



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-2021-33

Effective Date:

20 October 2021

ATA:

27

Type Certificate:

A-131

Subject:

Flight Controls – Rudder Control System – Inspection for Missing Crimping of Rudder Power Control Unit (PCU) Load Limiter

Applicability:

Bombardier Inc. aeroplanes:

Model CL-600-1A11, serial numbers 1004 through 1085,

Model CL-600-2A12, serial numbers 3001 through 3066,

Model CL-600-2B16, serial numbers 5001 through 5194, 5301 through 5665, 5701 through 5988, 6050 through 6158 and 6160 through 6162.

Compliance:

As indicated below, unless already accomplished.

Background:

Bombardier received a disclosure letter issued by the vendor advising that some rudder PCU load limiters were found in service with the crimping missing from the end cap.

Rudder PCU load limiters, with missed crimping on the end cap, may not transmit the pilot command properly thus possibly leading to loss of adequate control of the rudder.

This AD mandates inspections and testing to detect and replace potentially defective rudder PCU load limiters.

Corrective Actions:

For the purpose of this AD, the term “the applicable SB” refers to the applicable service bulletin (SB) according to the aeroplane model and serial number as listed in Table 1 of this AD, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Where the applicable SB compliance time basis is the issuing date of the SB, that time must be the effective date of this AD.

Part I – Applicable to Aeroplane Models CL-600-1A11 (Serial Numbers 1004 through 1085), CL-600-2A12 (Serial Numbers 3001 through 3066) and CL-600-2B16 (Serial Numbers 5001 through 5194 and Serial Numbers 5301 through 5665)

A. Special Check – One-Time Visual Inspection of the Rudder PCU Load Limiters

1. For aircraft: CL-600-1A11 (serial numbers 1004 through 1085), CL-600-2A12 (serial numbers 3001 through 3066) and CL-600-2B16 (serial numbers 5001 through 5194):

Within 800 hours air time from the effective date of this AD, inspect the rudder PCU load limiter part number (P/N) 600-91302-43 and/or P/N 600-91302-53 in accordance with Paragraph 2.B.

Part A. of the Accomplishment Instructions of the applicable SB.

If the crimping of the end cap of the rudder PCU load limiter P/N 600-91302-43 and/or P/N 600-91302-53 is missing, proceed to Part I.B. of this AD.

2. For aircraft: CL-600-2B16 (serial numbers 5301 through 5665):

Within 2200 hours air time from the effective date of this AD, inspect the rudder PCU load limiter P/N 600-91302-43 and/or P/N 600-91302-53 in accordance with Paragraph 2.B. Part A. of the Accomplishment Instructions of the applicable SB.

If the crimping of the end cap of the rudder PCU load limiter P/N 600-91302-43 and/or P/N 600-91302-53 is missing, proceed to Part I.B. of this AD.

- B. Modification – Replacement of the Rudder PCU Load Limiter P/N 600-91302-43 and/or P/N 600-91302-53

Before further flight, replace the defective components identified during the inspection performed in Part I.A. of this AD in accordance with Paragraph 2.C. Part B. of the Accomplishment Instructions of the applicable SB.

Part II – Applicable to Aeroplane Model CL-600-2B16, Serial Numbers 5701 through 5988, 6050 through 6158 and 6160 through 6162

- A. Special Check – Initial Testing of the Rudder PCU Load Limiters

Within 1000 hours air time from the effective date of this AD, test the rudder PCU load limiters in accordance with Paragraph 2.B. Part A. of the Accomplishment Instructions of the applicable SB.

If this testing produces a failed condition for any one of the three rudder PCU load limiters, complete Paragraph 2.C. Part B. of the applicable SB before further flight.

- B. Special Check – Repeat Testing of the Rudder PCU Load Limiters

Following completion of Part II.A. of this AD, repeat the testing required by Part II.A. of this AD every 800 hours air time.

- C. Special Check – Visual Inspection of the Rudder PCU Load Limiter P/N 600-91302-43 and/or P/N 600-91302-53

1. Within 3400 hours air time from the effective date of this AD, inspect the rudder PCU load limiters in accordance with Paragraph 2.C. Part B. of the Accomplishment Instructions of the applicable SB.
2. If the crimping of the end cap of the rudder PCU load limiter is missing, proceed to Part II.D. of this AD.
3. Completion of the inspection required by Part II.C.1. of this AD terminates the requirement for repeat testing required by Part II.B. of this AD.

- D. Modification – Replacement of the Rudder PCU Load Limiters

When completing Part II.C. of this AD, if the crimping of the end cap of the rudder PCU load limiter P/N 600-91302-43 and/or P/N 600-91302-53 is missing, replace the affected part in accordance with Paragraph 2.D. Part C. of the applicable SB before further flight.

Table 1

Aeroplane Model	Aeroplane Serial Number	SB Number
CL-600-1A11	1004 through 1085	600-0776 Basic Issue, dated 7 December 2020
CL-600-2A12	3001 through 3066	601-0648 Basic Issue, dated 7 December 2020
CL-600-2B16	5001 through 5194	601-0648 Basic Issue, dated 7 December 2020
CL-600-2B16	5301 through 5665	604-27-039 Revision 1, dated 6 April 2021
CL-600-2B16	5701 through 5988	605-27-010 Basic Issue, dated 7 December 2020
CL-600-2B16	6050 through 6158 and 6160 through 6162	650-27-003 Basic Issue, dated 7 December 2020

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 6 October 2021

Contact:

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