



No.	CF-2011-11	1/2
Issue Date	25 mai 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- 2011-11

Subject: Oxygen Supply System – Deformation of the Pressure Regulator on the Oxygen Cylinder and Regulator Assembly and installation of protection on the Electrical Wiring Harness

Effective: 17 June 2011

Applicability: Bombardier Inc. Models CL-600-2B16 Serial Numbers 5701 through 5802, 5804 through 5808, 5810 through 5816, 5819, 5822 through 5823.

Compliance: As indicated below, unless already accomplished.

Background: During a routine inspection, deformation was found at the neck of the pressure regulator body on the oxygen Cylinder and Regulator Assemblies (CRA) of a BD-700-1A11 aeroplane.

An investigation by the vendor, Avox Systems Inc., revealed that the deformation was attributed to two (2) batches of raw material that did not meet the required tensile strength. This may cause elongation of the pressure regulator neck, which could result in rupture of the oxygen cylinder, and in the case of cabin depressurization, oxygen would not be available when required.

Although there have been no reported failures to date on any CL-600-2B16 aeroplanes, oxygen pressure regulators, Part Numbers (P/N) 806370-12, could be part of the affected batches.

It has also been found that the electrical wiring harness in the area of the oxygen cylinder has been installed without protection. Unprotected wiring could chafe against the oxygen system components or surrounding structure in the area, which could lead to electrical arcing and an oxygen fed fire.

This directive mandates the replacement of oxygen CRAs containing pressure regulators that do not meet the required material properties and to inspect and protect the affected wiring.

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**

**Corrective
Actions:**

Part I – Inspection of the oxygen pressure regulator serial number:

Within 750 hours air time from the effective date of this directive, but no later than 31 December 2011.

- A. Inspect the serial number of each oxygen pressure regulator, P/N 806370-12, in accordance with the accomplishment instructions in Section 2. B. (3) of the Bombardier Service Bulletin (SB) 605-35-001, Basic Issue, dated 31 January 2011, Revision 01 dated 28 February 2011, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
- B. If the serial number of the pressure regulator, P/N 806370-12, is listed in Table 2 of the above-mentioned SBs, proceed to Part II of this directive.
- C. If the serial number of the pressure regulator, P/N 806370-12, is not listed in Table 2 of the above-mentioned SBs, proceed to Part III of this directive.

Part II – Replacement of the affected oxygen CRA:

Replace the affected oxygen CRA in accordance with the accomplishment instructions in Section 2. B. (5) or 2. C. (5), as applicable, of the above-mentioned SBs. Proceed to Part III of this directive.

Part III – Inspection of the Electrical Harness, applicable to aeroplane serial numbers 5701 through 5778, 5780 through 5796, 5798, 5800 through 5802, 5804, 5805, 5808, 5811, and 5813:

In accordance with the following schedule, perform a detailed inspection and protect the electrical wiring harness in accordance with the accomplishment instructions of Bombardier SB 605-24-005, dated 31 January 2011, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

- A. For aeroplanes that require the replacement of the affected oxygen CRA, complete at the same time as Part II of this directive;
- B. For all other affected aeroplanes, within 800 hours air time from the effective date of this directive.

Part IV – Future Installation of the oxygen CRA:

As of the effective date of this directive, installation of an oxygen pressure regulator, P/N 806370-12, with a S/N listed in the Table 2 of the Bombardier SB 605-35-001, Basic Issue, dated 31 January 2011, Revision 01, dated 28 February 2011, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, is not permitted on any CL-600-2B16 aeroplane unless the serial number has a suffix "A" beside the serial number.

Authorization: For the Minister of Transport, Infrastructure and Communities

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

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