



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-2022-67

Effective Date:

20 December 2022

ATA:

25

Type Certificate:

A-236

Subject:

Equipment/Furnishings – Vibration on Fuselage and Emergency Locator Transmitter (ELT) Antenna

Replacement:

Supersedes AD CF-2021-10, issued 18 March 2021.

Applicability:

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

Model BD-500-1A10, serial numbers 50001 through 50065,

Model BD-500-1A11, serial numbers 55001 through 55161,

equipped with a Gogo 2Ku antenna radome part number (P/N) P23743-605 or P/N P23743-606.

Compliance:

As indicated below, unless already accomplished.

Background:

Two ELT antenna failures have been reported, including one case where the antenna departed the aeroplane causing minor damage to the vertical stabilizer skin. The investigation revealed that these ELT antenna failures were caused by vibration loads induced by air vortices shed by the Gogo 2Ku antenna radome. Uncorrected, this situation can lead to the loss of the ELT antenna and the development of fuselage cracks that can result in an inability to maintain cabin pressure.

To mitigate the risks associated with the loss of the ELT antenna and inability to maintain cabin pressure, AD CF-2021-10 required replacement of the ELT antenna with a new ELT antenna at a specified interval and a repetitive inspection of the exterior fuselage skin around the ELT antenna attachment area.

Since AD CF-2021-10 was issued, an aluminum ELT antenna has been made available to prevent ELT antenna failures resulting from vibration loads induced by air vortices shed by the Gogo 2Ku antenna radome. In addition, there was a failure in-service of an ELT antenna before the repetitive replacement interval was reached. This AD mandates installation of this aluminum ELT antenna as a terminating action to the requirements of AD CF-2021-10, maintains the requirements of AD CF-2021-10 until this aluminum ELT antenna has been installed, and limits its applicability to aeroplanes that have not had this aluminum ELT antenna installed in production.

Corrective Actions:

A. Within the applicable compliance time indicated in Table 1 below:

Replace the ELT antenna with a new ELT antenna and inspect the exterior fuselage skin around the ELT antenna attachment holes for damage, repairing any damage found before further flight, in accordance with the Accomplishment Instructions of Airbus Canada Limited Partnership (ACLP)

Service Bulletin (SB) BD500-256008 Issue 003, dated 29 September 2022, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Compliance with ACLP SB BD500-256008 Issue 001, dated 15 January 2021, or Issue 002, dated 21 September 2022, prior to the effective date of this AD, satisfies the requirements of Paragraph A of this AD.

Table 1: Compliance Time

For aeroplanes with ELT Antenna Usage, as of the effective date of AD CF-2021-10 (1 April 2021)	Compliance Time
3500 total hours air time or more accumulated on the ELT antenna	Within 200 hours air time from the effective date of AD CF-2021-10 (1 April 2021)
1650 total hours air time or more accumulated on the ELT antenna, but less than 3500 total hours air time accumulated on the ELT antenna	Within 850 hours air time from the effective date of AD CF-2021-10 (1 April 2021), or before the ELT antenna has accumulated 3700 total hours air time, whichever occurs first
Less than 1650 total hours air time accumulated on the ELT antenna	Before the ELT antenna has accumulated 2500 total hours air time

- B. Following the initial ELT antenna replacement and inspection required by Paragraph A of this AD, at intervals not to exceed 2500 hours air time, repeat the ELT antenna replacement and inspection required by Paragraph A of this AD.
- C. Within 2000 hours air time from the effective date of this AD, replace the ELT antenna with a new aluminum ELT antenna and inspect the exterior fuselage skin around the ELT antenna attachment holes for damage, repairing any damage found before further flight, in accordance with ACLP SB BD500-256014 Issue 001, dated 21 September 2022, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Accomplishment of Paragraph C of this AD constitutes a terminating action to the initial and repeat requirements of Paragraph A and Paragraph B of this AD.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 6 December 2022

Contact:

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