Transport Canada Transports Canada

TP 7245E

No. CF-2010-16 1/2
Issue Date 18 May 2010

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) 521 Division X**. 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), National Aircraft Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

Number: **CF-2010-16**

Subject: **Cockpit Windshield Lower Frames – Potential for Corrosion**

Effective: 8 June 2010

Applicability: Bombardier Inc. Model DHC-8 Aeroplanes, as follows:

DHC-8 Series 100, 200, and 300, serial numbers 003 through 566; and
DHC-8 Series 400, serial numbers 4001, 4003, 4004, 4006, 4008 through 4274

Compliance: Within 6,000 hours air time or 3 years after the effective date of this Directive, whichever comes first, unless already accomplished.

Note: The compliance times in this Directive differ from the recommended compliance times mentioned in the Bombardier Service Bulletins (SB).

Background: There have been several in-service reports of finding trapped water on the bottom of the cockpit windshield frames (or lower windshield frames) that resulted in either corrosion or water ingress into the cockpit. In one occurrence, the trapped water caused severe corrosion of numerous anchor nuts that secure the windshield to the lower windshield frame, such that the intended fastening function was seriously compromised.

Corrosion of the lower windshield frames, including the anchor nuts that secure the windshield to the aircraft structure, can result in a serious structural degradation possibly leading to the loss of the windshield during flight. Also, water could leak into the cockpit and cause either a malfunction or failure of the electrical and electronics systems in the area of the cockpit instrument panels.

The lower windshield frames do not have drain provisions to prevent moisture or water run-off from the condensation of the windshields from being trapped. The consequences of trapped water in the lower windshield frames can result in unsafe conditions, as noted above. This Directive mandates the installation of a drain system for the lower windshield frames.

Corrective Actions: Within the compliance times specified in the Compliance paragraph of this Directive, install a drain system in the cockpit windshield lower frames, as follows:

1. For Model DHC-8 Series 100, 200, and 300 aeroplanes, in accordance with Bombardier Service Bulletin 8-53-78, Revision C, dated 29 April 2010, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada Civil Aviation. Compliance with this SB's Initial Issue dated 23 December 1999, or Revision A dated 7 June 2001, or Revision B dated 2 May 2002, fulfills the requirement of this Directive and no additional action is required.

2. For Model DHC-8 Series 400 aeroplanes, in accordance with Bombardier SB 84-53-43, Initial Issue, dated 27 April 2010, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada Civil Aviation.

Authorization: For Minister of Transport, Infrastructure and Communities

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

Contact: Mr. Anthony Wan, Continuing Airworthiness, Ottawa, telephone 613-952-4357, facsimile 613-996-9178 or e-mail CAWWEBFeedback@tc.gc.ca or any Transport Canada Centre.