



No.	CF-2007-10R1	1/6
Issue Date	18 August 2008	

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-2007-10R1

Subject: Flaps Failure

Effective: 25 August 2008

Revision: Supersedes Airworthiness Directive (AD) CF-2007-10 dated 18 July 2007.

Applicability: All Bombardier Inc. Model CL-600-2B19, serial number 7003 thru 7990 and 8000 and subsequent.

Compliance: As indicated unless already accomplished

Background: On 22 November 2006, due to weather conditions a CRJ 100 executed a missed approach. At the same time, a flaps malfunction resulted in the flaps becoming unresponsive while in the fully deployed position (45 degree). The pilot declared an emergency and diverted to the alternate airport. Due to high fuel consumption when flying in this configuration, the aircraft landed at a diversion airport with 512 pounds of fuel remaining.

The Bombardier CL-600-2B19 airplanes have had a history of flap failures at various positions for several years. Flap failure may result in a significant increase in required landing distances and higher fuel consumption than planned during a diversion. The nature of the malfunction is related to the design and reliability of some of the components of the flap system.

To lower the risk of exposure until a permanent solution becomes available, Transport Canada is implementing the following four mandatory actions:

- Part I:** AFM Change. This action is mandated to provide the crew with additional guidance information for the FLAPS FAIL abnormal procedure, to address the possibility of fuel exhaustion resulting from a flaps failure at other than 0 degrees, in combination with a diversion to an alternate airport.
- Part II:** Operational Procedures: The operational procedures mandated herein are aimed at reducing or eliminating the risk caused by flaps failures. These Operational Procedures cover the three most critical flaps failure modes.
- Part III:** Training Procedures: This action is mandated to provide personnel with training on the operational procedures of Part II of this directive and instruction on zero flap landing.
- Part IV:** Maintenance Actions: The maintenance actions are mandated to improve overall Flaps System reliability and bring the failure rate to an acceptable level, until permanent solutions are implemented.

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

This AD has been revised to enhance the Flaps System performance through the introduction of modified flaps actuators (internal seal), change to temperature limitations, and change to flaps operating speeds.

In addition, this AD revision also adds an additional maintenance requirement following a flap fail event and introduction of a cockpit placard associated with new operating limitations.

**Corrective
Actions:**

Part I. AFM Change:

- A. Within 30 days after 31 July 2007 (the effective date of the original issue of this directive)
 1. Amend the AFM by inserting Temporary Revision (TR) RJ/165, dated 18 April 2007 or later approved revisions.
 2. Advise all flight crew members and operational control/dispatch of the changes introduced through the AFM TR RJ/165.
 3. Advise all flight crewmembers and operational control/dispatch of the operational procedures mandated in part II below.
- B. Within 30 days after the effective date of this directive:
 1. Amend the AFM by inserting TR RJ/165-1, dated 7 August 2008 or later approved revisions.
 2. Advise all flight crew members and operational control/dispatch of the changes introduced through the AFM TR RJ/165-1.
 3. Advise all flight crewmembers and operational control/dispatch of the operational procedures changes incorporated by the above mentioned TR.

Part II. Operational Procedures:

Except as specified (in Part II, Paragraphs 3.b. and 3.c.), within 30 days after 31 July 2007 (the effective date of the original issue of this directive) operators shall comply with the more restrictive of the procedures in this AD, applicable regulations and/or established Standard Operating Procedures (SOPs). The following operational procedures are imposed:

1. Flap Extended Diversion

Upon arrival at the destination airport, an approach shall not be commenced, nor shall the flaps be extended beyond the 0 degree position, unless one of the following conditions exists:

- a. When conducting a precision approach, the reported visibility (or RVR) is confirmed to be at or above the visibility associated with the landing minima for the approach in use, and can be reasonably expected to remain at or above this visibility until after landing; or
- b. When conducting a non-precision approach, the reported ceiling and visibility (or RVR) are confirmed to be at or above the ceiling and visibility associated with the landing minima for the approach in use, and can be reasonably expected to remain at or above this ceiling and visibility until after landing; or
- c. An emergency or abnormal situation occurs that requires landing at the nearest suitable airport; or