

Transport
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No. CF-93-27R1

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-93-27R1 CANADAIR

Applies to Canadair Model CL-600-2B19 "Regional Jet" Series 100 aircraft, serial numbers 7003 through 7069.

Compliance is required as indicated, unless already accomplished.

A review of the aircraft stall protection system (SPS) has revealed that the stall horn, light and stick push command may be inadvertently inhibited at a roll rate within the normal flight envelope. This is a result of a built-in feature of comparison of lateral acceleration within the stall protection computer (SPC), which takes data from both attitude and heading reference systems (AHRS). When the SPC recognizes that there is a lateral acceleration miscompare of 0.03 g, or higher, it will inhibit the stall horn, light and stick push command, and an SPS FAIL message will be displayed. Due to a build-up effect of AHRS tolerances, this value of miscompare may be achieved within the SPC at a roll rate within the normal flight envelope.

The initial issue of this directive mandated disconnection of the right channel AHRS input wires from the connection to the SPC as an interim corrective action, pending development of a permanent fix. This revision is to require installation of a new stall protection computer with updated software to restore the SPS to the type approval configuration.

To restore the stall protection system to the type approval configuration, accomplish the following:

1. Before further flight after receipt of this directive, advise the flight crew that the pre-flight check of the slip/skid indications before the engine start continues to be required in accordance with Aircraft Flight Manual (AFM) Revision 35, or later approved revisions, Chapter 4, "Normal Procedures", Section 20, "Consolidated Checklists", "Paragraph H", "Taxi Check".

Note: The pre-flight check above was previously required by AFM Temporary Revision RJ/26.

2. Before 30 June 1996, accomplish the following in accordance with Bombardier Inc. Canadair Regional Jet Service Bulletin 601R-27-038 Revision B, dated 18 August 1995, or later revisions approved by the Director, Airworthiness Branch, Transport Canada, Ottawa:

- (a) Replace the stall protection computer P/N 601R59152-5 with a new one P/N 601R59152-7 equipped with updated software. Refer to Part A of the service bulletin.
- (b) To allow the use of both left and right AHRS inputs in the stall protection system, reconnect the right channel of the AHRS to the SPC. Refer to Part B of the service bulletin.

Compliance with the requirements of paragraph 2 above constitutes a terminating action to the requirements of this directive.

Alternative means of compliance with the requirements of this directive may be used only if approved by the Director, Airworthiness Branch, Transport Canada, Ottawa. Any application should be made to the appropriate regional office.

This revision supersedes Airworthiness Directive CF-93-27 issued 26 October 1993.

This directive becomes effective 12 December 1995.

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 <http://www.tc.gc.ca/civilaviation/communications/centre/address.asp>.

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