



No.	CF-2009-01R1	1/2
Issue Date	31 March 2010	

# 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-2009-01R1

**Subject:** Dual AC Generator Shutdown

**Effective:** 20 April 2010

**Revision:** Supersedes Airworthiness Directive CF-2009-01, dated 19 January 2009

**Applicability:** Bombardier Inc. DHC-8 Models 400, 401 and 402, Serial Numbers 4001, 4003, 4004, 4006 and 4008 through 4154

**Compliance:** As indicated below.

**Background:** Four aircraft have experienced a dual AC generator shutdown, caused by a broken propeller de-ice bus bar which short-circuited with the backplate assembly.

It was subsequently determined that any friction or contact between a propeller de-ice bus bar and the backplate assembly can cause an intermittent short circuit. Such a short circuit can cause a dual AC generator shutdown that, particularly in conjunction with an engine failure in icing conditions, could result in reduced controllability of the aircraft.

Part I of this directive mandates a revision of the Airplane Flight Manual (AFM) to introduce a procedure that restores AC power following failure of No.1 and No.2 AC generators with propeller de-ice on. Additionally, in order to prevent similar dual AC generator shutdowns, Part II of the original issue of this directive had mandated the application of sealant as insulation between the propeller de-ice bus bars and the backplate assembly.

This revision has been issued to cancel Part II of this directive, since it has been superseded by a European Aviation Safety Agency (EASA) Airworthiness Directive (AD) 2009-0114, dated 28 May 2009. EASA AD No. 2009-0114 is applicable to Dowty Propellers, Model R408/6-123-F/17, all serial numbers, and also mandates the application of sealant, both initially as previously mandated by Part II of the original issue of this directive, and repetitively.

- Notes:
1. Dowty Propellers Service Bulletin (SB) D8400-61-66 referenced in EASA AD 2009-0114 is included as part of Bombardier SB 84-61-03 previously referenced in Part II of the original issue of this directive.
  2. The state of design for the propeller is a member state of EASA, which is responsible for fulfilling the State of Design responsibilities of all such Member States.

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](http://www.tc.gc.ca/civilaviation/communications/centre/address.asp)

**Corrective  
Actions:**

**Part I: AFM Change**

Within 30 days of the effective date of the original issue of this directive, 19 February 2009:

- A. Amend the AFM, PSM 1-84-1A, by Inserting Temporary Amendment (TA) No. 14, dated 10 May 2006, or later approved changes to this TA.
- B. Advise all flight crews of the changes introduced in the AFM TA.

**Part II: Modification**

Part II of this directive is cancelled as it is superseded by EASA AD 2009-0114, dated 28 May 2009.

Note: Prior application of sealant between the bus bar assemblies and the backplate assembly by incorporating Modsum 4-163047, in accordance with the original issue of Bombardier SB 84-61-03, dated 27 April 2007, or with Revision A of SB 84-61-03, dated 18 September 2007, is directly equivalent to application of sealant in accordance with the instructions of Dowty Propellers Alert SB D8400-61-66, dated 9 February 2007, as specified in EASA AD 2009-0114.

**Authorization:** For Minister of Transport, Infrastructure and Communities

ORIGINAL SIGNED BY

Derek Ferguson  
Chief, Continuing Airworthiness

**Contact:** Mr. Richard Topham, Continuing Airworthiness, Ottawa, telephone 613-952-4357, facsimile 613-996-9178 or e-mail [CAWWEBFeedback@tc.gc.ca](mailto:CAWWEBFeedback@tc.gc.ca) or any Transport Canada Centre.