



No.	CF-1999-32R3	1/3
Issue Date	21 September 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-1999-32R3

Subject: Main Landing Gear Main Fittings

Effective: 25 October 2002 (the effective date of Airworthiness Directive CF-1999-32R2).

Revision: Supersedes Airworthiness Directive CF-1999-32R2 issued 19 September 2002.

Applicability: Bombardier Inc. Model CL-600-2B19 "Regional Jet" aircraft equipped with main landing gear fittings P/N 601R85001-3 and -4 (MDI P/N 17064-101, -102, -103, and -104).

Compliance: When indicated, unless already accomplished.

Background: Three cases of premature failure of the main landing gear main fitting were originally reported. The reports indicated that a circumferential crack was found on the main landing gear main fitting at the radius between the fitting cylinder area and the upper attachment lug for the shock strut. The original issue of this directive mandated a repetitive eddy current inspection of the main landing gear main fitting. Further investigation revealed that, under certain conditions, a mis-serviced shock strut could lead to the premature failure of this fitting. The directive was revised to Revision 1 to add servicing of the main landing gear shock struts, and repetitive inspection of the shock strut for nitrogen pressure and visible chrome dimensions.

Subsequently, another premature failure of the main landing gear main fitting was reported. The laboratory examination confirmed that the failure was at the identical location but is of a different failure mode than previously encountered. As a result of this recent main landing gear failure, this directive was revised to Revision 2 to eliminate the escalation of the eddy current inspection interval. In addition, this revision also introduces a detailed visual inspection of the main fitting to supplement the eddy current inspection.

Transport Canada has certified the new design of the main landing gear main fitting, part numbers, 601R85001-83 and 601R85001-84 (MDI P/N 17064-107 and -108) as a terminating modification. This directive has been revised to Revision 3 to mandate the retrofit of all in-service CL-600-2B19 "Regional Jet" aircraft with the redesigned main fitting and to terminate the need to comply with Parts I, II, III, IV and V of this directive as well as with the requirements of Airworthiness Directive CF-2004-18R1.

Corrective Actions: **Part I - Eddy Current Inspection of Main Fittings**

1. Initially, in accordance with the following schedule, whichever occurs first:
 - (a) Upon accumulating a total of 1,500 flight cycles since new, or within 150 flight cycles after 7 January 2000, whichever occurs later;
 - (b) Upon accumulating a total of 1,000 flight cycles since new, or within 150 flight cycles after the effective date of this Directive, whichever occurs later;

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

Perform an eddy current inspection in accordance with Part B of the Accomplishment Instructions of Bombardier Alert Service Bulletin (ASB), A601R-32-079, Revision E, dated 12 September 2002, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada.

Eddy current inspections performed prior to the effective date of this directive in accordance with previous revisions of ASB A601R-32-079 satisfy the requirements of this Part I.

2. Subsequently, at intervals not to exceed 500 flight cycles, repeat the inspection detailed in Part I, paragraph 1 above.
3. If the repetitive inspection interval has been increased as stipulated in Revision 1 of this directive, dated 22 January 2001, the next eddy current inspection must be performed within 500 flight cycles after the effective date of this directive, or 1,000 flight cycles since the last eddy current inspection, whichever occurs first, and thereafter at intervals not to exceed 500 flight cycles.
4. Replace any cracked main landing gear main fitting prior to further flight.

Part II - Detailed Visual Inspection of Main Fittings

1. Upon accumulating a total of 1,000 flight cycles since new, or within 250 flight cycles after the effective date of this directive, whichever occurs later, perform a detailed visual inspection in accordance with Part A of the Accomplishment Instructions of Bombardier Alert Service Bulletin, A601R-32-079, Revision E, dated 12 September 2002, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada.
2. Subsequently, at intervals not to exceed 100 flight cycles, repeat the inspection detailed in Part II, paragraph 1 above.
3. If any of the following is detected by the visual inspection, prior to further flight, perform either an eddy current inspection in accordance with Part B or a fluorescent penetrant inspection in accordance with Part F, of the Accomplishment Instructions of Bombardier Alert Service Bulletin, A601R-32-079, Revision E, dated 12 September 2002, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada:
 - (a) Linear paint cracks oriented along the circumference of the main fitting tube
 - (b) Lack of paint (paint peeling) or any other paint damage
 - (c) Evidence of lack of adhesion or paint bulging
 - (d) Evidence of corrosion

If an eddy current inspection is used to confirm the visual inspection, the next eddy current inspection as required in part I, paragraph 2 of this directive may be conducted no later than 500 flight cycles effective from the date of completing this inspection, and thereafter at intervals not to exceed 500 flight cycles.

4. If no cracks have been found, prior to further flight, repaint and/or repair/rework the above-mentioned paint damage if detected in accordance with the above-noted ASB A601R-32-079, Revision E.
5. Replace any cracked main landing gear main fitting prior to further flight.

Part III - Servicing of Shock Struts

Upon accumulating a total of 1,500 flight cycles since new, or within 500 flight cycles after 2 March 2001, whichever occurs later, service both the left and right main landing gear shock struts in accordance with the applicable Part C or D of the Accomplishment Instructions of Bombardier ASB, A601R-32-079, Revision E, dated 12 September 2002,