# CHAPTER

# 30

# ICE AND RAIN PROTECTION

## CHAPTER 30
## ICE AND RAIN PROTECTION



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

# 30-EFFECTIVE PAGES

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# 30-EFFECTIVE PAGES

## CHAPTER 30
## ICE AND RAIN PROTECTION

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| 30-41 TASKS (cont) | | |
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| A 221 | Sep 05/2017 | |
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| 202 | Sep 05/2013 | |
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| 204 | BLANK | |
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| 201 | Jan 05/2013 | |
| 202 | Jan 05/2013 | |
| 203 | Sep 05/2016 | |
| 204 | Sep 05/2016 | |
| 205 | Sep 05/2016 | |
| 206 | Sep 05/2016 | |
| 207 | Jan 05/2013 | |
| 208 | Jan 05/2013 | |
| 209 | Jan 05/2013 | |
| 210 | BLANK | |

| Subject/Page | Date | COC |
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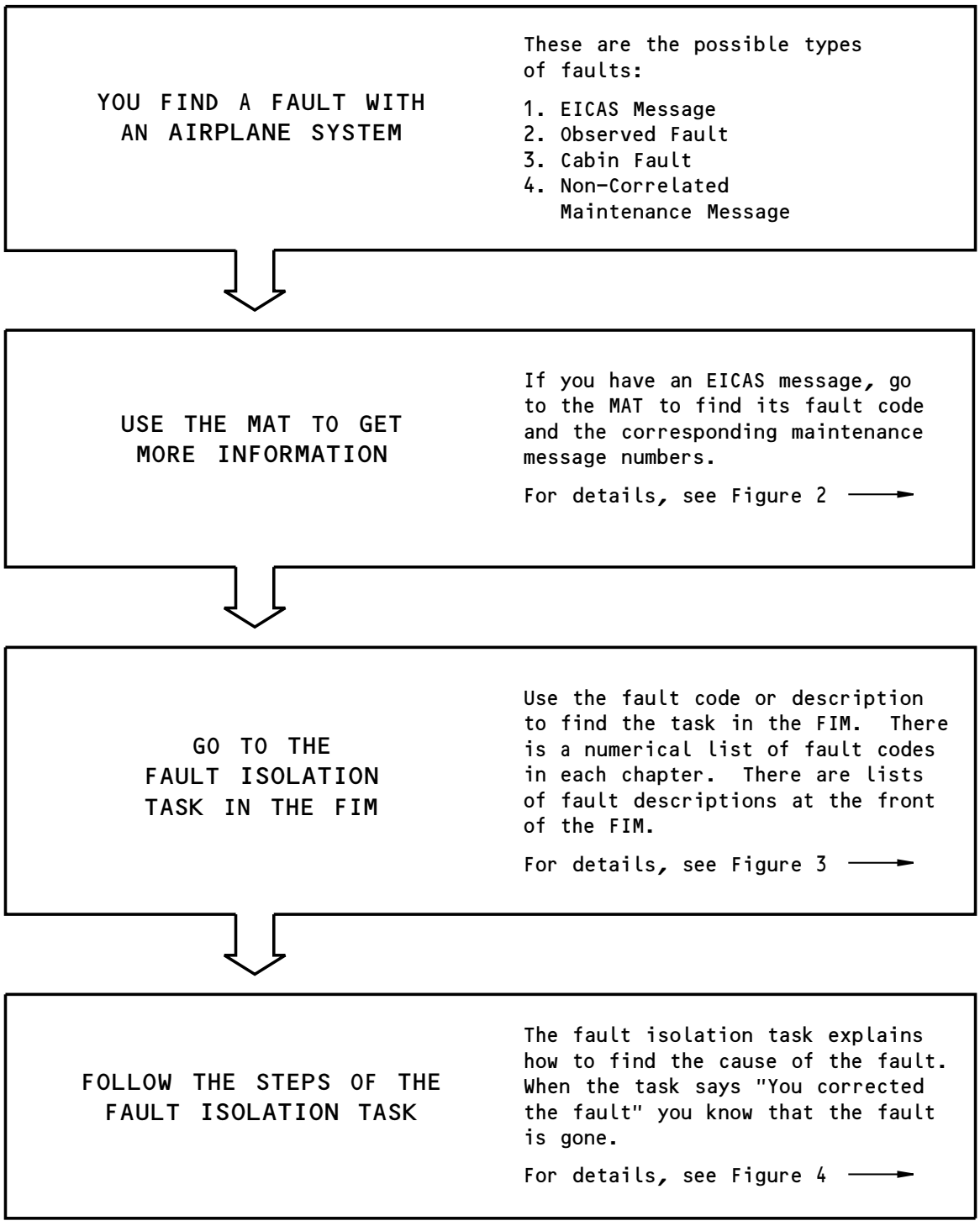
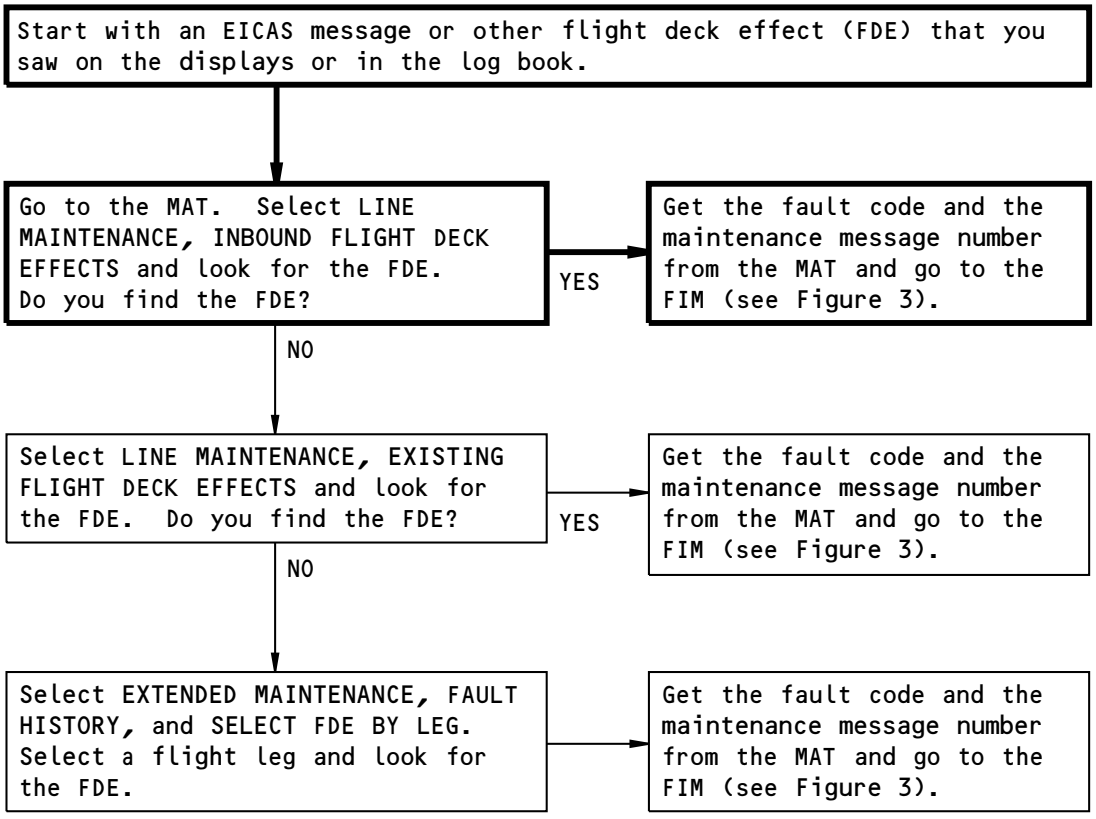
| 30-98 TASKS | | |
| 201 | Jan 05/2013 | |
| 202 | BLANK | |

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

# 30-EFFECTIVE PAGES



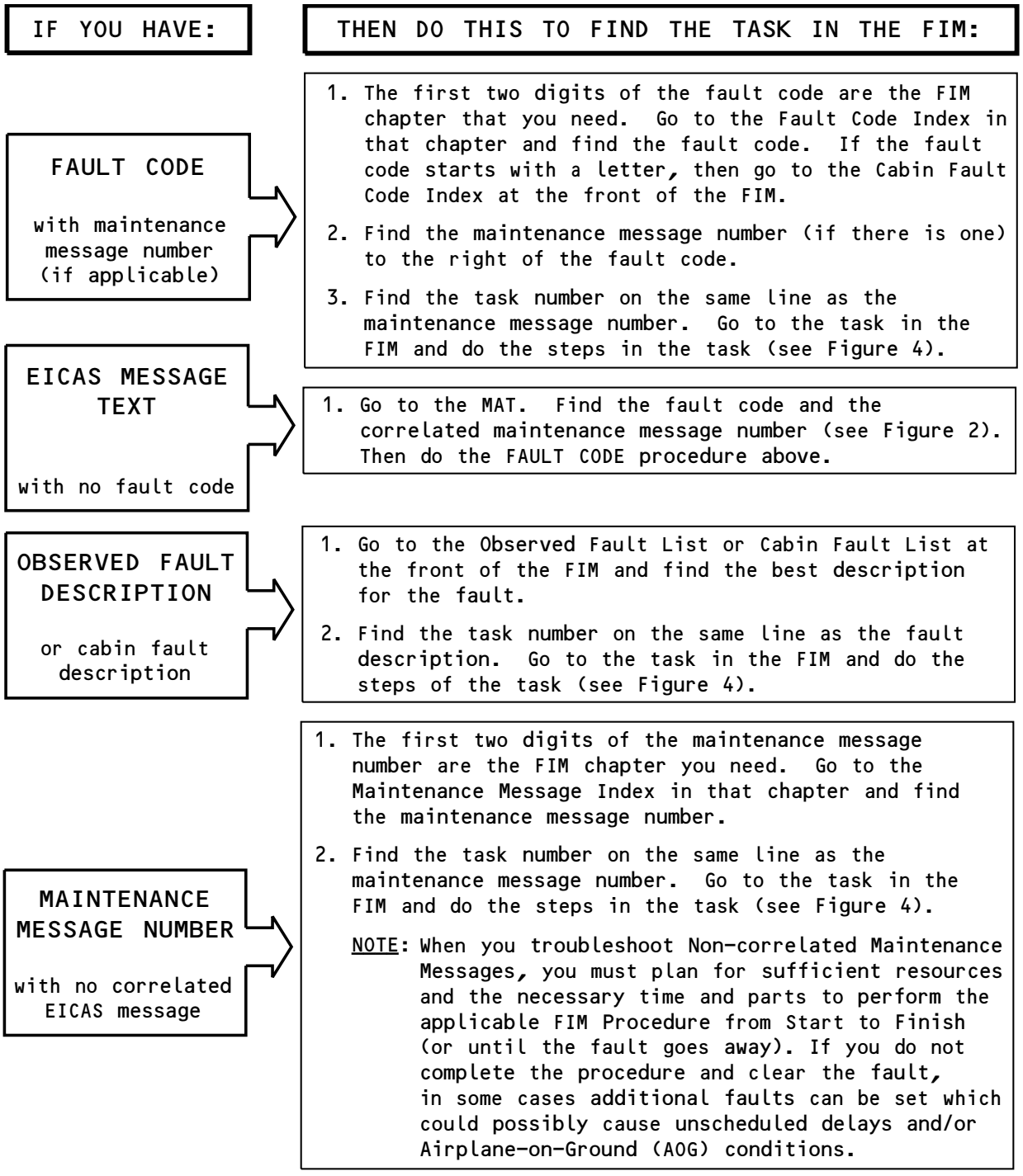

**Basic Fault Isolation Process**
**Figure 1**




NOTE: The bold lines show the most common path.

E84425 S0000132475_V1

**Getting Fault Information from the MAT**
**Figure 2**




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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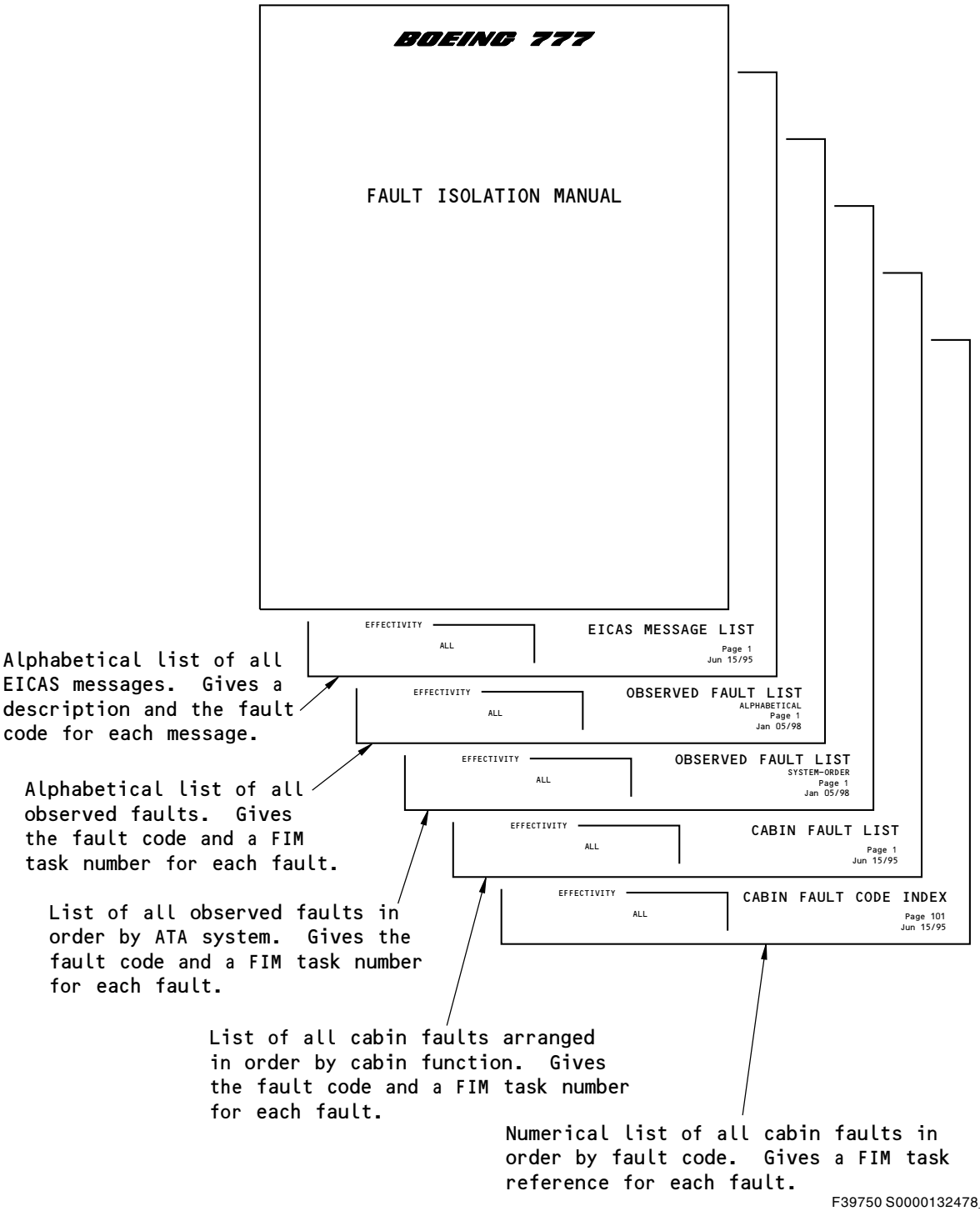
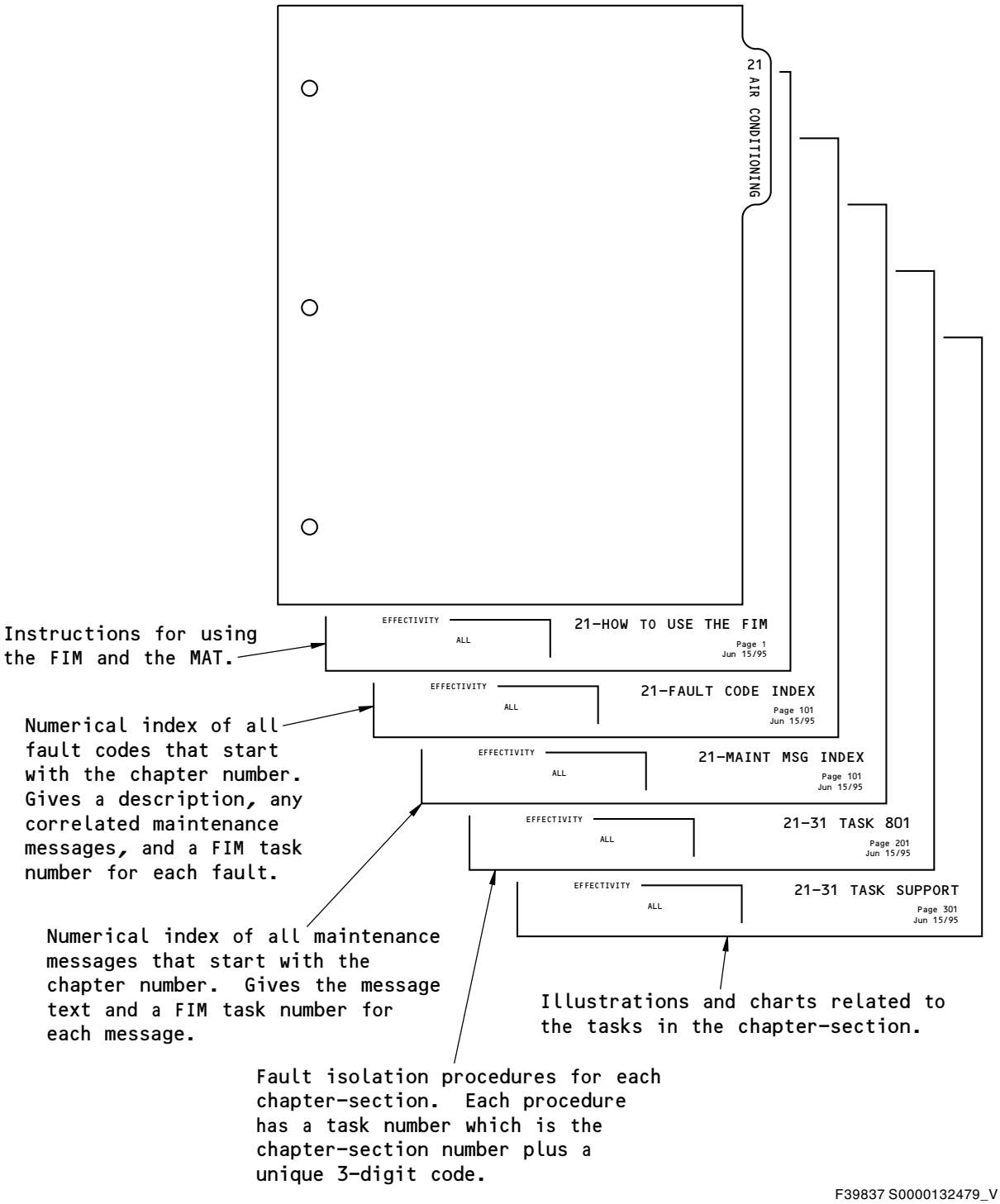
**Doing the Fault Isolation Task**
**Figure 4**




