

# Advisory Wire

REFERENCE NO:	AW700-32-0581, Rev 3	INFORMATION TYPE:	Maintenance Operational
ATA:	32-43	EFFECTIVITY:	Global Express / XRS (9002 - 9312, 9314 - 9380, 9384 - 9429)
SUBJECT:	<b>Wheel Speed Transducer (WST) – MLG Trailing Arm Water Ingress</b>		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 Advisory Council item # 32-34-M-989, voted at meeting #34 (October 2016)
- 1.2 Bombardier Service Bulletin (SB) 700-32-042/700-1A11-32-029/700-32-5019/700-32-6019/700-32-5505/700-32-6505, Modification - MLG - Main Landing Gear Assembly Improved Resistance to Water Ingress
- 1.3 Aircraft Maintenance Manual (AMM) TASK 32-43-13-720-801, Functional Test of the Brake Disk for Drive Slot Enlargement

## 2. INTRODUCTION:

This Advisory Wire (AW) is being updated to Revision 3 to inform operators of the recent release of SBs (Ref. 1.2) which modifies the Wheel Speed Transducer (WST) harness to eliminate water ingress into the trailing arm/axle.

This AW is to inform operators of a series of Wheel Speed Transducer (WST) atypical failures that occurred on Global aircraft.

## 3. DESCRIPTION:

Bombardier wants to inform operators of the release of SBs (Ref. 1.2) which modifies the WST harnesses. This modification includes relocation of the bonding jumpers as well as the introduction of a single piece conduit covering the steel braid entering the trailing arm. This design change will provide long lasting resistance to water ingress inside of the axle bore.

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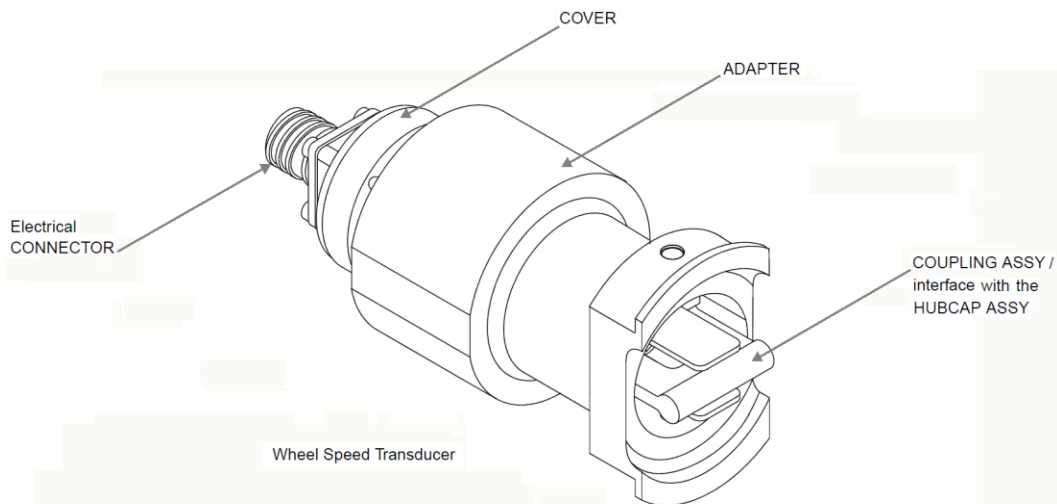
The atypical WST failures occurred on landing when the crew were alerted by L (R) OUTBD BRAKE FAIL (caution) message on the Engine Indication and Crew Alerting System (EICAS). In all cases, the aircraft landing was uneventful.

After landing, inspection revealed that the WST (MLG OUTBOARD) electrical harness had sheared from the WST inside the landing gear axle. It appears that the WST cover, including the electrical connector, had rotated causing the harness to spin and shear.

There have been seven (7) WST events of this type since January 2016 on the Global Express that resulted in the replacement of the electrical harness. Bombardier has also been informed of another event where the WST Hub Cap Assembly was damaged, the condition of the unit revealed that the WST shaft had locked causing the WST Spring Coupling Assembly to break.

In all cases, there was no collateral damage to the Gear Axle or Landing Gear Assembly. The WST and wiring harness or Hub Cap were replaced and the aircraft were returned to service.

The Wheel Speed Transducer / Trailing Arm water Ingress is currently part of the TOP issues of the Advisory Council meeting. (Ref: 1.1)



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#### 4. ACTION:

Bombardier Aviation recommends that this SB (Ref. 1.2) be accomplished at your earliest convenience or at the same time as the 30-month brake assembly - Functional Test of the Brake Disk for Drive Slot Enlargement (Ref 1.3).

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