



FAA
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EMERGENCY

AIRWORTHINESS DIRECTIVE

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DATE: August 19, 2014

AD #: 2014-17-51

Emergency Airworthiness Directive (AD) 2014-17-51 is sent to owners and operators of Bombardier, Inc. Model CL-600-2B16 airplanes.

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Emergency Airworthiness Directive CF-2014-27, dated August 15, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition on certain Model CL-600-2B16 airplanes. The MCAI states:

There have been three in-service reports on 604 Variant aeroplanes of a fractured fastener head on the inboard flap hinge-box forward fitting at Wing Station (WS) 76.50, found during a routine maintenance inspection. Investigation revealed that the installation of these fasteners on the inboard flap hinge-box forward fittings at WS 76.50 and WS 127.25, on both wings, does not conform to the engineering drawings. Incorrect installation may result in premature failure of the fasteners attaching the inboard flap hinge-box forward fitting. Failure of the fasteners could lead to the detachment of the flap hinge box and consequently the detachment of the flap surface. The loss of a flap surface could adversely affect the continued safe operation of the aeroplane.

The original issue of AD CF-2013-39 [dated December 6, 2013] [which corresponds to FAA AD 2014-03-17, Amendment 39-17754 (79 FR 9389, February 19, 2014)] mandated a detailed visual inspection (DVI) of each inboard flap hinge-box forward fitting, on both wings, and rectification as required. Incorrectly oriented fasteners require repetitive inspections until the terminating action is accomplished.

After the issuance of AD CF-2013-39, there has been one reported incident on a 604 Variant aeroplane where four fasteners were found fractured on the same flap hinge-box forward fitting. The investigation determined that the fasteners were incorrectly installed.

This [Canadian] AD is issued to reduce the initial and repetitive inspection intervals previously mandated in AD CF-2013-39, and to impose replacement of the incorrectly oriented fasteners within 24 months. The CL-600-1A11, -2A12 and -2B16 (601-3A/-3R Variant) aeroplanes are addressed through AD CF-2013-39R1 [dated August 15, 2014].

Relevant Service Information

We reviewed the following service information:

- Bombardier Alert Service Bulletin A604-57-006, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013.
- Bombardier Alert Service Bulletin A604-57-006, Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013.
- Bombardier Alert Service Bulletin A605-57-004, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013.
- Bombardier Alert Service Bulletin A605-57-004, Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013.

The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

Revision 02 of the service information instructs operators to contact Bombardier for repair procedures for certain configurations; paragraph (k)(2) of this AD addresses this issue.

FAA’s Determination and AD Requirements

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Accomplishment of the requirements of this AD constitutes terminating action for the requirements of AD 2014-03-17, Amendment 39-17754 (79 FR 9389, February 19, 2014), for the airplanes identified in paragraph (c) of this AD.

FAA AD 2014-03-17, Amendment 39-17754 (79 FR 9389, February 19, 2014), corresponds to Canadian AD CF-2013-39, dated December 6, 2013. FAA AD 2014-03-17 applies to Bombardier, Inc. Model CL-600-1A11 (CL-600), CL-600-2A12 (CL-601), and CL-600-2B16 (CL-601-3A, CL-601-3R, and CL-604 Variants) airplanes. Because of the urgency of this unsafe condition for the CL-604 Variant airplanes, we have determined that it is necessary to issue an emergency AD, only for CL-604 Variant airplanes, to reduce the compliance times for the inspection required by AD 2014-03-17.

Explanation of Applicability

This AD applies to Bombardier, Inc. Model CL-600-2B16 airplanes with certain serial numbers. The CL-605 is a marketing designation for the Challenger CL-600-2B16, CL-604 Variant, with Modsums 604DX10000, 604DX20000, and 604DX30000 incorporated, beginning with serial numbers 5701 and subsequent. All CL-604 and CL-605 airplanes are type certified as CL-600-2B16 airplanes. Therefore this AD applies to all CL-600-2B16 models in the specified serial-number range.

Differences Between This AD and the MCAI/Service Information

Canadian Airworthiness Directive CF-2014-27, dated August 15, 2014, specifies to replace all forward and aft fasteners at WS 76.50 and 127.25 within 24 months, if any incorrectly installed fasteners are found. We are considering requiring this replacement, which would terminate the actions required by this AD. However, the planned compliance time for the replacement would allow

enough time to provide notice and opportunity for prior public comment on the merits of the replacement.

Although the service information identified previously specifies that operators may contact the manufacturer for disposition of certain repair conditions, this AD requires operators to repair those conditions in accordance with a method approved by the FAA, or the TCCA, or Bombardier, Inc.'s TCCA Design Approval Organization (DAO).

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Presentation of the Actual AD

We are issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

2014-17-51 Bombardier, Inc.: Directorate Identifier 2014-NM-167-AD.

(a) Effective Date

This Emergency AD is effective upon receipt.

(b) Affected ADs

The requirements of this AD terminate the requirements of AD 2014-03-17, Amendment 39-17754 (79 FR 9389, February 19, 2014), only for the airplanes identified in paragraph (c) of this AD.

