Customer Services

Advisory Wire

REFERENCE NO:	AW700-49-0538, Rev 2	INFORMATION TYPE:	Maintenance
ATA:	49-61	EFFECTIVITY:	Global Express / XRS (9002 - 9312, 9314 - 9380, 9384 - 9429) Global 5000 (9127 to 9383, 9389 to 9400, 9404 to 9431 and 9998) Global 5000 feat. Vision Flight Deck (9386, 9401, 9445 - 9997) Global 6000 (9313, 9381, 9432 -9997)
SUBJECT:	**Auxiliary Power Unit (APU) Exhaust Gas Temperature (EGT) Sensor**		

1. REFERENCES:

   1.1. Honeywell Service Bulletin (VSB) RE220-49-8169 rev 3 – June 29, 2017

   1.2. Bombardier Service Bulletin (SB) 700-49-015 – Sept 12, 2011

   1.3. Aircraft Maintenance Manuel (AMM) 49-61-05-400-801 – November 13, 2017

   1.4. Advisory Council item #49-28-M-908

   1.5. Bombardier Service Bulletin (SB) 700-49-016, 700-1A11-49-004, 700-49-5003 and 700-49-6003 – June 29, 2017

2. INTRODUCTION:

   This Advisory Wire (AW) revision is to provide visibility on the release of the Service Bulletin (ref 1.1 & 1.5) pertaining to the Auxiliary Power Unit (APU) Exhaust Gas Temperature (EGT) sensors, which is a Top Advisory council item (ref. 1.4).

3. DESCRIPTION:

   Following the introduction of the EGT sensor (part number: WE3876352-2) with improved coating in 2011 via the Bombardier Service Bulletin 700-49-015 (ref 1.2), Bombardier has noticed an increase in EGT sensor sale orders indicating a reliability performance not meeting the expectation.

   Operators have reported the following EGT sensors faults:

   - APU FAULT message (Cyan) on Engine Indication & Crew Alerting System (EICAS) when one EGT sensor has failed (“Short EGT sensor/circuit 1or 2 Wiring” fault 4960150APU or 4960155APU in CAIMS/OMS).
   - APU SHUTDOWN when both probes fail with aircraft on ground (“NO DATA – EGT SENSOR [CKT 1 & 2] WIRING” fault 4960126APU in CAIMS/OMS). This condition occurs mostly in heavy rain or high humidity conditions.

The Advisory Committee members voted the EGT probe's reliability as a Top Issue in September 2013 (meeting # 28). The investigation carried out by Bombardier and Honeywell has identified a moisture ingress condition causing a conductive path from the thermocouple circuit to the EGT sensors' grounded structure. Thus, the Full Authority Digital Engine Controller (FADEC) detects and annunciates a short to ground (STG) fault.

The intent of the SBs (ref 1.1 & 1.5) is to perform an inspection of the RTV, to make sure that the probes are properly covered in order to prevent moisture from penetrating. Where there is no RTV covering the probes, the SBs (ref 1.1 & 1.5) provide instructions to expose the probes to high temperature to make sure dryness before applying primer. Once dry apply RTV to properly seal the interface between the wiring harness and the probe's connector. All previous revisions of Service Information Letters and SBs are superseded by the SBs (1.1 & 1.5) released on June 29, 2017.

At the last Advisory Council meeting in Oct 2017 (ref. 1.4), the committee members opted to monitor the reliability and to promote the incorporation of BBA SB (ref. 1.5) and HW VSB (ref. 1.1).

So far, about 140 aircrafts have incorporate one of the SBs (ref 1.1 & 1.5). This represent 20% of the affected aircrafts.

4. ACTION:

In an effort to improve the reliability of the EGT sensors, operators are encouraged to schedule the incorporation of the latest SB (ref 1.1 & 1.5).

Should you have any technical queries pertaining to this Advisory Wire, please contact your local Field Service Representative (FSR) or Customer Response Center (CRC).