



AIRWORTHINESS DIRECTIVE

This Airworthiness Directive (AD) is issued pursuant to Canadian Aviation Regulation (CAR) 521.427. No person shall conduct a take-off or permit a take-off to be conducted in an aircraft that is in their legal custody and control, unless the requirements of CAR 605.84 pertaining to ADs are met. Standard 625 - Aircraft Equipment and Maintenance Standards Appendix H provides information concerning alternative means of compliance (AMOC) with ADs.

Number:

CF-2024-32

Effective Date:

25 September 2024

ATA:

92

Type Certificate:

A-236

Subject:

Electrical System Installation – Frame (FR) 51 Bulkhead Connectors - Inadequate Electrical Bonding

Applicability:

Airbus Canada Limited Partnership (ACLP) (formerly C Series Aircraft Limited Partnership (CSALP), Bombardier Inc.) aeroplanes:

Model BD-500-1A10, serial numbers 50064 through 50070.

Model BD-500-1A11, serial numbers 55160 through 55217, 55220, 55222, 55225, 55228, 55231, 55234, 55237, 55239, 55241, 55243, 55245, 55254 and 55257.

Compliance:

As indicated below, unless already accomplished.

Background:

ACLP investigation revealed that a change in the feed-through connector O-ring material at FR 51 increased the electrical bonding resistance due to the current torque specification being inadequate. This may lead to electrical bonding levels which exceed allowable design limits, leaving the aircraft more susceptible to electromagnetic interference (EMI), high-intensity radiated fields (HIRF) and lightning strike.

To address this unsafe condition, this AD mandates that electrical bonding tests are done between the feed-through connectors and the forward side of the bulkhead at FR 51, and if required, that any discrepant connectors have two electrical bonding plates installed to re-establish adequate electrical bonding levels.

Corrective Actions:

For the purpose of this AD, the following definitions apply:

ACLP SB: ACLP Service Bulletin BD500-534011, Issue 001, dated 30 May 2024, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Discrepant connector: A feed-through connector having an electrical bonding value exceeding the design limit requirements as defined in the ACLP SB.

- A. Within 9350 hours air time from the effective date of this AD, perform electrical bonding tests between the forward side of the bulkhead and each of the twenty two (22) electrical feed-through connectors at FR 51 to determine if there are any discrepant connectors in accordance with the procedure in section 2 of Part A of the Accomplishment Instructions of the ACLP SB.

- B. If any discrepant connector is found, before further flight, install two electrical bonding plates in accordance with the procedures in section 3 of Part B through Part W of the Accomplishment Instructions of the ACLP SB, as applicable to the specific discrepant connector.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 11 September 2024

Contact:

William Humphries, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca or any Transport Canada Centre.