



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2024-1483; Project Identifier MCAI-2023-01094-T; Amendment
39-22924; AD 2024-26-09]**

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2021-10-02, which applied to all Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes. AD 2021-10-02 required repetitive general visual inspections of the left- and right-hand elevator torque tube bearings for any sand, dust, or corrosion; repetitive functional tests of the elevator control system; and replacement of the elevator torque tube bearings if necessary. This AD continues to require certain actions in AD 2021-10-02 and requires revising the existing maintenance or inspection program, as applicable, to incorporate a new airworthiness limitation. This AD was prompted by a determination that a new airworthiness limitation is necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of July 29, 2021 (86 FR 33088, June 24, 2021).

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2024-1483; 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 mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations 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.

Material Incorporated by Reference:

- For Bombardier material identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; website bombardier.com.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety 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 at regulations.gov under Docket No. FAA-2024-1483.

FOR FURTHER INFORMATION CONTACT: Gabriel Kim, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2021-10-02, Amendment 39-21535 (86 FR 33088, June 24, 2021) (AD 2021-10-02). AD 2021-10-02 applied to all Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes. AD 2021-10-02 required repetitive general visual inspections of the left- and right-hand elevator torque tube bearings for any sand, dust, or corrosion; repetitive functional tests of the elevator control system; and replacement of the elevator torque tube bearings if necessary. The FAA issued AD 2021-10-02 to address sand contamination and corrosion of the elevator torque tube bearings, which could lead to binding or seizure of the bearings, and potentially lead to a reduction in or loss of airplane pitch control.

The NPRM published in the *Federal Register* on June 12, 2024 (89 FR 49819). The NPRM was prompted by AD CF-2020-29R1, dated October 20, 2023, issued by Transport Canada, which is the aviation authority for Canada (Transport Canada AD CF-2020-29R1) (also referred to as the MCAI). The MCAI states that data collected from the reports mandated by Transport Canada AD CF-2020-29, dated August 21, 2020, was used to validate inspection intervals, which have been integrated into new certification maintenance requirement (CMR) tasks. The MCAI also states that Transport Canada AD CF-2020-29R1 mandates the new CMR tasks while giving credit for initial and repetitive inspections already performed, revises the applicability to exclude airplanes delivered with the new CMRs, and removes the reporting requirement.

In the NPRM, the FAA proposed to continue to require certain actions in AD 2021-10-02. In the NPRM, the FAA also proposed to require revising the existing maintenance or inspection program, as applicable, to incorporate a new airworthiness limitation. The FAA is issuing this AD to address sand contamination and corrosion of

the elevator torque tube bearings, which could lead to binding or seizure of the bearings, and potentially lead to a reduction in or loss of airplane pitch control.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-1483.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from an anonymous commenter who supported the NPRM without change.

The FAA received an additional comment from Bombardier. The following presents the comment received on the NPRM and the FAA's response to that comment.

Request for Alternative Source of Airplane Date of Manufacture

Bombardier requested a revision to paragraph (g) of the proposed AD to accommodate airplanes on which the identification data plate no longer specifies the date of manufacture. Bombardier stated that, for airplanes with serial numbers 60042 and 60045 and subsequent, the airplane identification data plate no longer specifies the date of manufacture. Instead, Bombardier added, the date of manufacture is identified in an airplane's technical records such as a technical log or technical logbook. Bombardier explained that the date in the technical records is validated by a Bombardier Minister's Delegate-Manufacturing (MDM), and that it believed this to be equivalent to the date on the identification data plate. Bombardier stated that it applied for and received a global alternative method of compliance (AMOC) for AD 2021-10-02 that contains the requested change.