**Subjects at Front of FIM**
**Figure 5**




F39837 S0000132479_V1

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

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 301 001 00 | ANTI-ICE WING (EICAS ADVISORY) | 23-41001 | 23-93 TASK 819 |
| | | 23-41002 | 23-93 TASK 844 |
| | | 23-41100 | 23-93 TASK 803 |
| | | 23-42001 | 23-93 TASK 841 |
| | | 23-42002 | 23-93 TASK 845 |
| | | 23-42100 | 23-93 TASK 804 |
| | | 23-43100 | 30-11 TASK 803 |
| | | 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 |
| | | 23-48801 | 23-93 TASK 881 |
| | | 23-48802 | 23-93 TASK 806 |
| | | 23-48841 | 23-93 TASK 819 |
| | | 23-48842 | 23-93 TASK 841 |
| | | 23-48861 | 23-93 TASK 844 |
| | | 23-48862 | 23-93 TASK 845 |
| | | 23-81004 | 23-91 TASK 804 |
| | | 23-81006 | 23-91 TASK 806 |
| | | 23-91010 | 23-93 TASK 816 |
| | | 23-91020 | 23-93 TASK 878 |
| | | 23-92010 | 23-93 TASK 879 |
| | | 23-92020 | 23-93 TASK 880 |
| | | 24-12056 | 24-32 TASK 820 |
| | | 24-13815 | 24-61 TASK 806 |
| | | 30-10003 | 30-11 TASK 804 |
| | | 30-10280 | 30-11 TASK 808 |
| | | 30-10310 | 30-11 TASK 809 |
| | | 30-10320 | 30-11 TASK 802 |
| | | 30-10340 | 30-11 TASK 811 |
| | | 30-10370 | 30-11 TASK 813 |
| | | 30-10610 | 36-11 TASK 810 |
| | | 30-10620 | 36-11 TASK 810 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 301 001 00 | ANTI-ICE WING (EICAS ADVISORY) | (continued) | |
| | | 30-10982 | 30-11 TASK 814 |
| | | 30-18893 | 30-11 TASK 815 |
| | | 31-14013 | 31-09 TASK 814 |
| | | 31-14014 | 31-09 TASK 815 |
| | | 31-14016 | 31-09 TASK 817 |
| | | 31-14018 | 31-09 TASK 818 |
| | | 31-17437 | 31-09 TASK 835 |
| | | 31-17478 | 31-10 TASK 825 |
| | | 31-17482 | 31-10 TASK 827 |
| | | 31-17639 | 31-10 TASK 814 |
| | | 31-17680 | 31-10 TASK 851 |
| | | 31-17684 | 31-10 TASK 853 |
| | | 31-17918 | 31-07 TASK 813 |
| | | 31-17920 | 31-07 TASK 814 |
| | | 31-18802 | 31-08 TASK 811 |
| | | 31-18804 | 31-08 TASK 813 |
| | | 31-18842 | 31-08 TASK 814 |
| | | 31-18864 | 31-08 TASK 817 |
| | | 31-54013 | 31-43 TASK 868 |
| | | 31-54014 | 31-43 TASK 869 |
| | | 31-54121 | 31-41 TASK 838 |
| | | 31-54122 | 31-41 TASK 839 |
| | | 31-58013 | 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 |
| | | 31-69493 | 31-42 TASK 851 |
| | | 31-69494 | 31-42 TASK 851 |
| | | 31-69601 | 31-42 TASK 857 |
| | | 31-69602 | 31-42 TASK 857 |
| | | 31-69693 | 31-42 TASK 878 |
| | | 31-69694 | 31-42 TASK 878 |
| | | 36-10200 | 36-11 TASK 810 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 301 001 00 | ANTI-ICE WING (EICAS ADVISORY) | (continued) | |
| | | 36-10340 | 36-11 TASK 810 |
| | | 36-10345 | 36-11 TASK 810 |
| | | 36-14001 | 36-11 TASK 831 |
| | | 36-14002 | 36-11 TASK 832 |
| | | 36-14003 | 36-11 TASK 833 |
| | | 36-14004 | 36-11 TASK 834 |
| | | NONE | 31-09 TASK 840 |
| 301 011 41 | WAI VALVE L (EICAS STATUS) | 30-10280 | 30-11 TASK 808 |
| | | 30-10320 | 30-11 TASK 802 |
| | | 30-10330 | 30-11 TASK 810 |
| 301 011 42 | WAI VALVE R (EICAS STATUS) | 30-10310 | 30-11 TASK 809 |
| | | 30-10340 | 30-11 TASK 811 |
| | | 30-10350 | 30-11 TASK 812 |
| 301 021 41 | WAI PRESS SENSOR L (EICAS STATUS) | 30-10160 | 30-11 TASK 801 |
| | | 30-10200 | 30-11 TASK 805 |
| | | 30-10370 | 30-11 TASK 813 |
| 301 021 42 | WAI PRESS SENSOR R (EICAS STATUS) | 30-10220 | 30-11 TASK 806 |
| | | 30-10250 | 30-11 TASK 807 |
| | | 30-10370 | 30-11 TASK 813 |
| 301 031 00 | WAI CARD (EICAS STATUS) | 23-41001 | 23-93 TASK 819 |
| | | 23-41002 | 23-93 TASK 844 |
| | | 23-41100 | 23-93 TASK 803 |
| | | 23-42001 | 23-93 TASK 841 |
| | | 23-42002 | 23-93 TASK 845 |
| | | 23-42100 | 23-93 TASK 804 |
| | | 23-43100 | 30-11 TASK 803 |
| | | 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 |
| | | 23-48801 | 23-93 TASK 881 |
| | | 23-48802 | 23-93 TASK 806 |
| | | 23-48841 | 23-93 TASK 819 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 301 031 00 | WAI CARD (EICAS STATUS) | (continued) | |
| | | 23-48842 | 23-93 TASK 841 |
| | | 23-48861 | 23-93 TASK 844 |
| | | 23-48862 | 23-93 TASK 845 |
| | | 23-81004 | 23-91 TASK 804 |
| | | 23-81006 | 23-91 TASK 806 |
| | | 23-91010 | 23-93 TASK 816 |
| | | 23-91020 | 23-93 TASK 878 |
| | | 23-92010 | 23-93 TASK 879 |
| | | 23-92020 | 23-93 TASK 880 |
| | | 24-12056 | 24-32 TASK 820 |
| | | 24-13815 | 24-61 TASK 806 |
| | | 30-10003 | 30-11 TASK 804 |
| | | 30-10370 | 30-11 TASK 813 |
| | | 30-10982 | 30-11 TASK 814 |
| | | 30-18893 | 30-11 TASK 815 |
| | | 30-19906 | 30-11 TASK 816 |
| | | 30-19909 | 30-11 TASK 817 |
| | | 31-14013 | 31-09 TASK 814 |
| | | 31-14014 | 31-09 TASK 815 |
| | | 31-14016 | 31-09 TASK 817 |
| | | 31-14018 | 31-09 TASK 818 |
| | | 31-17437 | 31-09 TASK 835 |
| | | 31-17478 | 31-10 TASK 825 |
| | | 31-17482 | 31-10 TASK 827 |
| | | 31-17639 | 31-10 TASK 814 |
| | | 31-17680 | 31-10 TASK 851 |
| | | 31-17684 | 31-10 TASK 853 |
| | | 31-17918 | 31-07 TASK 813 |
| | | 31-17920 | 31-07 TASK 814 |
| | | 31-18802 | 31-08 TASK 811 |
| | | 31-18804 | 31-08 TASK 813 |
| | | 31-18842 | 31-08 TASK 814 |
| | | 31-18864 | 31-08 TASK 817 |
| | | 31-18892 | 31-08 TASK 819 |
| | | 31-18894 | 31-08 TASK 821 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 301 031 00 | WAI CARD (EICAS STATUS) | (continued) | |
| | | 31-54013 | 31-43 TASK 868 |
| | | 31-54014 | 31-43 TASK 869 |
| | | 31-54121 | 31-41 TASK 838 |
| | | 31-54122 | 31-41 TASK 839 |
| | | 31-58013 | 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 |
| | | 31-69493 | 31-42 TASK 851 |
| | | 31-69494 | 31-42 TASK 851 |
| | | 31-69601 | 31-42 TASK 857 |
| | | 31-69602 | 31-42 TASK 857 |
| | | 31-69693 | 31-42 TASK 878 |
| | | 31-69694 | 31-42 TASK 878 |
| 301 480 41 | Maintenance memo shows on the MAT: EAI CARD L. | 26-30001 | 26-18 TASK 808 |
| | | 26-30003 | 26-18 TASK 810 |
| | | 26-38891 | 26-18 TASK 811 |
| | | 26-38893 | 26-18 TASK 811 |
| | | 30-10171 | 30-21 TASK 804 |
| | | 30-10191 | 30-21 TASK 805 |
| | | 30-10231 | 30-21 TASK 815 |
| | | 30-10261 | 30-21 TASK 817 |
| | | 30-10381 | 30-21 TASK 820 |
| | | 30-10401 | 30-21 TASK 807 |
| | | 30-10991 | 30-21 TASK 824 |
| | | 30-10993 | 30-21 TASK 831 |
| | | 31-14011 | 31-09 TASK 812 |
| | | 31-14012 | 31-09 TASK 813 |
| | | 31-14013 | 31-09 TASK 814 |
| | | 31-14014 | 31-09 TASK 815 |
| | | 31-14015 | 31-09 TASK 816 |
| | | 31-14016 | 31-09 TASK 817 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 301 480 41 | Maintenance memo shows on the MAT: EAI CARD L. | (continued) | |
| | | 31-14017 | 31-09 TASK 818 |
| | | 31-14018 | 31-09 TASK 818 |
| | | 31-17909 | 31-07 TASK 805 |
| | | 31-17911 | 31-07 TASK 807 |
| | | 31-17922 | 31-07 TASK 815 |
| | | 31-17924 | 31-07 TASK 816 |
| 301 480 42 | Maintenance memo shows on the MAT: EAI CARD R. | 26-30002 | 26-18 TASK 809 |
| | | 26-30003 | 26-18 TASK 810 |
| | | 26-38892 | 26-18 TASK 811 |
| | | 26-38893 | 26-18 TASK 811 |
| | | 30-10182 | 30-21 TASK 813 |
| | | 30-10212 | 30-21 TASK 814 |
| | | 30-10242 | 30-21 TASK 816 |
| | | 30-10272 | 30-21 TASK 818 |
| | | 30-10392 | 30-21 TASK 821 |
| | | 30-10402 | 30-21 TASK 822 |
| | | 30-10992 | 30-21 TASK 825 |
| | | 30-10993 | 30-21 TASK 831 |
| | | 31-14013 | 31-09 TASK 814 |
| | | 31-14014 | 31-09 TASK 815 |
| | | 31-14016 | 31-09 TASK 817 |
| | | 31-14018 | 31-09 TASK 818 |
| | | 31-17910 | 31-07 TASK 806 |
| | | 31-17912 | 31-07 TASK 808 |
| | | 31-17922 | 31-07 TASK 815 |
| | | 31-17924 | 31-07 TASK 816 |
| 302 001 41 | ANTI-ICE LOSS ENG L (EICAS ADVISORY) | 26-32103 | 26-18 TASK 805 |
| | | 26-38101 | 26-18 TASK 805 |
| | | NONE | 30-21 TASK 832 |
| 302 001 42 | ANTI-ICE LOSS ENG R (EICAS ADVISORY) | 26-31003 | 26-18 TASK 805 |
| | | 26-34102 | 26-18 TASK 805 |
| | | NONE | 30-21 TASK 832 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 302 011 41 | ANTI-ICE ENG L (EICAS ADVISORY) | 23-41001 | 23-93 TASK 819 |
| | | 23-41002 | 23-93 TASK 844 |
| | | 23-41550 | 23-93 TASK 801 |
| | | 23-42001 | 23-93 TASK 841 |
| | | 23-42002 | 23-93 TASK 845 |
| | | 23-42550 | 23-93 TASK 802 |
| | | 23-43550 | 30-21 TASK 809 |
| | | 23-45010 | 23-93 TASK 881 |
| | | 23-46010 | 23-93 TASK 806 |
| | | 23-47010 | 23-93 TASK 801 |
| | | 23-47020 | 23-93 TASK 802 |
| | | 23-48801 | 23-93 TASK 881 |
| | | 23-48802 | 23-93 TASK 806 |
| | | 23-48841 | 23-93 TASK 819 |
| | | 23-48842 | 23-93 TASK 841 |
| | | 23-48861 | 23-93 TASK 844 |
| | | 23-48862 | 23-93 TASK 845 |
| | | 23-81004 | 23-91 TASK 804 |
| | | 23-81006 | 23-91 TASK 806 |
| | | 23-91010 | 23-93 TASK 816 |
| | | 23-91020 | 23-93 TASK 878 |
| | | 24-12056 | 24-32 TASK 820 |
| | | 24-13815 | 24-61 TASK 806 |
| | | 30-10101 | 30-21 TASK 802 |
| | | 30-10291 | 30-21 TASK 806 |
| | | 30-10381 | 30-21 TASK 820 |
| | | 30-10981 | 30-21 TASK 823 |
| | | 30-18891 | 30-21 TASK 808 |
| | | 31-14011 | 31-09 TASK 812 |
| | | 31-14012 | 31-09 TASK 813 |
| | | 31-14015 | 31-09 TASK 816 |
| | | 31-14017 | 31-09 TASK 818 |
| | | 31-17438 | 31-09 TASK 836 |
| | | 31-17477 | 31-10 TASK 824 |
| | | 31-17481 | 31-10 TASK 826 |
| | | 31-17640 | 31-10 TASK 815 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 302 011 41 | ANTI-ICE ENG L (EICAS ADVISORY) | (continued) | |
| | | 31-17679 | 31-10 TASK 850 |
| | | 31-17683 | 31-10 TASK 852 |
| | | 31-17913 | 31-07 TASK 809 |
| | | 31-17915 | 31-07 TASK 811 |
| | | 31-18801 | 31-08 TASK 810 |
| | | 31-18803 | 31-08 TASK 812 |
| | | 31-18841 | 31-08 TASK 814 |
| | | 31-18863 | 31-08 TASK 816 |
| | | 31-54013 | 31-43 TASK 868 |
| | | 31-54014 | 31-43 TASK 869 |
| | | 31-54121 | 31-41 TASK 838 |
| | | 31-54122 | 31-41 TASK 839 |
| | | 31-58013 | 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 |
| | | 31-69491 | 31-42 TASK 851 |
| | | 31-69492 | 31-42 TASK 851 |
| | | 31-69601 | 31-42 TASK 857 |
| | | 31-69602 | 31-42 TASK 857 |
| | | 31-69691 | 31-42 TASK 878 |
| | | 31-69692 | 31-42 TASK 878 |
| | | NONE | 31-09 TASK 837 |
| 302 011 42 | ANTI-ICE ENG R (EICAS ADVISORY) | 23-41001 | 23-93 TASK 819 |
| | | 23-41002 | 23-93 TASK 844 |
| | | 23-41900 | 23-93 TASK 803 |
| | | 23-42001 | 23-93 TASK 841 |
| | | 23-42002 | 23-93 TASK 845 |
| | | 23-42900 | 23-93 TASK 804 |
| | | 23-43900 | 30-21 TASK 810 |
| | | 23-45010 | 23-93 TASK 881 |
| | | 23-46010 | 23-93 TASK 806 |
| | | 23-47010 | 23-93 TASK 801 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 302 011 42 | ANTI-ICE ENG R (EICAS ADVISORY) | (continued) | |
| | | 23-47020 | 23-93 TASK 802 |
| | | 23-48010 | 23-93 TASK 803 |
| | | 23-48020 | 23-93 TASK 804 |
| | | 23-48801 | 23-93 TASK 881 |
| | | 23-48802 | 23-93 TASK 806 |
| | | 23-48841 | 23-93 TASK 819 |
| | | 23-48842 | 23-93 TASK 841 |
| | | 23-48861 | 23-93 TASK 844 |
| | | 23-48862 | 23-93 TASK 845 |
| | | 23-81004 | 23-91 TASK 804 |
| | | 23-81006 | 23-91 TASK 806 |
| | | 23-91010 | 23-93 TASK 816 |
| | | 23-91020 | 23-93 TASK 878 |
| | | 23-92010 | 23-93 TASK 879 |
| | | 23-92020 | 23-93 TASK 880 |
| | | 24-12056 | 24-32 TASK 820 |
| | | 24-13815 | 24-61 TASK 806 |
| | | 30-10112 | 30-21 TASK 802 |
| | | 30-10302 | 30-21 TASK 819 |
| | | 30-10392 | 30-21 TASK 821 |
| | | 30-10981 | 30-21 TASK 823 |
| | | 30-18892 | 30-21 TASK 826 |
| | | 31-14013 | 31-09 TASK 814 |
| | | 31-14014 | 31-09 TASK 815 |
| | | 31-14016 | 31-09 TASK 817 |
| | | 31-14018 | 31-09 TASK 818 |
| | | 31-17437 | 31-09 TASK 835 |
| | | 31-17478 | 31-10 TASK 825 |
| | | 31-17482 | 31-10 TASK 827 |
| | | 31-17639 | 31-10 TASK 814 |
| | | 31-17680 | 31-10 TASK 851 |
| | | 31-17684 | 31-10 TASK 853 |
| | | 31-17914 | 31-07 TASK 810 |
| | | 31-17916 | 31-07 TASK 812 |
| | | 31-18802 | 31-08 TASK 811 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 302 011 42 | ANTI-ICE ENG R (EICAS ADVISORY) | (continued) | |
| | | 31-18804 | 31-08 TASK 813 |
| | | 31-18842 | 31-08 TASK 814 |
| | | 31-18864 | 31-08 TASK 817 |
| | | 31-54013 | 31-43 TASK 868 |
| | | 31-54014 | 31-43 TASK 869 |
| | | 31-54121 | 31-41 TASK 838 |
| | | 31-54122 | 31-41 TASK 839 |
| | | 31-58013 | 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 |
| | | 31-69493 | 31-42 TASK 851 |
| | | 31-69494 | 31-42 TASK 851 |
| | | 31-69601 | 31-42 TASK 857 |
| | | 31-69602 | 31-42 TASK 857 |
| | | 31-69693 | 31-42 TASK 878 |
| | | 31-69694 | 31-42 TASK 878 |
| | | NONE | 31-09 TASK 840 |
| 302 021 41 | EAI VALVE L (EICAS STATUS) | 26-32103 | 26-18 TASK 805 |
| | | 26-38101 | 26-18 TASK 805 |
| | | 30-10101 | 30-21 TASK 802 |
| | | 30-10121 | 30-21 TASK 803 |
| | | 30-10291 | 30-21 TASK 806 |
| 302 021 42 | EAI VALVE R (EICAS STATUS) | 26-31003 | 26-18 TASK 805 |
| | | 26-34102 | 26-18 TASK 805 |
| | | 30-10112 | 30-21 TASK 802 |
| | | 30-10132 | 30-21 TASK 812 |
| | | 30-10302 | 30-21 TASK 819 |
| 302 031 41 | EAI PRESS SENSOR L (EICAS STATUS) | 30-10171 | 30-21 TASK 804 |
| | | 30-10191 | 30-21 TASK 805 |
| | | 30-10231 | 30-21 TASK 815 |
| | | 30-10261 | 30-21 TASK 817 |
| | | 30-10381 | 30-21 TASK 820 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 302 031 42 | EAI PRESS SENSOR R (EICAS STATUS) | 30-10182 | 30-21 TASK 813 |
| | | 30-10212 | 30-21 TASK 814 |
| | | 30-10242 | 30-21 TASK 816 |
| | | 30-10272 | 30-21 TASK 818 |
| | | 30-10392 | 30-21 TASK 821 |
| 302 051 41 | EAI CARD L (EICAS STATUS) | 23-41001 | 23-93 TASK 819 |
| | | 23-41002 | 23-93 TASK 844 |
| | | 23-41550 | 23-93 TASK 801 |
| | | 23-42001 | 23-93 TASK 841 |
| | | 23-42002 | 23-93 TASK 845 |
| | | 23-42550 | 23-93 TASK 802 |
| | | 23-43550 | 30-21 TASK 809 |
| | | 23-45010 | 23-93 TASK 881 |
| | | 23-46010 | 23-93 TASK 806 |
| | | 23-47010 | 23-93 TASK 801 |
| | | 23-47020 | 23-93 TASK 802 |
| | | 23-48801 | 23-93 TASK 881 |
| | | 23-48802 | 23-93 TASK 806 |
| | | 23-48841 | 23-93 TASK 819 |
| | | 23-48842 | 23-93 TASK 841 |
| | | 23-48861 | 23-93 TASK 844 |
| | | 23-48862 | 23-93 TASK 845 |
| | | 23-81004 | 23-91 TASK 804 |
| | | 23-81006 | 23-91 TASK 806 |
| | | 23-91010 | 23-93 TASK 816 |
| | | 23-91020 | 23-93 TASK 878 |
| | | 24-12056 | 24-32 TASK 820 |
| | | 24-13815 | 24-61 TASK 806 |
| | | 26-30001 | 26-18 TASK 808 |
| | | 26-30003 | 26-18 TASK 810 |
| | | 26-38891 | 26-18 TASK 811 |
| | | 26-38893 | 26-18 TASK 811 |
| | | 30-10001 | 30-21 TASK 801 |
| | | 30-10381 | 30-21 TASK 820 |
| | | 30-10981 | 30-21 TASK 823 |
| | | 30-10991 | 30-21 TASK 824 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 302 051 41 | EAI CARD L (EICAS STATUS) | (continued) | |
| | | 30-10993 | 30-21 TASK 831 |
| | | 30-18891 | 30-21 TASK 808 |
| | | 30-19904 | 30-21 TASK 827 |
| | | 30-19907 | 30-21 TASK 829 |
| | | 31-14011 | 31-09 TASK 812 |
| | | 31-14012 | 31-09 TASK 813 |
| | | 31-14013 | 31-09 TASK 814 |
| | | 31-14014 | 31-09 TASK 815 |
| | | 31-14015 | 31-09 TASK 816 |
| | | 31-14016 | 31-09 TASK 817 |
| | | 31-14017 | 31-09 TASK 818 |
| | | 31-14018 | 31-09 TASK 818 |
| | | 31-17438 | 31-09 TASK 836 |
| | | 31-17477 | 31-10 TASK 824 |
| | | 31-17481 | 31-10 TASK 826 |
| | | 31-17640 | 31-10 TASK 815 |
| | | 31-17679 | 31-10 TASK 850 |
| | | 31-17683 | 31-10 TASK 852 |
| | | 31-17909 | 31-07 TASK 805 |
| | | 31-17911 | 31-07 TASK 807 |
| | | 31-17913 | 31-07 TASK 809 |
| | | 31-17915 | 31-07 TASK 811 |
| | | 31-17922 | 31-07 TASK 815 |
| | | 31-17924 | 31-07 TASK 816 |
| | | 31-18801 | 31-08 TASK 810 |
| | | 31-18803 | 31-08 TASK 812 |
| | | 31-18841 | 31-08 TASK 814 |
| | | 31-18863 | 31-08 TASK 816 |
| | | 31-18891 | 31-08 TASK 818 |
| | | 31-18893 | 31-08 TASK 820 |
| | | 31-54013 | 31-43 TASK 868 |
| | | 31-54014 | 31-43 TASK 869 |
| | | 31-54121 | 31-41 TASK 838 |
| | | 31-54122 | 31-41 TASK 839 |
| | | 31-58013 | 31-43 TASK 872 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 302 051 41 | EAI CARD L (EICAS STATUS) | (continued) | |
| | | 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 |
| | | 31-69491 | 31-42 TASK 851 |
| | | 31-69492 | 31-42 TASK 851 |
| | | 31-69601 | 31-42 TASK 857 |
| | | 31-69602 | 31-42 TASK 857 |
| | | 31-69691 | 31-42 TASK 878 |
| | | 31-69692 | 31-42 TASK 878 |
| 302 051 42 | EAI CARD R (EICAS STATUS) | 23-41001 | 23-93 TASK 819 |
| | | 23-41002 | 23-93 TASK 844 |
| | | 23-41900 | 23-93 TASK 803 |
| | | 23-42001 | 23-93 TASK 841 |
| | | 23-42002 | 23-93 TASK 845 |
| | | 23-42900 | 23-93 TASK 804 |
| | | 23-43900 | 30-21 TASK 810 |
| | | 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 |
| | | 23-48801 | 23-93 TASK 881 |
| | | 23-48802 | 23-93 TASK 806 |
| | | 23-48841 | 23-93 TASK 819 |
| | | 23-48842 | 23-93 TASK 841 |
| | | 23-48861 | 23-93 TASK 844 |
| | | 23-48862 | 23-93 TASK 845 |
| | | 23-81004 | 23-91 TASK 804 |
| | | 23-81006 | 23-91 TASK 806 |
| | | 23-91010 | 23-93 TASK 816 |
| | | 23-91020 | 23-93 TASK 878 |
| | | 23-92010 | 23-93 TASK 879 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 302 051 42 | EAI CARD R (EICAS STATUS) | (continued) | |
| | | 23-92020 | 23-93 TASK 880 |
| | | 24-12051 | 24-32 TASK 819 |
| | | 24-12056 | 24-32 TASK 820 |
| | | 24-13815 | 24-61 TASK 806 |
| | | 26-30002 | 26-18 TASK 809 |
| | | 26-30003 | 26-18 TASK 810 |
| | | 26-38892 | 26-18 TASK 811 |
| | | 26-38893 | 26-18 TASK 811 |
| | | 30-10002 | 30-21 TASK 811 |
| | | 30-10392 | 30-21 TASK 821 |
| | | 30-10981 | 30-21 TASK 823 |
| | | 30-10992 | 30-21 TASK 825 |
| | | 30-10993 | 30-21 TASK 831 |
| | | 30-18892 | 30-21 TASK 826 |
| | | 30-19905 | 30-21 TASK 828 |
| | | 30-19908 | 30-21 TASK 830 |
| | | 31-14013 | 31-09 TASK 814 |
| | | 31-14014 | 31-09 TASK 815 |
| | | 31-14016 | 31-09 TASK 817 |
| | | 31-14018 | 31-09 TASK 818 |
| | | 31-17437 | 31-09 TASK 835 |
| | | 31-17478 | 31-10 TASK 825 |
| | | 31-17482 | 31-10 TASK 827 |
| | | 31-17639 | 31-10 TASK 814 |
| | | 31-17680 | 31-10 TASK 851 |
| | | 31-17684 | 31-10 TASK 853 |
| | | 31-17910 | 31-07 TASK 806 |
| | | 31-17912 | 31-07 TASK 808 |
| | | 31-17914 | 31-07 TASK 810 |
| | | 31-17916 | 31-07 TASK 812 |
| | | 31-17922 | 31-07 TASK 815 |
| | | 31-17924 | 31-07 TASK 816 |
| | | 31-18802 | 31-08 TASK 811 |
| | | 31-18804 | 31-08 TASK 813 |
| | | 31-18842 | 31-08 TASK 814 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 302 051 42 | EAI CARD R (EICAS STATUS) | (continued) | |
| | | 31-18864 | 31-08 TASK 817 |
| | | 31-18892 | 31-08 TASK 819 |
| | | 31-18894 | 31-08 TASK 821 |
| | | 31-54013 | 31-43 TASK 868 |
| | | 31-54014 | 31-43 TASK 869 |
| | | 31-54121 | 31-41 TASK 838 |
| | | 31-54122 | 31-41 TASK 839 |
| | | 31-58013 | 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 |
| | | 31-69493 | 31-42 TASK 851 |
| | | 31-69494 | 31-42 TASK 851 |
| | | 31-69601 | 31-42 TASK 857 |
| | | 31-69602 | 31-42 TASK 857 |
| | | 31-69693 | 31-42 TASK 878 |
| | | 31-69694 | 31-42 TASK 878 |
| 303 001 00 | HEAT PITOT L+C+R (EICAS ADVISORY) | 23-81001 | 23-91 TASK 801 |
| | | 23-81002 | 23-91 TASK 802 |
| | | 23-81003 | 23-91 TASK 803 |
| | | 24-11784 | 24-51 TASK 836 |
| | | 24-12124 | 24-51 TASK 840 |
| | | 24-12125 | 24-51 TASK 841 |
| | | 24-12126 | 24-51 TASK 841 |
| | | 24-12127 | 24-51 TASK 842 |
| | | 27-14018 | 27-02 TASK 813 |
| | | 27-14019 | 27-02 TASK 941 |
| | | 27-14020 | 27-02 TASK 942 |
| | | 27-14025 | 27-02 TASK 943 |
| | | 27-14026 | 27-02 TASK 944 |
| | | 27-14027 | 27-02 TASK 945 |
| | | 27-14030 | 27-02 TASK 905 |
| | | 27-14031 | 27-02 TASK 906 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 303 001 00 | HEAT PITOT L+C+R (EICAS ADVISORY) | (continued) | |
| | | 27-14032 | 27-02 TASK 907 |
| | | 27-14033 | 27-02 TASK 908 |
| | | 27-15100 | 27-02 TASK 946 |
| | | 27-15101 | 27-02 TASK 947 |
| | | 27-15102 | 27-02 TASK 948 |
| | | 27-18811 | 27-02 TASK 901 |
| | | 27-18822 | 27-02 TASK 919 |
| | | 27-18833 | 27-02 TASK 920 |
| | | 27-19101 | 27-02 TASK 974 |
| | | 27-19201 | 27-02 TASK 979 |
| | | 27-19301 | 27-02 TASK 983 |
| | | 30-36121 | 30-31 TASK 801 |
| | | 30-36122 | 30-31 TASK 802 |
| | | 30-36123 | 30-31 TASK 803 |
| | | 30-36641 | 30-31 TASK 807 |
| | | 30-36642 | 30-31 TASK 808 |
| | | 30-36643 | 30-31 TASK 809 |
| | | 34-29115 | 34-21 TASK 857 |
| | | 34-29216 | 34-21 TASK 862 |
| | | 34-29317 | 34-21 TASK 869 |
| 303 001 41 | HEAT PITOT L (EICAS ADVISORY) | 23-81001 | 23-91 TASK 801 |
| | | 24-11784 | 24-51 TASK 836 |
| | | 27-14018 | 27-02 TASK 813 |
| | | 27-14025 | 27-02 TASK 943 |
| | | 27-14030 | 27-02 TASK 905 |
| | | 27-14031 | 27-02 TASK 906 |
| | | 27-15100 | 27-02 TASK 946 |
| | | 27-18811 | 27-02 TASK 901 |
| | | 27-19101 | 27-02 TASK 974 |
| | | 30-36121 | 30-31 TASK 801 |
| | | 30-36641 | 30-31 TASK 807 |
| | | 34-29115 | 34-21 TASK 857 |
| 303 001 42 | HEAT PITOT R (EICAS ADVISORY) | 23-81003 | 23-91 TASK 803 |
| | | 24-12124 | 24-51 TASK 840 |
| | | 24-12127 | 24-51 TASK 842 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 303 001 42 | HEAT PITOT R (EICAS ADVISORY) | (continued) | |
| | | 27-14020 | 27-02 TASK 942 |
| | | 27-14027 | 27-02 TASK 945 |
| | | 27-14030 | 27-02 TASK 905 |
| | | 27-14033 | 27-02 TASK 908 |
| | | 27-15102 | 27-02 TASK 948 |
| | | 27-18833 | 27-02 TASK 920 |
| | | 27-19301 | 27-02 TASK 983 |
| | | 30-36123 | 30-31 TASK 803 |
| | | 30-36643 | 30-31 TASK 809 |
| | | 34-29317 | 34-21 TASK 869 |
| 303 001 43 | HEAT PITOT C (EICAS ADVISORY) | 23-81002 | 23-91 TASK 802 |
| | | 24-12125 | 24-51 TASK 841 |
| | | 24-12126 | 24-51 TASK 841 |
| | | 27-14019 | 27-02 TASK 941 |
| | | 27-14026 | 27-02 TASK 944 |
| | | 27-14030 | 27-02 TASK 905 |
| | | 27-14032 | 27-02 TASK 907 |
| | | 27-15101 | 27-02 TASK 947 |
| | | 27-18822 | 27-02 TASK 919 |
| | | 27-19201 | 27-02 TASK 979 |
| | | 30-36122 | 30-31 TASK 802 |
| | | 30-36642 | 30-31 TASK 808 |
| | | 34-26102 | 34-21 TASK 839 |
| | | 34-28824 | 34-21 TASK 850 |
| | | 34-29201 | 34-21 TASK 858 |
| | | 34-29202 | 34-21 TASK 859 |
| | | 34-29216 | 34-21 TASK 862 |
| | | 34-39201 | 34-21 TASK 871 |
| | | 34-39204 | 34-21 TASK 876 |
| 303 011 41 | HEAT PITOT L (EICAS STATUS) | 23-81001 | 23-91 TASK 801 |
| | | 24-11784 | 24-51 TASK 836 |
| | | 27-14018 | 27-02 TASK 813 |
| | | 27-14025 | 27-02 TASK 943 |
| | | 27-14030 | 27-02 TASK 905 |
| | | 27-14031 | 27-02 TASK 906 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 303 011 41 | HEAT PITOT L (EICAS STATUS) | (continued) | |
| | | 27-15100 | 27-02 TASK 946 |
| | | 27-18811 | 27-02 TASK 901 |
| | | 27-19101 | 27-02 TASK 974 |
| | | 30-36121 | 30-31 TASK 801 |
| | | 30-36641 | 30-31 TASK 807 |
| | | 34-29115 | 34-21 TASK 857 |
| 303 011 42 | HEAT PITOT R (EICAS STATUS) | 23-81003 | 23-91 TASK 803 |
| | | 24-12124 | 24-51 TASK 840 |
| | | 24-12127 | 24-51 TASK 842 |
| | | 27-14020 | 27-02 TASK 942 |
| | | 27-14027 | 27-02 TASK 945 |
| | | 27-14030 | 27-02 TASK 905 |
| | | 27-14033 | 27-02 TASK 908 |
| | | 27-15102 | 27-02 TASK 948 |
| | | 27-18833 | 27-02 TASK 920 |
| | | 27-19301 | 27-02 TASK 983 |
| | | 30-36123 | 30-31 TASK 803 |
| | | 30-36643 | 30-31 TASK 809 |
| | | 34-29317 | 34-21 TASK 869 |
| 303 011 43 | HEAT PITOT C (EICAS STATUS) | 23-81002 | 23-91 TASK 802 |
| | | 24-12125 | 24-51 TASK 841 |
| | | 24-12126 | 24-51 TASK 841 |
| | | 27-14019 | 27-02 TASK 941 |
| | | 27-14026 | 27-02 TASK 944 |
| | | 27-14030 | 27-02 TASK 905 |
| | | 27-14032 | 27-02 TASK 907 |
| | | 27-15101 | 27-02 TASK 947 |
| | | 27-18822 | 27-02 TASK 919 |
| | | 27-19201 | 27-02 TASK 979 |
| | | 30-36122 | 30-31 TASK 802 |
| | | 30-36642 | 30-31 TASK 808 |
| | | 34-29216 | 34-21 TASK 862 |
| 303 021 00 | HEAT TAT (EICAS STATUS) | 24-11781 | 24-51 TASK 837 |
| | | 24-11786 | 24-51 TASK 833 |
| | | 24-12124 | 24-51 TASK 840 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 303 021 00 | HEAT TAT (EICAS STATUS) | (continued) | |
| | | 24-12127 | 24-51 TASK 842 |
| | | 30-37110 | 30-31 TASK 811 |
| | | 30-37113 | 30-31 TASK 817 |
| | | 30-37120 | 30-31 TASK 814 |
| | | 30-37123 | 30-31 TASK 817 |
| | | 30-37126 | 30-31 TASK 820 |
| | | 30-37127 | 30-31 TASK 821 |
| 304 001 00 | WINDOW HEAT (EICAS ADVISORY) | | 30-41 TASK 840 |
| 304 011 41 | WINDOW HEAT L FWD (EICAS ADVISORY) | 24-11784 | 24-51 TASK 836 |
| | | 30-21001 | 30-41 TASK 801 |
| | | 30-21011 | 30-41 TASK 803 |
| | | 30-21031 | 30-41 TASK 805 |
| | | 30-21051 | 30-41 TASK 807 |
| | | 30-22021 | 30-41 TASK 811 |
| | | 30-23012 | 30-41 TASK 820 |
| | | 30-24011 | 30-41 TASK 827 |
| | | 30-25001 | 30-41 TASK 833 |
| 304 011 42 | WINDOW HEAT R FWD (EICAS ADVISORY) | 24-12127 | 24-51 TASK 842 |
| | | 30-21002 | 30-41 TASK 802 |
| | | 30-21012 | 30-41 TASK 804 |
| | | 30-21032 | 30-41 TASK 806 |
| | | 30-21052 | 30-41 TASK 808 |
| | | 30-22022 | 30-41 TASK 812 |
| | | 30-23011 | 30-41 TASK 819 |
| | | 30-24012 | 30-41 TASK 828 |
| | | 30-25002 | 30-41 TASK 834 |
| 304 012 41 | WINDOW HEAT L FWD (EICAS STATUS)<br>Before you do any task listed here, see FIM 30-98 TASK 803.<br>**NOTE:** AIMS CAN LATCH THIS MESSAGE. | | |
| | | 24-11784 | 24-51 TASK 836 |
| | | 30-21001 | 30-41 TASK 801 |
| | | 30-21011 | 30-41 TASK 803 |
| | | 30-21031 | 30-41 TASK 805 |
| | | 30-21051 | 30-41 TASK 807 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 304 012 41 | WINDOW HEAT L FWD (EICAS STATUS)<br>Before you do any task listed here, see FIM 30-98 TASK 803.<br>**NOTE:** AIMS CAN LATCH THIS MESSAGE. | (continued) | |
| | | 30-22021 | 30-41 TASK 811 |
| | | 30-23012 | 30-41 TASK 820 |
| | | 30-24011 | 30-41 TASK 827 |
| | | 30-25001 | 30-41 TASK 833 |
| 304 012 42 | WINDOW HEAT R FWD (EICAS STATUS)<br>Before you do any task listed here, see FIM 30-98 TASK 803.<br>**NOTE:** AIMS CAN LATCH THIS MESSAGE. | | |
| | | 24-12127 | 24-51 TASK 842 |
| | | 30-21002 | 30-41 TASK 802 |
| | | 30-21012 | 30-41 TASK 804 |
| | | 30-21032 | 30-41 TASK 806 |
| | | 30-21052 | 30-41 TASK 808 |
| | | 30-22022 | 30-41 TASK 812 |
| | | 30-23011 | 30-41 TASK 819 |
| | | 30-24012 | 30-41 TASK 828 |
| | | 30-25002 | 30-41 TASK 834 |
| 304 021 41 | WINDOW HEAT L SIDE (EICAS ADVISORY) | 24-12127 | 24-51 TASK 842 |
| | | 24-12128 | 24-51 TASK 843 |
| | | 30-21012 | 30-41 TASK 804 |
| | | 30-22002 | 30-41 TASK 810 |
| | | 30-22022 | 30-41 TASK 812 |
| | | 30-22032 | 30-41 TASK 814 |
| | | 30-22052 | 30-41 TASK 816 |
| | | 30-23011 | 30-41 TASK 819 |
| | | 30-24012 | 30-41 TASK 828 |
| | | 30-25002 | 30-41 TASK 834 |
| 304 021 42 | WINDOW HEAT R SIDE (EICAS ADVISORY) | 24-11782 | 24-51 TASK 838 |
| | | 24-11786 | 24-51 TASK 833 |
| | | 30-21011 | 30-41 TASK 803 |
| | | 30-22001 | 30-41 TASK 809 |
| | | 30-22021 | 30-41 TASK 811 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 304 021 42 | WINDOW HEAT R SIDE (EICAS ADVISORY) | (continued) | |
| | | 30-22031 | 30-41 TASK 813 |
| | | 30-22051 | 30-41 TASK 815 |
| | | 30-23012 | 30-41 TASK 820 |
| | | 30-24011 | 30-41 TASK 827 |
| | | 30-25001 | 30-41 TASK 833 |
| 304 022 41 | WINDOW HEAT L SIDE (EICAS STATUS)<br>Before you do any task listed here, see FIM 30-98 TASK 803.<br>**NOTE:** AIMS CAN LATCH THIS MESSAGE. | | |
| | | 24-12127 | 24-51 TASK 842 |
| | | 24-12128 | 24-51 TASK 843 |
| | | 30-21012 | 30-41 TASK 804 |
| | | 30-22002 | 30-41 TASK 810 |
| | | 30-22022 | 30-41 TASK 812 |
| | | 30-22032 | 30-41 TASK 814 |
| | | 30-22052 | 30-41 TASK 816 |
| | | 30-23011 | 30-41 TASK 819 |
| | | 30-24012 | 30-41 TASK 828 |
| | | 30-25002 | 30-41 TASK 834 |
| 304 022 42 | WINDOW HEAT R SIDE (EICAS STATUS)<br>Before you do any task listed here, see FIM 30-98 TASK 803.<br>**NOTE:** AIMS CAN LATCH THIS MESSAGE. | | |
| | | 24-11782 | 24-51 TASK 838 |
| | | 24-11786 | 24-51 TASK 833 |
| | | 30-21011 | 30-41 TASK 803 |
| | | 30-22001 | 30-41 TASK 809 |
| | | 30-22021 | 30-41 TASK 811 |
| | | 30-22031 | 30-41 TASK 813 |
| | | 30-22051 | 30-41 TASK 815 |
| | | 30-23012 | 30-41 TASK 820 |
| | | 30-24011 | 30-41 TASK 827 |
| | | 30-25001 | 30-41 TASK 833 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 304 031 41 | WINDOW HEAT BACKUP L (EICAS STATUS)<br>Before you do any task listed here, see FIM 30-98 TASK 803.<br>**NOTE:** AIMS CAN LATCH THIS MESSAGE. | 24-11784 | 24-51 TASK 836 |
| | | 30-21001 | 30-41 TASK 801 |
| | | 30-21011 | 30-41 TASK 803 |
| | | 30-21031 | 30-41 TASK 805 |
| | | 30-21051 | 30-41 TASK 807 |
| | | 30-22021 | 30-41 TASK 811 |
| | | 30-23012 | 30-41 TASK 820 |
| | | 30-24001 | 30-41 TASK 825 |
| | | 30-24011 | 30-41 TASK 827 |
| | | 30-24031 | 30-41 TASK 829 |
| | | 30-24051 | 30-41 TASK 831 |
| | | 30-25001 | 30-41 TASK 833 |
| 304 031 42 | WINDOW HEAT BACKUP R (EICAS STATUS)<br>Before you do any task listed here, see FIM 30-98 TASK 803.<br>**NOTE:** AIMS CAN LATCH THIS MESSAGE. | 24-12127 | 24-51 TASK 842 |
| | | 24-12128 | 24-51 TASK 843 |
| | | 30-21002 | 30-41 TASK 802 |
| | | 30-21012 | 30-41 TASK 804 |
| | | 30-21032 | 30-41 TASK 806 |
| | | 30-21052 | 30-41 TASK 808 |
| | | 30-22022 | 30-41 TASK 812 |
| | | 30-23011 | 30-41 TASK 819 |
| | | 30-24002 | 30-41 TASK 826 |
| | | 30-24012 | 30-41 TASK 828 |
| | | 30-24032 | 30-41 TASK 830 |
| | | 30-24052 | 30-41 TASK 832 |
| | | 30-25002 | 30-41 TASK 834 |
| 304 480 41 | Maintenance memo shows on the MAT: WHCU (LEFT). | 24-11784 | 24-51 TASK 836 |
| | | 24-12127 | 24-51 TASK 842 |
| | | 24-12128 | 24-51 TASK 843 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 304 480 41 | Maintenance memo shows on the MAT: WHCU (LEFT). | (continued) | |
| | | 30-21011 | 30-41 TASK 803 |
| | | 30-21012 | 30-41 TASK 804 |
| | | 30-22021 | 30-41 TASK 811 |
| | | 30-22022 | 30-41 TASK 812 |
| | | 30-23011 | 30-41 TASK 819 |
| | | 30-23012 | 30-41 TASK 820 |
| | | 30-24001 | 30-41 TASK 825 |
| | | 30-24002 | 30-41 TASK 826 |
| | | 30-24011 | 30-41 TASK 827 |
| | | 30-24012 | 30-41 TASK 828 |
| | | 30-24031 | 30-41 TASK 829 |
| | | 30-24032 | 30-41 TASK 830 |
| | | 30-24051 | 30-41 TASK 831 |
| | | 30-24052 | 30-41 TASK 832 |
| | | 30-25001 | 30-41 TASK 833 |
| | | 30-25002 | 30-41 TASK 834 |
| | | 30-26001 | 30-41 TASK 841 |
| 304 480 42 | Maintenance memo shows on the MAT: WHCU (RIGHT). | 24-11784 | 24-51 TASK 836 |
| | | 24-12127 | 24-51 TASK 842 |
| | | 24-12128 | 24-51 TASK 843 |
| | | 30-21011 | 30-41 TASK 803 |
| | | 30-21012 | 30-41 TASK 804 |
| | | 30-22021 | 30-41 TASK 811 |
| | | 30-22022 | 30-41 TASK 812 |
| | | 30-23011 | 30-41 TASK 819 |
| | | 30-23012 | 30-41 TASK 820 |
| | | 30-24001 | 30-41 TASK 825 |
| | | 30-24002 | 30-41 TASK 826 |
| | | 30-24011 | 30-41 TASK 827 |
| | | 30-24012 | 30-41 TASK 828 |
| | | 30-24031 | 30-41 TASK 829 |
| | | 30-24032 | 30-41 TASK 830 |
| | | 30-24051 | 30-41 TASK 831 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 304 480 42 | Maintenance memo shows on the MAT: WHCU (RIGHT). | (continued)<br><br>30-24052<br>30-25001<br>30-25002<br>30-26002 | <br><br>30-41 TASK 832<br>30-41 TASK 833<br>30-41 TASK 834<br>30-41 TASK 842 |
| 304 611 02 | Window (flight deck): fogging - left No. 2. | | 30-41 TASK 839 |
| 304 611 03 | Window (flight deck): fogging - left No. 3. | | 30-41 TASK 839 |
| 304 611 12 | Window (flight deck): fogging - right No. 2. | | 30-41 TASK 839 |
| 304 611 13 | Window (flight deck): fogging - right No. 3. | | 30-41 TASK 839 |
| 304 641 41 | Windshield wiper: does not operate with switch set to LOW - left. | | 30-42 TASK 801 |
| 304 641 42 | Windshield wiper: does not operate with switch set to LOW - right. | | 30-42 TASK 802 |
| 304 642 41 | Windshield wiper: does not operate with switch set to HIGH - left. | | 30-42 TASK 803 |
| 304 642 42 | Windshield wiper: does not operate with switch set to HIGH - right. | | 30-42 TASK 804 |
| 304 643 41 | Windshield wiper: does not operate with switch set to INT - left. | | 30-42 TASK 805 |
| 304 643 42 | Windshield wiper: does not operate with switch set to INT - right. | | 30-42 TASK 806 |
| 304 644 41 | Windshield wiper: does not operate with switch in any position - left. | | 30-42 TASK 807 |
| 304 644 42 | Windshield wiper: does not operate with switch in any position - right. | | 30-42 TASK 808 |
| 304 645 41 | Windshield wiper: does not stop with switch set to OFF - left. | | 30-42 TASK 809 |
| 304 645 42 | Windshield wiper: does not stop with switch set to OFF - right. | | 30-42 TASK 810 |
| 304 646 41 | Windshield wiper: does not move to the stowed position - left. | | 30-42 TASK 811 |
| 304 646 42 | Windshield wiper: does not move to the stowed position - right. | | 30-42 TASK 812 |
| 304 647 41 | Windshield wiper: does not wipe cleanly - left. | | 30-42 TASK 813 |
| 304 647 42 | Windshield wiper: does not wipe cleanly - right. | | 30-42 TASK 813 |
| 304 648 41 | Windshield wiper: Blade missing - left. | | 30-42 TASK 814 |
| 304 648 42 | Windshield wiper: Blade missing - right. | | 30-42 TASK 814 |
| 307 811 44 | Drain mast: has ice on it - forward. | | 30-71 TASK 801 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 307 811 45 | Drain mast: has ice on it - aft. | | 30-71 TASK 801 |
| 308 001 00 | ICING ENG (EICAS CAUTION) | | 30-81 TASK 805 |
| 308 002 00 | ICING WING (EICAS ADVISORY) | | 30-81 TASK 806 |
| 308 011 00 | ANTI-ICE ON (EICAS ADVISORY) | | 30-81 TASK 807 |
| 308 021 00 | ICE DETECTORS (EICAS ADVISORY) | 23-81004 | 23-91 TASK 804 |
| | | 23-81006 | 23-91 TASK 806 |
| | | 24-11781 | 24-51 TASK 837 |
| | | 24-11786 | 24-51 TASK 833 |
| | | 24-12051 | 24-32 TASK 819 |
| | | 24-12124 | 24-51 TASK 840 |
| | | 24-12127 | 24-51 TASK 842 |
| | | 24-13815 | 24-61 TASK 806 |
| | | 30-10001 | 30-21 TASK 801 |
| | | 30-10002 | 30-21 TASK 811 |
| | | 30-10041 | 30-81 TASK 801 |
| | | 30-10052 | 30-81 TASK 803 |
| | | 30-10141 | 30-81 TASK 802 |
| | | 30-10152 | 30-81 TASK 804 |
| | | 30-10370 | 30-11 TASK 813 |
| | | 30-10381 | 30-21 TASK 820 |
| | | 30-10392 | 30-21 TASK 821 |
| | | 30-10550 | 30-81 TASK 802 |
| | | 30-10555 | 30-81 TASK 804 |
| | | 30-18891 | 30-21 TASK 808 |
| | | 30-18892 | 30-21 TASK 826 |
| | | 31-14011 | 31-09 TASK 812 |
| | | 31-14012 | 31-09 TASK 813 |
| | | 31-14013 | 31-09 TASK 814 |
| | | 31-14014 | 31-09 TASK 815 |
| | | 31-14015 | 31-09 TASK 816 |
| | | 31-14016 | 31-09 TASK 817 |
| | | 31-14017 | 31-09 TASK 818 |
| | | 31-14018 | 31-09 TASK 818 |
| | | 31-17437 | 31-09 TASK 835 |
| | | 31-17438 | 31-09 TASK 836 |
| | | 31-17639 | 31-10 TASK 814 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 308 021 00 | ICE DETECTORS (EICAS ADVISORY) | (continued) | |
| | | 31-17640 | 31-10 TASK 815 |
| | | 31-17913 | 31-07 TASK 809 |
| | | 31-17914 | 31-07 TASK 810 |
| | | 31-17915 | 31-07 TASK 811 |
| | | 31-17916 | 31-07 TASK 812 |
| | | 31-18801 | 31-08 TASK 810 |
| | | 31-18802 | 31-08 TASK 811 |
| | | 31-18803 | 31-08 TASK 812 |
| | | 31-18804 | 31-08 TASK 813 |
| | | 31-18841 | 31-08 TASK 814 |
| | | 31-18842 | 31-08 TASK 814 |
| | | 31-18863 | 31-08 TASK 816 |
| | | 31-18864 | 31-08 TASK 817 |
| 308 021 41 | ICE DETECTOR L (EICAS STATUS) | 23-81004 | 23-91 TASK 804 |
| | | 23-81006 | 23-91 TASK 806 |
| | | 24-11781 | 24-51 TASK 837 |
| | | 24-11786 | 24-51 TASK 833 |
| | | 24-13815 | 24-61 TASK 806 |
| | | 30-10001 | 30-21 TASK 801 |
| | | 30-10041 | 30-81 TASK 801 |
| | | 30-10141 | 30-81 TASK 802 |
| | | 30-10381 | 30-21 TASK 820 |
| | | 30-10550 | 30-81 TASK 802 |
| | | 30-18891 | 30-21 TASK 808 |
| | | 31-14011 | 31-09 TASK 812 |
| | | 31-14012 | 31-09 TASK 813 |
| | | 31-14015 | 31-09 TASK 816 |
| | | 31-14017 | 31-09 TASK 818 |
| | | 31-17438 | 31-09 TASK 836 |
| | | 31-17640 | 31-10 TASK 815 |
| | | 31-17913 | 31-07 TASK 809 |
| | | 31-17915 | 31-07 TASK 811 |
| | | 31-18801 | 31-08 TASK 810 |
| | | 31-18803 | 31-08 TASK 812 |
| | | 31-18841 | 31-08 TASK 814 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 308 021 41 | ICE DETECTOR L (EICAS STATUS) | (continued) | |
| | | 31-18863 | 31-08 TASK 816 |
| | | 31-54013 | 31-43 TASK 868 |
| | | 31-54014 | 31-43 TASK 869 |
| | | 31-54121 | 31-41 TASK 838 |
| | | 31-54122 | 31-41 TASK 839 |
| | | 31-58013 | 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 |
| | | 31-69491 | 31-42 TASK 851 |
| | | 31-69492 | 31-42 TASK 851 |
| | | 31-69601 | 31-42 TASK 857 |
| | | 31-69602 | 31-42 TASK 857 |
| | | 31-69691 | 31-42 TASK 878 |
| | | 31-69692 | 31-42 TASK 878 |
| 308 021 42 | ICE DETECTOR R (EICAS STATUS) | 23-81004 | 23-91 TASK 804 |
| | | 23-81006 | 23-91 TASK 806 |
| | | 24-12051 | 24-32 TASK 819 |
| | | 24-12124 | 24-51 TASK 840 |
| | | 24-12127 | 24-51 TASK 842 |
| | | 30-10002 | 30-21 TASK 811 |
| | | 30-10052 | 30-81 TASK 803 |
| | | 30-10152 | 30-81 TASK 804 |
| | | 30-10392 | 30-21 TASK 821 |
| | | 30-10555 | 30-81 TASK 804 |
| | | 30-18892 | 30-21 TASK 826 |
| | | 31-14013 | 31-09 TASK 814 |
| | | 31-14014 | 31-09 TASK 815 |
| | | 31-14016 | 31-09 TASK 817 |
| | | 31-14018 | 31-09 TASK 818 |
| | | 31-17437 | 31-09 TASK 835 |
| | | 31-17639 | 31-10 TASK 814 |
| | | 31-17914 | 31-07 TASK 810 |

| FAULT CODE | FAULT DESCRIPTION | MAINT MSG | GO TO FIM TASK |
|---|---|---|---|
| 308 021 42 | ICE DETECTOR R (EICAS STATUS) | (continued) | |
| | | 31-17916 | 31-07 TASK 812 |
| | | 31-18802 | 31-08 TASK 811 |
| | | 31-18804 | 31-08 TASK 813 |
| | | 31-18842 | 31-08 TASK 814 |
| | | 31-18864 | 31-08 TASK 817 |
| | | 31-54013 | 31-43 TASK 868 |
| | | 31-54014 | 31-43 TASK 869 |
| | | 31-54121 | 31-41 TASK 838 |
| | | 31-54122 | 31-41 TASK 839 |
| | | 31-58013 | 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 |
| | | 31-69493 | 31-42 TASK 851 |
| | | 31-69494 | 31-42 TASK 851 |
| | | 31-69601 | 31-42 TASK 857 |
| | | 31-69602 | 31-42 TASK 857 |
| | | 31-69693 | 31-42 TASK 878 |
| | | 31-69694 | 31-42 TASK 878 |

| MAINT MESSAGE | MESSAGE TEXT | GO TO FIM TASK |
|---|---|---|
| 30-10001 | ACIPS Control Card (left) engine anti-ice 28 VDC power is not available. | 30-21 TASK 801 |
| 30-10002 | ACIPS Control Card (right) engine anti-ice 28 VDC power is not available. | 30-21 TASK 811 |
| 30-10003 | ACIPS Control Card (center) wing anti-ice 28 VDC power is not available. | 30-11 TASK 804 |
| 30-10041 | Ice Detector (left) signal (PTT or Air/Ground status) is out of range. | 30-81 TASK 801 |
| 30-10052 | Ice Detector (right) signal (PTT or Air/Ground status) is out of range. | 30-81 TASK 803 |
| 30-10101 | Engine Anti-Ice Valve (left) is failed in closed position. | 30-21 TASK 802 |
| 30-10112 | Engine Anti-Ice Valve (right) is failed in closed position. | 30-21 TASK 802 |
| 30-10121 | Engine Anti-Ice Valve (left) is failed in open position. | 30-21 TASK 803 |
| 30-10132 | Engine Anti-Ice Valve (right) is failed in open position. | 30-21 TASK 812 |
| 30-10141 | Ice Detector (left) is inoperative. | 30-81 TASK 802 |
| 30-10152 | Ice Detector (right) is inoperative. | 30-81 TASK 804 |
| 30-10160 | Wing Anti-Ice Pressure Sensor (left) circuit is open or shorted. | 30-11 TASK 801 |
| 30-10171 | Engine Anti-Ice Pressure Sensor (left 1) circuit is open or shorted. | 30-21 TASK 804 |
| 30-10182 | Engine Anti-Ice Pressure Sensor (right 1) circuit is open or shorted. | 30-21 TASK 813 |
| 30-10191 | Engine Anti-Ice Pressure Sensor (left 1) signal is out of range. | 30-21 TASK 805 |
| 30-10200 | Wing Anti-Ice Pressure Sensor (left) signal is out of range. | 30-11 TASK 805 |
| 30-10212 | Engine Anti-Ice Pressure Sensor (right 1) signal is out of range. | 30-21 TASK 814 |
| 30-10220 | Wing Anti-Ice Pressure Sensor (right) circuit is open or shorted. | 30-11 TASK 806 |
| 30-10231 | Engine Anti-Ice Pressure Sensor (left 2) is open or shorted. | 30-21 TASK 815 |
| 30-10242 | Engine Anti-Ice Pressure Sensor (right 2) is open or shorted. | 30-21 TASK 816 |
| 30-10250 | Wing Anti-Ice Pressure Sensor (right) signal is out of range. | 30-11 TASK 807 |
| 30-10261 | Engine Anti-Ice Pressure Sensor (left 2) signal is out of range. | 30-21 TASK 817 |
| 30-10272 | Engine Anti-Ice Pressure Sensor (right 2) signal is out of range. | 30-21 TASK 818 |
| 30-10280 | **AIMS-2, CMCF LDI 3114-BCG-00W-16;**<br>Wing Anti-Ice Valve (left) Torque Motor is open or shorted.<br>**AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;**<br>**AIMS-2, CMCF LDI 3111-BCG-00W-13;**<br>**AIMS-2, CMCF LDI 3116-BCG-00W-14;**<br>**AIMS-2, CMCF LDI 3117-BCG-00W-15;**<br>Wing Anti-Ice Valve (left) torque motor is open or shorted. | 30-11 TASK 808 |

| MAINT MESSAGE | MESSAGE TEXT | GO TO FIM TASK |
|---|---|---|
| 30-10291 | **AIMS-2, CMCF LDI 3114-BCG-00W-16;**<br>Engine Anti-Ice Valve Controller (left) Torque Motor is open or shorted.<br>**AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;**<br>**AIMS-2, CMCF LDI 3111-BCG-00W-13;**<br>**AIMS-2, CMCF LDI 3116-BCG-00W-14;**<br>**AIMS-2, CMCF LDI 3117-BCG-00W-15;**<br>Engine Anti-Ice Valve Controller (left) torque motor is open or shorted. | 30-21 TASK 806 |
| 30-10302 | **AIMS-2, CMCF LDI 3114-BCG-00W-16;**<br>Engine Anti-Ice Valve Controller (right) Torque Motor is open or shorted.<br>**AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;**<br>**AIMS-2, CMCF LDI 3111-BCG-00W-13;**<br>**AIMS-2, CMCF LDI 3116-BCG-00W-14;**<br>**AIMS-2, CMCF LDI 3117-BCG-00W-15;**<br>Engine Anti-Ice Valve Controller (right) torque motor is open or shorted. | 30-21 TASK 819 |
| 30-10310 | **AIMS-2, CMCF LDI 3114-BCG-00W-16;**<br>Wing Anti-Ice Valve (right) Torque Motor is open or shorted.<br>**AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;**<br>**AIMS-2, CMCF LDI 3111-BCG-00W-13;**<br>**AIMS-2, CMCF LDI 3116-BCG-00W-14;**<br>**AIMS-2, CMCF LDI 3117-BCG-00W-15;**<br>Wing Anti-Ice Valve (right) torque motor is open or shorted. | 30-11 TASK 809 |
| 30-10320 | Wing Anti-Ice Valve (left) is failed in closed position. | 30-11 TASK 802 |
| 30-10330 | Wing Anti-Ice Valve (left) is failed in open position. | 30-11 TASK 810 |
| 30-10340 | Wing Anti-Ice Valve (right) is failed in closed position. | 30-11 TASK 811 |
| 30-10350 | Wing Anti-Ice Valve (right) is failed in open position. | 30-11 TASK 812 |
| 30-10370 | ACIPS Control Card, center (WAI card) has an internal fault. | 30-11 TASK 813 |
| 30-10381 | ACIPS Control Card, left (L EAI card) has an internal fault. | 30-21 TASK 820 |
| 30-10392 | ACIPS Control Card, right (R EAI card) has an internal fault. | 30-21 TASK 821 |
| 30-10401 | Value from Engine Anti-Ice Pressure Sensor (left 1) and Engine Anti-Ice Pressure Sensor (left 2) do not agree. | 30-21 TASK 807 |
| 30-10402 | Value from Engine Anti-Ice Pressure Sensor (right 1) and Engine Anti-Ice Pressure Sensor (right 2) do not agree. | 30-21 TASK 822 |
| 30-10550 | Ice Detector (left) is inactive or faulted. | 30-81 TASK 802 |
| 30-10555 | Ice Detector (right) is inactive or faulted. | 30-81 TASK 804 |
| 30-10610 | Left Manifold air temperature is low. | 36-11 TASK 810 |
| 30-10620 | Right Manifold air temperature is low. | 36-11 TASK 810 |
| 30-10981 | OPBC - Overhead panel bus controller switch signals are invalid. | 30-21 TASK 823 |

| MAINT MESSAGE | MESSAGE TEXT | GO TO FIM TASK |
|---|---|---|
| 30-10982 | OPBC - Overhead panel bus controller switch signals are invalid. | 30-11 TASK 814 |
| 30-10991 | DLODS Control Card (left) signal is invalid. | 30-21 TASK 824 |
| 30-10992 | DLODS Control Card (right) signal is invalid. | 30-21 TASK 825 |
| 30-10993 | DLODS Control Card (center) signal is invalid. | 30-21 TASK 831 |
| 30-18891 | ACIPS Control Card (left) has no output on ACIPS ARINC 429 Bus. | 30-21 TASK 808 |
| 30-18892 | ACIPS Control Card (right) has no output on ACIPS ARINC 429 Bus. | 30-21 TASK 826 |
| 30-18893 | ACIPS Control Card (center) has no output on ACIPS ARINC 429 Bus. | 30-11 TASK 815 |
| 30-19904 | ACIPS Control Card (left) has no input from ARINC Signal Gateway (left), LSCF on ASG Global Bus. | 30-21 TASK 827 |
| 30-19905 | ACIPS Control Card (right) has no input from ARINC Signal Gateway (left), RSCF on ASG Global Bus. | 30-21 TASK 828 |
| 30-19906 | ACIPS Control Card (center) has no input from ARINC Signal Gateway (left), RSCF on ASG Global Bus. | 30-11 TASK 816 |
| 30-19907 | ACIPS Control Card (left) has no input from ARINC Signal Gateway (right), LSCF on ASG Global Bus. | 30-21 TASK 829 |
| 30-19908 | ACIPS Control Card (right) has no input from ARINC Signal Gateway (right), RSCF on ASG Global Bus. | 30-21 TASK 830 |
| 30-19909 | ACIPS Control Card (center) has no input from ARINC Signal Gateway (right), RSCF on ASG Global Bus. | 30-11 TASK 817 |
| 30-21001* | Window Heat Control Unit (L Fwd & R Side) Fwd Window Anti-ice power is not available. | 30-41 TASK 801 |
| 30-21002* | Window Heat Control Unit (R Fwd & L Side) Fwd Window Anti-ice power is not available. | 30-41 TASK 802 |
| 30-21011* | Window Heater (Left #1 Anti-Ice) circuit is open or shorted. | 30-41 TASK 803 |
| 30-21012* | Window Heater (Right #1 Anti-Ice) circuit is open or shorted. | 30-41 TASK 804 |
| 30-21031* | Window Sensor (Left #1 Anti-Ice) circuit is open or shorted. | 30-41 TASK 805 |
| 30-21032* | Window Sensor (Right #1 Anti-Ice) circuit is open or shorted. | 30-41 TASK 806 |
| 30-21051* | Window Heater (Left #1 Anti-Ice) current is out of range. | 30-41 TASK 807 |
| 30-21052* | Window Heater (Right #1 Anti-Ice) current is out of range. | 30-41 TASK 808 |
| 30-22001* | Window Heat Ctrl Unit (LFwd & RSide) #2 side window power is not available. | 30-41 TASK 809 |
| 30-22002* | Window Heat Ctrl Unit (LFwd & RSide) #2 side window power is not available. | 30-41 TASK 810 |
| 30-22021* | Window Heater (Right #2) circuit is open or shorted. | 30-41 TASK 811 |

