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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0416; Directorate Identifier 2012-NE-13-AD; Amendment 39-17303; AD 2012-26-08]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Canada Corp. Turboprop Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) for all Pratt & Whitney Canada Corp. (P&WC) PW118, PW118A, PW118B, PW119B, PW119C, PW120, PW120A, PW121, PW121A, PW123, PW123B, PW123C, PW123D, PW123E, PW123AF, PW124B, PW125B, PW126A, PW127, PW127E, PW127F, PW127G, and PW127M turboprop engines. That AD currently requires initial and repetitive inspections of certain serial numbers (S/Ns) of propeller shafts for cracks and removal from service if found cracked. This new AD requires the same actions, but requires removal from service of affected propeller shafts as mandatory terminating action to the repetitive inspections. This AD was prompted by reports of two propeller shafts found cracked at time of inspection during maintenance. We are issuing this AD to detect propeller shaft cracks, which could cause failure of the shaft, propeller release, and loss of control of the airplane.

DATES: This AD is effective February 15, 2013.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of February 15, 2013.

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of July 20, 2012 (77 FR 39624, July 5, 2012).

ADDRESSES: For service information identified in this AD, contact Pratt & Whitney Canada Corp., 1000 Marie-Victorin, Longueuil, Quebec, Canada, J4G 1A1; phone: 800-268-8000; fax: 450-647-2888; Web site: www.pwc.ca. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility 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 address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; email: 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 supersede AD 2012-11-14, Amendment 39-17078 (77 FR 39624, July 5, 2012). That AD applies to the specified products. The NPRM published in the Federal Register on September 14, 2012 (77 FR 56794). That NPRM proposed initial and repetitive inspections of certain S/Ns of propeller shafts for cracks and removal from service if found cracked. That NPRM also proposed to require the removal from service of affected propeller shafts as mandatory terminating action to the repetitive inspections.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (77 FR 56794, September 14, 2012).

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting the AD as proposed (77 FR 56794, September 14, 2012).

Costs of Compliance

We estimate that this AD will affect 570 P&WC engines installed on airplanes of U.S. registry. We estimate that it will take 6 hours per engine to remove the propeller shaft for inspection, 1 hour to perform the inspection, 65 hours to remove and reinstall the engine if needed, and 35 hours to replace the propeller shaft. We estimate that consumable materials will cost \$2,200 per engine, and required engine testing will cost \$5,000. The average labor rate is \$85 per hour. We expect that about 30 engines will be found with propeller shafts requiring a replacement propeller shaft. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$1,028,850.

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 the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) 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.

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 removing airworthiness directive (AD) 2012-11-14, Amendment 39-17078 (77 FR 39624, July 5, 2012), and adding the following new AD:



2012-26-08 Pratt & Whitney Canada Corp: Amendment 39-17303 ; Docket No. FAA-2012-0416; Directorate Identifier 2012-NE-13-AD.

(a) Effective Date

This airworthiness directive (AD) is effective February 15, 2013.

(b) Affected ADs

This AD supersedes AD 2012-11-14 (77 FR 39624, July 5, 2012).

(c) Applicability

This AD applies to all Pratt & Whitney Canada Corp. (P&WC) PW118, PW118A, PW118B, PW119B, PW119C, PW120, PW120A, PW121, PW121A, PW123, PW123B, PW123C, PW123D, PW123E, PW123AF, PW124B, PW125B, PW126A, PW127, PW127E, PW127F, PW127G, and PW127M turboprop engines, with the serial number (S/N) propeller shafts listed in P&WC Alert Service Bulletin (ASB) No. PW100-72-A21813, Revision 3, dated March 21, 2012, ASB No. PW100-72-A21802, Revision 4, dated March 16, 2012, and ASB No. PW100-72-A21798, Revision 5, dated March 20, 2012.

