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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2023-1997; Project Identifier MCAI-2023-00383-T; Amendment
39-22748; AD 2024-10-03]**

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 the determination that reliance on design assurance level (DAL) D software for flight-critical fly-by-wire (FBW) rigging functions may result in undetected inaccurate positioning of the primary flight control surfaces. This AD requires the use of specific issues of the aircraft maintenance publication (AMP) for electrical rigging procedures, and an electrical rigging confirmation check of primary flight control surfaces for certain airplanes, as specified in a Transport Canada AD, which is incorporated by reference. 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-2023-1997; 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 material, 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; website 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 in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1997.

FOR FURTHER INFORMATION CONTACT: William Reisenauer, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 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 October 19, 2023 (88 FR 72008). The NPRM was prompted by AD CF-2023-15, dated March 2, 2023 (also referred to as the MCAI), issued by Transport Canada, which is the aviation authority for Canada. The MCAI states that during the airplane design review, it was discovered that the FBW electrical rigging functions rely in part on the primary flight control computer maintenance partition, which was certified to DAL D. The reliance on DAL D software for flight-critical FBW rigging functions may result in undetected inaccurate positioning of the primary flight control surfaces.

In the NPRM, the FAA proposed to require the use of specific issues of the AMP for electrical rigging procedures, and an electrical rigging confirmation check of primary flight control surfaces for certain airplanes, as specified in Transport Canada AD CF-2023-15. The FAA is issuing this AD to address a potential undetected inaccurate positioning of the primary flight control surfaces, which, in combination with an additional failure or extreme maneuvers, can lead to runway excursion or structure ultimate load exceedance.

You may examine the MCAI in the AD docket at regulations.gov under Docket No. FAA-2023-1997.

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 Delta Airlines (DAL). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Revise the Applicability Statement

DAL requested that the applicability of paragraph (c) of the proposed AD be revised to match the applicability of Transport Canada CF-2023-15. DAL noted that Part I of Transport Canada AD CF-2023-15 applies to all Model BD-500-1A10 and BD-500-1A11 airplanes. Delta asserted that Part I would not be required by the FAA's proposed AD. DAL stated that Part II of Transport Canada AD CF-2023-15 applies to a subset of the manufacturer serial numbers (MSNs) identified in the applicability of the FAA's proposed AD.

The FAA infers that DAL requests revising paragraph (c) of the AD to reflect the applicability of each Part of Transport Canada AD CF-2023-15. The FAA also notes that Delta incorrectly assumed that this FAA AD does not require the actions of Part I of Transport Canada AD CF-2023-15.

The overall applicability of an AD (paragraph (c) of this AD) includes all airplanes affected by any of the requirements of the AD. If the applicability of an individual requirement in an AD is a subset of the overall applicability, then that individual requirement would also identify the airplanes affected by that requirement. Transport Canada AD CF-2023-15 identifies the airplanes affected by each Part. Since this AD requires all actions of Transport Canada AD CF-2023-15, including the actions

in Part I, no additional exceptions are needed. The FAA has not changed this AD as a result of this comment.

Request to Clarify Compliance Time

DAL requested that a new exception be added to paragraph (h) of the proposed AD to state that where Transport AD CF-2023-15 refers to its effective date, operators should use the FAA's effective date instead.

The FAA agrees that an exception should be added to clarify the starting point for the compliance time for Part I of Transport Canada AD CF-2023-15. This AD has been revised to add paragraph (h)(1) of this AD stating that the compliance period starts from the effective date of the FAA AD.

Request to Provide Relief from Re-accomplishment of Certain Actions

DAL asserted that paragraph (h)(2) of the proposed AD requires re-accomplishment of the electrical rigging on airplanes on which the actions specified in Airbus Canada Limited Partnership Service Bulletin BD500-270016 were accomplished prior to the effective date of this AD, although such re-accomplishment is not required by Transport Canada AD CF-2023-15 or the service bulletin. DAL noted that because paragraph (f) of the proposed AD stated that the actions of the AD are required "unless already done," those actions do not need to be re-accomplished after the effective date of this AD, since Part II of Transport Canada AD CF-2023-15 requires the electrical rigging procedure only once.

