



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-2023-39

Effective Date:

20 June 2023

ATA:

28

Type Certificate:

A-236

Subject:

Fuel – Distribution – Refueling Pilot Valve Fitting Interference with Rear Spar of Centre Wing Box

Applicability:

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

Model BD-500-1A10, serial numbers 50010 through 50017,

Model BD-500-1A11, serial numbers 55003 through 55016, 55018 through 55025, 55027 and 55029 through 55034.

Compliance:

Before accumulating 20 000 total flight cycles, unless already accomplished.

Background:

An interference condition was found during aeroplane manufacturing between the pilot valve fittings and their mating holes in the rear spar of the centre wing box (CWB). The interference condition could damage the fitting and result in the fitting's failure under induced fatigue. Fitting failure will lead to a failure of its shroud attachment and subsequently, the fuel contained in the pilot valve pipe and in the centre tank above the level of the fitting will leak into the area behind the rear spar and into the landing gear bay. Such significant fuel leak, combined with a potential ignition source such as a failure of a bleed duct or a failure of wires/connectors in these areas, can create a fire hazard which would lead to an unsafe condition on the aeroplane.

To address the fitting interference condition and possible fuel leakage should the fittings fail due to fatigue, ACLPL issued Service Bulletin (SB) BD500-282008 to introduce redesigned pilot valve fittings and eliminate the interference condition.

This AD mandates replacement of the pilot valve fittings in accordance with the above-mentioned ACLPL SB.

Corrective Actions:

Replace the pilot valve fittings at the CWB rear spar in accordance with the Accomplishment Instructions of ACLPL SB BD500-282008, Issue No. 002, dated 10 March 2023, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Replacement of the affected pilot valve fittings, before the effective date of this AD, in accordance with ACLPL SB BD500-282008, Issue No. 001 dated 23 July 2020 is considered acceptable for compliance with the requirement of this AD.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 6 June 2023

Contact:

Zhiwei Wang, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca or any Transport Canada Centre.