

ADVISORY WIRE

AW300-28-0118

DATE: May 18, 2010

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FROM: BOMBARDIER CUSTOMER SERVICES BUSINESS AIRCRAFT

ADVISORY WIRE

REFERENCE NO: AW300-28-0118

SUBJECT: No Fault Found Initiative: Fuel Quantity and Gauging Computer (FQGC)

EFFECTIVITY: Challenger 300 aircraft (20003 to 20999)

ATA: 28-41

This Advisory Wire contains Operational and Maintenance Information

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1.0 REFERENCES:

- 1.1 Aircraft Maintenance Manual Task 28-10-00-680-801 "Drain Water From the Fuel Tank".
- 1.2 Service Bulletin 100-28-06 - "Modification fuel Management and Quantity Gauging System - Replacement and Relocation of Fuel Quantity Probes No.5 and Replacement of Fuel Quantity Probes No.8 with Compensator to Correct Gauging System Faults"
- 1.3 Service Bulletin 100-28-08 - "Rework – Wing Tank – Addition of Sealant to facilitate Water Drainage from Wing Fuel Tanks and Prevent Erratic Fuel Indications"

2.0 INTRODUCTION:

This Advisory Wire is to provide Operators with some details for troubleshooting when the Maintenance Diagnostic Computer (MDC) reports an Internal Fault of the Fuel Quantity and Gauging Computer (FQGC) that may be due to the presence of water in the fuel tank. These procedures will help to reduce unnecessary FQGC removals and reduce the No Fault Found (NFF) rate.

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3.0 DESCRIPTION:

Water in the fuel tanks can affect the fuel quantity probe capacitance. When this occurs, the FQGC could become temporarily inoperative and consequently the FQGC internal fault message will be reported on the MDC, as well as "FUEL QTY FAULT" or "FUEL QUANTITY FAIL" on the EICAS and fuel quantity indication will be Magenta dashes for the affected tank.

The following failure message will be posted on the MDC in the current fault message page or in the history fault message page:

```
ATA28-00 FUEL
FQGC      A057  02Aug2009
FAILED    02077 13:11
INTERNAL FAULT
INTERMITNT: 0 FN0` 0dX-- AIR
Equation ID: B3-006789
```

This fault message equation description will be seen if accessed on the Advance Diagnostic Page by pressing the "enter" button:

Equation description: A fault is detected in fuel system computer

This equation description will be revised in the next Maintenance Diagnostic Table (MDT) upgrade to include the possibility that this message could be posted due to water in the fuel tanks.

Before removing the FQGC, Technicians should first ensure that this message is not caused by water in the fuel tanks affecting the quantity probes.

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4.0 ACTION:

In order to reduce unnecessary FQGC removals and to help improve the NFF rate, Operators should be aware of the possibility that water in the fuel tanks could be causing failures associated to the FQGC. The ref. 1.1 AMM task should be followed to ensure water is drained from the fuel tanks.

The ref. 1.2 & 1.3 bulletins should be incorporated when applicable, to help prevent fuel quantity indication errors and MDC messages when water is present.

As a reminder, please refer to SmartFix™ Plus to determine if the FQGC internal fault posted on MDC is inherent to the FQGC or caused by water present between the inner and outer tubes of a fuel probe(s).

We would also like to remind Operators that draining water from the fuel tanks is part of the exterior Pre-flight per section 04-02 of the Airplane Flight Manual and is carried out only on the first flight of the day.