

ADVISORY WIRE

AW700-27-0218, Rev. 2

DATE: December 17, 2007

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FROM: BOMBARDIER CUSTOMER SERVICES BUSINESS AIRCRAFT

ADVISORY WIRE

REFERENCE NO: AW700-27-0218 Rev2

SUBJECT: Nuisance “SPLRS/STAB BIT”,
“STAB CH1 FAIL” or “STAB CH2 FAIL”
CAS Message

EFFECTIVITY: BD700-1A10 (9002 - 9999)
BD700-1A11 (9127 - 9999)

ATA: 27-41

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1.0 REFERENCES:

- 1.1 Service Bulletin [700-27-058, Rev. 1](#) and [700-1A11-27-016, Rev. 1](#)
 (December 10, 2007) – Introduction of new Motor Drive Unit (MDU)
 Part. No. GT415-4002-11 Mod 1

2.0 INTRODUCTION:

This Advisory Wire, Rev. 2 is to inform Operators of the availability of the new Ref.1.1 MDU-11 Mod.1 to address the condition where, following the installation of the MDU-11, nuisance advisory CAS message “SPLRS/STAB BIT”, “STAB CH1 FAIL” or “STAB CH2 FAIL” may be posted on power up.

3.0 DESCRIPTION:

With MDU-11 installed, field information indicates that the nuisance advisory Crew Alerting System (CAS) messages “SPLRS/STAB BIT”, “STAB CH1 FAIL” or “STAB CH2 FAIL” may be posted following the second portion of the Flight Control Unit (FCU) System Power On Self Test (SPOST2).

Resetting the FCU circuit breakers (CB’s) on the EMS CDU and performing the flight control self test will clear the nuisance CAS messages. Take note that to clear the nuisance CAS message, it may require up to Five complete self-tests.

The latest investigation results confirmed that these nuisance CAS messages are caused by a failure of the MDU BIT STATUS, due to a counter logic circuit failure during the SPOST 2 execution. The root cause is a reflective noise inside the MDU circuit board 145 following the introduction of the Q1 transistor during the MDU-11 design.

Two additional comparators were added into MDU-11 Mod 1 to cancel the reflective noise. The MDU retrofit campaign will be re-launched to introduce the latest MDU –11 Mod 1 to replace the MDU –9 (refer to Ref. 1.1 for details).

Take note that the campaign to replace the MDU-11 with the MDU-11 Mod 1 will only be launched upon completion of the MDU-9 campaign via new SB.

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4.0 ACTION:

Bombardier recommends that Operators of aircraft with MDU-11 installed (while awaiting the implementation of the MDU-11 Mod 1) carry out the following step to identify and reset the nuisance messages:

4.1 When a CAS message "SPLRS/STAB BIT", "STAB CH1 FAIL" or "STAB CH2 FAIL" is posted during the ground power-up:

- Ensure the circuit breakers (CB's) "FLT CTL1 CH A", "FLT CTL1 CH B", "FLT CTL2 CH A" and "FLT CTL2 CH B" are "IN" on the Electrical Management System Control Display Units (EMS CDU). Pressurize all hydraulics systems (1-2-3) and wait until the "SPLRS/STAB IN TEST" advisory CAS message is posted and clears.
- Wait 30 seconds after the CAS message "SPLRS/STAB IN TEST" clears. (Reference AMM TASK 27-61-05-740-801 "Self-test of the Flight-Control Units")

Note: Make sure no flight control surfaces are moved and no flight controls switches are selected in the flight compartment during the built-in-test.

- If the message remains posted, select "FLT CTL1 CH A", "FLT CTL1 CH B", "FLT CTL2 CH A" and "FLT CTL2 CH B" CB's to "OUT" on the EMS CDU.
- Wait 30 seconds and select them back to "IN".
- Pressurize all hydraulics systems (1-2-3) and wait until the "SPLRS/STAB IN TEST" advisory CAS message is posted and clears.
- If the nuisance CAS message doesn't clear, repeat this FCU CB out / in procedure again.

If the fault clears after any of these steps, then the message was a nuisance fault and the flight control system is fully functional.

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4.0 ACTION:...*Con't*

If the fault remains active after performing the above reset procedure five times, perform the following steps to troubleshoot the fault:

- Access CAIMS Active Fault (AMM TASK 45-45-00-970-802) and record the active fault(s) under FCU #1 and #2.
- Perform the associated fault isolation procedure as per fault isolation manuals (FIM).

4.2 To minimize waiting time prior to departure, Bombardier suggests this alternate procedure, prior to passengers boarding:

- Power-up aircraft with Ground Power Unit (GPU) or with one engine.
- Pressurize all 3 hydraulic systems, and FCU will initiate self-test.
- If SPOST 2 failed, follow reset procedure as mentioned in step 4.1.
- Once the FCU passes the SPOST2 BIT Test without nuisance CAS messages, maintain aircraft AC power ON using the GPU or APU source. Turn off non-essential hydraulic systems. This procedure will prevent the initialisation of an FCU SPOST2 BIT test following the next engines start.

Please be aware that dispatch of “SPLRS/STAB BIT” CAS message is now permitted per Master Minimum Equipment List (MMEL).