Customer Services

Advisory Wire

REFERENCE NO:	AW700-27-0373, Rev 1	INFORMATION TYPE:	Maintenance Operational
ATA:	27-51	EFFECTIVITY:	Global Express / XRS (9002 - 9312, 9314 - 9380, 9384 -9429) Global 5000 (9127 - 9383, 9389 - 9400, 9404 - 9431 and 9998) Global 5000 feat. Vision Flight Deck (9386, 9401, 9445 - 9862, and 9868 - 9997) Global 6000 (9313, 9381, 9432 to 9860, 9863 - 9871, 9873 – 9997)
SUBJECT:	**SFCU -17: "SLAT-FLAP HALFSPD" EICAS Nuisance Message**		

1. REFERENCES:

   1.1. Advisory Wire AW700-27-0631 - Slat/Flap HALFSPEED Messages - Intermittent Slat/Flap Resolver

   1.2. SmartFix[tm] Plus troubleshooting tool; available on CIC and stand-alone version

   1.3. Aircraft Maintenance Manual (AMM) TASK 27−51−05−910−801 "Clear Slat/Flap Control Unit (SFCU) Latched Faults"

   1.4. AMM TASK 27-51-05-820-801 "Electronic Rigging of the Slat/Flap Control Unit"

   1.5. Airplane Flight Manual (AFM) Non-Normal Procedure, Chapter 05-10

   1.6. AMM TASK 45-45-00-970-822 "Access to Non-Volatile Memory (NVM) Management"

   1.7. AMM TASK 45-47-00-970-810 "Download of the Onboard Maintenance System (OMS) Non-Volatile Memory (NVM)"

   1.8. "Detailed GX SFCU-17 Troubleshooting Report Questionnaire" available in SmartFix[tm] Plus under Troubleshooting Tips of each Slat Flap Control System messages.

2. INTRODUCTION:

This Advisory Wire (AW) is to inform Operators on the latest progress regarding the "SLAT-FLAP HALFSPD" (advisory) nuisance message. The content of the AW has also been revised to provide guidance on where to find the information to validate or rectify this condition.

3. DESCRIPTION:

Following the introduction of the SFCU Part Number GT415-5900-17 the number of unit removal and No Fault Found (NFF) increased.

The most frequent cause of SFCU removals is the SLAT-FLAP HALFSPD advisory message posted on the Engine and Indication Crew Alerting System (EICAS), under the following conditions:

- In-flight.
- After the installation or swap of SFCUs.
- On Aircraft power-up.

This "SLAT FLAP HALFSPD" advisory message is usually accompanied with a SFCU "internal fault" (2751064STD or 2752064STD) in the Central Aircraft Information and Maintenance System (CAIMS) or the Onboard Maintenance System (OMS). Per Slat Flap Control System (SFCS) design, an "Internal Fault" is a summary fault indication detected during the Built-in Test (BIT) on power-up or in continuous mode.

Bombardier's investigation revealed an instability of the Stall Protection Computer (SPC) signal which affected the SFCU Part Number GT415-5900-17 interface circuitry. Modifications to address this condition and improve the SFCU reliability were introduced on October 3rd,2013 with the release of the SFCU PN GT415-5900-19. The changes consist of:

- Addition of a jumper wire between chassis ground and power ground
- Replacement of 2 capacitors

The SFCU PN GT415-5900-17 and -19 are intermixable. The SFCU PN GT415-5900-17 are upgraded to PN GT415-5900-19 on failure basis.

A parallel investigation also revealed that when the message is posted in flight, it is often triggered by a defective resolver. In these cases, the messages is normally accompanied with a slat or flap resolver related fault in CAIMS/OMS. This situation and actions to resolve it are described in the Advisory Wire AW700-27-0631 (Ref. 1.1).

The HALFSPD (cyan) messages should not be considered a nuisance when accompanied with one of the following SFCS-CAIMS/OMS INTERNAL FAULT message (2751064STD or 2752064STD).

4. ACTION:

To avoid unnecessary SFCU removal, Bombardier recommends the following actions for each of the conditions listed below:

4.1. Intermittent SLAT FLAP HALFSPD message posted in flight:

- The Crew must follow the AFM (Ref. 1.5) instructions.
- Maintenance personnel should refer to the Advisory Wire AW700-27-0631 (Ref. 1.1) and SmartFix™ Plus (Ref 1.2) for guidance.

4.2. Latch SLAT FLAP HALFSPD message on power-up, maintenance or ground operation:

- While on the ground, Operators may attempt to clear the message by cycling the circuit breakers of the affected SFCU per SmartFix™ Plus (Ref 1.2) procedure. This will initiate the BIT of the SFCU and possibly clear the message.
- Performing two (2) consecutive Slat and Flap Electronic Rigging per (Ref. 1.4) and the Clear Latch fault procedure per (Ref. 1.3) will often avoid SFCU replacement. This ensures all computer memories have been reset and system rigging numbers are refreshed.
- In a situation where the SFCU is unresponsive (Lock-up condition), maintenance personnel can try to inject a new fault in the system per "Slat-Flap Control Unit (SFCU) Lock up State Reset" procedure listed in the Troubleshooting by Tips section, ATA 27 Flight Control of the SmartFix™ Plus (Ref 1.2).

Operators may also choose to proactively upgrade their SFCU PN GT415-5900-17 to the latest configuration for a certain fee and a turn-around time of 30 days. Contact Bombardier parts logistics for more information.

All troubleshooting related to the SFCS remains available via CAIMS/OMS active faults, ground and flight faults history menus.

In cases where NVM data must be retrieved, the applicable AMM procedure (Ref. 1.6 or 1.7) should be followed.

NOTE: Downloading NVM from the SFCU #2 may stop inadvertently with corrupted or incomplete data. For such cases, follow the alternate procedure per applicable AMM TASK (Ref. 1.6 or 1.7).

In the case where the SFCU is confirmed faulty and must be replaced, Bombardier is requesting that a GX SFCS Troubleshooting Report (Ref 1.8) sheet be filled and forwarded to your Field Service Representative (FSR) or the Bombardier Customer Response Center (CRC) at ac.yul@aero.bombardier.com.

The information contained in this questionnaire will allow Bombardier to gather data on the reported issues and assist in the troubleshooting if required.

Should you have any technical questions or need technical assistance, do not hesitate to communicate with your FSR or CRC.