



No.	CF-2009-25R1	1/2
Issue Date	23 July 2009	

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) 593**. 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-2009-25R1

Subject: Spoiler Unload Valves and Rudder Shutoff Valves – Non-Conformance - Incorrect Wall Thickness

Effective: 12 August 2009

Applicability: Bombardier Inc. Models DHC-8-400, DHC-8-401 and DHC-8-402, Serial Numbers 4105 thru 4179.

Compliance: As indicated unless already accomplished

Background: During final Acceptance Test Procedure (ATP), a small oil leak was discovered on the Spoiler Unload Valve and Rudder Shutoff Valve bodies. Investigation revealed that a number of valves were manufactured with an incorrect wall thickness. This thin wall condition caused cracking, subsequent external weeping and pressure loss from the subject valves.

This condition, if not corrected, will cause a loss of hydraulic fluid and subsequent loss of spoiler and/or rudder control.

Revision 1 of this directive mandates a new interval for the initial inspection, clarifies the time for replacement of the valve(s) specified in Paragraphs 1.2 and 2.2, and clarifies the labeling of the inspected valves in Paragraph 3 of this directive.

Corrective Actions: Within 750 hours air time after the effective date of this directive, accomplish the following:

1. Spoiler Unload Valve Manifold – Applicable to DHC-8 Aircraft, Models 400, 401, and 402, Serial Numbers 4105 through 4172:

Inspect the left hand and right hand spoiler unload valves Part Number (P/N) 396000-1005 for leaking or weeping in accordance with Bombardier Service Bulletin (SB) 84-27-37, dated February 5, 2009, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

- 1.1. If leaking or weeping is found, prior to further flight, replace the affected spoiler unload valve with a new valve.
- 1.2. If no leaking or weeping is found, replace the inspected valve(s) within 6 000 hours air time from the time of initial inspection mandated by this directive.

2. Rudder Shutoff Valve Manifold – Applicable to DHC-8 Aircraft, Models 400, 401, and 402, Serial Numbers 4113 through 4179:

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

Inspect the left hand and right hand rudder shutoff valves P/N 412700-1001 for leaking or weeping in accordance with Bombardier SB 84-27-39, dated February 5, 2009, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada

- 2.1. If leaking or weeping is found, prior to further flight, replace the affected rudder shutoff valve with a new valve.
- 2.2. If no leaking or weeping is found, replace the inspected valve(s) within 6 000 hours air time from the time of initial inspection mandated by this directive.
3. As of the effective date of this directive, no replacement of Spoiler Unload Valves Assembly P/N 396000-1005, with serial numbers from 0289 through 0424 and Rudder Shutoff Valves P/N 412700-1001 with serial numbers from 0239 through 0384, are allowed to be installed on the DHC-8 Series 400 airplanes unless such valves have been inspected by the manufacturer and labeled with a suffix "A" after the Serial Number as indicated in the above-mentioned Service Bulletins.

Authorization: For Minister of Transport, Infrastructure and Communities

Anthony Wan
Acting Chief, Continuing Airworthiness

Contact: Mr. Gordanko Jeremic, Continuing Airworthiness, Ottawa, telephone 613-952-4379, facsimile 613-996-9178 or e-mail gordanko.jeremic@tc.gc.ca or any Transport Canada Centre.