



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2024-2666; Project Identifier MCAI-2024-00261-T; Amendment
39-23062; AD 2025-12-04]**

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 certain Airbus Canada Limited Partnership Model BD-500-1A11 airplanes. This AD was prompted by an investigation of an in-service hydraulic fluid leakage event that indicated the potential use of an uncalibrated torque wrench when tightening the union fittings at the pressure and return interfaces of all three rudder hydraulic power control units (PCUs). This AD requires properly torquing the rudder PCU hydraulic fittings and applying the torque seal on the rudder PCU hydraulic fittings. 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-2024-2666; 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-2024-2666.

FOR FURTHER INFORMATION CONTACT: Brenda L. Buitrago, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 516-288-7368; email: Brenda.L.Buitrago.Perez@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 certain Airbus Canada Limited Partnership Model BD-500-1A11 airplanes. The NPRM was published in the *Federal Register* on

December 20, 2024 (89 FR 104067). The NPRM was prompted by AD CF-2024-13, dated April 29, 2024 (Transport Canada AD CF-2024-13) (also referred to as the MCAI), issued by Transport Canada, which is the aviation authority for Canada. The MCAI states an investigation of an in-service hydraulic fluid leakage event indicated the potential use of an uncalibrated torque wrench when tightening the union fittings at the pressure and return interfaces of all three rudder PCUs. If not corrected, this condition could cause the union fittings to come loose and leak, resulting in the potential loss of one or more hydraulic systems.

In the NPRM, the FAA proposed to require properly torquing the rudder PCU hydraulic fittings and applying the torque seal on the rudder PCU hydraulic fittings, as specified in Transport Canada AD CF-2024-13. The FAA is issuing 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-2024-2666.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from The Air Line Pilots Association, International (ALPA), who supported the NPRM without change.

The FAA received additional comments from two commenters, Airbus Canada Limited Partnership and Delta Air Lines, Inc. (Delta). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Remove, Revise, or Clarify the Exception for Leak Repair

Delta requested the FAA either remove the exception in paragraph (h)(3) of the proposed AD or revise it to require ensuring that any hydraulic leak is within the leakage limits, instead of requiring the leak to be repaired before further flight as proposed. As justification, Delta stated Transport Canada AD CF-2024-13 references service

information, which in turn references an airplane maintenance program (AMP) task that contains allowable leakage limits for seals on the rudder PCU, ensuring the leak rate does not exceed the allowable limit. Delta also stated they received confirmation from Airbus Canada Limited Partnership indicating that allowable leaks as defined in the AMP task are acceptable. Delta, therefore, concluded that the exception in paragraph (h)(3) of the proposed AD contradicts the allowable leakage limits of the AMP task, and that it causes extra strain on operators who have already accomplished the procedures in the referenced service information because those operators are not able to demonstrate compliance with the proposed AD, unless the exception is removed or revised.

Airbus requested the FAA explain why the FAA's proposed AD does not allow the same leak tolerance provided in Transport Canada AD CF-2024-13.

The FAA agrees that some leaks may be permissible if the leak rate is within the allowable leakage limits of the AMP task. It is not the FAA's intent to require different actions than those required by Transport Canada AD CF-2024-13. Therefore, the FAA has revised the "Material Incorporated by Reference Under 1 CFR Part 51" paragraph to clarify that, in addition to other specified actions, the corrective actions include testing for leakage limits to ensure any leak is within the applicable leakage tolerance and replacing the rudder PCU. Accordingly, the FAA has revised paragraph (h)(3) of this AD to specify that the visual inspection for hydraulics leaks at all coil tube fittings of the upper, middle, and lower rudder PCUs and all applicable corrective actions must be performed, and that all applicable corrective actions must be done before further flight except as specified in steps 13 and 22 of AMP BD500-A-J27-21-01-01AAA-364B-A.

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 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 Transport Canada AD CF-2024-13, dated April 29, 2024. This material specifies procedures for properly torquing the rudder PCU hydraulic fittings and applying the torque seal on the rudder PCU hydraulic fittings, which includes cleaning any leaks at the coil B-nut connections, performing a visual inspection for hydraulics leaks for all rudder PCU coil tube fittings, and applicable corrective actions. The corrective actions include tightening the nut to the specified torque, testing for leakage limits to ensure any leak is within the applicable leakage tolerance, replacing any defective components, and replacing the rudder PCU. 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 5 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 9 work-hours X \$85 per hour = Up to \$765	\$0*	Up to \$765	Up to \$3,825

*The FAA has received no definitive data on which to base the cost estimates for the replacement cost.

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:

2025-12-04 Airbus Canada Limited Partnership (Type Certificate Previously Held by C Series Aircraft Limited Partnership (CSALP); Bombardier, Inc.): Amendment 39-23062; Docket No. FAA-2024-2666; Project Identifier MCAI-2024-00261-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

None.

(c) Applicability

This AD applies to Airbus Canada Limited Partnership (Type Certificate previously held by C Series Aircraft Limited Partnership (CSALP); Bombardier, Inc.) Model BD-500-1A11 airplanes, certificated in any category, as identified in Transport Canada AD CF-2024-13, dated April 29, 2024 (Transport Canada AD CF-2024-13).

(d) Subject

Air Transport Association (ATA) of America Code 29, Hydraulic Power.

(e) Unsafe Condition

This AD was prompted by an investigation of an in-service leakage event that indicated the use potential of an uncalibrated torque wrench when tightening the union

fittings at the pressure and return interfaces of all three rudder hydraulic power control units (PCUs). The FAA is issuing this AD to address union fittings that could come loose and leak when improperly torqued. The unsafe condition, if not addressed, could result in the potential loss of one or more hydraulic systems.

(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-2024-13.

(h) Exception to Transport Canada AD CF-2024-13

(1) Where Transport Canada AD CF-2024-13 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where Transport Canada AD CF-2024-13 refers to hours air time, this AD requires using flight hours.

(3) Where the material referenced in Transport Canada AD CF-2024-13 specifies to “perform a visual inspection for hydraulics leaks for all Rudder PCUs coil tube fitting (Upper, Middle and Lower) in accordance with to AMP BD500-A-J27-21-01-01AAA-364B-A”, this AD requires replacing that text with “perform a visual inspection for hydraulics leaks for all Rudder PCUs coil tube fittings (Upper, Middle and Lower) and do all applicable corrective actions in accordance with AMP BD500-A-J27-21-01-01AAA-364B-A. Do all applicable corrective actions before further flight except as specified in steps 13 and 22 of AMP BD500-A-J27-21-01-01AAA-364B-A”.

(i) No Reporting Requirement

Although the material referenced in Transport Canada AD CF-2024-13 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(j) 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 AIR-520, Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (k) 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 Limited Partnership's Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(k) Additional Information

For more information about this AD, contact Brenda L. Buitrago, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 516-288-7368; email: Brenda.L.Buitrago.Perez@faa.gov.

(I) 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-2024-13, dated April 29, 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 Transport Canada 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 June 12, 2025.

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