



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1710; Project Identifier MCAI-2023-00243-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 certain Bombardier, Inc., Model CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes. This proposed AD was prompted by reports from the supplier that 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 testing of all affected overheat detection sensing elements of the bleed air leak detection system, and replacement if necessary. 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](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.

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1710; 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](https://www.bombardier.com).

- For Kidde Aerospace & Defense service information identified in this NPRM, contact Kidde Aerospace & Defense, 4200 Airport Drive NW, Building B, Wilson, NC 27896; telephone: 319-295-5000; website: [kiddetechnologies.com/aviation.com](https://www.kiddetechnologies.com/aviation.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.

FOR FURTHER INFORMATION CONTACT: Chirayu Gupta, 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-2023-1710; Project Identifier MCAI-2023-00243-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 Chirayu Gupta, 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-2023-05, dated February 8, 2023 (Transport Canada AD CF-2023-05) (also referred to after this as the MCAI), to correct an unsafe condition on certain Bombardier, Inc., Model CL-600-2B16 (601-3A, 601-3R, and 604 Variants) 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, which can result in an inability to detect hot bleed air leaks and cause damage to surrounding structures and systems that can 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](https://www.regulations.gov) under Docket No. FAA-2023-1710.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Bombardier Service Bulletin 604-36-005, Bombardier Service Bulletin 605-36-002, and Bombardier Service Bulletin 650-36-001, all dated December 23, 2022. This service information specifies procedures for testing affected bleed air leak detection system sensing elements (i.e., those marked with a date code before “A2105” (which corresponds to January 31, 2021) with a part number defined in this service information) to determine if they are serviceable, and replacing failed sensing elements with serviceable ones. These documents are distinct since they apply to different airplane serial numbers.

The FAA reviewed Kidde Aerospace & Defense Service Bulletin CFD-26-1, Revision 6, dated February 28, 2022. This service information specifies affected continuous fire detector part numbers and testing procedures.

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 referenced 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 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 694 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 37 work-hours X \$85 per hour = Up to \$3,145	\$0	Up to \$3,145	Up to \$2,182,630

The 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 these on-condition actions.

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
37 work-hours X \$85 per hour = \$3,145	\$4,000*	\$7,145

* The FAA has received no definitive data on which to base the cost estimates for the parts specified in this proposed AD. This is the estimated cost for replacement of 2 percent of the failed sensing elements. If all sensing elements failed, the estimated parts cost would be \$40,000 for each airplane.

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-2023-1710; Project Identifier MCAI-2023-00243-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 Bombardier, Inc., Model CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes, certificated in any category, serial numbers 5580 through 5665 inclusive, 5701 through 5988 inclusive, and 6050 and subsequent.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports that sensing elements of the bleed air leak detection system were manufactured with insufficient salt fill. The FAA is issuing this AD to address insufficient salt fill, which can result in an inability to detect hot bleed air leaks, which can cause damage to surrounding structures and systems that can prevent continued safe flight and landing.

(f) Compliance

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

(g) Definitions

For the purposes of this AD, the definitions specified in paragraphs (g)(1) and (2) of this AD apply.

(1) Affected part: A sensing element marked with a date code before A2105 and having a part number listed in Kidde Aerospace and Defense Service Bulletin CFD-26-1, Revision 6, dated February 28, 2022; unless the sensing element meets the conditions

specified in paragraphs (g)(1)(i) and (ii) of this AD, or has passed the test specified in paragraph (h) of this AD.

(i) Has been tested in accordance with the Accomplishment Instructions of the Kidde Aerospace and Defense Service Bulletin CFD-26-1, Revision 6, dated February 28, 2022, and passed the test; and

(ii) Has been marked on one face of its connector hex nut in accordance with paragraph 3.C., Identification Procedure, of the Kidde Aerospace and Defense Service Bulletin CFD-26-1, Revision 6, dated February 28, 2022.

(2) Serviceable part: A sensing element that is not an affected part.

(h) Testing

For airplane serial numbers 5580 through 5665 inclusive, 5701 through 5988 inclusive, and 6050 through 6174 inclusive: Within 7,800 flight cycles or 96 months, whichever occurs first, from the effective date of this AD, test the bleed air leak detection system sensing elements to determine if they are serviceable, in accordance with the Accomplishment Instructions of the applicable service information identified in paragraphs (h)(1) through (3) of this AD. If the sensing element is found serviceable, before further flight, mark the sensing element with a green mark in accordance with the Accomplishment Instructions of the applicable service information identified in paragraphs (h)(1) through (3) of this AD. If the sensing element is found not serviceable, before further flight, replace the sensing element with a serviceable part in accordance with the Accomplishment Instructions of the applicable service information identified in paragraphs (h)(1) through (3) of this AD.

(1) For Model CL-600-2B16 airplanes, serial numbers 5580 through 5665 inclusive (Challenger 604): Use Bombardier Service Bulletin 604-36-005, dated December 23, 2022.

(2) For Model CL-600-2B16 airplanes, serial numbers 5701 through 5988 inclusive (Challenger 605): Use Bombardier Service Bulletin 605-36-002, dated December 23, 2022.

(3) For Model CL-600-2B16 airplanes, serial numbers 6050 through 6174 inclusive (Challenger 650): Use Bombardier Service Bulletin 650-36-001, dated December 23, 2022.

(i) Parts Installation Prohibition

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

(j) No Reporting Requirement

Although the service information referenced in paragraph (g)(1) of this AD and paragraphs (h)(1) through (3) of this AD specify to submit certain information to the manufacturer, this AD does not include that requirement.

(k) 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, International Validation Branch, mail it to the address identified in paragraph (l)(2) of this AD or email to: 9-AVS-AIR-730-AMOC@faa.gov. 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.

(3) *Required for Compliance (RC)*: Except as required by paragraph (k)(2) of this AD, if any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(l) Additional Information

(1) Refer to Transport Canada AD CF-2023-05, dated February 8, 2023, for related information. This Transport Canada AD may be found in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1710.

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

(m) 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 604-36-005, dated December 23, 2022.

(ii) Bombardier Service Bulletin 605-36-002, dated December 23, 2022.

(iii) Bombardier Service Bulletin 650-36-001, dated December 23, 2022.

(iv) Kidde Aerospace and Defense Service Bulletin CFD-26-1, Revision 6, dated February 28, 2022.

Note 1 to paragraph (m)(2)(iv): The revision level of this service bulletin is only identified on the transmittal sheet.

(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 Kidde Aerospace & Defense service information identified in this AD, contact Kidde Aerospace & Defense, 4200 Airport Drive NW, Building B, Wilson, NC 27896; telephone: 319-295-5000; website: kiddetechnologies.com/aviation.com.

(5) 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.

(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 August 3, 2023.

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

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