The FAA agrees with the request. Paragraph (h)(2) of the proposed AD incorrectly included provisions for airplanes on which the actions of SB BD500-270016 were already accomplished. And, as the commenter noted, paragraph (f) of this AD specifies that required actions done before the effective date of the AD do not need to be repeated. Paragraph (h)(2) of this AD has been removed, and replaced with an exception changing "hours air time" to "flight hours."

Request to Allow Use of Later-Approved Service Information

DAL also noted that Transport Canada AD CF-2023-15 allows the use of later revisions of the service bulletin, where the proposed AD is not specific as to which service bulletin revision is required.

The FAA provides the following clarification regarding later-approved service bulletin revisions in this AD. DAL noted that the proposed AD did not mention later-approved service bulletins, although Transport Canada AD CF-2023-15 allows the use of later revisions of the service bulletin. Because this AD automatically adopts this provision as part of the requirements of Transport Canada AD CF-2023-15, this AD also allows later-approved versions of the service bulletin.

Request to Clarify Reporting Requirements

DAL requested that the proposed AD be revised to state that no reporting is required. DAL stated that no reporting should be necessary if the operator is already recording in applicable airplane records accomplishment of the service information referenced in Transport Canada AD CF-2023-15. Furthermore, DAL declared reporting accomplishment does not provide any technical value, nor does it affect the airworthiness of the airplane.

The FAA finds that although reporting is not necessary to comply with this AD, there is no need to include an exception in this AD to explain this. A “reporting requirement” in an AD typically requests findings from an inspection to enable the manufacturer to learn more about the cause of the AD and determine appropriate corrective actions. In this case, the service information referenced in Transport Canada AD CF-2023-15 merely requests that operators inform Airbus Canada of the completion of the service bulletin for their airplanes and does not specify submitting specific information such as test results. Therefore, no change is necessary to this AD.

Conclusion

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 referenced above. The FAA reviewed the relevant data, considered the 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 this product. 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.

Related Service Information Under 1 CFR Part 51

Transport Canada AD CF-2023-15 specifies using specific AMP versions for electrical rigging procedures for primary flight control surfaces, and, for certain airplanes, performing an electrical rigging confirmation check of primary flight control surfaces. 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 72 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 = \$765	\$0	Up to \$765	Up to \$55,080

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:

2024-10-03 Airbus Canada Limited Partnership (Type Certificate Previously Held by C Series Aircraft Limited Partnership (CSALP); Bombardier, Inc.): Amendment 39-22748; Docket No. FAA-2023-1997; Project Identifier MCAI-2023-00383-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 all Airbus Canada Limited Partnership Model BD-500-1A10 and BD-500-1A11 airplanes, certified in any category.

(d) Subject

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

(e) Unsafe Condition

It is possible that the surface travel checks were not done after the electrical rigging of the ailerons, the elevators, and the rudder. If this occurs, it is possible that the ailerons, the elevators, and the rudder will not be able to reach their maximum travel or return to their neutral position. The FAA is issuing this AD to ensure accurate rigging of the aircraft primary flight control surfaces by adding physical travel and centering checks of primary flight control surfaces. The unsafe condition, if not addressed, could result in

undetected inaccurate positioning of the primary flight control surfaces, which in combination with an additional failure or extreme maneuvers, can lead to runway excursion or structure ultimate load exceedance.

(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-2023-15, dated March 2, 2023 (Transport Canada AD CF-2023-15).

(h) Exceptions to Transport Canada AD CF-2023-15

(1) Where Transport Canada AD CF-2023-15 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where Transport Canada AD CF-2023-15 refers to hours air time, this AD requires replacing those words with flight hours.

(i) 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 International Validation Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed 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 Airbus Canada Limited Partnership's Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(j) Additional Information

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

(2) For Airbus Canada Limited Partnership service information identified in this AD that is not incorporated by reference, contact Airbus Canada Limited Partnership, 13100 Henri-Fabre Boulevard, Mirabel, Québec J7N 3C6, Canada; telephone 450-476-7676; email a220_crc@abc.airbus; website a220world.airbus.com.

(k) 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) Transport Canada AD CF-2023-15 dated March 2, 2023.

(ii) [Reserved]

(3) For Transport Canada AD CF-2023-15, 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; website 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.html, or email fr.inspection@nara.gov.

Issued on May 8, 2024.

James D. Foltz,
Deputy Director, Compliance & Airworthiness Division,
Aircraft Certification Service.

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