



No.	CF-2010-08	1/2
Issue Date 16 March 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-2010-08

Subject: Electrical Power — AC Wiring Harness Chafing on Centre Wing Lower Flap Shroud

Effective: 29 March 2010

Applicability: Bombardier Inc. DHC-8 Aeroplane, Models 400, 401 and 402, Serial Numbers 4001 through 4169

Compliance: As indicated below unless already accomplished.

Background: Operators of DHC-8 400 Series aeroplanes have been reporting chafing of wires in the AC wire harnesses located along the lower wing shroud on either wing resulting in a loss of various system services. Chafed wires may lead to arcing, local overheating and AC generator failure. The AC generators provide power to the anti-icing heaters, including pitot / static heater, engine adapter heater, and propeller heater. Failure of both AC generators would result in the loss of these systems and poses a safety concern.

Investigation has revealed that at four wiring harness tie down mount locations, the blind fasteners used to attach the tie down mount base were found to have protruding stems which chafed through the wire insulation leading to arcing damage. In addition, the wire chafing along the wing rear spar lower shroud has been attributed to sagging wire bundles resting on the structure and insufficient support in low clearance areas.

This directive mandates the replacement of the blind fasteners with solid rivets, and to inspect for and rectify damaged wiring along the wing lower shroud.

Corrective Actions: **A. Inspection at Four Wiring Harness Tie Down Mount Locations and Replacement of Blind Fasteners**

Within 200 hours air time after the effective date of this directive, replace the blind fasteners installed at the four wiring harness tie down mount locations and perform inspection, and rectification as required, in accordance with paragraph B(6) of the Accomplishment Instructions in Bombardier Inc. Service Bulletin (SB) A84-24-44, Revision A, dated 02 February 2010, or later revision approved by the Chief, Continuing Airworthiness, Transport Canada.

NOTE: Previous modification, inspection, and rectification as required, in accordance with the Accomplishment Instructions in Bombardier Inc. SB A84-24-44, dated 27 January 2010, or incorporation of Bombardier Inc. Modsum Number IS4Q5700013, satisfies the requirement of section A of this directive.

B. Visual Inspection of AC Feeder Cables along Lower Wing Shroud

In accordance with the following schedule:

1. For aeroplanes with AC feeder cables not covered with protective Teflon tubing (Modsum Number IS4Q2450001 or production Modsum 4Q109946 not incorporated):

Within 600 hours air time after the effective date of this directive.

2. For aeroplanes with AC feeder cables covered with protective Teflon tubing (Modsum Number IS4Q2450001 or production Modsum 4Q109946 incorporated):

Within 4000 hours air time after the effective date of this directive.

Inspect wiring harness installation along the wing rear spar lower shroud and perform all rectification in accordance with the Accomplishment Instructions in Bombardier Inc. SB A84-24-44, Revision A, dated 02 February 2010, or later revision approved by the Chief, Continuing Airworthiness, Transport Canada.

NOTE: Previous inspection and rectification in accordance with Bombardier Inc. SB A84-24-44, dated 27 January 2010, satisfies the requirement of section B of this directive.

C. Reporting Requirement

Within 14 days after the visual inspection of AC feeder cables, report all findings to Bombardier Technical Help Desk.

Authorization: For Minister of Transport, Infrastructure and Communities

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

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