



No.	CF-1997-16R2	1/2
Issue Date 31 May 2001		

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-1997-16R2

Subject: Bombardier CL-600 "Challenger" - FS409 Bulkhead Fatigue Cracks

Effective: 31 May 2001.

Revision: Supersedes Airworthiness Directive (AD) CF-97-16R1 issued 3 September 1998.

Applicability: Applies to the following Bombardier Inc. CL-600 aircraft:

- | | |
|-----------------------------------|------------------|
| (i) CL-600-1A11 (CL-600) | S/N 1004 to 1085 |
| (ii) CL-600-2A12 (CL-601) | S/N 3001 to 3066 |
| (iii) CL-600-2B16 (CL-601-3A/-3R) | S/N 5001 to 5194 |
| (iv) CL-600-2B16 (CL-604) | S/N 5301 to 5352 |

Compliance: As indicated below, unless already accomplished.

Background: A check of 105 Challenger aircraft has revealed 13 aircraft with fatigue cracks in the pressure bulkhead frame at the forward end of the wing box cutout. If not corrected, the cracks could result in in-flight loss of aircraft pressurization. The original issue of this directive mandated a detailed visual inspection of fuselage frame FS409.

This revision introduces a modification which provides terminating action to the repeat inspection requirements for those aircraft that have never developed cracks.

Corrective Actions:

1. In accordance with the following schedule:

- (a) CL-600-1A11 (CL-600)
 - (i) For aircraft with 1900 or more flight cycles, initially within 100 flight cycles after 15 October 1997 (the effective date of AD CF-97-16R1); and
 - (ii) For aircraft with less than 1900 flight cycles, not later than 2000 flight cycles since new.
- (b) CL-600-2A12 (CL-601), CL-600-2B16 (CL-601-3A/-3R) and CL-600-2B16 (CL-604)
 - (i) For aircraft with 1100 or more flight cycles, initially within 100 flight cycles after 15 October 1997; and
 - (ii) For aircraft with less than 1100 flight cycles, not later than 1200 flight cycles since new.

Perform a detailed visual inspection of both the fuselage frame FS409 bulkhead web (P/N 600-32014-71/-95/-105/-137, as applicable) from the corner radius at WL 49.00, LBL 6.00 and RBL 6.00, and the angles (P/Ns 600-32014-13 and -15, or -113 and -115, as applicable) between LBL 9.0 and RBL 9.0. The inspection is to be carried out in accordance with Part 2, Accomplishment Instructions, of the applicable Bombardier service bulletin indicated in the accompanying table, or later revisions of these service bulletins approved by the Director, Aircraft Certification, Transport Canada.

Model	Service Bulletin No.	Date
CL-600-1A11 (CL-600)	600-0679	12 September 1997
CL-600-2A12 (CL-601)	601-0501	12 September 1997
CL-600-2B16 (CL-601-3A/-3R)	601-0501	12 September 1997
CL-600-2B16 (CL-604)	604-53-007	30 September 1997

2. Aircraft that are visually determined to be crack free are to be re-inspected, at intervals not exceeding 600 flight cycles, in accordance with the applicable service bulletin indicated in paragraph 1 above or later Transport Canada approved revisions. Terminating action for the 600-flight cycle repeat inspection can be achieved through incorporation of the modification detailed by the applicable service bulletin in the table below, or later Transport Canada approved revisions.

Model	Service Bulletin No.	Date
CL-600-1A11 (CL-600)	600-0680	30 November 1999
CL-600-2A12 (CL-601)	601-0503	30 November 1999
CL-600-2B16 (CL-601-3A/-3R)	601-0503	30 November 1999
CL-600-2B16 (CL-604)	604-53-006	30 November 1999

3. Aircraft that are visually determined to have cracks that do not extend up to the angles, specified in paragraph 1 above, may only be returned to service under the following conditions:
- (a) No more than one crack exists at each corner; and
 - (b) Angles on the aft side of the web are visually confirmed to be crack free; and
 - (c) No crack extends under the angles; and
 - (d) Aircraft shall be reinspected at intervals not exceeding 100 flight cycles; and
 - (e) The cracked bulkhead is to be repaired prior to the aircraft accumulating 600 flight cycles or within 12 months, whichever occurs first, after the date of initial detection of the crack.
4. Aircraft that have cracks in excess of those specified in paragraph 3 require repair prior to further flight.
5. Report findings of all cracks to Bombardier Business Aircraft Division, Customer Support, telephone (514) 855-7453.

Authorization: For Minister of Transport



B. Goyaniuk
Chief, Continuing Airworthiness

Contact: Mr. Ian McLellan, Continuing Airworthiness, Ottawa, telephone (613) 952-4362, facsimile (613) 996-9178 or e-mail mclelli@tc.gc.ca or any Transport Canada Centre.