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No. CF-95-02R1

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.

CF-95-02R1 BOMBARDIER

Applies to the following Bombardier Inc. (formerly Canadair) CL-600 aircraft:

<u>MODEL</u>	<u>SERIAL NUMBERS</u>
CL-600-1A11 (CL-600)	1004 to 1085
CL-600-2A12 (CL-601)	3001 to 3066
CL-600-2B16 (CL-601-3A and -3R)	5001 to 5137, 5139 to 5166, 5168 to 5189, and 5191 to 5194

Compliance is required as indicated, unless already accomplished.

There have been several reported instances of horizontal stabilizer trim actuator (HSTA) overspeed conditions. Investigation by Canadair has indicated that, in these cases, the no-back device on the HSTA (a design feature to prevent uncommanded movement of the HSTA screw jack when air loads are applied on the horizontal stabilizer) may have slipped (become reversible), resulting in overspeed annunciation. Each time this condition occurred, the HSTA mechanical brake prevented an HSTA runaway. Further in-depth investigation has identified some internal degraded conditions that may exist in the no-back device which could adversely affect the irreversibility, especially at low temperature and under high air loads. This revision is issued to amend the applicability to specific aircraft serial numbers and to increase the operational check interval to 600 hours flight time for the HSTA brake if the aircraft has been modified in accordance with the Accomplishment Instructions, Part C, of Canadair Challenger Alert Service Bulletin A600-0645 Revision 2 or A601-0443 Revision 2, both dated 15 May 1996.

To reduce the possibility of an HSTA runaway, accomplish the following:

A. Before further flight after receipt of this directive:

1. Insert a copy of this directive into the Airplane Flight Manual; and
2. Advise the flight crew of the contents of this directive and of potential overspeed conditions of the horizontal stabilizer trim actuator.

B. Flight crew are required to comply with the requirements of the following sections B.2 and B.3. The operational check of the HSTA brake, required by section B.1 below, is to be accomplished either by certified maintenance personnel or by the flight crew:

1. Perform the following operational check of the HSTA brake in accordance with the schedule determined below:

- Before each flight, after receipt of this directive, if there has been a report of HSTA overspeed annunciation; or



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- Initially within 20 hours flight time after the effective date of this directive and thereafter

(i) at every 100 hours flight time, if there has been no report of HSTA overspeed annunciation; or

(ii) at every 600 hours flight time for aircraft which have been modified in accordance with the Accomplishment Instructions, Part C, of Alert Service Bulletin A600-0645 or A6010443, both at Revision 2, and dated 15 May 1996, or later revisions approved by the Director, Aircraft Certification, Transport Canada, if there has been no report of HSTA overspeed annunciation.

(a) Press the CHAN 1 INOP/CHAN 2 INOP switch/light and then the OVSP/CHNG CHAN switch/light on the center pedestal control panel.

(b) Set and hold the pitch trim switch on the pilot's control wheel until the stabilizer is in full NOSE UP position.

(c) Set and hold the pitch trim switch on the pilot's control wheel to NOSE DOWN position and, while the stabilizer is moving, press the PITCH TRIM DISC switch on the pilot's control wheel when the needle on the stabilizer trim position indicator reaches the first marking of the take-off configuration green band. Verify that both CHAN INOP lights are on.

(d) Verify that the stabilizer over-travel is less than 1 degree, as read on the stabilizer trim position indicator on the center instrument panel.

Note: One increment on the stabilizer trim position indicator is equal to 1 degree of stabilizer travel.

If the stabilizer over-travel is less than or equal to 1 degree, the pitch trim brake performance meets the ground performance requirements and is serviceable.

If the stabilizer over-travel is more than 1 degree, dispatch is not allowed. Correction is required in accordance with part C of this directive before further flight.

Note: Records of compliance with the requirements of section B.1 of this directive by the aircrew are to be entered in the maintenance records and signed by the aircrew. Airworthiness Manual Chapter 575, paragraph 575.109(b) refers.

2. If there has been a report of a previous overspeed annunciation, compliance with the following is required, in addition to the above operational check of the HSTA brake:

(a) Prior to take-off, exercise the pitch trim system: command full NOSE DOWN, then full NOSE UP and re-position.

(b) On each flight, accomplish the following requirements:

- Do not engage autopilot at an altitude below 1000 feet AGL.
- Monitor 8 CH annunciator for FLT CONT light.
- Maximum flap setting to be used is Flap 20

3. If the PITCH TRIM OVSP lights come on in flight, refer to EXCESSIVE PITCH TRIM RATE in the ABNORMAL PROCEDURES of the Airplane Flight Manual for the continued flight. Report this HSTA overspeed incident to the responsible maintenance personnel.

Note: Procedures for EXCESSIVE PITCH TRIM RATE are found in the NORMAL PROCEDURES of the Airplane Flight Manual for the CL-600 aircraft without winglets.

C. If the operational check per section B.1 above shows that the horizontal stabilizer travel is more than 1 degree, before further flight perform check to identify the unserviceable unit, HSTCU (horizontal stabilizer trim control unit) or HSTA, in accordance with the Accomplishment Instructions, Part A, paragraph (3) of

