



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-2022-29

Effective Date:

10 June 2022

ATA:

32

Type Certificate:

A-142

Subject:

Landing Gear – Main Landing Gear (MLG) and Doors – Forward Door Linkage Sleeves Missing Greasing Grooves

Applicability:

De Havilland Aircraft of Canada Limited (formerly Bombardier Inc.) model DHC-8-401 and -402 aeroplanes, serial numbers 4001, 4003 and subsequent.

Compliance:

As indicated below, unless already accomplished.

Background:

It has been disclosed that some forward door linkage sleeves (sleeve), part number (P/N) 46878-1, have been manufactured without greasing grooves on the outer diameter. An Investigation confirmed that incorrectly manufactured sleeves were potentially supplied from October 2019 to July 2021. A discrepant sleeve with a missing greasing groove can result in the fatigue failure of the forward door linkage leading to possible interference with the extension or retraction of the corresponding MLG. This condition, if not corrected and when combined with other failures, could result in an asymmetric MLG configuration at landing and a subsequent runway excursion.

To address this unsafe condition, this AD mandates the verification of technical records and inspections to determine if a discrepant sleeve is installed and, if required, the removal and replacement of the discrepant sleeve.

Corrective Actions:

Part I – Aeroplane Technical Records Verification

Within 30 days from the effective date of this AD, verify the aeroplane technical records to confirm if a sleeve P/N 46878-1 was replaced after 29 October 2019 on any MLG forward door linkage assembly P/N 46860.

- If the aeroplane technical records verification confirms that a sleeve P/N 46878-1 was replaced, or if the aeroplane technical records verification is unsuccessful, proceed to Part II of this AD;
- If the aeroplane technical records verification confirms that no maintenance was performed on the MLG forward door linkage assembly P/N 46860 after 29 October 2019, no further action is required other than compliance with Part III of this AD.

Part II – Inspection and Rectification of MLG Forward Door Assembly

Within 1500 flight cycles from the effective date of this AD, inspect and rectify, if necessary, the MLG forward door linkage assemblies in accordance with Section 3.B. of the Accomplishment Instructions of De Havilland Aircraft of Canada Limited Service Bulletin (SB) 84-32-169, dated 28 February 2022, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part III – Installation Prohibition of Discrepant Sleeve

As of the effective date of this AD, it is prohibited to install a sleeve P/N 46878–1 with missing lubrication grooves (discrepant sleeve) as a replacement part on all applicable aeroplanes.

Note: Figure 2 of Collins Aerospace SB 46860–32–150 shows the required lubrication grooves in sleeve P/N 46860.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Daniel Gosselin
Acting Chief, Continuing Airworthiness
Issued on 27 May 2022

Contact:

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