[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0876; Product Identifier 2019-NM-070-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes. This proposed AD was prompted by a report that cracking was discovered in a channel within a structural support member for the rudder quadrant, rudder feel unit assembly, and environmental control system due to fatigue. This proposed AD would require repetitive inspections of the rudder quadrant box assembly for any cracking, and modification of the rudder quadrant box assembly. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA 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 https://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; telephone 514-855-5000; fax 514-855-7401; email thd.crj@aero.bombardier.com; Internet https://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.

Examining the AD Docket

You may examine the AD docket on the Internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2019-0876; 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 NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Andrea Jimenez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7330; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites 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-2019-0876; Product Identifier 2019-NM-070-AD" at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. The FAA will consider all comments received by the closing date and may amend this NPRM because of those comments.

The FAA will post all comments received, without change, to https://www.regulations.gov, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this NPRM.

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2019-11, dated March 22, 2019 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain Bombardier, Inc., Model

BD-700-1A10 and BD-700-1A11 airplanes. You may examine the MCAI in the AD docket on the Internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2019-0876.

This proposed AD was prompted by a report that cracking was discovered in a channel within a structural support member for the rudder quadrant, rudder feel unit assembly, and environmental control system due to fatigue. The FAA is proposing this AD to address cracking in the rudder quadrant support structure, which can lead to progressive deterioration in the performance of the systems it supports, and could eventually lead to uncommanded rudder movement and bleed air leakage. See the MCAI for additional background information.

Related Service Information under 1 CFR part 51

Bombardier has issued the following service information.

- Bombardier Service Bulletin 700-53-054, dated October 1, 2018.
- Bombardier Service Bulletin 700-53-5013, dated October 1, 2018.
- Bombardier Service Bulletin 700-53-6012, dated October 1, 2018.
- Bombardier Service Bulletin 700-1A11-53-029, dated October 1, 2018.

This service information describes procedures for repetitive detailed visual inspections of the rudder quadrant box assembly for any cracking. These documents are distinct since they apply to different airplane models.

Bombardier also issued the following service information:

- Bombardier Service Bulletin 700-53-052, dated October 1, 2018.
- Bombardier Service Bulletin 700-53-6010, dated October 1, 2018.

- Bombardier Service Bulletin 700-1A11-53-027, dated October 1, 2018.
- Bombardier Service Bulletin 700-53-5011, dated October 1, 2018.

This service information describes procedures for modification of the rudder quadrant box assembly. The modification includes surface and bolt-hole eddy current inspections for cracking of the left-hand (LH) channel; a detailed visual inspection for cracking of the forward and aft half ribs and bottom and top skins; replacement of the rudder quadrant box half ribs, air systems support fitting, and LH channel; and installation of new rudder quadrant box back-up fittings. These documents are distinct since they apply to different airplane models.

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

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to a bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed Requirements of this NPRM

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between this Proposed AD and the MCAI or Service Information."

Differences Between this Proposed AD and the MCAI or Service Information

Canadian Airworthiness Directive CF-2019-11, dated March 22, 2019, states that if any cracking is found during the repetitive detailed visual inspections of the rudder quadrant box assembly, the repair can be done within 100 flight cycles after the inspection. However, this AD requires that, for the LH channel, if the length of the crack exceeds the upper limit, the repair must be done before further flight. In addition, if the length of the crack for the LH channel is within the upper limit, the repair must be done within 50 flight cycles. These differences have been coordinated with TCCA.

Costs of Compliance

The FAA estimates that this proposed AD affects 123 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
2 work-hours X $85 per hour = $170 per inspection cycle	$0	$170 per inspection cycle	$20,910 per inspection cycle

The FAA estimates the following costs to do any necessary on-condition action that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need this on-condition action:

Estimated costs of on-condition action

Labor cost	Parts cost	Cost per product
46 work-hours X $85 per hour = $3,910	$355	$4,265

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.

The FAA is 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 and associated appliances to the Director of the System Oversight Division.

Regulatory Findings

The FAA has 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. Will not affect intrastate aviation in Alaska; and

3. 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 adding the following new airworthiness directive (AD):

Bombardier, Inc.: Docket No. FAA-2019-0876; Product Identifier 2019-NM-070-AD.

(a) Comments Due Date

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

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes, certificated in any category, serial numbers 9001 through 9844 inclusive, and 9998.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Reason

This AD was prompted by a report that cracking was discovered in a channel within a structural support member for the rudder quadrant, rudder feel unit assembly, and environmental control system due to fatigue. The FAA is issuing this AD to address cracking in the rudder quadrant support structure, which can lead to progressive deterioration in the performance of the systems it supports, and could eventually lead to uncommanded rudder movement and bleed air leakage.

(f) Compliance

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

(g) Initial and Repetitive Inspections

For airplanes that have accumulated fewer than 2,900 total flight cycles as of the effective date of this AD, and that have not been modified as specified in paragraph (i) of this AD: At the applicable time specified in paragraph (g)(1) or (2) of this AD, do a detailed visual inspection for cracking of the rudder quadrant box assembly, in accordance with paragraph 2.B. of the Accomplishment Instructions of the applicable service bulletin specified in figure 1 to paragraph (g) of this AD. Repeat the inspection thereafter at intervals not to exceed 1,000 flight cycles.

(1) For airplanes that have accumulated fewer than 2,000 total flight cycles as of the effective date of this AD: Inspect within 1,000 flight cycles after the effective date of this AD.

(2) For airplanes that have accumulated 2,000 total flight cycles or more, but fewer than 2,900 total flight cycles, as of the effective date of this AD: Inspect within 100 flight cycles after the effective date of this AD.

