

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0550; Directorate Identifier 2009-NM-124-AD; Amendment 39-16454; AD 2010-20-19]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) Airplanes; Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) Airplanes; Model CL-600-2D15 (Regional Jet Series 705) Airplanes; and Model CL-600-2D24 (Regional Jet Series 900) Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

Two cases of a crack on a "dry" ADG [air driven generator] (Hamilton Sundstrand part number in the 761339 series), in the aft area of the strut and generator housing assembly, have been reported on CL-600-2B19 aircraft. The same part is also installed on CL-600-2C10, -2D15 and -2D24 aircraft. Investigation determined that the crack was in an area of the strut where the wall thickness of the casting was below specification, due to a manufacturing anomaly in a specific batch of ADGs. Structural failure and departure of the ADG during deployment could possibly result in damage to the aircraft structure. If deployment was activated by a dual engine shutdown, ADG structural failure would also result in loss of hydraulics for the flight controls.

* * * * *

We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective November 5, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of November 5, 2010.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Craig Yates, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7355; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on June 18, 2010 (75 FR 34657). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Two cases of a crack on a "dry" ADG [air driven generator] (Hamilton Sundstrand part number in the 761339 series), in the aft area of the strut and generator housing assembly, have been reported on CL-600-2B19 aircraft. The same part is also installed on CL-600-2C10, -2D15 and -2D24 aircraft. Investigation determined that the crack was in an area of the strut where the wall thickness of the casting was below specification, due to a manufacturing anomaly in a specific batch of ADGs. Structural failure and departure of the ADG during deployment could possibly result in damage to the aircraft structure. If deployment was activated by a dual engine shutdown, ADG structural failure would also result in loss of hydraulics for the flight controls.

This [Transport Canada Civil Aviation (TCCA)] directive gives instructions to check the part number of the installed ADG and, for ADGs with a part number in the 761339 series, the serial numbers of the ADG and strut and generator housing assembly are also to be checked. If these serial numbers are within specified ranges * * *, a one-time fluorescent penetrant inspection of the ADG strut is required [and replacement of the ADG if necessary].

Note: For ADGs with serial numbers in the * * * specified ranges, subsequent fluorescent penetrant inspections are required after each scheduled in-flight or on-ground functional check of the ADG and also after each unscheduled in-flight ADG deployment. These inspection requirements are not mandated in this [TCCA] directive but are specified in the approved maintenance program.

You may obtain further information by examining the MCAI in the AD docket.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comment received. Air Line Pilots Association, International supports the NPRM.

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a NOTE within the AD.

Costs of Compliance

We estimate that this AD will affect 1,073 products of U.S. registry. We also estimate that it will take about 1 work-hour per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$91,205, or \$85 per product.

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 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 this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the 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.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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 FAA amends § 39.13 by adding the following new AD:



2010-20-19 Bombardier, Inc.: Amendment 39-16454. Docket No. FAA-2010-0550; Directorate Identifier 2009-NM-124-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective November 5, 2010.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, serial numbers 7305 through 8051 inclusive; Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, serial numbers 10003 through 10260 inclusive; and Model CL-600-2D15 (Regional Jet Series 705) airplanes and Model CL-600-2D24 (Regional Jet Series 900) airplanes, serial numbers 15001 through 15106 inclusive; certificated in any category.

Subject

- (d) Air Transport Association (ATA) of America Code 24: Electrical Power.

Reason

- (e) The mandatory continuing airworthiness information (MCAI) states:

Two cases of a crack on a "dry" ADG [air driven generator] (Hamilton Sundstrand part number in the 761339 series), in the aft area of the strut and generator housing assembly, have been reported on CL-600-2B19 aircraft. The same part is also installed on CL-600-2C10, -2D15 and -2D24 aircraft. Investigation determined that the crack was in an area of the strut where the wall thickness of the casting was below specification, due to a manufacturing anomaly in a specific batch of ADGs. Structural failure and departure of the ADG during deployment could possibly result in damage to the aircraft structure. If deployment was activated by a dual engine shutdown, ADG structural failure would also result in loss of hydraulics for the flight controls.

This [Transport Canada Civil Aviation (TCCA)] directive gives instructions to check the part number of the installed ADG and, for ADGs with a part number in the 761339 series, the serial numbers of the ADG and strut and generator housing assembly are also to be checked. If these serial numbers are within specified ranges * * *, a one-time fluorescent penetrant inspection of the ADG strut is required [and replacement of the ADG if necessary].

