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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0892; Directorate Identifier 2010-NE-23-AD; Amendment 39-16524; AD 2010-24-05]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Canada Corp. (P&WC) PW305A and PW305B Turboprop Engines

AGENCY: Federal Aviation Administration (FAA), 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) issued 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:

As a result of a change in the low-cycle fatigue lifing methodology for the IMI 834 material, the recommended service life of certain PW305A and PW305B Impellers has been reduced, as published in the Airworthiness Limitations (AWL) section of Engine Maintenance Manual (EMM).

The in-service life of impellers P/N 30B2185, 30B2486 and 30B2858-01 has been reduced from 12,000 to 7,000 cycles; and of P/N 30B4565-01 from 8,500 to 7,000 cycles.

We are issuing this AD to prevent failure of the impeller, which could result in an uncontained event and possible damage to the airplane.

DATES: This AD becomes effective January 3, 2011. The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of January 3, 2011.

ADDRESSES: The Docket Operations office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

FOR FURTHER INFORMATION CONTACT: James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: james.lawrence@faa.gov; phone: (781) 238-7176; fax: (781) 238-7199.

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 August 19, 2010 (75 FR 51187). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

As a result of a change in the low-cycle fatigue lifing methodology for the IMI 834 material, the recommended service life of certain PW305A and PW305B Impellers has been reduced, as published in the Airworthiness Limitations (AWL) section of Engine Maintenance Manual (EMM).

The in-service life of impellers P/N 30B2185, 30B2486 and 30B2858-01 has been reduced from 12,000 to 7,000 cycles; and of P/N 30B4565-01 from 8,500 to 7,000 cycles.

This Airworthiness Directive (AD) is issued to mandate the incorporation of the revised in-service life limits for the affected impellers, in the AWL section of EMM, as introduced by Temporary Revision (TR) AL-8.

Within 30 days from the effective date of this AD, update AWL section of your PW305 EMM P/N 30B1402, to incorporate TR AL-8 for compliance with the revised in-service limits for the affected Impellers, installed on PW305A and PW305B engine.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comment received.

Request To Establish an Ending Engine Serial Number Applicability

One commenter, Bombardier-Learjet, asked us to establish an ending engine serial number (S/N) applicability for the proposed AD. The commenter said that any engine from S/N CA0651 forward will be linked to the updated engine maintenance manual (EMM) with the 7,000 cycle exducer life limit. Therefore, engines that have entered or will enter service with the appropriate Airworthiness Limitations already included in their EMM, will not be subject to this unsafe condition. To leave the AD applicability open-ended, will cause hours of unnecessary review and logbook entries for original equipment manufacturers (OEMs) and operators of engines that do not have an unsafe condition.

We don't agree. Because there are no mandatory links between the engine S/N and the EMM, there is no guarantee the EMM will stay with a particular engine S/N. Also, because the proposed AD is a onetime requirement to reduce the life limit for the exducer in the Airworthiness Limitations Section, the proposed AD won't cause hours of unnecessary review and logbook entries for OEMs and operators of engines. We didn't change the proposed AD.

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.

Costs of Compliance

Based on the service information, we estimate that this AD will affect about 114 products of U.S. registry. We also estimate that it will take 0 work-hours per product to comply with this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$54,288 per product. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$6,188,832. Our cost estimate is exclusive of possible warranty coverage.

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 this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (phone (800) 647-5527) is provided 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:



2010-24-05 Pratt & Whitney Canada Corp. (Formerly Pratt & Whitney Canada, Inc.):
Amendment 39-16524. Docket No. FAA-2010-0829; Directorate Identifier 2010-NE-23-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective January 3, 2011.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Pratt & Whitney Canada Corp. (P&WC) PW305A and PW305B turboprop engines with certain impellers, part numbers (P/Ns) 30B2185, 30B2486, 30B2858-01, or 30B4565-01 installed. These engines are installed on, but not limited to, Hawker-Beech Corporation BAe.125 series 1000A, 1000B, and Hawker 1000 airplanes and Learjet Inc. Learjet 60 airplanes.

Reason

- (d) This AD results from:

As a result of a change in the low-cycle fatigue lifing methodology for the IMI 834 material, the recommended service life of certain PW305A and PW305B Impellers has been reduced, as published in the Airworthiness Limitations (AWL) section of Engine Maintenance Manual (EMM).

The in-service life of impellers P/N 30B2185, 30B2486 and 30B2858-01 has been reduced from 12,000 to 7,000 cycles; and of P/N 30B4565-01 from 8,500 to 7,000 cycles.

We are issuing this AD to prevent failure of the impeller, which could result in an uncontained event and possible damage to the airplane.

Actions and Compliance

- (e) Unless already done, do the following actions.

(f) Within 30 days from the effective date of this AD, update AWL section of your PW305 EMM P/N 30B1402, to incorporate Pratt & Whitney Canada Corp. Temporary Revision (TR) AL-8, dated January 20, 2010, for compliance with the revised in-service limits for the affected Impellers, installed on PW305A and PW305B engine.

FAA AD Differences

(g) None.

Other FAA AD Provisions

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

Alternative Methods of Compliance (AMOCs)

(i) The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

Related Information

(j) Refer to MCAI Transport Canada Airworthiness Directive CF-2010-09, dated March 17, 2010, for related information.

(k) Contact James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: james.lawrence@faa.gov; phone: (781) 238-7176; fax: (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(l) You must use Pratt & Whitney Canada Corp. Temporary Revision No. AL-8, dated January 20, 2010, to P&WC EMM P/N 30B1402 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 Pratt & Whitney Canada Corp., 1000 Marie-Victorin, Longueuil, Quebec, Canada J4G 1A1; telephone (800) 268-8000; fax (450) 647-2888; or go to: <http://www.pwc.ca>.

(3) You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; 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 Burlington, Massachusetts, on November 10, 2010.

Peter A. White,
Assistant Manager, Engine and Propeller Directorate,
Aircraft Certification Service.