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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-0454; Project Identifier MCAI-2023-00923-T; Amendment 39-23098; AD 2025-16-01]

RIN 2120-AA64

Airworthiness Directives; Airbus Canada Limited Partnership (Type Certificate Previously Held by C Series Aircraft Limited Partnership (CSALP); Bombardier, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes. This AD was prompted by a report of multiple in-service failures of engine feed check valves, which have resulted in fuel imbalance conditions in flight. This AD requires repetitive replacement of the left-and right-side engine feed check valves with new engine feed check valves and prohibits flight dispatch under certain conditions. 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 a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-0454; 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 Transport Canada material identified in this AD, contact Transport Canada, Transport Canada National Aircraft Certification, 159 Cleopatra Drive, Nepean, Ontario K1A 0N5, Canada; telephone 888-663-3639; email TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca. You may find this material on the Transport Canada website at tc.canada.ca/en/aviation.

- 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](https://www.regulations.gov) under Docket No. FAA-2024-0454.

FOR FURTHER INFORMATION CONTACT: Joseph Catanzaro, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; 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 by adding an AD that would apply to all Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes. The NPRM was published in the *Federal*

Register on March 7, 2024 (89 FR 16486). The NPRM was prompted by AD CF-2023-59, dated July 26, 2023, issued by Transport Canada, which is the aviation authority for Canada (Transport Canada AD CF-2023-59). Transport Canada AD CF-2023-59 states that there have been multiple in-service failures of engine feed check valves, which have resulted in fuel imbalance conditions in flight. An investigation found that the engine feed check valve is subject to abnormal wear-out failures due to a severe operating environment in the engine fuel feed line. In the event of a failure of the check valve, flapper valve assembly items can become dislodged and contaminate the fuel system, potentially resulting in severe fuel imbalance or loss of fuel flow to the engine.

In the NPRM, the FAA proposed to require repetitive replacement of the left- and right-side engine feed check valves with new engine feed check valves, as specified in Transport Canada AD CF-2023-59.

You may examine Transport Canada AD CF-2023-59 in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-0454.

The FAA issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes. The SNPRM was published in the *Federal Register* on April 1, 2025 (90 FR 14343). The SNPRM was prompted by Transport Canada superseding Transport Canada AD CF-2023-59, and issuing Transport Canada AD CF-2024-20, dated June 5, 2024 (Transport Canada AD CF-2024-20) (also referred to as the MCAI). Transport Canada AD CF-2024-20 states that since issuance of Transport Canada AD CF-2023-59, the manufacturer determined that dispatching with either the left or right fuel alternating current (AC) boost pump inoperative can further exacerbate the risk of severe fuel imbalance, potentially leading to loss of fuel flow to both engines. The manufacturer issued Flight Operations Transmission (FOT) A220-FOT-28-00-001 to raise awareness of this issue and

recommend certain dispatch restrictions. The MCAI retains the requirements of Transport Canada AD CF-2023-59, which is superseded, and prohibits dispatch with either the left or right fuel AC boost pump inoperative. In the SNPRM, the FAA proposed to require repetitive replacement of the left- and right-side engine feed check valves with new engine feed check valves and prohibit flight dispatch under certain conditions, as specified in Transport Canada AD CF-2024-20. The FAA is issuing this AD to address failure of the check valve. The unsafe condition, if not addressed, could result in severe fuel imbalance or loss of fuel flow to one or both engines.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Air Line Pilots Association, International (ALPA) and JetBlue. The following presents the comments received on the SNPRM and the FAA's response to each comment.

Request to Remove “Or Later Revision”

ALPA, while supporting other parts of the proposed AD, disagreed with allowing later revisions of service information as compliance documents as specified in the MCAI. ALPA stated that it does not support referencing a service bulletin that has not been finalized.

The FAA agrees to clarify. This AD refers to Transport Canada AD CF-2024-20, as the appropriate source of service information for accomplishing the required actions. Transport Canada AD CF-2024-20 specifies to use certain service information “or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.” That phrase indicates that service information must be finalized and approved by a regulatory authority (Transport Canada, which is the state of design authority in this case) before it may be used to show compliance with this AD. Referring to the MCAI instead of a

service bulletin minimizes the need for Alternative Methods of Compliance. No change has been made to the AD in this regard.

Request for Revision of Paragraph Header for Paragraph (i) of the Proposed AD

JetBlue requested a revision to the header of paragraph (i) of the proposed AD from “Terminating Action for AD 2023-16-02” to “Changes for Repeat Inspection for AD 2023-16-02.” JetBlue reasoned that its requested change is necessary because the proposed AD wouldn’t terminate AD 2023-16-02, Amendment 39-22521 (88 FR 56459, August 18, 2023) (AD 2023-16-02), instead it allows a change to the repetitive inspection by use of a concurrent action.

The FAA agrees to revise the header of paragraph (i) of this AD, to clarify that the actions are not terminating. The FAA has revised the text to “Method of Compliance for Certain Action in AD 2023-16-02.”

