



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) to ADs.

Number:

CF-2017-24

Effective Date:

26 July 2017

ATA:

27

Type Certificate:

A-131

Subject:

Horizontal Stabilizer Trim Actuator – Attachment Pins and Trunnions Not Serialized

Applicability:

Bombardier Inc. aeroplanes:

Model CL-600-1A11 (600), serial numbers 1002 and 1004 through 1085;
Model CL-600-2A12 (601 Variant), serial numbers 3001 through 3066;
Model CL-600-2B16 (601-3A/-3R Variant), serial numbers 5001 through 5194;
Model CL-600-2B16 (604 Variant), serial numbers 5301 through 5665, 5701 through 5990, 6050 and subsequent.

Compliance:

As indicated below, unless already accomplished.

Background:

During a review of the Horizontal Stabilizer Trim Actuator (HSTA) system, it was discovered that the safe life limits of the HSTA attachment pins and trunnions were not listed in the Airworthiness Limitation (AWL) Section of the Instructions for Continued Airworthiness. Also, the HSTA attachment pins and trunnions were not serialized making it impossible to keep accurate records of the life of these parts. Failure of these pins and trunnions could lead to a disconnect of the horizontal stabilizer and subsequent loss of the aeroplane.

This AD mandates the incorporation of AWL tasks into the maintenance schedule and serialization of the HSTA attachment pins and trunnions. Some aircraft require AWL tasks and serialization of the attachment pins only, while others require AWL tasks and serialization of the trunnions and the attachment pins.

Corrective Actions:

Part I – Maintenance Schedule Amendment

- A. For aeroplane model CL-600-1A11 (600), serial numbers 1002 and 1004 through 1085; CL-600-2A12 (601 Variant), serial numbers 3001 through 3066; and CL-600-2B16 (601-3A/-3R Variant), serial numbers 5001 through 5194:
1. Within 60 days from the effective date of this AD, amend the Transport Canada-approved maintenance schedule by incorporating the life limit AWL tasks identified in Table 1 from the appropriate Time Limits / Maintenance Checks (TLMC) documents as follows:
 - a. Model CL-600-1A11 (600): PSP 605 Revision 38 dated 28 March 2017, Section 5-10-10.
 - b. Model CL-600-2A12 (601 Variant): PSP 601-5 Revision 45 dated 28 March 2017, Section 5-10-10, 5-10-11 or 5-10-12 as indicated in the TLMC manual depending on Bombardier Inc. Service Bulletin (SB) incorporation status.

- c. Model CL-600-2B16 (601-3A/-3R Variant): PSP 601A-5 Revision 41 dated 28 March 2017, Section 5-10-10, 5-10-11 or 5-10-12 as indicated in the TLMC manual depending on SB incorporation status.

Table 1: Life Limit AWL Tasks

Part Name	Part Number	Landings
HSTA Inst Pin, Lower Attach	600-92383-1	50,000
HSTA Inst Pin, Upper Attach	600-92384-1	50,000

- B. For aeroplane model CL-600-2B16 (604 Variant), serial numbers 5301 through 5665, 5701 through 5990 and 6050 and subsequent:
1. Within 60 days from the effective date of this AD, amend the Transport Canada-approved maintenance schedule by incorporating the new life limit AWL tasks:
 - a. 27-42-01-108 "Discard of the Horizontal-Stabilizer Trim-Actuator (HSTA) Trunnion Support; Part No. 601R92386-1/-3"; and
 - b. 27-42-01-112 "Discard of the Horizontal-Stabilizer Trim-Actuator (HSTA) Upper and Lower Attachment Pins; Upper Pin Part No. 600-92384-5/-7 or 601R92310-1/-3 and Lower Pin Part No. 600-92383-5/-7 or 601R92309-1/-3".

