



No.	CF-2003-09R1	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-2003-09R1
- Subject:** Main Landing Gear Main Fittings
- Effective:** 6 June 2003 (the effective date of Airworthiness Directive CF-2003-09).
- Revision:** Supersedes Airworthiness Directive CF-2003-09 issued 23 April 2003.
- Applicability:** Bombardier Inc. Model CL-600-2B19 "Regional Jet" aircraft equipped with main landing gear main fittings, P/N 601R85001-81 and 601R85001-82 (MDI P/N 17064-105 and 17064-106).

Compliance: When indicated, unless already accomplished.

Background: Following the in-service failures of the main landing gear main fittings, P/N 601R85001-3 and -4, the main landing gear main fittings, P/N 601R85001-81/-82, were introduced as an interim design improvement prior to the completion of the investigation of the in-service failures of -3/-4 main fittings. As a result of the investigation findings, Bombardier/Messier-Dowty had conducted further analysis of the -81/-82 main fittings and concluded that the structural integrity of -81/-82 configurations is also susceptible to premature cracking.

To prevent the collapse of the main landing gear upon landing, this Directive requires repetitive detailed visual and eddy current inspection of the main landing gear main fittings, and repetitive inspection of the main landing gear shock strut, for nitrogen pressure and visible chrome dimensions.

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 1 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.

Corrective Actions: Part I - Detailed Visual Inspection of Main Fittings

1. For each main fitting, upon accumulating a total of 2,500 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 (ASB), A601R-32-088, dated 20 February 2003, 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 I, paragraph 1 above.
3. If any of the following are detected by the visual inspection, prior to further flight, perform either eddy current or fluorescent penetrant inspection respectively in

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



accordance with Part B or Part F of the Accomplishment Instructions of Bombardier Alert Service Bulletin, A601R-32-088, dated 20 February 2003, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada:

- (a) Linear paint cracks
- (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 II, paragraph 2 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-32-088.
- 5. If cracked, replace main landing gear main fitting prior to further flight.

Part II - Eddy Current Inspection of Main Fittings

- 1. For each main fitting, upon accumulating a total of 2,500 flight cycles since new, or within 250 flight cycles after the effective date of this Directive, whichever occurs later, perform an eddy current inspection in accordance with Part B of the Accomplishment Instructions of Bombardier Alert Service Bulletin (ASB), A601R-32-088, dated 20 February 2003, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada.
- 2. Subsequently, at intervals not to exceed 500 flight cycles, repeat the inspection detailed in Part II, paragraph 1 above.
- 3. Replace cracked main landing gear main fitting prior to further flight.

Part III - Servicing of Shock Struts

For each main fitting, upon accumulating a total of 2,500 flight cycles since new, or within 500 flight cycles after the effective date of this Directive, whichever occurs later, service the main landing gear shock strut in accordance with Part C or D as applicable of the Accomplishment Instructions of Bombardier Alert Service Bulletin (ASB), A601R-32-088, dated 20 February 2003, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada.

Part IV - Shock Strut Inspection

For each main fitting, within the next 500 flight cycles after completing the servicing required by Part III of this directive, and thereafter at intervals not to exceed 500 flight cycles, inspect the main landing gear shock strut for nitrogen pressure, visible chrome dimension and oil leakage in accordance with Part E of the Accomplishment Instructions of the above-noted Bombardier ASB A601R-32-088.

If the main landing gear shock strut nitrogen pressure and visible chrome dimensions are outside the limits and/or oil leakage is found, prior to further flight, service the affected main landing gear shock strut in accordance with the applicable Part C or D of the Accomplishment Instructions of the above-noted Bombardier ASB A601R-32-088.

Part V - Reporting

Within 30 days after each inspection as required in Part II above, report the positive findings to Bombardier Aerospace, via the CRJ Technical Help Desk.

Part VI - Replacement with New Main Landing Gear Main Fittings

By 31 December 2008, the main landing gear main fittings must be replaced with the new main fittings, P/N 601R85001-83 and 601R85001-84 (MDI P/N 17064-107 and 17064-108) in accordance with Bombardier SB 601R-32-093, dated 17 October 2003, or SB 601R-32-093, Revision A, dated 21 September 2004, or SB 601R-32-093, Revision B, dated 14 July 2005 or later revisions approved by Chief, Continuing Airworthiness, Transport Canada. Incorporation of the new main fittings terminates the need to comply with Parts I, II, III, IV and V of this directive.

Authorization: For Minister of Transport



B. Goyaniuk
Chief, Continuing Airworthiness

Contact: Mr. Anthony Wan, Transport Canada, Continuing Airworthiness, Ottawa, telephone 613 952-4410, facsimile 613 996-9178 or e-mail wana@tc.gc.ca or any Transport Canada Centre.