Transport Canada Transports Canada

TP 7245E

No. CF-2010-28R1 1/2
Issue Date 12 June 2012

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-2010-28R1**

Subject: **Elevator Power Control Unit – Shaft (Tailstock) Swaged Bearing Wear**

Effective: **25 June 2012**

Revision: **Supersedes Airworthiness Directive CF-2010-28**

Applicability: **Bombardier Inc. DHC-8 aeroplane models 400, 401 and 402, serial numbers 4001 through 4334, and 4336.**

Compliance: **As indicated below, unless already accomplished.**

Background: Several reports have been received on the elevator power control units (PCUs) where the shaft (tailstock) swaged bearing liners had shown a higher than normal rate of wear. Investigation revealed that the excessive wear was due to the paint contamination between the bearing roller and bearing liner. The bearing paint contamination is known to be abrasive and could seize the bearing.

This condition, if not corrected, could lead to excessive airframe vibrations and difficulties in aircraft pitch control.

This AD mandates a free-play check of the shaft swaged bearing installed in the elevator PCU tailstock end and replacement of the shaft swaged bearings if excessive free-play is found.

This AD is revised to amend the applicability for DHC-8 Series 400 aeroplanes.

Corrective Actions:

A. Perform a free-play check of the shaft swaged bearing, part number (P/N) MS14103-7, installed in the tailstock end of each elevator PCU (three PCUs per elevator surface), P/Ns 390600-1007 and 390600-1009, in accordance with paragraph 3.B, Part A of Bombardier Aerospace Service Bulletin (SB) 84-27-52, Original Issue, dated 25 May 2010, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, with the following schedule:

1. For aeroplanes that have accumulated 8000 hours air time or more, within 2000 hours air time from the original effective date of this AD (8 September 2010);

2. For aeroplanes that have accumulated less than 8000 hours air time, within 6000 hours air time, but not to exceed 10 000 total hours air time, from the original effective date of this AD (8 September 2010).

B. If the bearing free-play is within the limits specified in the above-mentioned SB, no further action is required.

C. If the bearing free-play exceeds the limits specified in the above-mentioned SB, replace the elevator PCU with a serviceable one before further flight in accordance with paragraph 3.B, Part B of Bombardier Aerospace SB 84-27-52, Original Issue, dated 25 May 2010, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Authorization: For the Minister of Transport, Infrastructure and Communities

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

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