



No.	<b>CF-2012-25</b>	1/2
Issue Date	<b>28 August 2012</b>	

# 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-2012-25
- Subject:** Electrical Power — AC Wiring Harness Chafing on Centre Wing Lower Flap Shroud
- Effective:** 13 September 2012
- Applicability:** Bombardier Inc. DHC-8 Aeroplane Models 102, 103, 106, 201, 202, 301, 311, 314 and 315, serial numbers 003 and subsequent.
- Compliance:** As indicated below, unless already accomplished.
- Background:** There have been several reported occurrences of dual AC Generator failure during flight, resulting in the loss of the variable frequency AC System.

Investigations revealed wire chafing along the wing lower flap shroud due to sagging wiring harnesses resting on the support structure, missing teflon tape at the fairlead locations and missing grommets. Chafed wires may lead to arcing, local overheating and AC generator failure. The AC generators provide power to the anti-icing heaters, including elevator horn heater, engine inlet heater and propeller heater. Failure of both AC generators would result in the loss of these systems and poses a safety concern.

This AD mandates the inspection and rectification of the wiring harness installations along the centre wing lower flap shroud.

**Corrective Actions:** **Part I – Initial Inspection**

A. Inspection Schedule

1. For aeroplanes with 45 000 hours air time or more accumulated as of the effective date of this AD, inspect the wiring harness installations in accordance with Part I, Paragraph B of this AD within 1000 hours air time from the effective date of this AD.
2. For aeroplanes with less than 45 000 hours air time accumulated as of the effective date of this AD, inspect the wiring harness installations in accordance with Part I, paragraph B of this AD within 6000 hours air time from the effective date of this AD but not to exceed 46 000 hours air time.

B. Inspection Procedures

Perform a detailed visual inspection of the left and right hand side wiring harness installations along the centre wing lower flap shroud, and rectify as required, in accordance with the Accomplishment Instructions in Bombardier Service Bulletin 8-24-86, dated 1 April 2010, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

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)



## **Part II – Repetitive Inspection**

Within 15 000 hours air time from each previous inspection, inspect the wiring harness installations in accordance with Part I, Paragraph B of this AD.

## **Part III – Terminating Action**

Incorporation of Maintenance Review Board tasks 531X1 and 631X1, as found in the applicable Dash-8 Maintenance Program Manual (MPM), into the Transport Canada approved maintenance schedule terminates the repetitive inspection requirements of Part II of this AD:

<b>Dash 8 Series</b>	<b>MPM</b>
Series 100	PSM 1-8-7
Series 200	PSM 1-82-7
Series 300	PSM 1-83-7

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

*ORIGINAL SIGNED BY*

Derek Ferguson  
Chief, Continuing Airworthiness

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