



|            |              |     |
|------------|--------------|-----|
| No.        | CF-2003-23R3 | 1/3 |
| Issue Date | 21 May 2010  |     |

# 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) 521 Division X**. 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), National Aircraft Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

**Number:** CF- 2003-23R3

**Subject:** Main Landing Gear Door Separation During Flight

**Effective:** 9 June 2010

**Revision:** Supersedes Airworthiness Directive (AD) CF-2003-23R2 issued on 27 July 2005

**Applicability:** Bombardier CL-600-2C10 Serial Number 10003 through 10230, CL-600-2D15 and CL-600-2D24 Serial Number 15001 through 15053, 15055, and 15056.

**Compliance:** As indicated below unless already accomplished.

**Background:** The right-hand inboard main landing gear (MLG) door of a CRJ 700 departed the aircraft during the landing phase of flight. The door damaged the trailing edge flap and punctured the rear fuselage near the floor level. The aircraft landed safely. Preliminary investigation indicates the failure was initiated by fatigue of the panel structure near a panel hinge lug. Loss of the main landing gear door during flight could result in damage to the aircraft and injury to persons on the ground.

Subsequent to the issuance of Revision 1 of this directive, Transport Canada (TC) approved an alternate means of compliance (AMOC), AARDG 2004/A007, to allow extension of the repeat inspection interval when inboard MLG doors have incorporated certain repairs or modifications.

Subsequent to the issuance of the TC AMOC AARDG 2004/A007, an inboard MLG door departed from an aircraft operating under an AMOC equivalent to TC AMOC AARDG 2004/007. As a result of this incident, this directive was revised to Revision 2 to introduce additional inspection requirements according to Bombardier Alert Service Bulletin A670-32-016. In addition, Revision 2 also eliminated escalation of the repeat inspection interval allowed in TC AMOC AARDG 2004/007 and revised the aircraft applicability to add a new aircraft model.

Since the issuance of Revision 2 of this directive, TC approved an AMOC, AARDG 2006-A051, to allow the installation of a new modified MLG door configuration and to perform alternative inspection. Service history shows that this new modified MLG door configuration resolves the safety concerns associated with this directive.

Revision 3 of this directive mandates the incorporation of the new modified MLG door configuration in accordance with Bombardier Aerospace Service Bulletin (SB) 670BA-32-017 as the terminating action. In addition, this revision restricts the applicability to aircraft not equipped with the new modified MLG door configuration at delivery.

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**

## Corrective Actions:

### Initial Inspection

Applicable for aircraft that have not carried out the initial inspection mandated in the original issue, Revision 1, or Revision 2 of this directive.

1. Using the following schedule, inspect both left hand (L/H) and right hand (R/H) inboard MLG doors for damages, in accordance with Part A of the Accomplishment Instructions of Bombardier Alert Service Bulletin (ASB) A670-32-016, Revision A, dated 7 June 2005, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada:
  - (a) For aircraft that have accumulated 1500 flight cycles or more at the effective date of this directive, before accumulating an additional 10 flight cycles;
  - (b) For aircraft that have accumulated more than 1000 flight cycles but less than 1500 flight cycles at the effective date of this directive, before accumulating an additional 50 flight cycles; and
  - (c) For aircraft that have accumulated 1000 flight cycles or less at the effective date of this directive, before the aircraft reach 1050 flight cycles.
2. If damage to any inboard MLG door is found, before further flight comply with one of the following options:
  - (a) Replace the damaged inboard MLG door(s) with new or repaired door(s) in accordance with Part B of the Accomplishment Instructions of Bombardier Alert Service Bulletin (ASB) A670-32-016, Revision A, dated 7 June 2005, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada; or
  - (b) Remove the damaged inboard MLG door(s) and return the aircraft to service under the limitations specified in Appendix 1 - Configuration Deviation List (CDL) of the applicable Airplane Flight Manual, CSP B-012 or CSP C-012.

### Repeat Inspections

3. Aircraft returned to service following the initial inspection of this directive, or previous versions of this directive, are to have the inboard MLG doors re-inspected in accordance with paragraphs 1 and 2 of this directive, at intervals not exceeding 100 flight cycles.
4. For aircraft that have increased the repeat inspection interval to 450 flight cycles through an AMOC, phase in the next repeat inspection in accordance with the following schedule and thereafter perform the repeat inspections at intervals not exceeding 100 flight cycles:
  - (a) For aircraft that have accumulated less than 50 flight cycles since the last inspection, prior to the aircraft accumulating 100 flight cycles since the last inspection.
  - (b) For aircraft that have accumulated more than or equal to 50 flight cycles but less than 400 flight cycles since the last inspection, prior to the aircraft accumulating an additional 50 flight cycles.
  - (c) For aircraft that have accumulated 400 flight cycles or more since the last inspection, prior to the aircraft accumulating 450 flight cycles since the last inspection.