The FAA agrees. The date of manufacture found either on the identification data plate of the airplane or in the airplane technical logbook may be used to determine when inspections required in paragraph (g) of this AD must be performed. The FAA has revised paragraph (g) of this AD accordingly. The FAA has also revised paragraph (l) of

this AD to clarify that AMOCs approved previously for AD 2021-10-02 are approved as AMOCs for the corresponding provisions of paragraph (g) of this AD.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference under 1 CFR Part 51

The FAA reviewed the following Bombardier temporary revisions:

- Bombardier Global Express, BD-700 Time Limits/Maintenance Checks
Temporary Revision 5-2-53, dated March 31, 2023 (for Model BD-700-1A10 airplanes);
- Bombardier Global Express XRS, BD-700 Time Limits/Maintenance Checks
Temporary Revision 5-2-15, dated March 31, 2023 (for Model BD-700-1A10 airplanes);
- Bombardier Global 6000, GL 6000 Time Limits/Maintenance Checks
Temporary Revision 5-2-20, dated March 31, 2023 (for Model BD-700-1A10 airplanes);
- (Bombardier) Global 6500, GL 6500 Time Limits/Maintenance Checks
Temporary Revision 5-2-3, dated March 31, 2023 (for Model BD-700-1A10 airplanes);
- Bombardier Global 5000, BD-700 Time Limits/Maintenance Checks
Temporary Revision 5-2-21, dated March 31, 2023 (for Model BD-700-1A11 airplanes);

- Bombardier Global 5000, GL 5000 Featuring Global Vision Flight Deck - Time Limits/Maintenance Checks Temporary Revision 5-2-20, dated March 31, 2023 (for Model BD-700-1A11 airplanes); and

- (Bombardier) Global 5500, Time Limits/Maintenance Checks GL 5500 Temporary Revision, 5-2-3, dated March 31, 2023 (for Model BD-700-1A11 airplanes).

This material specifies an airworthiness limitation for a certification maintenance requirement. These documents are distinct since they apply to different airplane models and configurations.

This AD also requires the following material, which the Director of the Federal Register approved for incorporation by reference as of July 29, 2021 (86 FR 33088, June 24, 2021).

- Bombardier Service Bulletin 700-1A11-27-041, Revision 1, dated December 7, 2020.
- Bombardier Service Bulletin 700-27-083, Revision 1, dated December 7, 2020.
- Bombardier Service Bulletin 700-27-5012, Revision 1, dated December 7, 2020.
- Bombardier Service Bulletin 700-27-5503, Revision 1, dated December 7, 2020.
- Bombardier Service Bulletin 700-27-6012, Revision 1, dated December 7, 2020.
- Bombardier Service Bulletin 700-27-6503, Revision 1, dated December 7, 2020.

This material 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

The FAA estimates that this AD affects 461 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

The FAA has determined that revising the maintenance or inspection program takes an average of 90 work-hours per operator, although the agency recognizes that this

number may vary from operator to operator. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), the FAA has determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, the agency estimates the average total cost per operator to be \$7,650 (90 work-hours x \$85 per work-hour).

The FAA estimates the total cost per operator for the new actions to be \$7,650 (90 work-hours x \$85 per work-hour).

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions from AD 2021-10-02	22 work-hours X \$85 per hour = \$1,870	Up to \$4 (for four cotter pins)*	Up to \$1,874	Up to \$863,914

* Parts cost include replacement parts where necessary.

The FAA estimates the following costs to do any necessary on-condition actions 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 actions

Labor cost	Parts cost	Cost per product
5 work-hours X \$85 per hour = \$425	\$271 (for four bearings)	\$696

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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.

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) 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 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:

a. Removing Airworthiness Directive (AD) 2021-10-02, Amendment 39-21535 (86 FR 33088, June 24, 2021); and

b. Adding the following new AD:

2024-26-09 Bombardier, Inc.: Amendment 39-22924; Docket No. FAA-2024-1483; Project Identifier MCAI-2023-01094-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2021-10-02, Amendment 39-21535 (86 FR 33088, June 24, 2021) (AD 2021-10-02).

(c) Applicability

This AD applies to Bombardier, Inc., Model BD-700-1A10 and BD-700-1A11 airplanes, certificated in any category, having serial numbers 9002 through 60081 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 05, Time Limits/Maintenance Checks; 27, Flight Controls.

