



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-2024-21

Effective Date:

20 June 2024

ATA:

50

Type Certificate:

A-236

Subject:

Cargo and Accessory Compartments – Environmental Control System (ECS) Ducts – Flammability Non-Compliance

Applicability:

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

Compliance:

As indicated below, unless already accomplished.

Background:

ECS ducts, located on forward and aft cargo compartment ceiling panels, having part numbers (P/N) D761189-105, D761189-501 and D762232-509 have been manufactured using material APF1180-7781 which replaced discontinued legacy material Solvay L591PG-7781. The material change to APF1180-7781 was done without changing the ECS duct P/N. Subsequent certification testing of the ECS ducts made using material APF1180-7781 failed the flammability test requirements established by CAR 525.855(c). These non-compliant ECS ducts may have been installed on certain model BD-500-1A10 and BD-500-1A11 aeroplanes during production. Insufficient fire protection capability of the ECS duct material could result in an inability to contain a fire within the cargo compartment, resulting in uncontrolled fire.

To address this unsafe condition, fire-resistant sleeve assemblies were designed to be installed over non-compliant ECS ducts to restore compliance with CAR 525.855(c). For new production aircraft, these sleeve assemblies were incorporated as part of redesigned next higher assembly (NHA) cargo ceiling panel assemblies. This AD requires an inspection of affected in-service aeroplanes to determine if non-compliant ECS ducts have been installed during production and, if installed, a retrofit of affected cargo ceiling panel assemblies to install sleeves over non-compliant ECS ducts.

This AD also prohibits the installation of ECS ducts having P/Ns D761189-105, D761189-501 and D762232-509 as replacement parts, unless the fire-resistant sleeve assembly is also installed.

Corrective Actions:

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

Group A aeroplanes: Model BD-500-1A10, serial numbers 50060, 50062 and 50063, and model BD-500-1A11, serial numbers 55128 through 55150, 55152, 55154, and 55155.

ACLP SB: Airbus Canada SB BD500-501003 Issue 001, dated 21 December 2023, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part I – Inspection and Retrofit – Applicable to Group A aeroplanes

Before accumulating 9350 total hours air time or within 60 months from the effective date of this AD, whichever occurs first, carry out an inspection of the affected ECS ducts to determine the lot number of the ECS ducts in accordance with the Accomplishment Instructions of ACLP SB.

If the lot number of the affected ECS ducts is listed in Table 6 of the ACLP SB or the lot number cannot be determined, before further flight, install a fire-resistant sleeve assembly over non-compliant ducts in accordance with the Accomplishment Instructions of ACLP SB.

Part II – Installation Prohibition – Applicable to all Model BD-500-1A10 and Model BD-500-1A11 aeroplanes

As of the effective date of this AD, it is prohibited to install ECS ducts having P/Ns D761189-105, D761189-501 or D762232-509 as replacement parts, unless a fire-resistant sleeve assembly is incorporated as part of a redesigned NHA cargo ceiling panel assembly or incorporated in accordance with the Accomplishment Instructions of Safran Cabin Service Bulletin F493000-50-06 as contained within ACLP SB.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 6 June 2024

Contact:

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