

[Federal Register: July 24, 2007 (Volume 72, Number 141)]  
[Rules and Regulations]  
[Page 40224-40226]  
From the Federal Register Online via GPO Access [wais.access.gpo.gov]  
[DOCID:fr24jy07-5]

---

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2006-25779; Directorate Identifier 2006-NM-088-AD; Amendment 39-15131; AD 2007-15-02]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bombardier Model CL-600-2B19 (Regional Jet Series 100 & 440) Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

---

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all Bombardier Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. This AD requires revising the Certification Maintenance Requirements and the Maintenance Review Board Report sections of the Canadair Regional Jet Maintenance Requirements Manual to include changes and additions to checks of the aileron power control units (PCUs) and a change to the interval of the backlash check of the aileron control system. This AD results from a report that data collected from in-service airplanes show that approximately 19 percent of aileron backlash checks conducted at 4,000-flight-hour intervals reveal that aileron backlash wear limits are being exceeded. We are issuing this AD to prevent exceeded backlashes in both aileron PCUs, which, if accompanied by the failure of the flutter damper, could result in aileron vibration/flutter and reduced controllability of the airplane.

**DATES:** This AD becomes effective August 28, 2007.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of August 28, 2007.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-40, 1200 New Jersey Avenue, SE., Washington, DC.

Contact Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087, Station Centreville, Montreal, Quebec H3C 3G9, Canada, for service information identified in this AD.

**FOR FURTHER INFORMATION CONTACT:** Daniel Parrillo, Aerospace Engineer, Systems and Flight Test Branch, ANE-172, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7305; fax (516) 794-5531.

## **SUPPLEMENTARY INFORMATION:**

### **Examining the Docket**

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Operations office (telephone (800) 647-5527) is located on the ground floor of the West Building at the street address stated in the ADDRESSES section.

### **Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to all Bombardier Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. That NPRM was published in the Federal Register on September 11, 2006 (71 FR 53345). That NPRM proposed to require revising the Certification Maintenance Requirements and the Maintenance Review Board (MRB) Report sections of the Canadair Regional Jet Maintenance Requirements Manual (MRM) to include changes and additions to checks of the aileron power control units (PCUs) and a change to the interval of the backlash check of the aileron control system.

### **Comments**

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

### **Request To Provide Additional Information on Selection of Check Interval**

The National Transportation Safety Board (NTSB) requests that we provide additional information in the final rule indicating how the repeat interval for the aileron backlash check was selected and why the interval will prevent flight with aileron freeplay greater than the maximum limit. The NTSB notes that the Discussion section of the proposed AD does not explain how the 2,000-flight-hour interval was selected or why it would prevent flight with aileron freeplay greater than the maximum limit.

We agree to provide additional information. The repeat interval was selected after consideration of several factors related to known service experience, guidance from flutter analysis reference materials, and detailed flutter analysis. With respect to service experience, the absence of reports of buzzing or flutter events, known values of backlash freeplay, and the existing inspection interval were evaluated. Known backlash freeplay values were assessed against those recommended in flutter reference materials. A review of a recent flutter analysis conducted by Bombardier was also included in our consideration of an appropriate interval.

Also, Bombardier, with the agreement of the airworthiness authorities (Transport Canada Civil Aviation (TCCA) and the FAA), has started monthly monitoring of the Model CRJ200 fleet since the inspection interval was lowered from 4,000 to 2,000 flight hours. After collecting sufficient data on the backlash freeplay that develops during the 2,000-flight-hour interval, further evaluation of the interval may be conducted.

Therefore, we consider the proposed interval to be appropriate at this time. No change to the AD is necessary in this regard.

## **Request To Collect Aileron Freeplay Data**

The NTSB also requests that the FAA revise the AD to include a method for operators to record, retain, and report aileron freeplay check data. The NTSB is concerned that the FAA, TCCA, and Bombardier might fail to monitor the effects of the reduced interval appropriately by not collecting and analyzing aileron freeplay check data.

We do not agree to revise the AD to add a requirement to collect and report data. While we have not mandated reporting of the aileron freeplay check measurements to the manufacturer, Task Card 000-27-900-015 specifies recording and retaining this measurement. Bombardier is soliciting the measurement results from operators during the bi-monthly Technical Steering Committee meetings. As of January 2007, Bombardier has received feedback on over 70 airplanes and is confident that sufficient data will be available at the end of the 2-year term to provide validation of the check interval. TCCA requires Bombardier to provide the data results within 2 years after issuing Temporary Revision 1-2-33 to the MRM. Bombardier will tabulate the results based on the current methods and provide a matrix along with a recommendation to TCCA in mid-2008. There is no need to mandate a method for collecting the data, as there is a process in place. No change to the AD is necessary in this regard.

## **Request To Use Data in Monitoring Reclassification of Aileron Freeplay Check**

The NTSB suggests that aileron freeplay data provided by the operators also be used to assist the FAA, TCCA, and Bombardier in monitoring the reclassification of the bearing backlash test portion of the aileron freeplay check. The NTSB states that the NPRM proposes to reclassify the bearing backlash test portion of the aileron freeplay check from a certification maintenance requirement (CMR) task to an MRB task. The aileron freeplay backlash check would be replaced with an aileron PCU internal leakage test and would remain a CMR task.