(e) Reason

This AD was prompted by a determination that a new airworthiness limitation is necessary. The FAA is issuing this AD to address sand contamination and corrosion of the elevator torque tube bearings, which could lead to binding or seizure of the bearings, and potentially lead to a reduction in or loss of airplane pitch control.

(f) Compliance

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

(g) Retained Inspection and Corrective Actions, With Change

This paragraph restates the requirements of paragraph (g) of AD 2021-10-02, with a change to table 1 to paragraph (g), which identifies the airplane marketing designation instead of the serial number range, and a change to add an additional source for identifying the date of airplane manufacture. Within 36 months from July 29, 2021 (the effective date of AD 2021-10-02) or within 63 months from the date of airplane manufacture, as identified on the identification data plate of the airplane or in the airplane technical logbook, whichever occurs later: Do a general visual inspection of the left- and right-hand elevator torque tube bearings for any sand, dust, or corrosion; perform a functional test of the elevator control system; and do all applicable corrective actions; in accordance with the Accomplishment Instructions of paragraphs 2.B., 2.C., and 2.D. of the applicable material specified in table 1 to paragraph (g) of this AD. Applicable corrective actions must be done before further flight. Repeat the general visual inspection and functional test thereafter at intervals not to exceed 63 months. Accomplishing the revision of the existing maintenance or inspection program required by paragraph (i) of this AD terminates the requirements of this paragraph.

Table 1 to paragraph (g) – Service Information

For Model–	With Marketing Designation–	Use Bombardier Service Bulletin–
BD-700-1A10 airplanes	Global Express or Global Express XRS	700-27-083, Revision 1, dated December 7, 2020
BD-700-1A10 airplanes	Global 6000	700-27-6012, Revision 1, dated December 7, 2020
BD-700-1A10 airplanes	Global 6500	700-27-6503, Revision 1, dated December 7, 2020
BD-700-1A11 airplanes	Global 5000	700-1A11-27-041, Revision 1, dated December 7, 2020
BD-700-1A11 airplanes	Global 5000 Featuring Global Vision Flight Deck (GVFD)	700-27-5012, Revision 1, dated December 7, 2020
BD-700-1A11 airplanes	Global 5500	700-27-5503, Revision 1, dated December 7, 2020

(h) No Reporting Requirement

Although the material identified in table 1 to paragraph (g) of this AD specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(i) New Revision of the Existing Maintenance or Inspection Program

Within 30 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to incorporate the information specified in the applicable temporary revision identified in table 2 to paragraph (i) of this AD. The initial compliance time for doing the task is at the time specified in the applicable temporary revision identified in table 2 to paragraph (i) of this AD, or within 90 days after the effective date of this AD, whichever occurs later. Accomplishing the revision of the existing maintenance or inspection program required by this paragraph terminates the actions required by paragraph (g) of this AD.

Table 2 to paragraph (i) – Applicable Temporary Revisions

For Model–	Using Temporary Revision-
BD-700-1A10 airplanes	Bombardier Global Express, BD-700 Time Limits/Maintenance Checks Temporary Revision 5-2-53, dated March 31, 2023
BD-700-1A10 airplanes	Bombardier Global Express XRS, BD-700 Time Limits/Maintenance Checks Temporary Revision 5-2-15, dated March 31, 2023
BD-700-1A10 airplanes	Bombardier Global 6000, GL 6000 Time Limits/Maintenance Checks Temporary Revision 5-2-20, dated March 31, 2023
BD-700-1A10	(Bombardier) Global 6500, GL 6500 Time Limits/Maintenance Checks Temporary Revision 5-2-3, dated March 31, 2023
BD-700-1A11 airplanes	Bombardier Global 5000, BD-700 Time Limits/Maintenance Checks Temporary Revision 5-2-21, dated March 31, 2023
BD-700-1A11 airplanes	Bombardier Global 5000, GL 5000 Featuring Global Vision Flight Deck (GVFD) Time Limits/Maintenance Checks Temporary Revision 5-2-20, dated March 31, 2023
BD-700-1A11 airplanes	(Bombardier) Global 5500, GL 5500 Time Limits/Maintenance Checks Temporary Revision 5-2-3, dated March 31, 2023

(j) New No Alternative Actions or Intervals

After the existing maintenance or inspection program has been revised as required by paragraph (i) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions and intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (l)(1) of this AD.

