



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2018-0587; Product Identifier 2018-NM-054-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc., Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2012-22-10, which applies to certain Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. AD 2012-22-10 requires repetitive inspections to determine that cotter pins are installed at affected wing-to-fuselage attachment joints and replacement if necessary. Since we issued AD 2012-22-10, we determined that additional nuts of the forward keel beam attachment joint should be inspected, and that repetitive inspections of certain wing-to-fuselage attachment joints are not necessary. This proposed AD would retain the initial inspection of the wing-to-fuselage attachment joints, and remove the repetitive inspections of all but the forward keel beam attachment joint. This proposed AD would also change the repetitive inspection interval for the forward keel beam attachment joint. We are proposing this AD to address the unsafe condition on

these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone 514-855-5000; fax 514-855-7401; e-mail [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by

searching for and locating Docket No. FAA-2018-0587; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Aziz Ahmed, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2018-0587; Product Identifier 2018-NM-054-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

## **Discussion**

We issued AD 2012-22-10, Amendment 39-17246 (77 FR 67267, November 9, 2012) (“AD 2012-22-10”), for certain Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. AD 2012-22-10 requires repetitive inspections to determine that cotter pins are installed at affected wing-to-fuselage attachment joints and replacement if necessary. AD 2012-22-10 resulted from a report that certain wing-to-fuselage attachment nuts do not conform to the certification design requirements for dual locking features. We issued AD 2012-22-10 to prevent loss of wing-to-fuselage attachment joints, which could result in the loss of the wing.

## **Actions Since AD 2012-22-10 Was Issued**

Since we issued AD 2012-22-10, we determined that additional nuts of the forward keel beam attachment joint should be inspected, and that repetitive inspections of certain wing-to-fuselage attachment joints are not necessary.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, issued Canadian AD CF-2012-10R1, dated January 22, 2018 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. The MCAI states:

The manufacturer has determined that wing-to-fuselage attachment nuts, part number (P/N) SH670-35635-1, SH670-35440-951, SH670-35440-3, SH670-35635-1, and 95136D-2412, installed at six attachment joint locations, do not conform to the certification design requirements for dual locking features. The nuts are not of the self-locking type as required and do not provide the frictional thread interference required to prevent the nut from backing off the bolt. As a result, only a single locking device, the cotter pin, is provided at these critical joints. In the case where a nut becomes loose, in combination with a missing or broken cotter pin, the attachment bolt at the wing-to-fuselage joint could migrate and fall out. Loss of two attachment joints could potentially result in the loss of the wing.

The original version of this [Canadian] AD [which corresponds to FAA AD 2012-22-10] mandated initial and repeat detailed visual inspections (DVI) of each affected wing-to-fuselage attachment joint to ensure that a cotter pin was installed.

Design review and analysis of the inspection findings since the original issue of this [Canadian] AD have led us to determine that additional nuts at the forward keel beam joint should also be included in the inspection and that the repetitive inspection of some wing-to-fuselage attachment joints is not required. This [Canadian] AD maintains the initial inspection requirements [for missing or failed (...) cotter pins] for six attachment joint locations, and removes the repetitive inspection requirements for all but the forward keel beam attachment joint. This [Canadian] AD also requires a different repetitive inspection interval, and the [Canadian] AD applicability has been changed for the initial inspection to account for changes made in production.

### **Related Service Information under 1 CFR part 51**

Bombardier, Inc. has issued Service Bulletin 670BA-53-042, Revision B, dated October 20, 2017. This service information describes procedures for detailed inspections of the wing-to-fuselage attachment joints, and of the attachment nuts at the forward keel

beam attachment joint for missing or failed cotter pins. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

**FAA’s Determination and Requirements of this Proposed AD**

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 proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of these same type design.

**Costs of Compliance**

We estimate that this proposed AD affects 274 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

**Estimated costs for required actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
11 work-hours X \$85 per hour = \$935	\$100	\$1,035	\$283,590

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD. We have no way of determining the number of aircraft that may need these actions.

**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.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866,
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
3. Will not affect intrastate aviation in Alaska, and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

**PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2012-22-10, Amendment 39-17246 (77 FR 67267, November 9, 2012), and adding the following new AD:

**Bombardier, Inc.:** Docket No. FAA-2018-0587; Product Identifier 2018-NM-054-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2012-22-10, Amendment 39-17246 (77 FR 67267, November 9, 2012) (“AD 2012-22-10”).

**(c) Applicability**

This AD applies to the airplanes identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD, certificated in any category.

(1) Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, serial numbers 10002 and subsequent.

(2) Bombardier, Inc., Model CL-600-2D15 (Regional Jet Series 705) airplanes and Model CL-600-2D24 (Regional Jet Series 900) airplanes, serial numbers 15001 and subsequent.