Request to Clarify Number of Affected Check Valves for a Condition

JetBlue requested an edit to paragraph (i)(2) of the proposed AD to clarify the number of check valves that may qualify for relief from certain requirements. JetBlue suggested that the language in paragraph (i)(2) of the proposed AD added ambiguity to the number of check valves and suggested revised language that would clarify the valves that are affected by both ADs, i.e., change the text from “Only one check valve . . .” to “Only the replaced check valve . . .”.

The FAA agrees to revise paragraph (i)(2) of this AD as suggested but with one minor change. The FAA has replaced the text “Only one check valve” with “Only the check valve” so that paragraph (i)(2) of this AD now reads “Only the check valve (P/N 2090199-101) that has been replaced as specified in paragraph (g) of this AD may be granted relief from the on-condition inspection and replacement requirements of AD 2023-16-02.”

Clarification of the Exception in Paragraph (h)(1) of this AD

The compliance time exception in paragraph (h)(1) of the proposed AD only referred to the effective date of Transport Canada AD CF-2024-20; however, it should have also referred to the effective date of Transport Canada AD CF-2023-59, dated July 26, 2023, which is referred to in paragraph A. of Transport Canada AD CF-2024-20. Therefore, the FAA has revised paragraph (h)(1) of this AD to specify that “where Transport Canada AD CF-2024-20 refers to its effective date or to the effective date of AD CF-2023-59, this AD requires using the effective date of this AD.”

Conclusion

These products have been approved by the civil aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with this State of Design Authority, that authority has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered any 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 these products. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the SNPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Transport Canada AD CF-2024-20, which specifies procedures for repetitive replacement of the left- and right-side engine feed check valves with new engine feed check valves and prohibits dispatch with either the left or right fuel AC boost pump inoperative. 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.

Interim Action

The FAA considers that this AD is an interim action. If final action is identified, the FAA might consider further rulemaking then.

Costs of Compliance

The FAA estimates that this AD affects 91 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
9 work-hours X \$85 per hour = \$765 per replacement cycle	\$2,830 per replacement cycle	\$3,595 per replacement cycle	\$327,145 per replacement cycle

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 adding the following new airworthiness directive:

2025-16-01 Airbus Canada Limited Partnership (Type Certificate Previously Held by C Series Aircraft Limited Partnership (CSALP); Bombardier, Inc.): Amendment 39-23098; Docket No. FAA-2024-0454; Project Identifier MCAI-2023-00923-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 affects AD 2023-16-02, Amendment 39-22521 (88 FR 56459, August 18, 2023) (AD 2023-16-02).

(c) Applicability

This AD applies to all Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel.

(e) Unsafe Condition

This AD was prompted by a report of multiple in-service failures of engine feed check valves, which have resulted in fuel imbalance conditions in flight. The FAA is issuing this AD to address failure of the check valve. The unsafe condition, if not addressed, could result in severe fuel imbalance or loss of fuel flow to one or both engines.

(f) Compliance

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

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, Transport Canada AD CF-2024-20, dated June 5, 2024 (Transport Canada AD CF-2024-20).

(h) Exception to Transport Canada AD CF-2024-20

(1) Where Transport Canada AD CF-2024-20 refers to its effective date or to the effective date of Transport Canada AD CF-2023-59, dated July 26, 2023, this AD requires using the effective date of this AD.

(2) Where Transport Canada AD CF-2024-20 refers to hours air time, this AD requires using flight hours.

(i) Method of Compliance for Certain Action in AD 2023-16-02

Accomplishing repetitive replacement of the engine isolation feed ejector check valve, P/N 2090199-101, as required by paragraph (g) of this AD is an acceptable means of complying with the repetitive on-condition inspection requirement of AD 2023-16-02 provided that all of the conditions in paragraphs (i)(1) through (3) of this AD are satisfied.

(1) Both the replacement and on-condition inspection required by paragraph (g) of this AD are accomplished concurrently at intervals not to exceed 3,000 flight hours after the most recent inspection performed in accordance with AD 2023-16-02.

(2) Only the check valve (P/N 2090199-101) that has been replaced as specified in paragraph (g) of this AD may be granted relief from the on-condition inspection and replacement requirements of AD 2023-16-02.

(3) All other applicable requirements of AD 2023-16-02 are complied with.

(j) Special Flight Permit

Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the airplane to a location where the airplane can be modified, provided that only crew are onboard.

(k) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, AIR-520, Continued Operational Safety 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 Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (l) of this AD and email to: 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, AIR-520, Continued Operational Safety Branch, FAA; or Transport Canada; or Airbus Canada'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 material 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

For more information about this AD, contact Joseph Catanzaro, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; 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 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.

(i) Transport Canada AD CF-2024-20, dated June 5, 2024.

(ii) [Reserved]

(3) For Transport Canada material identified in this AD, contact Transport Canada, Transport Canada National Aircraft Certification, 159 Cleopatra Drive, Nepean, Ontario K1A 0N5, Canada; telephone 888-663-3639; email TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca. You may find this material on the Transport Canada website at tc.canada.ca/en/aviation.

(4) 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.

(5) 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 July 30, 2025.

Peter A. White,
Deputy Director, Integrated Certificate Management Division,
Aircraft Certification Service.

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