) 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.
  - (h) 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.
  - (i) Do these steps:
    - 1) Connect connector DM74002 to the ignition exciter M74002.
    - 2) Connect connector DM73003A to the EEC (FADEC), M73003.
    - 3) Do the repair confirmation procedure at the end of this task.
- (8) If there is 115 VAC between pins A and B, replace the applicable ignitor.

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These are the tasks:

Igniter (System 1 or System 2) Removal, AMM TASK 74-21-02-000-801-H01

Igniter (System 1 or System 2) Installation, AMM TASK 74-21-02-400-801-H01.

(a) Do these steps:

- 1) Connect connector DM74002 to the ignition exciter, M74002.
- 2) Connect connector DM73003A to the EEC (FADEC), M73003.
- 3) Do the repair confirmation procedure at the end of this task.

(9) Do an inspection of the combustion section of the engine (AMM TASK 72-00-00-290-804-H01).

(10) If the fault continues, replace the ignition exciter.

These are the tasks:

Ignition Exciter (System 1 or System 2) Removal, AMM TASK 74-11-01-000-801-H01

Ignition Exciter (System 1 or System 2) Installation, AMM TASK 74-11-01-400-801-H01.

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

(11) If the fault continues, replace the ignition lead.

These are the tasks:

Ignition Lead (System 1 or System 2) Installation, AMM TASK 74-21-01-400-801-H01

Ignition Lead (System 1 or System 2) Installation, AMM TASK 74-21-01-400-801-H01.

### D. Repair Confirmation

(1) Do this task: Test No. 17 - Engine Ignition System Test (MAT Initiated Test), AMM TASK 71-00-00-700-816-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** —————

## 812. Left Engine Ignition System #1 (Upper) Power Unavailable - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 74-33941.

### B. Description

(1) Electrical power to left engine ignition exciter #1 (upper) is not available to the EEC when the fuel control switch is in the RUN position. This fault can be reported whenever the EEC is powered.

### C. Initial Evaluation

- (1) Put the left engine FUEL CONTROL switch, on the P10 control stand, to the RUN position.
- (2) Set the left engine 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.

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- (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 judgment (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



USE EXTREME CAUTION WHEN EXAMINING FOR ELECTRICAL POWER. HIGH VOLTAGE CAN CAUSE INJURY OR DEATH.



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) Make sure the left engine EEC MAINT POWER switch, on the overhead maintenance panel, P61, is in the NORM position.
- (2) Open these circuit breakers and install safety tags:

#### Overhead Circuit Breaker Panel, P11

| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u>      |
|------------|------------|---------------|------------------|
| A          | 1          | C74401        | L ENG STBY IGN 1 |
| A          | 2          | C74407        | L ENG STBY IGN 2 |
| E          | 1          | C74403        | L ENG IGN 1      |
| E          | 14         | C74405        | L ENG IGN 2      |

- (3) Disconnect connector DM73003A from the EEC, M73003 (WDM 74-11-11).
- (4) Remove the safety tags and close these circuit breakers:

#### Overhead Circuit Breaker Panel, P11

| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u>      |
|------------|------------|---------------|------------------|
| A          | 1          | C74401        | L ENG STBY IGN 1 |
| A          | 2          | C74407        | L ENG STBY IGN 2 |
| E          | 1          | C74403        | L ENG IGN 1      |
| E          | 14         | C74405        | L ENG IGN 2      |

- (5) Put the left FUEL CONTROL switch, on the P10 control stand, to the RUN position.
- (6) Check for 115 VAC at connector DM73003A, pins A and B.
- (7) If there is not 115 VAC at connector DM73003A, pins A and B, then do these steps:
  - (a) Disconnect connector D11032P from the left power management panel, P110, and check for 115 VAC at pin 38 with reference to airplane ground.
  - (b) If there is 115 VAC at connector D11032, pin 38, then replace the left engine igniter 1 transfer relay, K74101, and the left engine ignition/fire detection relay, K76103 at the power management panel, P110.
    - 1) Do the repair confirmation at the end of this task.