(3) Bombardier, Inc., Model CL-600-2E25 (Regional Jet Series 1000) airplanes, serial numbers 19001 and subsequent.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by a report that certain wing-to-fuselage attachment nuts do not conform to the certification design requirements for dual locking features, and a determination that additional nuts of the forward keel beam attachment joint should be

inspected, and that repetitive inspections of certain wing-to-fuselage attachment joints are not necessary. We are issuing this AD to address loss of the wing-to-fuselage attachment joints, which could result in loss of the wing, and consequent reduced, or complete loss of, controllability of the airplane.

**(f) Compliance**

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

**(g) Initial Inspection of the Wing-to-Fuselage Attachment Joint**

For airplanes identified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD: Within 3,000 flight hours or 18 months, whichever occurs first after December 14, 2012 (the effective date of AD 2012-22-10), perform a detailed inspection for missing or failed cotter pins at each affected wing-to-fuselage attachment joint, in accordance with Part A through Part C of the Accomplishment Instructions of Bombardier Service Bulletin 670BA-53-042, Revision B, dated October 20, 2017.

(1) Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, serial numbers 10002 through 10337 inclusive.

(2) Bombardier, Inc., Model CL-600-2D15 (Regional Jet Series 705) airplanes and Model CL-600-2D24 (Regional Jet Series 900) airplanes, serial numbers 15001 through 15299 inclusive.

(3) Bombardier, Inc., Model CL-600-2E25 (Regional Jet Series 1000) airplanes, serial numbers 19001 through 19037 inclusive.

**(h) Initial and Repetitive Inspections of the Attachment Nuts at the Forward Keel Beam Attachment Joint**

Within the compliance time specified in figure 1 to paragraph (h) of this AD:

Perform a detailed inspection of the attachment nuts at the forward keel beam attachment joint for missing or failed cotter pins, in accordance with Part D of the Accomplishment Instructions of Bombardier Service Bulletin 670BA-53-042, Revision B, dated October 20, 2017. Repeat the inspection thereafter at intervals not to exceed 8,800 flight hours, in accordance with Part E of the Accomplishment Instructions of Bombardier Service Bulletin 670BA-53-042, Revision B, dated October 20, 2017.

**Figure 1 to Paragraph (h) of this AD –**  
*Compliance Time for Initial Inspection of Attachment Nuts at Forward Keel Beam Attachment Joint*

<b>Airplane Model and Serial Numbers (S/Ns)</b>	<b>Compliance Time</b>
Model CL-600-2C10 S/Ns 10002 through 10337 inclusive	Within 3,000 flight hours or 18 months, whichever occurs first after December 14, 2012 (the effective date of AD 2012-22-10)
Model CL-600-2C10 S/Ns 10338 and subsequent	Within 8,800 flight hours after the effective date of this AD
Model CL-600-2D15 and CL-600-2D24 S/Ns 15001 and subsequent	
Model CL-600-2E25 S/Ns 19001 and subsequent	

**(i) Corrective Action**

If any cotter pin is found missing or failed during any inspection required by this AD: Before further flight, replace the cotter pin using a method approved by the Manager, New York ACO Branch FAA; or Transport Canada Civil Aviation (TCCA); or

Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(j) Credit for Previous Actions**

(1) This paragraph provides credit for the initial inspections required by paragraphs (g) and (h) of this AD, if the inspection was performed before the effective date of this AD, using Bombardier Service Bulletin 670BA-53-042, dated December 21, 2011; or Bombardier Service Bulletin 670BA-53-042, Revision A, dated April 27, 2012.

(2) For Model CL-600-2C10 airplanes, S/Ns 10002 through 10337 inclusive: This paragraph provides credit for the initial inspection required by paragraph (h) of this AD, if the inspection was performed before the effective date of this AD, using Bombardier Service Bulletin 670BA-53-042, dated December 21, 2011; or Bombardier Service Bulletin 670BA-53-042, Revision A, dated April 27, 2012.

**(k) Other FAA AD Provisions**

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, New York ACO Branch, 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 manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone: 516-228-7300; fax: 516-794-5531.

(i) 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.

(ii) AMOCs approved previously for AD 2012-22-10, are approved as AMOCs for the corresponding provisions in paragraphs (g) and (h) of 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 ACO Branch, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

**(1) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2012-10R1, dated January 22, 2018, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0587.

(2) For more information about this AD, contact Aziz Ahmed, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531.

(3) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone 514-855-5000; fax 514-855-7401; e-mail [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on June 27, 2018.

Dionne Palermo,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

[FR Doc. 2018-14506 Filed: 7/6/2018 8:45 am; Publication Date: 7/9/2018]