



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-2023-78

Effective Date:

2 January 2024

ATA:

24

Type Certificate:

A-234

Subject:

Time Limits / Maintenance Checks (TLMC) – Addition of Certification Maintenance Requirement (CMR) Task

Applicability:

Bombardier Inc, model BD-100-1A10 aeroplanes, all serial numbers.

Compliance:

As indicated below, unless already accomplished.

Background:

There have been multiple in-service reports of erratic electrical system status on the push button annunciators (PBA) and the engine instrument and crew alerting system (EICAS) while on-ground and during flight. Several of these incidents resulted in the aeroplane experiencing a momentary loss of electrical power and loss of flight displays following crew action.

During the investigation, it was found that aeroplanes can experience misleading electrical system status indications (PBA and EICAS) as a result of contamination of electrical contacts in the left-hand (LH) direct current power centre (DCPC) internal communication data bus.

The erratic indications could cause the crew to turn off fully operational electrical power sources, leading to partial or complete loss of electrical power. Loss of electrical power could result in the loss of flight displays and reduced controllability of the aeroplane.

Transport Canada had previously issued AD CF-2020-46, AD CF-2022-28, and AD CF-2023-35 to mandate corrective actions to address this issue including: Airplane Flight Manual revision, verification of aeroplane technical records, cleaning of printed circuit boards, and modification of the DCPC units.

Bombardier introduced changes to the TLMC manual Part 2 wherein new Time Limits – Supplementary Limitation Task 24-61-01-101* was added for the Restoration of the Left DCPC, (Pre SB100-24-30 and SB350-24-005) to rectify lower time units not addressed by the previously issued AD's mentioned above. If the new tasks are not performed at the required intervals it could result in the unsafe condition described above.

Corrective Actions:

- A. Within 60 days after the effective date of this AD, incorporate according to the aeroplane model, the tasks identified in Table 1 or Table 2 below, in the appropriate chapter within Part 2 of the TLMC manuals.
- B. Perform the new and revised tasks at their respective threshold and intervals.

Note 1: For the purpose of this AD, the thresholds and intervals as defined in Part 2 of the Bombardier TLMC include specific initial compliance times (phase-in periods) for the task.

Table 1: New Task for Aeroplane Model BD-100-1A10 (Challenger 300)

Chapter 5 Task Number	Task Title	TLMC Chapter	BD-100 TLMC
24-61-01-101*	Restoration of the Left DC Power Center (DCPC) (Pre SB100-24-30)	5-10-20	Dated 9 August 2023

Table 2: New Task for Aeroplane Model BD-100-1A10 (Challenger 350)

Chapter 5 Task Number	Task Title	TLMC Chapter	BD-100 TLMC
24-61-01-101*	Restoration of the Left DC Power Center (DCPC) (Pre SB350-24-005)	5-10-20	Dated 9 August 2023

Compliance with superseding Temporary Revisions affecting these tasks or later revisions of the TLMC approved by Transport Canada also meets the intent of this AD.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 19 December 2023

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