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BOMBARDIER
AEROSPACE



Business Aircraft

ADVISORY WIRE

AW700-24-0153

DATE: August 11, 2004

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FROM: BOMBARDIER BUSINESS AIRCRAFT CUSTOMER SUPPORT

ADVISORY WIRE

REFERENCE NO: AW700-24-0153

SUBJECT: "RAT GEN FAIL" With "ELEC SYS FAIL"
Nuisance Messages After Landing

EFFECTIVITY: BD700-1A10 (9002 & Subs)

ATA: 24-23

If you require technical information concerning this wire, please call your Field Service Representative.

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1.0 REFERENCE:

- 1.1 FCOM volume 1 04-04-22, step 22, RAT generator test
- 1.2 FCOM volume 2 07-10-39, RAT pilot activated test

2.0 INTRODUCTION:

A condition may occur where intermittent nuisance Crew Alerting System (CAS) “ELEC SYS FAIL” and “RAT GEN FAIL” messages may be posted after landing along with an associated CAIMS stored fault “RAT GENERATOR HEATER” message.

3.0 DESCRIPTION:

Investigation has revealed that this nuisance condition is due to an ARINC 429 timing issue that is triggered during the weight on wheel transitions from flight to ground. During simulated weight on wheel transitions, it was possible to duplicate the “ELEC SYS FAIL” and “RAT GEN FAIL” EICAS messages associated with “RAT GENERATOR HEATER” message in the CAIMS “STORED FAULTS” menu. The RAT generator heater is powered by SPDA #1 but the logic for determining the heater health is located in the DCPC. Therefore, the heater health status information must be passed from SPDA #1 to the DCPC via the EMS CDU. The ARINC 429 transmission delay when transferring the data from the SPDA#1 to DCPC is causing the data to be shifted in time as seen by the DCPC and is enough for the DCPC to trigger the nuisance messages.

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4.0 ACTION:

It is recommended to perform the ref. 1.1 RAT TEST twice, via the EMS CDU, if the “RAT GEN FAIL” and “ELEC SYS FAIL” are posted after landing. The first RAT TEST clears the “ELEC SYS FAIL” and the second RAT TEST clears the “RAT GEN FAIL”. If both messages clear, then it should be considered a nuisance condition and no further action is required. If any of the messages remain, further troubleshooting is required.

Bombardier Aerospace is presently working to correct the software i.e.: add a time delay to mask the multiple transitions of the weight on wheel signal during landing. We will keep Operators informed of any new developments as they arise.