

ADVISORY WIRE

AW700-28-0400

DATE: October 11, 2012

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FROM: BOMBARDIER CUSTOMER SERVICES BUSINESS AIRCRAFT

ADVISORY WIRE

REFERENCE NO: AW700-28-0400

SUBJECT: Fuel Return To Tank dual valves failure during flight

EFFECTIVITY: Global Express XRS (9159 – 9312, 9314 – 9380, 9384 -9429)
Global 5000 (9160 – 9383, 9389 – 9400, 9404 – 9431, 9998)
Global 5000 featuring Vision Flight Deck (9386, 9401, 9445 to 9997)
Global 6000 (9313, 9381, 9432 to 9997)

ATA: 28-26

This Advisory Wire contains Operational and Maintenance Information

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1.0 REFERENCES:

- 1.1** Global XRS (CSP 700-1A) Aircraft Flight Manual, Global 5000 (CSP 700-5000-1) Aircraft Flight Manual, Global 5000 featuring Vision Flight Deck (CSP 700-5000-1V) and Global 6000 (CSP 700-1V) Airplane Flight Manual.

2.0 INTRODUCTION:

This Advisory Wire is to:

1. Describe an intermittent Fuel Return To Tank (FRTT) issue that was reported by some Operators during flight, causing Left and Right Fuel Recirculation Fail messages to be posted on the Engine Indicating and Crew Alerting System (EICAS).
2. Request Operators to fill and return the attached questionnaire should they encountered a dual FRTT valve failure in-flight.

3.0 DESCRIPTION:

To date, eight (8) events were reported on aircraft equipped with the automatic fuel return to tank (FRTT) system (Airplanes 9159 and subsequent).

For aircraft equipped with the automatic FRTT system, the Fuel Management and Quantity Gauging Computer (FMQGC) will operate the recirculation valves as follow:

OPEN	CLOSE
A/C Altitude > 34 000 Ft.	A/C Altitude < 33 800 Ft.
Coldest temperature < - 20 deg C C.	Left and Right Feed tank > 5 deg C
Average temperature < - 9 deg C.	Left and Right Engine OFF.

The typical reported scenario where the Left and Right Fuel Recirculation Fail messages were observed (both FRTT valves are indicating an open position and failed) is the following:

- Aircraft altitude above 40 000 ft.
- FRTT system already turned ON automatically by the FMQGC.
- 2-3 hours into flight.
- Bulk fuel temperature: between 0°C and -8 °C.

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It was also reported by flight crews that the Left and Right Fuel Recirculation Fail EICAS messages were disappearing when one of the following conditions were met:

1. Aircraft in descent.
2. 5 to 40 minutes elapsed time after the messages were posted.
3. FRTT system selected to OFF (both FRTT valves will go to Close position without any failure indication).

The FMQGC will display a Left and/or Right recirculation failed on the EICAS when one of the following conditions are met:

1. The applicable FRTT valve is not in the commanded position.
2. There is a mismatch detected on the automatic FRTT configuration pins between the FMQGC CH A and CH B.

In some cases, Operators opted to replace the FMQGC. After testing at vendor facility, units were returned into service as a No Fault Found (NFF) and no subsequent failure of these units was reported.

4.0 ACTION:

1. Should Left and Right Fuel Recirc Fail messages display on EICAS, Operators are reminded to follow the applicable Non-Normal procedures section of their Airplane Flight Manual (reference 1.1.)
2. In order to support the investigation, Bombardier requests Operators to fill and return the attached questionnaire should they encountered a dual FRTT valve failure in flight.

Have any suggestions or comments?

Please take a moment to fill out our Advisory Wire survey:

<http://csefeedback.aero.bombardier.com/index.php?sid=31854&lang=en>

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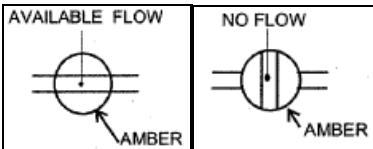
Left and Right Fuel Recirculation Fail EICAS message failure report

1. Aircraft and Component Identification:

A/C S/N	FMQGC P/N	FMQGC S/N

2. Flight Conditions and issue detail:

- FRTT system was ON before Failure? Yes ___ No ___
- Fuel Flow: Left Engine: ___PPH Right Engine ___PPH
- Outside Air Temperature: ___ °C
- Altitude: ___ Ft
- Bulk Fuel Temperature: Left Wing: ___ °C Right Wing: ___ °C
- On the FUEL synoptic page, please confirm FRTT valves status:



Issue Details

Event Description:

Contact Name:	Date:	Phone No:
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Please return the questionnaire to: BAG_BBAD_Global_Program@aero.bombardier.com