



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-2022-45

Effective Date:

25 August 2022

ATA:

22

Type Certificate:

A-131

Subject:

Auto Flight System – Airplane Flight Manual (AFM) Limitations and Procedures – Velocity Decay during Low Level Altitudes Capture (V) ALTS CAP or (V) ALTV CAP modes in One Engine Inoperative Conditions

Applicability:

Bombardier Inc. aeroplanes:

Model CL-600-2B16, serial numbers 5301 through 5665,

Model CL-600-2B16, serial numbers 5701 through 5988,

Model CL-600-2B16, serial numbers 6050 through 6160.

Compliance:

Within 30 days from the effective date of this AD, unless already accomplished.

Background:

It was determined that during (V) ALTS CAP or (V) ALTV CAP modes, the flight guidance/autopilot does not account for engine failure while capturing an altitude. If an engine failure occurs during or before a climb while in (V) ALTS CAP or (V) ALTV CAP modes, the airspeed may decrease rapidly below the safe operating speed. Prompt crew intervention may be required to maintain a safe operating speed.

AD CF-2020-02 was issued on 13 February 2020 to mandate the update of the Limitation and Emergency Procedures of the AFM and mistakenly included applicability for aeroplane models 604, 605 and 650. The altitude capture modes referred to in AD CF-2020-02 are not present on aeroplane models 604, 605 and 650. AD CF-2020-02R1, which supersedes CF-2020-02, has been issued to remove the applicability to aeroplane models 604, 605 and 650.

This AD mandates updates to the Limitation and Emergency Procedures of the AFM for (V) ALTS CAP or (V) ALTV CAP modes to address the unsafe condition for the affected CL-600-2B16 (604 variant) aeroplane models 604, 605 and 650. These updates include:

- A warning regarding the potential airspeed decay in the case of an engine failure during a climb while in (V) ALTS CAP or (V) ALTV CAP modes.
- A new procedure to adjust the pitch attitude to maintain the required operating airspeed in the case of an engine failure during a climb while in (V) ALTS CAP or (V) ALTV CAP modes.

Corrective Actions:

- A. Amend the applicable Transport Canada approved AFM to add new Limitations or Procedures, as applicable, in accordance with Table 1 below, or later revisions of these Limitations or Procedures approved by Transport Canada.

Table 1

Aeroplane Serial Number	AFM No	AFM Revision
Model CL-600-2B16 (604 variant) Serial numbers 5301 through 5665	PSP 604-1	AFM Revision 120, dated 8 December 2020
Model CL-600-2B16 (604 variant) Serial numbers 5701 through 5988	PSP 605-1	AFM Revision 58, dated 8 December 2020
Model CL-600-2B16 (604 variant) Serial numbers 6050 through 6160	PSP 650-1	AFM Revision 23, dated 8 December 2020

- B. Advise all flight crews of the changes introduced by the approved Transport Canada AFM Revisions listed above and thereafter operate the affected aircraft accordingly.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Philippe Ngassam
Director, National Aircraft Certification
Issued on 11 August 2022

Contact:

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