[Federal Register: June 8, 2010 (Volume 75, Number 109)]
[Rules and Regulations]
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From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr08jn10-6]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-1223; Directorate Identifier 2009-NM-114-AD; Amendment 39-16327; AD 2010-12-06]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Model DHC-8-400 Series 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:

> During final Acceptance Test Procedure (ATP), a small oil leak was discovered on the Spoiler Unload Valve and Rudder Shutoff Valve bodies. Investigation revealed that a number of valves were manufactured with an incorrect wall thickness. This thin wall condition caused cracking, subsequent external weeping and pressure loss from the subject valves.
>
> This condition, if not corrected, will cause a loss of hydraulic fluid and subsequent loss of spoiler and/or rudder control.
>
> * * * * *

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

DATES: This AD becomes effective July 13, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of July 13, 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: Cesar Gomez, 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) 228-7318; 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 December 30, 2009 (74 FR 69038). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

> During final Acceptance Test Procedure (ATP), a small oil leak was discovered on the Spoiler Unload Valve and Rudder Shutoff Valve bodies. Investigation revealed that a number of valves were manufactured with an incorrect wall thickness. This thin wall condition caused cracking, subsequent external weeping and pressure loss from the subject valves.
>
> This condition, if not corrected, will cause a loss of hydraulic fluid and subsequent loss of spoiler and/or rudder control.
>
> Revision 1 of this directive mandates a new interval for the initial inspection, clarifies the time for replacement of the valve(s) specified in Paragraphs 1.2 and 2.2, and clarifies the labeling of the inspected valves in Paragraph 3 of this directive.

Required actions include doing detailed inspections of the left-hand and right-hand spoiler unload and rudder shutoff valve for leaking and weeping, replacing discrepant left-hand and right-hand spoiler unload and rudder shutoff valves with new or serviceable valves, and eventually replacing all valves having a certain part number.

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.

Request To Address Valves Inspected Previously

Horizon Air requests that we address valves that have been inspected previously by the manufacturer by revising paragraphs (g)(1) and (g)(2) of the NPRM to include the phrase "without suffix 'A' after the serial number." Horizon Air explains that the NPRM, as written, requires the inspection to be done on all valves, regardless if they have been modified or unmodified. Horizon Air suggests that with the recommended phrasing, the NPRM would continue to require inspection of valves with the identified unsafe condition, but would not require inspection of valves inspected previously.

We agree. Adding the phrase "without suffix 'A' after the serial number" will eliminate unnecessary inspections for valves that have been inspected previously by the manufacturer. We have revised paragraphs (g)(1) and (g)(2) of this AD accordingly.

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

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.

Explanation of Change to Costs of Compliance

Since issuance of the NPRM, we have increased the labor rate used in the Costs of Compliance from $80 per work-hour to $85 per work-hour. The Costs of Compliance information, below, reflects this increase in the specified hourly labor rate.

Costs of Compliance

We estimate that this AD will affect 61 products of U.S. registry. We also estimate that it will take about 3 work-hours per product to comply with the basic requirements of this AD. The average labor rate is $85 per work-hour. Required parts will cost about $0 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be $15,555, or $255 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:

2010-12-06 Bombardier, Inc.: Amendment 39-16327. Docket No. FAA-2009-1223; Directorate Identifier 2009-NM-114-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective July 13, 2010.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Bombardier, Inc. Model DHC-8-400, DHC-8-401, and DHC-8-402 series airplanes, certificated in any category, serial numbers 4105 through 4179 inclusive.

Subject

(d) Air Transport Association (ATA) of America Code 27: Flight controls.

Reason

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

> During final Acceptance Test Procedure (ATP), a small oil leak was discovered on the Spoiler Unload Valve and Rudder Shutoff Valve bodies. Investigation revealed that a number of valves were manufactured with an incorrect wall thickness. This thin wall condition caused cracking, subsequent external weeping and pressure loss from the subject valves.
>
> This condition, if not corrected, will cause a loss of hydraulic fluid and subsequent loss of spoiler and/or rudder control.
>
> Revision 1 of this directive mandates a new interval for the initial inspection, clarifies the time for replacement of the valve(s) specified in Paragraphs 1.2 and 2.2, and clarifies the labeling of the inspected valves in Paragraph 3 of this directive.

Required actions include doing detailed inspections of the left-hand and right-hand spoiler unload and rudder shutoff valve for leaking and weeping, replacing discrepant left-hand and right-hand spoiler unload and rudder shutoff valves with new or serviceable valves, and eventually replacing all valves having a certain part number.

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 actions specified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD, as applicable.

(1) For airplanes having serial numbers 4105 through 4172 inclusive: Within 750 flight hours after the effective date of this AD, do a detailed inspection of the left-hand and right-hand spoiler unload valves having part number (P/N) 396000-1005 without suffix "A" after the serial number, for leaking and weeping, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-37, dated February 5, 2009. For airplanes with left-hand and right-hand spoiler unload valves having P/N 396000-1005 with suffix "A" after the serial number, no further action is required by this paragraph.

(i) If any leaking or weeping is found, prior to further flight, replace the affected spoiler unload valve with a new or serviceable valve, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-37, dated February 5, 2009.

(ii) If no leaking and no weeping are found, replace the valves with new or serviceable valves within 6,000 flight hours after the initial inspection required by paragraph (g)(1) of this AD, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-37, dated February 5, 2009.

(2) For airplanes having serial numbers 4113 through 4179 inclusive: Within 750 flight hours after the effective date of this AD, do a detailed inspection of the left-hand and right-hand rudder shutoff valves having P/N 412700-1001 without suffix "A" after the serial number, for leaking and weeping, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-39, dated February 5, 2009. For airplanes with left-hand and right-hand rudder shutoff valves having P/N 412700-1001 with suffix "A" after the serial number, no further action is required by this paragraph.

(i) If any leaking or weeping is found, prior to further flight, replace the affected rudder shutoff valve with a new or serviceable valve, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-39, dated February 5, 2009.

(ii) If no leaking and no weeping are found, replace the valves with new or serviceable valves within 6,000 flight hours after the initial inspection required by paragraph (g)(2) of this AD, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-39, dated February 5, 2009.

(3) As of the effective date of this AD, no person may install a spoiler unload valve assembly having P/N 396000-1005, having a serial number from 0289 through 0424 inclusive, or rudder shutoff valve having P/N 412700-1001, having a serial number from 0239 through 0384 inclusive, on any airplane, unless the valve has been inspected by the manufacturer and labeled with a suffix "A" after the serial number.

FAA AD Differences

Note 1: 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.

Related Information

(i) Refer to MCAI Canadian Airworthiness Directive CF-2009-25R1, dated July 23, 2009; Bombardier Service Bulletin 84-27-37, dated February 5, 2009; and Bombardier Service Bulletin 84-27-39, dated February 5, 2009; for related information.

Material Incorporated by Reference

(j) You must use Bombardier Service Bulletin 84-27-37, dated February 5, 2009; or Bombardier Service Bulletin 84-27-39, dated February 5, 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.qseries@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 May 25, 2010.
Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.