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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 39-17078; AD 2012-11-14]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Canada Turboprop Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Pratt & Whitney Canada (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. This AD requires initial and repetitive inspections of certain serial numbers (S/Ns) of propeller shafts for cracks and removal from service if found cracked. 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 becomes effective July 20, 2012.

We must receive comments on this AD by August 20, 2012.

The Director of the Federal Register approved the incorporation by reference of 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 Special Instruction P&WC 22-2012R2, dated April 4, 2012, listed in the AD as of July 20, 2012.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: 202-493-2251.

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 review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803. 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 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 the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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

Transport Canada, which is the aviation authority for Canada, has issued Canada AD CF-2012-12, dated March 26, 2012 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

Two PW100 propeller shafts were discovered with cracks during troubleshooting for oil leakage in the propeller shaft area. The subsequent investigation has determined that the crack initiation resulted from a plating repair not performed in accordance with the current published Pratt & Whitney Canada (P&WC) Cleaning Inspection and Repair (CIR) Manual. Both propeller shafts that were found with a circumferential crack had been processed consecutively for nickel plating repair at the same repair facility.

P&WC had initially identified 24 high-risk propeller shafts that were repaired by the same facility and accordingly, issued Service Bulletin (SB) No. A21802 in May 2011 to remove those 24 units from service. Nineteen of those units were removed and the remaining 5 are confirmed to not be installed on any serviceable aircraft. Further investigation by P&WC indicated that the lack of full conformity with the CIR procedure may not have been limited to one vendor only. As a result P&WC identified a total of 203 (24 + 179) suspect units that may not have been repaired in accordance with CIR procedures.

This AD addresses the entire 203 article population. P&WC has issued service information to address all of the affected propeller shafts, since the first two cracked propeller shafts were discovered.

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

Relevant Service Information

P&WC has issued ASB No. PW100-72-A21813, Revision 3, dated March 21, 2012 and ASB No. PW100-72-A21802, Revision 4, dated March 16, 2012. These ASBs provide instructions on

replacing the affected propeller shafts that are identified by S/N in the ASBs. P&WC has also issued Special Instruction P&WC 22-2012R2, dated April 4, 2012, which provides instructions on performing ultrasonic inspections to the affected propeller shafts. The actions described in that service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This AD

This product has been approved by the aviation authority of Canada, and is approved for operation in the United States. Pursuant to our bilateral agreement with Canada, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all information provided by Canada and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

This AD requires within 30 days after the effective date of the AD, removing from service propeller shafts with a S/N listed in Table 1 of P&WC ASB No. PW100-72-A21802, Revision 4, dated March 16, 2012. These propeller shafts are the highest-risk propeller shafts.

This AD also requires within 200 engine flight hours (EFH) or 40 days, whichever occurs first after the effective date of this AD, performing an initial, and repetitive visual inspections or ultrasonic inspections of propeller shafts with a S/N listed in Table 1 or Table 2 of P&WC ASB No. PW100-72-A21813, Revision 3, dated March 21, 2012. These propeller shafts are not as high a risk.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because the compliance requirements are within 30 days or less, depending on airplane usage. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2012-0416; Directorate Identifier 2012-NE-13-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

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.

Differences Between the MCAI and This AD

The PW126, PW127B, PW127H, and PW127J model engines listed in the MCAI are not included in this AD because they are not subject to FAA oversight.

The MCAI requires retirement of all subject propeller shafts within 12 months. This AD does not. However, that requirement may be added at a later date as required terminating 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.

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:



2012-11-14 Pratt & Whitney Canada: Amendment 39-17078; Docket No. FAA-2012-0416; Directorate Identifier 2012-NE-13-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective July 20, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Pratt & Whitney Canada (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, and ASB No. PW100-72-A21802, Revision 4, dated March 16, 2012.

(d) Reason

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) Actions and Compliance

Unless already done, do the following actions.

(f) Inspecting and Removing Propeller Shafts

(1) Within 30 days after the effective date of this AD, remove from service propeller shafts with an S/N listed in Table 1 of P&WC ASB No. PW100-72-A21802, Revision 4, dated March 16, 2012.

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

(i) Within 200 engine flight hours (EFH) or 40 days, whichever occurs first after the effective date of this AD, 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 22-2012R2, dated April 4, 2012.

(ii) If the visual inspection was performed, repeat the visual inspection within 50 EFH after the initial inspection, and thereafter 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.

(3) 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) Installation Prohibition

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.

(h) 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.

(i) Special Flight Permit

No special flight permits will be issued for this AD.

(j) 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.

(k) Material Incorporated by Reference

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

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

(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.

(3) 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.

(4) You may review copies of the 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.

(5) You may also review copies of the service information 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/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on May 31, 2012.

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