



No.	CF-2010-27	1/1
Issue Date	20 August 2010	

AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aeroplane 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 aeroplane is contingent upon compliance with all applicable ADs. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aeroplane. 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 Aeroplane Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

Number: CF- 2010-27

Subject: Flight Controls – Backlash in the Crank Arms of Elevator Torque Tube

Effective: 8 September 2010

Applicability: All Bombardier Inc. DHC-8 Aeroplane Models 400, 401, and 402, Serial Numbers 4001 through 4305.

Compliance: As indicated below unless already accomplished.

Background: Several operators have reported pitch oscillations and/or elevator asymmetry caution lights illumination when flying with the autopilot engaged. Investigations revealed that loose rivets in the torque tube assemblies caused relative motion between the crank arms and torque tubes.

Loose rivets could result in excessive wear and subsequent significant backlash in the driving crank arms. This condition, if left uncorrected, will progressively get worse and degrade the controllability of the aeroplane.

Corrective Actions: A. Replace the elevator torque tube assemblies part number (P/N) 82760709-009 and 82760757-009 with P/N 82760709-011 and 82760757-011, or replace the rivets in each elevator torque tube assembly and reidentify the elevator torque tube assemblies in accordance with Bombardier's Service Bulletin (SB) 84-27-50, Revision C, dated 26 July 2010, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, with the following schedule:

1. For aeroplanes that have accumulated 8000 or more hours air time, accomplish SB within 2000 hours air time after the effective date of this directive.
2. For aeroplanes that have accumulated less than 8000 hours air time, accomplish SB within 6000 hours air time after the effective date of this directive, but not to exceed 10 000 total hours air time.

Incorporation of the original issue of Bombardier Aerospace SB 84-27-50 dated 03 March 2010, or Revision A dated 28 April 2010 or Revision B dated 19 May 2010, also meets the requirement of paragraph 1 of this directive.

B. As of the effective date of this directive, the elevator torque tube assemblies P/N 82760709-009 and 82760757-009 are not allowed to be installed on the DHC-8 Series 400 aeroplanes.

Authorization: For Minister of Transport, Infrastructure and Communities

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

Contact: Mr. Gordanko Jeremic, Continuing Airworthiness, Ottawa, telephone 613-952-4379, facsimile 613-996-9178 or e-mail CAWWEBFeedback@tc.gc.ca or any Transport Canada Centre.

Pursuant to **CAR 202.51** the registered owner of a Canadian aeroplane shall, within seven days, notify the Minister in writing of any change of his or her name or address.

To request a change of address, contact the **Civil Aviation Communications Centre (AARC)** at **Place de Ville, Ottawa, Ontario K1A 0N8**, or **1-800-305-2059**, or www.tc.gc.ca/civilaviation/communications/centre/address.asp

