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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2009-0046; Directorate Identifier 2008-NE-05-AD; Amendment 39-15962; AD 2009-14-12]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Pratt & Whitney Canada Corp. (P&WC) Models PW305A and PW305B Turbofan Engines**

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

**ACTION:** Final rule.

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**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:

P&WC has determined that the Post-Service Bulletin (SB) PW300-72-24287 High Pressure Compressor (HPC) drum rotor assemblies P/N 30B2478 and 30B2542 on PW 305A and 305B engines with single stage coated labyrinth seals, are susceptible to developing significant cracks in the region of the labyrinth seal.

We are issuing this AD to detect cracks in the HPC drum rotor assembly, which could lead to an uncontained failure of the drum rotor assembly and damage to the airplane.

**DATES:** This AD becomes effective August 13, 2009.

**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:** Ian Dargin, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: [ian.dargin@faa.gov](mailto:ian.dargin@faa.gov); telephone (781) 238-7178; 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 February 20, 2009 (74 FR 7836). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

P&WC has determined that the Post-Service Bulletin (SB) PW300-72-24287 High Pressure Compressor (HPC) drum rotor assemblies P/N 30B2478 and 30B2542 on PW 305A and 305B engines with single stage coated labyrinth seals, are susceptible to developing significant cracks in the region of the labyrinth seal.

P&WC issued SB PW300-72-24462 for initial inspection of affected HPC drum rotor assemblies for cracks. In addition, the PW305 Maintenance Manual (MM) 05-20-00 was revised (Revision No. 26) accordingly, to add requirement for repeat inspection interval. A new P/N 31B6325-01, HPC drum rotor assembly, which is not susceptible to subject cracking, is made available through SB PW300-72-24376, as terminating action for the required repeat inspection.

Recent data (Ref: SIL: PW300-093) indicate that a number of high-time Pre-SB-PW300-72-24376 HPC drum rotor assemblies (P/N 30B2478 and 30B2542), with potential for a hazardous disk failure in consequence of non-compliance with the inspection requirements, are still in-service. This AD is issued to mandate the inspection of the affected P/N 30B2478 and 30B2542 HPC drum rotor assemblies in accordance with PW305-MM-05-20-00 requirements.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

### **Conclusion**

We reviewed the available data 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 540 products of U.S. registry. We also estimate that it will take about 10 work-hours per product to comply with this AD. The average labor rate is \$80 per work-hour. Required parts will cost about \$5,000 per product. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$3,132,000. 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 (telephone (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, 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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**2009-14-12 Pratt & Whitney Canada Corp:** Amendment 39-15962. Docket No. FAA-2009-0046; Directorate Identifier 2008-NE-05-AD.

### **Effective Date**

- (a) This airworthiness directive (AD) becomes effective August 13, 2009.

### **Affected ADs**

- (b) None.

(c) This AD applies to Pratt & Whitney Canada Corp. (P&WC) Models PW305A and PW305B turbofan engines with high pressure compressor (HPC) drum rotor assemblies, post P&WC Service Bulletin (SB) PW300-72-24287 but without P&WC SB PW300-72-24376, installed. These engines are installed on, but not limited to, Bombardier Learjet M60 and Hawker Beechcraft 1000 series airplanes.

### **Reason**

- (d) P&WC has determined that the Post-Service Bulletin (SB) PW300-72-24287 High Pressure Compressor (HPC) drum rotor assemblies P/N 30B2478 and 30B2542 on PW305A and 305B engines with single stage coated labyrinth seals, are susceptible to developing significant cracks in the region of the labyrinth seal.

We are issuing this AD to detect cracks in the HPC drum rotor assembly, which could lead to an uncontained failure of the drum rotor assembly and damage to the airplane.

### **Actions and Compliance**

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

(1) Within 500 flight hours after effective date of this directive, borescope-inspect the interiors of affected HPC rotor assemblies for cracks. If a crack is found, remove the engine before next flight for HPC drum rotor replacement. Pratt & Whitney Maintenance Manual, Chapter 72-00-00, contains guidance on borescope inspection.

### **Credit for Previous Inspections**

(2) Inspection of affected HPC drum rotor assembly per P&WC SB PW300-72-24462 and or SB PW305 MM 05-20-00 inspection requirements prior to the effective date of this directive satisfies the requirements of paragraph (e)(1) of this AD.

(3) Repeat borescope inspection per paragraph (e)(1) of this AD, at intervals not exceeding 1,350 flight cycles. If a crack is found, remove the engine before next flight for HPC rotor drum replacement.

## **Optional Terminating Action**

(4) Replacement of the affected HPC rotor assembly P/N 30B2478 or 30B2542 with Post-SB PW300-72-24376 assembly P/N 31B6325-01 or later superseding P/N, will constitute terminating action for the inspection requirements of the above paragraphs (e)(1) and (e)(2) of the corrective action requirements of this AD.

## **Other FAA AD Provisions**

(f) Alternative Methods of Compliance (AMOCs): 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**

(g) Refer to Canadian Airworthiness Directive CF-2007-25R1, dated February 13, 2008, and P&WC SB PW300-72-24462, dated December 13, 1999, for related information. Contact Pratt & Whitney Canada Corp., 1000 Marie-Victorin, Longueuil, Quebec, Canada J4G 1A1, telephone: (800) 268-8000, for a copy of this service information.

(h) Contact Ian Dargin, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: [ian.dargin@faa.gov](mailto:ian.dargin@faa.gov); telephone (781) 238-7178; fax (781) 238-7199, for more information about this AD.

## **Material Incorporated by Reference**

(i) None.

Issued in Burlington, Massachusetts, on June 30, 2009.  
Francis A. Favara,  
Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.