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- 2) If the problem continues, do a check of the wiring between connector D11032P, pin 37 at the left power management panel, P110, and the EEC, M73003, connector DM73003, pin A and repair the problems that you find.
- (c) If there is not 115 VAC at connector D11032P, pin 38, then do these steps:
  - 1) Do a check of the wiring between the left power management panel, P110, connector D11032P, pin 38 and the L ENG IGN 1 circuit breaker, C74403 on the overhead circuit breaker panel, P11.
  - 2) Do a check of the wiring between the left power management panel, P110, connector D11016P, pin 30 and the L ENG STBY IGN 1 circuit breaker, C74401 on the overhead circuit breaker Panel, P11.
    - a) Do the repair confirmation at the end of this task.
- (8) If there is 115 VAC at connector DM7003A, pins A and B, then do these steps:
  - (a) Replace the ignition exciter #1, M74001.  
These are the tasks:  
Igniter (System 1 or System 2) Removal, AMM TASK 74-21-02-000-801-H01  
Igniter (System 1 or System 2) Installation, AMM TASK 74-21-02-400-801-H01.
    - 1) Do the repair confirmation at the end of this task.
  - (b) If the problem continues, replace the EEC, 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.
    - 1) Do the repair confirmation at the end of this task.

### E. Repair Confirmation

- (1) Do this task: Test No. 17 - Engine Ignition System Test (MAT Initiated Test), AMM TASK 71-00-00-700-816-H01.
  - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), the you corrected the fault.
  - (b) If the MAT shows ACTIVE for the maintenance message, the continue with this fault isolation procedure at the subsequent step.

————— END OF TASK —————

### 813. Right Engine Ignition System #1 (Upper) Power Unavailable - Fault Isolation

#### A. Maintenance Messages

- (1) This task is for maintenance message: 74-33942.

#### B. Description

- (1) Electrical power to right engine ignition exciter #1 (upper) is not available to the EEC when the fuel control switch is in the RUN position. This fault can be reported whenever the EEC is powered.

#### C. Initial Evaluation

- (1) Put the right engine FUEL CONTROL switch, on the P10 control stand, to the RUN position.
- (2) Set the right engine EEC MAINT POWER switch on the overhead maintenance panel, P61, to the TEST position.

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- (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 judgment (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



USE EXTREME CAUTION WHEN EXAMINING FOR ELECTRICAL POWER. HIGH VOLTAGE CAN CAUSE INJURY OR DEATH.



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) Make sure the right engine EEC MAINT POWER switch, on the overhead maintenance panel, P61, is in the NORM position.
- (2) Open these circuit breakers and install safety tags:

#### Overhead Circuit Breaker Panel, P11

| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u>      |
|------------|------------|---------------|------------------|
| A          | 14         | C74400        | R ENG STBY IGN 1 |
| A          | 15         | C74406        | R ENG STBY IGN 2 |
| E          | 2          | C74404        | R ENG IGN 2      |
| E          | 15         | C74402        | R ENG IGN 1      |

- (3) Disconnect connector DM73003A from the EEC, M73003 (WDM 74-11-21).
- (4) Remove the safety tags and close these circuit breakers:

#### Overhead Circuit Breaker Panel, P11

| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u>      |
|------------|------------|---------------|------------------|
| A          | 14         | C74400        | R ENG STBY IGN 1 |
| A          | 15         | C74406        | R ENG STBY IGN 2 |
| E          | 2          | C74404        | R ENG IGN 2      |
| E          | 15         | C74402        | R ENG IGN 1      |

- (5) Put the right FUEL CONTROL switch, on the P10 control stand, to the RUN position.
- (6) Check for 115 VAC at connector DM73003A, pins A and B.
- (7) If there is not 115 VAC at connector DM73003A, pins A and B, then do these steps:
  - (a) Disconnect connector D21032P from the right power management panel, P210, and check for 115 VAC at pin 58 with reference to airplane ground.

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- (b) If there is 115 VAC at connector D21032, pin 58, then replace the right engine igniter 1 transfer relay, K74201, and the right engine ignition/fire detection relay, K76203 at the power management panel, P210.
  - 1) Do the repair confirmation at the end of this task.
  - 2) If the problem continues, do a check of the wiring between connector D21032P, pin 57 at the right power management panel, P210, and the EEC, M73003, connector DM73003, pin A and repair the problems that you find.
- (c) If there is not 115 VAC at connector D21032P, pin 58, then do these steps:
  - 1) Do a check of the wiring between the right power management panel, P210, connector D21032P, pin 58 and the R ENG IGN 1 circuit breaker, C74402 on the overhead circuit breaker panel, P11.
  - 2) Do a check of the wiring between the right power management panel, P210, connector D21016P, pin 22 and the R ENG STBY IGN 1 circuit breaker, C74400 on the overhead circuit breaker Pnel, P11.
    - a) Do the repair confirmation at the end of this task.
- (8) If there is 115 VAC at connector DM7003A, pins A and B, then do these steps:
  - (a) Replace the ignition exciter #1, M74001.  
These are the tasks:  
Igniter (System 1 or System 2) Removal, AMM TASK 74-21-02-000-801-H01  
Igniter (System 1 or System 2) Installation, AMM TASK 74-21-02-400-801-H01.
    - 1) Do the repair confirmation at the end of this task.
  - (b) If the problem continues, replace the EEC, 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.
    - 1) Do the repair confirmation at the end of this task.

