



# AIRWORTHINESS DIRECTIVE

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*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-2023-15

**Effective Date:**

16 March 2023

**ATA:**

27

**Type Certificate:**

A-236

**Subject:**

Flight Controls – Electrical Rigging Confirmation and Surface Travel Check of Primary Flight Control Surfaces

**Applicability:**

Airbus Canada Limited Partnership (formerly C Series Aircraft Limited Partnership, Bombardier Inc.) model BD-500-1A10 and BD-500-1A11 aeroplanes, all serial numbers.

**Compliance:**

As indicated below, unless already accomplished.

**Background:**

During an A220 aircraft design review, it was discovered that the fly-by-wire (FBW) electrical rigging functions rely in part on the primary flight control computer maintenance partition which was certified to design assurance level (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 which in combination with an additional failure or extreme maneuvers can lead to runway excursion or structure ultimate load exceedance.

To ensure accurate rigging of A220 aircraft primary flight control surfaces, the Aircraft Maintenance Publication (AMP) was amended at issue 110.02 (2 July 2020) to add physical travel and centering checks of primary flight control surfaces at the completion of electrical rigging procedures. Subsequently, Airbus Canada issued Service Bulletin (SB) BD500-270016, dated 18 December 2020, to conduct an electrical rigging confirmation check of the primary flight controls to ensure all aircraft that may have been electrically rigged in service using the AMP prior to issue 110.02 (2 July 2020), have also had the additional physical travel and centering check as introduced at AMP Issue 110.02.

Originally, SB BD500-270016 was implemented as a managed fleet campaign with a time compliance of 4900 flight hours without the issuance of an AD. However, it has been recently determined that a number of aircraft have exceeded this time compliance.

This AD mandates the use of AMP Issue 110.02 or later approved versions for electrical rigging procedures and mandates the completion of SB BD500-270016 to verify the accurate positioning of primary flight control surfaces on aircraft that have been electrically rigged prior to the introduction of AMP Issue 110.02.

**Corrective Action:**

For the purpose of this AD, the following definition applies:

**Group A Aeroplanes:**

Model BD-500-1A10, serial numbers 50010 through 50018, 50020 through 50050, and 50055; and

Model BD-500-1A11, serial numbers 55003 through 55016, 55018 through 55068, 55071 through 55080,

55082 through 55084, and 55087.

**Part I – Electrical Rigging Prohibition – Applicable to Model BD-500-1A10 and Model BD-500-1A11 aeroplanes, all serial numbers**

As of the effective date of this AD, it is prohibited to use versions prior to AMP Issue 110.02 to conduct electrical rigging of any primary flight control surface.

**Part II – Physical Confirmation of Electrical Rigging – Applicable to Group A Aeroplanes**

Carry out the electrical rigging confirmation check of primary flight control surfaces in accordance with the Accomplishment Instructions of Airbus Canada SB BD500-270016 Issue 001, dated 18 December 2020, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada within the following compliance times:

- A. Within 930 hours air time from the effective date of this AD, or
- B. Within 4900 hours air time from 18 December 2020 (the original issue date of SB BD500-270016), whichever occurs last.

**Authorization:**

For the Minister of Transport,

*ORIGINAL SIGNED BY*

Jenny Young  
Chief, Continuing Airworthiness  
Issued on 2 March 2023

**Contact:**

Barry Devereux, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail [TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca](mailto:TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca) or any Transport Canada Centre.