



No.	CF-2013-18	1/2
Issue Date	16 July 2013	

AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aircraft which our records indicate is registered in your name. ADs are issued pursuant to **Canadian Aviation Regulation (CAR) 521 Division X**. Pursuant to **CAR 605.84** and the further details of **CAR Standard 625, Appendix H**, the continuing airworthiness of a Canadian registered aircraft is contingent upon compliance with all applicable ADs. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aircraft. Alternative means of compliance shall be applied for in accordance with **CAR 605.84** and the above-referenced **Standard**.

This AD has been issued by the Continuing Airworthiness Division (AARDG), National Aircraft Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

Number: CF-2013-18

Subject: Horizontal Stab Trim Actuator (HSTA) – Loose Bolts on the Spur Gear

Effective: 30 July 2013

Applicability: Bombardier Inc. model CL-600-2B16 aeroplanes, serial numbers 5301 and subsequent, equipped with HSTA Part Number (P/N) 604-92305-3 (vendor P/N 8454-1) or P/N 604-92305-5 (vendor P/N 8454-2).

Compliance: As indicated below, unless already accomplished.

Background: There have been a number of reports where the HSTA spur gear bolts were found loose, broken or backed out. Investigation revealed that the root cause of the bolt loosening is due to incorrect bending of the anti-rotation tab washer and the improper application of Loctite glue during installation. Loose bolt(s) on the HSTA spur gear combined with the failure of the primary load path, could lead to failure of the HSTA and subsequent loss of the aeroplane.

Bombardier Aerospace has introduced a modified HSTA P/N 604-92305-5 (vendor P/N 8454-2) to rectify the loose bolt problem. However, this modified HSTA has several quality control problems which could affect safety.

This AD is issued to mandate the replacement of the affected HSTA with the new HSTA P/N 604-92305-7 (vendor P/N 8454-3).

Corrective Actions: **Part I – Airplane Flight Manual Change**

- A. Within 30 days from the effective date of this AD, amend the Airplane Flight Manual (AFM) by incorporating the following applicable Temporary Revision (TR):
1. PSP 604-1 TR 604/37, dated 21 May 2013 or later approved changes to this AFM TR.
 2. PSP 605-1 TR 605/18, dated 21 May 2013 or later approved changes to this AFM TR.
- B. Advise all flight crews of the changes detailed in the applicable AFM TR.

Part II – Time Limit Maintenance Checks Change

- A. Within 30 days from the effective date of this AD, amend the Transport Canada approved maintenance schedule by incorporating task 27-41-00-101 Operational Test (BITE) of the Horizontal Stabilizer Trim Control System (HSTS), as introduced by the TR RS-CL604-055, dated 30 April 2012 or RS-CL605-030, dated 30 April 2012 as required.

Pursuant to **CAR 202.51** the registered owner of a Canadian aircraft shall, within seven days, notify the Minister in writing of any change of his or her name or address.

To request a change of address, contact the **Civil Aviation Communications Centre (AARC)** at Place de Ville, Ottawa, Ontario K1A 0N8, or 1-800-305-2059, or www.tc.gc.ca/civilaviation/communications/centre/address.asp

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- B. Phase-in: within 100 hours air time from the effective date of this AD, perform task 27-41-00-101 and thereafter at intervals not to exceed 400 hours air time.

Part III – HSTA Replacement

For aeroplanes equipped with HSTA P/N 604-92305-3 (vendor P/N 8454-1) or P/N 604-92305-5 (vendor P/N 8454-2), within 3000 hours air time from the effective date of this AD or before 1 November 2015, whichever comes first, remove and replace the HSTA with P/N 604-92305-7 (vendor P/N 8454-3) in accordance with the accomplishment instructions of applicable Bombardier Inc. Service Bulletin (SB) 604-27-032, Basic Issue, dated 10 September 2012, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, or SB 605-27-002, Basic Issue, dated 10 September 2012, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

The above removal schedule does not alleviate any existing life limit requirements.

As of the effective date of this AD, it is prohibited for anyone to install HSTA P/N 604-92305-3 (vendor P/N 8454-1) or 604-92305-5 (vendor P/N 8454-2) on the CL-600-2B16 aeroplanes.

Authorization: For the Minister of Transport, Infrastructure and Communities,

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

Contact: Gordanko Jeremic, Continuing Airworthiness, Ottawa, telephone 613-952-4357, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.