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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2018-0739; Product Identifier 2015-NE-07-AD; Amendment 39-19782; AD 2019-22-03]**

**RIN 2120-AA64**

### **Airworthiness Directives; Pratt & Whitney Canada Corp. Turboshift Engines**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2015-20-04 for certain Pratt & Whitney Canada Corp. (P&WC) PT6B-37A turboshift engines. AD 2015-20-04 required initial and repetitive inspections until replacement of the No. 10 bearing, and eventual replacement of the No. 9 bearing, both located in the engine reduction gearbox (RGB) assembly. This AD requires removal from service and replacement of the No. 9 and No. 10 position bearings. This AD was prompted by reports of incorrect engine torque for PT6B-37A turboshift engines. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective December 24, 2019.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 24, 2019.

**ADDRESSES:** For service information identified in this final rule, contact Pratt & Whitney Canada Corp., 1000 Marie-Victorin, Longueuil, Quebec, Canada, J4G 1A1; phone: 800-268-8000; fax: 450-647-2888; website: <https://www.pwc.ca/en/>. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759. It is also available on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0739.

### **Examining the AD Docket**

You may examine the AD docket on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0739; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the

mandatory continuing airworthiness information (MCAI), regulatory evaluation, any comments received, and other information. The address for Docket Operations is 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:** Barbara Caufield, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

**SUPPLEMENTARY INFORMATION:**  
**Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2015-20-04, Amendment 39-18282 (80 FR 61717, October 14, 2015), (“AD 2015-20-04”). AD 2015-20-04 applied to certain P&WC PT6B-37A turboshaft engines. The NPRM published in the Federal Register on September 17, 2018 (83 FR 46898). The NPRM was prompted by reports of incorrect engine torque for PT6B-37A turboshaft engines. The NPRM proposed to require removal from service and replacement of the No. 9 and No. 10 position bearings. The FAA is issuing this AD to address the unsafe condition on these products.

Transport Canada Civil Aviation, which is the aviation authority for Canada, has issued Transport Canada AD CF-2015-01R1, dated November 18, 2016 (referred to after this as “the MCAI”), to address the unsafe condition on these products. The MCAI states:

Five incidents of incorrect engine torque indication have been reported for PT6B-37A engine installations on AW119MKII helicopters. A lower than actual engine torque indication due to a faulty indication system, particularly on a helicopter being operated at max allowable torque (90 to 110%) range, may result in undetected over-torque condition.

Repeat undetected over-torque conditions that are not corrected in accordance with conditional inspection requirements of original equipment manufacturer (OEM) Instructions for Continued Airworthiness (ICAs), may have a negative impact on the operational life of aircraft components. Investigation by P&WC has determined the root cause of the subject torque indication anomaly to be an axial migration of the #9 and #10 bearings at the engine torque sensing gear location.

P&WC has introduced a new bearing configuration through its SB No. PT6B-72-39108, Revision No. 1, dated September 5, 2017, that effectively addresses the axial movement issue at No. 9 and No. 10 bearing positions. You may obtain further information by examining the MCAI in the AD docket on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0739.

**Comments**

The FAA gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

**Support for the AD**

An individual commenter expressed support for the NPRM as written.

## Miscellaneous Comments

An individual commenter provided comments not relevant to this AD. The FAA did not change this AD.

## Update to the Service Information

The FAA determined the need to incorporate the latest service information in this AD. The FAA revised the reference to P&WC SB No. PT6B-72-39108 in the paragraph (g) of this AD from the original issue, dated September 30, 2016, to Revision No. 1, dated September 5, 2017.

The FAA also updated the reference in paragraph (g) of this AD to P&WC SB No. PT6B-72-39092 from Revision No. 4, dated December 29, 2014, to Revision No. 5, dated October 27, 2017.

## Addition of Credit for Previous Action

The FAA determined the need to add a Credit for Previous Action section to allow credit for previous replacement of the No. 9 and No 10 position bearings if accomplished using P&WC SB No. PT6B-72-39108, dated September 30, 2016.

## Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. The FAA has determined that these minor changes:

Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and

Do not add any additional burden upon the public than was already proposed in the NPRM.