### E. Repair Confirmation

- (1) Do this task: Test No. 17 - Engine Ignition System Test (MAT Initiated Test), AMM TASK 71-00-00-700-816-H01.
  - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), the you corrected the fault.
  - (b) If the MAT shows ACTIVE for the maintenance message, the continue with this fault isolation procedure at the subsequent step.

————— END OF TASK —————

### 815. Left Engine Ignition System #2 (Lower) Power Unavailable - Fault Isolation

#### A. Maintenance Messages

- (1) This task is for maintenance message: 74-33951.

#### B. Description

- (1) Electrical power to left engine ignition exciter #2 (lower) is not available to the EEC when the fuel control switch is in the RUN position. This fault can be reported whenever the EEC is powered.

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### C. Initial Evaluation

- (1) Put the left engine FUEL CONTROL switch, on the P10 control stand, to the RUN position.
- (2) Set the left engine 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 judgment (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



USE EXTREME CAUTION WHEN EXAMINING FOR ELECTRICAL POWER. HIGH VOLTAGE CAN CAUSE INJURY OR DEATH.



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) Make sure the left engine EEC MAINT POWER switch, on the overhead maintenance panel, P61, is in the NORM position.
- (2) Open these circuit breakers and install safety tags:

#### Overhead Circuit Breaker Panel, P11

| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u>      |
|------------|------------|---------------|------------------|
| A          | 1          | C74401        | L ENG STBY IGN 1 |
| A          | 2          | C74407        | L ENG STBY IGN 2 |
| E          | 1          | C74403        | L ENG IGN 1      |
| E          | 14         | C74405        | L ENG IGN 2      |

- (3) Disconnect connector DM73003B from the EEC, M73003 (WDM 74-11-11).
- (4) Remove the safety tags and close these circuit breakers:

#### Overhead Circuit Breaker Panel, P11

| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u>      |
|------------|------------|---------------|------------------|
| A          | 1          | C74401        | L ENG STBY IGN 1 |
| A          | 2          | C74407        | L ENG STBY IGN 2 |
| E          | 1          | C74403        | L ENG IGN 1      |
| E          | 14         | C74405        | L ENG IGN 2      |

- (5) Put the left FUEL CONTROL switch, on the P10 control stand, to the RUN position.
- (6) Check for 115 VAC at connector DM73003B, pins A and B.
- (7) If there is not 115 VAC at connector DM73003B, pins A and B, then do these steps:

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- (a) Disconnect connector D11042P from the left power management panel, P110, and check for 115 VAC at pin 12 with reference to airplane ground.
- (b) If there is 115 VAC at connector D11042, pin 12, then replace the left engine igniter 2 transfer relay, K74102, and the left engine generator control/ignition relay, K76104 at the power management panel, P110.
  - 1) Do the repair confirmation at the end of this task.
  - 2) If the problem continues, do a check of the wiring between connector D11039P, pin 12 at the left power management panel, P110, and the EEC, M73003, connector DM73003B, pin A and repair the problems that you find.
- (c) If there is not 115 VAC at connector D11042P, pin 12, then do these steps:
  - 1) Do a check of the wiring between the left power management panel, P110, connector D11042P, pin 12 and the L ENG IGN 2 circuit breaker, C74405 on the overhead circuit breaker panel, P11.
  - 2) Do a check of the wiring between the left power management panel, P110, connector D11016P, pin 31 and the L ENG STBY IGN 2 circuit breaker, C74407 on the overhead circuit breaker Panel, P11.
    - a) Do the repair confirmation at the end of this task.
- (8) If there is 115 VAC at connector DM7003B, pins A and B, then do these steps:
  - (a) Replace the ignition exciter #2, M74002.  
These are the tasks:  
Ignition Exciter (System 1 or System 2) Removal, AMM TASK 74-11-01-000-801-H01  
Ignition Exciter (System 1 or System 2) Installation, AMM TASK 74-11-01-400-801-H01.
    - 1) Do the repair confirmation at the end of this task.
  - (b) If the problem continues, replace the EEC, 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.
    - 1) Do the repair confirmation at the end of this task.