*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 |
|---|---|---|
| 30-22022* | Window Heater (Left #2) circuit is open or shorted. | 30-41 TASK 812 |
| 30-22031* | Window Sensor (Right #2) circuit is open or shorted. | 30-41 TASK 813 |
| 30-22032* | Window Sensor (Left #2) circuit is open or shorted. | 30-41 TASK 814 |
| 30-22051* | Window Heater (Right #2) current is out of range. | 30-41 TASK 815 |
| 30-22052* | Window Heater (Left #2) current is out of range. | 30-41 TASK 816 |
| 30-23001 | Window Heat Control Unit (R Fwd & L Side) #3 Side Window power is not available. | 30-41 TASK 817 |
| 30-23002 | **AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;** Window Heat Control Unit (L FWD & R Side) #3 Side Window Power is not available. **AIMS-2, CMCF LDI 3111-BCG-00W-13; AIMS-2, CMCF LDI 3114-BCG-00W-16; AIMS-2, CMCF LDI 3116-BCG-00W-14; AIMS-2, CMCF LDI 3117-BCG-00W-15;** Window Heat Control Unit (L Fwd & R Side) #3 Side Window power is not available. | 30-41 TASK 818 |
| 30-23011* | Window Heater (Left #3) circuit is open or shorted. | 30-41 TASK 819 |
| 30-23012* | Window Heater (Right #3) circuit is open or shorted. | 30-41 TASK 820 |
| 30-23031 | Window Sensor (Left #3) circuit is open or shorted. | 30-41 TASK 821 |
| 30-23032 | Window Sensor (Right #3) circuit is open or shorted. | 30-41 TASK 822 |
| 30-23051 | Window Heater (Left #3) current is out of range. | 30-41 TASK 823 |
| 30-23052 | Window Heater (Right #3) current is out of range. | 30-41 TASK 824 |
| 30-24001* | Window Heat Control Unit (L Fwd & R Side) Fwd Window Anti-fog power is not available. | 30-41 TASK 825 |
| 30-24002* | Window Heat Control Unit (R Fwd & L Side) Fwd Window Anti-fog power is not available. | 30-41 TASK 826 |
| 30-24011* | Window Heater (Left #1 Anti-Fog) circuit is open or shorted. | 30-41 TASK 827 |
| 30-24012* | Window Heater (Right #1 Anti-Fog) circuit is open or shorted. | 30-41 TASK 828 |
| 30-24031* | Window Sensor (Left #1 Anti-Fog) circuit is open or shorted. | 30-41 TASK 829 |
| 30-24032* | Window Sensor (Right #1 Anti-Fog) circuit is open or shorted. | 30-41 TASK 830 |
| 30-24051* | Window Heater (Left #1 Anti-Fog) current is out of range. | 30-41 TASK 831 |
| 30-24052* | Window Heater (Right #1 Anti-Fog) current is out of range. | 30-41 TASK 832 |
| 30-25001* | Window Heat Ctrl Unit (L Fwd & R Side) has an internal fault. | 30-41 TASK 833 |
| 30-25002* | Window Heat Ctrl Unit (R Fwd & L Side) has an internal fault. | 30-41 TASK 834 |
| 30-26001 | Switch (BACKUP WINDOW HEAT LEFT) is turned off or failed. | 30-41 TASK 841 |
| 30-26002 | Switch (BACKUP WINDOW HEAT RIGHT) is turned off or failed. | 30-41 TASK 842 |

*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 |
|---|---|---|
| 30-28891 | Window Heat Ctrl Unit (LFwd & RSide) has no output on Window Heat System Output ARINC 429 Bus. | 30-41 TASK 835 |
| 30-28892 | Window Heat Ctrl Unit (RFwd & LSide) has no output on Window Heat System Output ARINC 429 Bus. | 30-41 TASK 836 |
| 30-29903 | Window Heat Ctrl Unit (LFwd & RSide) has no input from Left AIMS on CMCS Left Bus. | 30-41 TASK 837 |
| 30-29904 | Window Heat Ctrl Unit (RFwd & LSide) has no input from Left AIMS on CMCS Right Bus. | 30-41 TASK 838 |
| 30-36121* | Pitot Probe (L) heater power is not available. | 30-31 TASK 801 |
| 30-36122* | Pitot Probe (C) heater power is not available. | 30-31 TASK 802 |
| 30-36123* | Pitot Probe (R) heater power is not available. | 30-31 TASK 803 |
| 30-36421* | **AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;**<br>**AIMS-2, CMCF LDI 3111-BCG-00W-13;**<br>**AIMS-2, CMCF LDI 3116-BCG-00W-14;**<br>**AIMS-2, CMCF LDI 3117-BCG-00W-15;**<br>Angle Of Attack Sensor (Left) vane heater power is not available.<br>**AIMS-2, CMCF LDI 3114-BCG-00W-16;**<br>Angle of Attack Sensor (Left) vane heater power is not available. | 30-31 TASK 804 |
| 30-36423* | **AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;**<br>**AIMS-2, CMCF LDI 3111-BCG-00W-13;**<br>**AIMS-2, CMCF LDI 3116-BCG-00W-14;**<br>**AIMS-2, CMCF LDI 3117-BCG-00W-15;**<br>Angle Of Attack Sensor (Right) vane heater power is not available.<br>**AIMS-2, CMCF LDI 3114-BCG-00W-16;**<br>Angle of Attack Sensor (Right) vane heater power is not available. | 30-31 TASK 805 |
| 30-36521* | **AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;**<br>**AIMS-2, CMCF LDI 3111-BCG-00W-13;**<br>**AIMS-2, CMCF LDI 3116-BCG-00W-14;**<br>**AIMS-2, CMCF LDI 3117-BCG-00W-15;**<br>Angle Of Attack Sensor (Left) case heater power is not available.<br>**AIMS-2, CMCF LDI 3114-BCG-00W-16;**<br>Angle of Attack Sensor (Left) case heater power is not available. | 30-31 TASK 806 |

*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 |
|---|---|---|
| 30-36523* | **AIMS-1, CPM/Comm OPS S/W 3166-HNP-002-11;**<br>**AIMS-2, CMCF LDI 3111-BCG-00W-13;**<br>**AIMS-2, CMCF LDI 3116-BCG-00W-14;**<br>**AIMS-2, CMCF LDI 3117-BCG-00W-15;**<br>Angle Of Attack Sensor (Right) case heater power is not available.<br>**AIMS-2, CMCF LDI 3114-BCG-00W-16;**<br>Angle of Attack Sensor (Right) case heater power is not available. | 30-31 TASK 810 |
| 30-36641* | Relay (Pitot/AOA Heat Control, L) in P110 is not in commanded position. | 30-31 TASK 807 |
| 30-36642* | Relay (Pitot Heat Control, C) in P210 is not in commanded position. | 30-31 TASK 808 |
| 30-36643* | Relay (Pitot/AOA Heat Control, R) in P210 is not in commanded position. | 30-31 TASK 809 |
| 30-37110 | Relay (TAT PROBE HEAT) in P110 is not in commanded position. | 30-31 TASK 811 |
| 30-37113 | Relay (TAT PROBE HEAT) in P110 is not in commanded position. | 30-31 TASK 817 |
| 30-37120 | TAT Probe heater power is not available. | 30-31 TASK 814 |
| 30-37123 | Relay (TAT PROBE HEAT) in P110 is not in commanded position. | 30-31 TASK 817 |
| 30-37126 | TAT Probe heater power is not available. | 30-31 TASK 820 |
| 30-37127 | TAT Probe (Left) heater power is not available. | 30-31 TASK 821 |

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

## 801. Wing Anti-Ice Pressure Sensor (left) Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10160.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the left wing anti-ice (WAI) pressure sensor, M30113.

These are the tasks:

Wing Anti-Ice Pressure Sensor Removal, AMM TASK 30-11-04-000-801,

Wing Anti-Ice Pressure Sensor Installation, AMM TASK 30-11-04-400-801.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring:

(a) Remove the center airfoil and cowl ice protection system (ACIPS) card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(b) Disconnect connector DM30113 from the WAI pressure sensor, M30113.

(c) Do a wiring check between these pins of connector XA7 at the right system cardfile (RSCF) and connector DM30113 at the WAI pressure sensor (WDM 30-11-11).

| XA7 | DM30113 |
|---|---|
| pin 27 | pin 1 |
| pin 9 | pin 2 |
| pin 63 | pin 3 |
| pin 62 | pin 4 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM30113.

3) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

(3) Replace the center ACIPS card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

**——— END OF TASK ———**

## 802. Wing Anti-Ice Valve (left) Failed Closed - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10320.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the left WAI valve, V30111.

These are the tasks:

Wing Anti-Ice Valve Removal, AMM TASK 30-11-03-000-801,

Wing Anti-Ice Valve Installation, AMM TASK 30-11-03-400-801.

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

NOTE: This follows the ground test that is done after installation of the valve.

(b) If the maintenance message shows on the ground test display, then continue.

(2) Do a check of the tubing between the wing anti-ice (WAI) duct and the WAI pressure sensor for leaks.

(a) If you find a leak in the tubing:

1) Repair the tubing.

2) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics available).

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

(b) If you do not find a leak in the tubing, then continue.

(3) Replace the left WAI pressure sensor, M30113.

These are the tasks:

Wing Anti-Ice Pressure Sensor Removal, AMM TASK 30-11-04-000-801,

Wing Anti-Ice Pressure Sensor Installation, AMM TASK 30-11-04-400-801.

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

——— END OF TASK ———

## 803. Wing Anti-Ice Selector Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 23-43100.

### B. Initial Evaluation

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

(2) If the MAT shows NOT ACTIVE for the maintenance message, monitor the maintenance message on the MAT while you do these steps:

(a) Set the ANTI-ICE WING selector (P5 overhead panel) to the ON position.

(b) Wait 30 seconds.

(c) Set the ANTI-ICE WING selector to the AUTO position.

(d) Wait 30 seconds.

(e) Set the ANTI-ICE WING selector to the OFF position.

(f) Wait 30 seconds.

(g) If the MAT shows ACTIVE for the maintenance message while the WING selector, on the P5 overhead panel, is in the ON of OFF position, then do the Fault Isolation Procedure below.

(h) If the MAT shows NOT ACTIVE for the maintenance message while the ANTI-ICE WING selector is in the ON or OFF positions, then there was an intermittent fault.

### C. Fault Isolation Procedure

(1) Replace the wing anti-ice (WAI) selector, M33413 (WDM 30-11-11).

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

(b) If the MAT shows ACTIVE for the maintenance message while the ANTI-ICE WING selector is in the ON or OFF positions, then continue.

(2) Do this check of the wiring from the WAI selector to the right overhead panel cardfile (OPCF):

(a) Disconnect connector DM33413A from the anti-ice module, M33413.

(b) Disconnect connector DM23217K from the right OPCF, M23217.

(c) Do a wiring check between these pins of connector DM33413A at the anti-ice module, M33413, and connector DM23217K at the right OPCF, M23217 (WDM 30-11-11):

| DM33413A | DM23217K |
|---|---|
| pin 21 | pin A4 |
| pin 40 | pin A1 |
| pin 41 | pin A2 |
| pin 22 | pin A3 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connectors DM33413A and DM23217K.

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connectors DM33413A and DM23217K.

(3) Replace the right A1 OPIC card in M23217 at the maintenance panel, P61.

(a) Do these tasks:

Overhead Panel Interface Card (OPIC) Removal, AMM TASK 23-93-02-000-801

Overhead Panel Interface Card (OPIC) Installation, AMM TASK 23-93-02-400-801

(b) Monitor the maintenance message on the MAT while you do these steps:

1) Set the ANTI-ICE WING selector to the ON position.

2) Wait 30 seconds.

3) Set the ANTI-ICE WING selector to the AUTO position.

4) Wait 30 seconds.

5) Set the ANTI-ICE WING selector to the OFF position.

6) Wait 30 seconds.

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

**END OF TASK**

## 804. ACIPS Control Card (center) Power Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10003.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Make sure that this circuit breaker is closed:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 6 | C30600 | WAI CTRL |

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the power wiring:

(a) Remove the center airfoil and cowl ice protection system (ACIPS) card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801.

(b) Do a check for 28V DC at pin 4 of connector XA7 at the right system cardfile (RSCF) (WDM 30-11-11).

(c) If there is not 28V DC at pin 4 of connector XA7, then do these steps:

1) Open the P210 right power management panel.

2) Do a check for 28V DC at the load terminal of circuit breaker C30600.

3) If there is not 28V DC at the circuit breaker, then do these steps:

a) Replace this circuit breaker:

(WDM 30-11-11)

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 6 | C30600 | WAI CTRL |

b) Close the P210 right power management panel.

c) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

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

4) If there is 28V DC at the circuit breaker, then do there steps:

a) Repair the wiring between pin 4 of connector XA7 in the RSCF, P84, and the load terminal of circuit breaker C30600 (WDM 30-11-11).

b) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

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

(d) If there is 28V DC at pin 4 of connector XA7, then continue.

(3) Replace the center ACIPS card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

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

**END OF TASK**

## 805. Wing Anti-Ice Pressure Sensor (left) Signal Range Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10200.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the center airfoil and cowl ice protection system (ACIPS) card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Remove the center ACIPS card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801.

(b) Disconnect connector DM30113 from the wing anti-ice (WAI) pressure sensor, M30113.

(c) Do a wiring check between these pins of connector XA7 at the right system cardfile (RSCF) and connector DM30113 at the WAI pressure sensor (WDM 30-11-11):

| XA7 | DM30113 |
|---|---|
| pin 27 | pin 1 |
| pin 9 | pin 2 |
| pin 63 | pin 3 |
| pin 62 | pin 4 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM30113.

3) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DM30113.

(g) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(3) Replace the left WAI pressure sensor, M30113.

These are the tasks:

Wing Anti-Ice Pressure Sensor Removal, AMM TASK 30-11-04-000-801,

Wing Anti-Ice Pressure Sensor Installation, AMM TASK 30-11-04-400-801.

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

——— END OF TASK ———

## 806. Wing Anti-Ice Pressure Sensor (right) Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10220.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the right wing anti-ice (WAI) pressure sensor, M30112.

These are the tasks:

Wing Anti-Ice Pressure Sensor Removal, AMM TASK 30-11-04-000-801,

Wing Anti-Ice Pressure Sensor Installation, AMM TASK 30-11-04-400-801.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring:

(a) Remove the center airfoil and cowl ice protection system (ACIPS) card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(b) Disconnect connector DM30112 from the WAI pressure sensor, M30112.

(c) Do a wiring check between these pins of connector XA7 at the right system cardfile (RSCF) and connector DM30112 at the right WAI pressure sensor (WDM 30-11-11):

| DM30112 | | XA7 |
|---|---|---|
| pin 2 | . . . . . | pin 9 |
| pin 1 | . . . . . | pin 25 |
| pin 3 | . . . . . | pin 57 |
| pin 4 | . . . . . | pin 56 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM30112.

3) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DM30112.

(g) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(3) Replace the center ACIPS card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

**——— END OF TASK ———**

## 807. Wing Anti-Ice Pressure Sensor (right) Signal Range Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10250.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the center airfoil and cowl ice protection system (ACIPS) card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Remove the center ACIPS card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801.

(b) Disconnect connector DM30112 from the right wing anti-ice (WAI) pressure sensor, M30112.

(c) Do a wiring check between these pins of connector XA7 at the right system cardfile (RSCF) and connector DM30112 at the right WAI pressure sensor, M30112 (WDM 30-11-11):

| DM30112 | XA7 |
|---|---|
| pin 2 | pin 9 |
| pin 1 | pin 25 |
| pin 3 | pin 57 |
| pin 4 | pin 56 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM30112.

3) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

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

5) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Replace the left WAI pressure sensor, M30112.

These are the tasks:

Wing Anti-Ice Pressure Sensor Removal, AMM TASK 30-11-04-000-801,

Wing Anti-Ice Pressure Sensor Installation, AMM TASK 30-11-04-400-801.

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

**END OF TASK**

## 808. Wing Anti-Ice Valve (left) Torque Motor Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10280.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

(1) Replace the left wing anti-ice (WAI) valve, V30111.

These are the tasks:

Wing Anti-Ice Valve Removal, AMM TASK 30-11-03-000-801,

Wing Anti-Ice Valve Installation, AMM TASK 30-11-03-400-801.

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

NOTE: This follows the ground test that is done after installation of the valve.

(b) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring:

(a) Remove the center airfoil and cowl ice protection system (ACIPS) card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801.

(b) Disconnect connector DV30111 from the WAI valve, V30111.

(c) Do a wiring check between these pins of connector XA7 at the right system cardfile (RSCF) and connector DV30111 at the WAI valve, V30111 (WDM 30-11-11):

| XA7 | DV30111 |
|---|---|
| pin 15 . . . . . | pin 1 |
| pin 14 . . . . . | pin 2 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DV30111.

3) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DV30111.

(g) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(3) Replace the center ACIPS card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

——— END OF TASK ———

## 809. Wing Anti-Ice Valve (right) Torque Motor Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10310.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the right wing anti-ice (WAI) valve, V30112.

These are the tasks:

Wing Anti-Ice Valve Removal, AMM TASK 30-11-03-000-801,

Wing Anti-Ice Valve Installation, AMM TASK 30-11-03-400-801.

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

NOTE: This follows the ground test that is done after installation of the valve.

(b) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring:

(a) Remove the center airfoil and cowl ice protection system (ACIPS) card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801.

(b) Disconnect connector DV30112 from the right WAI valve, V30112.

(c) Do a wiring check between these pins of connector XA7 at the right system cardfile (RSCF) and connector DV30112 at the WAI valve, V30112 (WDM 30-11-11):

| XA7 | DV30112 |
|---|---|
| pin 15 | pin 1 |
| pin 14 | pin 2 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DV30111.

3) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DV30111.

(g) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(3) Replace the center ACIPS card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

——— END OF TASK ———

## 810. Wing Anti-Ice Valve (left) Failed Open - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10330.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the center ACIPS card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics available).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring:

(a) Remove the center airfoil and cowl ice protection system (ACIPS) card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(b) Disconnect connector DM30113 from the left WAI pressure sensor, M30113.

(c) Do a wiring check between these pins of connector XA7 at the right system cardfile (RSCF) and connector DM30113 at the WAI pressure sensor (WDM 30-11-11):

| DM30113 | | XA7 |
|---|---|---|
| pin 2 | . . . . . | pin 34 |
| pin 1 | . . . . . | pin 35 |
| pin 3 | . . . . . | pin 54 |
| pin 4 | . . . . . | pin 55 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM30113.

3) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DM30113.

(g) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(3) Replace the left WAI valve, V30111.

These are the tasks:

Wing Anti-Ice Valve Removal, AMM TASK 30-11-03-000-801,

Wing Anti-Ice Valve Installation, AMM TASK 30-11-03-400-801.

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

NOTE: This follows the ground test that is done after installation of the valve.

(b) If the maintenance message shows on the ground test display, then continue.

(4) Replace the left WAI pressure sensor, M30113.

These are the tasks:

Wing Anti-Ice Pressure Sensor Removal, AMM TASK 30-11-04-000-801,

Wing Anti-Ice Pressure Sensor Installation, AMM TASK 30-11-04-400-801.

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

——— END OF TASK ———

## 811. Wing Anti-Ice Valve (right) Failed Closed - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10340.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do this check of the tubing:

(a) Examine the tubing between the right wing anti-ice (WAI) pressure sensor, M30112 and the right WAI duct for loose fittings or damage.

(b) If you find a problem with the tubing:

1) Repair the tubing.

2) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics available).

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

(c) If you do not find a problem with the tubing, then continue.

(2) Replace the center ACIPS card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics available).

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

(c) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring:

(a) Remove the center airfoil and cowl ice protection system (ACIPS) card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(b) Disconnect connector DM30112 from the right WAI pressure sensor, M30112.

(c) Do a wiring check between these pins of connector XA7 at the right system cardfile (RSCF) and connector DM30112 at the right WAI pressure sensor (WDM 30-11-11):

| DM30112 | XA7 |
|---|---|
| pin 2 | pin 33 |
| pin 1 | pin 16 |
| pin 3 | pin 32 |
| pin 4 | pin 51 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM30112.

3) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DM30112.

(g) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(4) Replace the right WAI valve, V30112.

These are the tasks:

Wing Anti-Ice Valve Removal, AMM TASK 30-11-03-000-801,

Wing Anti-Ice Valve Installation, AMM TASK 30-11-03-400-801.

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

NOTE: This follows the ground test that is done after installation of the valve.

(b) If the maintenance message shows on the ground test display, then continue.

(5) Replace the right WAI pressure sensor, M30112.

These are the tasks:

Wing Anti-Ice Pressure Sensor Removal, AMM TASK 30-11-04-000-801,

Wing Anti-Ice Pressure Sensor Installation, AMM TASK 30-11-04-400-801.

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

**END OF TASK**

## 812. Wing Anti-Ice Valve (right) Failed Open - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10350.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the center ACIPS card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics available).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring:

(a) Remove the center airfoil and cowl ice protection system (ACIPS) card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(b) Disconnect connector DM30112 from the right WAI pressure sensor, M30113.

(c) Do a wiring check between these pins of connector XA7 at the right system cardfile (RSCF) and connector DM30113 at the WAI pressure sensor (WDM 30-11-11):

| DM30113 | XA7 |
|---|---|
| pin 2 | pin 34 |
| pin 1 | pin 35 |
| pin 3 | pin 54 |
| pin 4 | pin 55 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM30112.

3) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DM30112.

(g) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(3) Replace the right WAI valve, V30112.

These are the tasks:

Wing Anti-Ice Valve Removal, AMM TASK 30-11-03-000-801,

Wing Anti-Ice Valve Installation, AMM TASK 30-11-03-400-801.

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

NOTE: This follows the ground test that is done after installation of the valve.

(b) If the maintenance message shows on the ground test display, then continue.

(4) Replace the right WAI pressure sensor, M30112.

These are the tasks:

Wing Anti-Ice Pressure Sensor Removal, AMM TASK 30-11-04-000-801,

Wing Anti-Ice Pressure Sensor Installation, AMM TASK 30-11-04-400-801.

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

**END OF TASK**

## 813. ACIPS Control Card (center) Internal Fault - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10370.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the center airfoil and cowl ice protection system (ACIPS) card, P84A7. To remove it,

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

——— END OF TASK ———

## 814. Invalid Overhead Panel Bus Controller Switch Signals - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10982.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the left overhead panel bus controller (OPBC), M23112.

These are the tasks:

Left Overhead Panel Bus Controller (OPBC) Removal, AMM TASK 23-93-01-000-801,

Left Overhead Panel Bus Controller (OPBC) Installation, AMM TASK 23-93-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Replace the right OPBC, M23212.

These are the tasks:

Right Overhead Panel Bus Controller (OPBC) Removal, AMM TASK 23-93-01-000-802,

Left Overhead Panel Bus Controller (OPBC) Installation, AMM TASK 23-93-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Replace the left ASG card, P84A12.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(4) Replace the right ASG card, P84A15.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(5) Replace the center airfoil and cowl ice protection system (ACIPS) card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

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

**——— END OF TASK ———**

## 815. ACIPS Control Card (center) Output Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-18893.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the center airfoil and cowl ice protection system (ACIPS) card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Removal, AMM TASK 30-11-02-000-801,

Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring:

(a) Remove the center ACIPS card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Remove the left ARINC signal gateway (ASG) card, P84A12. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(c) Do a wiring check between these pins of connector XA7 and connector XA12 at the P84 right systems cardfile (SSM 30-11-11):

| XA12 | XA7 |
|---|---|
| pin 67 | pin 151 |
| pin 70 | pin 154 |

(d) Remove the right ASG card, P84A15. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(e) Do a wiring check between these pins of connector XA7 and connector XA15 at the P84 right systems cardfile (SSM 30-11-11):

| XA15 | XA7 |
|---|---|
| pin 67 | pin 115 |
| pin 70 | pin 118 |

(f) If you find a problem with the wiring, do these steps:

1) Repair the wiring.

2) Re-install the left ASG card, P85A12. To install it, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

3) Re-install the right ASG card, P85A15. To install it, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

4) Re-install the center ACIPS control card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

5) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Wing Anti-Ice (pneumatics not available).

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

**——— END OF TASK ———**

## 816. ACIPS Control Card (center) Input Problem from ARINC Signal Gateway (left) - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-19906.

**B. Initial Evaluation**

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

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

**C. Fault Isolation Procedure**

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the center airfoil and cowl ice protection system (ACIPS) card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Remove the center ACIPS card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Remove the left ARINC signal gateway (ASG) card, P84A12. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(c) Do a wiring check between these pins of connector XA12 and connector XA7 at the P84 right systems cardfile:

| XA12 | XA7 |
|---|---|
| pin 67 . . . . . | pin 151 |
| pin 70 . . . . . | pin 154 |

(d) If you find a problem with the wiring, do these steps:

1) Repair the wiring.

2) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

3) Re-install the left ASG card, P84A12. To install it, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

b) If the MAT shows ACTIVE for the maintenance message, then continue.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

(g) Re-install the left ASG card, P84A12. To install it, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

(3) Replace the left ASG card, P84A12.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

**——— END OF TASK ———**

## 817. ACIPS Control Card (center) Input Problem from ARINC Signal Gateway (right) - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-19909.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the center airfoil and cowl ice protection system (ACIPS) card, P84A7.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring SSM 30-11-11:

(a) Remove the center ACIPS card, P84A7. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Remove the right ARINC signal gateway (ASG) card, P84A15. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(c) Do a wiring check between these pins of connector XA15 and connector XA7 at the P84 right systems cardfile:

| XA15 | XA7 |
|---|---|
| pin 67 | pin 115 |
| pin 70 | pin 118 |

(d) If you find a problem with the wiring, do these steps:

1) Repair the wiring.

2) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

3) Re-install the right ASG card, P84A15. To install it, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-install the center ACIPS card, P84A7. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

1) Re-install the right ASG card, P84A15. To install it, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

(3) Replace the right ASG card, P84A15.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

**——— END OF TASK ———**

## 801. ACIPS Control Card (left) Power Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10001.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Make sure that this circuit breaker is closed:

**Standby Power Management Panel, P310**

| Row | Col | Number | Name |
|---|---|---|---|
| H | 11 | C30603 | EAI CTRL L |

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the power wiring:

(a) Remove the left airfoil and cowl ice protection system (ACIPS) card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Do a check for 28V DC at pin 4 of connector XA6 at the left system cardfile (LSCF) (WDM 30-21-11).

(c) If there is not 28V DC at pin 4 of connector XA6, then do these steps:

1) Open the P310 power management panel.

2) Do a check for 28V DC at the load terminal of circuit breaker C30603.

3) If there is not 28V DC at the circuit breaker, then do these steps:

a) Replace this circuit breaker:

(WDM 30-21-11)

**Standby Power Management Panel, P310**

| Row | Col | Number | Name |
|---|---|---|---|
| H | 11 | C30603 | EAI CTRL L |

b) Close the P310 power management panel.

c) Re-install the left ACIPS card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

4) If there is 28V DC at the circuit breaker, then do there steps:

a) Repair the wiring between pin 4 of connector XA6 in the LSCF, P85, and the load terminal of circuit breaker C30603 (WDM 30-21-11).

b) Close the P310 power management panel.

c) Re-install the left ACIPS card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(d) If there is 28V DC at pin 4 of connector XA6, then continue.

(e) Re-install the left ACIPS card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(3) Replace the left ACIPS card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

**——— END OF TASK ———**

## 802. Engine Anti-Ice Valve Failed Closed - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance messages: 30-10101, 30-10112.

### B. Initial Evaluation

NOTE: If maintenance message 30-10112 shows as a result of an in-flight engine shut down, continue with the initial evaluation to clear it.

NOTE: ACIPS software P/N 3004-HAM-002-A0, 3005-HAM-003-A0, or 3007-HAM-001-A0;

The EAI VALVE L/R status message and ANTI-ICE ENG L/R advisory message can show without a failure. This can occur because of low engine idle pressure in flight when the system does an automatic "once-a-day" built in test (BIT). If you do the Engine Anti-Ice System Test (engines running) and the test passes with no faults, then no maintenance action is necessary. This will also clear the EAI VALVE or ANTI-ICE Eng messages. Refer to the steps in the initial evaluation to do the Engine Anti-Ice System Test.

(1) If the MAT shows ACTIVE for the maintenance message, then do the Fault Isolation Procedure that follows.

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, (left, right) Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure that follows.

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

**C. Fault Isolation Procedure**

(1) Do this check of the filter in the EAI valve controller, M30211:

(a) Remove the filter in the EAI valve controller. To remove it, do this task: Engine Anti-Ice Valve Controller Filter Removal, AMM TASK 30-21-03-000-814-001.

(b) Examine the filter for blockage.

(c) If the filter is blocked, then do these steps:

1) Clean the EAI Valve Controller Filter (Engine Anti-Ice Valve Controller Filter Cleaning, AMM TASK 30-21-03-100-801-001).

2) Install a new filter (Engine Anti-Ice Valve Controller Filter Installation, AMM TASK 30-21-03-400-812-001).

3) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, (left, right) Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(d) If the filter is not blocked, then continue.

(2) Do this check of the EAI controller heater circuit breaker:

(a) Open the applicable power management panel:

**Table 201/30-21-00-993-805**

| MAINTENANCE MESSAGE | POWER MANAGEMENT PANEL |
|---|---|
| 30-10101 | P110 LEFT |
| 30-10112 | P210 RIGHT |

(b) Do a check for 28 VDC at the load terminal of applicable circuit breaker:

**Table 202/30-21-00-993-806**

| MAINTENANCE MESSAGE | CIRCUIT BREAKER |
|---|---|
| 30-10101 | C30627 |
| 30-10112 | C30626 |

(c) If there is not 28VDC at the circuit breakers, then replace the applicable circuit breakers:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| H | 16 | C30627 | EAI CTRL L HTR |

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 17 | C30626 | EAI CTRL R HTR |
| P | 11 | C30602 | EAI CTRL R |

**Standby Power Management Panel, P310**

| Row | Col | Number | Name |
|---|---|---|---|
| H | 11 | C30603 | EAI CTRL L |

(d) If there is 28VDC at the circuit breaker, then continue.

(3) Do this check of the heater power wiring for the EAI valve controller, M30211:

(a) Disconnect electrical connector DB30211 from the EAI valve controller, M30211.

(b) Do a wiring check between these pins at the EAI valve controller heater circuit breaker and the EAI valve controller, M30211 (WDM 30-21-11) (WDM 30-21-12). The first set applies to message 30-10101. The second set applies to message 30-10112:

| **C30627** | | **DM30211B** |
|---|---|---|
| pin 2 | . . . . . | pin 1 |

| **C30626** | | **DM30211B** |
|---|---|---|
| pin 2 | . . . . . | pin 1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Close the applicable power management panel.

3) Connect connector DM30211B.

4) Hold your hand near the EAI valve controller.

5) If the EAI valve controller is hot, then you corrected the fault.

(d) If you do not find a problem with the wiring, then continue.

(e) Close the applicable power management panel.

(4) Do this check of the heater ground wiring for the EAI valve controller, M30211:

(a) Do a wiring check between pin 2 of connector DM30211B at the EAI valve controller, M30211 and structure ground at the fan/strut (WDM 30-21-11) (WDM 30-21-12).

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Connect connector DM30211B.

3) Hold your hand near the EAI valve controller.

4) If the EAI valve controller is hot, then you corrected the fault.

(5) Do this check for leaks in the tubing of the engine anti-ice (EAI) system:

(a) Examine the inlet air tube assembly to the Controller Air Cooler for damage.

1) If you find a problem with the tubing then repair it.

(b) Examine the tubing between the SVO port on the left engine anti-ice (EAI) valve controller, M30211, and the SVO port on the left EAI valve for loose fittings or damage.

(c) Examine the tubing connected to the SUPPLY port on the left EAI valve controller, M30211, for loose fittings or damage.

(d) If you find a problem with the tubing or flex hose, then do these steps:

1) Repair the tubing or flex hoses.

2) Reconnect any unconnected tubing or flex hoses.

3) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, (left, right) Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(e) If you do not find a problem with the tubing, then do these steps to pressure test the tubing.

1) Disconnect the tubing at the SVO port of the EAI valve controller, M30211.
2) Disconnect the tubing at the SVO port of the EAI valve.
3) Connect a regulator, STD-1291 to an 0 to 150 psig dry filtered regulated air source, STD-3940.
4) Use an extension line to connect the regulator, STD-1291 (output end) to one end of the tubing.
5) Install a plug in the other end of the tubing.
6) Apply a minimum pressure of 10 psig to the tubing.
7) Examine the tubing for damage that could cause leaks.
8) Disconnect the tubing at the SUPPLY port of the EAI valve controller, M30211.
9) Follow the tubing from the SUPPLY port of the EAI valve controller, M30211 to the first TEE in the tubing on the fan case.
10) Disconnect the tubing at the TEE.
11) Connect a regulator, STD-1291 (0-150 psig) to an air or nitrogen source.
12) Use an extension line to connect the regulator, STD-1291 (output end) to one end of the tubing.
13) Install a plug in the other end of the tubing.
14) Apply a minimum pressure of 10 psig to the tubing.
15) Examine the tubing for damage that could cause leaks.
16) If you find a problem with the tubing, then do these steps:
    a) Remove the 0 to 150 psig dry filtered regulated air source, STD-3940, and extension line from the tubing.
    b) Repair the tubing.
    c) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, (left, right) Engine Anti-Ice (engine running).
    d) If the maintenance message does not show on the ground test display, you corrected the fault.
17) If you do not find a problem with the tubing, then continue.

(6) Do this check for ice in the EAI tubing:

(a) Make sure the weep hole in the tube assembly that runs from the EAI valve controller to EAI valve is not blocked.

NOTE: The weep hole is near the bottom of the lower bifurcation disconnect panel.

(b) Disconnect the tube assembly at the lower bifurcation disconnect panel.

(c) Hold the EAI valve controller, M30211 at the SVO port with a wrench and disconnect the tube assembly from the EAI valve controller, M30211.

(d) Do these steps to check the tubing for ice:

1) Connect a pressure gage to an air or nitrogen source.

2) Use an extension line to connect the pressure gage (output end) to the end of the tube assembly at the EAI valve controller, M30211.

3) Apply a minimum for 10 psig of air or nitrogen pressure.

**CAUTION** DO NOT APPLY MORE THAN THE SPECIFIED PRESSURE. IF YOU APPLY MORE PRESSURE, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT.

4) Increase the pressure to not more than 100 psig and make sure there is no blockage of the tubing.

(e) If the tubing is blocked by ice, then do these steps:

1) Apply hot air (not more than 200°F) to the area of the tubing from the engine fan case to the lower bifurcation panel.

2) Apply a minimum for 10 psig of air or nitrogen pressure.

**CAUTION** DO NOT APPLY MORE THAN THE SPECIFIED PRESSURE. IF YOU APPLY MORE PRESSURE, YOU CAN CAUSE DAMAGE TO THE EQUIPMENT.

3) Increase the pressure to not more than 100 psig and make sure there is no blockage of the tubing.

NOTE: The air or nitrogen must flow freely through the tubing.

4) Disconnect the extension line from the tube assembly.

5) Connect the tube assembly at the lower bifurcation disconnect panel.

a) Tighten the nut on the tube assembly to 266.5-283.5 pound-inches.

6) Hold the EAI valve controller, M30211 at the SVO port with a wrench and connect the tube assembly to the EAI valve controller, M30211.

a) Tighten the nut on the tube assembly to 266.5-283.5 pound-inches.

(7) Replace the EAI valve.

These are the tasks:

Engine Anti-Ice Valve Removal, AMM TASK 30-21-02-000-805-001,

Engine Anti-Ice Valve Installation, AMM TASK 30-21-02-400-805-001.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, (left, right) Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(c) If the maintenance message shows on the ground test display, then continue.

(8) Do this check to determine if the engine anti-ice valve controller is binding.

(a) Disconnect the lines on the input and output of the engine anti-ice valve controller (AMM PAGEBLOCK 30-21-02/401 Config 1).

