



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-2023-05

Effective Date:

22 February 2023

ATA:

36

Type Certificate:

A-131

Subject:

Pneumatic – Non-Conforming Bleed Air Leak Detection System Sensing Elements

Applicability:

Bombardier Inc. model CL-600-2B16 aeroplanes, serial numbers 5580 to 5665, 5701 to 5988 and 6050 and subsequent.

Compliance:

As indicated below, unless already accomplished.

Background:

Bombardier (BA) received disclosure letters from the supplier of overheat detection sensing elements which reported a manufacturing quality escape in which some sensing elements were manufactured with insufficient salt fill. As these sensing elements are used by the bleed air leak detection system for temperature detection in the event of a hot bleed air leak, this insufficient salt fill can result in an inability to detect hot bleed air leaks, which can cause damage to surrounding structures and systems that can prevent continued safe flight and landing.

To address this unsafe condition, this AD requires testing of all affected overheat detection sensing elements of the bleed air leak detection system and replacement, as required, of non-confirming sensing elements, in accordance with BA Service Bulletin (SB) 604-36-005, SB 605-36-002 and SB 650-36-001, as applicable. This AD also prohibits the installation of any non-conforming sensing element as a replacement part on applicable aeroplanes.

Corrective Actions:

For the purpose of this AD, the following definitions apply:

Kidde SB: Kidde Aerospace and Defense SB CFD-26-1, as referenced in Section 1.K. of the applicable BA SB, or earlier revisions of the Kidde SB.

The applicable BA SB: BA SB 604-36-005, Basic Issue, dated 23 December 2022, BA SB 605-36-002, Basic Issue, 23 December 2022, or BA SB 650-36-001, Basic Issue, dated 23 December 2022, as applicable, or later revisions of these SBs approved by the Chief, Continuing Airworthiness, Transport Canada.

Affected part: A sensing element marked with a date code A0448 through A2104 (inclusive) and having a part number as defined in the Kidde Aerospace and Defense SB CFD-26-1 Revision 6, dated 28 February 2022, unless that sensing element:

- a. Has been tested in accordance with Section 3 of the Accomplishment Instructions of the Kidde SB and found to be serviceable; and
- b. Has been marked on one (1) face of its connector hex nut in accordance with Section 3.C. of the Accomplishment Instructions – Identification Procedure of the Kidde SB.

OR

- c. Has been tested and found to be serviceable in accordance with Part I of this AD; and
- d. Has been marked on one (1) face of one (1) connector hex nut with one (1) green mark, as shown in Figure 6 of the applicable BA SB (figure is representative for all sensing elements).

Serviceable part: A sensing element that is not an affected part.

Group 1 aeroplanes: Model CL-600-2B16 aeroplanes having serial numbers 5580 through 5665, model CL-600-2B16 aeroplanes having serial numbers 5701 through 5988, and model CL-600-2B16 aeroplanes having serial numbers 6050 through 6174.

Group 2 aeroplanes: Model CL-600-2B16 aeroplanes having serial numbers 6175 and subsequent.

Part I – Testing and Replacement – Applicable to Group 1 Aeroplanes

- A. Within 7800 flight cycles or 96 months, whichever occurs first, from the effective date of this AD, test the overheat detection sensing elements to determine if they are serviceable, in accordance with the Section 2 of the Accomplishment Instructions of the applicable BA SB.
- B. If the sensing element is found serviceable, before further flight, mark the sensing element with a witness mark in accordance with Section 2 of the Accomplishment Instructions of the applicable BA SB.
- C. If the sensing element is found not serviceable, before further flight, replace the sensing element with a serviceable part in accordance with Section 2 of the Accomplishment Instructions of the applicable BA SB.

Part II – Parts Installation Prohibition – Applicable to Group 1 and Group 2 Aeroplanes

As of the effective date of this AD, an affected part is not eligible for installation as a replacement part on Group 1 and Group 2 aeroplanes.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 8 February 2023

Contact:

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