

# ADVISORY WIRE

## AW300-24-0034

**DATE:** September 29, 2005**PAGE:** 1 OF 3**FROM:** BOMBARDIER BUSINESS AIRCRAFT CUSTOMER SUPPORT

### ADVISORY WIRE

**REFERENCE NO:** AW300-24-0034**SUBJECT:** "ELECTRICAL FAULT" CAS Message When External  
Power is Connected**EFFECTIVITY:** BD100-1A10 (20006 & Subs)**ATA:** 24-00

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### 1.0 INTRODUCTION:

This Advisory Wire is to inform Operators of an “ELECTRICAL FAULT” Crew Alerting System (CAS) message that may be posted after electrical power-up with an external power cart.

### 2.0 DESCRIPTION:

There have been several reports of the “ELECTRICAL FAULT” CAS caution message being posted when the batteries are selected ON, if external power is connected to the aircraft. The EXT PWR AVAIL light was illuminated, meaning external power was not selected to ON. The faults seen on the Maintenance Diagnostic Computer (MDC) Current Faults page could be a combination of the following; Left Generator Control Unit (GCU) PCB 5, Right GCU PCB 6, Differential Protection Monitor Sensor (DPMS) 1, DPMS 2. These messages don't necessarily always appear together. All the faults present remained latched and did not go away upon selecting the external power to ON. Other cases were reported where the above MDC faults were logged in the MDC current faults page without the “ELECTRICAL FAULT” CAS caution message being posted.

Investigation into this issue has revealed that this is caused by a slow “ramp-up” characteristic of the external power cart voltage. Some carts, when powered up while connected to the aircraft, may take few seconds to reach the required stabilized 28VDC voltage output. During this voltage rise period, the GCU and the DPMS circuits may be performing their Power-on Built In Test (PBIT). This could result in these components being flagged as faulty in the MDC. A different power cart that has a faster “ramp-up” characteristic will not induce this condition.

Bombardier has been working with the vendor on this issue and it will be addressed in the upcoming upgrade of the electrical system, scheduled for Q1 '06.

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### 3.0 ACTION:

Operators should be aware that, when an electrical fault occurs as described above, the external power should be removed from the aircraft and the batteries must be selected to ON. If the CAS message and the MDC faults are no longer present, the slow “ramp-up” characteristic of the power cart is the cause. This should be considered as a nuisance message, the normal operation of the aircraft is not affected and no further troubleshooting is necessary. If the message does not clear, then further troubleshooting is required.

SMARTFIX Model 24-00\_ELECTRICAL\_SYS\_BD100-009 will be revised to include the pertinent troubleshooting information from this Advisory Wire.