



No.	CF-2010-06R1	1/3
Issue Date	8 August 2013	

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-2010-06R1
- Subject:** In-Flight Loss of Cabin Pressurization: Blockage of the Safety Valve Cabin Pressure-Sensing Port
- Effective:** 22 August 2013
- Revision:** Supersedes Airworthiness Directive CF-2010-06, issued 24 February 2010.
- Applicability:** Bombardier Inc. model BD-100-1A10 aeroplanes, serial numbers (S/Ns) 20001 through 20274.
- Compliance:** As indicated below.
- Background:** Investigation of a high altitude loss of cabin pressurization on a BD-100-1A10 aeroplane determined that it was caused by a partial blockage of a safety valve cabin pressure-sensing port, in conjunction with a dormant failure/leakage of the safety valve manometric capsule. The blockage, caused by accumulation of lint/dust on the grid of the port plug, did not allow sufficient airflow through the cabin pressure-sensing port to compensate for the rate of leakage from the manometric capsule, resulting in the opening of the safety valve. It was also determined that failure of the manometric capsule alone would not result in the opening of the safety valve.
- The original issue of this AD mandated a revision of the maintenance schedule, the cleaning of the safety valves, the removal of material from the area surrounding the safety valves and the modification of the safety valves with a gridless cabin pressure-sensing port plug.
- Since the original issue of this AD, there have been two additional reported events of in-flight loss of cabin pressurization that were attributed to partial blockage of a safety valve cabin pressure-sensing port in conjunction with a failed safety valve manometric capsule.
- Bombardier Aerospace has determined that aeroplanes with a particular interior installation require improved instructions to clean the safety valves and their surrounding area. In addition, Aircraft Maintenance Manual tasks have been updated to ensure that inspection of the safety valves and their surrounding is carried out after any maintenance action.
- Revision 1 of this AD is issued to mandate inspection and cleaning of the safety valves and their surrounding area on the affected aeroplanes.
- Corrective Actions:** **Part I – Revision of the Maintenance Schedule**
- Applicable to BD-100-1A10 aeroplanes, S/Ns 20001 through 20274.
- Within 30 days from the effective date of the original issue of this AD (19 March 2010), unless already accomplished:

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

Revise the Transport Canada approved maintenance schedule by incorporating the repetitive functional test of the safety valves (Task Number 21-31-09-101) and repetitive discard of the safety valve filters (Task number 21-31-09-102) contained in BD-100 Time Limits/Maintenance Checks (TLMC), Temporary Revision (TR) 5-2-53, dated 1 October 2009,

- Notes:
1. BD-100 TLMC TR 5-2-53 contains phase-in schedules, as necessary, for the initial functional test of the safety valves and the initial discard of the safety valve filters on aeroplanes that have exceeded the initial task intervals.
 2. Compliance with superseding TRs or later revisions of the BD-100 TLMC, approved by Transport Canada, also satisfies the requirements of Part I of this directive.

Part II – Initial Cleaning of the Safety Valves, including the Cabin Pressure-Sensing Port Plugs, and Removal of Surrounding Material

Applicable to BD-100-1A10 aeroplanes, S/Ns 20003 through 20173, 20176 and 20177.

Within 50 hours air time from the effective date of the original issue of this AD (19 March 2010), unless already accomplished:

Inspect both safety valves and the surrounding areas, clean the safety valves (including the cabin pressure-sensing port plugs) and remove surrounding material, as necessary, in accordance with the Accomplishment Instructions in Bombardier Service Bulletin (SB) 100-25-14, dated 30 June 2008, or SB 100-25-21, dated 30 June 2008, whichever is applicable, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part III - Initial Cleaning of the Safety Valve Cabin Pressure-Sensing Port Plugs

Applicable to BD-100-1A10 aeroplanes, S/Ns 20174, 20175, 20178 through 20189, 20191 through 20228, 20230 through 20232, 20235, 20237, 20238, 20241, 20244, 20247, 20249 through 20251, 20254, 20256 and 20259.

Within 50 hours air time from the effective date of the original issue of this AD (19 March 2010), unless already accomplished:

Clean the cabin pressure-sensing port plug in both safety valves, in accordance with the Accomplishment Instructions in Paragraph 2.B., Part A, of Bombardier Alert Service Bulletin (ASB) A100-21-08, dated 18 June 2009, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part IV - Repetitive Cleaning of the Safety Valve Cabin Pressure-Sensing Port Plugs

Applicable to BD-100-1A10 aeroplanes, S/Ns 20003 through 20189, 20191 through 20228, 20230 through 20232, 20235, 20237, 20238, 20241, 20244, 20247, 20249 through 20251, 20254, 20256 and 20259.

Within 50 hours air time from the effective date of the original issue of this AD (19 March 2010), and subsequently no later than every 50 hours air time until Part V of this directive is accomplished:

Clean the cabin pressure-sensing port plug in both safety valves, in accordance with the Accomplishment Instructions in Paragraph 2.B., Part A, of Bombardier ASB A100-21-08, dated 18 June 2009, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part V – Modification: Replacement of the Safety Valve Cabin Pressure-Sensing Port Plugs and Reidentification of the Safety Valves

Applicable to BD-100-1A10 aeroplanes, S/Ns 20003 through 20189, 20191 through 20228, 20230 through 20232, 20235, 20237, 20238, 20241, 20244, 20247, 20249 through 20251, 20254, 20256 and 20259.