Note: For ADGs with serial numbers in the * * * specified ranges, subsequent fluorescent penetrant inspections are required after each scheduled in-flight or on-ground functional check of the ADG and also after each unscheduled in-flight ADG deployment. These inspection requirements are not mandated in this [TCCA] directive but are specified in the approved maintenance program.

Compliance

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

Actions

(g) Do the following actions.

(1) Within 1,000 flight hours after the effective date of this AD or before the first scheduled ADG functional test after the effective date of this AD, whichever occurs first, inspect to determine the part number of the installed ADG. A review of the airplane maintenance records is acceptable in lieu of this inspection if the part number can be conclusively determined from that review.

(i) If a Hamilton Sundstrand ADG having part number 1711405 is installed, the strut thickness is within specification and no further action is required by this AD.

(ii) If a Hamilton Sundstrand ADG having a part number in the 761339 series is installed, within 1,000 flight hours after the effective date of this AD or before the first scheduled ADG functional test after the effective date of this AD, whichever occurs first, inspect to determine the serial number of the ADG. A review of the airplane maintenance records is acceptable in lieu of this inspection if the serial number can be conclusively determined from that review.

(A) If the serial number of the ADG is 2000 or higher, the strut wall thickness is within specification and no further action is required by this AD.

(B) If the serial number of the ADG is in the range 0101 through 1999 and symbol "24-3" is marked in the serial number block of the identification plate, the strut wall thickness is within specification, no further action is required by this AD.

(C) If the serial number of the ADG is in the range 0101 through 1999 and the symbol "24-3" is not marked in the serial block of the identification plate, within 1,000 flight hours after the effective date of this AD or before the first scheduled ADG functional test after the effective date of this AD, whichever occurs first, inspect to determine the serial number of the strut and generator housing assembly. A review of the airplane maintenance records is acceptable in lieu of this inspection if the serial number can be conclusively determined from that review.

(1) If the serial number of the strut and generator housing assembly is in the range 0001 through 2503, do a fluorescent penetrant inspection in accordance with paragraph (g)(2) of this AD at the times specified in paragraph (g)(2) of this AD.

(2) If the serial number of the strut and generator housing assembly is 2504 or higher, the strut wall thickness is within specification and no further action is required by this AD.

(3) If the serial number of the strut and generator housing assembly is not inspected or it is not possible to determine the serial number, do a fluorescent penetrant inspection in accordance with paragraph (g)(2) of this AD at the times specified in paragraph (g)(2) of this AD.

(2) For ADGs having a strut and generator assembly identified in paragraph (g)(1)(ii)(C)(1) or (g)(1)(ii)(C)(3) of this AD: Within 1,000 flight hours after the effective date of this AD or before the first scheduled ADG functional test after the effective date of this AD, whichever occurs first, do a fluorescent penetrant inspection for cracking of the ADG strut, and if any crack is found, before further flight, replace the ADG with a serviceable ADG, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A601R-24-120, Revision C, dated April 20, 2009 (for Model CL-600-2B19 airplanes); or Bombardier Alert Service Bulletin A670BA-24-020,

Revision C, dated April 20, 2009 (for Model CL-600-2C10, CL-600-2D15, and CL-600-2D24 airplanes).

(3) Fluorescent penetrant inspections accomplished before the effective date of this AD in accordance with any applicable service bulletin specified in Table 1 of this AD are considered acceptable for compliance with the corresponding fluorescent penetrant inspection specified in this AD.

