Transport Canada Transports Canada

TP 7245E

No. CF-2008-02 1/2

Issue Date 03 January 2008

AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aircraft which our records indicate is registered in your name. ADs are issued pursuant to ***Canadian Aviation Regulation* (CAR) 593**. Pursuant to **CAR 605.84** and the further details of **CAR Standard 625, Appendix H**, the continuing airworthiness of a Canadian registered aircraft is contingent upon compliance with all applicable ADs. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aircraft. Alternative means of compliance shall be applied for in accordance with **CAR 605.84** and the above-referenced **Standard**.

This AD has been issued by the Continuing Airworthiness Division (AARDG), Aircraft Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

Number: **CF-2008-02**

Subject: **Fuel System Safety - Insufficient Electrical Bonding Between Fuel Tubes and Insufficient Lightning Current Capability of Fuel Tube Couplings**

Effective: 24 January 2008

Applicability: Bombardier Inc. Model CL-600-2C10 aircraft, serial numbers 10003 through 10169 and CL-600-2D24 aircraft, serial numbers 15001 through 15025.

Compliance: Compliance is required as indicated unless already accomplished.

Background: Bombardier Aerospace has completed a system safety review of the CL-600-2C10/CL-600-2D24 aircraft fuel system against new fuel tank safety standards, introduced in Chapter 525 of the Airworthiness Manual through Notice of Proposed Amendment (NPA) 2002-043. The identified non-compliances were assessed using Transport Canada Policy Letter No. 525-001 to determine if mandatory corrective action is required.

The assessment and lightning tests showed that certain fuel tube self-bonded couplings do not provide sufficient lightning current capability. The assessment also showed that single failure of the integral bonding wire of the self-bonded couplings could affect electrical bonding between fuel tubes.

Insufficient electrical bonding between fuel tubes or insufficient current capability of fuel tube couplings, if not corrected, could result in arcing and potential ignition source inside the fuel tank during lightning strikes and consequent fuel tank explosion. To correct the unsafe condition, this directive mandates the replacement of certain fuel tube couplings with redesigned couplings.

Corrective Action:

A. For aircraft that have not incorporated the original issue of Bombardier Service Bulletin (SB) 670BA-28-014, within 4500 hours air time after the effective date of this directive, replace fuel tube couplings inside the wing and centre fuel tanks with redesigned couplings, according to Part A of the Accomplishment Instructions of Bombardier SB 670BA-28-014, Revision A, dated 7 May 2007, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

B. For aircraft that have already incorporated the original issue of Bombardier SB 670BA-28-014, within 4500 hours air time after the effective date of this directive, inspect the aft scavenge ejector fuel couplings inside the LH and RH wing fuel tanks and replace with redesigned couplings if necessary, according to Part B of the Accomplishment Instructions of Bombardier SB 670BA-28-014, Revision A, dated 7 May 2007, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Authorization: For Minister of Transport, Infrastructure and Communities

P. Tang
Acting Chief, Continuing Airworthiness

Contact: Mr. Philip Tang, Continuing Airworthiness, Ottawa, telephone (613) 952-4365, facsimile (613) 996-9178 or e-mail tangp@tc.gc.ca or any Transport Canada Centre.