



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-2019-36

Effective Date:

1 November 2019

ATA:

55

Type Certificate:

A-142

Subject:

Stabilizers – Elevator Power Control Unit (PCU) Arm Fittings Insufficient Fillet Radius

Applicability:

De Havilland Aircraft of Canada Limited (formerly Bombardier Inc.) model DHC-8-400, -401 and -402 aeroplanes, serial numbers 4001 and subsequent.

Compliance:

As indicated below, unless already accomplished.

Background:

Bombardier Inc. discovered that certain aeroplanes entered service with elevator power control unit (PCU) arm fittings having nonconforming fillet radii. If not rectified, a nonconforming radius could lead to premature fatigue failure of a fitting, which could cause a jam in one elevator. In the event of failure of fittings on both elevators on the same aeroplane, a complete loss of elevator control could occur.

This AD requires aeroplanes or their technical records to be inspected for the presence of certain elevator serial numbers, and for the PCU arm fittings on affected elevators to be inspected and replaced if found to have cracks or nonconforming fillet radii. This AD also prohibits the installation of affected elevators.

Corrective Actions:

- A. For aeroplanes with serial numbers 4001 through 4620, perform the following actions before accumulating 8000 flight cycles from the effective date of the AD, or before accumulating 30 000 total flight cycles, whichever occurs first:
 - a. Inspect maintenance records or elevator data plates for elevator serial numbers to determine if any affected elevators are installed. Affected elevators are those having Part Numbers (P/Ns) 85527021-005/-006 with serial number MMC4255 through MMC4276.
 - b. Inspect the PCU arm fittings of affected elevators in accordance with Section 3.B Part A of the Accomplishment Instructions of Bombardier Inc. Service Bulletin (SB) 84-55-10 Revision A, dated 25 July 2019, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada. Re-identify any affected elevators with conforming fillet radii and no cracks in any PCU arm fittings in accordance with Section 3.B Part A of the above-mentioned SB.
 - c. Before further flight following the inspection above, replace all PCU arm fittings with cracks in the fillet radii or undersized fillet radii in accordance with Section 3.B Part B of the Accomplishment Instructions of the above-mentioned SB.

- B. For aeroplanes with serial numbers 4001 and subsequent, as of the effective date of this AD, it is prohibited to install an elevator having P/Ns 85527021-005/-006 with serial number MMC4255 through MMC4276 as a replacement part on DHC-8-400 series aeroplanes, unless it has been re-identified per the above-mentioned SB.
- C. For aeroplanes with serial numbers 4001 and subsequent, performing the actions required by paragraph A, prior to the effective date of this AD, in accordance with SB 84-55-10 Initial Issue, dated 29 May 2019, meets the intent of paragraph A of this AD.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 18 October 2019

Contact:

Daniel Gosselin, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.