



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-2023-26

Effective Date:

17 May 2023

ATA:

27

Type Certificate:

A-234

Subject:

Flight Controls – Pitch Trim – Mis-Trimmed Horizontal Stabilizer Leading to Controllability Issues

Applicability:

Bombardier Inc. model BD-100-1A10 (Challenger 300/350) aeroplanes, serial numbers 20003 through 20910.

Compliance:

Within 60 days from the effective date of this AD, unless already accomplished.

Background:

Bombardier is aware of several in-service events during which the crew experienced an unexpected pitch upset upon Auto-Pilot disconnect. Investigations of these events identified common factors which led to the pitch upset. In each event, after take-off, the aeroplane gained altitude via manual command of the elevator control surface without the use of the horizontal stabilizer pitch trim, even though the manual pitch trim was fully functional. The Auto-Pilot was then engaged while the aeroplane was still in an out-of-trim condition. Delays actioning subsequent engine indication and crew alerting system messages and later disengagement of the Auto-Pilot when the horizontal stabilizer is not correctly trimmed can lead to high control column forces and difficulties in controlling the aeroplane.

This AD mandates a revision of the Airplane Flight Manual (AFM) to incorporate a caution in the Auto Flight Non-Normal Procedures, in order to instruct crews to minimize changes to airspeed and configuration when using the Auto-Pilot disconnect switch in an out-of-trim situation.

Corrective Actions:

- A. Amend the Transport Canada approved AFM as detailed in Table 1 below, or later revisions of these procedures approved by Transport Canada.

Table 1

Aeroplane Model	AFM Procedure	AFM Revision
BD-100-1A10 CH300	Non-Normal Procedures in Section 05-14	AFM CSP 100-1, Revision 68, dated June 14, 2022, or later revisions of this manual approved by Transport Canada.
BD-100-1A10 CH350	Non-Normal Procedures in Section 05-14	AFM CH350 AFM, Revision 34, dated June 14, 2022, or later revisions of this manual approved by Transport Canada.

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

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Philippe Ngassam
Director, National Aircraft Certification
Issued on 3 May 2023

Contact:

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