[Federal Register Volume 84, Number 114 (Thursday, June 13, 2019)]
[Rules and Regulations]
[Pages 27503-27506]
From the Federal Register Online via the Government Publishing Office [www.gpo.gov]
[FR Doc No: 2019-12351]

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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-0024; Product Identifier 2018-NM-138-AD; Amendment 39-19640; AD 2019-10-01]**

**RIN 2120-AA64**

# Airworthiness Directives; Bombardier, Inc., Airplanes

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model CL-600-2A12 (601) airplanes. This AD was prompted by a report of damage to the anti-rotation tab on a main landing gear (MLG) side brace fitting due to the installation of an incorrect side brace fitting shaft. This AD requires an inspection of the MLG side brace fitting for damage, a verification of the side brace fitting shaft part number, and replacement of the side brace fitting shaft if necessary. It also requires the installation of an anti-rotation bracket. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective July 18, 2019.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of July 18, 2019.

**ADDRESSES:** For service information identified in this final rule, contact Bombardier, Inc., 200 Côte-Vertu Road West, Dorval, Québec H4S 2A3, Canada; North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; email 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. It is also available on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2019-0024.

## 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-2019-0024; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the

regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Aziz Ahmed, Aerospace Engineer, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone: 516-287-7329; fax: 516-794-5531; email: Aziz.Ahmed@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model CL-600-2A12 (601) airplanes. The NPRM published in the Federal Register on February 28, 2019 (84 FR 6705). The NPRM was prompted by a report of damage to the anti-rotation tab on an MLG side brace fitting due to the installation of an incorrect side brace fitting shaft. The NPRM proposed to require an inspection of the MLG side brace fitting for damage, a verification of the side brace fitting shaft part number, and replacement of the side brace fitting shaft if necessary. It also proposed to require the installation of an anti-rotation bracket.

We are issuing this AD to address premature cracking of the MLG side brace fitting. This condition, if not corrected, could lead to the collapse of the MLG, resulting in structural damage to the wing spar and fuel tank.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF-2018-19, dated July 20, 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-600-2A12 (601) airplanes. The MCAI states:

> There has been a report of damage to the anti-rotation tab on a Main Landing Gear (MLG) Side Brace fitting. Investigation of the report revealed that a Challenger model CL600 MLG Side Brace shaft had been installed on a Challenger model CL601 Side Brace fitting. Due to the difference in size, this will result in changes to the way the load is transferred between the shaft and the MLG Side Brace fitting and may result in premature cracking of the MLG Side Brace fitting. This condition, if not corrected, could lead to the collapse of the MLG resulting in structural damage to the wing spar and fuel tank.
>
> This [Canadian] AD mandates an inspection of the MLG Side Brace fitting and shaft to verify that the correct shaft part number (P/N) is installed and the fitting is not damaged [damage includes cracking, scratches, gouges, corrosion, defects, and incorrect inner diameter tolerance]. If the Challenger CL600 shaft is installed, this AD mandates replacement with the correct Challenger model CL601 part. If the correct P/N is found installed, this [Canadian] AD also mandates the installation of a bracket to prevent the incorrect part from being installed in the future.
>
> You may examine the MCAI in the AD docket on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2019-0024.

## Comments

We gave the public the opportunity to participate in developing this final rule. We received no comments on the NPRM or on the determination of the cost to the public.

## Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. We have determined that these minor changes:

Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and

Do not add any additional burden upon the public than was already proposed in the NPRM.

## Related Service Information Under 1 CFR Part 51

Bombardier has issued Service Bulletin 601-0624, Revision 02, dated January 29, 2018. This service information describes procedures for inspecting the MLG side brace fitting and side brace fitting shaft, installing a replacement side brace fitting shaft if necessary, and installing an anti-rotation bracket.

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.

## Costs of Compliance

We estimate that this AD affects 9 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

**Estimated Costs for Required Actions**

| Labor cost | Parts cost | Cost per product | Cost on U.S. operators |
|---|---|---|---|
| 4 work-hours × $85 per hour = $340 | $397 | $737 | $6,633 |

We estimate the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. We have no way of determining the number of aircraft that might need these on-condition actions:

**Estimated Costs of On-Condition Actions**

| Labor cost | Parts cost | Cost per product |
|---|---|---|
| 8 work-hours × $85 per hour = $680 | $7,989 | $8,669 |

## 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 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 and associated appliances to the Director of the System Oversight Division.

**Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will 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 that this AD:

(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.

**Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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 adding the following new airworthiness directive (AD):

**2019-10-01 Bombardier, Inc.:** Amendment 39-19640; Docket No. FAA-2019-0024; Product Identifier 2018-NM-138-AD.

**(a) Effective Date**

This AD is effective July 18, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc., Model CL-600-2A12 (601) airplanes, certificated in any category, serial numbers (S/N) 3001 through 3009 inclusive and 3011 through 3029 inclusive.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by a report of damage to the anti-rotation tab on a main landing gear (MLG) side brace fitting due to the installation of an incorrect side brace fitting shaft. We are issuing this AD to address premature cracking of the MLG side brace fitting. This condition, if not corrected, could lead to the collapse of the MLG, resulting in structural damage to the wing spar and fuel tank.

**(f) Compliance**

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

**(g) Inspection for Damage and Identification of the Side Brace Fitting Shaft Part Number**

Within 400 flight cycles or 12 months, whichever occurs first, after the effective date of this AD, do the actions specified in paragraphs (g)(1) and (g)(2) of this AD.

