Customer Services

Advisory Wire

REFERENCE NO:	AW300-30-0082, Rev 2	INFORMATION TYPE:	Maintenance Operational
ATA:	30-31	EFFECTIVITY:	Challenger 300 (20003 – 20500) Challenger 350 (20501 – 20999)
SUBJECT:	**Pitot-Static Heater**		

1. REFERENCES:

   1.1. SB100-34-38 Modification - Pitot-Static and Temperature System - Pitot-Static Probe Heater Redesign.

2. INTRODUCTION:

The revision to this Advisory Wire (AW) is to provide Operators with an update to the ongoing investigation of cases where the Pitot-Static probe heat came on un-commanded.

3. DESCRIPTION:

In 2014, the Pitot-Static probes PN 0856WC1 and PN 0856WC2 have been replaced by new, more robust PN 0856WC3 and PN 0856WC4 on the CL300 with the Ref. 1.1 SB and installed as standard on the CL350. Despite this change, some cases were recently reported to Bombardier that when the aircraft was powered up, the Pitot-Static probe heat came on un-commanded.

At the time, our investigation revealed that on some probes, the heating element shorted to the aircraft ground, which resulted in continuous operation of the Pitot-Static heater, regardless of the position of the probe PBA. The recent failures have prompted Bombardier and the vendor to revisit this investigation.

The 28 VDC is directly connected to the Pitot-Static Heater. The electrical ground is made through the air-data-sensor heater-current monitor and is commanded with the left (or right) PROBE Push Button Annunciator (PBA) on the center pedestal Anti-Ice Panel. The air-data-sensor heater-current monitor senses the electrical current flow in the heater and, in case of system malfunction, sends the appropriate AMBER L(R) PITOT HEAT FAIL message to EICAS.

In cases where the probe has the internal short, the current draw is not monitored and the AMBER L(R) PITOT HEAT FAIL message may not be posted.

The root cause is not yet defined and Bombardier is actively working on a solution with the vendor. We will keep you informed of any developments as they arise.

4. ACTION:

We recommend that Pilots and Technicians are aware that whether or not the AMBER L (R) PITOT HEAT FAIL EICAS message is posted, it is possible that the affected probe remains heated. The Pitot-Static probes should always be considered as potentially hot whenever the aircraft is powered and extra care should be taken.

We also recommend opening and tagging the circuit breaker CB1-E2 and CB2-E2 after flight on ground and during maintenance to prevent it from remaining heated.

The failed Pitot-Static probe should be checked with a multi-meter to verify if the heater elements are shorted to the ground. If an element is found shorted to the ground, the Pitot-Static probe should be replaced as soon as possible.

Should you have any questions pertaining to this AW or additional queries, please contact your Bombardier Field Service Representative (FSR) or the Customer Response Center (CRC).