



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-2019-17R1

Effective Date:

2 July 2020

ATA:

32

Type Certificate:

A-276

Subject:

Landing Gear – Main Landing Gear – Corrosion

Revision:

Supersedes AD CF-2019-17, issued 8 May 2019.

Applicability:

MHI RJ Aviation ULC. (formerly Bombardier Inc.) aeroplanes:

Model CL-600-2C10 and CL-600-2C11, serial numbers 10002 and subsequent,

Model CL-600-2D15 and CL-600-2D24, serial numbers 15001 and subsequent,

Model CL-600-2E25, serial numbers 19001 and subsequent.

Compliance:

As indicated below, unless already accomplished.

Background:

In-service reports and design review show that there is a possibility that corrosion exists on the main landing gear (MLG) outer cylinder at the interface with the gland nut on the shock strut installation and on the forward and aft trunnion pins in the MLG dressed shock strut assembly. Additionally, it is possible that a quality escape may have resulted in some MLG outer cylinders having an inappropriate coating application introduced at the gland nut thread relief groove and chamfer areas. Finally, it is possible that some trunnion pins may have had the corrosion inhibiting compound removed inadvertently during maintenance. Undetected corrosion on the trunnion pins or at the gland nut outer cylinder interface could result in a MLG collapse.

AD CF-2019-17 mandated the inspection, rectification, and modification of the appropriate MLG components in order to mitigate the risk of MLG collapse.

This AD revision, CF-2019-17R1, corrects the Applicability in Part I to include aeroplane models CL-600-2C11, CL-600-2D15 and CL-600-2D24. It corrects the Applicability in Part II to include aeroplane models CL-600-2C10, CL-600-2C11, CL-600-2D15 and CL-600-2D24 equipped with MLG dressed shock strut assemblies part number (P/N) 49000–25 through 49000–46 and P/N 49050–15 through 49050–22, that have replaced the MLG active dynamic seal by the spare dynamic seal using AMM Task 32-11-10-960-802 Revision 37, dated 25 November 2011 or earlier. It corrects the AMM Task Revision number referenced in Part II. It also corrects the compliance time criteria in Part IV, paragraph A.ii. to include trunnion pins that have less than 10 000 hours air time and more than five years from its entry-into-service or last overhaul date. As part of this AD revision, opportunity is taken to update the Type Certificate number which was introduced on 22 November 2019, and update the Applicability to include aeroplane model CL-600-2C11.

Corrective Actions:**Part I - Applicable to CL-600-2C10, CL-600-2C11, CL-600-2D15 and CL-600-2D24 aeroplane models:**

Perform a detailed visual inspection and rectification of the MLG outer cylinder assemblies and MLG dressed shock strut assemblies with part numbers and serial numbers listed in the effectivity tables in Section 1.A.(1) in accordance with Section 2 Accomplishment Instructions, Part A – Corrosion protection on the outer cylinder of Bombardier (BA) Service Bulletin (SB) 670BA-32-024, Revision C, dated 11 February 2015, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, using the following schedule:

- A. For assemblies that have accumulated 12 500 hours air time or less, and have been in service for six years or less from their entry-into-service or last overhaul date: within 6500 hours air time or 3 years, whichever occurs first, from the effective date of AD CF-2019-17, 22 May 2019; or
- B. For assemblies that have accumulated more than 12 500 hours air time, or have been in service for more than six years from its entry-into-service or last overhaul date: within 3500 hours air time or 2 years, whichever occurs first, from the effective date of AD CF-2019-17, 22 May 2019.

Incorporation of Section 2, Part A of the Accomplishment Instructions of BA SB 670BA-32-024 Revision B, dated 19 December 2012, meets the requirements of Part I of this AD.

Part II - Applicable to CL-600-2C10, CL-600-2C11, CL-600-2D15 and CL-600-2D24 aeroplane models equipped with MLG dressed shock strut assemblies P/N 49000-25 through 49000-46 and P/N 49050-15 through 49050-22, that have replaced the MLG active dynamic seal by the spare dynamic seal using AMM Task 32-11-10-960-802 Revision 37, dated 25 November 2011 or earlier:

Perform a detailed visual inspection and rectification of the MLG dressed shock strut assemblies in accordance with Section 2 Accomplishment Instructions, Part B – Inspection of the outer cylinder of BA SB 670BA-32-024, Revision C, dated 11 February 2015, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, using the following schedule:

- A. For assemblies that have accumulated 12 500 hours air time or less, and have been in service six years or less from its entry-into-service or last overhaul date: within 6500 hours air time or 3 years, whichever occurs first, from the effective date of AD CF-2019-17, 22 May 2019; or
- B. For assemblies that have accumulated more than 12 500 hours air time, or have been in service for more than six years, from its entry-into-service or last overhaul date: within 3500 hours air time or 2 years, whichever occurs first, from the effective date of AD CF-2019-17, 22 May 2019.

Incorporation of Section 2, Part B of the Accomplishment Instructions of BA SB 670BA-32-024, Revision B, dated 19 December 2012, meets the requirements of Part II of this AD.

