



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-2016-36R1

Effective Date:

16 May 2017

ATA:

32

Type Certificate:

A-142

Subject:

Landing Gear – Main Landing Gear Retraction Actuator Rod-End Failure

Revision:

Supersedes AD CF-2016-36, issued on 22 November 2016.

Applicability:

Bombardier Inc. model DHC-8-102, -103, -106, -201, -202, -301, -311, -314 and -315 aeroplanes, serial numbers 003 through 672, equipped with main landing gear retraction actuator assembly part numbers (P/Ns) 10500-101, -103, -501, -551, or -553.

Compliance:

As indicated below, unless already accomplished.

Background:

Two cases of undamped main landing gear (MLG) extension were reported in-service. Investigation determined that the MLG retraction actuator rod-ends failed as a result of non-conforming threads. This condition, if not corrected, could lead to additional MLG undamped extensions, which may result in MLG structural failure, resulting in an unsafe asymmetric landing gear configuration.

The original issue of this AD mandated the replacement of the MLG retraction actuator rod-end subassemblies manufactured with potentially non-conforming threads with units that fully conform to the design requirements.

Since the original issue of this AD, it has been reported that Bombardier Service Bulletin (SB) 8-32-179 Initial Issue dated 10 July 2015, erroneously identifies the post-modification configuration MLG retraction actuator assembly part numbers. Bombardier SB 8-32-179 Revision A dated 9 March 2017 has been updated accordingly.

Revision 1 of this AD mandates the replacement of the MLG retraction actuator rod-end subassemblies manufactured with potentially non-conforming threads with units that fully conform to the design requirements. This AD revision also updates reference to Bombardier SB 8-32-179 Revision A dated 9 March 2017 to correct the post-modification configuration MLG retraction actuator assembly part numbers.

Corrective Actions:

Part I – Applicable to MLG Retraction Actuator Assemblies with 37 000 Flight Cycles and Above Accumulated Since New as of the Effective Date of the Original Issue of this AD, 6 December 2016:

Within 18 months or 2700 flight cycles, whichever occurs first, from the effective date of the original issue of this AD, 6 December 2016, incorporate Bombardier ModSum 8Q113021 to replace the MLG retraction actuator rod-ends on both MLG assemblies. Bombardier SB 8-32-179, Revision A dated 9 March 2017, or

later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, provides approved instructions for incorporating the above-mentioned ModSum.

Part II – Applicable to MLG Retraction Actuator Assemblies with Less Than 37 000 Flight Cycles Accumulated Since New as of the Effective Date of the Original Issue of this AD, 6 December 2016:

Within 24 months or 3600 flight cycles, whichever occurs first, from the effective date of the original issue of this AD, 6 December 2016, incorporate Bombardier ModSum 8Q113021 to replace the MLG retraction actuator rod-ends on both MLG assemblies. Bombardier SB 8-32-179, Revision A dated 9 March 2017, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, provides approved instructions for incorporating the above-mentioned ModSum.

Incorporation of Bombardier SB 8-32-179, Initial Issue dated 10 July 2015, meets the requirements of this AD.

Installation of MLG retraction actuator assembly P/N 10500-105, P/N 10500-503, or P/N 10500-555 in accordance with the table below on both MLG assemblies also meets the requirements of this AD.

| MLG Retraction Actuator Assembly Replacement | |
|---|---------------------------------|
| Remove Old Part Number: | Install New Part Number: |
| 10500-101, -103 | 10500-105 |
| 10500-501 | 10500-503 |
| 10500-551, -553 | 10500-555 |

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 16 May 2017

Contact:

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