Table 1 – Credit Service Bulletins

Bombardier, Inc. Model –	Service Bulletin –	Revision –	Date –
CL-600-2B19 airplanes	Bombardier Alert Service Bulletin A601R-24-120	Original	April 20, 2005
CL-600-2B19 airplanes	Bombardier Alert Service Bulletin A601R-24-120	A	December 1, 2005
CL-600-2B19 airplanes	Bombardier Alert Service Bulletin A601R-24-120	B	December 7, 2006
CL-600-2C10 airplanes and CL-600-2D24 airplanes	Bombardier Alert Service Bulletin A670BA-24-020	Original	April 20, 2005
CL-600-2C10 airplanes; and CL-600-2D15 and CL-600-2D24 airplanes	Bombardier Alert Service Bulletin A670BA-24-020	A	May 17, 2005
CL-600-2C10 airplanes; and CL-600-2D15 and CL-600-2D24 airplanes	Bombardier Alert Service Bulletin A670BA-24-020	B	December 7, 2006
CL-600-2B19 airplanes; CL-600-2C10 airplanes; and CL-600-2D15 and CL-600-2D24 airplanes	Hamilton Sundstrand Service Bulletin ERPS10AG-24-3	Original	April 14, 2005
CL-600-2B19 airplanes; CL-600-2C10 airplanes; and CL-600-2D15 and CL-600-2D24 airplanes	Hamilton Sundstrand Service Bulletin ERPS10AG-24-3	1	April 19, 2005
CL-600-2B19 airplanes; CL-600-2C10 airplanes; and CL-600-2D15 and CL-600-2D24 airplanes	Hamilton Sundstrand Service Bulletin ERPS10AG-24-3	2	November 14, 2006
Bombardier, Inc. CL-600-2B19 airplanes; CL-600-2C10 airplanes; and CL-600-2D15 and CL-600-2D24 airplanes	Hamilton Sundstrand Service Bulletin ERPS10AG-24-3	3	March 12, 2009

Note 1: Additional guidance on the ADGs specified in paragraphs (g)(1)(ii)(C)(1) and (g)(1)(ii)(C)(3) of this AD and the repetitive fluorescent penetrant inspections specified as part of the periodic ADG functional check procedure may be found in the applicable tasks identified in Table 2 of this AD. These tasks can be found in Part 2–Airworthiness Limitations, Appendix A–Certification Maintenance Requirements (CMR), of the Bombardier CL-600-2C10, CL-600-2D15, and CL-600-

2D24 Maintenance Requirements Manual; and the Canadair CRJ Series Regional Jet Aircraft Maintenance Manual (AMM); as applicable.

Table 2 – Guidance for the periodic ADG functional check procedure

Bombardier, Inc. Model –	Task Number –
CL-600-2B19 airplanes	CMR Task C24-20-129-01 and AMM Task 24-23-01-720-803
CL-600-2C10 airplanes	CMR Task 24-23-00-102 and AMM Task 24-23-01-720-802
CL-600-2D15 and CL-600-2D24 airplanes	CMR Task 24-23-00-102 and AMM Task 24-23-01-720-802

Note 2: Additional guidance on the ADGs specified in paragraph (g)(1)(ii)(C)(1), and the fluorescent penetrant inspection necessary following each future unscheduled in-flight ADG deployment can be found in the tasks specified in Table 3 of this AD.

Table 3 – Guidance for inspection following unscheduled in-flight ADG deployment

Bombardier, Inc. Model –	AMM Task –
CL-600-2B19 airplanes, serial numbers 7305 through 8051 inclusive	05-51-19-210-801
CL-600-2C10 airplanes, serial numbers 10003 through 10260 inclusive	05-51-19-210-801
CL-600-2D15 and CL-600-2D24 airplanes, serial numbers 15001 through 15106 inclusive	05-51-19-210-801

Note 3: In Hamilton Sundstrand Service Bulletin ERPS10AG-24-3, the fluorescent penetrant inspection is referred to as a "Penetrant Check."

FAA AD Differences

Note 4: This AD differs from the MCAI and/or service information as follows: No differences.

Other FAA AD Provisions

(h) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are

considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

(4) Special Flight Permits: Special flight permits, as described in section 21.197 and section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), are not allowed.

Related Information

(i) Refer to MCAI Canadian Airworthiness Directive CF-2009-27, dated June 8, 2009; Bombardier Alert Service Bulletin A601R-24-120, Revision C, dated April 20, 2009; and Bombardier Alert Service Bulletin A670BA-24-020, Revision C, dated April 20, 2009; for related information.

Material Incorporated by Reference

(j) You must use Bombardier Alert Service Bulletin A601R-24-120, Revision C, dated April 20, 2009; or Bombardier Alert Service Bulletin A670BA-24-020, Revision C, dated April 20, 2009; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Bombardier, Inc., 400 Côte Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-5000; fax 514-855-7401; e-mail thd.crj@aero.bombardier.com; Internet <http://www.bombardier.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference 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/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on September 21, 2010.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.