(b) Connect a nitrogen source to the inlet of the engine anti-ice valve controller.

(c) Make sure that the applicable engine anti-ice switch on the P5 panel is in the off position.

(d) Apply 20 psi to the inlet of the anti-ice controller with the nitrogen source.

(e) Verify that no air is present at the exhaust of the controller.

(f) On the P5 overhead turn the applicable engine anti-ice switch to the on position.

(g) Verify that air is present at the exhaust of the controller.

(h) If you find a problem the controller is binding and will need to be replaced (AMM PAGEBLOCK 30-21-02/401 Config 1)

(9) Replace the EAI valve controller, M30211.

These are the tasks:

Engine Anti-Ice Valve Controller Removal, AMM TASK 30-21-03-000-813-001,

Engine Anti-Ice Valve Controller Installation, AMM TASK 30-21-03-400-811-001.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(c) If the maintenance message shows on the ground test display, then continue.

**END OF TASK**

## 803. Engine Anti-Ice Valve (left) Failed Open - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10121.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

(1) Replace the EAI valve.

These are the tasks:

Engine Anti-Ice Valve Removal, AMM TASK 30-21-02-000-805-001,

Engine Anti-Ice Valve Installation, AMM TASK 30-21-02-400-805-001.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(2) Replace the EAI valve controller, M30211.

These are the tasks:

Engine Anti-Ice Valve Controller Removal, AMM TASK 30-21-03-000-813-001,

Engine Anti-Ice Valve Controller Installation, AMM TASK 30-21-03-400-811-001.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(c) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the tubing for the engine anti-ice (EAI) pressure sensors for leaks:

(a) Examine the tubing between the upper EAI duct and the EAI pressure sensor 1, M30214, for loose fittings or damage.

(b) Examine the tubing between the upper EAI duct and the EAI pressure sensor 2, M30212, for loose fittings or damage.

(c) If you find a problem with the tubing, then these steps:

1) Repair the tubing.

2) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(d) If you do not find a problem with the tubing, then continue.

**END OF TASK**

## 804. Engine Anti-Ice Pressure Sensor (left 1) Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10171.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do this check of the ducts and tubing for leaks or damage:

(a) Examine the tubing between the upper EAI duct and the EAI pressure sensor 1, M30214, for loose fittings, cross-threaded connections or B nuts, blockage, leakage, or other damage.

(b) Examine the tubing between the upper EAI duct and the EAI pressure sensor 2, M30212, for loose fittings, cross-threaded connections or B nuts, blockage, leakage, or other damage.

(c) If you find a problem, then do these steps:

1) Repair the problem.

2) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(d) If you do not find a problem with the tubing, then continue.

(2) Replace the left engine anti-ice (EAI) pressure sensor 1, M30214.

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring:

(a) Disconnect electrical connector DM30214 from the left EAI pressure sensor 1 (WDM 30-21-11).

(b) Remove the left ACIPS card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(c) Do a wiring check between these pins of connector DM30214 at the left EAI pressure sensor 1, M30214 and connector XA6 in the P85 left systems cardfile, P85A6 (WDM 30-21-11):

| DM30214 | | XA6 |
|---|---|---|
| pin 1 | . . . . . | pin 27 |
| pin 3 | . . . . . | pin 63 |
| pin 4 | . . . . . | pin 62 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Connect connector DM30214.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

6) If the maintenance message shows on the ground test display, then continue.

(4) Replace the ACIPS card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

**——— END OF TASK ———**

## 805. Engine Anti-Ice Pressure Sensor (left 1) Signal Range Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10191.

### B. Initial Evaluation

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

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

**C. Fault Isolation Procedure**

(1) Replace the left ACIPS card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Disconnect electrical connector DM30214 from the left EAI pressure sensor 1 (WDM 30-21-11).

(b) Remove the left ACIPS card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(c) Do a wiring check between these pins of connector DM30214 at the left EAI pressure sensor 1, M30214 and connector XA6 in the P85 left systems cardfile, P85A6 (WDM 30-21-11):

| DM30214 | | XA6 |
|---|---|---|
| pin 1 | . . . . . | pin 27 |
| pin 3 | . . . . . | pin 63 |
| pin 4 | . . . . . | pin 62 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-connect connector DM30214.

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

5) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Replace the left engine anti-ice (EAI) pressure sensor 1, M30214.

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

**——— END OF TASK ———**

## 806. Engine Anti-Ice Valve Controller (left) Torque Motor Problem - Fault Isolation

**A. Maintenance Messages**

(1) This task is for maintenance message: 30-10291.

**B. Initial Evaluation**

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

(1) Do this check of the resistance of the left engine anti-ice (EAI) valve:

(a) Remove the left ACIPS card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Measure the resistance between pin 14 and pin 15 of connector XA6 at the left system cardfile (LSCF) (WDM 30-21-11).

(c) If the resistance between pins 14 and 15 of connector XA6 is not 30-100 ohms, then do these steps:

1) Disconnect connector DM30211 from the left EAI valve controller, M30211.

2) Measure the resistance between pin 1 and pin 2 of connector DM30211 (WDM 30-21-11).

3) If the resistance between pins 1 and 2 of connector DM30211 is not 30-100 ohms, then do these steps:

a) Replace the left EAI valve controller, M30211. To replace it,

These are the tasks:

Engine Anti-Ice Valve Controller Removal, AMM TASK 30-21-03-000-813-001,

Engine Anti-Ice Valve Controller Installation, AMM TASK 30-21-03-400-811-001.

b) Re-install the left ACIPS card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

c) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

4) If the resistance between pins 1 and 2 of connector DM30211 is 30-100 ohms, then do these steps:

a) Repair the wiring between pins 15 and 14 of connector XA6 at the LSCF, P85, and pins 1 and 2 of connector DM30211 at the left EAI valve controller, M30211 (WDM 30-21-11).

b) Re-connect connector DM30211.

c) Re-install the left ACIPS card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

d) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

(d) If the resistance between pins 14 and 15 of connector XA6 is 30-100 ohms, then continue.

(2) Replace the left ACIPS card, P85A6,

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

**——— END OF TASK ———**

## 807. Engine Anti-Ice Pressure Sensor (left) Values Disagree - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10401.

### B. Initial Evaluation

(1) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

(a) If one or more maintenance messages show on the ground test display, then do these steps:

1) Find each message in the Maintenance Message Index.

2) Do the specified fault isolation task.

(b) If no maintenance message shows on the ground test display, then continue.

### C. Fault Isolation Procedure

(1) Replace the left engine anti-ice (EAI) pressure sensor 1, M30214:

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(2) Replace the left EAI pressure sensor 2, M30212:

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(3) Do a this check of the wiring:

(a) Remove the left ACIPS card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Disconnect connector DM30214 from the left EAI pressure sensor 1, M30214.

(c) Do a wiring check between these pins of connector XA6 at the left system cardfile (LSCF) and connector DM30214 at the EAI pressure sensor 1 (WDM 30-21-11):

| XA6 | DM30214 |
|---|---|
| pin 27 | pin 1 |
| pin 63 | pin 3 |
| pin 62 | pin 4 |

(d) Disconnect connector DM30212 from the left EAI pressure sensor 2, M30212.

(e) Do a wiring check between these pins of connector XA6 at the left system cardfile (LSCF) and connector DM30212 at the EAI pressure sensor 2 (WDM 30-21-11):

| XA6 | DM30212 |
|---|---|
| pin 52 | pin 1 |
| pin 57 | pin 3 |
| pin 56 | pin 4 |

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Connect connectors DM30214 and DM30212.

3) Install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

**END OF TASK**

## 808. ACIPS Control Card (left) Output Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-18891.

**B. Initial Evaluation**

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

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

**C. Fault Isolation Procedure**

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the left airfoil and cowl ice protection system (ACIPS) card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (SSM 30-21-11):

(a) Remove the left airfoil and cowl ice protection system (ACIPS) card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801

(b) Remove the left ARINC signal gateway (ASG) card, P85A12. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(c) Do a wiring check between these pins of connector XA6 and connector XA12 at the P85 left systems cardfile:

| XA6 | XA12 |
|---|---|
| pin 151 . . . . . | pin 67 |
| pin 154 . . . . . | pin 70 |

(d) If you find a problem with the wiring, do these steps:

1) Repair the wiring.

2) Re-install the left ASG card, P84A12, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

3) Re-install the left ACIPS control card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(3) Look at the Extended Maintenance, Existing Faults display on the MAT for maintenance messages related to the ARINC signal gateway system.

(a) Find the maintenance messages in the FIM Maintenance Messages Index.

(b) Do the specified fault isolation task.

——— END OF TASK ———

## 809. Engine Anti-Ice (left) Selector Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 23-43550.

### B. Initial Evaluation

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

(2) If the MAT shows NOT ACTIVE for the maintenance message, monitor the maintenance message on the MAT while you do these steps:

(a) Set the ANTI-ICE ENGINE L selector (P5 overhead panel) to the ON position.

(b) Wait 30 seconds.

(c) Set the ANTI-ICE ENGINE L selector to the AUTO position.

(d) Wait 30 seconds.

(e) Set the ANTI-ICE ENGINE L selector to the OFF position.

(f) Wait 30 seconds.

(g) If the MAT shows ACTIVE for the maintenance message while the ANTI-ICE ENGINE L selector is in the ON, AUTO or OFF position, then do the Fault Isolation Procedure below.

(h) If the MAT shows NOT ACTIVE for the maintenance message while the ANTI-ICE ENGINE L selector is in the ON, AUTO or OFF positions, then there was an intermittent fault.

### C. Fault Isolation Procedure

(1) Replace the ANTI-ICE ENGINE L selector, M33413S2 (WDM 30-21-11).

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

(b) If the MAT shows ACTIVE for the maintenance message while the ANTI-ICE ENGINE L selector is in the ON, AUTO or OFF positions, then continue.

(2) Do this check of the wiring from the left EAI selector to the left overhead panel cardfile (OPCF):

(a) Disconnect connector DM33413B from the anti-ice module, M33413.

(b) Disconnect connector DM23117J from the left OPCF, M23117.

(c) Do a wiring check between these pins of connector DM33413B at the anti-ice module, M33413, and connector DM23117J at the left OPCF, M23117 (WDM 30-21-11):

| DM33413B | DM23117J |
|---|---|
| pin 8 | pin B15 |
| pin 9 | pin B12 |
| pin 21 | pin B13 |
| pin 20 | pin B14 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connectors DM33413B and DM23117J.

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

4) If the MAT shows ACTIVE for the maintenance message, then continue.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connectors DM33413B and DM23117J.

(3) Replace the left overhead panel cardfile chassis, M23117 at the maintenance panel, P61.

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) Monitor the maintenance message on the MAT while you do these steps:

1) Set the ANTI-ICE ENGINE L (P5 overhead panel) selector to the ON position.

2) Set the ANTI-ICE ENGINE L selector to the AUTO position.

3) Set the ANTI-ICE ENGINE L selector to the OFF position.

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

——— END OF TASK ———

## 810. Engine Anti-Ice (right) Selector Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 23-43900.

### B. Initial Evaluation

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

(2) If the MAT shows NOT ACTIVE for the maintenance message, monitor the maintenance message on the MAT while you do these steps:

(a) Set the ANTI-ICE ENGINE R selector (P5 overhead panel) to the ON position.

(b) Wait 30 seconds.

(c) Set the ANTI-ICE ENGINE R selector to the AUTO position.

(d) Wait 30 seconds.

(e) Set the ANTI-ICE ENGINE R selector to the OFF position.

(f) Wait 30 seconds.

(g) If the MAT shows ACTIVE for the maintenance message while the ANTI-ICE ENGINE R selector is in the ON, AUTO of OFF position, then do the Fault Isolation Procedure below.

(h) If the MAT shows NOT ACTIVE for the maintenance message while the ANTI-ICE ENGINE R selector is in the ON, AUTO or OFF positions, then there was an intermittent fault.

### C. Fault Isolation Procedure

(1) Replace the ANTI-ICE ENGINE R selector, M33413S3 (WDM 30-21-12).

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

(b) If the MAT shows ACTIVE for the maintenance message while the ANTI-ICE ENGINE R selector is in the ON, AUTO or OFF positions, then continue.

(2) Do this check of the wiring:

(a) Disconnect connector DM33413A from the anti-ice module, M33413.

(b) Disconnect connector DM23217K from the right OPCF, M23217.

(c) Do a wiring check between these pins of connector DM33413A at the anti-ice module, M33413, and connector DM23217K at the right OPCF, M23217 (WDM 30-21-12):

| DM33413A | DM23217K |
|---|---|
| pin 9 | pin A8 |
| pin 23 | pin A5 |
| pin 24 | pin A6 |
| pin 10 | pin A7 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connectors DM33413A and DM23217K.

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

4) If the MAT shows ACTIVE for the maintenance message, then continue.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connectors DM33413A and DM23217K.

(3) Replace the right OPCF chassis, M23217 at the maintenance panel, P61.

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) Monitor the maintenance message on the MAT while you do these steps:

1) Set the ANTI-ICE ENGINE R selector to the ON position.

2) Wait 30 seconds.

3) Set the ANTI-ICE ENGINE R selector to the AUTO position.

4) Wait 30 seconds.

5) Set the ANTI-ICE ENGINE R selector to the OFF position.

6) Wait 30 seconds.

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

**——— END OF TASK ———**

## 811. ACIPS Control Card (right) Power Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10002.

### B. Initial Evaluation

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

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

**C. Fault Isolation Procedure**

(1) Make sure that this circuit breaker is closed:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| P | 11 | C30602 | EAI CTRL R |

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the power wiring:

(a) Remove the right airfoil and cowl ice protection system (ACIPS) card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Do a check for 28V DC at pin 4 of connector XA6 at the right system cardfile (RSCF) (WDM 30-21-12).

(c) If there is not 28V DC at pin 4 of connector XA6, then do these steps:

1) Open the P210 right power management panel.

2) Do a check for 28V DC at the load terminal of circuit breaker C30602.

3) If there is not 28V DC at the circuit breaker, then of there steps:

a) Replace this circuit breaker, C30602:

(WDM 30-21-12)

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| P | 11 | C30602 | EAI CTRL R |

b) Close the P210 right power management panel.

c) Re-install the right ACIPS card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

4) If there is 28V DC at the circuit breaker, then do there steps:

a) Repair the wiring between pin 4 of connector XA6 in the RSCF, P84, and the load terminal of circuit breaker C30602 (WDM 30-21-12).

b) Close the P210 right power management panel.

c) Re-install the right ACIPS card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(d) If there is 28V DC at pin 4 of connector XA6, then continue.

(e) Re-install the right ACIPS card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(3) Replace the right ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

——— END OF TASK ———

## 812. Engine Anti-Ice Valve (right) Failed Open - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10132.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the right EAI valve.

These are the tasks:

Engine Anti-Ice Valve Removal, AMM TASK 30-21-02-000-805-001,

Engine Anti-Ice Valve Installation, AMM TASK 30-21-02-400-805-001.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(2) Replace the EAI valve controller, M30211.

These are the tasks:

Engine Anti-Ice Valve Controller Removal, AMM TASK 30-21-03-000-813-001,

Engine Anti-Ice Valve Controller Installation, AMM TASK 30-21-03-400-811-001.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(c) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the tubing:

(a) Examine the tubing between the upper EAI duct and the EAI pressure sensor 1, M30214, for loose fittings or damage.

(b) Examine the tubing between the upper EAI duct and the EAI pressure sensor 2, M30212, for loose fittings or damage.

(c) If you find a problem with the tubing, then these steps:

1) Repair the tubing.

2) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(d) If you do not find a problem with the tubing, then continue.

**——— END OF TASK ———**

## 813. Engine Anti-Ice Pressure Sensor (right 1) Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10182.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do this check of the ducts and tubing for leaks or damage:

(a) Examine the tubing between the upper EAI duct and the EAI pressure sensor 1, M30214, for loose fittings, cross-threaded connections or B nuts, blockage, leakage, or other damage.

(b) Examine the tubing between the upper EAI duct and the EAI pressure sensor 2, M30212, for loose fittings, cross-threaded connections or B nuts, blockage, leakage, or other damage.

(c) If you find a problem, then do these steps:

1) Repair the problem.

2) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(d) If you do not find a problem with the tubing, then continue.

(2) Replace the right engine anti-ice (EAI) pressure sensor 1, M30214.

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring:

(a) Disconnect electrical connector DM30214 from the right EAI pressure sensor 1, M30214.

(b) Remove the right ACIPS card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(c) Do a wiring check between these pins of connector DM30214 at the right EAI pressure sensor 1, M30214 and connector XA6 in the P84 right systems cardfile, P84A6 (WDM 30-21-12):

| DM30214 | | XA6 |
|---|---|---|
| pin 1 | . . . . . | pin 27 |
| pin 3 | . . . . . | pin 63 |
| pin 4 | . . . . . | pin 62 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Install the right ACIPS card, P84A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

3) Connect connector DM30214.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engine not running).

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

6) If the maintenance message shows on the ground test display, then continue.

(4) Replace the right ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engine not running).

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

**——— END OF TASK ———**

## 814. Engine Anti-Ice Pressure Sensor (right 1) Signal Range Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10212.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the right ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Disconnect electrical connector DM30214 from the right EAI pressure sensor 1, M30214.

(b) Remove the right ACIPS card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(c) Do a wiring check between these pins of connector DM30214 at the right EAI pressure sensor 1, M30214 and connector XA6 in the P84 right systems cardfile, P84A6 (WDM 30-21-12):

| DM30214 | | XA6 |
|---|---|---|
| pin 2 | . . . . . | pin 9 |
| pin 1 | . . . . . | pin 27 |
| pin 3 | . . . . . | pin 63 |
| pin 4 | . . . . . | pin 62 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the right ACIPS card, P84A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-connect connector DM30214.

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

5) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Replace the right EAI pressure sensor 1, M30214.

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

**——— END OF TASK ———**

## 815. Engine Anti-Ice Pressure Sensor (left 2) Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10231.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do this check of the ducts and tubing for leaks or damage:

(a) Examine the tubing between the upper EAI duct and the EAI pressure sensor 1, M30214, for loose fittings, cross-threaded connections or B nuts, blockage, leakage, or other damage.

(b) Examine the tubing between the upper EAI duct and the EAI pressure sensor 2, M30212, for loose fittings, cross-threaded connections or B nuts, blockage, leakage, or other damage.

(c) If you find a problem, then do these steps:

1) Repair the problem.

2) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(d) If you do not find a problem with the tubing, then continue.

(2) Replace the left engine anti-ice (EAI) pressure sensor 2, M30212.

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring:

(a) Disconnect electrical connector DM30212 from the left EAI pressure sensor 2 (WDM 30-21-11).

(b) Remove the left ACIPS card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(c) Do a wiring check between these pins of connector DM30212 at the left EAI pressure sensor 2, M30212 and connector XA6 in the P85 left systems cardfile, P85A6 (WDM 30-21-11):

| DM30212 | XA6 |
|---|---|
| pin 1 | pin 25 |
| pin 3 | pin 57 |
| pin 4 | pin 56 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Connect connector DM30212.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

6) If the maintenance message shows on the ground test display, then continue.

(4) Replace the ACIPS card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

——— END OF TASK ———

## 816. Engine Anti-Ice Pressure Sensor (right 2) Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10242.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do this check of the ducts and tubing for leaks or damage:

(a) Examine the tubing between the upper EAI duct and the EAI pressure sensor 1, M30214, for loose fittings, cross-threaded connections or B nuts, blockage, leakage, or other damage.

(b) Examine the tubing between the upper EAI duct and the EAI pressure sensor 2, M30212, for loose fittings, cross-threaded connections or B nuts, blockage, leakage, or other damage.

(c) If you find a problem, then do these steps:

1) Repair the problem.

2) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

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

(d) If you do not find a problem with the tubing, then continue.

(2) Replace the right engine anti-ice (EAI) pressure sensor 2, M30212.

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring:

(a) Disconnect electrical connector DM30212 from the right EAI pressure sensor 2, M30212.

(b) Remove the right ACIPS card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(c) Do a wiring check between these pins of connector DM30212 at the right EAI pressure sensor 2, M30212 and connector XA6 in the P84 right systems cardfile, P84A6 (WDM 30-21-12):

| DM30212 | | XA6 |
|---|---|---|
| pin 1 | . . . . . | pin 25 |
| pin 3 | . . . . . | pin 57 |
| pin 4 | . . . . . | pin 56 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Install the right ACIPS card, P84A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Connect connector DM30212.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engine not running).

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

6) If the maintenance message shows on the ground test display, then continue.

(4) Replace the right ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engine not running).

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

**END OF TASK**

## 817. Engine Anti-Ice Pressure Sensor (left 2) Signal Range Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10261.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the left ACIPS card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Disconnect electrical connector DM30212 from the left EAI pressure sensor 2 (WDM 30-21-11).

(b) Remove the left ACIPS card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(c) Do a wiring check between these pins of connector DM30212 at the left EAI pressure sensor 2, M30212 and connector XA6 in the P85 left systems cardfile, P85A6 (WDM 30-21-11):

| DM30212 | | XA6 |
|---|---|---|
| pin 1 | . . . . . | pin 27 |
| pin 3 | . . . . . | pin 63 |
| pin 4 | . . . . . | pin 62 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-connect connector DM30212.

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

5) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Replace the left EAI pressure sensor 2, M30212.

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

——— END OF TASK ———

## 818. Engine Anti-Ice Pressure Sensor (right 2) Signal Range Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10272.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the right ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Disconnect electrical connector DM30212 from the right EAI pressure sensor 2, M30212.

(b) Remove the right ACIPS card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(c) Do a wiring check between these pins of connector DM30212 at the right EAI pressure sensor 2, M30212 and connector XA6 in the P84 right systems cardfile, P84A6 (WDM 30-21-12):

| DM30212 | XA6 |
|---|---|
| pin 1 . . . . . | pin 25 |
| pin 3 . . . . . | pin 57 |
| pin 4 . . . . . | pin 56 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the right ACIPS card, P84A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

3) Re-connect connector DM30212.

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

5) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Replace the right EAI pressure sensor 2, M30212.

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

——— END OF TASK ———

## 819. Engine Anti-Ice Valve Controller (right) Torque Motor Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10302.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do this check of the resistance of the right engine anti-ice (EAI) valve:

(a) Remove the right ACIPS card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Measure the resistance between pin 14 and pin 15 of connector XA6 at the right system cardfile (RSCF) (WDM 30-21-12).

(c) If the resistance between pins 15 and 14 of connector XA6 is not 30-100 ohms, then do these steps:

1) Disconnect connector DM30211 from the right EAI valve controller, M30211.

2) Measure the resistance between pin 1 and pin 2 of connector DM30211 (WDM 30-21-12).

3) If the resistance between pins 1 and 2 of connector DM30211 is not 30-100 ohms, then do these steps:

a) Replace the right EAI valve controller, M30211.

These are the tasks:

Engine Anti-Ice Valve Controller Removal, AMM TASK 30-21-03-000-813-001

Engine Anti-Ice Valve Controller Installation, AMM TASK 30-21-03-400-811-001.

b) Re-install the right ACIPS card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

c) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engine not running).

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

4) If the resistance between pins 1 and 2 of connector DM30211 is 30-100 ohms, then do these steps:

a) Repair the wiring between pins 15 and 14 of connector XA6 at the RSCF, P84, and pins 1 and 2 of connector DM30211 at the right EAI valve controller, M30211 (WDM 30-21-12).

b) Re-connect connector DM30211.

c) Re-install the right ACIPS card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

d) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engine not running).

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

(d) If the resistance between pins 14 and 15 of connector XA6 is 30-100 ohms, then continue.

(e) Re-install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(2) Replace the right ACIPS card, P85A7,

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

**——— END OF TASK ———**

## 820. ACIPS Control Card (left) Internal Fault - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10381.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

(1) Replace the left airfoil and cowl ice protection system (ACIPS) card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engine not running).

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

**——— END OF TASK ———**

**821. ACIPS Control Card (right) Internal Fault - Fault Isolation**

**A. Maintenance Messages**

(1) This task is for maintenance message: 30-10392.

**B. Initial Evaluation**

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

(1) Replace the right airfoil and cowl ice protection system (ACIPS) card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engine not running).

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

**——— END OF TASK ———**

## 822. Engine Anti-Ice Pressure Sensor (right) Values Disagree - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10402.

### B. Initial Evaluation

(1) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Right Engine Anti-Ice (engine running).

NOTE: Make sure that the PS3 pneumatic pressure is a minimum of 47 psi before you start the ground test. The test will be inhibited if PS3 is too low. Look at the engine maintenance page for the PS3 pressure.

(a) If one or more maintenance messages show on the ground test display, then do these steps:

1) Find each message in the Maintenance Message Index.

2) Do the specified fault isolation task.

(b) If no maintenance message shows on the ground test display, then continue.

### C. Fault Isolation Procedure

(1) Replace the right engine anti-ice (EAI) pressure sensor 1, M30214.

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(2) Replace the right EAI pressure sensor 2, M30212:

These are the tasks:

Engine Anti-Ice Pressure Sensor Removal, AMM TASK 30-21-04-000-802-001,

Engine Anti-Ice Pressure Sensor Installation, AMM TASK 30-21-04-400-802-001.

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

NOTE: This follows the ground test that is done after installation of the pressure sensor.

(b) If the maintenance message shows on the ground test display, then continue.

(3) Do a this check of the wiring:

(a) Remove the right ACIPS card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Disconnect connector DM30214 from the right EAI pressure sensor 1, M30214.

(c) Do a wiring check between these pins of connector XA6 at the right system cardfile (RSCF) and connector DM30214 at the right EAI pressure sensor 1 (WDM 30-21-11):

| XA6 | DM30214 |
|---|---|
| pin 27 | pin 1 |
| pin 63 | pin 3 |
| pin 62 | pin 4 |

(d) Disconnect connector DM30212 from the right EAI pressure sensor 2, M30212.

(e) Do a wiring check between these pins of connector XA6 at the right system cardfile (RSCF) and connector DM30212 at the EAI pressure sensor 2 (WDM 30-21-11):

| XA6 | DM30212 |
|---|---|
| pin 52 | pin 1 |
| pin 57 | pin 3 |
| pin 56 | pin 4 |

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Connect connectors DM30214 and DM30212.
3) Install the right ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.
4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engine not running).
5) If the maintenance message does not show on the ground test display, you corrected the fault.

——— END OF TASK ———

## 823. Invalid Overhead Panel Bus Controller Switch Signals - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10981.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the left overhead panel bus controller, M23112.

These are the tasks:

Left Overhead Panel Bus Controller (OPBC) Removal, AMM TASK 23-93-01-000-801,

Left Overhead Panel Bus Controller (OPBC) Installation, AMM TASK 23-93-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Replace the right overhead panel bus controller, M23212.

These are the tasks:

Right Overhead Panel Bus Controller (OPBC) Removal, AMM TASK 23-93-01-000-802,

Right Overhead Panel Bus Controller (OPBC) Installation, AMM TASK 23-93-01-400-802.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Look at the Message Data for the maintenance message.

(a) Find the ACIPS or ASG card that is reporting the fault.

(b) Replace the applicable card:

1) Left(Right) ACIPS card, P85A6(P84A6).

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left(Right) Engine Anti-Ice (engine not running).

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

2) Left(right) ASG card, P85A12(P84A12).

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

a) Do this ground test on the MAT: 31 Systems Cardfiles, System Configuration, ARINC Signal Gateway Left(Right), LSCF(RSCF)

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

**——— END OF TASK ———**

## 824. Duct Leak and Overheat Detection System Card (left) Signal Invalid - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10991.

### B. Fault Isolation Procedure

(1) Look at the Extended Maintenance, Existing Faults display on the MAT for maintenance messages related to the ARINC signal gateway system, or duct leak and overheat detection system.

(2) If maintenance messages show for those systems, do these steps:

(a) Find the maintenance messages in the FIM Maintenance Messages Index.

(b) Do the specified fault isolation task.

(3) If maintenance messages do not show for those systems, do these steps:

(a) Look at the Message Data for the maintenance message.

(b) Find the ACIPS card that is reporting the fault.

(c) Replace the left ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(d) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left(Right) Engine Anti-Ice (engine not running).

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

**——— END OF TASK ———**

## 825. Duct Leak and Overheat Detection System Card (right) Signal Invalid - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10992.

### B. Fault Isolation Procedure

(1) Look at the Extended Maintenance, Existing Faults display on the MAT for maintenance messages related to the ARINC signal gateway system, or duct leak and overheat detection system.

(2) If maintenance messages show for those systems, do these steps:

(a) Find the maintenance messages in the FIM Maintenance Messages Index.

(b) Do the specified fault isolation task.

(3) If maintenance messages do not show for those systems, do these steps:

(a) Look at the Message Data for the maintenance message.

(b) Find the ACIPS card that is reporting the fault.

(c) Replace the right ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(d) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left(Right) Engine Anti-Ice (engine not running).

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

**——— END OF TASK ———**

## 826. ACIPS Control Card (right) Output Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-18892.

**B. Initial Evaluation**

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

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

**C. Fault Isolation Procedure**

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the right airfoil and cowl ice protection system (ACIPS) card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Remove the right ACIPS card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Remove the left ARINC signal gateway (ASG) card, P84A12. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(c) Do a wiring check between these pins of connector XA6 and connector XA12 at the P84 right systems cardfile (WDM 30-21-12):

| XA12 | XA6 |
|---|---|
| pin 67 | pin 151 |
| pin 70 | pin 154 |

(d) Remove the right ASG card, P84A15. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(e) Do a wiring check between these pins of connector XA6 and connector XA15 at the P84 right systems cardfile (WDM 30-21-12):

| XA15 | XA6 |
|---|---|
| pin 67 | pin 115 |
| pin 70 | pin 118 |

(f) If you find a problem with the wiring, do these steps:

1) Repair the wiring.

2) Re-install the left ASG card, P85A12, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

3) Re-install the right ASG card, P85A15, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

4) Re-install the right ACIPS control card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

——— END OF TASK ———

## 827. ACIPS Control Card (left) Input Problem from ARINC Signal Gateway (left) - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-19904.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the left airfoil and cowl ice protection system (ACIPS) card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (SSM 30-21-12):

(a) Remove the left ACIPS card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(b) Remove the left ARINC signal gateway (ASG) card, P85A12. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(c) Do a wiring check between these pins of connector XA12 and connector XA6 at the P85 left systems cardfile (LSCF):

| XA12 | XA6 |
|---|---|
| pin 67 | pin 151 |
| pin 70 | pin 154 |

(d) If you find a problem with the wiring, do these steps:

1) Repair the wiring.

2) Re-install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Wing Anti-Ice - Installation, AMM TASK 30-11-02-400-801.

3) Re-install the left ASG card, P85A12, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine not running).

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(g) Re-install the left ASG card, P85A12, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

(3) Replace the left ASG card, P85A12.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection, System, System Test, Left Engine Anti-Ice (engine not running).

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

**——— END OF TASK ———**

## 828. ACIPS Control Card (right) Input Problem from ARINC Signal Gateway (left) - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-19905.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the right airfoil and cowl ice protection system (ACIPS) card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (SSM 30-21-12):

(a) Remove the right ACIPS card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Remove the left ARINC signal gateway (ASG) card, P84A12. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(c) Do a wiring check between these pins of connector XA12 and connector XA6 at the P84 right systems cardfile:

| XA12 | XA6 |
|---|---|
| pin 67 | pin 151 |
| pin 70 | pin 154 |

(d) If you find a problem with the wiring, do these steps:

1) Repair the wiring.

2) Re-install the right ACIPS card, P84A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-install the left ASG card, P84A12, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-install the right ACIPS card, P84A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(g) Re-install the left ASG card, P84A12, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

(3) Replace the left ASG card, P84A12.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

**——— END OF TASK ———**

## 829. ACIPS Control Card (left) Input Problem from ARINC Signal Gateway (right) - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-19907.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the left airfoil and cowl ice protection system (ACIPS) card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (SSM 30-21-11):

(a) Remove the left ACIPS card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Remove the right ARINC signal gateway (ASG) card, P85A15. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(c) Do a wiring check between these pins of connector XA15 and connector XA6 at the P85 left systems cardfile (LSCF):

| XA15 | XA6 |
|---|---|
| pin 67 | pin 115 |
| pin 70 | pin 118 |

(d) If you find a problem with the wiring, do these steps:

1) Repair the wiring.

2) Re-install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-install the right ASG card, P85A15, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-install the left ACIPS card, P85A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(g) Re-install the right ASG card, P85A15, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

(3) Replace the right ASG card, P85A15.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

——— END OF TASK ———

## 830. ACIPS Control Card (right) Input Problem from ARINC Signal Gateway (right) - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-19908.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the right airfoil and cowl ice protection system (ACIPS) card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (SSM 30-21-12):

(a) Remove the right ACIPS card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Remove the right ARINC signal gateway (ASG) card, P84A15. To remove it, do this task: ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801.

(c) Do a wiring check between these pins of connector XA15 and connector XA6 at the P84 right systems cardfile (RSCF):

| XA15 | XA6 |
|---|---|
| pin 67 | pin 115 |
| pin 70 | pin 118 |

(d) If you find a problem with the wiring, do these steps:

1) Repair the wiring.

2) Re-install the right ACIPS card, P84A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-install the right ASG card, P84A15, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

(e) If you do not find a problem with the wiring, then continue.

(f) Re-install the right ACIPS card, P84A6, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(g) Re-install the right ASG card, P84A15, do this task: ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

(3) Replace the right ASG card, P84A15.

These are the tasks:

ARINC Signal Gateway (ASG) Card Removal, AMM TASK 31-09-02-000-801,

ARINC Signal Gateway (ASG) Card Installation, AMM TASK 31-09-02-400-802.

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

**——— END OF TASK ———**

## 831. Duct Leak and Overheat Detection System Card (center) Signal Invalid - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10993.

### B. Fault Isolation Procedure

(1) Look at the Extended Maintenance, Existing Faults display on the MAT for maintenance messages related to the ARINC signal gateway system, or duct leak and overheat detection system.

(2) If maintenance messages show for those systems, do these steps:

(a) Find the maintenance messages in the FIM Maintenance Messages Index.

(b) Do the specified fault isolation task.

(3) If maintenance messages do not show for those systems, do these steps:

(a) Look at the Message Data for the maintenance message.

(b) Find the ACIPS card that is reporting the fault.

(c) Replace the left(right) ACIPS card, P85A6(P84A6).

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(d) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left(Right) Engine Anti-Ice (engine not running).

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

——— END OF TASK ———

## 832. EICAS Message ANTI-ICE LOSS ENG L (R) Shows with No Correlated Maintenance Message - Fault Isolation

### A. Description

(1) This task is for these EICAS Advisory Messages:

(a) ANTI-ICE LOSS ENG L

(b) ANTI-ICE LOSS ENG R

(2) When these EICAS Messages show without a correlated Central Maintenance Computing Function (CMCF) Maintenance Message, it is a result of the AHM Event Driven Uplink CFG request and CFG requests for DLODS ATA 26 from the MAT. This is not considered to be an actual Duct Leak Overheat Detection System (DLODS) Overheat Condition.

NOTE: Refer to 777-FTD-30-12001 and Maintenance Tip 777-MT-30-008

### B. Initial Evaluation

(1) If the ANTI-ICE LOSS ENG L (R) EICAS Message shows with a CMCF Maintenance Message, refer to the 30-MAINT MSG INDEX to find the applicable FIM Task for the message that shows.

(2) If the ANTI-ICE LOSS ENG L (R) EICAS Message shows without a CMCF Maintenance Message, do the Fault Isolation Procedure below.

### C. Fault Isolation Procedure

(1) Do a visual inspection of the ducts that connect to the engine Anti-Ice Valve for damage, breaks or fractures AMM PAGEBLOCK 30-21-06/401 Config 1

(a) If you find damage, breaks or fractures repair as necessary.

(b) If you do not find damage, breaks or fractures to the ducts, then there was an intermittent fault.

NOTE: Do not request CMC – CFG – ATA 261800 DLODS.

——— END OF TASK ———

## 801. Pitot Probe (left) Heater Power Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36121.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

(a) If the maintenance message shows on the ground test display then do the Fault Isolation Procedure.

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

### C. Fault Isolation Procedure

(1) Do these steps to replace these relays (WDM 30-31-11):

(a) Open the P110 left power management panel.

(b) Replace the left probe air heat control relay, K30312.

(c) Replace the left probe ground heat control relay, K30311.

(d) Replace the left pitot probe heat sensor relay, K30120.

(e) Replace the left AOA vane probe heat sensor relay, K30122.

(f) Replace the left AOA case probe heat sensor relay, K30121.

(g) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P110 left power management panel.

(i) If the maintenance message shows on the ground test display, then continue.

(2) Replace the left pitot probe heater, M34117.

These are the tasks:

Pitot Probe Removal, AMM TASK 34-11-01-000-801,

Pitot Probe Installation, AMM TASK 34-11-01-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the left pitot air data module, M34102.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P110 left power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Replace the left pitot probe heat transformer, T30314 (WDM 30-31-11).

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P110 left power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(5) Do a check for 28V DC at the load terminal of circuit breaker C30624 (WDM 30-31-11):

(a) If there is not 28V DC at the circuit breaker, then do these steps:

1) Replace this circuit breaker:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

2) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P110 left power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(b) If there is 28V DC at the circuit breaker, then continue.

(6) Do a check for 115V AC at the left pitot probe heater circuit breaker, C30424 (WDM 30-31-11):

(a) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace this circuit breaker, C30424:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| H | 6 | C30424 | PH C PITOT PROBE HTR L |

2) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P110 left power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(b) If there is 115V AC at the circuit breaker, then continue.

(7) Do a check for 115V AC at the left pitot probe heater circuit breaker, C30405 (WDM 30-31-11):

(a) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace this circuit breaker, C30405:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 5 | C30405 | PH B PITOT PROBE HTR L |

2) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P110 left power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(b) If there is 115V AC at the circuit breaker, then continue.

(8) Do this check of the wiring to the left probe air heat control relay, K30312 (WDM 30-31-11):

(a) Open these circuit breakers and install safety tags:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| H | 6 | C30424 | PH C PITOT PROBE HTR L |
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(b) Remove the left probe air heat control relay, K30312.

(c) Do a wiring check between these pins at circuit breaker C30424 to the connector DK30312 on the left probe air heat control relay, K30312:

| C30424 | | DK30312 |
|---|---|---|
| pin 2 | . . . . . | pin B1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the left probe air heat control relay, K30312.

3) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P110 left power management panel.

(e) If you do not find a problem with the wiring, then continue.

(f) Disconnect electrical connector DM34102B from the left pitot Air Data Module (ADM), M34102.

(g) Do a wiring check between these pins at the connector DK30312 on the left probe air heat control relay, K30312, to the connector DM34102B on the left pitot ADM, M34102.

| DK30312 | | DM34102B |
|---|---|---|
| pin X2 | . . . . . | pin 5 |

(h) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM34102B to the left pitot ADM, M34102.

3) Re-install the left probe air heat control relay, K30312.

4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P110 left power management panel.

(i) If you do not find a problem with the wiring, then continue.

(j) Remove the safety tags and close these circuit breakers:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| H | 6 | C30424 | PH C PITOT PROBE HTR L |
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(k) Check for 28V DC at pin X1 at connector DK30312 and the ground:

1) If there is no 28V DC, then do these steps:

a) Open this circuit breaker and install safety tag:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

b) Do a continuity check between these pins at the circuit breaker C30624 to the connector DK30312 on the left probe air heat control relay, K30312 (WDM 30-31-11).

| C30624 | | DK30312 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

<1> If there is no continuity, then repair the wiring.

c) Re-install the left probe air heat control relay, K30312.

d) Remove the safety tag and close this circuit breaker:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

<1> Close the P110 left power management panel.

2) If there is 28V DC, then continue.

(l) Re-install the left probe air heat control relay, K30312, then continue.

(9) Do this check of the wiring to the left probe ground heat control relay, K30311 (WDM 30-31-11):

(a) Open this circuit breaker and install safety tag:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(b) Remove the left probe ground heat control relay, K30311.

(c) Disconnect electrical connector DM34102B from the left pitot ADM, M34102.

