

EMERGENCY AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post Emergency ADs on the internet at "www.faa.gov"

DATE: January 16, 2003

AD #: 2003-02-51

Transmitted as follows is emergency airworthiness directive (AD) 2003-02-51, for the attention of all owners and operators of all Bombardier Model CL-600-2C10 (Regional Jet Series 700 and 701) series airplanes.

Background

Transport Canada Civil Aviation (TCCA), which is the airworthiness authority for Canada, advises that vibration and fuel line misalignment in the center tank has resulted in damage to fuel line couplings and cracks in the fuel feed lines. TCCA also advises that more recently four incidents have been reported of cracked fuel feed lines near the welded boss for the transfer ejector motive flow lines within the center fuel tank. The airplanes landed without incident. As a result of the fuel leakage into the center tank, an imbalance of fuel could occur within the fuel system and a significant amount of fuel may not be usable during flight. Discrepancies in the fuel distribution system, if not detected and corrected, could cause the center tank to overfill and fuel to leak from the center tank vent system or to become inaccessible, and could result in engine fuel starvation.

Explanation of Relevant Service Information

Bombardier has issued Canadair Temporary Revision (TR) RJ 700/42, dated January 14, 2003, which describes procedures for revising the Limitations, Normal Procedures, and Abnormal Procedures sections of the Airplane Flight Manual (AFM) to introduce new quantity limitations for the center fuel tank and associated procedures. TCCA classified this TR as mandatory and issued Canadian airworthiness directive CF-2003-01, dated January 15, 2003, in order to ensure the continued airworthiness of these airplanes in Canada.

FAA's Conclusions

This airplane model is manufactured in Canada and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, TCCA has kept the FAA informed of the situation described above. The FAA has examined the findings of TCCA, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Other Relevant Rulemaking

On May 7, 2002, the FAA issued AD 2002-08-19, amendment 39-12731 (67 FR 31939, May 13, 2002), applicable to all Bombardier Model CL-600-2C10 (Regional Jet Series 700 and 701) airplanes. That AD requires revising the AFM to address uncommanded transfer of fuel between the wing fuel tanks and the center fuel tank; revising the Minimum Equipment List (MEL); limiting airplane operation; and increasing normal mission fuel requirements by 3,000 pounds. That AD also requires modification of the fuel distribution system for the center tank; an inspection of system for discrepancies; and corrective actions if necessary.

This emergency AD, however, addresses a newly identified failure mode in the fuel transfer system involving fuel leaks in the aft section of the center fuel tank, while the failure mode discussed in AD 2002-08-19 involves fuel leaks in the forward section of the center fuel tank.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of this same type design registered in the United States, this AD is issued to require an AFM revision to introduce new quantity limitations for the center fuel tank and associated procedures; to limit flight to within 30 minutes of a suitable alternative airport, and to limit the center tank fuel quantity to 1,500 lbs. (680 kgs.) maximum at takeoff. This emergency AD terminates certain requirements of AD 2002-08-19.

Interim Action

This is considered to be interim action until final action is identified, at which time the FAA may consider further rulemaking.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this AD effective in less than 30 days.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this AD.

2003-02-51 BOMBARDIER, INC. (Formerly Canadair): Docket 2003-NM-20-AD.

Applicability: Model CL-600-2C10 (Regional Jet Series 700 and 701) series airplanes, serial numbers (S/N) 10005 and subsequent; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct discrepancies in the fuel distribution system, which could cause the center tank to overflow and fuel to leak from the center tank vent system or to become inaccessible, and could result in engine fuel starvation, accomplish the following:

Revision of AFM

(a) Within 2 days after receipt of this AD, revise the applicable Limitations, Normal Procedures, and Abnormal Procedures sections of the AFM by incorporating Canadair Temporary Revision RJ 700/42, dated January 14, 2003, and operate the airplane in accordance with those limitations and procedures.

(b) When the information incorporating Canadair Temporary Revision RJ 700/42, dated January 14, 2003, has been incorporated into the general revisions of the AFM, the general revisions may be incorporated into the AFM, and these TRs may be removed from the AFM.

(c) Within 2 days after receipt of this AD, revise the Limitations section of Canadair Regional Jet Series 700 of AFM CSP B-012 to limit operation of the airplane to flight within 30 minutes of a suitable alternative airport. This action may be accomplished by inserting a copy of this AD into the Limitations section of the AFM. Accomplishment of this action constitutes terminating action for the AFM revision required by paragraphs (c) and (g) of AD 2002-08-19, amendment 12731.

(d) Within 2 days after receipt of this AD, revise the Limitations section of Canadair Regional Jet Series 700 of AFM CSP B-012 to specify that, prior to each further flight, the center fuel quantity must be limited to 1,500 lbs. maximum at takeoff. This action may be accomplished by inserting a copy of this AD into the Limitations section of the AFM.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, the New York Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the New York ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished, provided the limitations provided in paragraphs (f)(1), (f)(2), and (f)(3) of this AD are provided in the special flight permit:

- (1) Normal mission fuel requirements must be increased by 3000 lbs.
- (2) Operations must be within thirty (30) minutes of a suitable alternate airport.
- (3) Center fuel tank limited to 1,500 lbs at takeoff.

Effective Date

(g) AD 2003-02-51, issued on January 16, 2003, becomes effective upon receipt.

NOTE 3: The subject of this AD is addressed in Canadian airworthiness directive CF-2003-01, dated January 15, 2003.

For further information contact: Rodrigo J. Huete, Flight Test Pilot, Systems and Flight Test Branch, ANE-172, FAA, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York 11581; telephone (516) 256-7518; fax (516) 568-2716.

Issued in Renton, Washington, on January 16, 2003.

Original Signed By:
Vi L. Lipski, Manager,
Transport Airplane Directorate,
Aircraft Certification Service.