



No.	CF-2003-14R1	1/2
Issue Date	26 January 2005	

# 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-2003-14R1

**Subject:** Bombardier CL-600-2B19 "Regional Jet" – Wing root area wire damage

**Effective:** 26 February 2005

**Revision:** Supersedes Airworthiness Directive (AD) CF-2003-14 issued 15 May 2003.

**Applicability:** Bombardier Inc. CL-600-2B19 "Regional Jet" aircraft, Series 100 and Series 440, Serial Numbers 7003 through 7067 and 7069 through 7947.

**Compliance:** When indicated, unless already accomplished.

**Background:** A total of three aircraft have reported chafing of the two spoiler electrical cables, and the brake pressure sensor unit electrical cable, on both sides of the wing root. The chafing condition occurred where electrical cables (harnesses) are routed through two misaligned adjacent lightening holes in the wing box of both wings at Station 545. The condition can exist due to tight harness routing in this location and movement of the harnesses due to wing flex and vibration. Damages to harnesses could result in loss of function of the affected systems.

With the availability of a modification to reroute and better support the harnesses, Revision 1 of this directive is issued to mandate the incorporation of this modification as a terminating action to the repetitive visual inspection. This revision also refers to the harness inspection/repair/replacement instructions contained in recently published Bombardier Alert Service Bulletin, A601R-27-133, and updates the applicability section to include additional aircraft serial numbers that will require inspection and incorporation of the terminating action.

**Corrective Actions:**    **A. Inspection and Repair of Electrical Harnesses**

1. Using the following compliance schedules, carry out a visual inspection of the electrical harnesses of the spoiler and the brake pressure sensor unit on both sides of the wing root to detect any chafing in accordance with Accomplishment Instructions, Part A of Bombardier Alert Service Bulletin (ASB) No. A601R-27-133, Revision A, dated 16 September 2004, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

- (a) For aircraft serial numbers 7003 through 7067 and 7069 through 7351 - initially, within 500 hours air time of 20 June 2003 (the effective date of the original issue of this directive) and subsequently at intervals not exceeding 4000 hours air time or next C-check interval, whichever is later.
- (b) For aircraft serial numbers 7352 through 7947, within 500 hours air time after the effective date of this directive.

2. If harness/wire damage is found, before further flight, accomplish either of the following:

- (a) Replace damaged harnesses in accordance with the Accomplishment Instructions, Part C and/or Part D, of the above-mentioned ASB; or

- (b) Repair damaged harnesses in accordance with the Accomplishment Instructions, Part B, of the above-mentioned ASB. This repair is valid for 4000 hours air time from the time the repair is installed. Prior to reaching the 4000 hours air time limit, replace damaged harnesses in accordance with paragraph A.2.(a) above.

Note:

1. Prior inspections performed in accordance with Revision A of ASB A601R-27-101 or the original issue of ASB A601R-27-133, satisfy the requirements of paragraph A.1 of this directive.
2. Damaged harnesses replaced or repaired in accordance with the original issue or Revision A of ASB A601R-27-101, or the original issue of ASB A601R-27-133, satisfy the requirements of paragraph A.2 of this directive.

**B. Modification of Routing and Support of Electrical Harnesses**

1. Within 4000 hours air time after the effective date of this directive, modify the routing and support of the electrical harnesses of the spoiler and the brake pressure sensor unit on both sides of the wing root in accordance with the applicable Accomplishment Instructions, Part E or F of Bombardier ASB No. A601R-27-133, Revision A, dated 16 September 2004, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
2. Accomplishment of paragraph B.1 above constitutes terminating action for the inspection requirements of paragraph A of this directive.

**Authorization:** For Minister of Transport



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Chief, Continuing Airworthiness

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