(d) Do a wiring check between these pins at the connector DK30311 on the left probe ground heat control relay, K30311, to the connector DM34102B on the left pitot ADM, M34102.

| DK30311 | | DM34102B |
|---|---|---|
| pin X2 | . . . . . | pin 2 |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect electrical connector DM34102B to the left pitot ADM, M34102.
3) Re-install the left probe ground heat control relay, K30311.
4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.
5) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 left power management panel.

(f) If you do not find a problem with the wiring, then re-connect electrical connector DM34102B and re-install the left probe ground heat control relay, K30311, and continue.

(g) Remove the safety tag and close this circuit breaker:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(h) Check for 28V DC at pin X1 at connector DK30311 to the ground:

1) If there is no 28V DC, then do these steps:
   a) Open this circuit breaker and install safety tag:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

   b) Do a continuity check between these pins at the circuit breaker C30624 to the connector DK30311 on the left probe ground heat control relay, K30311 (WDM 30-31-11).

| C30624 | | DK30311 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

<1> If there is no continuity, then repair the wiring.

   c) Re-install the left probe ground heat control relay, K30311.

d) Remove the safety tag and close this circuit breaker:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

<1> Close the P110 left power management panel.

2) If there is 28V DC, then continue.

(i) Re-install the left probe ground heat control relay, K30311, then continue.

(10) Do this check of the wiring to the left pitot probe heat sensor relay, K30120 (WDM 30-31-11):

(a) Open these circuit breakers and install safety tags:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 5 | C30405 | PH B PITOT PROBE HTR L |
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(b) Remove the left pitot probe heat sensor relay, K30120.

(c) Disconnect electrical connector DM34117 from the left pitot probe heater, M34117.

(d) Do a wiring check between these pins at the connector DK30120 on the left pitot probe heat sensor relay, K30120, to the connector DM34117 on the left pitot probe heater, M34117.

| DK30120 | | DM34117 |
|---|---|---|
| pin C1 | . . . . . | pin A |

(e) Do a wiring check between these pins at the left PHB pitot probe heater circuit breaker, C30405, to the connector DM34117 on the left pitot probe heater, M34117.

| C30405 | | DM34117 |
|---|---|---|
| pin 2 | . . . . . | pin B |

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the left pitot probe heat sensor relay, K30120.

3) Re-connect connector DM34117 to the left pitot probe heater, M34117.

4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

6) Close the P110 left power management panel.

(g) If you do not find a problem with the wiring, then re-connect connector DM34117 and continue.

(h) Disconnect electrical connector DM34102B from the left pitot air data module, M34102.

(i) Do a wiring check between these pins at connector DK30120 on the left pitot probe heat sensor relay, K30120, to the connector DM34102B on the left pitot air data module, M34102.

| DK30120 | | DM34102B |
|---|---|---|
| pin C3 | . . . . . | pin 3 |

(j) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the left pitot probe heat sensor relay, K30120.
3) Re-connect connector DM34102B to the left pitot air data module, M34102.
4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.
5) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 left power management panel.
6) If you do not find a problem with the wiring then continue.

(k) Remove the safety tags and close these circuit breakers:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 5 | C30405 | PH B PITOT PROBE HTR L |
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(l) Check for 28V DC at pin X1 at connector DK30120 and the ground:

1) If there is no 28V DC, then do these steps:
   a) Open this circuit breaker and install safety tag:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

   b) Do a continuity check between these pins at the circuit breaker C30624 to the connector DK30120 on the left pitot probe heat sensor relay, K30120 (WDM 30-31-11).

| C30624 | | DK30120 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

<1> If there is no continuity, then repair the wiring.

   c) Re-install the left pitot probe heat sensor relay, K30120.
   d) Remove the safety tag and close this circuit breaker:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

   e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

<1> Close the P110 left power management panel.

2) If there is 28V DC, then re-install the left pitot probe heat sensor relay, K30120, then continue.

(11) Do this check of the wiring to the left pitot probe heat transformer, T30314 (WDM 30-31-11):

(a) Put the airplane in the ground mode (Air/Ground Mode Simulation, AMM TASK 32-09-00-860-801).

(b) Open these circuit breakers and install safety tags:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 5 | C30405 | PH B PITOT PROBE HTR L |
| H | 6 | C30424 | PH C PITOT PROBE HTR L |
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(c) Remove the left pitot probe heat transformer, T30314.

(d) Do a wiring check between these pins at circuit breaker C30405 and the left pitot probe heater transformer, T30314:

| C30405 | | T30314 |
|---|---|---|
| pin 2 | . . . . . | pin ground |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the left pitot probe heat transformer, T30314.

3) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P110 left power management panel.

(f) Remove the left probe ground heat control relay, K30311.

(g) Do a wiring check between these pins at the left pitot probe heat transformer, T30314, and connector DK30311 on the left probe ground heat control relay, K30311:

| T30314 | | DK30311 |
|---|---|---|
| pin ground | . . . . . | pin B1 |

(h) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the left pitot probe heat transformer, T30314.

3) Re-install the left probe ground heat control relay, K30311.

4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P110 left power management panel.

(i) If you do not find a problem with the wiring, then re-install the left pitot probe heat transformer, T30314, and the left probe ground heat control relay, K30311.

(j) Remove the safety tags and close these circuit breakers:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 5 | C30405 | PH B PITOT PROBE HTR L |
| H | 6 | C30424 | PH C PITOT PROBE HTR L |
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

**——— END OF TASK ———**

## 802. Pitot Probe (center) Heater Power Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36122.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do these steps to replace these relays (WDM 30-31-13):

(a) Open the P210 right power management panel.

(b) Replace the center probe air heat control relay, K30316.

(c) Replace the center probe ground heat control relay, K30315.

(d) Replace the center pitot probe heat sensor relay, K30223.

(e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P210 right power management panel.

(g) If the maintenance message shows on the ground test display, then continue.

(2) Replace the center pitot probe heater, M34317.

These are the tasks:

Pitot Probe Removal, AMM TASK 34-11-01-000-801,

Pitot Probe Installation, AMM TASK 34-11-01-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the center pitot air data module, M34302.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P210 right power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Do a check for 115V AC at the center pitot probe heater circuit breaker, C30425 (WDM 30-31-13).

(a) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace this circuit breaker, C30425:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 26 | C30425 | PH C PITOT PROBE HTR C |

2) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(b) If there is 115V AC at the circuit breaker, then continue.

(5) Do a check for 115V AC at the center pitot probe heater circuit breaker, C30406 (WDM 30-31-13).

(a) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace this circuit breaker, C30406:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 20 | C30406 | PH B PITOT PROBE HTR C |

2) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(b) If there is 115V AC at the circuit breaker, then continue.

(6) Do a check for 28V DC at the center pitot probe heater control circuit breaker, C30625 (WDM 30-31-13):

(a) If there is not 28V DC at the circuit breaker, then do these steps:

1) Replace this circuit breaker, C30625:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

2) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

(b) If there is 28V DC at the circuit breaker, then continue.

(7) Do this check of the wiring (WDM 30-31-13):

(a) Open these circuit breakers and install safety tags:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 20 | C30406 | PH B PITOT PROBE HTR C |
| G | 26 | C30425 | PH C PITOT PROBE HTR C |

(b) Put the airplane in the air mode (Air/Ground Mode Simulation, AMM TASK 32-09-00-860-801).

(c) Disconnect electrical connector DM34317 from the center pitot probe heater, M34317.

(d) Do a wiring check between these pins at the center pitot probe heater circuit breaker, C30425, and pin A of connector DM34317 at the center pitot probe heater, M34317:

| C30425 | | DM34317 |
|---|---|---|
| pin 2 | . . . . . | pin A |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM34317.

3) Put the airplane back to the ground mode. To put the airplane back to the ground mode, do this task: Air/Ground Mode Simulation, AMM TASK 32-09-00-860-801.

4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

6) Remove the safety tags and close these circuit breakers:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 20 | C30406 | PH B PITOT PROBE HTR C |

(Continued)

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 26 | C30425 | PH C PITOT PROBE HTR C |

(8) Do this check of the wiring to the center probe air heat control relay, K30316 (WDM 30-31-13):

(a) Open these circuit breakers and install safety tags:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 26 | C30425 | PH C PITOT PROBE HTR C |
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

(b) Remove the center probe air heat control relay, K30316.

(c) Do a wiring check between these pins at circuit breaker C30425 to the connector DK30316 on the center probe air heat control relay, K30316:

| C30425 | | DK30316 |
|---|---|---|
| pin 2 | . . . . . | pin A1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the center probe air heat control relay, K30316.

3) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

(e) If you do not find a problem with the wiring, then continue troubleshooting below.

(f) Disconnect electrical connector DM34302B from the center pitot Air Data Module (ADM), M34302.

(g) Do a wiring check between these pins at the connector DK30316 on the center probe air heat control relay, K30316, to the connector DM34302B on the center pitot ADM, M34302.

| DK30316 | | DM34302B |
|---|---|---|
| pin X2 | . . . . . | pin 5 |

(h) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM34302B to the center pitot ADM, M34302.

3) Re-install the center probe air heat control relay, K30316.

4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

6) If you do not find a problem with the wiring, then continue troubleshooting below.

(i) Remove the safety tags and close these circuit breakers:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 26 | C30425 | PH C PITOT PROBE HTR C |
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

(j) Check for 28V DC at pin X1 at connector DK30316 and the ground:

1) If there is no 28V DC, then do these steps:

a) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

b) Do a continuity check between these pins at the circuit breaker C30625 to the connector DK30316 on the center probe air heat control relay, K30316 (WDM 30-31-13).

| C30625 | | DK30316 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

<1> If there is no continuity, then repair the wiring.

c) Re-install the center probe air heat control relay, K30316.

d) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

<1> Close the P210 right power management panel.

2) If there is 28V DC, then continue.

(k) Re-install the center probe air heat control relay, K30316, then continue.

(9) Do this check of the wiring to the center probe ground heat control relay, K30315 (WDM 30-31-13):

(a) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

(b) Remove the center probe ground heat control relay, K30315.

(c) Disconnect electrical connector DM34302B from the center pitot ADM, M34302.

(d) Do a wiring check between these pins at the connector DK30315 on the center probe ground heat control relay, K30315, to the connector DM34302B on the center pitot ADM, M34302.

| DK30315 | | DM34302B |
|---|---|---|
| pin X2 | . . . . . | pin 2 |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect electrical connector DM34302B to the center pitot ADM, M34302.
3) Re-install the center probe ground heat control relay, K30315.
4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.
5) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P210 right power management panel.

(f) If you do not find a problem with the wiring, then re-connect electrical connector DM34302B and continue.

(g) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

(h) Check for 28V DC at pin X1 at connector DK30315 to the ground:

1) If there is no 28V DC, then do these steps:
   a) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

   b) Do a continuity check between these pins at the circuit breaker C30625 to the connector DK30315 on the center probe ground heat control relay, K30315 (WDM 30-31-13).

| C30625 | | DK30315 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

<1> If there is no continuity, then repair the wiring.

   c) Re-install the center probe ground heat control relay, K30315.
   d) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

   e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

<1> Close the P210 right power management panel.

2) If there is 28V DC, then continue.

(i) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

(j) Disconnect electrical connector DM34302B from the center pitot Air Data Module (ADM), M34302.

(k) Do a wiring check between these pins at the connector DK30315 on the center probe ground heat control relay, K30315, to the connector DM34302B on the center pitot ADM, M34302.

| DK30315 | | DM34302B |
|---|---|---|
| pin X2 | . . . . . | pin 2 |

(l) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM34302B to the center pitot ADM, M34302.

3) Re-install the center probe ground heat control relay, K30315.

4) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

5) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

(m) Re-install the center probe ground heat control relay, K30315, then continue.

(10) Do this check of the wiring to the center pitot probe heat sensor relay, K30223 (WDM 30-31-13):

(a) Open these circuit breakers and install safety tags:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 20 | C30406 | PH B PITOT PROBE HTR C |
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

(b) Remove the center pitot probe heat sensor relay, K30223.

(c) Disconnect electrical connector DM34317 from the center pitot probe heater, M34317.

(d) Do a wiring check between these pins at the connector DK30223 on the center pitot probe heat sensor relay, K30223, to the connector DM34317 on the center pitot probe heater, M34317.

| DK30223 | DM34317 |
|---|---|
| pin C1 | pin A |

(e) Do a wiring check between these pins at the center PHB pitot probe heater circuit breaker, C30406, to the connector DM34317 on the center pitot probe heater, M34317.

| C30406 | DM34317 |
|---|---|
| pin 2 | pin B |

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the center pitot probe heat sensor relay, K30223.
3) Re-connect connector DM34317 to the center pitot probe heater, M34317.
4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.
5) If the maintenance message does not show on the ground test display, you corrected the fault.
6) Close the P210 right power management panel.

(g) If you do not find a problem with the wiring, then re-connect connector DM34317 and continue.

(h) Disconnect electrical connector DM34302B from the center pitot air data module, M34302.

(i) Do a wiring check between these pins at connector DK30223 on the center pitot probe heat sensor relay, K30223, to the connector DM34302B on the center pitot air data module, M34302.

| DK30223 | DM34302B |
|---|---|
| pin C3 | pin 3 |

(j) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the center pitot probe heat sensor relay, K30223.
3) Re-connect connector DM34302B to the center pitot air data module, M34302.
4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.
5) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P210 right power management panel.
6) If you do not find a problem with the wiring then continue.

(k) Remove the safety tags and close these circuit breakers:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 20 | C30406 | PH B PITOT PROBE HTR C |
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

(l) Check for 28V DC at pin X1 at connector DK30223 and the ground:

1) If there is no 28V DC, then do these steps:

a) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

b) Do a continuity check between these pins at the circuit breaker C30625 to the connector DK30223 on the center pitot probe heat sensor relay, K30223 (WDM 30-31-13).

| C30625 | | DK30223 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

<1> If there is no continuity, then repair the wiring.

c) Re-install the center pitot probe heat sensor relay, K30223.

d) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 11 | C30625 | PITOT PROBE HTR C CTRL |

e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

<1> Close the P110 center power management panel.

2) If there is 28V DC, then re-install the center pitot probe heat sensor relay, K30223.

**——— END OF TASK ———**

## 803. Pitot Probe (right) Heater Power Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36123.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

(a) If the maintenance message shows on the ground test display then do the Fault Isolation Procedure.

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

**C. Fault Isolation Procedure**

(1) Do these steps to replace these relays (WDM 30-31-12):

(a) Open the P210 right power management panel.

(b) Replace the right probe air heat control relay, K30314.

(c) Replace the right probe ground heat control relay, K30313.

(d) Replace the right pitot probe heat sensor relay, K30220.

(e) Replace the right AOA vane probe heat sensor relay, K30222.

(f) Replace the right AOA case probe heat sensor relay, K30221.

(g) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P210 right power management panel.

(i) If the maintenance message shows on the ground test display, then continue.

(2) Replace the right pitot probe heater, M34217.

These are the tasks:

Pitot Probe Removal, AMM TASK 34-11-01-000-801,

Pitot Probe Installation, AMM TASK 34-11-01-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the right pitot air data module, M34202.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P210 right power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Replace the right pitot probe heat transformer, T30315 (WDM 30-31-12).

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P210 right power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(5) Do a check for 28V DC at the load terminal of circuit breaker C30623 (WDM 30-31-12).

(a) If there is not 28V DC at the circuit breaker, then do these steps:

1) Replace this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

2) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(b) If there is 28V DC at the circuit breaker, then continue.

(6) Do a check for 115V AC at the right pitot probe heater circuit breaker, C30423 (WDM 30-31-12):

(a) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace the circuit breaker, C30423:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 4 | C30423 | PH C PITOT PROBE HTR R |

2) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(b) If there is 115V AC at the circuit breaker, then continue.

(7) Do a check for 115V AC at the right pitot probe heater circuit breaker, C30404 (WDM 30-31-12):

(a) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace the circuit breaker, C30404:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 5 | C30404 | PH B PITOT PROBE HTR R |

2) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(b) If there is 115V AC at the circuit breaker, then continue.

(8) Do this check of the wiring to the right probe air heat control relay, K30314 (WDM 30-31-12):

(a) Open these circuit breakers and install safety tags:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 4 | C30423 | PH C PITOT PROBE HTR R |
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

(b) Remove the right probe air heat control relay, K30314.

(c) Do a wiring check between these pins at circuit breaker C30423 to the connector DK30314 on the right probe air heat control relay, K30314:

| C30423 | | DK30314 |
|---|---|---|
| pin 2 | . . . . . | pin B1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the right probe air heat control relay, K30314.

3) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

(e) If you do not find a problem with the wiring, then continue troubleshooting below.

(f) Disconnect electrical connector DM34202B from the right pitot Air Data Module (ADM), M34202.

(g) Do a wiring check between these pins at the connector DK30314 on the right probe air heat control relay, K30314, to the connector DM34202B on the right pitot ADM, M34202.

| DK30314 | | DM34202B |
|---|---|---|
| pin X2 | . . . . . | pin 5 |

(h) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM34202B to the right pitot ADM, M34202.

3) Re-install the right probe air heat control relay, K30314.

4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

(i) If you do not find a problem with the wiring, then continue.

(j) Remove the safety tags and close these circuit breakers:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 4 | C30423 | PH C PITOT PROBE HTR R |
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

(k) Check for 28V DC at pin X1 at connector DK30314 and the ground:

1) If there is no 28V DC, then do these steps:

a) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

b) Do a continuity check between these pins at the circuit breaker C30623 to the connector DK30314 on the right probe air heat control relay, K30314 (WDM 30-31-12).

| C30623 | | DK30314 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

<1> If there is no continuity, then repair the wiring.

c) Re-install the right probe air heat control relay, K30314.

d) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

<1> Close the P210 right power management panel.

2) If there is 28V DC, then continue.

(l) Re-install the right probe air heat control relay, K30314, then continue.

(9) Do this check of the wiring to the right probe ground heat control relay, K30313 (WDM 30-31-12):

(a) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

(b) Remove the right probe ground heat control relay, K30313.

(c) Disconnect electrical connector DM34202B from the right pitot ADM, M34202.

(d) Do a wiring check between these pins at the connector DK30313 on the right probe ground heat control relay, K30313, to the connector DM34202B on the right pitot ADM, M34202.

| DK30313 | | DM34202B |
|---|---|---|
| pin X2 | . . . . . | pin 2 |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect electrical connector DM34202B to the right pitot ADM, M34202.
3) Re-install the right probe ground heat control relay, K30313.
4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.
5) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P210 right power management panel.

(f) If you do not find a problem with the wiring, then re-connect electrical connector DM34202B and continue.

(g) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

(h) Check for 28V DC at pin X1 at connector DK30313 to the ground:

1) If there is no 28V DC, then do these steps:
   a) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

   b) Do a continuity check between these pins at the circuit breaker C30623 to the connector DK30313 on the right probe ground heat control relay, K30313 (WDM 30-31-12).

| C30623 | | DK30313 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

<1> If there is no continuity, then repair the wiring.

   c) Re-install the right probe ground heat control relay, K30313.
   d) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

   e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

<1> Close the P210 right power management panel.

2) If there is 28V DC, then continue.

(i) Re-install the right probe ground heat control relay, K30313, then continue.

(10) Do this check of the wiring to the right pitot probe heat sensor relay, K30220 (WDM 30-31-12):

(a) Open these circuit breakers and install safety tags:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 5 | C30404 | PH B PITOT PROBE HTR R |
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

(b) Remove the right pitot probe heat sensor relay, K30220.

(c) Disconnect electrical connector DM34217 from the right pitot probe heater, M34217.

(d) Do a wiring check between these pins at the connector DK30220 on the right pitot probe heat sensor relay, K30220, to the connector DM34217 on the right pitot probe heater, M34217.

| DK30220 | | DM34217 |
|---|---|---|
| pin C1 | . . . . . | pin A |

(e) Do a wiring check between these pins at the right PHB pitot probe heater circuit breaker, C30404, to the connector DM34217 on the right pitot probe heater, M34217.

| C30404 | | DM34217 |
|---|---|---|
| pin 2 | . . . . . | pin B |

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the right pitot probe heat sensor relay, K30220.

3) Re-connect connector DM34217 to the right pitot probe heater, M34217.

4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

6) Close the P210 right power management panel.

(g) If you do not find a problem with the wiring, then re-connect connector DM34217 and continue.

(h) Disconnect electrical connector DM34202B from the right pitot air data module, M34202.

(i) Do a wiring check between these pins at connector DK30220 on the right pitot probe heat sensor relay, K30220, to the connector DM34202B on the right pitot air data module, M34202.

| DK30220 | | DM34202B |
|---|---|---|
| pin C3 | . . . . . | pin 3 |

(j) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the right pitot probe heat sensor relay, K30220.

3) Re-connect connector DM34202B to the right pitot air data module, M34202.

4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 right power management panel.

6) If you do not find a problem with the wiring then continue.

(k) Remove the safety tags and close these circuit breakers:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 5 | C30404 | PH B PITOT PROBE HTR R |
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

(l) Check for 28V DC at pin X1 at connector DK30220 and the ground:

1) If there is no 28V DC, then do these steps:

a) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

b) Do a continuity check between these pins at the circuit breaker C30623 to the connector DK30220 on the right pitot probe heat sensor relay, K30220 (WDM 30-31-12).

| C30623 | | DK30220 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

<1> If there is no continuity, then repair the wiring.

c) Re-install the right pitot probe heat sensor relay, K30220.

d) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

e) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

<1> Close the P210 right power management panel.

2) If there is 28V DC, then re-install the right pitot probe heat sensor relay, K30220, and continue.

(11) Do this check of the wiring to the right pitot probe heat transformer, T30315 (WDM 30-31-12):

(a) Put the airplane in the ground mode (Air/Ground Mode Simulation, AMM TASK 32-09-00-860-801).

(b) Open these circuit breakers and install safety tags:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 5 | C30404 | PH B PITOT PROBE HTR R |
| E | 4 | C30423 | PH C PITOT PROBE HTR R |
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

(c) Remove the right pitot probe heat transformer, T30315.

(d) Do a wiring check between these pins at circuit breaker C30404 and the right pitot probe heater transformer, T30315:

| C30404 | | T30315 |
|---|---|---|
| pin 2 | . . . . . | pin ground |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the right pitot probe heat transformer, T30315.
3) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.
4) If the maintenance message does not show on the ground test display, you corrected the fault.
    a) Close the P210 right power management panel.

(f) Remove the right probe ground heat control relay, K30313.

(g) Do a wiring check between these pins at the right pitot probe heat transformer, T30315, and connector DK30313 on the right probe ground heat control relay, K30313:

| T30315 | | DK30313 |
|---|---|---|
| pin ground | . . . . . | pin B1 |

(h) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the right pitot probe heat transformer, T30315.
3) Re-install the right probe ground heat control relay, K30313.
4) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.
5) If the maintenance message does not show on the ground test display, you corrected the fault.
    a) Close the P1210 right power management panel.

(i) If you do not find a problem with the wiring, then re-install the right pitot probe heat transformer, T30315, and the right probe ground heat control relay, K30313.

(j) Remove the safety tags and close these circuit breakers:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 5 | C30404 | PH B PITOT PROBE HTR R |
| E | 4 | C30423 | PH C PITOT PROBE HTR R |
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

**——— END OF TASK ———**

## 804. Angle of Attack Sensor (left) Vane Heater Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36421.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

(a) If the maintenance message shows on the ground test display and messages 30-36121 and 30-36521 also show, then do the Fault Isolation Procedure - Multiple Faults below.

(b) If the maintenance message shows on the ground test display and messages 30-36121 and 30-36521 do not show, then do the Fault Isolation Procedure - Single Fault below (SUBTASK 30-31-00-960-022).

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

### C. Fault Isolation Procedure - Multiple Faults

(1) Replace the air heat control relay, K30312 (WDM 30-32-11).

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(2) Replace the ground heat control relay, K30311 in the P110 power management panel (WDM 30-32-11).

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the air data module, M34102.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Do a check of this circuit breaker:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(a) Do a check for 28V DC at the load terminal of the circuit breaker (WDM 30-32-11).

(b) If there is not 28V DC at the circuit breaker, then do these steps:

1) Replace this circuit breaker, C30624:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 26 | C30409 | AOA PROBE HTR L |

2) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(c) If there is 28V DC at the circuit breaker, then continue.

(5) Do this check of the 28V DC power wiring to the air heat control relay, K30312 (WDM 30-31-11) (WDM 30-32-11):

(a) Open this circuit breaker and install safety tag:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(b) Remove the air heat control relay, K30312.

(c) Do a wiring check between these pins of circuit breaker C30624 and connector DK30312 at the air heat control relay, K30312.

| C30624 | | DK30312 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the air heat control relay, K30312.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(e) If you do not find a problem with the wiring, then continue.

(6) Do this check of the 28V DC power wiring to the ground heat control relay, K30311 (WDM 30-31-11) (WDM 30-32-11):

(a) Remove the ground heat control relay, K30311.

(b) Do a wiring check between these pins of circuit breaker C30624 and connector DK30311 at the ground heat control relay, K30311.

| C30624 | | DK30311 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the air heat control relay, K30312.

3) Re-install the ground heat control relay, K30311.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(d) If you do not find a problem with the wiring, then continue.

(7) Do this check of the ADM control wiring to the air heat control relay, K30312 (WDM 30-31-11):

(a) Disconnect electrical connector DM34102B from the left pitot air data module, M34102B.

(b) Do a wiring check between these pins connector DK30312 at the left probe heat air control relay, K30312 and connector DM34102B at the left pitot air data module, M34102B.

| DK30312 | | DM34102B |
|---|---|---|
| pin X2 | . . . . . | pin 5 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30311.

3) Re-install the air heat control relay, K30312.

4) Re-connect connector DM34102B.

5) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(d) If you do not find a problem with the wiring, then continue:

(8) Do this check of the ADM control wiring to the ground heat control relay, K30311 (WDM 30-31-11):

(a) Do a wiring check between these pins connector DK30311 at the ground heat control relay, K30311 and connector DM34102B at the left pitot air data module, M34102B.

| DK30311 | | DM34102B |
|---|---|---|
| pin X2 | . . . . . | pin 2 |

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30311.

3) Re-install the air heat control relay, K30312.

4) Re-connect connector DM34102B.

5) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

**D. Fault Isolation Procedure - Single Fault**

(1) Do these steps to replace the sensor relay, K30122 (WDM 30-32-11):

(a) Open the P110 power management panel.

(b) Replace the sensor relay, K30122.

(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Replace the left AOA vane, M34103.

These are the tasks:

Angle of Attack Sensor Removal, AMM TASK 34-21-04-000-801,

Angle of Attack Sensor Installation, AMM TASK 34-21-04-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the air data module, M34102.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Do this check of the wiring from the sensor relay, K30122 to the AOA probe, M34103 (WDM 30-32-11):

(a) Remove the sensor relay, K30122.

(b) Disconnect electrical connector DM34103A from the AOA probe, M34103.

(c) Do a wiring check between these pins of connector DK30122 at the sensor relay, K30122 and connector DM34103A at the AOA probe, M34103:

| DK30122 | | DM34103A |
|---|---|---|
| pin C1 | . . . . . | pin 8 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the sensor relay, K30122.

3) Re-connect connector DM34103A.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DM34103A.

(5) Do this check of the wiring from the sensor relay, K30122 to the air data module, M34102 (WDM 30-31-11):

(a) Disconnect connector DM34102B at the air data module, M34102.

(b) Do a wiring check between these pins at connector DK30122 the sensor relay, K30122 and connector DM34102B at the air data module, M34102.

| DK30122 | | DM34102B |
|---|---|---|
| pin C3 | . . . . . | pin 13 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the sensor relay, K30122.
3) Re-connect connector DM34102B.
4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).
5) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 left power management panel.

(6) Do this check of the circuit breaker, C30409 (WDM 30-32-11):

(a) Do a check for 115V AC at the load terminal of circuit breaker C30409.

(b) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace this circuit breaker, C30409:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 26 | C30409 | AOA PROBE HTR L |

2) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).
3) If the maintenance message does not show on the ground test display, you corrected the fault.
4) If the maintenance message shows on the ground test display, then continue.
   a) Close the P110 left power management panel.

(c) If there is 115V AC at the circuit breaker, then continue.

(7) Do this check of the power wiring to the air heat control relay, K30312 (WDM 30-32-11):

(a) Remove the air heat control relay, K30312.

(b) Do a wiring check between these pins at circuit breaker C30409 and connector DK30312:

| C30409 | | DK30312 |
|---|---|---|
| pin 2 | . . . . . | pin A1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the air heat control relay, K30312.
3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).
4) If the maintenance message does not show on the ground test display, you corrected the fault.

a) Close the P110 left power management panel.

(d) If you do not find a problem with the wiring, then continue.

(e) Re-connect connector DK30312.

(8) Do this check of the power wiring to the ground heat control relay, K30311 (WDM 30-32-11):

(a) Remove the ground heat control relay, K30311.

(b) Do a wiring check between these pins at circuit breaker C30409 and connector DK30311:

| C30409 | | DK30311 |
|---|---|---|
| pin 2 | . . . . . | pin A1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30311.

3) Re-install the air heat control relay, K30312.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

**——— END OF TASK ———**

## 805. Angle of Attack Sensor (right) Vane Heater Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36423.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

(a) If the maintenance message shows on the ground test display and messages 30-36123 and 30-36523 also show, then do the Fault Isolation Procedure - Multiple Faults below.

(b) If the maintenance message shows on the ground test display and messages 30-36123 and 30-36523 do not show, then do the Fault Isolation Procedure - Single Fault below (SUBTASK 30-31-00-960-113).

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

### C. Fault Isolation Procedure - Multiple Faults

(1) Do these steps to replace the air heat control relay, K30314 (WDM 30-32-12).

(a) Open the P210 power management panel.

(b) Replace the air heat control relay, K30314.

(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Replace the ground heat control relay, K30313 in the P210 power management panel (WDM 30-32-12).

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the air data module, M34202.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Do a check of this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

(a) Do a check for 28V DC at the load terminal of the circuit breaker (WDM 30-32-12).

(b) If there is not 28V DC at the circuit breaker, then do these steps:

1) Replace this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

2) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(c) If there is 28V DC at the circuit breaker, then continue.

(5) Do this check of the 28V DC power wiring to the air heat control relay, K30314 (WDM 30-31-11) (WDM 30-32-11):

(a) Open this circuit breaker and install safety tag:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(b) Remove the air heat control relay, K30314.

(c) Do a wiring check between these pins of circuit breaker C30623 and connector DK30314 at the air control relay, K30314.

| C30623 | | DK30314 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the air heat control relay, K30314.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(e) If you do not find a problem with the wiring, then continue.

(6) Do this check of the 28V DC power wiring to the ground heat control relay, K30313 (WDM 30-31-11) (WDM 30-32-11):

(a) Remove the ground heat control relay, K30313.

(b) Do a wiring check between these pins of circuit breaker C30623 and connector DK30313 at the ground control relay, K30313.

| C30623 | | DK30313 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30313.

3) Re-install the air heat control relay, K30314.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(d) If you do not find a problem with the wiring, then continue.

(7) Do this check of the ADM control wiring to the air heat control relay, K30314 (WDM 30-31-12):

(a) Disconnect electrical connector DM34202B from the air data module, M34202B.

(b) Do a wiring check between these pins connector DK30314 at the air heat control relay, K30314 and connector DM34202B at the left pitot air data module, M34202.

| DK30314 | DM34202B |
|---|---|
| pin X2 | pin 5 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30313.

3) Re-install the air heat control relay, K30314.

4) Re-connect connector DM34202B.

5) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(d) If you do not find a problem with the wiring, then continue:

(8) Do this check of the ADM control wiring to the ground heat control relay, K30313 (WDM 30-31-12):

(a) Do a wiring check between these pins connector DK30313 at the ground heat control relay, K30313 and connector DM34202B at the left pitot air data module, M34202B.

| DK30313 | DM34202B |
|---|---|
| pin X2 | pin 2 |

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30313.

3) Re-install the air heat control relay, K30314.

4) Re-connect connector DM34202B.

5) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

**D. Fault Isolation Procedure - Single Fault**

(1) Do these steps to replace the sensor relay, K30222 (WDM 30-32-12):

(a) Open the P210 power management panel.

(b) Replace the sensor relay, K30222.

(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Replace the AOA probe, M34203.

These are the tasks:

Angle of Attack Sensor Removal, AMM TASK 34-21-04-000-801,

Angle of Attack Sensor Installation, AMM TASK 34-21-04-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the air data module, M34202.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Do this check of the wiring from the sensor relay, K30222 to the AOA probe, M34203 (WDM 30-32-12):

(a) Remove the sensor relay, K30222.

(b) Disconnect electrical connector DM34203A from the AOA probe, M34203.

(c) Do a wiring check between these pins of connector DK30222 at the sensor relay, K30222 and connector DM34203A at the AOA probe, M34203:

| **DK30222** | | **DM34203A** |
|---|---|---|
| pin C1 | . . . . . | pin 8 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the sensor relay, K30222.

3) Re-connect connector DM34203A.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DM34203A.

(5) Do this check of the wiring from the sensor relay, K30222 to the air data module, M34202 (WDM 30-31-12):

(a) Disconnect electrical connector DM34202B at the air data module, M34202.

(b) Do a wiring check between these pins at connector DK30222 the sensor relay, K30222 and connector DM34202B at the air data module, M34202.

| DK30222 | | DM34202B |
|---|---|---|
| pin C3 | . . . . . | pin 13 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the sensor relay, K30222.

3) Re-connect connector DM34202B.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(6) Do this check of the circuit breaker, C30408 (WDM 30-32-12):

(a) Do a check for 115V AC at the load terminal of circuit breaker C30408.

(b) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 1 | C30408 | AOA PROBE HTR R |

2) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

4) If the maintenance message shows on the ground test display, then continue.

a) Close the P210 power management panel.

(c) If there is 115V AC at the circuit breaker, then continue.

(7) Do this check of the power wiring to the air heat control relay, K30314 (WDM 30-32-12):

(a) Remove the air heat control relay, K30314.

(b) Do a wiring check between these pins at circuit breaker C30408 and connector DK30314:

| C30408 | DK30314 |
|---|---|
| pin 2 . . . . . | pin A1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the air heat control relay, K30314.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(d) If you do not find a problem with the wiring, then continue.

1) Re-install the air heat control relay, K30314.

(8) Do this check of the power wiring to the ground heat control relay, K30313 (WDM 30-32-12):

(a) Remove the ground heat control relay, K30313.

(b) Do a wiring check between these pins at circuit breaker C30408 and connector DK30313:

| C30408 | DK30313 |
|---|---|
| pin 2 . . . . . | pin A1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30313.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

**——— END OF TASK ———**

## 806. Angle of Attack Sensor (left) Case Heater Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36521.

**B. Initial Evaluation**

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

(a) If the maintenance message shows on the ground test display and messages 30-36121 and 30-36421 also show, then do the Fault Isolation Procedure - Multiple Faults below.

(b) If the maintenance message shows on the ground test display and messages 30-36121 and 30-36421 do not show, then do the Fault Isolation Procedure - Single Fault below (SUBTASK 30-31-00-960-097).

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

**C. Fault Isolation Procedure - Multiple Faults**

(1) Replace the air heat control relay, K30312 (WDM 30-32-11).

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(2) Replace the ground heat control relay, K30311 in the P110 power management panel (WDM 30-31-11).

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the air data module, M34102.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Do a check of this circuit breaker:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(a) Do a check for 28V DC at the load terminal of the circuit breaker (WDM 30-32-11).

(b) If there is not 28V DC at the circuit breaker, then do these steps:

1) Replace this circuit breaker, C30624:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 26 | C30409 | AOA PROBE HTR L |

2) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(c) If there is 28V DC at the circuit breaker, then continue.

(5) Do this check of the 28V DC power wiring to the air heat control relay, K30312 (WDM 30-31-11) (WDM 30-32-11):

(a) Open this circuit breaker and install safety tag:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(b) Remove the air heat control relay, K30312.

(c) Do a wiring check between these pins of circuit breaker C30624 and connector DK30312 at the air heat control relay, K30312.

| C30624 | | DK30312 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the air heat control relay, K30312.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(e) If you do not find a problem with the wiring, then continue.

(6) Do this check of the 28V DC power wiring to the ground heat control relay, K30311 (WDM 30-31-11) :

(a) Remove the ground heat control relay, K30311.

(b) Do a wiring check between these pins of circuit breaker C30624 and connector DK30311 at the ground control relay, K30311.

| C30624 | DK30311 |
|---|---|
| pin 2 . . . . . | pin X1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30311.

3) Re-install the air heat control relay, K30312.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(d) If you do not find a problem with the wiring, then continue.

(7) Do this check of the ADM control wiring to the probe air heat control relay, K30312 (WDM 30-31-11):

(a) Disconnect electrical connector DK30312 from the air heat control relay, K30312.

(b) Disconnect electrical connector DM34102B from the left pitot air data module, M34102B.

(c) Do a wiring check between these pins connector DK30312 at the left probe air heat control relay, K30312 and connector DM34102B at the left pitot air data module, M34102B.

| DK30312 | DM34102B |
|---|---|
| pin X2 . . . . . | pin 5 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30311.

3) Re-install the air heat control relay, K30312.

4) Re-connect connector DM34102B.

5) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(e) If you do not find a problem with the wiring, then do these steps:

(8) Do this check of the ADM control wiring to the ground heat control relay, K30311 (WDM 30-31-11):

(a) Do a wiring check between these pins connector DK30311 at the ground heat control relay, K30311 and connector DM34102B at the left pitot air data module, M34102B.

| DK30311 | | DM34102B |
|---|---|---|
| pin X2 | . . . . . | pin 2 |

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the ground heat control relay, K30311.
3) Re-install the air heat control relay, K30312.
4) Re-connect connector DM34102B.
5) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).
6) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 left power management panel.

**D. Fault Isolation Procedure - Single Fault**

(1) Do these steps to replace the sensor relay, K30121 (WDM 30-32-11):

(a) Open the P110 power management panel.
(b) Replace the sensor relay, K30121.
(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).
(d) If the maintenance message does not show on the ground test display, you corrected the fault.
   1) Close the P110 power management panel.
(e) If the maintenance message shows on the ground test display, then continue.

(2) Replace the left AOA probe, M34103.

These are the tasks:

Angle of Attack Sensor Removal, AMM TASK 34-21-04-000-801,

Angle of Attack Sensor Installation, AMM TASK 34-21-04-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).
(b) If the maintenance message does not show on the ground test display, you corrected the fault.
   1) Close the P110 power management panel.
(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the air data module, M34102.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P110 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Do this check of the wiring from the sensor relay, K30121 to the AOA probe, M34103 (WDM 30-32-11):

(a) Remove the sensor relay, K30121.

(b) Disconnect electrical connector DM34103A from the AOA probe, M34103.

(c) Do a wiring check between these pins of connector DK30121 at the sensor relay, K30121 and connector DM34103A at the AOA probe, M34103:

| **DK30121** | | **DM34103A** |
|---|---|---|
| pin C1 | . . . . . | pin 9 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the sensor relay, K30121.

3) Re-connect connector DM34103A.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DM34103A.

(5) Do this check of the wiring from the sensor relay, K30121 to the air data module, M34102 (WDM 30-31-11):

(a) Disconnect electrical connector DM34102B at the air data module, M34102.

(b) Do a wiring check between these pins at connector DK30121 the sensor relay, K30121 and connector DM34102B at the air data module, M34102.

| **DK30121** | | **DM34102B** |
|---|---|---|
| pinC3 | . . . . . | pin 21 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the sensor relay, K30121.

3) Re-connect connector DM34102B.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Left Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(6) Do this check of the circuit breaker, C30409 (WDM 30-32-11):

(a) Do a check for 115V AC at the load terminal of circuit breaker C30409.

(b) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace this circuit breaker, C30409:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 26 | C30409 | AOA PROBE HTR L |

2) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

4) If the maintenance message shows on the ground test display, then continue.

a) Close the P110 left power management panel.

(c) If there is 115V AC at the circuit breaker, then continue.

(7) Do this check of the power wiring to the air heat control relay, K30312 (WDM 30-32-11):

(a) Remove the air heat control relay, K30312.

(b) Do a wiring check between these pins at circuit breaker C30409 and connector DK30312:

| C30409 | | DK30312 |
|---|---|---|
| pin 2 | . . . . . | pin A1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the air heat control relay, K30312.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

(d) If you do not find a problem with the wiring, then continue.

