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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1038; Directorate Identifier 2011-NE-31-AD; Amendment 39-16843; AD 2011-20-51]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Canada PT6A-15AG, -27, -28, -34, -34AG, -34B, and -36 Series Turboprop Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for Pratt & Whitney Canada PT6A-15AG, -27, -28, -34, -34AG, -34B, and -36 series turboprop engines. This emergency AD was sent previously to all known U.S. owners and operators of these engines. This AD requires the removal of affected part manufacturer approval (PMA) replacement Timken Alcor Aerospace Technologies, Inc. (TAATI) first stage reduction sun gears and the interacting planet gears, from the propeller reduction gearbox assembly. This AD was prompted by failures of certain PMA replacement first stage reduction sun gears, manufactured by TAATI. We are issuing this AD to correct the unsafe condition on these products.

DATES: This AD is effective November 1, 2011 to all persons except those persons to whom it was made immediately effective by Emergency AD 2011-20-51, issued on September 15, 2011, which contained the requirements of this amendment.

We must receive comments on this AD by December 1, 2011.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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 in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Paul Craig, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, 3960 Paramount Blvd., Suite 100, Lakewood, CA 90712; phone: 562-627-5252; fax: 562-627-5210; e-mail: paul.craig@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On September 15, 2011, we issued Emergency AD 2011-20-51, which requires the removal of affected PMA replacement TAATI first stage reduction sun gears and the interacting planet gears, from the propeller reduction gearbox assembly. This action was prompted by failures of certain replacement PMA first stage reduction sun gears, manufactured by TAATI. This condition, if not corrected, could result in failure of the shaft portion of the sun gear, which will result in an engine in-flight shut down, possible uncontained engine failure, aircraft damage, and serious injuries.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires the removal of affected PMA replacement TAATI first stage reduction sun gear and the interacting planet gears, from the propeller reduction gearbox assembly, within 15 operating hours or 15 days after the effective date of this AD, whichever occurs first.

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 of the short compliance time required in this AD to remove any affected parts from service. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2011-1038 and Directorate Identifier 2011-NE-31-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 we receive about this AD.

Costs of Compliance

We estimate that the inspection in this AD will affect about 5,000 engines installed on airplanes of U.S. registry. We also estimate that disassembly of reduction gearboxes will affect about 50 engines, and the sun gear removal will affect about 40 engines. We also estimate that it will take about 1 work-hour per engine for inspecting the engine records. We also estimate that for about 10 engines, it will take about 10 work-hours for the inspection of the sun gear serial number (S/N) and reassembly of the reduction gearbox, due to the records not identifying the S/N. We also estimate that it would take about 16 work-hours for parts replacement. The average labor rate is \$85 per work-hour. Required parts for one engine will cost about \$14,500. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$1,067,900.

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

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 DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, 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 adding the following new airworthiness directive (AD):



2011-20-51 Pratt & Whitney Canada: Amendment 39-16843; Docket No. FAA-2011-1038; Directorate Identifier 2011-NE-31-AD.

(a) Effective Date

This AD is effective November 1, 2011 to all persons except those persons to whom it was made immediately effective by Emergency AD 2011-20-51, issued on September 15, 2011, which contained the requirements of this amendment.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Pratt & Whitney Canada PT6A-15AG, -27, -28, -34, -34AG, -34B, and -36 series turboprop engines that have had maintenance done to the power section module involving first stage reduction sun gear replacement since February 3, 2010, and having a Timken Alcor Aerospace Technologies, Inc. (TAATI) part manufacturer approval (PMA) replacement first stage reduction sun gear, part number (P/N) E3024765, serial numbers (S/Ns) PC5-091 through PC5-176, installed.

(d) Unsafe Condition

This AD was prompted by failures of certain first stage reduction sun gears, manufactured by TAATI. We are issuing this AD to prevent failure of the shaft portion of the sun gear, which will result in an engine in-flight shut down, possible uncontained engine failure, aircraft damage, and serious injuries.

(e) Compliance

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

(f) For affected engines, remove the PMA replacement TAATI first stage reduction sun gear and the interacting planet gears from the propeller reduction gearbox assembly within 15 operating hours or 15 days after the effective date of this AD, whichever occurs first.

(g) Installation Prohibition

After the effective date of this AD, do not install on any airplane, any engine or power section module with a TAATI PMA replacement first stage reduction sun gear, P/N E3024765, S/Ns PC5-091 through PC5-176.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Los Angeles Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(i) Related Information

For further information about this AD, contact: Paul Craig, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, 3960 Paramount Blvd., Suite 100, Lakewood, CA 90712; phone: 562-627-5252; fax: 562-627-5210; e-mail: paul.;craig@faa.gov.

Issued in Burlington, Massachusetts, on October 12, 2011.
Peter A. White,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.