Performing Aircraft Maintenance Manual (AMM) Task 32-11-10-960-802, Revision 38, dated 25 March 2012, or later approved revisions, meets the requirements of Part II of this AD.

Part III - Applicable to all aeroplane models:

Within 6500 hours air time or 3 years, whichever occurs first, from the effective date of AD CF-2019-17, 22 May 2019, perform a detailed visual inspection and rectification of the MLG outer cylinder assemblies with part numbers and serial numbers listed in Section 1.A. Effectivity, in accordance with the Accomplishment Instructions of BA SB 670BA-32-052, dated 9 February 2015, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part IV - Applicable to all aeroplane models:

Perform a detailed visual inspection and rectification or rework of the MLG forward and aft trunnion pins with part numbers and serial numbers listed in Section 1.A. Effectivity, in accordance with the Accomplishment Instructions of BA SB 670BA-32-034, Revision B, dated 21 December 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, using the following schedule:

- A. For trunnion pins and grease adapters that have not had Goodrich SB 49101-32-47 (any revision) incorporated:
 - i. For trunnion pins that have accumulated 10 000 hours air time or less, and have been in service five years or less from its entry-into-service or last overhaul date: within 6500 hours air time or 3 years, whichever occurs first, from the effective date of AD CF-2019-17, 22 May 2019; or
 - ii. For trunnion pins that have accumulated more than 10 000 hours air time, or have been in service for more than five years from its entry-into-service or last overhaul date: within 3000 hours air time or 2 years, whichever occurs first, from the effective date of AD CF-2019-17, 22 May 2019.

- B. For trunnion pins that have had Goodrich SB 49101-32-47 (any revision) incorporated, within 6500 hours air time or 3 years, whichever occurs first, from the effective date of AD CF-2019-17, 22 May 2019.

Note: The corrective action described in this Part is applicable to aft and forward trunnion pin P/N 49101-9/-11/-13 reworked from P/N 49101-1/-5/-7 in accordance with Goodrich SB 49101-32-47 (any revision). The corrective action described in this Part is **not applicable** to aft and forward trunnion pin P/N 49101-9/-11/-13 installed as original equipment or purchased from Goodrich Landing Gear.

Incorporation of the Accomplishment Instructions of BA SB 670BA-32-034, Revision A, dated 17 August 2012, meets the requirements of Part IV of this AD.

Incorporation of the Accomplishment Instructions of BA SB 670BA-32-034 Initial Issue, dated 29 February 2012, meets the requirements of Part IV of this AD.

Part V - Applicable to all aeroplane models with forward and aft trunnion pin P/N 49101-9, 49101-11, and 49101-13, maintained in accordance with the following maintenance instructions:

- A. AMM Task 32-11-05-400-801 A01 (Installation of the MLG Shock-Strut Assembly), at revision 31 dated 20 March 2010 or earlier; or
- B. AMM Task 32-11-05-400-801 A02 (Installation of the MLG Shock-Strut Assembly), at revision 34 dated 20 November 2010 or earlier; or
- C. AMM Task 32-11-05-400-804 A01 (Installation of the MLG Shock-Strut Assembly – Forward Trunnion Pin), at revision 35 dated 20 March 2011 or earlier; and/or, as applicable,
- D. AMM Task 32-11-05-400-805 A01 (Installation of the MLG Shock-Strut Assembly – Aft Trunnion Pin), at revision 35 dated 20 March 2011 or earlier.

Note: The corrective action described in this Part is **not applicable** to aft and forward trunnion pin P/N 49101-9/-11/-13 reworked from P/N 49101-1/-5/-7 in accordance with Goodrich SB 49101-32-47 (any revision). The corrective action described in this Part is applicable to aft and forward trunnion pin P/N 49101-9/-11/-13 installed as original equipment or purchased from Goodrich Landing Gear.

Within 6500 hours air time or 3 years, whichever occurs first, from the effective date of AD CF-2019-17, 22 May 2019, perform a detailed visual inspection and rectification of the MLG forward and aft trunnion pins in accordance with the Accomplishment Instructions of BA SB 670BA-32-039, dated 29 February 2012, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Performing AMM Task 32-11-05-400-801 A01 Revision 38, dated 25 March 2012, or later approved revisions, meets the requirements of Part V of this AD.

Performing AMM Task 32-11-05-400-801 A02 Revision 38, dated 25 March 2012, or later approved revisions, meets the requirements of Part V of this AD.

Performing AMM Task 32-11-05-400-804 A01 Revision 37, dated 25 November 2011, or later approved revisions, satisfies the Accomplishment Instructions found at paragraph 2.B.(1) of BA SB 670BA-32-039, dated 29 February 2012.

Performing AMM Task 32-11-05-400-805 A01 Revision 37, dated 25 November 2011, or later approved revisions, satisfies the Accomplishment Instructions found at paragraph 2.B.(2) of BA SB 670BA-32-039, dated 29 February 2012.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 18 June 2020

Contact:

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