
Issued in Burlington, Massachusetts, on June 25, 2012.

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Manager, Engine & Propeller Directorate,
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DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39

RIN 2120–AA64

Airworthiness Directives; Pratt & Whitney Division Turboprop 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 PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4062A, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4565 turbofan engines, including models with any dash number suffix. This proposed AD was prompted by 16 reports of damaged or failed 3rd stage low-pressure turbine (LPT) duct segments. This proposed AD would require removing from service certain part numbers (P/Ns) of 3rd stage LPT duct segments. We are proposing this AD to prevent failure of the 3rd stage LPT duct segments, which could lead to LPT rotor damage, uncontained engine failure, and damage to the airplane.

DATES: We must receive comments on this proposed AD by September 10, 2012.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:


- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.


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–2012–0546; Directorate Identifier 2012–NE–15–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 received 16 reports of damaged or failed 3rd stage LPT duct segments that resulted in 5 in-flight shutdowns, two of which were uncontained engine failures. The 3rd stage LPT duct segment assembly has seal plates that are attached with rivets. During normal engine operation, vibration may cause these seal plates to loosen or fall off, which allows hot gaspath air to enter the cavity behind the duct. This can cause the 3rd stage LPT duct segment to distort, fall into the gaspath, and damage the downstream LPT rotor blades. This condition, if not corrected, could result in failure of the 3rd stage LPT duct segments, which could lead to LPT rotor damage, uncontained engine failure, and damage to the airplane.

Relevant Service Information

We reviewed Pratt & Whitney Engine-Duct Segment, Third Stage LPT Assembly Service Bulletin (SB) No. PW4ENG 72–488, Revision 3, dated August 13, 2009. The SB lists the part numbers of parts to be removed and parts to be installed.

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 removal from service of 3rd stage LPT duct segments P/Ns 50N095; 50N095–001; 50N235; 50N235–001; 50N494–001; 50N494–001; and 50N495–001, at the next piece-part exposure after the effective date of the proposed AD.

Costs of Compliance

We estimate that this proposed AD would affect 151 engines installed on airplanes of U.S. registry. We estimate that no additional labor costs would be incurred to perform the required work as the work is done when the 3rd stage LPT duct segments are at piece-part exposure. The average labor rate is $85 per work-hour. Required parts would cost about $44,441 per engine. Based on these figures, we estimate the total cost of the AD to U.S. operators to be $6,710,591.

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, 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):


(a) Comments Due Date

We must receive comments by September 10, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Pratt & Whitney PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4062A, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4650 turbofan engines, including models with any dash number suffix, with 3rd stage LPT duct segments P/N 50N095; 50N095–001; 50N235; 50N235–001; 50N494–01; 50N494–001; 50N495–01; or 50N495–001, installed.

(d) Unsafe Condition

This AD was prompted by 16 reports of damaged or failed 3rd stage low-pressure turbine (LPT) duct segments. We are issuing this AD to prevent failure of the 3rd stage LPT duct segments, which could lead to LPT rotor damage, uncontained engine failure, and damage to the airplane.

(e) Compliance

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

(f) 3rd Stage LPT Duct Segments Removal From Service

At the next piece-part exposure after the effective date of this AD, remove from service 3rd stage LPT duct segments, P/Ns 50N095; 50N095–001; 50N235; 50N235–001; 50N494–01; 50N494–001; 50N495–01; and 50N495–001.

(g) Installation Prohibition

After the effective date of this AD, do not install into any engine any 3rd stage LPT duct segment, P/N 50N095; 50N095–001; 50N235; 50N235–001; 50N494–01; 50N494–001; or 50N495–01, that is at piece-part exposure.

(h) Definition

For the purpose of this AD, piece-part exposure is when the 3rd stage LPT duct segment is removed from the engine and completely disassembled.

(i) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(j) Related Information


(2) For more information about this AD, contact James Gray, Aerospace Engineer, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781–238–7742; fax: 781–238–7199; email: james.e.gray@faa.gov.

(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 review copies of the 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 July 2, 2012.

Peter A. White, Manager, Engine & Propeller Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (NPRM); reopening of comment period.

SUMMARY: We are revising an earlier proposed airworthiness directive (AD) for all Airbus Model A318 series airplanes, Airbus Model A319 series airplanes, Airbus Model A320 series airplanes, and Airbus Model A321 series airplanes. That NPRM proposed an inspection to determine if certain angle of attack (AOA) probes are installed, and replacing the affected AOA probe if necessary. That NPRM was prompted by reports of oil residue between the stator and the rotor parts of the position resolvers of the AOA vane, which was a result of incorrect removal of the machining oil during the manufacturing process of the AOA resolvers. This action revises that NPRM by including an inspection to determine if certain other AOA probes are installed, and replacing the affected probes. We are proposing this AD to prevent erroneous AOA information and consequent delayed or non-activation of the AOA protection systems which, during flight at a high angle of attack, could result in reduced control of the airplane. Since these actions impose an additional burden over that proposed in the NPRM, we are reopening the comment period to allow the public the chance to comment on these proposed changes.

DATES: We must receive comments on this proposed AD by August 27, 2012.