

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0101; Project Identifier MCAI-2020-01084-T; Amendment 39-21531; AD 2021-09-17]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD-100-1A10 airplanes. This AD was prompted by a report that the inboard multi-function spoiler (MFS) surfaces failed to deploy, which was caused by missing notches on the piston seal of the MFS power control units (PCUs). This AD requires an inspection to determine if affected MFS PCUs are installed, and replacement of affected MFS PCUs. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective June 23, 2021.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of June 23, 2021.

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 phone: 1-866-538-1247 or direct-dial phone: 1-514-855-2999; email: ac.yul@aero.bombardier.com; internet: <https://www.bombardier.com>. You may view this service information 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 on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0101.

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-2021-0101; 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, 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.

FOR FURTHER INFORMATION CONTACT: Siddeeq Bacchus, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7362; fax: 516-794-5531; email: 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2020-26, dated August 4, 2020 (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain Bombardier, Inc., Model BD-100-1A10 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-2021-0101.

The FAA 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 BD-100-1A10 airplanes. The NPRM published in the Federal Register on February 26, 2021 (86 FR 11667). The NPRM was prompted by a report that the inboard MFS surfaces failed to deploy, which was caused by missing notches on the piston seal of the MFS PCUs. The NPRM proposed to require an inspection to determine if affected MFS PCUs are installed, and replacement of affected MFS PCUs. The FAA is issuing this AD to address MFS PCUs with improperly configured piston seals, which could cause degraded proportional lift dumping (PLD) function. This condition could hinder the airplane from carrying out an emergency descent, resulting in structural damage and injury to occupants. See the MCAI for additional background information.

Comments

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

Conclusion

The FAA 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. The FAA has 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 the following service information. This service information describes procedures for an inspection to determine if affected MFS PCUs are installed, and replacement of affected MFS PCUs. These documents are distinct since they apply to different airplane configurations.

- Bombardier Service Bulletin 100-27-17, Revision 03, dated June 19, 2020.
- Bombardier Service Bulletin 350-27-010, dated June 19, 2020.

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

The FAA estimates that this AD affects 630 airplanes of U.S. registry. The FAA estimates 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
Up to 19 work-hours × \$85 per hour = Up to \$1,615	Up to \$19,600 (up to 4 MFS PCUs per airplane)	Up to \$21,215 (up to 4 MFS PCUs per airplane)	Up to \$13,365,450 (up to 4 MFS PCUs per airplane)

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators. The FAA does not control warranty coverage for affected operators. As a result, the FAA has included all known costs in the cost estimate.

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.

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:



AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

2021-09-17 Bombardier, Inc.: Amendment 39-21531; Docket No. FAA-2021-0101; Project Identifier MCAI-2020-01084-T.

(a) Effective Date

This airworthiness directive (AD) is effective June 23, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc., Model BD-100-1A10 airplanes, certificated in any category, serial numbers 20003 through 20457 inclusive, and 20501 through 22999 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls.

(e) Reason

This AD was prompted by a report that the inboard multi-function spoiler (MFS) surfaces failed to deploy, which was caused by missing notches on the piston seal of the MFS power control units (PCUs). The FAA is issuing this AD to address MFS PCUs with improperly configured piston seals, which could cause degraded proportional lift dumping (PLD) function. This condition could hinder the airplane from carrying out an emergency descent, resulting in structural damage and injury to occupants.

(f) Compliance

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

(g) Definition of Affected Part

For the purpose of this AD, an affected MFS PCU is an MFS PCU that has a serial number of 0001 through 1410 inclusive, except for those MFS PCUs having the serial numbers listed in figure 1 to paragraph (g) of this AD and except for those with the suffix "A" at the end of the serial number (i.e., serial number 1025A).

Figure 1 to paragraph (g): Serial numbers that are not affected

66	605	1287	1395
72	671	1334	1396
175	720	1337	1397
200	727	1368	1400
331	728	1369	1401
441	773	1370	1403
448	778	1373	1404
449	812	1376	1405
456	831	1380	1406
470	887	1382	1407
494	991	1385	1408
495	1049	1386	1409
498	1208	1387	-
499	1236	1388	-
561	1284	1394	-

(h) Required Actions

(1) Within 12 months after the effective date of this AD: Do an inspection to determine if affected MFS PCUs are installed on the airplane in accordance with Paragraph 2.B. of Bombardier Service Bulletin 100-27-17, Revision 03, dated June 19, 2020; or Bombardier Service Bulletin 350-27-010, dated June 19, 2020; as applicable. A review of airplane maintenance records is acceptable in lieu of this inspection if the serial number of the MFS PCU can be conclusively determined from that review.

(2) Within 12 months after the effective date of this AD: Replace any affected MFS PCUs with MFS PCUs that are not affected, in accordance with Paragraphs 2.C., 2.D., 2.E., and 2.F., as applicable, of Bombardier Service Bulletin 100-27-17, Revision 03, dated June 19, 2020; or Bombardier Service Bulletin 350-27-010, dated June 19, 2020; as applicable.

(i) Parts Installation Prohibition

As of the effective date of this AD, no person may install an affected MFS PCU, on any airplane.

(j) 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 responsible Flight Standards 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; phone: 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 responsible Flight Standards Office.

(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, 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.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2020-26, dated August 4, 2020, 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-2021-0101.

(2) For more information about this AD, contact Siddeeq Bacchus, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7362; fax: 516-794-5531; email: 9-avs-nyaco-cos@faa.gov.

(l) 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 100-27-17, Revision 03, dated June 19, 2020.

(ii) Bombardier Service Bulletin 350-27-010, dated June 19, 2020.

(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 phone: 1-866-538-1247 or direct-dial phone: 1-514-855-2999; email: ac.yul@aero.bombardier.com; internet: <https://www.bombardier.com>.

(4) You may view this service information 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.

(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, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on April 23, 2021.
Gaetano A. Sciortino,
Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division, Aircraft
Certification Service.
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