



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-2021-18

Effective Date:

20 May 2021

ATA:

32

Type Certificate:

A-236

Subject:

Landing Gear – Main Landing Gear (MLG) Lower Spindle Pin Corrosion

Applicability:

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

Compliance:

As indicated below, unless already accomplished.

Background:

There have been several in-service findings of corrosion on the flange of the MLG lower spindle pin. An investigation revealed that micro-fretting of the anti-rotation washer at the spindle pin flange surface causes abrasion of the protective coating and leaves the flange area susceptible to corrosion.

The MLG lower spindle pin is a principal structural element (PSE). If the corrosion progresses from the flange to the adjacent radius area, it can lead to low cycle fatigue (LCF) cracking, failure of the MLG lower spindle pin, and collapse of the MLG.

In order to mitigate this unsafe condition, this AD mandates initial and repetitive inspections of the MLG lower spindle pin to detect damage, and to repair or replace the MLG lower spindle pin if damage is found. This AD is considered interim action and further AD action may follow.

For the purposes of airworthiness monitoring and development of further corrective actions, operators are strongly encouraged to complete and return the Service Bulletin Findings Record as detailed in Airbus Canada Service Bulletin (SB) BD500-321003 after completing each inspection.

Corrective Actions:

Part I – Initial Inspection

Inspect and repair or replace, as applicable, the left and right MLG lower spindle pin in accordance with the Accomplishment Instructions of Airbus Canada SB BD500-321003 Issue 001, dated 13 April 2021, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, within the following compliance time:

- A. MLG having accumulated, as of the effective date of this AD, 5500 total flight cycles (FC) or more: within 6 months from the effective date of this AD.
- B. MLG having accumulated, as of the effective date of this AD, less than 5500 total FC, whichever occurs last:
 - 1. Whichever occurs first: before accumulating 5500 total FC on the MLG or within 36 months from the effective date of this AD; or
 - 2. Within 12 months from the effective date of this AD.

Part II – Repeat Inspection

Thereafter, at intervals of 3000 FC or 24 months, whichever occurs first, carry out repetitive inspections and repair or replacement, as applicable, of the left and right MLG lower spindle pin in accordance with the Accomplishment Instructions of Airbus Canada SB BD500-321003 Issue 001, dated 13 April 2021, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Matthew Weeks
Acting Chief, Continuing Airworthiness
Issued on 6 May 2021

Contact:

Barry Devereux, 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.

SUPERSEDED