(c) Applicability

This AD applies to Bombardier, Inc. Model CL-600-2B16 airplanes, certificated in any category, serial numbers 5301 through 5665 inclusive, and 5701 through 5920 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by reports of fractured fastener heads on the inboard flap hinge-box forward fitting at Wing Station (WS) 76.50 due to incorrect installation. We are issuing this AD to detect and correct incorrectly oriented or fractured fasteners, which could result in premature failure of the fasteners attaching the inboard flap hinge-box forward fitting. Failure of the fasteners could

lead to the detachment of the flap hinge box and the flap surface, and consequent loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection: Airplanes Not Previously Inspected

For airplanes on which the actions required by AD 2014-03-17, Amendment 39-17754 (79 FR 9389, February 19, 2014), have not been done as of receipt of this AD: Within 10 flight cycles after receipt of this AD, or within 100 flight cycles after March 6, 2014 (the effective date of AD 2014-03-17, Amendment 39-17754 (79 FR 9389, February 19, 2014)), whichever occurs first: Do a detailed visual inspection of each inboard flap fastener of the hinge-box forward fitting at WS 76.50 and WS 127.25, on both wings, to determine if the fasteners are correctly oriented and intact (non-fractured, with intact fastener head). Do the inspection in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A604-57-006, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5301 through 5665 inclusive); or Bombardier Alert Service Bulletin A605-57-004, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5701 through 5920 inclusive).

(1) If all fasteners are found intact and correctly oriented, no further action is required by this AD.

(2) If any fastener is found fractured: Before further flight, remove and replace all forward and aft fasteners at WS 76.50 and WS 127.25, regardless of condition or orientation, on both wings, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A604-57-006, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5301 through 5665 inclusive); or Bombardier Alert Service Bulletin A605-57-004, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5701 through 5920 inclusive). After replacement of all fasteners as required by paragraph (g)(2) of this AD, no further action is required by this AD.

(3) If any incorrectly oriented but intact fastener is found, and no fractured fastener is found, repeat the inspection required by paragraph (g) of this AD thereafter at intervals not to exceed 10 flight cycles, until the requirements of paragraph (i)(1) of this AD have been done.

(h) Airplanes Previously Inspected, With Incorrectly Oriented Fastener(s)

For airplanes on which an inspection required by paragraph (g) or (j) of AD 2014-03-17, Amendment 39-17754 (79 FR 9389, February 19, 2014), has been done as of receipt of this AD, and on which any incorrectly oriented fastener, but no fractured fastener, was found: Except as provided by paragraph (i)(3) of this AD, do a detailed visual inspection of all inboard flap fasteners of the hinge-box forward fitting at WS 76.50 and WS 127.25, on both wings, to determine if the fasteners are intact (non-fractured, with intact fastener head). Inspect within 10 flight cycles after receipt of this AD, or within 100 flight cycles after the most recent inspection done as required by AD 2014-03-17, whichever occurs first. Inspect in accordance with the Accomplishment Instructions of Bombardier

Alert Service Bulletin A604-57-006, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5301 through 5665 inclusive); or Bombardier Alert Service Bulletin A605-57-004, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5701 through 5920 inclusive).

(1) If all fasteners are found intact, repeat the inspection thereafter at intervals not to exceed 10 flight cycles, until the requirements of paragraph (i)(1) of this AD have been done.

(2) If any fastener is found fractured: Before further flight, remove and replace all forward and aft fasteners at WS 76.50 and WS 127.25, regardless of condition or orientation, on both wings, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A604-57-006, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5301 through 5665 inclusive); or Bombardier Alert Service Bulletin A605-57-004, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5701 through 5920 inclusive). After replacement of all fasteners as required by paragraph (h)(2) of this AD, no further action is required by this AD.

(i) Terminating Action

(1) Replacement of all forward and aft fasteners at WS 76.50 and WS 127.25, on both wings, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A604-57-006, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5301 through 5665 inclusive); or Bombardier Alert Service Bulletin A605-57-004, Revision 01, dated September 26, 2013, including Appendices 1 and 2, dated September 26, 2013, or Revision 02, dated January 22, 2014, including Appendices 1 and 2, dated September 26, 2013 (for serial numbers 5701 through 5920 inclusive); terminates the requirements of this AD.

(2) Accomplishment of the applicable requirements of this AD constitutes terminating action for the requirements of AD 2014-03-17, Amendment 39-17754 (79 FR 9389, February 19, 2014), for that airplane only.

(3) Replacement, before receipt of this AD, of all fractured and incorrectly oriented fasteners, as provided by paragraph (i) or (k) of AD 2014-03-17, Amendment 39-17754 (79 FR 9389, February 19, 2014), is acceptable for compliance with the requirements of this AD.

(j) Special Flight Permit

Special flight permits to operate the airplane to a location where the airplane can be repaired in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) are not allowed.

(k) Other FAA Provisions

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending

information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York Aircraft Certification Office, ANE-170, FAA; or the TCCA; or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(I) Related Information

(1) For further information about this AD, contact: Aziz Ahmed, Aerospace Engineer, Propulsion and Services Branch, ANE-173, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531.

(2) For copies of the service information referenced in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA.

Issued in Renton, Washington, on August 19, 2014.

Original signed by:
Kevin Hull
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.