



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-2024-25

Effective Date:

12 July 2024

ATA:

27

Type Certificate:

A-286

Subject:

Flight Controls - Horizontal Stabilizer Trim Actuator (HSTA) - Rubber Bull Gear (RBG) Wheel Abnormal Wear

Applicability:

MHI RJ Aviation ULC. (MHIRJ) (formerly Bombardier Inc.) model CL-600-2C10, CL-600-2C11, CL-600-2D15, CL-600-2D24 and CL-600-2E25 aeroplanes, all serial numbers.

Compliance:

As indicated below, unless already accomplished.

Background:

An in-service event occurred where an Engine Indicating and Crew Alerting System (EICAS) STAB TRIM Caution message was posted. Following the occurrence, the HSTA was removed and returned to the vendor for repair. During repair, it was discovered that one of the two RBG wheels had worn teeth. Investigation revealed quality issues involving the machining and surface treatment of the HSTA RBG wheel had caused premature wear of the wheel teeth. Further investigation determined that this quality issue affects a limited number of RBG wheels and HSTA serial numbers.

Wear of the RBG wheel teeth could cause a failure of the Horizontal Stabilizer trim system.

To address this unsafe condition, this AD mandates a Service Bulletin (SB) to remove and replace the affected RBG wheels from the associated HSTA's.

Corrective Actions:

For the purpose of this AD, the following definition applies:

Applicable MHIRJ SB: SB 670BA-27-077, Initial Issue, dated 16 April 2024, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part I – Verification of the Aeroplane Technical Records

- A. Within 4000 flight cycles accumulated on the HSTA from the effective date of this AD, verify the aeroplane technical records to determine if the serial number of the HSTA, Part Number (P/N) 8489-7 or P/N 8489-7R, is listed in Section 1.A. of the applicable MHIRJ SB.
- B. If the verification of the aeroplane technical records cannot be performed or if an inspection of the HSTA is preferred to a records check, proceed to Part I Paragraph C of this AD.
- C. If the serial number of the HSTA is not listed in Section 1.A. of the applicable MHIRJ SB or is marked with the suffix 'D' on the HSTA identification plate, then Part II of this AD is not required.
- D. If the serial number of the HSTA, P/N 8489-7 or P/N 8489-7R, is listed in Section 1.A. of the applicable MHIRJ SB, then proceed to Part II of this AD.

Part II – Removal, Replacement and Installation

- A. Within 4000 flight cycles accumulated on the HSTA from the effective date of this AD, complete Section 2.B. of the Accomplishment Instructions of the applicable MHIRJ SB.

Part III – Installation Prohibition of Components

- A. As of the effective date of this AD, it is prohibited to install HSTA, P/N 8489-7 or P/N 8489-7R, if the serial number is listed in Section 1.A. of the applicable MHIRJ SB, unless the HSTA serial number is marked with the suffix 'D' on the HSTA identification plate.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 28 June 2024

Contact:

Christopher Banken, 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.