



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0072; Directorate Identifier 2013-NE-04-AD]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Division Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Pratt & Whitney Division (PW) turbofan engine models PW4074, PW4074D, PW4077, PW4077D, PW4084D, PW4090, and PW4090-3 with a certain 2nd-stage high-pressure turbine (HPT) air seal part number (P/N) installed. This proposed AD was prompted by discovery of cracks in the 2nd-stage HPT air seals. This proposed AD would require, for those air seals that meet certain cycles since new (CSN) criteria, inspection and removal from service of HPT air seals that fail inspection. We are proposing this AD to prevent failure of the 2nd-stage HPT air seal, which could lead to an uncontained engine failure and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 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 <http://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 AD, contact Pratt & Whitney, 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, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; 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 proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Ian Dargin, Aerospace Engineer, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7178; fax: 781-238-7199; email: ian.dargin@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite 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-2013-0072; Directorate Identifier 2013-NE-04-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory,

economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed 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 we receive about this proposed AD.

Discussion

We propose to adopt a new AD for all PW turbofan engine models PW4074, PW4074D, PW4077, PW4077D, PW4084D, PW4090, and PW4090-3 with 2nd-stage HPT air seal, P/N 54L041, installed. This proposed AD was prompted by cracks in 2nd-stage HPT air seals discovered during fluorescent-penetrant inspection (FPI). This proposed AD would require, for HPT air seals that meet certain CSN criteria, either on-wing eddy current inspection (ECI) or in-shop FPI, and removal from service of any HPT air seal that fails inspection. We are proposing this AD to prevent failure of the 2nd-stage HPT air seal. This condition, if not corrected, could lead to an uncontained engine failure, and damage to the airplane.

Relevant Service Information

We reviewed PW Alert Service Bulletin (ASB) PW4G-112-A72-330, Revision 1, dated February 26, 2013. The ASB describes procedures for inspecting the integrity of 2nd-stage HPT air seals and criteria for their removal from service and replacement.

FAA's Determination

We are proposing 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.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously.

Interim Action

We consider this proposed AD interim action. PW has not determined the root cause of the cracks discovered in 2nd-stage HPT air seals.

Costs of Compliance

We estimate that this AD will affect 83 engines installed on airplanes of U.S. registry. We also estimate that it would take about 5 hours to perform the inspection required by this proposed AD. The costs of an ECI and an FPI are assumed to be equal. The average labor rate is \$85 per hour. Based on these figures, we estimate the total cost of the AD to U.S. operators will be \$35,275.

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 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) Is not a “significant rule” under the 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.

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 Division: Docket No. FAA-2013-0072; Directorate Identifier 2013-NE-04-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None

(c) Applicability

This AD applies to all Pratt & Whitney Division (PW) turbofan engine models PW4074, PW4074D, PW4077, PW4077D, PW4084D, PW4090, and PW4090-3 with 2nd-stage high-pressure turbine (HPT) air seal, part number 54L041, installed.

(d) Unsafe Condition

This AD was prompted by discovery of cracks in the 2nd-stage HPT air seals. We are issuing this AD to prevent failure of the 2nd-stage HPT air seal, which could lead to uncontained engine failure and damage to the airplane.

(e) Compliance

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

(1) For 2nd-stage HPT air seals that have 1,200 or fewer cycles since new (CSN) on the effective date of this AD, perform an on-wing eddy current inspection (ECI) or in-shop fluorescent-penetrant inspection (FPI) for cracks within 2,200 CSN.

(2) For 2nd-stage HPT air seals that have more than 1,200 CSN on the effective date of this AD, perform an on-wing ECI or in-shop FPI for cracks within 1,000 cycles after the effective date of this AD.

(3) Thereafter, reinspect with either an on-wing ECI or in-shop FPI every 1,200 cycles since last inspection.

(4) If you find a crack, remove the air seal from service before further flight.

(5) Use paragraph 7 of the Accomplishment Instructions of PW Alert Service Bulletin (ASB) PW4G-112-A72-330, Revision 1, dated February 26, 2013, to do the on-wing ECI, except the reporting requirement of that step.

(f) 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.

(g) Related Information

(1) For more information about this AD, contact Ian Dargin, Aerospace Engineer, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7178; fax: 781-238-7199; email: ian.dargin@faa.gov.

(2) Refer to PW ASB PW4G-112-A72-330, Revision 1, dated February 26, 2013, for related information.

(3) For service information identified in this AD, contact Pratt & Whitney, 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, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on March 4, 2013.

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

[FR Doc. 2013-06118 Filed 03/15/2013 at 8:45 am; Publication Date: 03/18/2013]