(d) Unsafe Condition

This AD was prompted by reports of two propeller shafts found cracked at time of inspection during maintenance. We are issuing this AD to detect propeller shaft cracks, which could cause failure of the shaft, propeller release, and loss of control of the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(f) Inspecting Propeller Shafts

(1) For propeller shafts with an S/N listed in Table 1 and Table 2 of P&WC ASB No. PW100-72-A21813, Revision 3, dated March 21, 2012:

(i) For engines not yet initially inspected per AD 2012-11-14 (77 FR 39624, July 5, 2012), before further flight, perform either an initial visual inspection or an initial ultrasonic inspection (UI) for cracks, in accordance with paragraphs 3.C.(1) through 3.C.(1)(a), and 3.C.(2) of P&WC ASB No. PW100-72-A21813, Revision 3, dated March 21, 2012, and Section 9 of P&WC Special Instruction (SI) P&WC No. 22-2012, R2, dated April 4, 2012.

(ii) If the visual inspection was performed, repeat the visual inspection within 50 engine flight hours (EFH) after the initial inspection, and thereafter within every 10 EFH, until the propeller shaft is removed from service.

(iii) If the UI was performed, repeat the UI at intervals not to exceed 1,000 EFH, until the propeller shaft is removed from service.

(2) If a crack is found during any of the inspections required by this AD, remove the propeller shaft from service before the next flight.

(g) Mandatory Terminating Action

As mandatory terminating action to the repetitive inspections required by this AD:

(1) For propeller shafts with an S/N listed in Table 1 of P&WC ASB No. PW100-72-A21802, Revision 4, dated March 16, 2012, remove the propeller shafts from service before further flight.

(2) For affected S/N propeller shafts listed in Table 1 of P&WC ASB No. PW100-72-A21798, Revision 5, dated March 20, 2012, remove the propeller shafts from service within 6 months after the effective date of this AD.

(3) For affected S/N propeller shafts listed in Table 2 of P&WC ASB No. PW100-72-A21798, Revision 5, dated March 20, 2012, remove the propeller shafts from service within 12 months after the effective date of this AD.

(h) Installation Prohibition

(1) After the effective date of this AD, do not install any propeller shaft S/Ns listed in Table 1 of P&WC ASB No. PW100-72-A21802, Revision 4, dated March 16, 2012, into any engine.

(2) After the effective date of this AD, do not install any propeller shaft S/Ns listed in Table 1 and Table 2 of P&WC ASB No. PW100-72-A21798, Revision 5, dated March 20, 2012, into any engine.

(i) Credit for Actions Accomplished in Accordance With Previous Service Information

(1) Initial inspections performed before the effective date of this AD using P&WC ASB No. PW100-72-A21813, Revision 3, dated March 21, 2012 or earlier revisions satisfy the initial inspection requirements of paragraph (f) of this AD. However, you must perform the repetitive inspection intervals specified in paragraph (f).

(2) Ultrasonic inspections performed before the effective date of this AD per Special Instruction P&WC 22-2012R2, dated April 4, 2012, or earlier revisions satisfy the requirements of paragraph (f) of this AD.

(j) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(k) Related Information

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

(2) Refer to Transport Canada AD CF-2012-12, dated March 26, 2012, for related information.

(l) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Pratt & Whitney Canada Alert Service Bulletin ASB No. PW100-72-A21798, Revision 5, dated March 20, 2012.

(ii) Reserved.

(3) The following service information was approved for IBR on July 20, 2012, (77 FR 39624, July 5, 2012).

(i) Pratt & Whitney Canada Alert Service Bulletin No. PW100-72-A21813, Revision 3, dated March 21, 2012.

(ii) Pratt & Whitney Canada Alert Service Bulletin No. PW100-72-A21802, Revision 4, dated March 16, 2012.

(iii) Pratt & Whitney Canada Special Instruction P&WC 22-2012R2, dated April 4, 2012.

(4) For Pratt & Whitney Canada service information identified in this AD, contact Pratt & Whitney Canada Corp., 1000 Marie-Victorin, Longueuil, Quebec, Canada, J4G 1A1; phone: 800-268-8000; fax: 450-647-2888; Web site: www.pwc.ca.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(6) You may view this service information 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 December 21, 2012.

Colleen M. D'Alessandro,
Assistant Manager, Engine & Propeller Directorate,
Aircraft Certification Service.