



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 2023-35

Effective Date:

9 June 2023

ATA:

24

Type Certificate:

A-234

Subject:

Electrical Power – Misleading Indications

Replacement:

Supersedes AD CF-2022-28, issued 26 May 2022

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 previously issued AD CF-2020-46, which mandated the use of revised Electrical Emergency and Non-Normal Procedures in the Airplane Flight Manual that directed crews not to turn off active generators in the event of an erroneous electrical system status indication. Transport Canada also issued AD CF-2022-28 to further mitigate the risk by requiring the removal and replacement of certain LH DCPC units. The removed units were required to be returned to the manufacturer to have the printed circuit boards cleaned.

This AD retains the requirement to perform a verification of the aeroplane technical records and requires LH DCPC units, part number (P/N) 975GC02Y04, 975GC02Y05, 975GC02Y06 or 975GC02Y07 to be removed for cleaning by the LH DCPC manufacturer.

This AD also requires LH DCPC units, P/N 975GC02Y07, to be modified by adding a protective layer of tape to prevent the ingress of contaminants into the printed circuit board cage.

A Time Limits/Maintenance Checks (TLMC) task will also be implemented in the near future to rectify lower time units not addressed by this AD and AD CF-2022-28.

Corrective Actions:**Part I – Technical Records Check – Verification of the Accumulated Hours Air Time on the LH DCPC Unit**

Applicable to LH DCPC P/N 975GC02Y04, 975GC02Y05, 975GC02Y06 or 975GC02Y07 that were not previously cleaned and replaced as required by Part II of AD CF-2022-28 or Safran Service Bulletin (SB) 975GC02Y-24-018.

Within 60 days from the effective date of this AD, verify the total accumulated hours air time of the LH DCPC unit since the date of manufacture by performing technical records check, in accordance with section 2.B(1). of the Accomplishment Instructions of the applicable SB listed in Table 1 below. If the total accumulated hours air time since the date of manufacture of the LH DCPC unit is equal to or more than 3500 hours air time, proceed to the replacement of the LH DCPC in Part II of this AD.

If the total accumulated hours air time since the date of manufacture of the LH DCPC unit is less than 3500 hours air time, no further action is required at this time. A TLMC task will be created to address these lower time units.

Table 1 – Applicable Bombardier SBs

Aeroplane Model	Serial Number	SB / Revision	Issue Date
BD-100-1A10 (CH300)	20001 through 20500	100-24-29 / Basic Issue	9 April 2021 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
BD-100-1A10 (CH350)	20501 through 20999	350-24-004 / Basic Issue	9 April 2021 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part II – Replacement of the LH DCPC

Applicable to LH DCPC P/N 975GC02Y04, 975GC02Y05, 975GC02Y06 or 975GC02Y07 that were not previously cleaned and replaced as required by Part II of AD CF-2022-28.

1. Within 12 months from the effective date of this AD, remove the LH DCPC unit P/N 975GC02Y04, 975GC02Y05, 975GC02Y06 or 975GC02Y07, in accordance with Aircraft Maintenance Manual (AMM) Task 24-61-01-000-801 and replace with P/N 975GC02Y08, in accordance with AMM Task 24-61-01-400-801.
2. Following the installation of LH DCPC, P/N 975GC02Y08, perform the testing in accordance with section 2.D. of the Accomplishment Instructions of the applicable SB in Table 2 below.
3. Perform the functional test of the LH DCPC in accordance with AMM Task 24-61-01-720-801.

Part III – Modification of LH DCPC

Applicable to LH DCPC P/N 975GC02Y07 units that were previously cleaned as required by Part II of AD CF-2022-28 or cleaned in accordance with Safran SB 975GC02Y-24-018 prior to the effective date of this AD.

Within 12 months from the effective date of this AD, rework the LH DCPC P/N 975GC02Y07, in accordance with section 2.C. of the Accomplishment Instructions of the applicable SB in Table 2 below.

Following rework of the LH DCPC, perform the testing in accordance with section 2.D. of the Accomplishment Instructions of the applicable SB in Table 2 below.

Table 2 – Applicable Bombardier SBs

Aeroplane Model	Serial Number	SB / Revision	Issue Date
BD-100-1A10 (CH300)	20001 through 20500	100-24-30 / Basic Issue	29 November 2022 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada
BD-100-1A10 (CH350)	20501 through 20929, and 20931	350-24-005 / Basic Issue	29 November 2022 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada

Part IV – Installation Prohibition of Affected Parts

Within 60 days from the effective date of this AD, it is prohibited to install a LH DCPC with P/N 975GC02Y04, 975GC02Y05, 975GC02Y06 or 975GC02Y07, as a replacement part.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 26 May 2023

Contact:

Craig McAllister, 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.