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No. CF-2014-19 Issue Date 20 June 2014

# EMERGENCY 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-2014-19

ATA: 78 Type Certificate: A-131

Subject: Engine Exhaust - Engine Thrust Reverser Actuator Attachment Structure Failure

Effective Date: 20 June 2014

Applicability: Bombardier Inc. model CL-600-1A11 aeroplanes, serial numbers 1004 to 1085.

Compliance: As indicated below, unless already accomplished.

**Background:** There have been two reported incidents of partial deployment of an engine thrust reverser in-flight, caused by a failure of the translating sleeve at the thrust reverser actuator attachment points. Inspection of the same area on some other thrust reversers revealed cracks emanating from the holes under the nut plates.

In both incidents, the affected aeroplane landed safely without any noticeable controllability issues, however structural failure of thrust reverser actuator attachment points resulting in thrust reverser deployment or dislodgment in flight is a safety hazard warranting an immediate mitigating action.

To help in mitigating any immediate safety hazard, Bombardier Inc. has revised the Aircraft Flight Manual (AFM) through Temporary Revisions (TR) 600/29, 600/30, 600-1/24 and 600-1/26, to prohibit the thrust reverser operation on affected aeroplanes. Additionally, as an interim corrective action, Bombardier Inc. has issued alert service bulletin (ASB) A600-0769 requiring an inspection and/or a mechanical lock out of the thrust reverser to prevent it from moving out of forward thrust mode.

This AD is issued to mandate the incorporation of revised AFM procedures per TR 600/29, 600/30, 600-1/24 and 600-1/26 and compliance with ASB A600-0769 for all affected CL-600-1A11 aeroplanes.

### Corrective Part 1 - AFM Revision

Actions: Within 24 hours of the effective date of this AD, amend the AFM for the affected CL-600-1A11 aeroplanes by incorporating the procedural changes introduced through TR 600/30, 600-1/26 dated 14 June 2014 and TR 600/29, 600-1/24 dated 20 June 2014, as applicable, or later revisions of these procedures as approved by Transport Canada.

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



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.

## Part 2 - Inspection For Cracks

Within 25 flight cycles or 90 days, whichever occurs first, from the effective date of this AD, comply with Part 2 paragraph A or Part 2 paragraph B of this AD.

### A-Inspection

Inspect both engine thrust reversers on the affected aeroplanes and perform repeat inspections every 100 flight cycles, in accordance with the Part A instructions of ASB A600-0769 dated 19 June 2014 or later revision approved by the Chief, Continuing Airworthiness, Transport Canada. If any crack is found, comply with paragraph B below prior to next flight.

## **B** - Modification Of Thrust Reverser

Modify the thrust reversers on both engines of the affected aeroplanes in accordance with Part B of ASB A600-0769 dated 19 June 2014 or later revision approved by the Chief, Continuing Airworthiness, Transport Canada.

Compliance with Part 2 paragraph B of this AD is the terminating action for the Part 2 paragraph A requirements of this AD.

#### Part 3

Within 24 months from the compliance with Part 2 paragraph B of this AD, repair/modify the affected thrust reversers in accordance with methods developed by Bombardier Inc. and approved by the Chief Continuing Airworthiness, Transport Canada.

Authorization: For the Minister of Transport,

ORIGINAL SIGNED BY

Derek Ferguson Chief, Continuing Airworthiness

**Contact:** A K Durrani, Continuing Airworthiness, Ottawa, telephone 613-952-4357, facsimile 613-996-9178 or e-mail <u>AD-CN@tc.gc.ca</u> or any Transport Canada Centre.