



EMERGENCY 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-2020-27

Effective Date:

7 August 2020

ATA:

05

Type Certificate:

A-142

Subject:

Time Limits / Maintenance Checks – Airworthiness Limitations – Adjustment for Aeroplane Usage and Configuration

Applicability:

De Havilland Aircraft of Canada Limited (formerly Bombardier Inc.) model DHC-8-202 aeroplanes, serial numbers 413, 421 and 431.

Compliance:

As of the effective date of this AD, unless already accomplished.

Background:

Transport Canada Supplemental Type Certificate (STC) O-LSA12-106/D, SNC Mission System Modifications, was issued to Field Aviation Company Inc. This STC introduced modifications which required Maintenance Manual Supplements 25573111, 25603100, and 25613100 that specify Airworthiness Limitations (AWL) for affected aeroplanes that are in addition to DHC-8-202 AWL specified in De Havilland Maintenance Program PSM 1-82-7 Part 2.

The modifications approved by this STC are intended to support a significant change to the aeroplane mission profile when compared to aeroplanes in normal commercial operation, however the changed mission is not defined nor approved by this STC. It was discovered during the review of a recent revision of this STC, that Maintenance Manual Supplements (MMS) issued in support of this STC require the operator to define a Mission Severity Factor (MSF). Each MMS instructs the operator to apply this operator-defined MSF to adjust the MMS AWL for aeroplanes that have been modified through installation of the STC. The MMS requires the operator to calculate an equivalent number of flight cycles, based on the number of flight cycles accumulated during normal commercial operation plus flight cycles accumulated during modified missions multiplied by the MSF. The MMS neglected to explicitly state that the MSF is to be applied to the AWL listed in Maintenance Program PSM 1-82-7 Part 2.

It was determined that the operator applied a MSF of 1.0 to all AWL tasks. This would be representative of commercial operations but is not appropriate for the affected aeroplanes. Due to the changed mission of aeroplane serial numbers 413, 421 and 431, it is expected that several AWL inspections are overdue. This situation, if not corrected, could lead to structural failure of the aeroplane.

Based on all available information, Transport Canada has decided to prohibit operation of all aeroplanes having flown mission profiles other than those associated with normal commercial operations until a MSF is determined by the STC holder and accepted by Transport Canada, and the required inspections are performed.

Corrective Actions:

It is prohibited for anyone to allow operation of affected aeroplanes.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Robert Farinas
Acting Chief, Continuing Airworthiness
Issued on 7 August 2020

Contact:

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