



No.	CF-2012-09	1/2
Issue Date	15 February 2012	

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-2012-09
- Subject:** Loss of the 400Hz Fixed Frequency System Due To Multiple Inverter Failures
- Effective:** 27 February 2012
- Applicability:** Bombardier Inc. DHC-8 Aeroplane Models 102, 103, 106, 201, 202, 301, 311, 314 and 315, Serial Numbers 002 through 672
- Compliance:** As indicated below, unless already accomplished.

Background: There have been several reported occurrences of the loss of the 400Hz Fixed Frequency System, leading to the loss of power to the Left 115VAC bus, the Right 115VAC bus, the Left 26VAC bus, the Right 26VAC bus and all systems serviced by these four electrical buses. The loss of the 400Hz Fixed Frequency System has been attributed to a failure of one or two static inverters, which resulted in the loss of the remaining inverters. The loss of systems serviced by the four fixed frequency electrical buses creates an unsafe condition due to the loss of a number of the pilot's and co-pilot's flight instruments, in addition to the other avionics systems.

This Airworthiness Directive (AD) mandates the wiring modification to untie the 400Hz inverters and additional Airworthiness Limitation tasks introduced as a result of this modification.

Corrective Actions: **Part I - Wiring Modifications**

Within 6000 hours air time or 36 months, whichever occurs first, from the effective date of this AD, incorporate the wiring modifications in accordance with Bombardier Service Bulletin (SB) 8-24-87, Revision A, dated 5 October 2011, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Incorporation of SB 8-24-87, Initial Issue, dated 26 May 2011, also meets the requirements of Part I of this AD.

Part II - Amendment to the Maintenance Schedule

Within 30 days from the effective date of this AD, revise the Transport Canada approved maintenance schedule to incorporate Airworthiness Limitation task 2420/13 as introduced by the applicable Temporary Revisions (TR) of the Dash-8 Maintenance Program Manual – Airworthiness Limitations List:

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



Dash 8 Series	TR Number	Date
Series 100	TR AWL-117	08 April 2011
Series 200	TR AWL 2-48	08 April 2011
Series 300	TR AWL 3-118	08 April 2011

Authorization: For the Minister of Transport, Infrastructure and Communities

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

Contact: Miss Helen Tsai, Continuing Airworthiness, Ottawa, telephone 613-952-4357, facsimile 613-996-9178 or e-mail CAWWEBFeedback@tc.gc.ca or any Transport Canada Centre.