**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2020-0471; Project Identifier MCAI-2019-00126-E]**

**RIN 2120-AA64**

# Airworthiness Directives; Pratt & Whitney Canada Corp. Turboshaft Engines

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for all Pratt & Whitney Canada Corp. (P&WC) PT6B-37A model turboshaft engines with engine serial number PCE-PU0289 and earlier. This proposed AD was prompted by a report of contamination from galvanic corrosion between the fuel control unit (FCU) aluminum body and the steel union fitting causing the loss of engine control, resulting in an engine over-speed condition and subsequent in-flight shutdown (IFSD). This proposed AD would require replacing the FCU with a part eligible for installation. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**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 https://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.

For service information identified in this NPRM, 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, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

**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-2020-0471; 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 NPRM, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Mehdi Lamnyi, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7743; fax: 781-238-7199; email: Mehdi.Lamnyi@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2020-0471; Project Identifier MCAI-2019-00126-E” at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. The FAA will

consider all comments received by the closing date and may amend this NPRM because of those comments.

Except for Confidential Business Information as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to https://www.regulations.gov, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this NPRM.

**Confidential Business Information**

Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Mehdi Lamnyi, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

**Discussion**

Transport Canada Civil Aviation (Transport Canada), which is the aviation authority for Canada, has issued Transport Canada AD CF-2019-05, dated February 19, 2019 (referred to after this as "the MCAI"), to address the unsafe condition on these products. The MCAI states:

> There has been one reported incident on a PT6B-37A engine, where the contamination from galvanic corrosion between the FCU aluminum body and the steel union fitting has caused the loss of engine control, resulting in an engine over-speed condition and subsequently leading to an engine inflight shutdown (IFSD). This condition, if not corrected, could lead to additional cases of IFSDs, which on a single engine helicopter may result in an emergency autorotation landing. To address the subject galvanic corrosion problem in the FCU, P&WC has issued Service Bulletin (SB) 39107 to replace the affected FCUs with a modified FCU that is not susceptible to the subject galvanic corrosion problem. This [Transport Canada] AD mandates compliance with P&WC SB 39107, requiring the replacement of the affected FCUs to mitigate the potential unsafe condition.

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-2020-0471.

**Related Service Information under 1 CFR Part 51**

The FAA reviewed P&WC Service Bulletin (SB) No. PT6B-72-39107, Revision No. 1, dated December 13, 2017. The SB describes procedures for replacing the FCU. 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.

**FAA's Determination**

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, Transport Canada, its technical representative has notified us of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because it evaluated all the relevant information provided by Transport Canada and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

**Proposed AD Requirements**

This proposed AD would require replacing the FCU with a part eligible for installation.

**Differences Between this Proposed AD and the Service Information**

P&WC SB No. PT6B-72-39107, Revision No. 1, dated December 13, 2017, directs the replacement of both the FCU and the bypass valve cover. This proposed AD requires only the replacement of the FCU.

**Costs of Compliance**

The FAA estimates that this proposed AD affects 75 engines installed on helicopters of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

**Estimated costs**

| Action | Labor Cost | Parts Cost | Cost per product | Cost on U.S. operators |
|---|---|---|---|---|
| Replace the FCU | 1 work-hour x $85 per hour = $85 | $37,000 | $37,085 | $2,781,375 |

**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.

**Regulatory Findings**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:

(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.

**The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

**Pratt & Whitney Canada Corp: Docket No. FAA-2020-0471; Project Identifier MCAI-2019-00126-E**.

**(a) Comments Due Date**

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Pratt & Whitney Canada Corp. (P&WC) PT6B-37A model turboshaft engines with engine serial number PCE-PU0289 and earlier, which do not have an installed fuel control unit (FCU) that incorporates a stainless steel air adapter using P&WC Service Bulletin (SB) No. PT6B-72-39107, Revision No. 1, dated December 13, 2017.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7321, Fuel Control/Turbine Engines.

**(e) Unsafe Condition**

This AD was prompted by a report of contamination from galvanic corrosion between the FCU aluminum body and the steel union fitting causing the loss of engine control, resulting in an engine over-speed condition and subsequent in-flight shutdown (IFSD). The FAA is issuing this AD to prevent failure of the FCU due to contamination from galvanic corrosion. The unsafe condition, if not addressed, could result in loss of engine control, failure of the engine, IFSD, and loss of the helicopter.

**(f) Compliance**

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

**(g) Required Actions**

Within the compliance time identified in Table 1 to paragraph (g) of this AD, replace the FCU with an FCU that incorporates the stainless steel air adapter using the Accomplishment Instruments, paragraphs 3.A. and 3.C., of P&WC SB No. PT6B-72-39107, Revision No. 1, dated December 13, 2017.

**Table 1 to paragraph (g) – Compliance time requirements**

| **Compliance Time** (A or B, whichever occurs later after the effective date of this AD) | |
|---|---|
| A | Before the FCU accumulates 1,500 flight hours, or before the FCU accumulates six years since new or last overhaul, whichever occurs first. |
| B | Within six months. |

**(h) Credit for Previous Actions**

You may take credit for the replacement of the FCU that is required by paragraph (g) of this AD if you replaced the FCU with an FCU that incorporates a stainless steel air adapter before the effective date of this AD using P&WC SB No. PT6B-72-39107, Original Issue, dated December 15, 2016.

**(i) 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 ECO Branch, send it to the attention of the person identified in paragraph (j)(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.

**(j) Related Information**

(1) For more information about this AD, contact Mehdi Lamnyi, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7743; fax: 781-238-7199; email: Mehdi.Lamnyi@faa.gov.

(2) Refer to Transport Canada Civil Aviation (Transport Canada) AD CF-2019-05, dated February 19, 2019, 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 it in Docket No. FAA-2020-0471.

(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; website: https://www.pwc.ca/en/. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

Issued on May 5, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.
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