1) Re-install the air heat control relay, K30312.

(8) Do this check of the power wiring to the ground heat control relay, K30311 (WDM 30-32-11):

(a) Remove the ground heat control relay, K30311.

(b) Do a wiring check between these pins at circuit breaker C30409 and connector DK30311:

| C30409 | | DK30311 |
|---|---|---|
| pin 2 | . . . . . | pin A1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30311.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Left Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P110 left power management panel.

——— END OF TASK ———

## 807. Probe Heat Control Relay (left) Position Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36641.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do these steps to replace the left probe air heat control relay, K30312 (WDM 30-31-11).

(a) Open the P110 left power management panel.

(b) Replace the left probe air heat control relay, K30312.

(c) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P110 left power management panel.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Do these steps to isolate a failed sensing relay:

(a) Open these circuit breakers and install safety tags:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 26 | C30409 | AOA PROBE HTR L |
| H | 6 | C30424 | PH C PITOT PROBE HTR L |

(b) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

(c) If 30-36121 does not show, then replace the left pitot probe heat sensor relay, K30120, in the P110 left power management panel (WDM 30-31-11).

(d) If 30-36421 does not show, then replace the left AOA vane probe heat sensor relay, K30122, in the P110 left power management panel (WDM 30-32-11).

(e) If 30-36521 does not show, then replace the left AOA case probe heat sensor relay, K30121, in the P110 left power management panel (WDM 30-32-11).

(f) Remove the safety tags and close these circuit breakers:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 26 | C30409 | AOA PROBE HTR L |
| H | 6 | C30424 | PH C PITOT PROBE HTR L |

(g) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

(i) If the maintenance message shows on the ground test display, then replace these relays in the P110 Left Power Management Panel (WDM 30-31-11, WDM 30-32-11):

1) K30311, left probe ground heat control relay.

2) K30312, left probe air heat control relay.

3) K30120, left pitot probe heat sensor relay.

4) K30121, left AOA case probe heat sensor relay.

5) K30122, left AOA vane probe heat sensor relay.

(j) If the maintenance message shows on the ground test display, then continue.

(3) Replace the left pitot air data module, M34102.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

(c) If the maintenance message shows on the ground test display, then continue.

(4) Replace the left pitot probe heater, M34117.

These are the tasks:

Pitot Probe Removal, AMM TASK 34-11-01-000-801,

Pitot Probe Installation, AMM TASK 34-11-01-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

**END OF TASK**

## 808. Probe Heat Control Relay (center) Position Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36642.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do these steps to replace the center probe air heat control relay, K30316 (WDM 30-31-13).

(a) Open the P210 right power management panel.

(b) Replace the center probe air heat control relay, K30316.

(c) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P210 right power management panel.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Do these steps to isolate a failed sensing relay:

(a) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 26 | C30425 | PH C PITOT PROBE HTR C |

(b) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

(c) If 30-36122 shows, then replace the center pitot probe heat sensor relay, K30223, in the P210 right power management panel (WDM 30-31-13).

(d) If 30-36122 does not show, then replace the center probe ground heat control relay, K30315, in the P210 right power management panel (WDM 30-31-13).

(e) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| G | 26 | C30425 | PH C PITOT PROBE HTR C |

(f) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

(h) If the maintenance message shows on the ground test display, then replace these relays in the P210 Right Power Management Panel (WDM 30-31-13):

1) K30315, center probe ground heat control relay.

2) K30316, center probe air heat control relay.

3) K30223, center pitot probe heat sensor relay.

(i) If the maintenance message shows on the ground test display, then continue.

(3) Replace the center pitot air data module, M34302.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

(c) If the maintenance message shows on the ground test display, then continue.

(4) Replace the center pitot probe heater, M34317.

These are the tasks:

Pitot Probe Removal, AMM TASK 34-11-01-000-801,

Pitot Probe Installation, AMM TASK 34-11-01-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

**——— END OF TASK ———**

## 809. Probe Heat Control Relay (right) Position Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36643.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

(1) Do these steps to replace the right probe air heat control relay, K30314 (WDM 30-31-12).

(a) Open the P210 right power management panel.

(b) Replace the right probe air heat control relay, K30314.

(c) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

1) Close the P210 right power management panel.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Do these steps to isolate a failed sensing relay:

(a) Open these circuit breakers and install safety tags:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 1 | C30408 | AOA PROBE HTR R |
| E | 4 | C30423 | PH C PITOT PROBE HTR R |

(b) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

(c) If 30-36123 does not show, then replace the right pitot probe heat sensor relay, K30220, in the P210 right power management panel (WDM 30-31-12).

(d) If 30-36423 does not show, then replace the right AOA vane probe heat sensor relay, K30222, in the P210 right power management panel (WDM 30-32-12).

(e) If 30-36523 does not show, then replace the right AOA case probe heat sensor relay, K30221, in the P210 right power management panel (WDM 30-32-12).

(f) Remove the safety tags and close these circuit breakers:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 1 | C30408 | AOA PROBE HTR R |
| E | 4 | C30423 | PH C PITOT PROBE HTR R |

(g) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

(i) If the maintenance message shows on the ground test display, then replace these relays in the P210 Right Power Management Panel (WDM 30-31-12, WDM 30-31-12WDM 30-32-12):

1) K30313, right probe ground heat control relay.

2) K30314, right probe air heat control relay.

3) K30220, right pitot probe heat sensor relay.

4) K30221, right AOA case probe heat sensor relay.

5) K30222, right AOA vane probe heat sensor relay.

(j) If the maintenance message shows on the ground test display, then continue.

(3) Replace the right pitot air data module, M34202.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

(c) If the maintenance message shows on the ground test display, then continue.

(4) Replace the right pitot probe heater, M34217.

These are the tasks:

Pitot Probe Removal, AMM TASK 34-11-01-000-801,

Pitot Probe Installation, AMM TASK 34-11-01-400-801.

(a) Do this test on the MAT: Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

**——— END OF TASK ———**

## 810. Angle of Attack Sensor (right) Case Heater Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-36523.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

(a) If the maintenance message shows on the ground test display and messages 30-36123 and 30-36523 also show, then do the Fault Isolation Procedure - Multiple Faults below.

(b) If the maintenance message shows on the ground test display and messages 30-36123 and 30-36523 do not show, then do the Fault Isolation Procedure - Single Fault below (SUBTASK 30-31-00-960-119).

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

### C. Fault Isolation Procedure - Multiple Faults

(1) Do these steps to replace the air heat control relay, K30314 (WDM 30-32-12).

(a) Close the P210 power management panel.

(b) Replace the air heat control relay, K30314.

(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Replace the ground heat control relay, K30313 in the P210 power management panel (WDM 30-32-12).

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the air data module, M34202.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Do a check of this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

(a) Do a check for 28V DC at the load terminal of the circuit breaker (WDM 30-32-12).

(b) If there is not 28V DC at the circuit breaker, then do these steps:

1) Replace this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 10 | C30623 | PROBE/VANE HTR CTRL R |

2) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802.

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

a) Close the P210 power management panel.

4) If the maintenance message shows on the ground test display, then continue.

(c) If there is 28V DC at the circuit breaker, then continue.

(5) Do this check of the 28V DC power wiring to the air heat control relay, K30314 (WDM 30-31-11) (WDM 30-32-11):

(a) Open this circuit breaker and install safety tag:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 25 | C30624 | PROBE/VANE HTR CTRL L |

(b) Remove the air control relay, K30314.

(c) Do a wiring check between these pins of circuit breaker C30623 and connector DK30314 at the air control relay, K30314.

| C30623 | | DK30314 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the air control relay, K30314.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(e) If you do not find a problem with the wiring, then continue.

(6) Do this check of the 28V DC power wiring to the ground heat control relay, K30313 (WDM 30-31-11) (WDM 30-32-11):

(a) Remove the ground control relay, K30313.

(b) Do a wiring check between these pins of circuit breaker C30623 and connector DK30313 at the ground control relay, K30313.

| C30624 | | DK30313 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the air control relay, K30314.

3) Re-install the ground control relay, K30313.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(d) If you do not find a problem with the wiring, then continue.

(7) Do this check of the ADM control wiring to the air control relay, K30314 (WDM 30-31-12):

(a) Disconnect electrical connector DM34202B from the air data module, M34202B.

(b) Do a wiring check between these pins connector DK30314 at the air heat control relay, K30314 and connector DM34202B at the left pitot air data module, M34202.

| DK30314 | DM34202B |
|---|---|
| pin X2 | pin 5 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground control relay, K30313.

3) Re-install the air control relay, K30314.

4) Re-connect connector DM34202B.

5) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(d) If you do not find a problem with the wiring, then continue:

(8) Do this check of the ADM control wiring to the ground heat control relay, K30313 (WDM 30-31-12):

(a) Do a wiring check between these pins connector DK30313 at the ground heat control relay, K30313 and connector DM34202B at the left pitot air data module, M34202B.

| DK30313 | DM34202B |
|---|---|
| pin X2 | pin 2 |

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground control relay, K30313.

3) Re-install the air control relay, K30314.

4) Re-connect connector DM34202B.

5) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

**D. Fault Isolation Procedure - Single Fault**

(1) Do these steps to replace the sensor relay, K30221 (WDM 30-32-12):

(a) Open the P210 power management panel.

(b) Replace the sensor relay, K30221.

(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Replace the AOA probe, M34203.

These are the tasks:

Angle of Attack Sensor Removal, AMM TASK 34-21-04-000-801,

Angle of Attack Sensor Installation, AMM TASK 34-21-04-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(3) Replace the air data module, M34202.

These are the tasks:

Pitot Air Data Module Removal, AMM TASK 34-21-03-000-801,

Pitot Air Data Module Installation, AMM TASK 34-21-03-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

1) Close the P210 power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

(4) Do this check of the wiring from the sensor relay, K30222 to the AOA probe, M34203 (WDM 30-32-12):

(a) Remove the sensor relay, K30221.

(b) Disconnect electrical connector DM34203A from the AOA probe, M34203.

(c) Do a wiring check between these pins of connector DK30221 at the sensor relay K30221 and connector DM34203A at the AOA probe, M34203:

| **DK30221** | | **DM34203A** |
|---|---|---|
| pin C1 | . . . . . | pin 9 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the sensor relay, K30221.

3) Re-connect connector DM34203A.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-connect connector DM34203A.

(5) Do this check of the wiring from the sensor relay, K30222 to the air data module, M34202 (WDM 30-31-12):

(a) Disconnect electrical connector DM34202B at the air data module, M34202.

(b) Do a wiring check between these pins at connector DK30222 the sensor relay, K30222 and connector DM34202B at the air data module, M34202.

| DK30222 | | DM34202B |
|---|---|---|
| pin C3 | . . . . . | pin 13 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the sensor relay, K30222.

3) Re-connect connector DM34202B.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Pitot/AOA Heat Right Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(6) Do this check of the circuit breaker, C30408 (WDM 30-32-12):

(a) Do a check for 115V AC at the load terminal of circuit breaker C30408.

(b) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| D | 1 | C30408 | AOA PROBE HTR R |

2) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

4) If the maintenance message shows on the ground test display, then continue.

a) Close the P210 power management panel.

(c) If there is 115V AC at the circuit breaker, then continue.

(7) Do this check of the power wiring to the air heat control relay, K30314 (WDM 30-32-12):

(a) Remove the air heat control relay, K30314.

(b) Do a wiring check between these pins at circuit breaker C30408 and connector DK30314:

| C30408 | DK30314 |
|---|---|
| pin 2 . . . . . | pin A1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the air heat control relay, K30314.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test (Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

(d) If you do not find a problem with the wiring, then continue.

1) Re-install the air heat control relay, K30314.

(8) Do this check of the power wiring to the ground heat control relay, K30313 (WDM 30-32-12):

(a) Remove the ground heat control relay, K30313.

(b) Do a wiring check between these pins at circuit breaker C30408 and connector DK30313:

| C30408 | DK30313 |
|---|---|
| pin 2 . . . . . | pin A1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the ground heat control relay, K30313.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right Pitot/AOA Heat Test Pitot/Angle of Attack Probe Heat and Current Sensing Relay Operational Test (CMCF Available), AMM TASK 30-31-00-700-802).

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

a) Close the P210 power management panel.

**——— END OF TASK ———**

## 811. Total Air Temperature Probe Heat Control Relay Position Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-37110.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

(1) Do these steps to replace the TAT probe air heat control relay, K30331 (WDM 30-31-11):

(a) Open the P110 left power management panel.

(b) Replace the left probe air heat control relay, K30331.

(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

1) Close the P110 left power management panel.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-33-11):

(a) Remove the TAT probe heater (left) relay, K30331.

(b) Do a wiring check between these pins at circuit breaker C30619 and connector DK30331:

| **C30619** | | **DK30331** |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the TAT probe heater (left) relay, K30331.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

a) Close the P110 left power management panel.

5) If the maintenance message shows on the ground test display, then continue.

(d) If you do not find a problem with the wiring, then continue.

(3) Do this check of the wiring (WDM 30-33-11):

(a) Do a wiring check between these pins at circuit breaker C30411 and connector DK30331:

| **C30411** | | **DK30331** |
|---|---|---|
| pin 2 | . . . . . | pin A2 |

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the TAT probe heater (left) relay, K30331.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

a) Close the P110 left power management panel.

5) If the maintenance message shows on the ground test display, then continue.

(c) If you do not find a problem with the wiring, then continue.

1) Re-install the TAT probe heater (left) relay, K30331.

(4) Do this check of the wiring (WDM 30-33-11):

(a) Disconnect electrical connector DM24504B at the P110 ELMS 2 signal interface unit (SIU), M24504.

(b) Do a wiring check between these pins at connector DK30331 and connector DM24504B:

| DK30331 | DM24504B |
|---|---|
| pin X2 | pin 5 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM24504B.

3) Re-connect connector DK30331.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

a) Close the P110 left power management panel.

(d) If you do not find a problem with the wiring, then do these steps:

(e) Re-connect connector DM24504B.

(5) Do this check of the wiring (WDM 30-33-11):

(a) Disconnect electrical connector DM24504C at the ELMS-2 signal interface unit, M24504.

(b) Do a wiring check between these pins at connector DK30331 and connector DM24504C:

| DK30331 | DM24504C |
|---|---|
| pin A1 | pin 80 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM24504C.

3) Re-connect connector DK30331.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

a) Close the P110 left power management panel.

(d) If you do not find a problem with the wiring, then continue:

(e) Re-connect connector DM24504C.

(f) Re-connect connector DK30331.

(6) Do a check of the signal interface unit, M24504 in the P110 left power management panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

1) Close the P110 left power management panel.

(c) If the maintenance message shows on the ground test display, then continue.

——— END OF TASK ———

## 814. Total Air Temperature Probe Heater Power Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-37120.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the total air temperature (TAT) probe, M34003. To replace it,

These are the tasks:

Total Air Temperature Probe - Removal, AMM TASK 34-21-05-000-801,

Total Air Temperature Probe - Installation, AMM TASK 34-21-05-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do these steps to replace the left total air temperature (TAT) probe heater relay, K30331 (WDM 30-33-11):

(a) Open the P110 left power management panel.

(b) Replace the left total air temperature (TAT) probe heater relay, K30331.

(c) Close the P110 left power management panel.

(d) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

(f) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring (WDM 30-33-11):

(a) Do a wiring check between these pins at circuit breaker C30411 and connector DK30331:

| C30411 | DK30331 |
|---|---|
| pin 2 . . . . . | pin A2 |

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect connector DK30331.
3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.
4) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 left power management panel.
5) If the maintenance message shows on the ground test display, then continue.

(c) If you do not find a problem with the wiring, then continue.

(4) Do this check of the wiring (WDM 30-33-11):

(a) Disconnect electrical connector DM34003 at the left TAT probe heater, M34003.

(b) Do a wiring check between these pins at connector DK30331 and connector DM34003:

| DK30331 | DM34003 |
|---|---|
| pin A1 . . . . . | pin 1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect connector DM34003.
3) Re-connect connector DK30331.
4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.
5) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 left power management panel.

(d) If you do not find a problem with the wiring, then continue:

(e) Re-connect connector DM34003.

(f) Re-connect connector DK30331.

(5) Do a check of the signal interface unit, M24504 in the P110 left power management panel.

This is the task:

Signal Interface Unit - Exchange Check, AMM TASK 24-09-00-700-801-002.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

**END OF TASK**

## 817. Relay (TAT PROBE HEAT) in P110 is not in commanded position - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance messages: 30-37113, 30-37123.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do these steps to replace the TAT probe heat relay, K30331 (WDM 30-33-11):

(a) Open the P110 power management panel left.

(b) Replace the TAT probe heat relay, K30331.

(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

1) Close the P110 power management panel left.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Replace the P110 ELMS 2 signal interface unit, M24504 in the P110 power management panel left. To replace it,

These are the tasks:

Signal Interface Unit - Removal, AMM TASK 24-09-00-000-814-002,

Signal Interface Unit - Installation, AMM TASK 24-09-00-400-810-002.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

1) Close the P110 power management panel left.

(c) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring (WDM 30-33-11):

(a) Remove the TAT probe heat relay, K30331.

(b) Do a wiring check between these pins at circuit breaker C30619 and connector DK30331:

| C30619 | | DK30331 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the TAT probe heat relay, K30331.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

a) Close the P110 power management panel left.

5) If the maintenance message shows on the ground test display, then continue.

(d) If you do not find a problem with the wiring, then continue.

(4) Do this check of the wiring (WDM 30-33-11):

(a) Do a wiring check between these pins at circuit breaker C30411 and connector DK30331:

| C30411 | | DK30331 |
|---|---|---|
| pin 2 | . . . . . | pin A2 |

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the TAT probe heat relay, K30331.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

a) Close the P110 power management panel left.

5) If the maintenance message shows on the ground test display, then continue.

(c) If you do not find a problem with the wiring, then continue.

1) Re-install the TAT probe heat relay, K30331.

(5) Do this check of the wiring (WDM 30-33-11):

(a) Disconnect electrical connector DM24504B at the P110 ELMS 2 signal interface unit, M24504.

(b) Do a wiring check between these pins at connector DK30331 and connector DM24504B:

| DK30331 | | DM24504B |
|---|---|---|
| pin X2 | . . . . . | pin 5 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM24504B.

3) Re-connect connector DK30331.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

a) Close the P110 power management panel left.

**END OF TASK**

## 820. Total Air Temperature Probe Heater Power Not Available - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-37126.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, Right TAT Probe Heat.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the total air temperature (TAT) probe, M34003. To replace it,

These are the tasks:

Total Air Temperature Probe - Removal, AMM TASK 34-21-05-000-801,

Total Air Temperature Probe - Installation, AMM TASK 34-21-05-400-801.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do these steps to replace the TAT probe heat relay, K30331 (WDM 30-33-11):

(a) Open the P110 power management panel left.

(b) Replace the TAT probe heat relay, K30331.

(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

1) Close the P110 power management panel left.

(e) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring (WDM 30-33-11):

(a) Remove the TAT probe heat relay, K30331.

(b) Do a wiring check between these pins at circuit breaker C30619 and connector DK30331:

| C30619 | | DK30331 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the TAT probe heat relay, K30331.

3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

4) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 power management panel left.
5) If the maintenance message shows on the ground test display, then continue.

(d) If you do not find a problem with the wiring, then continue.

(4) Do this check of the wiring (WDM 30-33-11):

(a) Do a wiring check between these pins at circuit breaker C30411 and connector DK30331:

| C30411 | DK30331 |
|---|---|
| pin 2 | pin A2 |

(b) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-install the TAT probe heat relay, K30331.
3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.
4) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 power management panel left.
5) If the maintenance message shows on the ground test display, then continue.

(c) If you do not find a problem with the wiring, then continue.
1) Re-install the TAT probe heat relay, K30331.

(5) Do this check of the wiring (WDM 30-33-11):

(a) Disconnect electrical connector DM24504C at the P110 ELMS 2 signal interface unit, M24504.

(b) Do a wiring check between these pins at connector DK30331 and DM24504C:

| DK30331 | DM24504C |
|---|---|
| pin A1 | pin 80 |

(c) If you find a problem with the wiring, then do these steps:
1) Repair the wiring.
2) Re-connect connector DK30331.
3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.
4) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 power management panel left.

(d) If you do not find a problem with the wiring, then continue:

(e) Re-connect connector DK30331.

(6) Replace the signal interface unit, M24504 in the P110 power management panel left. To replace it,

These are the tasks:

Signal Interface Unit - Installation, AMM TASK 24-09-00-400-810-002,

Signal Interface Unit - Removal, AMM TASK 24-09-00-000-814-002.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

1) Close the P110 power management panel left.

(c) If the maintenance message shows on the ground test display, then continue.

(7) Replace the signal interface unit, M24504 in the P110 power management panel left. To replace it,

These are the tasks:

Signal Interface Unit - Installation, AMM TASK 24-09-00-400-810-002,

Signal Interface Unit - Removal, AMM TASK 24-09-00-000-814-002.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

1) Close the P110 power management panel left.

**——— END OF TASK ———**

## 821. Total Air Temperature Probe (Left) Heater Power Not Available - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-37127.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Do these steps to replace the TAT probe heat relay, K30331 (WDM 30-31-11):

(a) Open the P110 power management panel left.

(b) Replace the TAT probe heat control relay, K30331.

(c) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

1) Close the P110 power management panel left.

(e) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-33-11):

(a) Remove the TAT probe heat relay, K30331.

(b) Do a wiring check between these pins at circuit breaker C30619 and connector DK30331:

| C30619 | | DK30331 |
|---|---|---|
| pin 2 | . . . . . | pin X1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the TAT probe heat relay, K30331.
3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.
4) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 power management panel left.
5) If the maintenance message shows on the ground test display, then continue.

(d) If you do not find a problem with the wiring, then continue.

(3) Do this check of the wiring (WDM 30-33-11):

(a) Do a wiring check between these pins at circuit breaker C30411 and connector DK30331:

| C30411 | | DK30331 |
|---|---|---|
| pin 2 | . . . . . | pin A2 |

(b) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the TAT probe heat relay, K30331.
3) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.
4) If the maintenance message does not show on the ground test display, you corrected the fault.
   a) Close the P110 power management panel left.
5) If the maintenance message shows on the ground test display, then continue.

(c) If you do not find a problem with the wiring, then continue.

1) Re-install the TAT probe heat relay, K30331.

(4) Do this check of the wiring (WDM 30-33-11):

(a) Disconnect electrical connector DM24504B at the P110 ELMS 2 signal interface unit 1, M24504.

(b) Do a wiring check between these pins at connector DK30331 and connector DM24504B:

| DK30331 | | DM24504B |
|---|---|---|
| pin X2 | . . . . . | pin 5 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect connector DM24504B.

3) Re-connect connector DK30331.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

a) Close the P110 power management panel left.

(d) If you do not find a problem with the wiring, then do these steps:

(e) Re-connect connector DM24504B.

(5) Do this check of the wiring (WDM 30-33-11):

(a) Disconnect electrical connector DM24401B at the P110 ELMS 2 signal interface unit 1, M24504.

(b) Do a wiring check between these pins at connector DK30331 and connector DM24504C:

| DK30331 | | DM24504C |
|---|---|---|
| pin A1 | . . . . . | pin 80 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector DM24504C.

3) Re-connect connector DK30331.

4) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

a) Close the P110 power management panel left.

(d) If you do not find a problem with the wiring, then continue:

(e) Re-connect connector DM24504C.

(f) Re-connect connector DK30331.

(6) Replace the P110 ELMS-2 signal interface unit, M24504 in the P110 power management panel left. To replace it,

These are the tasks:

Signal Interface Unit - Installation, AMM TASK 24-09-00-400-810-002,

Signal Interface Unit - Removal, AMM TASK 24-09-00-000-814-002.

(a) Do this ground test on the MAT: 30 Air Data Sensor Anti-Ice System, Operational Test, TAT Probe Heat.

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

1) Close the P110 power management panel left.

**END OF TASK**

## 801. Forward Window (left) Anti-Ice Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-21001.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(2) Do this check of the power wiring:

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a check for 208V AC between pin 1 and pin 2 of connector DM30101AC.

(c) If there is not 208V AC at pin 1 of connector DM30101AC, then do these steps:

1) Open the P100 left power panel.

2) Do a check for 208V AC at the load terminal of circuit breaker C30301.

3) If there is not 208V AC at the circuit breaker, then do these steps:

a) Replace this circuit breaker:

(WDM 30-41-11)

**Left Power Panel, P100**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 2 | C30301 | WDO HTR 1L |

b) Close the P100 left power panel.

c) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

d) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

4) If there is 208V AC at the circuit breaker, then do these steps:

a) Repair the wiring between pin 1 of connector DM30101AC and the load terminal of circuit breaker C30301 (WDM 30-41-11).

b) Repair the wiring between pin 2 of connector DM30101AC and the load terminal of circuit breaker C30301 (WDM 30-41-11).

c) Close the P100 left power panel.

d) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

e) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

g) If the maintenance message shows on the ground test display, then continue.

(3) Inspect the left No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

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

**END OF TASK**

## 802. Forward Window (right) Anti-ice Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-21002.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801)

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(2) Do this check of the power wiring:

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a check for 208V AC between pin 1 and pin 2 of connector DM30201AC.

(c) If there is not 208V AC at pin 1 of connector DM30201AC, then do these steps:

1) Open the P200 right power panel.

2) Do a check for 208V AC at the load terminal of circuit breaker C30300.

3) If there is not 208V AC at the circuit breaker, then do these steps:

a) Replace these circuit breakers:

(WDM 30-41-11)

**Right Power Panel, P200**

| Row | Col | Number | Name |
|---|---|---|---|
| **ARO 005-999** | | | |
| A | 4 | C30300 | WDO HTR 1R |
| **ARO 001-004** | | | |
| B | 4 | C30300 | WDO HTR 1R |

**ARO ALL**

b) Close the P200 right power panel.

c) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

d) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

4) If there is 208V AC at the circuit breaker, then do these steps:

a) Repair the wiring between pin 1 of connector DM30201AC and the load terminal of circuit breaker C30300 (WDM 30-41-11).

b) Repair the wiring between pin 2 of connector DM30201AC and the load terminal of circuit breaker C30300 (WDM 30-41-11).

c) Close the P200 right power panel.

d) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

e) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

g) If the maintenance message shows on the ground test display, then continue.

(3) Inspect the right No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

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

——— END OF TASK ———

## 803. Forward Window (left) Heater Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-21011.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a wiring check between these pins of connector DM30101AC at the WHCU, M30101 and connector J1 at the left window 1, B30101:

| DM30101AC | | J1 |
|---|---|---|
| pin 5 | . . . . . | pin 1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(d) If you do not find a problem with the wiring, then continue:

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(f) If you do not find a problem with the wiring, then continue:

(g) Do a wiring check between these pins of connector DM30101AC at the WHCU, M30101 and connector J5 at the left window 1, B30101:

| DM30101AC | J5 |
|---|---|
| pin 4 | pin 1 |

(h) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(i) If you do not find a problem with the wiring, then continue:

(j) Re-connect connector D30105 to the left window 1, B30101.

(3) Inspect the left No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

**END OF TASK**

## 804. Forward Window (right) Heater Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-21012.

**B. Initial Evaluation**

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30201 from the right window 1, B30201.

(c) Do a wiring check between these pins of connector DM30201AC at the HCU, M30201 and connector J1 at the left window 1, B30201 (WDM 30-41-12):

| **DM30201AC** | | **J1** |
|---|---|---|
| pin 5 | . . . . . | pin 1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(e) If you do not find a problem with the wiring, then continue:

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(g) If you do not find a problem with the wiring, then continue:

(h) Do a wiring check between these pins of connector DM30201AC at the WHCU, M30201 and connector J5 at the right window 1, B30201 (WDM 30-41-12):

| DM30201AC | | J5 |
|---|---|---|
| pin 4 | . . . . . | pin 1 |

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30205 to the right window 1, B30201.

4) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(3) Inspect the right No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

**——— END OF TASK ———**

## 805. Forward Window (left) Sensor Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-21031.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Do these steps to change anti-ice sensors in the left window 1, B30101 (WDM 30-41-11):

NOTE: TB3007 is located on the outboard side of the E1 shelf.

(a) If the anti-ice sensor, J3, in the left window 1, B30101, is connected, do these steps:

1) Disconnect the wire, W4123-2006R-24, from terminal PA5 on terminal block TB3007.

2) Re-connect the wire, W4123-2006R-24, to terminal PA6 on terminal block TB3007.

3) Disconnect the wire, W4123-2006B-24, from terminal PB5 on the terminal block TB3007.

4) Re-connect the wire, W4123-2006B-24, to terminal PB6 on terminal block TB3007.

5) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(b) If the spare anti-ice sensor, J2, in the left window 1, B30101, is connected, do these steps:

1) Replace the left window 1, B30101.

These are the tasks:

No. 1 Window Removal, AMM TASK 56-11-01-000-801,

No. 1 Window Installation, AMM TASK 56-11-01-400-801.

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

3) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Do this check of the wiring (WDM 30-41-11):

(a) If the anti-ice sensor, J3, in the left window 1, B30101, is connected, do these steps:

1) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

2) Disconnect connector D30103 from the left window 1, B30101.

3) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30103 at the left window 1, B30101:

| DM30101AB | D30103 |
|---|---|
| pin 51 | pin A |
| pin 57 | pin B |

4) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

c) Re-connect connector D30103 to the left window 1, B30101.

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

e) If the MAT shows ACTIVE for the maintenance message, then continue.

5) If you do not find a problem with the wiring, then continue:

6) Re-connect connector D30103 to the left window 1, B30101.

(b) If the spare anti-ice sensor, J2, in the left window 1, B30101, is connected, do these steps:

1) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801

2) Disconnect connector D30102 from the left window 1, B30101.

3) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30102 at the left window 1, B30101 (WDM 30-41-11):

| DM30101AB | D30102 |
|---|---|
| pin 51 | pin A |
| pin 57 | pin B |

4) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

c) Re-connect connector D30102.

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

**END OF TASK**

## 806. Forward Window (right) Anti-Ice Sensor Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-21032.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Do these steps to change anti-ice sensors in the right window 1, B30201 (WDM 30-41-12):

NOTE: TB3006 is located on the outboard side of the E2 shelf.

(a) If the anti-ice sensor, J3, in the right window 1, B30201, is connected, do these steps:

1) Disconnect the wire, W4269-2008R-24, from terminal PA5 on terminal block TB3006.

2) Re-connect the wire, W4269-2008R-24, to terminal PA6 on terminal block TB3006.

3) Disconnect the wire, W4269-2008B-24, from terminal PB5 on the terminal block TB3006.

4) Re-connect the wire, W4269-2008B-24, to terminal PB6 on terminal block TB3006.

5) Do this ground test on the MAT: 30 Window Heat Control System, system Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

7) If the MAT shows ACTIVE, then continue.

(b) If the spare anti-ice sensor, J2, in the right window 1, B30201, is connected, do these steps:

1) Replace the right window 1, B30201.

These are the tasks:

No. 1 Window Removal, AMM TASK 56-11-01-000-801,

No. 1 Window Installation, AMM TASK 56-11-01-400-801.

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

3) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-12):

(a) If the anti-ice sensor, J3, in the right window 1, B30201, is connected, do these steps:

1) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

2) Disconnect connector D30203 from the right window 1, B30201.

3) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector D30203 at the right window 1, B30201:

| DM30201AB | D30203 |
|---|---|
| pin 51 | pin A |
| pin 57 | pin B |

4) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

c) Re-connect connector D30203.

d) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

5) If you do not find a problem with the wiring, then continue:

(b) If the spare anti-ice sensor, J2, in the right window 1, B30201, is connected, do these steps:

1) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

2) Disconnect connector D30202 from the right window 1, B30201.

3) Do a wiring check between these pins of connector DM30201AC at the WHCU, M30201 and connector D30202 at the right window 1, B30202 (WDM 30-41-12):

| DM30201AC | D30202 |
|---|---|
| pin 51 | pin A |
| pin 57 | pin B |

4) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

c) Re-connect connector D30202.

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

e) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

**——— END OF TASK ———**

## 807. Forward Window (left) Anti-Ice Heater Current Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-21051.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a wiring check between these pins of connector DM30101AC at the WHCU, M30101 and connector D30101 at the left window 1, B30101:

| DM30101AC | J1 |
|---|---|
| pin 5 . . . . . | pin 1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
3) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show), you corrected the fault.
4) If the MAT shows ACTIVE for the maintenance message, then continue.

(d) If you do not find a problem with the wiring, then continue:

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
3) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show), you corrected the fault.
4) If the MAT shows ACTIVE for the maintenance message, then continue.

(f) If you do not find a problem with the wiring, then continue:

(g) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
3) If the MAT shows NOT ACTIVE for the maintenance message (or if the maintenance message does not show), you corrected the fault.
4) If the MAT shows ACTIVE for the maintenance message, then continue.

(h) If you find a problem with the wiring, then continue.

(i) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(3) Inspect the left No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

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

**END OF TASK**

## 808. Forward Window (right) Anti-Ice Heater Current Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-21052.

**B. Initial Evaluation**

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

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

**C. Fault Isolation Procedure**

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a wiring check between these pins of connector DM30201AC at the WHCU, M30201 and connector J1 at the right window 1, B30201:

| DM30201AC | J1 |
|---|---|
| pin 5 . . . . . | pin 1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

4) If the MAT shows ACTIVE for the maintenance message, then continue.

(d) If you do not find a problem with the wiring, then continue:

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

4) If the MAT shows ACTIVE for the maintenance message, then continue.

(f) If you do not find a problem with the wiring, then continue:

(g) Do a wiring check between these pins of connector DM30201AC at the WHCU, M30201 and connector J5 at the right window 1, B30201:

| DM30201AC | J5 |
|---|---|
| pin 4 . . . . . | pin 1 |

(h) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

4) If the MAT shows ACTIVE for the maintenance message, then continue.

(i) If you find a problem with the wiring, then continue.

(j) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(3) Inspect the right No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

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

**——— END OF TASK ———**

## 809. Side Window (right 2) Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-22001.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L. (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L. (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(2) Do this check of the power wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a check for 115V AC at pin 1 of connector DM30101AB.

(c) If there is not 115V AC at pin 1 of connector DM30101AB, then do these steps:

1) Open the P110 left power management panel.

2) Do a check for 115V AC at the load terminal of circuit breaker C30416.

3) If there is not 115V AC at the circuit breaker, then do these steps:

a) Replace this circuit breaker:

(WDM 30-41-11)

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| B | 16 | C30416 | WDO HT 2R |

b) Close the P110 left power management panel.

c) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

d) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L. (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

4) If there is 115V AC at the circuit breaker, then do these steps:

a) Repair the wiring between pin 1 of connector DM30101AB and the load terminal of circuit breaker C30416 (WDM 30-41-11).

b) Close the P110 left power management panel.

c) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

d) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L. (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

f) If the maintenance message shows on the ground test display, then continue.

(3) Inspect the right No. 2 window. To inspect it, do this task: Flight Compartment No. 2 Window Inspection, AMM TASK 56-11-00-200-802

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

**——— END OF TASK ———**

## 810. Side Window (left 2) Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-22002.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(2) Do this check of the power wiring (WDM 30-41-11):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a check for 115V AC at pin 1 of connector DM30201AB.

(c) If there is not 115V AC at pin 1 of connector DM30201AB, then do these steps:

1) Open the P210 right power management panel.

2) Do a check for 115V AC at the load terminal of circuit breaker C30417.

3) If there is not 115V AC at the circuit breaker, then do these steps:

a) Replace this circuit breaker:

(WDM 30-41-11)

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| B | 16 | C30416 | WDO HT 2R |

b) Close the P210 right power management panel.

c) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

d) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

4) If there is 115V AC at the circuit breaker, then do these steps:

a) Repair the wiring between pin 1 of connector DM30201AB and the load terminal of circuit breaker C30417 (WDM 30-41-11).

b) Close the P200 right power panel.

c) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

d) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

f) If the maintenance message shows on the ground test display, then continue.

(3) Inspect the left No. 2 window. To inspect it, do this task: Flight Compartment No. 2 Window Inspection, AMM TASK 56-11-00-200-802

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

——— END OF TASK ———

## 811. Side Window (right 2) Heater Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-22021.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801)

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801)

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30217 from the right window 2, B30202.

(c) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30217 at the right window 2, B30202:

| DM30101AB | D30217 |
|---|---|
| pin 13 | pin C |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30217 to the right window 2, B30202.

4) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Disconnect connector D5575P on the coiled wire bundle near the right window 2, B30202.

(h) Do a wiring check between these pins of connector D5575P and connector D30217 at the right window 2, B30202:

| D5575P | | D30217 |
|---|---|---|
| pin 7 | . . . . . | pin D |

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D5575P.

3) Re-connect connector D30217.

4) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(j) If you do not find a problem with the wiring, then continue:

(k) Re-connect connector D5575P.

(l) Re-connect connector D30217.

(3) Inspect the right No. 2 window. To inspect it, do this task: Flight Compartment No. 2 Window Inspection, AMM TASK 56-11-00-200-802

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

**END OF TASK**

## 812. Side Window (left 2) Heater Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-22022.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801)

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801)

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30117 from the left window 2, B30102.

(c) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector D30117 at the left window 2, B30102:

| DM30201AB | D30117 |
|---|---|
| pin 13 . . . . . | pin C |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30117 to the left window 2, B30102.

4) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801)

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Disconnect connector D5525P on the coiled wire bundle near the left window 2, B30102.

(h) Do a wiring check between these pins of connector D5525P and connector D30117 at the left window 2, B30102:

| D5525P | | D30117 |
|---|---|---|
| pin 7 | . . . . . | pin D |

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D5525P.

3) Re-connect connector D30117.

4) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801)

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

(j) If you do not find a problem with the wiring, then continue:

(k) Re-connect connector D5525P.

(l) Re-connect connector D30117.

(3) Inspect the left No. 2 window. To inspect it, do this task: Flight Compartment No. 2 Window Inspection, AMM TASK 56-11-00-200-802

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801)

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

**——— END OF TASK ———**

## 813. Side Window (right 2) Sensor Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-22031.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Do these steps to change sensors in the right window 2, B30202 (WDM 30-41-11):

NOTE: TB3007 is located on the outboard side of the E1 shelf.

(a) If the sensor, J7, in the right window 2, B30202, is connected, do these steps:

1) Disconnect the wire, W4114-2009R-24, from terminal PA3 on terminal block TB3007.
2) Re-connect the wire, W4114-2009R-24, to terminal PA4 on terminal block TB3007.
3) Disconnect the wire, W4114-2009B-24, from terminal PB3 on the terminal block TB3007.
4) Re-connect the wire, W4114-2009B-24, to terminal PB4 on terminal block TB3007.
5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
6) If the MAT shows ACTIVE for the maintenance message, then continue.

(b) If the spare sensor, J6, in the right window 2, B30202, is connected, do these steps:

1) Replace the right window 2, B30202.

These are the tasks:

No. 2 Openable Window Removal, AMM TASK 56-11-02-000-801,

No. 2 Openable Window Installation, AMM TASK 56-11-02-400-801.

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

(2) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Do this check of the wiring (WDM 30-41-11):

(a) If the anti-ice sensor, J7, in the right window 2, B30202, is connected, do these steps:

1) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.
2) Disconnect connector D30216 from the right window 2, B30202.
3) Do a wiring check between these pins of connector DM30101AC at the WHCU, M30101 and connector D30216 at the right window 2, B30202:

| DM30101AC | D30216 |
|---|---|
| pin 49 | pin A |
| pin 55 | pin B |

4) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
   c) Re-connect connector D30216 to the right window 2, B30202.
   d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

5) If you do not find a problem with the wiring, then continue:

6) Re-connect connector D30261 to the right window 2, B30202.

(b) If the spare sensor, J6, in the right window 2, B30202, is connected, do these steps:

1) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

2) Disconnect connector D30215 from the right window 2, B30202.

3) Do a wiring check between these pins of connector DM30101AC at the WHCU, M30101 and connector D30251 at the right window 2, B30202 (WDM 30-41-11):

| DM30101AC | D30215 |
|---|---|
| pin 49 | pin A |
| pin 55 | pin B |

4) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

c) Re-connect connector D30215 to the right window 2, B30202.

