



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-5423; Directorate Identifier 2016-NE-09-AD; Amendment 39-18694; AD 2016-22-05]**

**RIN 2120-AA64**

**Airworthiness Directives; Pratt & Whitney Division Turbofan Engines**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Pratt & Whitney (PW) PW4164, PW4164-1D, PW4168, PW4168-1D, PW4168A, PW4168A-1D, and PW4170 turbofan engines. This AD was prompted by several instances of fuel leaks on PW engines installed with the Talon IIB combustion chamber configuration. This AD requires initial and repetitive inspections of the affected fuel nozzles and their replacement with parts eligible for installation. We are issuing this AD to prevent failure of the fuel nozzles, which could lead to engine fire and damage to the airplane.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Pratt & Whitney Division, 400 Main St., East Hartford, CT 06108; phone: 860-565-8770; fax: 860-565-4503. You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of

this material at the FAA, call 781-238-7125. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-5423.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-5423; or in person at the Docket Management Facility 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 address for the Docket Office (phone: 800-647-5527) is Document Management Facility, 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:** Besian Luga, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7750; fax: 781-238-7199; email: [besian.luga@faa.gov](mailto:besian.luga@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain PW PW4164, PW4164-1D, PW4168, PW4168-1D, PW4168A, PW4168A-1D, and PW4170 turbofan engines. The NPRM published in the Federal Register on April 20, 2016 (81 FR 23217) (“the NPRM”). The NPRM was prompted by several instances of fuel leaks on PW engines installed with the Talon IIB combustion chamber configuration. The NPRM proposed to require initial and repetitive inspections of the affected fuel nozzles and their replacement with parts eligible for installation. We are issuing this AD to prevent failure of the fuel nozzles, which could lead to engine fire and damage to the airplane.

## **Comments**

We 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.

### **Request to Change Definition of Engine Shop Visit**

Delta Air Lines (Delta) requested that the definition of an "engine shop visit" be defined as the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine flanges. Delta requested this change so that the definition of an engine shop visit in this AD would be consistent with prior ADs.

We disagree. The redefined shop visit interval as requested would result in less frequent replacements of fuel nozzles and an unacceptable fleet risk. We did not change this AD.

## **Conclusion**

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this AD as proposed.

### **Related Service Information under 1 CFR part 51**

We reviewed PW Alert Service Bulletin (ASB) PW4G-100-A73-45, dated February 16, 2016. The ASB describes procedures for inspecting and replacing the fuel nozzles. 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.

### **Costs of Compliance**

We estimate that this AD will affect 72 engines installed on airplanes of U.S. registry. We also estimate that it will take about 2.2 hours per engine to perform each inspection and 48 hours per engine to replace the fuel nozzle. The average labor rate is

\$85 per hour. We also estimate that parts cost would be \$15,780 per engine. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$1,443,384.

### **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 to the extent that it justifies making a regulatory distinction, 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):

2016-22-05 **Pratt & Whitney Division**: Amendment 39-18694; Docket No. FAA-2016-5423; Directorate Identifier 2016-NE-09-AD.

**(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Pratt & Whitney (PW):

(1) PW4164, PW4168, and PW4168A model engines that have incorporated PW Service Bulletin (SB) PW4G-100-72-214, dated December 15, 2011, or PW SB PW4G-100-72-219, Revision No. 1, dated October 5, 2011, or original issue, and have fuel nozzles, part number (P/N) 51J345, installed;

(2) PW4168A model engines with Talon IIA outer combustion chamber assembly, P/N 51J100, and fuel nozzles, P/N 51J345, with serial numbers CGGUA19703 through CGGUA19718 inclusive or CGGUA22996 and higher, installed;

(3) PW4168A-1D and PW4170 model engines with engine serial numbers P735001 thru P735190 inclusive and fuel nozzles, P/N 51J345, installed; and

(4) PW4164-1D, PW4168-1D, PW4168A-1D, and PW4170 model engines that have incorporated PW SB PW4G-100-72-220, Revision No. 4, dated September 30, 2011, or earlier revision, and have fuel nozzles, P/N 51J345, installed.

**(d) Unsafe Condition**

This AD was prompted by nine instances of fuel leaks on PW engines with the Talon IIB combustion chamber configuration installed. We are issuing this AD to prevent failure of the fuel nozzles, which could lead to engine fire and damage to the airplane.

**(e) Compliance**

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

(1) Within 800 flight hours after the effective date of this AD, and thereafter within every 800 flight hours accumulated on the fuel nozzles, do the following:

(i) Inspect all fuel nozzles, P/N 51J345. Use Part A of PW Alert Service Bulletin (ASB) PW4G-100-A73-45, dated February 16, 2016, to do the inspection.

(ii) For any fuel nozzle that fails the inspection, before further flight, remove and replace it with a part that is eligible for installation.

(2) At the next shop visit after the effective date of this AD, and thereafter at each engine shop visit, remove all fuel nozzles, P/N 51J345, unless fuel nozzles were replaced within the last 100 flight hours. Use Part B of PW ASB PW4G-100-A73-45, dated February 16, 2016, to replace the fuel nozzles with parts eligible for installation.

**(f) Definitions**

(1) For the purpose of this AD, an “engine shop visit” means the induction of an engine into the shop for any maintenance.

(2) For the purpose of this AD, a part that is “eligible for installation” is a fuel nozzle, with a P/N other than 51J345, that is FAA-approved for installation or a fuel nozzle, P/N 51J345, that meets the requirements of Part A, paragraph 4.B., or Part B, paragraph 1.B. of PW ASB PW4G-100-A73-45, dated February 16, 2016.

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

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

**(h) Related Information**

For more information about this AD, contact Besian Luga, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7750; fax: 781-238-7199; email: besian.luga@faa.gov.

**(i) 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 (PW) Alert Service Bulletin PW4G-100-A73-45, dated February 16, 2016.

(ii) Reserved.

(3) For PW service information identified in this AD, contact Pratt & Whitney Division, 400 Main St., East Hartford, CT 06108; phone: 860-565-8770; fax: 860-565-4503.

(4) You may view this service information at FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(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, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on October 25, 2016.

Colleen M. D'Alessandro,  
Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.

[FR Doc. 2016-26183 Filed: 10/31/2016 8:45 am; Publication Date: 11/1/2016]