



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) to ADs.

Number:

CF-2018-29

Effective Date:

16 November 2018

ATA:

27

Type Certificate:

A-131

Subject:

Flight Controls – Elevator and Rudder Rod Ends of the Power Control Units

Applicability:

Bombardier Inc. aeroplanes:

Model CL-600-2B19, serial numbers 7003 and subsequent,
Model CL-600-2C10, serial numbers 10002 through 10999,
Models CL-600-2D15 and CL-600-2D24, serial numbers 15001 through 15990,
Model CL-600-2E25, serial numbers 19001 through 19990.

Compliance:

As indicated below, unless already accomplished.

Background:

There have been several in-service reports of Power Control Unit (PCU) rod end fractures due to pitting corrosion. Investigation revealed that the PCU rod end spherical bearing could seize which, in turn, could induce a bending moment on the PCU output rod. This bending moment will eventually fracture the rod end. It was also noted that this failure mode typically occurs within the first 6000 hours of aeroplane operation.

This condition, if not corrected, could lead to a disconnect between the PCU and the control surface, potential loss of the control surface function or inadequate flutter suppression.

This AD mandates incorporation of revised tasks into the maintenance manuals for detailed inspections of the PCU rod ends in order to allow timely detection of pitting corrosion.

Corrective Actions:

Part I – Maintenance Schedule Amendment

A. Applicable to CL-600-2B19 – All Aircraft

1. After 30 days from the effective date of this AD, it is prohibited to use Aircraft Maintenance Manual (AMM) task 10-12-00-550-804, Revision 55, dated 10 April 2017, or earlier revisions of this task.
2. After 30 days from the effective date of this AD, it is prohibited to use AMM task 27-33-01-220-801, Revision 54, dated 10 October 2016, or earlier revisions of this task.
3. After 30 days from the effective date of this AD, it is prohibited to use AMM task 27-23-01-220-801, Revision 54, dated 10 October 2016, or earlier revisions of this task.

B. Applicable to CL-600-2B19 – Aircraft Operating under the Low Utilization Maintenance Program

Within 90 days from the effective date of this AD, amend the Maintenance Planning Manual (MPM) - Low Utilization Maintenance Program (LUMP) (MRLUMP-001 CSP A-054-009 and MRLUMP-002 CSP A-054-060) by incorporating task numbers 27-31-00-05, 27-20-00-13 and 27-23-01-01 of the

MPM - LUMP (MRLUMP-001 CSP A-054-009 and MRLUMP-002 CSP A-054-060), Section 3, Revision 37, dated 10 July 2018.

- C. Applicable Only to CL-600-2C10 serial numbers 10004, 10040, 10043, 10052, 10100, 10164, 10183, 10187, 10204, 10206, 10217, 10247, 10289, 10332 and 10343, and to CL-600-2D15 and CL-600-2D24 serial numbers 15158, 15278 and 15370, Aircraft Operating Under the LUMP

Within 30 days from the effective date of this AD, amend the MPM - LUMP by incorporating task numbers 27-20-00-106, 273000-207 and 273000-215 of the MPM - LUMP CSP BC-116, Revision 15, dated 25 May 2017.

- D. Applicable to CL-600-2C10, CL-600-2D15, CL-600-2D24 and CL-600-2E25 That Are Not Operating Under the LUMP

Within 30 days from the effective date of this AD, amend the Transport Canada approved maintenance schedule by incorporating task number 273000-207 – Operational Check of each elevator PCU, as introduced in Maintenance Requirements Manual (MRM), Part 1, Revision 18, dated 25 July 2018. Later revisions of these documents approved by Transport Canada also meet the requirement of Part I D. of this AD.

Part II – Inspection of the Elevator PCU Rod End, Applicable to CL-600-2C10, CL-600-2D15, CL-600-2D24 and CL-600-2E25 That Are Not Operating under the LUMP

A. First Inspection

For aeroplanes that have accumulated 6000 hours air time or less as of the effective date of this AD, within the compliance time indicated in the following table, inspect the elevator PCU rod end ball and inner race interface in accordance with the Accomplishment Instructions of Service Bulletin (SB) 670BA-27-074, Initial Issue, dated 22 June 2017 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Hours Air Time As of the Effective Date of This AD	Compliance
Less than 800	After the aeroplane accumulates 1000 hours air time, but not to exceed 1400 hours air time.
Between 800 and 6000	Within 880 hours air time from the effective date of this AD.

B. Second Inspection

- For aeroplanes that have accumulated 2600 hours air time or less at the time of the First Inspection as per Part II A. of this AD, prior to reaching 3400 hours air time, inspect the elevator PCU rod end ball and inner race interface in accordance with the Accomplishment Instructions of SB 670BA-27-074, Initial Issue, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
- For aeroplanes that have accumulated more than 2600 hours air time at the time of the First Inspection as per Part II A. of this AD, a second inspection is not applicable.

C. Aeroplanes that do not need inspection

As of the effective date of this AD, Part II of this AD is not applicable to aeroplanes that have accumulated 6000 hours air time or more.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 2 November 2018

Contact:

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