



No.	CF-2006-20R1	1/3
Issue Date	4 October 2006	

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) 593**. 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), Aircraft Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

- Number:** CF-2006-20R1
- Subject:** Horizontal Stabilizer Trim – Uncommanded Motion
- Effective:** 16 October 2006
- Revision:** Supersedes Airworthiness Directive CF-2006-20 issued on 22 August 2006.
- Applicability:** Bombardier Inc. Model CL-600-2B19, serial numbers 7003 thru 7990 and 8000 thru 8066.
- Compliance:** As indicated below, unless already accomplished.
- Background:** Transport Canada has received reports of uncommanded horizontal stabilizer trim motion (HSTCU) on two CL-600-2B16 (CL-604) aircraft. In each case, the aircraft landed safely.

An investigation has revealed that a motherboard in the HSTCU had not had appropriate environmental protection applied during manufacture. The absence of corrosion protection and the accumulation of moisture during flight, caused short circuits that resulted in autopilot disconnect and trim system malfunctions. The trim problems included uncommanded trim, trim in a direction opposite to that selected, loss of trim position indication and, in one case potential loss of trim disconnect capability.

This Revision enhances the airplane flight manual (AFM) stabilizer trim runaway procedure, mandates the installation of circuit breaker (CB) identification collars for the HSTCU CBs, and introduces some additional trim system pre-flight checks for the flight crew.

The installation of a modified HSTCU with environment protection on the motherboard provides terminating action.

- Corrective Action:**
 1. Within 14 days of the effective date of this directive, complete the following:
 - a) Amend the AFM by inserting Temporary Revision (TR) RJ/152-5 dated 03 October 2006, or later approved change to this TR. TR RJ/152-4 dated 09 August 2006, which was installed under Canadian airworthiness directive CF-2006-20, should be removed;
 - b) Install circuit breaker identifier collars on the HSTCU circuit breakers in accordance with Bombardier In-Service ModSum No. IS601R27410051, Revision C, approved 29 September 2006, or later revision of this ModSum. Circuit breaker collars that meet the color requirements of Revision C but were installed under Revision A or B of the ModSum also meet this requirement;
 - c) Brief all flight crew that prior to the flight crew's first flight of the day, each flight crew is required to:

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



- i) Review the location of the STAB CH1 HSTCU and STAB CH2 HSTCU circuit breakers, and
 - ii) Complete a functional check of the stabilizer trim system as detailed in the Transport Canada approved procedure attached to this directive.
 - d) Replace the copy of directive CF-2006-20 that was installed in each AFM with a copy of this revision.
2. Within 12 months of the effective date of this revision, install HSTCU, part number (P/N) 601R92301-15 (vendor P/N 7060-10) or a higher Mod Number, in accordance with Bombardier Service Bulletin (SB) 601R-27-147 dated 28 September 2006, or later revision approved by the Chief, Continuing Airworthiness.
3. Following installation of HSTCU P/N 601R92301-15 (vendor P/N 7060-10) or higher, it is permissible to:
- a) Remove the identification circuit breaker collars installed under paragraph 1.b. of this directive;
 - b) Flight crew may discontinue both their first flight of the day review of the HSTCU circuit breaker location and the flight crew first flight of the day functional check of stabilizer trim system; and
 - c) Remove the copy of this directive that was inserted in each AFM under paragraph 1.d. of this directive.

Authorization: Minister of Transport, Infrastructure and Communities

B. Goyaniuk
Chief, Continuing Airworthiness

Contact: Mr. Anthony Wan, Continuing Airworthiness, Ottawa, telephone 613-952-4410, facsimile 613-996-9178 or e-mail wana@tc.gc.ca or any Transport Canada Centre.

Appendix “A” to AD CF-2006-20R1 dated 04 October 2006

Control Wheel Stab Trim Disconnect Check

Control Wheel Stab Trim
Disconnect switchesCheck

- Make sure STAB TRIM caution message is out.
- Activate the pilot’s Control Wheel Stab Trim Disconnect switch and make sure the STAB TRIM caution message comes on.
- Engage the STAB TRIM switches and make sure the STAB TRIM caution message is out
- Activate the co-pilot’s Control Wheel Stab Trim Disconnect switch and make sure the STAB TRIM caution message comes on.
- Engage the STAB TRIM and MACH TRIM switches and make sure the STAB TRIM and MACH TRIM caution messages are out.

NOTE

During ground testing only, do not activate the Control Wheel Stab Trim Disconnect switch if the horizontal stabilizer trim is in motion.