
AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/CL-600/69 and issues the following AD under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Bombardier (Canadair) CL-600 (Challenger) Series Aeroplanes

AD/CL-600/69 Amdt 1	Horizontal Stabiliser Trim - Uncommanded Movement	13/2006 DM
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Applicability: Model CL-600-2B16 (CL-604), serial number 5301 through 5665.

- Requirement:
1. If not previously accomplished, amend the Aircraft Flight Manual (AFM) by inserting Temporary Revision (TR) 604/21-1 dated 3 October 2006, or later approved changes to this TR. TR 604/21 dated 1 August 2006, which was installed under the original issue of this Airworthiness Directive, should be removed.
 2. Install circuit breaker quick identifier collars on the horizontal stabiliser trim control unit (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, Transport Canada Civil Aviation (TCCA)
 3. Ensure all flight crew are aware that on the flight crew's first flight of the day, they are required to:
 - a. Review the location of the STAB CH1 HSTCU and STAB CH2 HSTCU circuit breakers, and
 - b. 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".

This may be accomplished by placing a copy of this Amendment in the AFM "Normal Procedures".

4. Install HSTCU, part number (P/N) 601R92301-15, (Vendor P/N 7060-10) or a higher Mod Number, in accordance with ASB A604-27-029 dated 28 September 2006, or later revision approved by the Chief, Continuing Airworthiness, TCCA.

Following installation of HSTCU Vendor P/N -10 or higher, it is permissible to remove the quick identification circuit breaker collars installed under Requirement 1 of this Amendment

Bombardier (Canadair) CL-600 (Challenger) Series Aeroplanes

AD/CL-600/69 Amdt 1 (continued)

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

Note 2: TCCA AD CF-2006-21R1 refers.

Compliance: For Requirements 1 2 and 3 - Within 14 days after the effective date of this Amendment.

For Requirement 4 - Within 12 months of the effective date of this Amendment.

This Amendment becomes effective on 27 October 2006.

Background: Transport Canada has received reports of uncommanded horizontal stabilizer trim motion on two CL-600-2B16 (CL-604) aircraft. In each case, the aircraft landed safely.

An investigation has revealed that a motherboard in the horizontal stabiliser trim control unit (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 Amendment enhances the 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 pre-flight checks for the flight crew. The installation of a modified HSTCU with environment protection on the motherboard provides terminating action.

The original issue of this Directive became effective on 6 September 2006.



James Coyne
Delegate of the Civil Aviation Safety Authority

23 October 2006