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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2012-0417; Directorate Identifier 2012-NE-11-AD; Amendment 39-17045; AD 2012-09-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Pratt & Whitney Canada Turboprop Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Pratt & Whitney Canada PT6A-38, -41, -42, -42A, -61, -64, -66, -66B, -110, -112, -114, -114A, -121, -135, and -135A series turboprop engines. This AD requires removal from service of certain part manufacturer approval (PMA) replacement Timken Alcor Aerospace Technologies, Inc. (TAATI) first stage sun gears and planet gears installed in the reduction gearbox. This AD was prompted by failures of certain first stage sun gears manufactured by TAATI. We are issuing this AD to prevent failure of the sun gear and planet gears which will result in an engine in-flight shut down, possible uncontained engine failure, aircraft damage, and serious injuries.

**DATES:** This AD becomes effective May 23, 2012.

We must receive comments on this AD by June 22, 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.

#### **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:** 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; email: paul.craig@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We received two reports of sun gears, part number (P/N) E3028456, and installed in reduction gearboxes, failing during operation. We also received one report of a sun gear, P/N E3037304, showing premature wear and broken gear teeth during inspection. All three gear failures occurred between 60 and 127 hours of operation time-since-new. These conditions, if not corrected, could result in failure of the sun gear and planet gears in the propeller reduction gearbox assembly, which will result in an engine in-flight shut down, possible uncontained engine failure, aircraft damage, and serious injuries. We determined that the affected PMA replacement TAATI first stage sun gears and planet gears listed in this AD, would have been installed after December 22, 2008. The affected parts are listed as follows:

First stage sun gears P/N E3028456, all serial numbers (S/Ns), and the associated planet gears.

First stage sun gears P/N E3037304, all S/Ns, and the associated planet gears.

Planet gear sets P/N E3101455-02, all S/Ns, and the associated sun gears.

Planet gear sets P/N E3101525-02, all S/Ns, and the associated sun gears.

### **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 removal from service within 40 operating hours after the effective date of the AD, of the PMA replacement TAATI first stage sun gears and planet gears, as listed in the Discussion section above, and installed in the reduction gearbox assemblies of Pratt & Whitney Canada PT6A-38, -41, -42, -42A, -61, -64, -66, -66B, -110, -112, -114, -114A, -121, -135, and -135A series turboprop engines.

### **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 start the inspections. 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-2012-0417; Directorate Identifier 2012-NE-11-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.

## **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:



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**2012-09-10 Pratt & Whitney Canada:** Amendment 39-17045; Docket No. FAA-2012-0417; Directorate Identifier 2012-NE-11-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective May 23, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Pratt & Whitney Canada PT6A-38, -41, -42, -42A, -61, -64, -66, -66B, -110, -112, -114, -114A, -121, -135, and -135A series turboprop engines:

(1) That have had maintenance done to the power section module involving first stage sun gear or planet gear replacement since December 22, 2008; and

(2) That have any of the following Timken Alcor Aerospace Technologies, Inc. (TAATI) part manufacturer approval (PMA) replacement first stage sun gears or planet gear sets installed:

(i) First stage sun gears P/N E3028456, all serial numbers (S/Ns).

(ii) First stage sun gears P/N E3037304, all S/Ns.

(iii) Planet gear sets P/N E3101455-02, all S/Ns.

(iv) Planet gear sets P/N E3101525-02, all S/Ns.

**(d) Unsafe Condition**

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

**(e) Compliance**

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

(2) Within 40 operating hours after the effective date of this AD, remove from service the following PMA replacement TAATI first stage sun gear and the planet gears from the propeller reduction gearbox assembly:

(i) First stage sun gears P/N E3028456, all S/Ns, and the associated planet gears.

(ii) First stage sun gears P/N E3037304, all S/Ns, and the associated planet gears.

(iii) Planet gear sets P/N E3101455-02, all S/Ns, and the associated sun gears.

(iv) Planet gear sets P/N E3101525-02, all S/Ns, and the associated sun gears.

**(f) 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 sun gear or a planet gear set, as listed in paragraph (c) of this AD.

**(g) Alternative Methods of Compliance (AMOCs)**

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

**(h) Special Flight Permits**

Special flight permits are not authorized.

**(i) Related Information**

For more 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; email: paul.craig@faa.gov.

**(j) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on May 3, 2012.  
Peter A. White,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.