## Related Service Information Under 1 CFR Part 51

The FAA reviewed P&WC SB No. PT6B-72-39108, Revision No. 1, dated September 5, 2017. The SB describes procedures for replacing affected bearings. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

## Other Related Service Information

The FAA reviewed P&WC SB No. PT6B-72-39092, Revision No. 5, dated October 27, 2017. The service information describes procedures for removing affected bearings.

## Costs of Compliance

The FAA estimates that this AD affects 119 engines installed on helicopters of U.S. registry. The FAA estimates the following costs to comply with this AD:

### Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Remove and replace No. 9 and No. 10 bearings	65 work-hours × \$85 per hour = \$5,525	\$37,874	\$43,399	\$5,164,481

## **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.

The FAA is 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

## **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) Will not affect intrastate aviation in Alaska, 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.

## **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 part 39 of the Federal Aviation Regulations (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) 2015-20-04, Amendment 39-18282 (80 FR 61717, October 14, 2015), and adding the following new AD:



**2019-22-03 Pratt & Whitney Canada Corp.:** Amendment 39-19782; Docket No. FAA-2018-0739; Product Identifier 2015-NE-07-AD.

**(a) Effective Date**

This AD is effective December 24, 2019.

**(b) Affected ADs**

This AD replaces AD 2015-20-04, Amendment 39-18282 (80 FR 61717, October 14, 2015).

**(c) Applicability**

This AD applies to Pratt & Whitney Canada Corp. (P&WC) PT6B-37A turboshaft engines with serial number (S/N) PCE-PU0275 or earlier or with engine S/N PCE-PU0278.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7210, Turbine Engine Reduction Gear.

**(e) Unsafe Condition**

This AD was prompted by reports of incorrect engine torque for PT6B-37A turboshaft engines. The FAA is issuing this AD to prevent axial movement at the No. 10 bearing position in the engine reduction gearbox (RGB) assembly. The unsafe condition, if not addressed, could result in engine overtorque, failure of the engine, in-flight shutdown, and loss of the helicopter.

**(f) Compliance**

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

**(g) Required Actions**

(1) For affected engines that did not have the bearings replaced in accordance with P&WC Service Bulletin (SB) No. PT6B-72-39092, Revision No. 5, dated October 27, 2017, or earlier revision: Remove from service and replace the No. 9 and No. 10 position bearings at the next engine shop visit after the effective date of this AD, but no later than December 31, 2020, whichever occurs first, in accordance with the Accomplishment Instructions, paragraphs 3.A. and B., of P&WC SB PT6B-72-39108, Revision No. 1, dated September 5, 2017.

(2) For affected engines that had the bearings replaced in accordance with P&WC SB No. PT6B-72-39092, Revision No. 5, dated October 27, 2017, or earlier revision: Remove from service and replace the No. 9 and No. 10 position bearings before December 31, 2020, in accordance with the Accomplishment Instructions, paragraphs 3.A. and B., of P&WC SB PT6B-72-39108, Revision No. 1, dated September 5, 2017.

## **(h) Credit for Previous Action**

You may take credit for the No. 9 and No. 10 position bearing replacement required by paragraph (g) of this AD, if you performed the replacement before the effective date of this AD using P&WC SB No. PT6B-72-39108, dated September 30, 2016.

## **(i) Definition**

For the purpose of this AD, an “engine shop visit” is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine flanges, or any removal of the RGB assembly.

## **(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

## **(k) Related Information**

(1) For more information about this AD, contact Barbara Caufield, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

(2) Refer to Transport Canada AD CF-2015-01R1, dated November 18, 2016, for more information. You may examine the Transport Canada AD in the AD docket on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0739.

## **(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 Corp. (P&WC) Service Bulletin No. PT6B-72-39108, Revision No. 1, dated September 5, 2017.

(ii) [Reserved]

(3) For P&WC 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; website: <https://www.pwc.ca/en/>.

(4) You may view this service information at FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(5) You may view this service information at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on November 4, 2019.  
Robert J. Ganley,  
Manager, Engine and Propeller Standards Branch, Aircraft Certification Service.  
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