### E. Repair Confirmation

- (1) Do this task: Test No. 17 - Engine Ignition System Test (MAT Initiated Test), AMM TASK 71-00-00-700-816-H01.
  - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), the you corrected the fault.
  - (b) If the MAT shows ACTIVE for the maintenance message, the continue with this fault isolation procedure at the subsequent step.

————— END OF TASK —————

### 816. Right Engine Ignition System #2 (Lower) Power Unavailable - Fault Isolation

#### A. Maintenance Messages

- (1) This task is for maintenance message: 74-33952.

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**B. Description**

- (1) Electrical power to right engine ignition exciter #2 (lower) is not available to the EEC when the fuel control switch is in the RUN position. This fault can be reported whenever the EEC is powered.

**C. Initial Evaluation**

- (1) Put the right engine FUEL CONTROL switch, on the P10 control stand, to the RUN position.
- (2) Set the right engine 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 judgment (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**

USE EXTREME CAUTION WHEN EXAMINING FOR ELECTRICAL POWER.  
HIGH VOLTAGE CAN CAUSE INJURY OR DEATH.



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) Make sure the right engine EEC MAINT POWER switch, on the overhead maintenance panel, P61, is in the NORM position.
- (2) Open these circuit breakers and install safety tags:

**Overhead Circuit Breaker Panel, P11**

| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u>      |
|------------|------------|---------------|------------------|
| A          | 14         | C74400        | R ENG STBY IGN 1 |
| A          | 15         | C74406        | R ENG STBY IGN 2 |
| E          | 2          | C74404        | R ENG IGN 2      |
| E          | 15         | C74402        | R ENG IGN 1      |

- (3) Disconnect connector DM73003B from the EEC, M73003 (WDM 74-11-21).
- (4) Remove the safety tags and close these circuit breakers:

**Overhead Circuit Breaker Panel, P11**

| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u>      |
|------------|------------|---------------|------------------|
| A          | 14         | C74400        | R ENG STBY IGN 1 |
| A          | 15         | C74406        | R ENG STBY IGN 2 |
| E          | 2          | C74404        | R ENG IGN 2      |

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(Continued)

**Overhead Circuit Breaker Panel, P11**

| <u>Row</u> | <u>Col</u> | <u>Number</u> | <u>Name</u> |
|------------|------------|---------------|-------------|
| E          | 15         | C74402        | R ENG IGN 1 |

- (5) Put the right FUEL CONTROL switch, on the P10 control stand, to the RUN position.
- (6) Check for 115 VAC at connector DM73003B, pins A and B.
- (7) If there is not 115 VAC at connector DM73003B, pins A and B, then do these steps:
  - (a) Disconnect connector D21042P from the right power management panel, P210, and check for 115 VAC at pin 24 with reference to airplane ground.
  - (b) If there is 115 VAC at connector D21042, pin 24, then replace the right engine igniter 2 transfer relay, K74202, and the right engine generator control/ignition relay, K76204 at the power management panel, P210.
    - 1) Do the repair confirmation at the end of this task.
    - 2) If the problem continues, do a check of the wiring between connector D21039P, pin 23 at the right power management panel, P210, and the EEC, M73003, connector DM73003B, pin A and repair the problems that you find.
  - (c) If there is not 115 VAC at connector D21042P, pin 24, then do these steps:
    - 1) Do a check of the wiring between the right power management panel, P210, connector D21042P, pin 24 and the R ENG IGN 2 circuit breaker, C74404 on the overhead circuit breaker panel, P11.
    - 2) Do a check of the wiring between the right power management panel, P210, connector D21046P, pin 24 and the R ENG STBY IGN 2 circuit breaker, C74406 on the overhead circuit breaker Panel, P11.
      - a) Do the repair confirmation at the end of this task.
- (8) If there is 115 VAC at connector DM7003B, pins A and B, then do these steps:
  - (a) Replace the ignition exciter #2, M74002.  
 These are the tasks:  
 Ignition Exciter (System 1 or System 2) Removal, AMM TASK 74-11-01-000-801-H01  
 Ignition Exciter (System 1 or System 2) Installation, AMM TASK 74-11-01-400-801-H01.
    - 1) Do the repair confirmation at the end of this task.
  - (b) If the problem continues, replace the EEC, 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.
    - 1) Do the repair confirmation at the end of this task.

**E. Repair Confirmation**

- (1) Do this task: Test No. 17 - Engine Ignition System Test (MAT Initiated Test), AMM TASK 71-00-00-700-816-H01.
  - (a) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), the you corrected the fault.

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

————— **END OF TASK** —————

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FAULT ISOLATION MANUAL****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** ————