



No.	CF-2006-21R1	1/2
Issue Date	3 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-2006-21R1
- Subject:** Horizontal Stabilizer Trim – Uncommanded Motion
- Effective:** 16 October 2006
- Revision:** Supersedes Airworthiness Directive CF-2006-21 issued on 23 August 2006.
- Applicability:** Bombardier Inc. Model CL-600-2B16 (CL-604), serial numbers 5301 through 5665.
- 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) quick identification collars for the HSTCU CBs, and introduces some additional trim system preflight 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) 604/21-1 dated **03 October 2006**, or later approved changes to this TR. TR 604/21 dated 01 August 2006, which was installed under airworthiness directive CF-2006-21, should be removed;
    - b) Install circuit breaker quick identifier collars on the HSTCU circuit breakers in accordance with Bombardier Alert Service Bulletin (ASB) A604-27-029 dated 28 September 2006, or later revision approved by the Chief, Continuing Airworthiness;
    - c) Brief all flight crew that on the flight crew's first flight of the day, they are required to:
      - i. Review the location of the **STAB CH1 HSTCU** and **STAB CH2 HSTCU** circuit breakers, and

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](http://www.tc.gc.ca/civilaviation/communications/centre/address.asp)



- ii. Check the stabilizer trim system as detailed in CL-604 AFM "Normal Procedures" section titled "Flight Controls Trim Systems, Before Flight - First Flight of the Day".
  - d) Replace the copy of directive CF-2006-21 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, P/N 601R92301-15, (Vendor P/N 7060-10) or a higher Mod Number, in accordance with Bombardier ASB A604-27-029 dated 28 September 2006, or later revision approved by the Chief, Continuing Airworthiness. Following installation of HSTCU P/N -10 or higher, it is permissible to:
- a) Remove the quick identification circuit breaker collars installed under paragraph 1.b of this directive;
  - b) Discontinue the mandatory flight crew's first flight of the day review of the HSTCU circuit breaker location and the flight crew's first flight of the day functional check of Stabilizer Trim System. (Note 1); and,
  - c) Remove the copy of this directive that was inserted in each AFM under paragraph 1.d of this directive.

**Note 1:** As called for in the airplane flight manual, it is recommended that Operators reinstate the functional check of the stabilizer trim system on the aircraft's first flight of the day.

**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.