These AWL tasks are introduced by the applicable TLMC manual Section 5-10-10 as follows:

 - a. Aeroplane model CL-600-2B16 (604 Variant), serial numbers 5301-5665: CH 604 TLMC Revision 28 dated 23 February 2017
 - b. Aeroplane model CL-600-2B16 (604 Variant), serial numbers 5701-5990: CH 605 TLMC Revision 16 dated 23 February 2017
 - c. Aeroplane model CL-600-2B16 (604 Variant), serial numbers 6050 and subsequent: CH 650 TLMC Revision 3 dated 23 February 2017
- C. Initial compliance with the AWL tasks introduced in Part I of this AD is required within 500 flight cycles of the effective date of this AD or as indicated within the AWL section, whichever occurs later.
- D. Compliance in accordance with superseding Temporary Revisions or later revisions of the Airworthiness Limitations of the TLMC, approved by Transport Canada, also satisfies the requirements of Part I of this AD.

Part II – HSTA Attachment Pins & Trunnions Serialization

- A. This part is applicable to the following aeroplanes:
1. Model CL-600-1A11 (600), serial numbers 1002 and 1004 through 1085;
 2. Model CL-600-2A12 (601 Variant), serial numbers 3001 through 3066;
 3. Model CL-600-2B16 (601-3A/-3R Variant), serial numbers 5001 through 5194; and
 4. Model CL-600-2B16 (604 Variant), serial numbers 5301 through 5665 and 5701 through 5926.
- B. Within 48 months from the effective date of this AD or prior to performing a maintenance task required by Part I of this AD, whichever occurs first, inspect and add serial numbers to the HSTA Trunnions (for the models indicated in Table 2), HSTA Lower Pin and HSTA Upper Pin in accordance with the Accomplishment Instructions of the applicable SB as indicated in Table 2:

Table 2: Service Bulletins for Part Serialization

Aeroplane Model	Service Bulletin	Parts to Serialize
CL-600-1A11 (600)	600-0760 Revision 01, dated 21 April 2017	
CL-600-2A12 (601 Variant)	601-0626 Revision 01, dated 21 April 2017	HSTA Upper Pin
CL-600-2B16 (601-3A/-3R Variant)		HSTA Lower Pin
CL-600-2B16 (604 Variant) serial numbers 5301 to 5665	604-27-034 Revision 01, dated 21 April 2017	HSTA Trunnions
CL-600-2B16 (604 Variant) serial numbers 5701 to 5926	605-27-005 Revision 01, dated 21 April 2017	HSTA Upper Pin HSTA Lower Pin

- C. Completion of the Basic Issue, dated 25 February 2013, or the SBs identified in Table 2 before the effective date of this AD meets the intent of Part II of this AD.
- D. Completion of later revisions of the SBs identified in Table 2 approved by the Chief, Continuing Airworthiness, Transport Canada, meets the intent of Part II of this AD.
- E. For any deviations to the Accomplishment Instructions of the SBs indicated in Table 2, contact Bombardier Business Aircraft Customer Services for an approved disposition. The approved disposition must specifically refer to this AD.
- F. Repair Engineering Order (REO) 604-27-42-011, Revision -- dated 15 December 2016, REO 604-27-42-012 Revision -- dated 15 December 2016, or REO 600-27-42-002 Revision -- dated 15 December 2016, as applicable as indicated in the Service Effectivity of these REOs, may be used to repair any applicable damage to the HSTA pin or trunnion found during incorporation of a SB in Table 2. Later revisions of these REOs approved by the Chief, Continuing Airworthiness, Transport Canada, may also be used.
- G. If damage to the HSTA pin or trunnion cannot be repaired in accordance with the above-mentioned REOs, replace the pin or trunnion prior to next flight.

Part III – Spares

- A. Part III is applicable to all aeroplanes identified in the Applicability section of this AD.
- B. As of the effective date of this AD, no person shall permit the installation of an HSTA attachment pin on any aeroplane listed in the Applicability section of this AD unless the pin has a serial number.
- C. As of the effective date of this AD, no person shall permit the installation of an HSTA trunnion on Bombardier Inc. model CL-600-2B16 (604 variant) aeroplanes with serial number 5301 and subsequent unless the trunnion has a serial number.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 12 July 2017

Contact:

Daniel Gosselin, Continuing Airworthiness, Ottawa, telephone 1-888-663-3639, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.