



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-2025-12

Effective Date:

18 March 2025

ATA:

73

Type Certificate:

A-236

Subject:

Engine Fuel and Control – Electronic Engine Control (EEC) Software – Deficiency to Detect and Protect against Large Engine Bleed Duct Leak

Replacement:

Supersedes AD CF-2024-30, issued 27 August 2024.

Applicability:

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

Model BD-500-1A10, serial numbers 50001 through 50077, 50079 through 50083,

Model BD-500-1A11, serial numbers 55001 through 55343, 55345.

Compliance:

As indicated below, unless already accomplished.

Background:

During a design review, it was discovered that the software protection logic for potential large leaks from the engine bleed duct inside the engine core compartments was partially impaired. Under certain large leak conditions such as duct burst at a specific portion of the engines bleed ducting, Pratt & Whitney's PW1500G EEC would not transmit the necessary information to the aircraft controller to automatically isolate the opposite engine from the leak path in the bleed system. This failure condition could lead to a dual engine failure.

To mitigate this unsafe condition, AD CF-2024-30 mandated the revised Non-Normal Procedure in the Master Airplane Flight Manual (AFM), which incorporates the procedures for the flight crew to manually isolate the opposite functional engine in the event of an engine bleed duct large leak condition.

Since Transport Canada Civil Aviation (TCCA) AD CF-2024-30 was issued, ACLP has published Service Bulletin (SB) BD500-732016 introducing the engine EEC software update v.2.12.1 Part Number (P/N) 5324158-15 to address the detection and protection for potential large leaks.

This AD, CF-2025-12, mandates the installation of the engine EEC software update, while maintaining the requirements of AD CF-2024-30, which is superseded. The installation of the engine EEC software update on both sides (both engines) is a terminating action to those AFM procedures.

Corrective Actions:**Part I – AFM Revision**

For the purpose of this AD, the Master AFM Issue 023 refers to:

- ACLP's BD-500-1A10 Master AFM (publication BD500-3AB48-22200-00), Issue 023, dated 01 June 2024 and published on 09 July 2024, or
 - ACLP's BD-500-1A11 Master AFM (publication BD500-3AB48-32200-00), Issue 023, dated 01 June 2024 and published on 09 July 2024.
- A. Within 90 days from the effective date of AD CF-2024-30, (10 September 2024), amend the applicable AFM by incorporating the procedures "L ENG EXCEEDANCE (Caution)" and "R ENG EXCEEDANCE (Caution)" introduced by the Master AFM Issue 023 or included in later Master AFM revision approved by Transport Canada.
- B. Inform all flight crews of these changes in the AFM procedures and thereafter operate the aeroplane accordingly.

Part II – Engine EEC Software Installation

- A. Within 18 months from the effective date of this AD, for aeroplanes equipped with engine EEC software version 2.11.15 or prior versions, update the EEC software to version 2.12.1 on both engines in accordance with the procedure in section 2 of the Accomplishment Instructions of ACLP SB BD500-732016 Issue 001, dated 23 December 2024, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
- B. Accomplishment of Paragraph A, Part II, of this AD terminates the AFM amendment requirements of Part I of this AD.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 4 March 2025

Contact:

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