We agree that the aileron free play data could be useful. We will consider the NTSB's suggestion to use aileron freeplay data to monitor reclassification of the bearing backlash test once the service data are collected and we have reviewed the data. No change to the AD is necessary in this regard.

## **Clarification of Alternative Method of Compliance (AMOC) Paragraph**

We have revised this action to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

## **Conclusion**

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the change described previously. We have determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Costs of Compliance**

This AD affects about 742 airplanes of U.S. registry. The required actions take about 1 work hour per airplane, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the AD for U.S. operators is \$59,360, or \$80 per airplane.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):



**2007-15-02 Bombardier, Inc. (Formerly Canadair):** Amendment 39-15131. Docket No. FAA-2006-25779; Directorate Identifier 2006-NM-088-AD.

**Effective Date**

(a) This AD becomes effective August 28, 2007.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to all Bombardier Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, certificated in any category.

**Unsafe Condition**

(d) This AD results from a report that data collected from in-service airplanes show that approximately 19 percent of aileron backlash checks conducted at 4,000-flight-hour intervals reveal that aileron backlash wear limits are being exceeded. We are issuing this AD to prevent exceeded backlashes in both aileron power control units (PCUs), which, if accompanied by the failure of the flutter damper, could result in aileron vibration/flutter and reduced controllability of the airplane.

**Compliance**

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**Revision of the Maintenance Requirements Manual (MRM)**

(f) Within 60 days after the effective date of this AD, revise the Canadair Regional Jet MRM CSP A-053 by doing the actions specified in paragraphs (f)(1) and (f)(2) of this AD. When the tasks specified in Canadair Regional Jet Temporary Revisions 2A-20, dated March 13, 2006; and 1-2-33, dated October 27, 2005; are included in the general revisions of the MRM, the general revisions may be inserted in the MRM, and these temporary revisions may be removed.

(1) Revise the Certification Maintenance Requirements section of the Canadair Regional Jet MRM to include Tasks C27-10-105-06 and C27-10-105-05, as specified in Canadair Regional Jet Temporary Revision 2A-20, dated March 13, 2006, to Part 2, Appendix A—Certification Maintenance Requirements, of the Canadair Regional Jet MRM CSP A-053.

(2) Revise the Maintenance Review Board Report for Section 2—Systems and Powerplant Program, of Part 1 of the Canadair Regional Jet MRM CSP A-053, to include the task interval for Task 27-11-00-09, as specified in Canadair Regional Jet Temporary Revision 1-2-33, dated October 27, 2005. Incorporating Revision 10, dated May 27, 2005, of the

Canadair Regional Jet Maintenance Review Board Report for Section 2–Systems and Powerplant Program of the Canadair Regional Jet MRM CSP A-053 is one approved method for including the task interval specified in Canadair Regional Jet Temporary Revision 1-2-33. After the task interval has been incorporated into the MRM, no alternative aileron backlash check interval in excess of 2,000 flight hours may be approved, except as specified in paragraphs (g) and (h) of this AD.

### **Phase-In Schedule for Initial Inspection Specified in MRM Revisions**

(g) For airplanes with more than 1,000 flight hours but less than 3,000 flight hours since the last aileron backlash check specified in Task 27-11-00-09 was accomplished, as of the effective date of this AD: Within 1,000 flight hours after the effective date of this AD, do the next aileron backlash check in accordance with Task 27-11-00-09, as specified in Canadair Regional Jet Temporary Revision 1-2-33, dated October 27, 2005.

(h) For airplanes with 3,000 flight hours or more since the last aileron backlash check specified in Task 27-11-00-09 was accomplished, as of the effective date of this AD: Within 4,000 flight hours after the last aileron backlash check, do the next aileron backlash check in accordance with Task 27-11-00-09, as specified in Canadair Regional Jet Temporary Revision 1-2-33, dated October 27, 2005.

### **One Approved Method for Task C27-10-105-06**

(i) For airplanes without access to ground support equipment necessary to do the PCU internal leakage functional check, as specified in Task C27-10-105-06 specified in paragraph (f)(1) of this AD: Doing the aileron PCU internal leakage check in accordance with Task 27-11-00-220-803 of Chapter 27-11-00 of the Canadair Regional Jet Aircraft Maintenance Manual at intervals not to exceed 4,000 flight hours is one approved method for accomplishing Task C27-10-105-06, and is acceptable for up to 12 months after the effective date of this AD. Thereafter, the check must be done in accordance with Task C27-10-105-06 as specified in paragraph (f)(1) of this AD at a repetitive interval not to exceed that specified in the task.

### **Alternative Methods of Compliance (AMOCs)**

(j)(1) The Manager, New York Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

### **Related Information**

(k) Canadian airworthiness directive CF-2006-04, dated March 22, 2006, also addresses the subject of this AD.

### **Material Incorporated by Reference**

(l) You must use Canadair Regional Jet Temporary Revision 1-2-33, dated October 27, 2005, to the Canadair Regional Jet Maintenance Review Manual CSP A-053; and Canadair Regional Jet Temporary Revision 2A-20, dated March 13, 2006, to the Canadair Regional Jet Maintenance Review Manual CSP A-053; to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of

these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087, Station Centre-ville, Montreal, Quebec H3C 3G9, Canada, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on July 11, 2007.

Stephen P. Boyd,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7-13983 Filed 7-23-07; 8:45 am]