

ADVISORY WIRE

REFERENCE NO:	AW700-24-0304, Rev. 1	INFORMATION TYPE:	Maintenance Operational
ATA:	24-00	EFFECTIVITY:	Global Express 9002 to 9153
SUBJECT:	“ELEC SYS FAIL” CAS message		Global 5000 9127 to 9411, 9417 to 9431, 9998 Global Express XRS 9159 to 9429

1. REFERENCES:

- 1.1. Airplane Flight Manual (CSP 700-1, CSP 700-1A, CSP 700-5000-1)
- 1.2. Master Minimum Equipment List (MMEL) Operational and Maintenance (O & M) Procedure Revision 12, issue date: March 12th 2010
- 1.3. Smart Fix™ Plus (available on the CIC website: <http://cic.bombardier.com>)

2. INTRODUCTION:

Revision 1 of this Advisory Wire is to limit the aircraft effectivity, since the condition described herein does not apply to the Global 5000 aircraft featuring the Bombardier Vision Flight Deck or the Global 6000 aircraft.

This Advisory Wire is to inform Operators of a condition where some non-normal Electrical System behavior may not be annunciated with an **“ELEC SYS FAIL”** message on the Engine Indication Crew Alerting System (EICAS).

3. DESCRIPTION:

While performing CAIMS troubleshooting for an Electrical System anomaly, it was reported that the observed anomaly should have triggered the **“ELEC SYS FAIL”** message on the EICAS. Extensive investigation has revealed that some specific failures within the Secondary Power Distribution Assemblies (SPDAs), the Electrical Management System Control and Display Units (EMS CDUs) and the DC Power Center (DCPC) will not generate an **“ELEC SYS FAIL”** message on EICAS. However, an ACPC failure or a loss of communication from two (out of four) EMS CDUs channels will still continue to generate an **“ELEC SYS FAIL”** message on the EICAS.

This condition is limited to aircraft having the Integrated Avionics Computer (IAC) part numbers 7017300-61009 and 7017300-62009.

Bombardier identified and analyzed the relevant failure scenarios that should trigger an **“ELEC SYS FAIL”** EICAS message.

- Many of the failure scenarios were considered “evident” failures due to the fact that other EICAS messages will be posted to notify the crew of the failure and that adequate coverage was provided in

ADVISORY WIRE

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the Airplane Flight Manual (Ref. 1.1) to address the failure and to prevent dispatching the aircraft with the failure active.

- Other relevant failures were considered to be more critical in case of multiple failures scenarios, and were addressed immediately by an amendment release to the Master Minimum Equipment List (MMEL) Operational and Maintenance (O & M) Procedure (Ref. 1.2).
- Some of the relevant failure conditions are covered during existing aircraft maintenance procedures / regular checks.
- The remaining failures that did not fall within the previous three categories were not considered to present a hazard for the airworthiness status of the airplane.

In addition, Bombardier produced a list of flight deck effects that could be associated with these conditions:

- Abnormal DC synoptic page (i.e. DC Busses other than BATT Bus energized by the batteries on ground operation).
- Avionics equipment blinking during electrical power switching (i.e. APU start up, Hydraulic pumps start up, generator switching after engine start, etc.)
- Avionics equipment remains powered during aircraft power down, after Battery Master Switch (BMS) is set in the "OFF" position.
- DC buses (other than the BATT bus) energized by the batteries. (This anomaly can be detected by having Display Units (DU) #1, #2, #5 and #6 and/or Flight Management System (FMS) Control Display Units (CDU) #2 or #3 powered "ON" with aircraft on battery power only.)
- Electronics Circuit Breakers (CBs) status shown dashed out on the EMS CDUs.

In case any of the symptoms above are noticed, Bombardier recommends troubleshooting the system in accordance with the Smart Fix™ Plus tool using CAIMS fault codes (Ref. 1.3). In the event that no CAIMS messages are available, please use the "observed faults" troubleshooting section of Smart Fix Plus.

Please note that the "ELEC SYS FAULT" EICAS message ability to be posted from any of the associated electrical system faults (ACPC, DCPC, EMS CDUs, SPDAs) is unaffected.

4. ACTION:

Bombardier recommends that Operators and Pilots familiarize themselves with the flight deck effects and symptoms mentioned above and perform, if required, the system troubleshooting via the Smart Fix™ Plus tool. Bombardier will keep you inform as new developments arise.