



# AIRWORTHINESS DIRECTIVE

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*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) to ADs.*

**Number:**

CF-2018-19

**Effective Date:**

3 August 2018

**ATA:**

57

**Type Certificate:**

A-131

**Subject:**

Special Check of Attachment Fittings – Wing Box Main Landing Gear Side Brace Fittings

**Applicability:**

Bombardier Inc. model CL-600-2A12 aeroplanes, serial numbers (S/N) 3001 through 3009 and 3011 through 3029.

**Compliance:**

As indicated below, unless already accomplished.

**Background:**

There has been a report of damage to the anti-rotation tab on a Main Landing Gear (MLG) Side Brace fitting. Investigation of the report revealed that a Challenger model CL600 MLG Side Brace shaft had been installed on a Challenger model CL601 Side Brace fitting. Due to the difference in size, this will result in changes to the way the load is transferred between the shaft and the MLG Side Brace fitting and may result in premature cracking of the MLG Side Brace fitting. This condition, if not corrected, could lead to the collapse of the MLG resulting in structural damage to the wing spar and fuel tank.

This AD mandates an inspection of the MLG Side Brace fitting and shaft to verify that the correct shaft part number (P/N) is installed and the fitting is not damaged. If the Challenger CL600 shaft is installed, this AD mandates replacement with the correct Challenger model CL601 part. If the correct P/N is found installed, this AD also mandates the installation of a bracket to prevent the incorrect part from being installed in the future.

**Corrective Actions:**

**Part I – Special Check – Inspection for Damage and Identification of the Shaft Part Number**

Within 400 flight cycles or 12 months, whichever occurs first, from the effective date of this AD, identify the P/N of the Side Brace shaft installed and perform a detailed visual inspection (DVI) of the Side Brace fitting for signs of damage, in accordance with paragraph 2.B. of the Accomplishment Instructions of Bombardier Service Bulletin (SB) 601-0624, Revision 02, dated 29 January 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

- A. If shaft P/N 600-10237-3 is installed, proceed to Part II of this AD.
- B. If shaft P/N 600-10237-1 or 600-10237-5 is installed, proceed to Part III of this AD.

**Part II – Modification – Installation of the Anti-Rotation Bracket**

- A. Following the inspection performed in Part I, where it was confirmed P/N 600-10237-3 is installed, before next flight, modify the MLG Side Brace fitting by installing the anti-rotation bracket in accordance with paragraph 2.C. of the Accomplishment Instructions of Bombardier SB 601-0624, Revision 02, dated 29 January 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

- B. For aeroplanes that have previously accomplished Part I of this AD, and where it had been confirmed P/N 600-10237-3 is installed, within 6 months from the effective date of this AD, modify the MLG Side Brace fitting by installing the anti-rotation bracket in accordance with paragraph 2.C. of the Accomplishment Instructions of Bombardier SB 601-0624, Revision 02, dated 29 January 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

**Part III - Modification – Replacement of the Side Brace fitting shaft and installation of the Anti-Rotation Bracket**

- A. If Side Brace Fitting shaft P/N 600-10237-1 or 600-10237-5 is installed and damage is found during the DVI of the side brace fitting, before further flight, perform a DVI of the anti-rotation tab and side brace fitting aft bushing, perform a Special Detailed Inspection (SDI) of the side brace fitting aft bore, replace the shaft P/N 600-10237-1 or 600-10237-5 with P/N 600-10237-3 and install the anti-rotation bracket in accordance with paragraph 2.D. of the Accomplishment Instructions of Bombardier SB 601-0624, Revision 02, dated 29 January 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
- B. If Side Brace Fitting shaft P/N 600-10237-1 or 600-10237-5 is installed and no damage is found during the DVI of the side brace fitting, within 300 flight cycles or 12 months, whichever occurs first, following the inspection performed in Part I of this AD, perform a DVI of the anti-rotation tab and side brace fitting aft bushing, perform a SDI of the side brace fitting aft bore, replace the shaft P/N 600-10237-1 or 600-10237-5 with P/N 600-10237-3 and install the anti-rotation bracket in accordance with paragraph 2.D. of the Accomplishment Instructions of Bombardier SB 601-0624, Revision 02, dated 29 January 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

The basic issue of Bombardier SB 601-0624, dated 1 October 2012, meets the intent of this AD only if the Side Brace Fitting shaft P/N 600-10237-3 was identified and the anti-rotation bracket was installed in accordance with paragraph 2.C of the Accomplishment Instructions of the SB. If the shaft P/N 600-10237-3 was identified, but the anti-rotation bracket has not been installed, the corrective action of Part II (B) of this AD must be accomplished.

Revision 01 of Bombardier SB 601-0624, dated 29 March 2017, meets the intent of this AD under the following conditions:

- A. Part number (P/N) 600-10237-3 was found installed and the anti-rotation bracket was installed in accordance with paragraph 2.C of the Accomplishment Instructions of the SB.
- B. If either shaft P/N 600-10237-1 or shaft P/N 600-10237-5 was identified and replaced by shaft P/N 600-10237-3, and the anti-rotation bracket has been installed in accordance with paragraph 2.D of the Accomplishment Instructions of the SB.
- C. If the shaft P/N 600-10237-3 was identified but the anti-rotation bracket has not been installed, the corrective action of Part II (B) of this AD must be accomplished within 6 months from the effective date of this AD.
- D. If, either shaft (P/N) 600-10237-1 or shaft P/N 600-10237-5 was identified, but the shaft has not been replaced by shaft P/N 600-10237-3, within 3 months from the effective date of this AD, perform a DVI of the Side Brace fitting for signs of damage in accordance with paragraph 2.B. of the Accomplishment Instructions of Bombardier SB 601-0624, Revision 02, dated 29 January 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
  - 1. If damage is found, before further flight, perform a DVI of the anti-rotation tab and side brace fitting aft bushing, perform a SDI of the side brace fitting aft bore, replace the shaft P/N 600-10237-1 or 600-10237-5 with P/N 600-10237-3 and install the anti-rotation bracket in accordance with paragraph 2.D. of the Accomplishment Instructions of Bombardier SB 601-0624, Revision 02, dated 29 January 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
  - 2. If no damage is found replace the shaft P/N 600-10237-1 or 600-10237-5 with P/N 600-10237-3 and install the anti-rotation bracket in accordance with paragraph 2.D. of the Accomplishment Instructions of Bombardier SB 601-0624, Revision 02, dated 29 January 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

**Authorization:**

For the Minister of Transport,

*ORIGINAL SIGNED BY*

Rémy Knoerr  
Chief, Continuing Airworthiness  
Issued on 20 July 2018

**Contact:**

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