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ADVISORY WIRE
700T-0083

DATE: May 28, 2002	**PAGE** 1 OF 4
ADDRESS TO: DESTINATAIRE	**A/C:**
FAX NUMBER: NUMÉRO DE FAX:	
FROM/DE: Bombardier Aerospace, Business Aircraft	

ADVISORY WIRE

REFERENCE NO: 700T-0083

SUBJECT: Fault Isolation Procedures for AV BATT FAIL & APU BATT FAIL, Caution CAS Messages

EFFECTIVITY: BD700-1A10 (A/C 9002 & subs)

ATA: 24-32

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1.0 REFERENCE

1.1. FIM Task 24-32-00-810-803 (AV BATT FAIL)
1.2. FIM Task 24-32-00-810-806 (APU BATT FAIL)

2.0 INTRODUCTION

This advisory wire is to inform Operators of the introduction of fault isolation procedures (ref. 1.1 & 1.2) for the AV BATT FAIL and the APU BATT FAIL caution Crew Alerting System (CAS) messages. These procedures provide the necessary steps to determine if the AV BATT FAIL or APU BATT FAIL messages, when posted on EICAS, are due to a nuisance fault being detected by the respective battery charger.

3.0 DESCRIPTION

Bombardier has received several reports of these messages being displayed on EICAS upon selecting aircraft AC power on. The typical scenario is as follows; the aircraft has been parked for some time, (usually more than two days) with no AC power and the APU and/or Avionics batteries connected. Upon selecting the AC power on, the AV BATT FAIL and/or APU BATT FAIL message may be posted on EICAS.

Preliminary investigation reveals that the nuisance messages can be the result of the battery charger monitoring circuit for cell imbalance, which is active only while the AC power is off and while the batteries are connected.

Use of the entrance door, service lights and residual current draw by various devices on the battery direct busses, may cause the battery cell voltage to drop to a point where the battery charger logic could erroneously sense a cell imbalance and post the AV BATT FAIL and/or APU BATT FAIL nuisance messages.

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In the cases where the batteries are not subject to this current draw, as described above, or if they were disconnected during the parked period, than the AV BATT FAIL and/or APU BATT FAIL messages must not be considered to be nuisance messages but rather as system failures. In either case, the fault isolation procedures (referenced FIM Tasks) were created to establish the validity of these messages as specified in section 4.0 ACTION below.

4.0 ACTION

In order to avoid nuisance battery fault messages, Bombardier recommends that:

1) If the aircraft is to be parked for more than one or two days period of time without AC electrical power being applied, disconnect the Avionics and APU batteries.

2) If the batteries cannot be disconnected and the AV BATT FAIL and/or APU BATT FAIL message is posted on EICAS upon selection of AC power on, perform the following procedure to establish if the CAS message is due to a nuisance fault detection. If either or both messages are displayed in-flight follow the AFM.

   - AV BATT FAIL (Caution), refer to FIM Task 24-32-00-810-803
   - APU BATT FAIL (Caution), refer to FIM Task 24-32-00-810-806
   -

   Note: 1. The ref. 1.1 and 1.2 FIM tasks suggest that the test be done only if the aircraft has been parked for more than two days. Since there have been cases where the messages occurred even before the two day period, we recommend that the FIM procedure be carried out any time the message is posted on EICAS upon AC power on. These changes will be incorporated via Temporary Revision TR 24-3 and TR 24-4 to the current FIM Tasks.

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2. To prevent unnecessary battery removals, it is recommended that when the message is posted, to cycle the AC power off then back on before doing the FIM procedure.

   - If the message is no longer present, perform the FIM procedure.

   - If the message is still present, then the cell imbalance nuisance message is not the cause and additional troubleshooting should be performed in accordance with the applicable AMM Tasks (ref. 24-32-00-710-801, 24-32-01-710-801, 24-32-09-710-801) to isolate the cause of the battery system failure.

Bombardier is presently working with vendors to address this condition and eliminate the occurrence of the nuisance faults. We will provide you with more information on this issue as it becomes available.

If you need assistance, contact your local Field Service Representative.