



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-2024-20

Effective Date:

19 June 2024

ATA:

28

Type Certificate:

A-236

Subject:

Fuel – Engine Feed Check Valve Failures

Replacement:

Supersedes AD CF-2023-59, issued 26 July 2023.

Applicability:

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

Model BD-500-1A10, serial numbers 50001 and subsequent,

Model BD-500-1A11, serial numbers 55001 and subsequent.

Compliance:

As indicated below, unless already accomplished.

Background:

There have been multiple in-service failures of engine feed check valves, which have resulted in fuel imbalance conditions in-flight. Investigation has determined that the engine feed check valve is subject to abnormal wear out failures due to a severe operating environment in the engine fuel feed line. In the event of a failure of the check valve, flapper valve assembly items can become dislodged and contaminate the fuel system, potentially resulting in severe fuel imbalance or loss of fuel flow to the engine.

To mitigate this unsafe condition, AD CF-2023-59 required an initial and repetitive replacement of the left and right-side engine feed check valves at an interval which will reduce in-service failures. Since then, ACLP has determined that dispatching with either the left or right fuel alternating current (AC) boost pump inoperative can further exacerbate the risk of severe fuel imbalance, potentially leading to loss of fuel flow to both engines. ACLP issued Flight Operations Transmission (FOT) A220-FOT-28-00-001 to raise awareness of this issue and recommend certain dispatch restrictions. This AD, CF-2024-20 retains the requirements of AD CF-2023-59, which is superseded and prohibits dispatch with either the left or right fuel AC boost pump inoperative.

This AD is considered interim action and further AD action may follow.

Corrective Actions:

- A. Within 4000 hours air time from the effective date of AD CF-2023-59 (9 August 2023), and thereafter at intervals not to exceed 3000 hours air time, remove the left and right-side engine feed check valves and replace with new engine feed check valves, in accordance with the Accomplishment Instructions of ACLP Service Bulletin BD500-282018, Issue 001, dated 29 May 2023, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

B. As of the effective date of this AD, it is prohibited to dispatch an aeroplane under the Minimum Equipment List (MEL) item corresponding with the Master Minimum Equipment List (MMEL) item 28-23-02 – L AC Boost Pump and MMEL Crew Alerting System (CAS) Indication item 28-00-053-01 – R BOOST PUMP FAIL.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 5 June 2024

Contact:

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