Figure 1 to paragraph (g) – *Inspection Service Information*

Airplane Model	Service Information
BD-700-1A10 airplanes having serial numbers 9002 through 9312 inclusive, 9314 through 9380 inclusive, and 9384 through 9429 inclusive	Bombardier Service Bulletin 700-53-054, dated October 1, 2018
BD-700-1A10 airplanes having serial numbers 9313, 9381, and 9432 through 9844 inclusive	Bombardier Service Bulletin 700-53-6012, dated October 1, 2018
BD-700-1A11 airplanes having serial numbers 9127 through 9383 inclusive, 9389 through 9400 inclusive, 9404 through 9431 inclusive, and 9998	Bombardier Service Bulletin 700-1A11-53-029, dated October 1, 2018

Airplane Model	Service Information
BD-700-1A11 airplanes having serial numbers 9386, 9401, and 9445 through 9840 inclusive	Bombardier Service Bulletin 700-53-5013, dated October 1, 2018

(h) Corrective Actions for Inspection Findings

If any cracking is found during the inspection specified in paragraph (g) of this AD, do the actions specified in paragraph (i) of this AD at the applicable time specified in paragraphs (h)(1) through (4) of this AD.

(1) If any crack of 1.20 inch (30.48 mm) or longer is found on the forward (FWD) upper half rib: Do the actions within 100 flight cycles after discovery of the crack.

(2) If any crack of 0.40 inch (10.16 mm) or longer is found on the AFT lower half rib, do the actions within 100 flight cycles after discovery of the crack.

(3) If any crack is found on the left-hand (LH) channel that has grown from the air system's support fitting aft fastener hole to the adjacent air systems support fitting fastener hole (which is 0.625 inch (15.88 mm) from hole edge to hole edge) or longer, do the actions before further flight.

(4) If any crack is found on the LH channel that is less than 0.625 inch (15.88 mm) from hole edge to hole edge (which is the distance from the air system's support fitting aft fastener hole to the adjacent air system's support fitting fastener hole), do the actions within 50 flight cycles after discovery of the crack.

(i) Modification of the Rudder Quadrant Box Assembly

At the applicable time specified in paragraph (i)(1) or (2) of this AD, except as required by paragraph (h) of this AD: Modify the rudder quadrant box assembly. The

modification includes surface and bolt-hole eddy current inspections for cracking of the left-hand channel; a detailed visual inspection for cracking of the forward and aft half ribs and bottom and top skins; applicable corrective actions; replacement of the rudder quadrant box half ribs, air systems support fitting, and LH channel; and installation of new rudder quadrant box back-up fittings. Do the modification and associated actions in accordance with paragraph 2.B., 2.C., and 2.D., of the Accomplishment Instructions of the applicable service bulletin specified in figure 2 to paragraph (i) of this AD; except, where the applicable service bulletin specifies to contact Bombardier for appropriate action, corrective actions must be done before further flight in accordance with the procedures specified in paragraph (l)(2) of this AD.

(1) For airplanes that have accumulated 2,900 total flight cycles or fewer as of the effective date of this AD, do the required actions before the accumulation of 3,000 total flight cycles, or within 60 months after the effective date of this AD, whichever occurs first.

(2) For airplanes that have accumulated more than 2,900 total flight cycles as of the effective date of this AD, do the required actions within 100 flight cycles or 12 months, whichever occurs first, after the effective date of this AD.

Figure 2 to paragraph (i) – *Modification Service Information*

Airplane Model	Service Information
BD-700-1A10 airplanes having serial numbers 9002 through 9312 inclusive, 9314 through 9380 inclusive, and 9384 through 9429 inclusive	Bombardier Service Bulletin 700-53-052, dated October 1, 2018
BD-700-1A10 airplanes having serial numbers 9313, 9381, and 9432 through 9844 inclusive	Bombardier Service Bulletin 700-53-6010, dated October 1, 2018.

Airplane Model	Service Information
BD-700-1A11 airplanes having serial numbers 9127 through 9383 inclusive, 9389 through 9400 inclusive, 9404 through 9431 inclusive, and 9998	Bombardier Service Bulletin 700-1A11-53-027, dated October 1, 2018
BD-700-1A11 airplanes having serial numbers 9386, 9401, and 9445 through 9840 inclusive	Bombardier Service Bulletin 700-53-5011, dated October 1, 2018

(j) Alternative Modification

Airplanes that have been modified as specified by any modification identified in paragraph (j)(1) through (4) of this AD (which are not required by this AD), meet the requirements specified in paragraph (i) of this AD.

(1) Bombardier Repair Modification R700T400669, Revision C, dated January 19, 2018, or Bombardier Repair Modification R700T400669, Revision G, dated May 30, 2018.

(2) Bombardier In-Service Modification IS700-53-0024, Revision A, dated July 24, 2018.

(3) Bombardier Service Request for Product Support Action (SRPSA) 000220372.

(4) Bombardier Service Request for Product Support Action (SRPSA) 000271526.

(k) Terminating Action for Repetitive Inspections

Accomplishing the actions in paragraph (i) or (j) of this AD terminates all of the requirements in paragraph (g) of this AD.

(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 Canada'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 Airworthiness Directive CF-2019-11, dated March 22, 2019, for related information. This MCAI may be found in the AD docket on the Internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2019-0876.

(2) For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7330; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(3) For service information identified 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 https://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 November 21, 2019.

Dorr Anderson,
Acting Director,
System Oversight Division,
Aircraft Certification Service.

[FR Doc. 2019-25719 Filed: 12/13/2019 8:45 am; Publication Date: 12/16/2019]