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

——— END OF TASK ———

## 814. Side Window (left 2) Sensor Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-22032.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Do these steps to change sensors in the left window 2, B30102 (WDM 30-41-12):

NOTE: TB3006 is located on the outboard side of the E2 shelf.

(a) If the sensor, J7, in the left window 2, B30102, is connected, do these steps:

1) Disconnect the wire, W4233-2008R-24, from terminal PA3 on terminal block TB3006.

2) Re-connect the wire, W4233-2008R-24, to terminal PA4 on terminal block TB3006.

3) Disconnect the wire, W4233-2008B-24, from terminal PB3 on the terminal block TB3006.

4) Re-connect the wire, W4233-2008B-24, to terminal PB4 on terminal block TB3006.

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

6) If the MAT shows ACTIVE for the maintenance message, then continue.

(b) If the spare sensor, J6, in the left window 2, B30102, is connected, do these steps:

1) Replace the left window 2, B30102.

These are the tasks:

No. 2 Openable Window Removal, AMM TASK 56-11-02-000-801,

No. 2 Openable Window Installation, AMM TASK 56-11-02-400-801.

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

3) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Do this check of the wiringWDM 30-41-12 :

(a) If the anti-ice sensor, J7, in the left window 2, B30102, is connected, do these steps:

1) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

2) Disconnect connector D30116 from the left window 2, B30102.

3) Do a wiring check between these pins of connector DM30201AC at the WHCU, M30201 and connector D30116 at the left window 2, B30102:

| DM30201AC | D30116 |
|---|---|
| pin 49 | pin A |
| pin 55 | pin B |

4) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

c) Re-connect connector D30116 to the left window 2, B30102.

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

5) If you do not find a problem with the wiring, then continue:

6) Re-connect connector D30116 to the right window 2, B30202.

(b) If the spare sensor, J6, in the left window 2, B30102, is connected, do these steps:

1) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

2) Disconnect connector D30115 from the left window 2, B30102.

3) Do a wiring check between these pins of connector DM30101AC at the WHCU, M30201 and connector D30115 at the left window 2, B30102 (WDM 30-41-11):

| DM30201AC | D30115 |
|---|---|
| pin 49 | pin A |
| pin 55 | pin B |

4) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
   c) Re-connect connector D30115 to the left window 2, B30102.
   d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

——— END OF TASK ———

## 815. Side Window (right 2) Current Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-22051.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30217 from the right window 2, B30202.

(c) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30217 at the right window 2, B30202:

| DM30101AB | D30117 |
|---|---|
| pin 13 | pin C |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30217.

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Disconnect connector D5575P at the coiled wire bundle near the right window 2, B30202.

(h) Do a wiring check between these pins of connector D5575P and connector D30217 at the right window 2, B30202:

| D5575P | | D30217 |
|---|---|---|
| pin 7 | . . . . . | pin D |

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D5575P.

3) Re-connect connector D30217.

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

5) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Inspect the right No. 2 window. To inspect it, do this task: Flight Compartment No. 2 Window Inspection, AMM TASK 56-11-00-200-802

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

**——— END OF TASK ———**

## 816. Side Window (left 2) Current Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-22052.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(2) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30117 from the left window 2, B30102.

(c) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector D30117 at the left window 2, B30102:

| DM30201AB | D30117 |
|---|---|
| pin 13 | pin C |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30117.

4) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L. (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Disconnect connector D5525P at the coiled wire bundle near the left window 2, B30102.

(h) Do a wiring check between these pins of connector D5525P and connector D30117 at the left window 2, B30202:

| D5525P | D30117 |
|---|---|
| pin 7 | pin D |

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D5525P.

3) Re-connect connector D30117.

4) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(3) Inspect the left No. 2 window. To inspect it, do this task: Flight Compartment No. 2 Window Inspection, AMM TASK 56-11-00-200-802

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

——— END OF TASK ———

## 817. Side Window (left 3) Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-23001.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the power wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a check for 208V AC between pin 1 and pin 2 of connector DM30201AB.

(c) If there is not 208V AC between pin 1 and pin 2, then do these steps:

1) Open the P200 right power panel.

2) Do a check for 208V AC at the load terminals of circuit breaker C30300.

3) If there is not 208V AC at the circuit breaker, then do these steps:

a) Replace these circuit breakers:

(WDM 30-41-12)

**Right Power Panel, P200**

| Row | Col | Number | Name |
|---|---|---|---|
| **ARO 005-999** | | | |
| A | 4 | C30300 | WDO HTR 1R |
| **ARO 001-004** | | | |
| B | 4 | C30300 | WDO HTR 1R |

**ARO ALL**

b) Close the P200 right power panel.

c) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

4) If there is 208V AC at the circuit breaker, then do these steps:

a) Repair the wiring between pin 1 and pin 2 of connector DM30201AB and the load terminals of circuit breaker C30300 (WDM 30-41-12).

b) Close the P200 right power panel.

c) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

**——— END OF TASK ———**

## 818. Side Window (right 3) Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-23002.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the power wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a check for 208V AC between pin 1 and pin 2 of connector DM30101AB.

(c) If there is not 208V AC between pin 1 and pin 2, then do these steps:

1) Open the P100 left power panel.

2) Do a check for 208V AC at the load terminals of circuit breaker C30301.

3) If there is not 208V AC at the circuit breaker, then do these steps:

a) Replace this circuit breaker:

**Left Power Panel, P100**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 2 | C30301 | WDO HTR 1L |

b) Close the P100 left power panel.

c) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

4) If there is 208V AC at the circuit breaker, then do these steps:

a) Repair the wiring between pin 1 and pin 2 of connector DM30101AB and the load terminals of circuit breaker C30301.

b) Close the P100 left power panel.

c) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

e) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Inspect the right No. 3 window. To inspect it, do this task: Flight Compartment No. 3 Window Inspection, AMM TASK 56-11-00-200-803

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

**END OF TASK**

## 819. Side Window (left 3) Heater Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-23011.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30111 from the left window 3, B30202.

(c) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector D30111 at the left window 3, B30103:

| DM30201AB | D30111 |
|---|---|
| pin 14 | pin 1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30111 to the left window 3, B30103.

4) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Disconnect connector D30114 at the left window 3, B30103.

(h) Do a wiring check between pin 1 of connector D30114 and the airplane structure.

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D30114.

3) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(j) If you do not find a problem with the wiring, then continue:

(k) Re-connect connector D30114.

(3) Inspect the left No. 3 window. To inspect it, do this task: Flight Compartment No. 3 Window Inspection, AMM TASK 56-11-00-200-803

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

**END OF TASK**

## 820. Side Window (right 3) Heater Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-23012.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30211 from the right window 3, B30203.

(c) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30211 at the right window 3, B30203:

| DM30101AB | D30211 |
|---|---|
| pin 14 | pin 1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30211 to the right window 3, B30203.

4) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Disconnect connector D30214 at the right window 3, B30203.

(h) Do a wiring check between pin 1 of connector D30214 and the airplane structure.

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D30214.

3) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(j) If you do not find a problem with the wiring, then continue:

(k) Re-connect connector D30214.

(3) Inspect the right No. 3 window. To inspect it, do this task: Flight Compartment No. 3 Window Inspection, AMM TASK 56-11-00-200-803

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

**——— END OF TASK ———**

## 821. Side Window (left 3) Sensor Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-23031.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Do these steps to change sensors in the left window 3, B30103 (WDM 30-41-12):

NOTE: TB3006 is located on the outboard side of the E2 shelf.

(a) If the anti-ice sensor, J11, in the left window 3, B30103, is connected, do these steps:

1) Disconnect the wire, W4233-2010R-24, from terminal PA1 on terminal block TB3006.

2) Re-connect the wire, W4233-2010R-24, to terminal PA2 on terminal block TB3006.

3) Disconnect the wire, W4233-2010B-24, from terminal PB1 on the terminal block TB3006.

4) Re-connect the wire, W4233-2010B-24, to terminal PB2 on terminal block TB3006.

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

6) If the MAT shows ACTIVE for the maintenance message, then continue.

(b) If the spare sensor, J10, in the left window 1, B30103, is connected, do these steps:

1) Replace the left window 3, B30103.

These are the tasks:

No. 3 Window Removal, AMM TASK 56-11-21-400-801,

No. 3 Window Installation, AMM TASK 56-11-21-400-803.

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

3) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Do this check of the wiring (WDM 30-41-12):

(a) If the sensor, J11, in the left window 3, B30103, is connected, do these steps:

1) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

2) Disconnect connector D30113 from the left window 3, B30103.

3) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector D30113 at the left window 3, B30103:

| DM30201AB | D30113 |
|---|---|
| pin 50 | pin A |
| pin 56 | pin B |

4) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

c) Re-connect connector D30113 to the left window 3, B30103.

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

5) If you do not find a problem with the wiring, then continue:

6) Re-connect connector D30113 to the left window 3, B30103.

(b) If the spare sensor, J10 in the left window 3, B30103, is connected, do these steps:

1) Disconnect connector D30112 from the left window 3, B30103.

2) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector D30112 at the left window 3, B30103 (WDM 30-41-11):

| DM30201AB | D30112 |
|---|---|
| pin 50 | pin A |
| pin 56 | pin B |

3) If you find a problem with the wiring, then do these steps:
   a) Repair the wiring.
   b) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
   c) Re-connect connector D30112 to the left window 3, B30103.
   d) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.

**——— END OF TASK ———**

## 822. Side Window (right 3) Sensor Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-23032.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Do these steps to change anti-ice sensors in the right window 3, B30101 (WDM 30-41-11):

NOTE: TB3007 is located on the outboard side of the E1 shelf.

(a) If the sensor, J11, in the right window 3, B30203, is connected, do these steps:
   1) Disconnect the wire, W4114-2007R-24, from terminal PA1 on terminal block TB3007.
   2) Re-connect the wire, W4114-2007R-24, to terminal PA2 on terminal block TB3007.
   3) Disconnect the wire, W4114-2007B-24, from terminal PB1 on the terminal block TB3007.
   4) Re-connect the wire, W4114-2007B-24, to terminal PB2 on terminal block TB3007.
   5) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
   6) If the MAT shows ACTIVE for the maintenance message, then continue.

(b) If the spare sensor, J10, in the right window 3, B30203, is connected, do these steps:
   1) Replace the right window 3, B30203.

      These are the tasks:

      No. 3 Window Removal, AMM TASK 56-11-21-400-801,

      No. 3 Window Installation, AMM TASK 56-11-21-400-803.
   2) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
   3) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Replace the window heat control unit (WHCU), M30203.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Do this check of the wiring (WDM 30-41-11):

(a) If the sensor, J11, in the right window 3, B30203, is connected, do these steps:

1) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

2) Disconnect connector D30213 from the right window 3, B30203.

3) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30213 at the right window 3, B30203:

| DM30101AB | D30213 |
|---|---|
| pin 50 | pin A |
| pin 56 | pin B |

4) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

c) Re-connect connector D30213 to the right window 3, B30203.

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

5) If you do not find a problem with the wiring, then continue:

6) Re-connect connector D30213 to the right window 3, B30203.

(b) If the spare anti-ice sensor, J10, in the right window 3, B30203, is connected, do these steps:

1) Disconnect connector D30212 from the right window 3, B30203.

2) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30212 at the right window 1, B30203 (WDM 30-41-11):

| DM30101AB | D30212 |
|---|---|
| pin 50 | pin A |
| pin 56 | pin B |

3) If you find a problem with the wiring, then do these steps:

a) Repair the wiring.

b) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

c) Re-connect connector D30212 to the right window 3, B30203.

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

——— END OF TASK ———

## 823. Side Window (left 3) Current Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-23051.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30111 from the left window 3, B30103.

(c) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector D30111 at the left window 3, B30103:

| DM30201AB | D30111 |
|---|---|
| pin 13 . . . . . | pin 1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30111.

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Disconnect connector D30114 at the left window 3, B30103.

(h) Do a wiring check between pin 1 of connector D30114 and airplane structure.

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-connect connector D30114.
3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
4) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Inspect the left No. 3 window. To inspect it, do this task: Flight Compartment No. 3 Window Inspection, AMM TASK 56-11-00-200-803

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

——— END OF TASK ———

## 824. Side Window (right 3) Current Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-23052.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30211 from the right window 3, B30203.

(c) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30211 at the right window 3, B30203 (WDM 30-41-11):

| DM30101AB | D30211 |
|---|---|
| pin 14 | pin 1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
3) Re-connect connector D30211.

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Disconnect connector D30214 at the right window 3, B30203.

(h) Do a wiring check between pin 1 of connector D30214 and airplane structure.

(i) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-connect connector D30214.

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

4) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Inspect the right No. 3 window. To inspect it, do this task: Flight Compartment No. 3 Window Inspection, AMM TASK 56-11-00-200-803

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

**——— END OF TASK ———**

## 825. Forward Window (left) Anti-Fog Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-24001.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30106 at the left window 1, B30101:

| DM30101AB | J15 |
|---|---|
| pin 18 | pin 1 |

(c) Do a continuity check between pin 1 of connector J13 at the left window 1, B30101 and structure ground.

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

4) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Inspect the left No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

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

**——— END OF TASK ———**

## 826. Forward Window (right) Anti-Fog Power Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-24002.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30206 at the right window 1, B30201:

| DM30101AB | J15 |
|---|---|
| pin 18 | pin 1 |

(c) Do a continuity check between pin 1 of connector J13 at the right window 1, B30201 and structure ground.

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
3) If the MAT shows NOT ACTIVE for the maintenance message (or if the message does not show), you corrected the fault.
4) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Inspect the right No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

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

——— END OF TASK ———

## 827. Forward Window (left) Anti-Fog Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-24011.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Connect DM30101 and perform continuity check from pin 18 at DM30101AB with shake wire of terminal socket J13 in B30101. If you find a problem, repair the wiring.

(c) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30106 at the left window 1, B30101:

| DM30101AB | J15 |
|---|---|
| pin 18 . . . . . | pin 1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(3) Inspect the left No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

**——— END OF TASK ———**

## 828. Forward Window (right) Anti-Fog Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-24012.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Connect DM30201 and perform continuity check from pin 18 at DM30201AC with shake wire of terminal socket J13 in B30201. If you find a problem, repair the wiring.

(c) Do a wiring check between these pins of connector DM30201AC at the WHCU, M30201 and connector D30206 at the right window 1, B30201:

| DM30201AC | J15 |
|---|---|
| pin 18 | pin 1 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(3) Inspect the right No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

**——— END OF TASK ———**

## 829. Forward Window (left) Anti-Fog Sensor Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-24031.

**B. Initial Evaluation**

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

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

**C. Fault Isolation Procedure**

(1) Replace the left window 1, B30101.

These are the tasks:

No. 1 Window Removal, AMM TASK 56-11-01-000-801,

No. 1 Window Installation, AMM TASK 56-11-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30107 from the left window 1, B30101.

(c) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector D30107 at the left window 1, B30101:

| DM30101AB | D30107 |
|---|---|
| pin 54 | pin C |
| pin 60 | pin D |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30107.

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Re-connect connector D30107.

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

(i) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

——— END OF TASK ———

## 830. Forward Window (right) Anti-Fog Sensor Circuit Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-24032.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the right window 1, B30201.

These are the tasks:

No. 1 Window Removal, AMM TASK 56-11-01-000-801,

No. 1 Window Installation, AMM TASK 56-11-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Disconnect connector D30207 from the right window 1, B30201.

(c) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector D30207 at the right window 1, B30201:

| DM30201BC | D30207 |
|---|---|
| pin 54 | pin C |
| pin 60 | pin D |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector D30207.

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(g) Re-connect connector D30207.

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

(i) If the MAT shows ACTIVE for the maintenance message, then continue.

(3) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

——— END OF TASK ———

## 831. Forward Window (left) Anti-Fog Current Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-24051.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector J15 at the left window 1, B30101:

| DM30101AB | J15 |
|---|---|
| pin 18 | pin 1 |

(c) Do a check for continuity between connector J13 at the left window 1, B30101 and structure ground.

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(e) If you do not find a problem with the wiring, then continue:

(f) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(3) Inspect the left No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

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

——— END OF TASK ———

## 832. Forward Window (right) Anti-Fog Current Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-24052.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector D30206 at the right window 1, B30201:

| **DM30201AB** | **J15** |
|---|---|
| pin 18 . . . . . | pin 1 |

(c) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

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

(d) If you do not find a problem with the wiring, then continue:

(e) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(3) Inspect the right No. 1 window. To inspect it, do this task: Flight Compartment No. 1 Window Inspection, AMM TASK 56-11-00-200-801

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

——— END OF TASK ———

**833. Window Heat Control Unit (left forward and right side) Internal Fault - Fault Isolation**

**A. Maintenance Messages**

(1) This task is for maintenance message: 30-25001.

**B. Initial Evaluation**

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

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

**C. Fault Isolation Procedure**

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows ACTIVE for the maintenance message, then do the following Fault Isolation tasks:

1) Forward Window (left) Anti-Ice Heater Current Problems - Fault Isolation, 30-41 TASK 807

2) Side Window (right 2) Current Problems - Fault Isolation, 30-41 TASK 815

3) Side Window (right 3) Current Problems - Fault Isolation, 30-41 TASK 824

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

——— END OF TASK ———

**834. Window Heat Control Unit (right forward and left side) Internal Fault - Fault Isolation**

**A. Maintenance Messages**

(1) This task is for maintenance message: 30-25002.

**B. Initial Evaluation**

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

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

**C. Fault Isolation Procedure**

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows ACTIVE for the maintenance message, then do the following Fault Isolation tasks:

1) Forward Window (right) Anti-Ice Heater Current Problems - Fault Isolation, 30-41 TASK 808

2) Side Window (left 2) Current Problems - Fault Isolation, 30-41 TASK 816

3) Side Window (left 3) Current Problems - Fault Isolation, 30-41 TASK 823

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

——— END OF TASK ———

## 835. Window Heat Control Unit (left forward and right side) Output Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-28891.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the bus wiring:

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Remove IOM M009 from the left AIMS cabinet, M31101. To remove it, do this task: Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801.

(c) Remove IOM M009 from the right AIMS cabinet, M31201. To remove it, do this task: Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801.

(d) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector P9A for module M009 in the left AIMS cabinet, M31101 (SSM 30-41-11, SSM 31-41-03):

| DM30101AB | P9A |
|---|---|
| pin 25 | pin F11 |
| pin 26 | pin G12 |
| pin 28 | pin A6 |
| pin 29 | pin B6 |

(e) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector P9A for M009 in the right AIMS cabinet, M31201 (SSM 30-41-11, SSM 31-41-06):

| DM30101AB | P9A |
|---|---|
| pin 28 | pin A6 |
| pin 29 | pin B6 |

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
3) Re-install IOM M009 in the left AIMS cabinet M31101. To install it, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.
4) Re-install IOM M009 in the right AIMS cabinet M31201. To install it, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.
5) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).
6) If the maintenance message does not show on the ground test display, you corrected the fault.

**——— END OF TASK ———**

## 836. Window Heat Control Unit (right forward and left side) Output Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-28892.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

**C. Fault Isolation Procedure**

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the bus wiring:

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Remove IOM M004 from the left AIMS cabinet, M31101. To remove it, do this task: Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801.

(c) Remove IOM M004 from the right AIMS cabinet, M31201. To remove it, do this task: Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801.

(d) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector P4A of module M004 in the left AIMS cabinet, M31101 (SSM 30-41-12, SSM 31-41-03):

| **DM30201AB** | **P4A** |
|---|---|
| pin 25 | pin F11 |
| pin 26 | pin G12 |
| pin 28 | pin A6 |
| pin 29 | pin B6 |

(e) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector P4A for module M004 in the right AIMS cabinet, M31201 (SSM 30-41-12, SSM 31-41-06):

| **DM30301** | **P4A** |
|---|---|
| pin 28 | pin A6 |
| pin 29 | pin B6 |

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-install IOM M004 in the left AIMS cabinet, M31101. To install it, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.

4) Re-install IOM M004 in the right AIMS cabinet, M31201. To install it, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.

5) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

——— END OF TASK ———

## 837. Window Heat Control Unit (left forward and right side) AIMS Input Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-29903.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows NOT ACTIVE for the maintenance message, you corrected the fault.

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Remove IOM M009 from the left AIMS cabinet, M31101. To remove it, do this task: Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801.

(c) Remove IOM M009 from the right AIMS cabinet, M31201. To remove it, do this task: Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801.

(d) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector P9A for module M009 in the left AIMS cabinet, M31101 (SSM 30-41-11, SSM 31-41-03):

| DM30101AB | P9A |
|---|---|
| pin 25 | pin F11 |
| pin 26 | pin G12 |
| pin 28 | pin A6 |
| pin 29 | pin B6 |

(e) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector P9A for M009 in the right AIMS cabinet, M31201 (SSM 30-41-11, SSM 31-41-06):

| DM30101AB | P9A |
|---|---|
| pin 28 | pin A6 |
| pin 29 | pin B6 |

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
3) Re-install IOM M009 in the left AIMS cabinet M31101. To install it, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.
4) Re-install IOM M009 in the right AIMS cabinet M31201. To install it, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.
5) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).
6) If the maintenance message does not show on the ground test display, you corrected the fault.

(3) Replace the input/output module (IOM), M009, in the left AIMS cabinet, M31101.

These are the tasks:

Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801,

Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.

(a) If the MAT shows NOT ACTIVE for the maintenance message, you corrected the fault.

**——— END OF TASK ———**

## 838. Window Heat Control Unit (right forward and left side) AIMS Input Problem - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-29904.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

NOTE: If you use a megohmmeter to do wiring checks on an ARINC 429 bus (or if you need the exact resistance of the bus wiring), first remove all the LRUs that are connected to the bus (use the WDM to tell which LRUs are on the bus). Then re-install the LRUs when you are done.

(1) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows NOT ACTIVE for the maintenance message, you corrected the fault.

(b) If the MAT shows ACTIVE for the maintenance message, then continue.

(2) Do this check of the wiring:

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Remove IOM M004 from the left AIMS cabinet, M31101. To remove it, do this task: Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801.

(c) Remove IOM M004 from the right AIMS cabinet, M31201. To remove it, do this task: Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801.

(d) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector P4A of module M004 in the left AIMS cabinet, M31101 (SSM 30-41-12, SSM 31-41-03):

| **DM30201AB** | **P4A** |
|---|---|
| pin 25 | pin F11 |
| pin 26 | pin G12 |
| pin 28 | pin A6 |
| pin 29 | pin B6 |

(e) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector P4A for module M004 in the right AIMS cabinet, M31201 (SSM 30-41-12, SSM 31-41-06):

| **DM30301** | **P4A** |
|---|---|
| pin 28 | pin A6 |
| pin 29 | pin B6 |

(f) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-install IOM M004 in the left AIMS cabinet, M31101. To install it, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.

4) Re-install IOM M004 in the right AIMS cabinet, M31201. To install it, do this task: Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.

5) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(3) Replace the input/output module (IOM), M004, in the left AIMS cabinet, M31101.

These are the tasks:

Input/Output Module (IOM) Removal, AMM TASK 31-41-11-000-801,

Input/Output Module (IOM) Installation, AMM TASK 31-41-11-400-801.

(a) If the MAT shows NOT ACTIVE for the maintenance message, you corrected the fault.

——— END OF TASK ———

**839. Side Window (2L, 2R, 3L, or 3R) Fogging Problems - Fault Isolation**

**A. Fault Isolation Procedure**

(1) Look at the Extended Maintenance, Existing Faults display on the MAT for maintenance messages related to the window heat system.

(2) For each maintenance messages related to the window heat system, do these steps:

(a) Find the maintenance message in the FIM Maintenance Message Index.

(b) Do the specified fault isolation task.

——— END OF TASK ———

**840. EICAS Message WINDOW HEAT - Fault Isolation**

**A. Initial Evaluation**

NOTE: During pre/post flight any two or more of the advisory window heat messages are true.

(1) Look at the Extended Maintenance, Existing Faults display on the MAT for maintenace messages related to the window heat system.

(2) For each maintenance message related to the window heat system, do these steps:

(a) Find the maintenance message in the FIM Maintenance Message Index.

(b) Do the specified fault isolation task.

——— END OF TASK ———

**841. Backup Window Heat Control Unit (left) Switch - Fault Isolation**

**A. Maintenance Messages**

(1) This task is for maintenance message: 30-26001.

**B. Initial Evaluation**

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

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

**C. Fault Isolation Procedure**

(1) Do this check of the wiring (WDM 30-41-11):

(a) Remove the WHCU, M30101. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Remove the backup window heat panel (P61), M30431.

(c) Disconnect connector DM30431A at the backup window heat panel (P61), M30431.

(d) Do a wiring check between these pins of connector DM30101AB at the WHCU, M30101 and connector DM30431A at the backup window heat panel (P61), M30431:

| DM30101AB | DM30431A |
|---|---|
| GND | pin 5 |
| NC | pin 6 |
| pin 36 | pin 7 |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

3) Re-connect connector DM30431A.

4) Re-install the backup window heat panel (P61), M30431.

5) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

(f) If you do not find a problem with the wiring, then continue:

(g) Re-install the WHCU, M30101. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(h) Re-connect connector DM30431A.

(i) Re-install the backup window heat panel (P61), M30431.

(2) Replace the window heat control unit (WHCU), M30101.

These are the tasks:

Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - L (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

**——— END OF TASK ———**

## 842. Backup Window Heat Control Unit (right) Switch - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-26002.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Do this check of the wiring (WDM 30-41-12):

(a) Remove the WHCU, M30201. To remove it, do this task: Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801.

(b) Remove the backup window heat panel (P61), M30431.

(c) Disconnect connector DM30431B at the backup window heat panel (P61), M30431.

(d) Do a wiring check between these pins of connector DM30201AB at the WHCU, M30201 and connector DM30431B at the backup window heat panel (P61), M30431:

| DM30201AB | DM30431B |
|---|---|
| GND | pin 4 |
| NC | pin 5 |
| pin 36 | pin 6 |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.
2) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.
3) Re-connect connector DM30431B.
4) Re-install the backup window heat panel (P61), M30431.
5) Do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).
6) If the maintenance message does not show on the ground test display, you corrected the fault.

(f) If you do not find a problem with the wiring, then continue:

(g) Re-install the WHCU, M30201. To install it, do this task: Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

(h) Re-connect connector DM30431B.

(i) Re-install the backup window heat panel (P61), M30431.

(2) Replace the window heat control unit (WHCU), M30201.

These are the tasks:

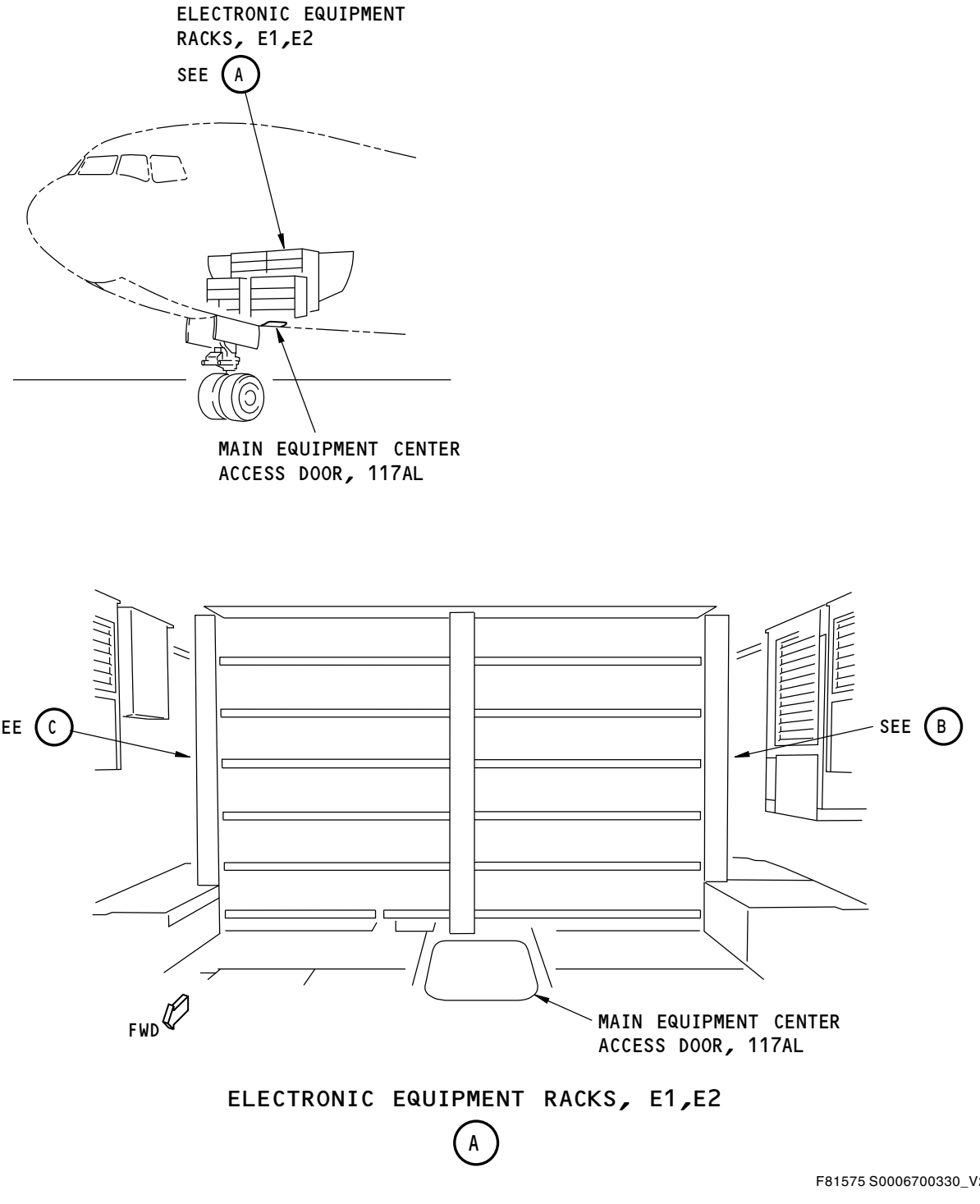
Window Heat Control Unit Removal, AMM TASK 30-41-01-000-801,

Window Heat Control Unit Installation, AMM TASK 30-41-01-400-801.

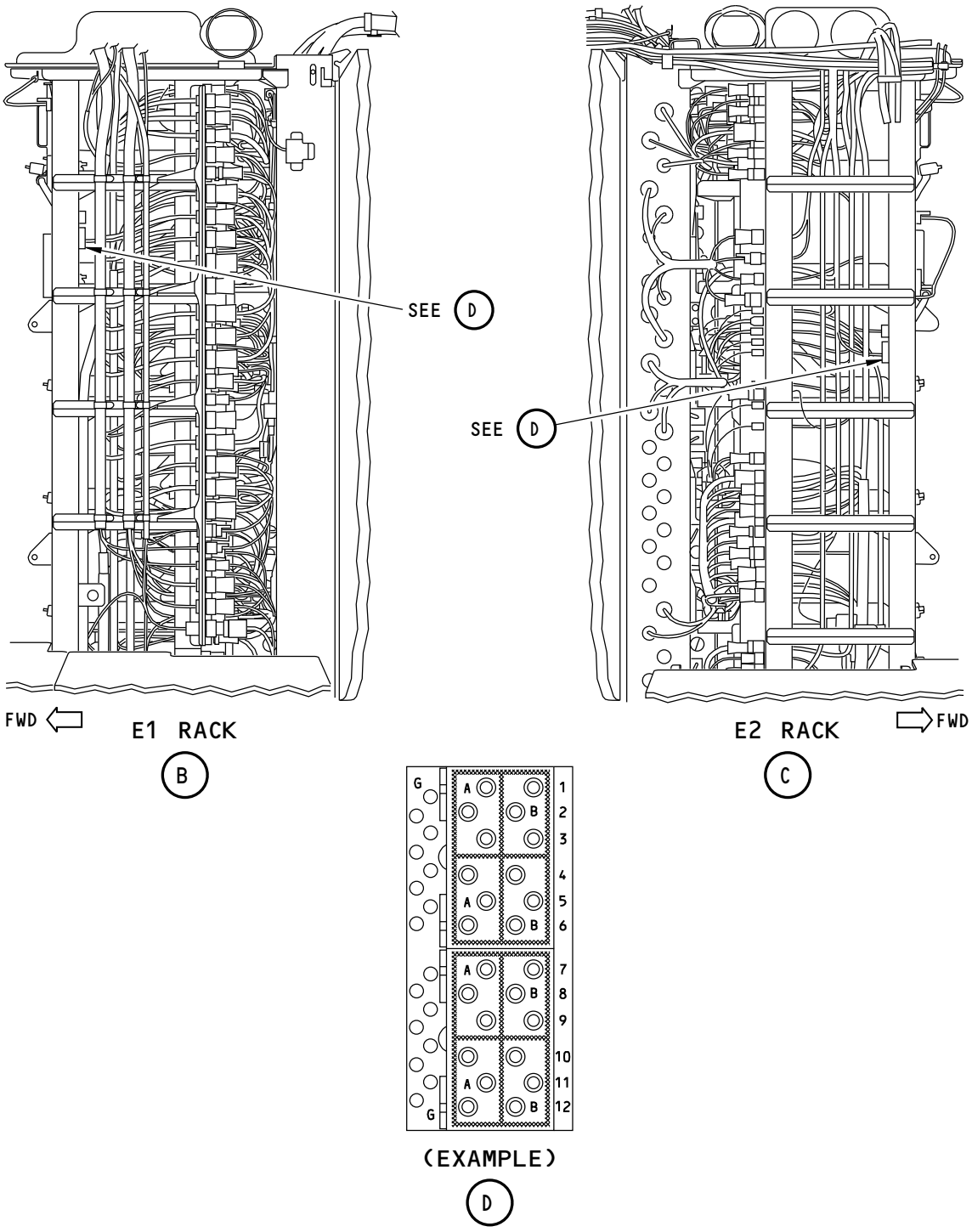
(a) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Window Heat Control System, System Test, Window Heat Ctrl Unit - R (Window Heat Control System - Operational Test, AMM TASK 30-41-00-710-801).

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

**——— END OF TASK ———**

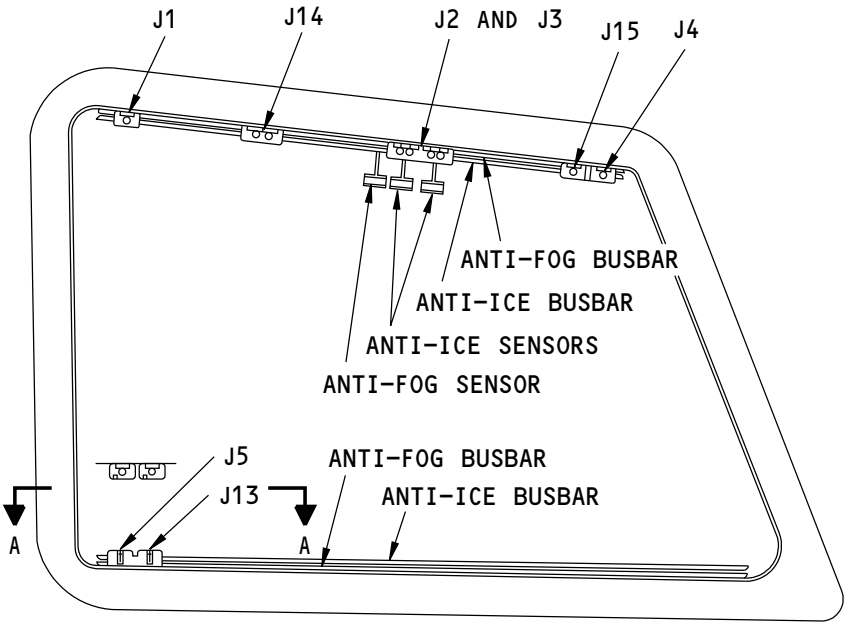



**Window Heat Terminal Block Installation**
**Figure 301/30-41-00-990-801 (Sheet 1 of 2)**




F81577 S0006700331_V2

**Window Heat Terminal Block Installation**
**Figure 301/30-41-00-990-801 (Sheet 2 of 2)**




| TERMINAL | RESISTANCE (OHMS) | |
|---|---|---|
| | MINIMUM | MAXIMUM |
| J1,J4,J5 | 9.12 | 11.15 |
| J2 | 1 | 1 |
| J3 | 1 | 1 |
| J13,J15 | 20.20 2 | 24.70 2 |
| J14 | 1 | 1 |

J1,J4,J5,J13,J15: POWER TERMINALS
J2,J3,J14: SENSOR TERMINALS

1 SEE SENSOR RESISTANCE ON TABLE 1-2.

2 BACK-UP POWER TERMINALS

F88901 S0006700332_V2

**Window Heat Control Sensor Resistance Values**
**Figure 302/30-41-00-990-802 (Sheet 1 of 2)**

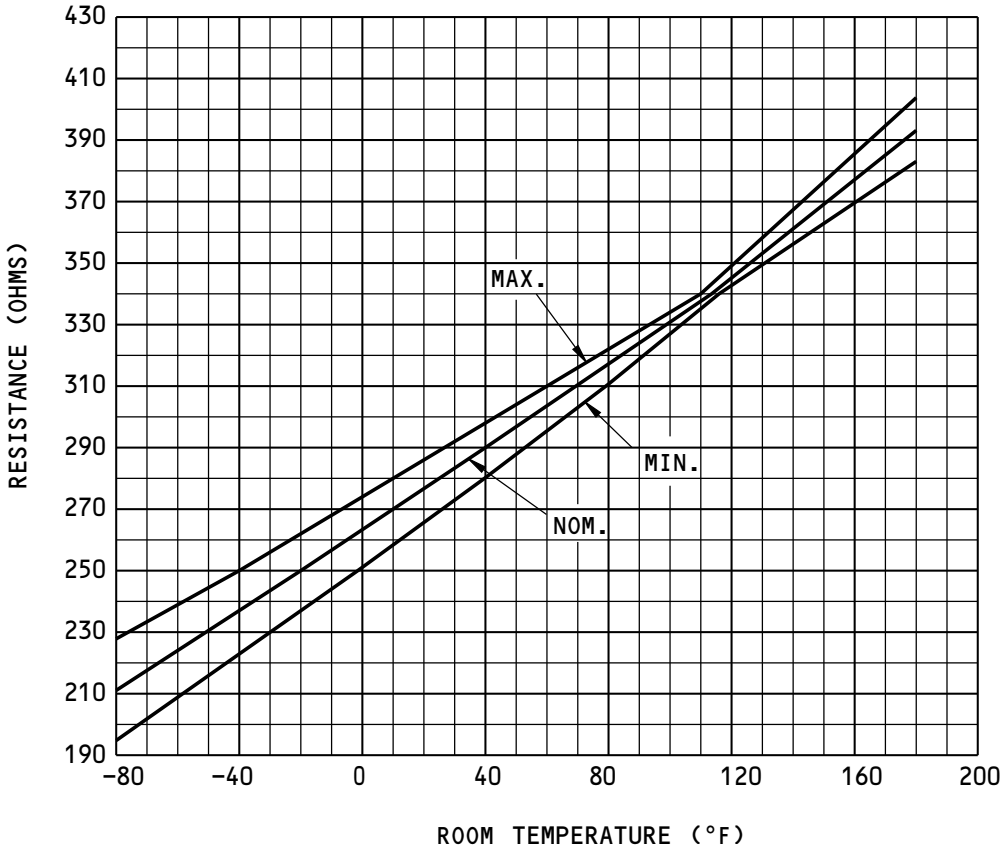



TABLE 1-2

NOTE: CHARACTERISTICS SHOWN EQUIVALENT
TO WESTINGHOUSE AVK 1160.

F88903 S0006700333_V2

**Window Heat Control Sensor Resistance Values**
**Figure 302/30-41-00-990-802 (Sheet 2 of 2)**

## 801. Windshield Wiper (left) Low Speed Problem - Fault Isolation

### A. Initial Evaluation

(1) Supply a continuous water spray to the windshield.

> **CAUTION** DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the L WIPER selector (P5 overhead panel) to LOW.

(a) If the windshield wiper does not operate, then do the Fault Isolation Procedure below.

(b) If the windshield wiper does operate, then there was an intermittent fault.

### B. Fault Isolation Procedure

(1) Replace the L WIPER selector, S1, at the left windshield wiper module, M30421 (WDM 30-42-11).

