[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1890; Project Identifier MCAI-2023-00283-T]

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 all Bombardier, Inc., Model BD-100-1A10 airplanes. This proposed AD was prompted by reports from the supplier that some overheat detection sensing elements of the bleed air leak detection system were manufactured with insufficient salt fill, which can result in an inability to detect hot bleed air leaks. This proposed AD would require revising the existing airplane flight manual (AFM) to include procedures to prevent takeoff with an active bleed air leak annunciated while on the ground. This proposed AD would also require testing the overheat detection sensing elements, marking each serviceable sensing element with a witness mark, and replacing each nonserviceable part with a serviceable part. This proposed AD would also prohibit the installation of affected parts. 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 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.

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2023-1890; 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 mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

• For Bombardier service information identified in this NPRM, 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.

• For Liebherr-Aerospace Toulouse SAS service information identified in this NPRM, contact Liebherr-Aerospace Toulouse SAS, 408, Avenue des Etats-Unis – B.P.52010, 31016 Toulouse Cedex, France; telephone +33 (0)5.61.35.28.28; fax +33 (0)5.61.35.29.29; email: techpub.toulouse@liebherr.com; website: liebherr.aero.

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

FOR FURTHER INFORMATION CONTACT: Steven Dzierzynski, 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:

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 ADDRESSES. Include "Docket No. FAA-2023-1890; Project Identifier MCAI-2023-00283-T" at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Steven Dzierzynski, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email: 9-avs-nyaco-cos@faa.gov. Any commentary that the

FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

Transport Canada, which is the aviation authority for Canada, has issued Transport Canada AD CF-2023-09, dated February 14, 2023 (Transport Canada AD CF-2023-09) (also referred to after this as the MCAI), to correct an unsafe condition on all Bombardier, Inc., Model BD-100-1A10 airplanes. The MCAI states that Bombardier received reports from the supplier of the overheat detection sensing elements of a manufacturing quality escape. Some of the sensing elements of the bleed air leak detection system were manufactured with insufficient salt fill. This condition can result in an inability to detect hot bleed air leaks, which can cause damage to surrounding structures and systems and prevent continued safe flight and landing.

The FAA is proposing this AD to address the unsafe condition on these products. You may examine the MCAI in the AD docket at regulations.gov under Docket No. FAA-2023-1890.

Related Service Information under 1 CFR Part 51

The FAA reviewed Liebherr Service Bulletin CFD-F1958-26-01, dated May 6, 2022, which specifies part numbers for affected sensing elements.

Bombardier has issued the following service information. This service information describes procedures to prevent the take-off of an airplane with an active bleed air leak annunciated while on the ground. These documents are distinct since they apply to different airplane models.

- Section 05-42, Air Conditioning & Pressurization, Non-Normal Procedures Section, Bombardier Challenger 300 AFM (Imperial Version), Publication No. CSP 100-1, Revision 71, dated November 9, 2022. (For obtaining the procedures for Bombardier Challenger 300 AFM (Imperial Version), Publication No. CSP 100-1, use

Document Identification No. CH 300 AFM-I.)

- Section 05-42, Air Conditioning & Pressurization, Non-Normal Procedures Section, Bombardier Challenger 350 AFM, Publication No. CH 350 AFM, Revision 37, dated November 9, 2022. (For obtaining the procedures for Bombardier Challenger 350 AFM, Publication No. CH 350 AFM, use Document Identification No. CH 350 AFM.)

The FAA also reviewed Bombardier Service Bulletin 100-36-10, dated December 23, 2022; and Bombardier Service Bulletin 350-36-003, dated December 23, 2022; which specify procedures for testing each leak detection loop (LDL) sensing element installed on the airplane, marking each serviceable sensing element with a witness mark, and replacing each nonserviceable part with a serviceable part. 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 the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI and service information described above. The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would require revising the existing AFM to include procedures to prevent takeoff with an active bleed air leak annunciated while on the ground. This proposed AD would also require accomplishing the actions specified in the service

information already described. This proposed AD would also prohibit the installation of affected parts.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 317 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
Up to 77 work-hours X $85 per hour = $6,545	$0	Up to $6,545	Up to $2,428,195

The FAA has received no definitive data on which to base the cost estimates for the on-condition actions specified in this proposed AD. The FAA estimates it would take up to 1.5 hours to replace one sensor.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this proposed 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

The FAA 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) Would not affect intrastate aviation in Alaska, and

(3) Would 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:

Bombardier, Inc.: Docket No. FAA-2023-1890; Project Identifier MCAI-2023-00283-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Bombardier, Inc., Model BD-100-1A10 airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code: 36, Pneumatic.

(e) Unsafe Condition

This AD was prompted by reports that some overheat detection sensing elements of the bleed air leak detection system were manufactured with insufficient salt fill. The FAA is issuing this AD to address non-conforming sensing elements of the bleed air leak detection system. The unsafe condition, if not addressed, could result in an inability to detect hot bleed air leaks and consequent damage to surrounding structures and systems, which could prevent continued safe flight and landing.

(f) Compliance

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

(g) Definitions

(1) For purposes of this AD, an affected part is a sensing element marked with a date code A0448 through A2104 inclusive and having an LTS/Kidde part number specified in Liebherr Service Bulletin CFD-F1958-26-01, dated May 6, 2022, unless that sensing element meets the criteria specified in either paragraph (g)(1)(i) or (ii) of this AD.