(k) Credit for Previous Actions

(1) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before July 29, 2021 (the effective date of AD 2021-10-02) using the applicable material specified in paragraphs (k)(1)(i) through (vi) of this AD, which are not incorporated by reference in this AD.

(i) Bombardier Service Bulletin 700-1A11-27-041, dated July 23, 2020.

(ii) Bombardier Service Bulletin 700-27-083, dated July 23, 2020.

(iii) Bombardier Service Bulletin 700-27-5012, dated July 23, 2020.

(iv) Bombardier Service Bulletin 700-27-5503, dated July 23, 2020.

(v) Bombardier Service Bulletin 700-27-6012, dated July 23, 2020.

(vi) Bombardier Service Bulletin 700-27-6503, dated July 23, 2020.

(2) This paragraph provides credit for the initial and repetitive inspection actions required by paragraph (i) of this AD if those actions were performed before the effective date of this AD using the applicable material identified in table 1 to paragraph (g) of this AD, which were incorporated by reference in AD 2021-10-02.

(l) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Validation 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 responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (m)(1) of this AD. Information may be emailed to: AMOC@faa.gov.

(i) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(ii) AMOCs approved previously for AD 2021-10-02, are approved as AMOCs for the corresponding provisions of paragraph (g) of this AD.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or Transport Canada; or Bombardier, Inc.'s Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(m) Additional Information

(1) For more information about this AD, contact Gabriel Kim, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

(2) Material identified in this AD that is not incorporated by reference is available at the address specified in paragraph (n)(5) of this AD.

(n) Material Incorporated by Reference

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

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

(3) The following material was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) (Bombardier) Global 5500, GL 5500 Time Limits/Maintenance Checks Temporary Revision, 5-2-3, dated March 31, 2023.

(ii) (Bombardier) Global 6500, GL 6500 Time Limits/Maintenance Checks Temporary Revision 5-2-3, dated March 31, 2023.

(iii) Bombardier Global 5000, BD-700 Time Limits/Maintenance Checks Temporary Revision 5-2-21, dated March 31, 2023.

(iv) Bombardier Global 5000, GL 5000 Featuring Global Vision Flight Deck Time Limits/Maintenance Checks Temporary Revision 5-2-20, dated March 31, 2023.

(v) Bombardier Global 6000, GL 6000 Time Limits/Maintenance Checks Temporary Revision 5-2-20, dated March 31, 2023.

(vi) Bombardier Global Express, BD-700 Time Limits/Maintenance Checks Temporary Revision 5-2-53, dated March 31, 2023.

(vii) Bombardier Global Express XRS, BD-700 Time Limits/Maintenance Checks Temporary Revision 5-2-15, dated March 31, 2023.

(4) The following material was approved for IBR on July 29, 2021 (86 FR 33088, June 24, 2021).

(i) Bombardier Service Bulletin 700-1A11-27-041, Revision 1, dated December 7, 2020.

(ii) Bombardier Service Bulletin 700-27-083, Revision 1, dated December 7, 2020.

(iii) Bombardier Service Bulletin 700-27-5012, Revision 1, dated December 7, 2020.

(iv) Bombardier Service Bulletin 700-27-5503, Revision 1, dated December 7, 2020.

(v) Bombardier Service Bulletin 700-27-6012, Revision 1, dated December 7, 2020.

(vi) Bombardier Service Bulletin 700-27-6503, Revision 1, dated December 7, 2020.

(5) For Bombardier material identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; website bombardier.com.

(6) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(7) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA,

visit www.archives.gov/federal-register/cfr/ibr-locations or email

fr.inspection@nara.gov.

Issued on December 30, 2024.

Steven W. Thompson,
Acting Deputy Director, Compliance & Airworthiness Division,
Aircraft Certification Service.

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