(a) Supply a continuous water spray to the windshield.

> **CAUTION** DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to LOW.

(c) If the windshield wiper operates, you corrected the fault.

(d) If the windshield wiper does not operate, then continue.

(2) Do this check of the wiring (WDM 30-42-11):

(a) Disconnect electrical connector DM30421A at the left windshield wiper module, M30421.

(b) Remove the left windshield wiper motor/converter, B30421. To remove it, do this task: Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802.

(c) Do a wiring check between these pins of connector DM30421A at the left windshield wiper module, M30421 and connector DB30421 at the left windshield wiper motor/converter, B30421 (WDM 30-42-11).

| DM30421A | | DB30421 |
|---|---|---|
| pin 5 | . . . . . | pin 4 |

(d) If you find a problem with wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM30421A.

3) Re-install the left windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

4) Supply a continuous water spray to the windshield.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

5) Set the L WIPER selector to LOW.

6) If the windshield wiper operates, you corrected the fault.

7) If the windshield wiper does not operate, then continue.

(3) Install a new windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Supply a continuous water spray to the windshield.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector (P5 overhead panel) to LOW.

(c) If the windshield wiper operates, you corrected the fault.

——— END OF TASK ———

## 802. Windshield Wiper (right) Low Speed Problem - Fault Isolation

### A. Initial Evaluation

(1) Supply a continuous water spray to the windshield.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the R WIPER selector (P5 overhead panel) to LOW.

(a) If the windshield wiper does not operate, then do the Fault Isolation Procedure below.

(b) If the windshield wiper does operate, then there was an intermittent fault.

### B. Fault Isolation Procedure

(1) Replace the R WIPER selector, S1, at the right windshield wiper module, M30422 (WDM 30-42-11).

(a) Supply a continuous water spray to the windshield.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to LOW.

(c) If the windshield wiper operates, you corrected the fault.

(d) If the windshield wiper does not operate, then continue.

(2) Do this check of the wiring (WDM 30-42-11):

(a) Disconnect electrical connector DM30422A at the left windshield wiper module, M30422.

(b) Remove the right windshield wiper motor/converter, B30422. To remove it, do this task: Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802.

(c) Do a wiring check between pin 5 of connector DM30422A at the right windshield wiper module, M30422 and pin 4 of connector DB30422 at the right windshield wiper motor/converter, B30422:

| DM30422A | | DB30422 |
|---|---|---|
| pin 5 | . . . . . | pin 4 |

(d) If you find a problem with wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM30422A.

3) Re-install the right windshield wiper motor/converter, B30422. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

4) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

5) Set the R WIPER selector to LOW.

6) If the windshield wiper operates, you corrected the fault.

7) If the windshield wiper does not operate, then continue.

(3) Install a new windshield wiper motor/converter, B30422. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Supply a continuous water spray to the windshield.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector (P5 overhead panel) to LOW.

(c) If the windshield wiper operates, you corrected the fault.

**——— END OF TASK ———**

## 803. Windshield Wiper (left) High Speed Problem - Fault Isolation

### A. Initial Evaluation

(1) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the L WIPER selector (P5 overhead panel) to HIGH.

(a) If the windshield wiper does not operate, then do the Fault Isolation Procedure below.

(b) If the windshield wiper does operate, then there was an intermittent fault.

**B. Fault Isolation Procedure**

(1) Replace the L WIPER selector, S1, at the left windshield wiper module, M30421 (WDM 30-42-11).

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to HIGH.

(c) If the windshield wiper operates, you corrected the fault.

(d) If the windshield wiper does not operate, then continue.

(2) Do this check of the wiring (WDM 30-42-11):

(a) Disconnect electrical connector DM30421A at the left windshield wiper module, M30421.

(b) Remove the left windshield wiper motor/converter, B30421. To remove it, do this task: Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802.

(c) Do a wiring check between these pins of connector DM30421A at the left windshield wiper module, M30421 and connector DB30421 at the left windshield wiper motor/converter, B30421:

| DM30421A | | DB30421 |
|---|---|---|
| pin 6 | . . . . . | pin 7 |

(d) If you find a problem with wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM30421A.

3) Re-install the left windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

4) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

5) Set the L WIPER selector to HIGH.

6) If the windshield wiper operates, you corrected the fault.

7) If the windshield wiper does not operate, then continue.

(3) Install a new windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(a) Use a water source to keep the windshield wet while you operate the wiper.

(b) Set the L WIPER selector (P5 overhead panel) to HIGH.

(c) If the windshield wiper operates, you corrected the fault.

——— END OF TASK ———

## 804. Windshield Wiper (right) High Speed Problem - Fault Isolation

### A. Initial Evaluation

(1) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the R WIPER selector (P5 overhead panel) to HIGH.

(a) If the windshield wiper does not operate, then do the Fault Isolation Procedure below.

(b) If the windshield wiper does operate, then there was an intermittent fault.

### B. Fault Isolation Procedure

(1) Replace the R WIPER selector, S1, at the right windshield wiper module, M30422 (WDM 30-42-11).

(a) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to HIGH.

(c) If the windshield wiper operates, you corrected the fault.

(d) If the windshield wiper does not operate, then continue.

(2) Do this check of the wiring (WDM 30-42-11):

(a) Disconnect electrical connector DM30422A at the right windshield wiper module, M30422.

(b) Remove the right windshield wiper motor/converter, B30422. To remove it, do this task: Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802.

(c) Do a wiring check between these pins of connector DM30422A at the right windshield wiper module, M30422 and connector DB30422 at the right windshield wiper motor/converter, B30422:

| DM30422A | | DB30422 |
|---|---|---|
| pin 4 | . . . . . | pin 7 |

(d) If you find a problem with wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM30422A.

3) Re-install the right windshield wiper motor/converter, B30422. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

4) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

5) Set the R WIPER selector to HIGH.

6) If the windshield wiper operates, you corrected the fault.

7) If the windshield wiper does not operate, then continue.

(3) Install a new windshield wiper motor/converter, B30422. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to HIGH.

(c) If the windshield wiper operates, you corrected the fault.

**——— END OF TASK ———**

## 805. Windshield Wiper (left) Intermittent Speed Problems - Fault Isolation

### A. Initial Evaluation

(1) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the L WIPER selector (P5 overhead panel) to INT.

(a) If the windshield wiper does not operate, then do the Fault Isolation Procedure below.

(b) If the windshield wiper does operate, then there was an intermittent fault.

### B. Fault Isolation Procedure

(1) Replace the L WIPER selector, S1, at the left windshield wiper module, M30421 (WDM 30-42-11).

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to INT.

(c) If the windshield wiper operates, you corrected the fault.

(d) If the windshield wiper does not operate, then continue.

(2) Do this check of the wiring (WDM 30-42-11):

(a) Disconnect electrical connector DM30421A at the left windshield wiper module, M30421.

(b) Remove the left windshield wiper motor/converter, B30421. To remove it, do this task: Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802.

(c) Do a wiring check between these pins of connector DM30421A at the left windshield wiper module, M30421 and connector DB30421 at the left windshield wiper motor/converter, B30421:

| DM30421A | | DB30421 |
|---|---|---|
| pin 4 | . . . . . | pin 3 |

(d) If you find a problem with wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM30421A.

3) Re-install the left windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

4) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

5) Set the L WIPER selector to INT.

6) If the windshield wiper operates, you corrected the fault.

7) If the windshield wiper does not operate, then continue.

(3) Install a new windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to HIGH.

(c) If the windshield wiper operates, you corrected the fault.

**END OF TASK**

## 806. Windshield Wiper (right) Intermittent Speed Problems - Fault Isolation

### A. Initial Evaluation

(1) Use a water source to keep the windshield wet while you operate the wiper.

> **CAUTION** DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the R WIPER selector (P5 overhead panel) to INT.

(a) If the windshield wiper does not operate, then do the Fault Isolation Procedure below.

(b) If the windshield wiper does operate, then there was an intermittent fault.

### B. Fault Isolation Procedure

(1) Replace the R WIPER selector, S1, at the right windshield wiper module, M30422 (WDM 30-42-11).

(a) Use a water source to keep the windshield wet while you operate the wiper.

> **CAUTION** DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to INT.

(c) If the windshield wiper operates, you corrected the fault.

(d) If the windshield wiper does not operate, then continue.

(2) Do this check of the wiring (WDM 30-42-11):

(a) Disconnect electrical connector DM30422A at the right windshield wiper module, M30422.

(b) Remove the right windshield wiper motor/converter, B30422. To remove it, do this task: Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802.

(c) Do a wiring check between these pins of connector DM30422A at the right windshield wiper module, M30422 and connector DB30422 at the right windshield wiper motor/converter, B30422:

| DM30422A | DB30422 |
|---|---|
| pin 6 | pin 4 |

(d) If you find a problem with wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM30422A.

3) Re-install the right windshield wiper motor/converter, B30422. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

4) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

5) Set the R WIPER selector to INT.

6) If the windshield wiper operates, you corrected the fault.

7) If the windshield wiper does not operate, then continue.

(3) Install a new windshield wiper motor/converter, B30422. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to HIGH.

(c) If the windshield wiper operates, you corrected the fault.

——— END OF TASK ———

## 807. Windshield Wiper (left) Operation Problem - Fault Isolation

### A. Initial Evaluation

(1) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the L WIPER selector (P5 overhead panel) to LOW, HIGH, and INT.

(a) If the windshield wiper does not operate, then do the Fault Isolation Procedure below.

(b) If the windshield wiper does operate, then there was an intermittent fault.

### B. Fault Isolation Procedure

(1) Replace the L WIPER selector, S1, at the left windshield wiper module, M30421 (WDM 30-42-11).

(a) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to LOW, HIGH, and INT.

(c) If the windshield wiper operates, you corrected the fault.

(d) If the windshield wiper does not operate, then continue.

(2) Do this check of the wiring (WDM 30-42-11):

(a) Disconnect electrical connector DM30421A at the left windshield wiper module, M30421.

(b) Remove the left windshield wiper motor/converter, B30421. To remove it, do this task: Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802.

(c) Do a wiring check between these pins of connector DM30421A at the left windshield wiper module, M30421 and connector DB30421 at the left windshield wiper motor/converter, B30421:

| DM30421A | DB30421 |
|---|---|
| pin 4 | pin 3 |
| pin 5 | pin 4 |
| pin 6 | pin 7 |
| pin 3 | GND |

(d) If you find a problem with wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM30421A.

3) Re-install the left windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

4) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

5) Set the L WIPER selector to LOW, HIGH, and INT.

6) If the windshield wiper operates, you corrected the fault.

(e) If you do not find a problem with wiring, then continue.

(f) Re-connect electrical connector DM30421A.

(3) Do this check of the power wiring:

(a) Disconnect connector DB30421 at the left windshield wiper motor/converter, B30421.

(b) Do a check for 28V DC at pin 1 of connector DB30421.

(c) If there is not 28V DC at pin 1 of connector DB30421, then do these steps:

1) Open the P110 left power management panel.

2) Do a check for 28V DC at the load terminal of circuit breaker C30607.

3) If there is not 28V DC at the circuit breaker, then do these steps:

a) Replace this circuit breaker:

(WDM 30-42-11)

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| M | 27 | C30607 | WSHLD WIPER L |

b) Close the P110 left power management panel.

c) Re-connect connector DB30421.

d) Set the L WIPER selector to LOW, HIGH, and INT.

e) If the windshield wiper operates, you corrected the fault.

f) Re-install the left windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

4) If there is 28V DC at the circuit breaker, then do these steps:

a) Repair the wiring between pin 1 of connector DB30421 at the left windshield wiper motor, B30421 and the load terminal of circuit breaker C30607 (WDM 30-42-11).

b) Close the P110 left power management panel.

c) Re-connect connector DB30421.

d) Set the L WIPER selector to LOW, HIGH, and INT.

e) If the windshield wiper operates, you corrected the fault.

f) Re-install the left windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(d) If there is 28V DC at pin 1 of connector DB30421, then do these steps:

(4) Install a new windshield wiper motor/converter, B30421. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to LOW, HIGH, and INT.

(c) If the windshield wiper operates, you corrected the fault.

**——— END OF TASK ———**

## 808. Windshield Wiper (right) Operation Problem - Fault Isolation

### A. Initial Evaluation

(1) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the R WIPER selector (P5 overhead panel) to LOW, HIGH, and INT.

(a) If the windshield wiper does not operate, then do the Fault Isolation Procedure below.

(b) If the windshield wiper does operate, then there was an intermittent fault.

### B. Fault Isolation Procedure

(1) Replace the R WIPER selector, S1, at the right windshield wiper module, M30422 (WDM 30-42-11).

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to LOW, HIGH, and INT.

(c) If the windshield wiper operates, you corrected the fault.

(d) If the windshield wiper does not operate, then continue.

(2) Do this check of the control wiring (WDM 30-42-11):

(a) Disconnect electrical connector DM30422A at the right windshield wiper module, M30422.

(b) Remove the right windshield wiper motor/converter, B30422. To remove it, do this task: Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802.

(c) Do a wiring check between these pins of connector DM30422A at the right windshield wiper module, M30422 and connector DB30422 at the right windshield wiper motor/converter, B30422:

| DM30422A | DB30422 |
|---|---|
| pin 6 | pin 3 |
| pin 5 | pin 4 |
| pin 4 | pin 7 |
| pin 7 | GND |

(d) If you find a problem with wiring, then do these steps:

1) Repair the wiring.

2) Re-connect electrical connector DM30422A.

3) Re-install the right windshield wiper motor/converter, B30422. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

4) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

5) Set the R WIPER selector to LOW, HIGH, and INT.

6) If the windshield wiper operates, you corrected the fault.

(e) If you do not find a problem with wiring, then continue.

(f) Re-connect electrical connector DM30422A.

(3) Do this check of the power wiring:

(a) Disconnect connector DB30422 at the right windshield wiper motor/converter, B30422.

(b) Do a check for 28V DC at pin 1 of connector DB30422.

(c) If there is not 28V DC at pin 1 of connector DB30422, then do these steps:

1) Open the P210 right power management panel.

2) Do a check for 28V DC at the load terminal of:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 7 | C30608 | WSHLD WIPER R |

3) If there is not 28V DC at the circuit breaker, then do these steps:

a) Replace this circuit breaker:

(WDM 30-42-11)

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 7 | C30608 | WSHLD WIPER R |

b) Close the P210 right power management panel.

c) Re-install the right windshield wiper motor/converter, B30422, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

d) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

e) Set the R WIPER selector to LOW, HIGH, and INT.

f) If the windshield wiper operates, you corrected the fault.

4) If there is 28V DC at the circuit breaker, then do these steps:

a) Repair the wiring between pin 1 of connector DB30422 at the right windshield wiper motor, B30422 and the load terminal of:

(WDM 30-42-11)

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| L | 7 | C30608 | WSHLD WIPER R |

b) Close the P210 right power management panel.

c) Re-install the right windshield wiper motor/converter, B30422. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

d) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

e) Set the R WIPER selector to LOW, HIGH, and INT.

f) If the windshield wiper operates, you corrected the fault.

(d) If there is 28V DC at pin 1 of connector DB30422, then do these steps:

(4) Install a new windshield wiper motor/converter, B30422. To install it, do this task: Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to LOW, HIGH, and INT.

(c) If the windshield wiper operates, you corrected the fault.

**——— END OF TASK ———**

## 809. Windshield Wiper (left) Keeps Moving - Fault Isolation

### A. Initial Evaluation

(1) If the windshield wiper moves from the parked position in flight with the L WIPER selector set to OFF, then do the Fault Isolation Procedure - Fault in Flight below.

(2) Adjust the wiper sweep, do this task: Windshield Wiper Arm Position Check/Adjustment, AMM TASK 30-42-02-820-801.

(3) Check Wiper Blade to arm nut torque, do this task: Windshield Wiper Blade Installation, AMM TASK 30-42-01-400-801.

(4) If the windshield wiper operates on the ground with the L WIPER selector set to OFF, then do these steps:

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector (P5 overhead panel) to LOW then to OFF.

1) If the windshield wiper operates at OFF, then do the Fault Isolation Procedure below.

2) If the windshield wiper does not operate at OFF, then there was an intermittent fault.

### B. Fault Isolation Procedure - Fault in Flight

(1) Adjust the windshield wiper arm force.

This is the task:

Windshield Wiper Arm Force Check/Adjustment, AMM TASK 30-42-02-800-801

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WINDSHIELD WIPERS ON DRY GLASS. ALWAYS SUPPLY WATER TO THE WINDSHIELDS BEFORE YOU OPERATE THE WIPER. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to LOW then to OFF.

(c) If the windshield wiper does not operate at OFF, you corrected the fault.

(d) If the windshield wiper operates, then continue.

(2) Replace the left windshield wiper motor/converter, B30421.

These are the tasks:

Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802,

Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to LOW then to OFF.

(c) If the windshield wiper does not operate at OFF, you corrected the fault.

**C. Fault Isolation Procedure - Fault on Ground**

(1) Replace the L WIPER selector, S1, at the left windshield wiper module, M30421 (WDM 30-42-11).

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to LOW then to OFF.

(c) If the windshield wiper does not operate at OFF, you corrected the fault.

(d) If the windshield wiper operates, then continue.

(2) Replace the left windshield wiper motor/converter, B30421.

These are the tasks:

Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802,

Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to LOW then to OFF.

(c) If the windshield wiper does not operate at OFF, you corrected the fault.

**END OF TASK**

## 810. Windshield Wiper (right) Keeps Moving - Fault Isolation

### A. Initial Evaluation

(1) If the windshield wiper moves from the parked position in flight with the L WIPER selector set to OFF, then do the Fault Isolation Procedure - Fault in Flight below.

(2) Adjust the wiper sweep, do this task: Windshield Wiper Arm Position Check/Adjustment, AMM TASK 30-42-02-820-801.

(3) Check Wiper Blade to arm nut torque, do this task: Windshield Wiper Blade Installation, AMM TASK 30-42-01-400-801.

(4) If the windshield wiper operates on the ground with the L WIPER selector set to OFF, then do these steps:

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION** DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector (P5 overhead panel) to LOW then to OFF.

1) If the windshield wiper operates at OFF, then do the Fault Isolation Procedure - Fault on Ground below.

2) If the windshield wiper does not operate at OFF, then there was an intermittent fault.

### B. Fault Isolation Procedure - Fault in Flight

(1) Adjust the windshield wiper arm force.

This is the task:

Windshield Wiper Arm Force Check/Adjustment, AMM TASK 30-42-02-800-801

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION** DO NOT OPERATE THE WINDSHIELD WIPERS ON DRY GLASS. ALWAYS SUPPLY WATER TO THE WINDSHIELDS BEFORE YOU OPERATE THE WIPER. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to LOW then to OFF.

(c) If the windshield wiper does not operate at OFF, you corrected the fault.

(d) If the windshield wiper operates, then continue.

(2) Replace the right windshield wiper motor/converter, B30422.

These are the tasks:

Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802,

Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to LOW then to OFF.

(c) If the windshield wiper does not operate at OFF, you corrected the fault.

**C. Fault Isolation Procedure - Fault on Ground**

(1) Replace the R WIPER selector, S1, at the right windshield wiper module, M30422 (WDM 30-42-11).

(a) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to LOW then to OFF.

(c) If the windshield wiper does not operate at OFF, you corrected the fault.

(d) If the windshield wiper operates, then continue.

(2) Replace the right windshield wiper motor/converter, B30422.

These are the tasks:

Wiper Motor/Converter Removal, AMM TASK 30-42-03-000-802,

Wiper Motor/Converter Installation, AMM TASK 30-42-03-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to LOW then to OFF.

(c) If the windshield wiper does not operate at OFF, you corrected the fault.

**END OF TASK**

## 811. Windshield Wiper (left) Stowing Problems - Fault Isolation

**A. Initial Evaluation**

(1) Use a water source to keep the windshield wet while you operate the wiper.

CAUTION

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the L WIPER selector (P5 overhead panel) to LOW (let the wiper operate) then to OFF.

(a) If the windshield wiper does not move to the stowed position, then do the Fault Isolation Procedure below.

(b) If the windshield wiper moves to the stowed position, then there was an intermittent fault.

NOTE: The wiper motor always has power when the Circuit Breaker is in. The switch in "OFF" commands the wiper motor to put the wiper arm in park, where a switch is engaged. If the wiper motor gets hit, blown or pushed out of park; the wiper motor will re-park the wiper blade. Because of it being a 4-bar linkage, there can be 2 or 3 sweeps to get back to park. This is an uncommanded sweep. These can be caused by the following: aircraft maneuvers, gusts of wind, excessive airframe vibration, or bad wiper motor rigging. Some uncommanded sweeps are permitted for each wiper system (this is a decision made by the airline).

**B. Fault Isolation Procedure**

(1) Adjust the wiper arm so that it moves to the stowed position, do this task: Windshield Wiper Arm Position Check/Adjustment, AMM TASK 30-42-02-820-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to LOW (let the wiper operate) then to OFF.

(c) If the windshield wiper moves to the stowed position, then you corrected the fault.

(d) If the windshield wiper does not move to the stowed position, then continue.

(2) Do a check/adjustment of the force of the wiper arm on the window, do this task: Windshield Wiper Arm Force Check/Adjustment, AMM TASK 30-42-02-800-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L WIPER selector to LOW (let the wiper operate) then to OFF.

(c) If the windshield wiper moves to the stowed position, you corrected the fault.

**——— END OF TASK ———**

## 812. Windshield Wiper (right) Stowing Problems - Fault Isolation

**A. Initial Evaluation**

(1) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the R WIPER selector (P5 overhead panel) to LOW (let the wiper operate) then to OFF.

(a) If the windshield wiper does not move to the stowed position, then do the Fault Isolation Procedure below.

(b) If the windshield wiper moves to the stowed position, then there was an intermittent fault.

NOTE: The wiper motor always has power when the Circuit Breaker is in. The switch in "OFF" commands the wiper motor to put the wiper arm in park, where a switch is engaged. If the wiper motor gets hit, blown or pushed out of park; the wiper motor will re-park the wiper blade. Because of it being a 4-bar linkage, there can be 2 or 3 sweeps to get back to park. This is an uncommanded sweep. These can be caused by the following: aircraft maneuvers, gusts of wind, excessive airframe vibration, or bad wiper motor rigging. Some uncommanded sweeps are permitted for each wiper system (this is a decision made by the airline).

**B. Fault Isolation Procedure**

(1) Adjust the wiper arm so that it moves to the stowed position, do this task: Windshield Wiper Arm Position Check/Adjustment, AMM TASK 30-42-02-820-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION** DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to LOW (let the wiper operate) then to OFF.

(c) If the windshield wiper moves to the stowed position, then you corrected the fault.

(d) If the windshield wiper does not move to the stowed position, then continue.

(2) Do a check/adjustment of the force of the wiper arm on the window, do this task: Windshield Wiper Arm Force Check/Adjustment, AMM TASK 30-42-02-800-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION** DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the R WIPER selector to LOW (let the wiper operate) then to OFF.

(c) If the windshield wiper moves to the stowed position, you corrected the fault.

**——— END OF TASK ———**

## 813. Windshield Wiper (left or right) Wiping Problems - Fault Isolation

**A. Initial Evaluation**

(1) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION** DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(2) Set the L (R) WIPER selector (P5 overhead panel) to LOW.

(a) If the windshield wiper does not wipe cleanly, then do the Fault Isolation Procedure below.

(b) If the windshield wiper wipes cleanly, then there was an intermittent fault.

**B. Fault Isolation Procedure**

(1) Replace the left (right) windshield wiper blade.

These are the tasks:

Windshield Wiper Blade Removal, AMM TASK 30-42-01-000-801,

Windshield Wiper Blade Installation, AMM TASK 30-42-01-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L (R) WIPER selector to LOW.

NOTE: The lowest possible position of the wiper blade tip should fall within 0.5 in. (12.7 mm) - 1.8 in. (45.7 mm) from the lower windshield seal strip.

(c) If the windshield wiper wipes cleanly, you corrected the fault.

(d) If the windshield wiper does not wipe cleanly, then continue.

(2) Do a check/adjustment of the force of the wiper arm on the window, do this task: Windshield Wiper Arm Force Check/Adjustment, AMM TASK 30-42-02-800-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L (R) WIPER selector to LOW.

NOTE: The lowest possible position of the wiper blade tip should fall within 0.5 in. (12.7 mm) - 1.8 in. (45.7 mm) from the lower windshield seal strip.

(c) If the windshield wiper wipes cleanly, you corrected the fault.

**——— END OF TASK ———**

## 814. Windshield Wiper Blade (left or right) Missing - Fault Isolation

**A. Fault Isolation Procedure**

(1) Replace the left (right) windshield wiper blade.

These are the tasks:

Windshield Wiper Blade Removal, AMM TASK 30-42-01-000-801,

Windshield Wiper Blade Installation, AMM TASK 30-42-01-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L (R) WIPER selector (P5 overhead panel) to HIGH.

(c) If the windshield wiper operates correctly, you corrected the fault.

(d) If the windshield wiper does not operate correctly, then continue.

(2) Replace the left (right) windshield wiper arm.

These are the tasks:

Windshield Wiper Arm Removal, AMM TASK 30-42-02-000-801,

Windshield Wiper Arm Installation, AMM TASK 30-42-02-400-801.

(a) Use a water source to keep the windshield wet while you operate the wiper.

**CAUTION**

DO NOT OPERATE THE WIPER ON A DRY WINDSHIELD. THE WIPER WILL CAUSE DAMAGE TO A DRY WINDSHIELD.

(b) Set the L (R) WIPER selector to HIGH.

(c) If the windshield wiper operates correctly, you corrected the fault.

**——— END OF TASK ———**

## 801. Drain Masts or Gray Water Drain Lines Frozen - Fault Isolation

### A. Initial Evaluation

(1) Test the operation of the drain mast heaters, B30001 and B30002 and the gray water drain line heaters, B30140 and B30141. To test them, do this task: Drain Mast and Gray Water Drain Line Heaters Operational Test, AMM TASK 30-71-00-720-801 (WDM 30-71-11).

(a) If the heaters operate correctly, there was an intermittent fault.

(b) If the heaters do not operate correctly, then continue.

### B. Fault Isolation Procedure

(1) Do these steps to replace the air/ground relay, K32214 (WDM 30-71-11):

(a) Open the P210 right power management panel.

(b) Replace the air mode air/ground relay, K32214.

(c) Close the P210 right power management panel.

(d) Test the operation of the heaters. To test them, do this task: Drain Mast and Gray Water Drain Line Heaters Operational Test, AMM TASK 30-71-00-720-801.

(e) If the heaters operate correctly, you corrected the fault.

(f) If the heaters do not operate correctly, then continue.

(2) Do the applicable task to replace the non-serviceable heater:

(a) These are the tasks:

Forward Drain Mast Removal, AMM TASK 38-31-01-000-801,

Forward Drain Mast Installation, AMM TASK 38-31-01-400-801.

(b) These are the tasks:

Aft Drain Mast Removal, AMM TASK 38-31-01-000-802,

Aft Drain Mast Installation, AMM TASK 38-31-01-400-802.

(c) These are the tasks:

Gray Water Drain Line Hose Heater Removal, AMM TASK 30-71-02-000-801,

Gray Water Drain Line Hose Heater Installation, AMM TASK 30-71-02-400-801.

(d) Test the operation of the heater. To test it, do this task: Drain Mast and Gray Water Drain Line Heaters Operational Test, AMM TASK 30-71-00-720-801.

(e) If the heater operates correctly, you corrected the fault.

(f) If the heater does not operate correctly, then continue.

(3) Do this check of the drain mast heaters ground circuit breaker, C30500 (WDM 30-71-11):

(a) Open the P320 ground servicing/handling power panel.

(b) Do a check for 28V AC at the load terminal of circuit breaker C30500.

(c) If there is not 28V AC at the circuit breaker, then do these steps:

1) Replace this circuit breaker

**Ground Service/Handling Power Panel, P320**

| Row | Col | Number | Name |
|---|---|---|---|
| J | 13 | C30500 | DRAIN MAST HTRS GND |

2) Test the operation of the heaters. To test them, do this task: Drain Mast and Gray Water Drain Line Heaters Operational Test, AMM TASK 30-71-00-720-801.

3) If the heaters operate correctly, you corrected the fault.

4) Close the P320 ground servicing/handling power panel.

(d) If there is 28V AC at the circuit breaker, then continue.

(4) Do this check of the drain mast heaters flight circuit breaker, C30422 (WDM 30-71-11):

(a) Do a check for 115V AC at the load terminal of circuit breaker C30422.

(b) If there is not 115V AC at the circuit breaker, then do these steps:

1) Replace these circuit breakers:

**Ground Service/Handling Power Panel, P320**

| Row | Col | Number | Name |
|---|---|---|---|
| **ARO 001** | | | |
| L | 3 | C30422 | DRAIN MAST HTRS FLS |
| **ARO ALL** | | | |
| L | 3 | C30426 | DRAIN MAST HTRS FLS |

2) Test the operation of the heaters. To test them, do this task: Drain Mast and Gray Water Drain Line Heaters Operational Test, AMM TASK 30-71-00-720-801.

3) If the heaters operate correctly, you corrected the fault.

4) Close the P320 ground servicing/handling power panel.

(c) If there is 115V AC at the circuit breaker, then continue.

(5) Do this check of the wiring with the airplane in the ground mode (WDM 30-71-11):

(a) Do a wiring check between the load terminal of circuit breaker C30500 and ground stud GD47072-AC at the aft drain mast heater, B30001.

(b) Do a wiring check between the load terminal of circuit breaker C30500 and ground stud GB43030-AC at the forward drain mast heater, B30002.

(c) Do a wiring check between the load terminal of circuit breaker C30500 and ground stud GB43030-S connected to the gray water drain line heater, B30140.

NOTE: Gray water drain line heater, B30141 is connected in series with B30140.

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Test the operation the heaters. To test them, do this task: Drain Mast and Gray Water Drain Line Heaters Operational Test, AMM TASK 30-71-00-720-801.

3) If the heaters operate correctly, you corrected the fault.

4) Close the P310 ground service/handling power panel.

(e) If you do not find a problem with the wiring, then continue.

(6) Do this check of the wiring with the airplane in the air mode (WDM 30-71-11):

(a) Put the airplane in the air mode, do this task: Air/Ground Mode Simulation, AMM TASK 32-09-00-860-801.

(b) Do a wiring check between the load terminal of circuit breaker C30422 and ground stud GD47072-AC at the aft drain mast heater, B30001.

(c) Do a wiring check between the load terminal of circuit breaker C30422 and ground stud GB43030-AC at the forward drain mast heater, B30002.

(d) Do a wiring check between the load terminal of circuit breaker C30422 and ground stud GB43030-S connected to the gray water drain line heater, B30140.

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Test the operation of the heaters. To test them, do this task: Drain Mast and Gray Water Drain Line Heaters Operational Test, AMM TASK 30-71-00-720-801.

3) If the heaters operate correctly, you corrected the fault.

4) Close the P320 ground service/handling power panel.

**——— END OF TASK ———**

## 801. Ice Detector (left) Signal Range Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10041.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the left ACIPS card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring:

(a) Remove the left airfoil and cowl ice protection system (ACIPS) card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Open this circuit breaker and install safety tag:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 26 | C30441 | ICE DET L |

(c) Disconnect connector DM30811 from the left ice detector, M30811.

(d) Do a wiring check between these pins of connector DM30811 at the left ice detector, M30811, and connector DP8503 at the left system cardfile, P85 (WDM 30-81-11):

| DM30811 | | DP8503 |
|---|---|---|
| pin 4 | . . . . . | pin 18 |
| pin 2 | . . . . . | pin 59 |
| pin 6 | . . . . . | pin 57 |
| pin 5 | . . . . . | pin 1 |
| pin 3 | . . . . . | pin 16 |
| pin 12 | . . . . . | pin 5 |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the left ACIPS card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-connect connector DM30811.

4) Remove the safety tag and close this circuit breaker:

**Left Power Management Panel, P110**

| Row | Col | Number | Name |
|---|---|---|---|
| E | 26 | C30441 | ICE DET L |

5) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

6) If the maintenance message does not show on the ground display, you corrected the fault.

(f) If you do not find a problem with the wiring, then continue.

(g) Re-install the left ACIPS card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(h) Re-connect connector DM30811.

(3) Replace the left ice detector, M30811.

These are the tasks:

Ice Detector Removal, AMM TASK 30-81-01-000-801,

Ice Detector Installation, AMM TASK 30-81-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

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

**——— END OF TASK ———**

## 802. Ice Detector (left) Inoperative - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance messages: 30-10141, 30-10550.

**B. Initial Evaluation**

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

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

**C. Fault Isolation Procedure**

(1) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-805.

NOTE: When 28V DC is available on the airplane and 115V AC is not, or during power transfers, the subject maintenance message may be displayed.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Replace the left ice detector, M30811.

These are the tasks:

Ice Detector Removal, AMM TASK 30-81-01-000-801,

Ice Detector Installation, AMM TASK 30-81-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring:

(a) Remove the left airfoil and cowl ice protection system (ACIPS) card, P85A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Disconnect connector DM30811 from the left ice detector, M30811.

(c) Do a wiring check between these pins of connector DM30811 at the left ice detector, M30811, and connector DP8503 at the left system cardfile, P85 (WDM 30-81-11):

| DM30811 | DP8503 |
|---|---|
| pin 4 | pin 18 |
| pin 2 | pin 59 |
| pin 6 | pin 57 |
| pin 5 | pin 1 |
| pin 3 | pin 16 |
| pin 12 | pin 5 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the left ACIPS card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-connect connector DM30811.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

5) If the maintenance message does not show on the ground display, you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-install the left ACIPS card, P85A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(g) Re-connect connector DM30811.

(4) Replace the left ACIPS card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

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

**——— END OF TASK ———**

## 803. Ice Detector (right) Signal Range Problems - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance message: 30-10052.

### B. Initial Evaluation

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

(2) If the MAT shows LATCHED for the maintenance message, then do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

(a) If the maintenance message shows on the ground test display, then do the Fault Isolation Procedure below.

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

### C. Fault Isolation Procedure

(1) Replace the right ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Do this check of the wiring:

(a) Remove the right airfoil and cowl ice protection system (ACIPS) card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Open this circuit breaker and install safety tag:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| C | 4 | C30440 | ICE DET R |

(c) Disconnect connector DM30812 from the left ice detector, M30812.

(d) Do a wiring check between these pins of connector DM30812 at the left ice detector, M30812, and connector DP8403 at the right system cardfile, P84 (WDM 30-81-12):

| DM30812 | | DP8403 |
|---|---|---|
| pin 4 | . . . . . | pin 18 |
| pin 2 | . . . . . | pin 59 |
| pin 6 | . . . . . | pin 57 |
| pin 5 | . . . . . | pin 1 |
| pin 3 | . . . . . | pin 16 |
| pin 12 | . . . . . | pin 5 |

(e) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the right ACIPS card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-connect connector DM30812.

4) Remove the safety tag and close this circuit breaker:

**Right Power Management Panel, P210**

| Row | Col | Number | Name |
|---|---|---|---|
| C | 4 | C30440 | ICE DET R |

5) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

6) If the maintenance message does not show on the ground display, you corrected the fault.

(f) If you do not find a problem with the wiring, then continue.

(g) Re-install the right ACIPS card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(h) Re-connect connector DM30812.

(3) Replace the right ice detector, M30812.

These are the tasks:

Ice Detector Removal, AMM TASK 30-81-01-000-801,

Ice Detector Installation, AMM TASK 30-81-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

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

**——— END OF TASK ———**

## 804. Ice Detector (right) Inoperative - Fault Isolation

### A. Maintenance Messages

(1) This task is for maintenance messages: 30-10152, 30-10555.

### B. Initial Evaluation

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

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

### C. Fault Isolation Procedure

(1) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-805.

NOTE: When 28V DC is available on the airplane and 115V AC is not, or during power transfers, the subject maintenance message may be displayed.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Replace the right ice detector, M30812.

These are the tasks:

Ice Detector Removal, AMM TASK 30-81-01-000-801,

Ice Detector Installation, AMM TASK 30-81-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

(3) Do this check of the wiring:

(a) Remove the right airfoil and cowl ice protection system (ACIPS) card, P84A6. To remove it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801.

(b) Disconnect connector DM30812 from the right ice detector, M30812.

(c) Do a wiring check between these pins of connector DM30811 at the right ice detector, M30812, and connector DP8403 at the right system cardfile, P84 (WDM 30-81-12):

| DM30812 | DP8403 |
|---|---|
| pin 4 | pin 18 |
| pin 2 | pin 59 |
| pin 6 | pin 57 |
| pin 5 | pin 1 |
| pin 3 | pin 16 |
| pin 12 | pin 5 |

(d) If you find a problem with the wiring, then do these steps:

1) Repair the wiring.

2) Re-install the right ACIPS card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

3) Re-connect connector DM30811.

4) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

5) If the maintenance message does not show on the ground display, you corrected the fault.

(e) If you do not find a problem with the wiring, then continue.

(f) Re-install the right ACIPS card, P84A6. To install it, do this task: Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(g) Re-connect connector DM30812.

(4) Replace the right ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

**END OF TASK**

## 805. EICAS Message ICING ENGINE - Fault Isolation

### A. Initial Evaluation

NOTE: This message shows when the primary ice detection system (left or right ice detectors) detects ice, and left and/or right engine anti-icing switch is off.

(1) Set the L/R ENGINE switches on the ANTI-ICE panel (P5) to AUTO or ON.

**END OF TASK**

## 806. EICAS Message ICING WING - Fault Isolation

### A. Initial Evaluation

NOTE: This message shows when the primary ice detection system (left or right ice detectors) detects ice, and left and/or right wing anti-icing switch is off.

(1) Set the L/R WING switches on the ANTI-ICE panel (P5) to AUTO or ON.

——— END OF TASK ———

## 807. EICAS Message ANTI-ICE ON - Fault Isolation

### A. Initial Evaluation

NOTE: Left or right engine anti-ice (EAI) switch or wing anti-ice (WAI) switch is ON but ice detectors do not detect ice, and total air temperature (TAT) is above 10 degrees C.

(1) Set the L/R ENGINE switches or the WING switch on the ANTI-ICE panel (P5) to AUTO or OFF.

——— END OF TASK ———

## 808. Ice Detector (left) Problems - Fault Isolation

### A. Fault Isolation Procedure

(1) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-805.

NOTE: When 28V DC is available on the airplane and 115V AC is not, or during power transfers, the subject maintenance message may be displayed.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Look at the Extended Maintenance, Existing Faults display on the MAT for maintenance messages related to the ARINC signal gateway system.

(3) If maintenance messages show for that system, do these steps:

(a) Find the maintenance messages in the FIM Maintenance Messages Index.

(b) Do the specified fault isolation task.

(4) Replace the right ACIPS card, P84A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Left Engine Anti-Ice (engines not running).

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

——— END OF TASK ———

## 809. Ice Detector (right) Problems - Fault Isolation

### A. Fault Isolation Procedure

(1) Do this task: Supply Electrical Power, AMM TASK 24-22-00-860-805.

NOTE: When 28V DC is available on the airplane and 115V AC is not, or during power transfers, the subject maintenance message may be displayed.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

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

(c) If the maintenance message shows on the ground test display, then continue.

(2) Look at the Extended Maintenance, Existing Faults display on the MAT for maintenance messages related to the ARINC signal gateway system.

(3) If maintenance messages show for that system, do these steps:

(a) Find the maintenance messages in the FIM Maintenance Messages Index.

(b) Do the specified fault isolation task.

(4) Replace the left ACIPS card, P85A6.

These are the tasks:

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Removal, AMM TASK 30-21-01-000-801,

Airfoil and Cowl Ice Protection System Control Card - Engine Anti-Ice - Installation, AMM TASK 30-21-01-400-801.

(a) Do this ground test on the MAT: 30 Airfoil Cowl Ice Protection System, System Test, Right Engine Anti-Ice (engines not running).

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

**——— END OF TASK ———**

**801. Procedure To Be Determined - Fault Isolation**

**A. 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. 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 ———

**803. 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. To erase it, do this task: Erasing a EICAS Status Message Latched by AIMS, AMM TASK 31-61-00-800-802.

——— END OF TASK ———