(1) Identify the part number of the installed side brace fitting shaft.

(2) Do a detailed visual inspection (DVI) of the side brace fitting for signs of damage, including cracking and gouges, in accordance with paragraph 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin 601-0624, Revision 02, dated January 29, 2018.

**(h) Installation of Anti-Rotation Bracket**

(1) For airplanes on which a side brace fitting shaft having P/N 600-10237-3 is installed and the actions required by paragraph (g) of this AD are done on or after the effective date of this AD: Before

further flight, modify the MLG side brace fitting by installing the anti-rotation bracket in accordance with paragraph 2.C. of the Accomplishment Instructions of Bombardier Service Bulletin 601-0624, Revision 02, dated January 29, 2018.

(2) For airplanes on which a side brace fitting shaft having P/N 600-10237-3 is installed and the actions required by paragraph (g) of this AD were done before the effective date of this AD: Within 6 months after the effective date of this AD, modify the MLG side brace fitting by installing the anti-rotation bracket in accordance with paragraph 2.C. of the Accomplishment Instructions of Bombardier Service Bulletin 601-0624, Revision 02, dated January 29, 2018.

**(i) Replacement of the Side Brace Fitting Shaft and Installation of the Anti-Rotation Bracket**

(1) For airplanes on which a side brace fitting shaft having P/N 600-10237-1 or 600-10237-5 is installed and damage is found during the DVI of the side brace fitting: Before further flight, do a DVI of the anti-rotation tab and side brace fitting aft bushing for cracking, scratches, gouges, corrosion, and inner diameter tolerance, and a special detailed inspection (SDI) of the side brace fitting aft bore for cracks and defects; perform applicable repairs; replace the side brace fitting shaft with a side brace fitting shaft having P/N 600-10237-3; and install the anti-rotation bracket in accordance with paragraph 2.D. of the Accomplishment Instructions of Bombardier Service Bulletin 601-0624, Revision 02, dated January 29, 2018.

(2) For airplanes on which a side brace fitting shaft having P/N 600-10237-1 or 600-10237-5 is installed and no damage is found during the DVI of the side brace fitting: Within 300 flight cycles or 12 months, whichever occurs first, after the inspection required by paragraph (g)(2) of this AD, do a DVI of the anti-rotation tab and side brace fitting aft bushing for cracking, scratches, gouges, corrosion, and inner diameter tolerance, and an SDI of the side brace fitting aft bore for cracks and defects; perform applicable repairs; replace the side brace fitting shaft with a side brace fitting shaft having P/N 600-10237-3; and install the anti-rotation bracket in accordance with paragraph 2.D. of the Accomplishment Instructions of Bombardier Service Bulletin 601-0624, Revision 02, dated January 29, 2018.

**(j) Exceptions to Service Information**

Where Bombardier Service Bulletin 601-0624, Revision 02, dated January 29, 2018, specifies contacting Bombardier's Customer Support Engineering for repair instructions: This AD requires doing the repair before further flight using a method approved in accordance with the procedures specified in paragraph (l)(2) of this AD.

**(k) Credit for Previous Actions**

(1) For an airplane on which a side brace fitting shaft having P/N 600-10237-3 is installed: This paragraph provides credit for actions required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 601-0624, dated October 1, 2012; or Bombardier Service Bulletin 601-0624, Revision 01, dated March 29, 2017.

(2) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 601-0624, dated October 1, 2012; or Bombardier Service Bulletin 601-0624, Revision 01, dated March 29, 2017, provided that the side brace fitting shaft was identified as having P/N 600-10237-3 and within 6 months after the effective date of this AD, the MLG side brace fitting is modified by installing the anti-rotation bracket in accordance with paragraph 2.C. of the Accomplishment Instructions of Bombardier Service Bulletin 601-0624, Revision 02, dated January 29, 2018.

(3) This paragraph provides credit for actions required by paragraphs (g) and (i) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin

601-0624, Revision 01, dated March 29, 2017, provided that any side brace fitting shaft having P/N 600-10237-1 or P/N 600-10237-5 was identified and replaced with a side brace fitting shaft having P/N 600-10237-3, and the anti-rotation bracket was installed in accordance with paragraph 2.D. of the Accomplishment Instructions of Bombardier Service Bulletin 601-0624, Revision 01, dated March 29, 2017.

**(l) Other FAA AD Provisions**

The following provisions also apply to this AD:

(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, 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.

(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 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.

**(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2018-19, dated July 20, 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-2019-0024.

(2) For more information about this AD, contact Aziz Ahmed, Aerospace Engineer, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone: 516-287-7329; fax: 516-794-5531; email: Aziz.Ahmed@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (n)(3) and (n)(4) of this AD.

**(n) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 601-0624, Revision 02, dated January 29, 2018.

(ii) [Reserved]

(3) For service information identified in this AD, contact Bombardier, Inc., 200 Côte-Vertu Road West, Dorval, Québec H4S 2A3, Canada; North America toll-free telephone: 1-866-538-1247 or direct-dial telephone: 1-514-855-2999; email: ac.yul@aero.bombardier.com; internet: http://www.bombardier.com.

(4) 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.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Des Moines, Washington, on May 29, 2019.

Michael Kaszycki,
Acting Director, System Oversight Division,
Aircraft Certification Service.