(i) The sensing element has been tested as specified in Section 3 of the Accomplishment Instructions of Kidde Aerospace and Defense Service Bulletin CFD-26-1, Revision 6, dated February 28, 2022, or earlier revisions, and has been found to be serviceable; and the sensing element has been marked on one face of its connector hex nut and packaged as specified in Section 3.C. of the Accomplishment Instructions of Kidde Aerospace and Defense Service Bulletin CFD-26-1, Revision 6, dated February 28, 2022, or earlier revisions.

(ii) The sensing element has been tested and found to be serviceable as specified in paragraph (i) of this AD; and the sensing element has been marked on one face of one connector hex nut with one green mark, as specified in Figure 11 of Bombardier Service Bulletin 100-36-10, dated December 23, 2022, or Bombardier Service Bulletin 350-36-003, dated December 23, 2022, as applicable (the figure is representative for all sensing elements).

(2) For purposes of this AD, a serviceable part is a sensing element that is not an affected part.

(h) Revision of the Existing Airplane Flight Manual (AFM)

For airplane serial numbers 20001 through 20457 inclusive and 20501 through 20906 inclusive: Within 30 days after the effective date of this AD, revise the existing AFM to include the information specified in paragraphs (h)(1) and (2) of this AD, as applicable.

(1) For airplane serial numbers 20001 through 20457 inclusive: Section 05-42, Air Conditioning & Pressurization, Non-Normal Procedures Section, Bombardier Challenger 300 AFM (Imperial Version), Publication No. CSP 100-1, Revision 71, dated November 9, 2022.

Note 1 to paragraph (h)(1): For obtaining the procedures for Bombardier Challenger 300 AFM (Imperial Version), Publication No. CSP 100-1, use Document

Identification No. CH 300 AFM-I.

(2) For airplane serial numbers 20501 through 20906 inclusive: Section 05-42, Airconditioning & Pressurization, Non-Normal Procedures Section, Bombardier Challenger 350 AFM, Publication No. CH 350 AFM, Revision 37, dated November 9, 2022.

Note 2 to paragraph (h)(2): For obtaining the procedures for Bombardier Challenger 350 AFM, Publication No. CH 350 AFM, use Document Identification No. CH 350 AFM.

(i) Testing of Overheat Detection Sensing Elements

For airplane serial numbers 20001 through 20457 inclusive and 20501 through 20906 inclusive: Within 7,500 flight cycles or 96 months, whichever occurs first, from the effective date of this AD, test the overheat detection sensing elements to determine if they are serviceable, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-36-10, dated December 23, 2022, or Bombardier Service Bulletin 350-36-003, dated December 23, 2022, as applicable.

(1) For each sensing element that is serviceable, before further flight, mark the sensing element with a witness mark in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-36-10, dated December 23, 2022; or Bombardier Service Bulletin 350-36-003, dated December 23, 2022; as applicable.

(2) For each sensing element that is not serviceable, before further flight, replace the sensing element with a serviceable part in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 100-36-10, dated December 23, 2022; or Bombardier Service Bulletin 350-36-003, dated December 23, 2022; as applicable.

(j) Parts Installation Prohibition

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

(k) No Reporting Requirement

Although Bombardier Service Bulletin 100-36-10, dated December 23, 2022, and Bombardier Service Bulletin 350-36-003, dated December 23, 2022; specify to submit certain information to the manufacturer, this AD does not include that requirement.

(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 ATTN: Program Manager, Continuing Operational Safety, at the address identified in paragraph (m)(2) of this AD or email to: 9-avs-nyaco-cos@faa.gov. If mailing information, also submit information by email. 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, 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) Refer to Transport Canada AD CF-2023-09, dated February 14, 2023, for related information. This Transport Canada AD may be found in the AD docket at regulations.gov under Docket No. FAA-2023-1890.

(2) For more information about this AD, contact Steven Dzierzynski, Aviation

Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

(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 100-36-10, dated December 23, 2022.

(ii) Bombardier Service Bulletin 350-36-003, dated December 23, 2022.

(iii) Section 05-42, Air Conditioning & Pressurization, Non-Normal Procedures Section, Bombardier Challenger 300 AFM (Imperial Version), Publication No. CSP 100-1, Revision 71, dated November 9, 2022.

Note 3 to paragraph (n)(2)(iii): For obtaining the procedures for Bombardier Challenger 300 AFM (Imperial Version), Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.

(iv) Section 05-42, Air Conditioning & Pressurization, Non-Normal Procedures Section, Bombardier Challenger 350 AFM, Publication No. CH 350 AFM, Revision 37, dated November 9, 2022.

Note 4 to paragraph (n)(2)(iv): For obtaining the procedures for Bombardier Challenger 350 AFM, Publication No. CH 350 AFM, use Document Identification No. CH 350 AFM.

(v) Liebherr Service Bulletin CFD-F1958-26-01, dated May 6, 2022.

(3) For Bombardier service information 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.

(4) For Liebherr-Aerospace Toulouse SAS service information identified in this AD, contact Liebherr-Aerospace Toulouse SAS, 408, Avenue des Etats-Unis - B.P.52010, 31016 Toulouse Cedex, France; telephone +33 (0)5.61.35.28.28; fax +33 (0)5.61.35.29.29; email techpub.toulouse@liebherr.com; website liebherr.aero.

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

(6) 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 fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on September 22, 2023.

Victor Wicklund, Deputy Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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