



No.	CF-2011-41	1/2
Issue Date	31 October 2011	

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-2011-41

Subject: Hydraulic Accumulators – Screw Cap/End Cap Failure

Effective: 17 November 2011

Applicability: Bombardier Inc. Aeroplane Model BD-100-1A10 Serial Numbers 20003 to 20335

Compliance: As indicated below, unless already accomplished.

Background: Seven cases of on-ground hydraulic accumulator screw cap/end cap failure have been experienced on CL-600-2B19 aeroplanes, resulting in loss of the associated hydraulic system and high-energy impact damage to adjacent systems and structure. To date, the lowest number of flight cycles accumulated at the time of failure has been 6991.

Although there have been no failures to date on any BD-100-1A10 aeroplanes, accumulators similar to those installed on the CL-600-2B19 are installed on them. The affected part numbers (P/Ns) of the accumulators installed on BD-100-1A10 are 900095-1 (Auxiliary Hydraulic System accumulator), 08-60219-001 (Inboard Brake accumulator), and 08-60218-001 (Outboard Brake accumulator).

A detailed analysis of the calculated line of trajectory of a failed screw cap/end cap for the accumulator has been conducted, resulting in the identification of areas where systems and/or structural components could potentially be damaged. Although all of the failures to date have occurred on the ground, an in-flight failure affecting such components could potentially have an adverse effect on the controllability of the aeroplane.

This directive provides the initial action by mandating the replacement of the Auxiliary Hydraulic System accumulators that are not identified by the letter “E” after the serial number on the identification plate. Further corrective actions are anticipated to rectify similar safety concerns with the Inboard and Outboard Brake accumulators.

Corrective Actions: For auxiliary hydraulic system accumulator P/N 900095-1 not identified by the letter “E” after the serial number on the identification plate, in accordance with the following schedule, replace the accumulator with an accumulator of the same part number that is identified by the letter “E” in accordance with the Accomplishment Instructions of Bombardier Service Bulletin (SB) 100-29-14, dated 16 December 2010, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

As of the effective date of this directive:

- A. For accumulator with more than 3150 flight cycles: within 350 flight cycles from the effective date of this directive.

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 accumulator with 3150 flight cycles or less: before reaching 3500 flight cycles.
- C. If it is not possible to determine the flight cycles accumulated for the accumulator: within 350 flight cycles after the effective date of this directive.

As of the effective date of this directive, no person may install a hydraulic system accumulator P/N 900095-1 not identified by the letter "E" after the serial number of the identification plate on any aeroplane.

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.

