

Advisory Wire

REFERENCE NO:	AW700-49-0317 Rev 2	INFORMATION TYPE:	Maintenance Operational
ATA:	49-61	EFFECTIVITY:	Global Express / XRS (9002 - 9312, 9314 - 9380, 9384 - 9429)
SUBJECT:	APU System - FADEC		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 and 60005 - 61999) Global 5500, Global 6500 (9861, 9872, 60001 - 61999)

1. REFERENCES:

- 1.1. Honeywell Service Information letter (SIL) D201007000037: "APU FADEC lock-up during APU cool down sequence".
- 1.2. Honeywell SIL APU-87: "APU Auto Shutdown in Heavy Rain condition".
- 1.3. Honeywell Service Bulletin RE220-49-7889: "Exhaust Gas Temperature sensor upgrade"
- 1.4. Honeywell SIL APU-80: "Uncommanded APU shutdown due to combustor plugging".
- 1.5. Honeywell SIL APU-106: "Implementation of a Combustor Wash Program".
- 1.6. Advisory Wire (AW) AW700-36-0287: "Pressure Regulating Valve".
- 1.7. Honeywell SIL APU-143: "Introduction of a field cleaning procedure for the Load Control Valve inlet filter".

2. INTRODUCTION:

This Advisory Wire is being updated to Revision XX to add aircraft models and serial numbers to the effectivity.

Revision 1 of this Advisory Wire (AW) is to modify the aircraft effectivity list in order to accommodate the Global 5000 featuring Vision Flight Deck and Global 6000 aircraft. The intent of this AW is to provide Operators all necessary tools and troubleshooting tips to reduce the number of unnecessary Auxiliary Power Unit (APU) Full Authority Digital Engine Controller (FADEC) removals.

Customer Services

Advisory Wire

3. DESCRIPTION:

In order to minimize aircraft downtime and avoid unnecessary removals of FADEC P/N 2118990-3, Honeywell and Bombardier wish to provide Operators a summary of known issues with available solutions as well as technical information that can be used for effective troubleshooting.

The actual hardware failures of the APU FADEC are extremely low. In addition, the APU FADEC has extensive internal BIT capability, which means that if the FADEC does not report an internal system fault it should be considered serviceable.

The most recurrent Crew Alerting System (CAS) messages associated to APU FADEC NFF are listed as follows:

- “APU FADEC FAIL” CAS message can be posted during an APU Cool-Down sequence and can inhibit the subsequent APU start due to an APU FADEC lock-up mode:
 - The Honeywell SIL (Ref. 1.1) gives troubleshooting instructions to avoid unnecessary APU FADEC replacement.
- “APU FAULT”, ”APU SHUTDOWN” or “APU EGT SENSOR” CAS message may be related to a fault on single or dual Exhaust Gas Temperature (EGT) probes as highlighted on Honeywell SIL. (Ref 1.2)
 - Honeywell released an improved EGT sensor P/N WE3876352-2 available via Vendor Service Bulletin (VSB) (Ref 1.3).
- “APU SHUTDOWN” CAS message posted after a main engine start or when APU Load Control Valve (LCV) transitions to the closed position. This issue could be related to an APU combustor chamber effusion hole plugging as initially identified on Honeywell SIL 80 (Ref 1.4):
 - The Honeywell SIL (Ref. 1.5) informs Operators about a new combustor wash program.
- “APU BLEED DISABLED” CAS message posted on APU Start. This issue could be associated to a Pressure Regulating Valve (PRV) not fully closed as mentioned by AW700-36-0287 (Ref. 1.6):
 - Bombardier released an improved PRV P/N GG436-1055-1 mod A.
- “APU BLEED SYS FAIL” CAS message may be posted due to a fluctuating APU LCV:
 - The Honeywell SIL (Ref. 1.7) recommends the cleaning of LCV inlet filter. Bombardier released an Aircraft Maintenance Manual (AMM) task 49-52-05-160-801 “Cleaning of the Load Control Valve Inlet Filter”

4. ACTION:

Bombardier is currently conducting an investigation with Honeywell to find a permanent solution for the APU FADEC lock-up issue listed in section 3.

Customer Services

Advisory Wire

To minimize downtime and avoid unnecessary APU FADEC removals, Bombardier encourages Operators to utilize all of the available solutions and troubleshooting information listed above.

All above listed VSB, SIL and AW are currently available on the Technical Library page when logging in on Customer Information Center (CIC) web site at www.cic.bombardier.com.

All vendor SIL and SB can be also accessible via Honeywell web site at <https://portal.honeywell.com/wps/portal/aero>
(Support > Technical > Publications > Publication Search tool)

Please note that all APU system troubleshooting tips are also available via the SMARTFIX™ Plus utility tool, through CIC web site.

(Tools and Services > Technical Tools > SMARTFIX Plus > Access Tool)

Should you have any technical queries, please contact your local Field Service Representative or the Customer Response Center (24/7/365) at ac.yul@aero.bombardier.com.