

# ADVISORY WIRE

## AW300-24-0038

**DATE:** December 5, 2005**PAGE:** 1 of 2**FROM:** BOMBARDIER BUSINESS AIRCRAFT CUSTOMER SUPPORT

### ADVISORY WIRE

**REFERENCE NO:** AW300-24-0038**SUBJECT:** Nuisance "ELECTRICAL FAULT" CAS Message Upon  
Engine or APU Shut Down.**EFFECTIVITY:** BD100-1A10 (20006 & Subs)**ATA:** 24-31

Please help us keep our distribution list up-to-date and accurate. To obtain this document by e-mail, report transmission errors or update your distribution profile; please contact (514) 855-2717. Changes to your publications profile can be affected through the distribution e-mail address: [bacs.e.dist@aero.bombardier.com](mailto:bacs.e.dist@aero.bombardier.com). If you require technical information concerning this wire, please call your Field Service Representative.

# ADVISORY WIRE

## AW300-24-0038

**DATE:** December 5, 2005**PAGE:** 2 of 2

### 1.0 INTRODUCTION:

A nuisance “ELECTRICAL FAULT” Crew Alerting System (CAS) message may be posted upon an engine or APU shut down.

### 2.0 DESCRIPTION:

There have been several field reports indicating that the “ELECTRICAL FAULT” (amber) caution CAS message was intermittently being posted following an engine or APU shut down. In each case, the Maintenance Diagnostic Computer (MDC) was interrogated and the Generator Control Unit (GCU) card for the applicable engine / APU was flagged as faulty.

The initial investigation revealed that one cause of this is the GCU card internal power supplies failing the Continuous Built-In Test (CBIT). The power supplies are tested continuously as part of the CBIT when the Permanent Magnet Generator (PMG) voltage is present, independently of the generator speed. During the engine or APU shut down, when the PMG speed falls below 5500 rpm, the PMG voltage drops causing the GCU CBIT to read this as a failure.

The GCU card will be modified to enable the CBIT only when generator speeds are above 5500 rpm, thus minimizing the nuisance message. This modification will be included in the next Electrical System upgrade.

### 3.0 ACTION:

Bombardier recommends that if an “ELECTRICAL FAULT” message is displayed during engine / APU shut down, the aircraft power should be set to OFF and then back to ON. If the MDC GCU card fault is no longer present when battery power is reapplied, and does not reoccur during a subsequent engine shut down, it is considered as a nuisance message. Should the message remain present, or reoccur very often, further troubleshooting is required.

SMARTFIX Model 24-00\_ELECTRICAL\_SYS\_BD100-009 will incorporate the troubleshooting information from this Advisory Wire.