



No.	CF-2005-15R1	1/3
Issue Date	6 June 2008	

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), Aircraft Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

- Number:** CF-2005-15R1
- Subject:** Pitot Static System Contamination
- Effective:** 23 June 2008
- Revision:** Supersedes Airworthiness Directive CF-2005-15 issued on 18 May 2005.
- Applicability:** Bombardier Inc. Models DHC-8-400, DHC-8-401 and DHC-8-402, Serial Numbers 4003 through 4154.
- Compliance:** Compliance is required as indicated unless already accomplished.

Background: Incidents of airspeed mismatch between the pilot, co-pilot and standby airspeed indication have been reported. These events are believed to be caused by contamination within the pitot lines and/or blockage within the pitot static probes. Blockage of a probe's pitot drain may allow sufficient moisture to enter the probe's internal pitot line such that freezing may occur under certain conditions, causing a blockage to the pitot line. As an interim action, to avoid the potential for erroneous airspeed information, this directive mandates the periodic cleaning of the pitot static probe drain hole and the pitot lines.

To mitigate potential blockage of the pitot static system, Bombardier has introduced modifications to improve the water drainage capabilities of the pitot static system and the freeze protection capabilities of the pitot probes. Therefore, Revision 1 of this directive is issued to mandate the incorporation of the above-mentioned modifications as terminating action to the repetitive maintenance requirements mandated by the original issue of this directive.

Corrective Action: **A. Cleaning of Pitot Static Probe Drain Hole**

1. Initially, within 30 days after 17 June 2005 (the effective date of the original issue of this directive) and thereafter at intervals not to exceed 70 hours air time, clean the drain hole of each of the pitot static probes that has not been replaced with new design probes per paragraph C.2 (see note) or C.3 of this directive, in accordance with Dash 8 Q400 Aircraft Maintenance Manual, PSM 1-84-2, Task 20-00-40-170-801 and as follows:

Note: Aircraft Serial Numbers 4147 to 4154 have had the new design probes installed during production (ModSum 4-113525), cleaning of pitot static probe drain hole is not required on those aircraft.

- a. Clean the drain holes in accordance with paragraph 4.B., Procedure 2, sub-paragraph (1) to (3) of the above noted Aircraft Maintenance Manual task.
- b. After cleaning, examine the drain hole for blockage in accordance with Paragraph 4.A., Procedure 1 of the above noted Aircraft Maintenance Manual task.

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



- c. If the drain hole of any pitot static probe is blocked, repeat the cleaning and examination procedure of Paragraph A.1.a and A.1.b of this directive on the affected pitot static probe.

B. Cleaning of Pitot Lines

1. For aircraft Serial Numbers 4003, 4004, 4006, 4008 through 4114, initially, within 30 days after 17 June 2005 (the effective date of the original issue of this directive) and thereafter at intervals not to exceed 600 hours air time, clean the pitot lines of each aircraft that has not been modified per paragraph C.1 of this directive, in accordance with Dash 8 Q400 Aircraft Maintenance Manual, PSM 1-84-2, Task 34 11-00-170-801.

C. Modification of Pitot Static System

1. For aircraft Serial Numbers 4003, 4004, 4006, 4008 through 4114, incorporate Bombardier ModSum 4-113488 to modify the pitot static system tubing for improved water drainage within 6000 hours air time after the effective date of this directive. Bombardier Service Bulletin (SB) 84-34-59, Revision D, dated 27 July 2007, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada provides approved instructions for incorporating ModSum 4-113488. Prior incorporation of Modsum 4-113488 according to Revision A, B or C of Bombardier SB 84-34-59 also meets the requirements of this paragraph.
2. For aircraft Serial Numbers 4003 through 4146, carry out the following within 6000 hours air time after the effective date of this directive:
 - a. Incorporate Bombardier ModSum 4-113530 to replace the left side primary pitot probe with a new design. Bombardier SB 84-34-90, Revision B, dated 3 January 2007, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada provides approved instructions for incorporating ModSum 4-113530. Prior incorporation of Modsum 4-113530 according to the initial issue or Revision A of Bombardier SB 84-34-90 also meets the requirements of this paragraph.
 - b. Incorporate Bombardier ModSum 4-113531 to replace the right side primary pitot probe with a new design. Bombardier SB 84-34-91, Revision B, dated 10 January 2007, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada provides approved instructions for incorporating ModSum 4-113531. Prior incorporation of Modsum 4-113531 according to the initial issue or Revision A of Bombardier SB 84-34-91 also meets the requirements of this paragraph.
3. For aircraft Serial Numbers 4003 through 4154, incorporate Bombardier ModSum 4-113526 to replace the standby pitot probe with a new design within 6000 hours air time after the effective date of this directive. Bombardier SB 84-34-93, Revision A, dated 23 February 2007, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, provides approved instructions for incorporating ModSum 4-113526. Prior incorporation of Modsum 4-113526 according to the initial issue of Bombardier SB 84-34-93 also meets the requirements of this paragraph.
4. For aircraft Serial Numbers 4115 through 4145, prior to accomplishing the requirements of paragraph C.3 above, carry out a one-time inspection for the correct installation of standby pitot static system tube assemblies and perform any necessary rectification, according to the Accomplishment Instructions of the Initial Issue of Bombardier SB 84-34-99, dated 4 April 2007, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

5. Accomplishment of the modification of paragraph C.1 of this directive constitutes terminating action to all the pitot line cleaning requirements of paragraph B of this directive.
6. Accomplishment of the modifications of paragraphs C.2, C.3 and C.4 of this directive constitutes terminating action to all the pitot static probe drain hole cleaning and inspection requirements of paragraph A of this directive.

Authorization: For Minister of Transport, Infrastructure and Communities

Anthony Wan
Acting Chief, Continuing Airworthiness

Contact: Mr. Philip Tang, Continuing Airworthiness, Ottawa, telephone 613 952-4365, facsimile 613 996-9178 or e-mail tangp@tc.gc.ca or any Transport Canada Centre.