



No.	CF-2004-18R1	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-2004-18R1

Subject: Main Landing Gear Main Fittings

Effective: 16 September 2004 (the effective date of Airworthiness Directive CF-2004-18).

Revision Supersedes Airworthiness Directive CF-2004-18 issued 16 September 2004.

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

Compliance: When indicated, unless already accomplished.

Background: One report has been received of the main landing gear main fitting cracked at the section between the forward face of the main fitting on the trunnion side and the area just above the shock strut upper attach lug radius. Laboratory examination has found that the fatigue crack was initiated from a corrosion pit located on the chamfer of the inner bore of the pintle pin socket of the main landing gear main fitting. Failure of the main fitting could result in the collapse of the main landing gear.

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 and III of this directive as well as with the requirements of Airworthiness Directive CF-1999-32R3.

Corrective Action: **Part I - Detailed Visual Inspection of Lateral Surface of Main Fittings**

1. For each main fitting, initially, in accordance with the following schedule, whichever occurs later:
 - (a) Upon accumulating a total of 8,000 flight cycles or 48 months since new, whichever occurs first;
 - (b) Upon accumulating a total of 8,000 flight cycles or 48 months since last overhaul of the main landing gear, whichever occurs first; or
 - (c) Within 50 flight cycles after the effective date of this directive.

Perform a detailed visual inspection of the main fitting lateral surface for cracking in accordance with Part A of the Accomplishment Instructions of Bombardier Alert Service Bulletin (ASB), A601R-32-099, dated 15 September 2004, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, 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



2. Subsequently, at intervals not to exceed five (5) days, repeat the inspection specified in Part I, paragraph 1 above.
3. Unless required by Part II, Paragraph 3 of this directive, the repetitive inspection requirement specified in Part I, paragraph 2 above is no longer required as soon as an ultrasonic inspection as specified in Part III of this directive has been performed.
4. Replace cracked main landing gear main fitting prior to further flight.

Part II - Detailed Visual Inspection of Main Fitting Forward Bushing Sealant

1. For each main fitting, initially, in accordance with the following schedule, whichever occurs later:
 - (a) Upon accumulating a total of 8,000 flight cycles or 48 months since new, whichever occurs first,
 - (b) Upon accumulating a total of 8,000 flight cycles or 48 months since last overhaul of the main landing gear, whichever occurs first, or
 - (c) Within 500 flight cycles or 6 months after the effective date of this directive, whichever occurs first,

Perform a detailed visual inspection for sealant damage or corrosion in accordance with Part B of the Accomplishment Instructions of Bombardier Alert Service Bulletin (ASB), A601R-32-099, dated 15 September 2004, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada.

2. Subsequently, at intervals not to exceed 500 flight cycles or 6 months, whichever occurs first, repeat the inspection specified in Part II, paragraph 1 above.
3. If any of the following sealant damage or corrosion is detected:
 - i. Sealant partially or completely missing from the main fitting forward face or from the bushing flange;
 - ii. Sealant partially or completely disbonded from the main fitting forward face or from the bushing flange;
 - iii. Sealant cracked; or
 - iv. Presence of corrosion (discoloration or red colored deposit) around the bushing flange.
 - (a) Perform a detailed visual inspection of the main fitting lateral surface for cracking specified in Part I within 5 days, and thereafter at intervals not to exceed five (5) days; and
 - (b) Perform ultrasonic inspection of the main fitting lateral surface for cracking specified in Part III within 500 flight cycles or 6 months, whichever occurs first, and thereafter at intervals not to exceed 500 flight cycles or 6 months, whichever occurs first.
 - (c) As soon as an ultrasonic inspection as specified in Part II, paragraph 3(b) of this directive has been performed, the repetitive visual inspection for sealant damage or corrosion specified in Part II, paragraph 2 and the repetitive visual inspection of the main fitting lateral surface specified in Part II, paragraph 3(a) are no longer required.

Part III - Ultrasonic Inspection of Main Fittings

1. For each main fitting, initially, in accordance with the following schedule, whichever occurs later:

- (a) Upon accumulating a total of 8,000 flight cycles or 48 months since new, whichever occurs first;
- (b) Upon accumulating a total of 8,000 flight cycles or 48 months since last overhaul of the main landing gear, whichever occurs first; or
- (c) Within 500 flight cycles or 6 months after the effective date of this directive, whichever occurs first;

Perform an ultrasonic inspection in accordance with Part C of the Accomplishment Instructions of Bombardier Alert Service Bulletin (ASB), A601R-32-099, dated 15 September 2004, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada.

2. Subsequently, at intervals not to exceed 5000 flight cycles or 30 months, whichever occurs first, unless the inspection interval has been modified by Part II, paragraph 3 of this directive, repeat the inspection specified in Part III, paragraph 1 above.

3. Replace cracked main landing gear main fitting prior to further flight.

Part IV - Replacement with New Main Landing Gear Main Fittings

By 30 June 2007, both RH and LH 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 and III of this directive and with the requirements of Airworthiness Directive CF-1999-32R3.

Authorization: For Minister of Transport



B. Goyaniuk
Chief, Continuing Airworthiness

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