



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-2022-52

Effective Date:

15 September 2022

ATA:

27

Type Certificate:

A-142

Subject:

Flight Controls – Flap Power Unit – Pressure Switch Failures

Applicability:

De Havilland Aircraft of Canada Limited (formerly Bombardier Inc.) model DHC-8-401 and DHC-8-402 aeroplanes, serial numbers 4001 and 4003 through 4633.

Compliance:

Within 8000 hours air time or 48 months, whichever occurs first, from the effective date of this AD, unless already accomplished.

Background:

There have been increasing reports of flap power unit (FPU) pressure switch failures over the past year leading to a high number of flap inoperative events in flight and on the ground.

An investigation has determined the root cause to be a deformation of the pressure switch internal mechanism due to hydraulic pressure spikes.

If not corrected, a failure of the FPU due to failed pressure switches could require abnormal flap landings, increased landing distances and could require the use of emergency landing procedures and/or airfield diversions.

To prevent this unsafe condition, this AD requires replacement of the pressure switch in the FPU with an improved pressure switch possessing a restrictor insert in the pressure switch inlet.

Corrective Actions:

Replace the FPU part number (P/N) C148656-1 or C148656-2 with P/N C148656-3 or replace the FPU pressure switch P/N 150135-1 or 162660-1 with P/N 162660-2 and re-identify the FPU, in accordance with Section 3.B. and Section 3.C. paragraph (2) of the Accomplishment Instructions of De Havilland Aircraft of Canada Limited (DHC) Service Bulletin (SB) 84-27-75, dated 23 June 2022, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Philippe Ngassam
Director, National Aircraft Certification
Issued on 1 September 2022

Contact:

Philip Lynch, 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.