



No.	CF-2010-18R1	1/2
Issue Date	19 March 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-2010-18R1

Subject: Rudder Travel Limiter – Return Springs Failure

Effective: 02 April 2012

Revision: Supersedes AD CF-2010-18 dated 16 June 2010

Applicability: Bombardier Inc. Aeroplanes:

Model CL-600-2C10, Serial Numbers 10002 through 10333

Models CL-600-2D15 and CL-600-2D24, Serial Numbers 15001 through 15288

Compliance: As indicated below, unless already accomplished.

Background: Rudder Travel Limiter (RTL) return spring, part number (P/N) E0650-069-2750S, failed prior to completion of the required endurance test. In addition, the replacement RTL return spring, P/N 670-93465-1 (see Note) was found to be susceptible to chafing on the primary actuator, which could also result in eventual dormant spring failure. There are two return springs in the RTL and if both springs failed, a subsequent mechanical disconnect of the RTL components would result in an unannounced failure of the RTL. This, in turn, would permit an increase of rudder authority beyond normal structural limits and, in the event of a strong rudder input, the controllability of the aeroplane could be affected.

Note: RTL return springs, P/N 670-93465-1, were installed in production aeroplanes serial number 10266 (CL-600-2C10) and 15182 (CL-600-2D24) respectively and were introduced in-service by Service Bulletin (SB) 670BA-27-047. SB 670BA-27-047 has since been superseded by SB 670BA-27-055.

This AD mandates repetitive visual inspection of the RTL return springs and primary actuator, with replacement of parts as necessary.

This revision mandates the installation of the RTL return spring, P/N BA670-93468-1, as a terminating action to this AD.

Corrective Actions: **Part I - Initial Inspection**

- A. For aeroplanes that have accumulated 4000 hours air time or less from the effective date of the original issue of this AD (07 July 2010) inspect and replace, if required, the RTL return springs and primary actuator before the aeroplane has accumulated 6000 hours air time, in accordance with the Accomplishment Instructions in Bombardier Aerospace SB 670BA-27-055, dated 11 May 2010 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Pursuant to **CAR 202.51** the registered owner of a Canadian aircraft 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



- B. For aeroplanes that have accumulated more than 4000 hours air time from the effective date of the original issue of this AD (07 July 2010) inspect and replace, if required, the RTL return springs and primary actuator within 2000 hours air time from the effective date of this AD, in accordance with the Accomplishment Instructions in Bombardier Aerospace SB 670BA-27-055, dated 11 May 2010 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part II - Repetitive Inspection

Within 6000 hours air time from the previous inspection (or component replacement, if applicable), inspect the RTL return springs and primary actuator in accordance with the Accomplishment Instructions in Bombardier Aerospace SB 670BA-27-055, dated 11 May 2010 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part III - Rudder Travel Limiter Return Spring Replacement

Replace the RTL return springs in accordance with the Accomplishment Instructions in Bombardier SB 670BA-27-059 Revision A, dated 08 March 2012 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, in accordance with the following schedule:

- A. For aeroplanes with RTL return springs P/N 670-93465-1, within 6000 flight cycles from the effective date of this AD,
- B. For aeroplanes with RTL return springs P/N E0650-069-2750S and:
1. with 15 400 flight cycles or more accumulated from the effective date of this AD, within 2000 flight cycles from the effective date of this AD.
 2. with 5200 flight cycles or more, but less than 15 400 flight cycles accumulated from the effective date of this AD, within 5000 flight cycles from the effective date of this AD but not to exceed 17 400 flight cycles,
 3. with less than 5200 flight cycles accumulated from the effective date of this AD, before accumulating 10 200 flight cycles.

Accomplishment in accordance with SB 670BA-27-059, Initial Issue, dated 12 October 2011 also meets the requirements of Part III of this AD.

Note: RTL return springs P/N 670-93465-1 were installed in production aeroplanes starting at serial number 10266 (CL-600-2C10) and 15182 (CL-600-2D24) and were introduced in-service by SB 670BA-27-047.

Completion of Part III of this AD constitutes terminating action to this AD.

Authorization: For the 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.