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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0593; Directorate Identifier 98-ANE-48-AD; Amendment 39-16584; AD 2011-03-01]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney JT8D-7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR Series Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) for Pratt & Whitney (PW) JT8D-1, -1A, -1B, -7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR series turbofan engines. That AD currently requires revisions to the engine manufacturer's time limits section (TLS) to include enhanced inspection of selected critical life-limited parts at each piece-part opportunity. This AD modifies the TLS of the manufacturer's engine manual and an air carrier's approved continuous airworthiness maintenance program to incorporate additional inspection requirements and reduce the model applicability. This AD was prompted by PW developing, and the FAA approving, improved inspection procedures for the critical life-limited parts. The mandatory inspections are needed to identify those critical rotating parts with conditions which, if allowed to continue in service, could result in uncontained failures. We are issuing this AD to prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane.

DATES: This AD is effective March 4, 2011.

ADDRESSES:

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 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: Ian Dargin, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone (781) 238-7178, fax (781) 238-7199; e-mail: ian.dargin@faa.gov.

SUPPLEMENTARY INFORMATION: We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2005-25-05, Amendment 39-14398 (70 FR 73361, December 12, 2005). That AD applies to the specified products. The NPRM published in the Federal Register on August 18, 2010 (75 FR 50942). That NPRM proposed to modify the TLS of the manufacturer's engine manual and an air carrier's approved continuous airworthiness maintenance program to incorporate additional inspection requirements and reduce the model applicability. PW has developed and the FAA has approved improved inspection procedures for the critical life-limited parts. The mandatory inspections are needed to identify those critical rotating parts with conditions which, if allowed to continue in service, could result in uncontained failures.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

We estimate that this AD will affect 1,527 JT8D -7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR series turbofan engines installed on airplanes of U.S. registry. We also estimate that it will take about 10 work-hours per engine to perform the actions, and that the average labor rate is \$85 per work-hour. Since this is an added inspection requirement, included as part of the normal maintenance cycle, no additional part costs are involved. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$1,297,950.

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 have determined that 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, 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, 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 removing Amendment 39-14398 (70 FR 73361, December 12, 2005), and by adding a new airworthiness directive, Amendment 39-16584, to read as follows:



2011-03-01 Pratt & Whitney: Amendment 39-16584. Docket No. FAA-2010-0593; Directorate Identifier 98-ANE-48-AD.

Effective Date

- (a) This airworthiness directive (AD) is effective March 4, 2011.

Affected ADs

- (b) This AD supersedes AD 2005-25-05, Amendment 39-14398.

Applicability

(c) This AD applies to Pratt & Whitney (PW) JT8D-7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR series turbofan engines. These engines are installed on, but not limited to, Boeing 727 and 737 series, and McDonnell Douglas DC-9 series airplanes.

Unsafe Condition

(d) This AD results from the need to require enhanced inspection of selected critical life-limited parts of PW JT8D series turbofan engines. We are issuing this AD to prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

(f) Within the next 30 days after the effective date of this AD, (1) revise the Time Limits Section (TLS) of the manufacturer's engine manual, part number 481672, as appropriate for PW JT8D-7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR series turbofan engines, and (2) for air carriers, revise the approved mandatory inspections section of the continuous airworthiness maintenance program, by adding the following:

"Critical Life Limited Part Inspection

A. Inspection Requirements:

(1) This section has the definitions for individual engine piece-parts and the inspection procedures which are necessary when these parts are removed from the engine.

(2) It is necessary to do the inspection procedures of the piece-parts in paragraph B when:

(a) The part is removed from the engine and disassembled to the level specified in paragraph B and

(b) The part has accumulated more than 100 cycles since the last piece-part inspection, provided that the part was not damaged or related to the cause for its removal from the engine.

(3) The inspections specified in this paragraph do not replace or make not necessary other recommended inspections for these parts or other parts.

B. Parts Requiring Inspection:

Note: Piece-part is defined as any of the listed parts with all the blades removed.

Description	Section	Inspection No.
Hub (Disk), 1 st Stage Compressor:		
* Hub Detail – All P/Ns	72-33-31	-03, -04, -05, -06
* Hub Assembly – All P/Ns	72-33-31	-03, -04, -05, -06
2 nd Stage Compressor		
Disk – All P/Ns	72-33-33	-02, -03
Disk Assembly – All P/Ns	72-33-33	-02, -03
Disk, 13 th Stage Compressor – All P/Ns	72-36-47	-02
HP Turbine Disk, First Stage w/integral Shaft – All P/Ns	72-52-04	-03
HP Turbine, First Stage, w/ separable Shaft		
Rotor Assembly - All P/Ns	72-52-02	-04
Disk - All P/Ns	72-52-02	-03
Disk, 2 nd Stage Turbine – All P/Ns	72-53-16	-02
* Disk, 3 rd Stage Turbine – All P/Ns	72-53-17	-02, -03
* Disk (Separable), 4 th Stage Turbine – All P/Ns	72-53-15	-02, -03
Disk (Integral Disk/Hub), 4 th Stage Turbine – All P/Ns	72-53-18	-02”

(g) The parts that have an Engine Manual Inspection Task and or Sub Task Number reference updated in the table of this AD are identified by an asterisk (*) that precedes the part nomenclature.

(h) Except as provided in paragraph (i) of this AD and, notwithstanding contrary provisions in section 43.16 of the Federal Aviation Regulations (14 CFR 43.16), these mandatory inspections shall be performed only in accordance with the TLS of the manufacturer's engine manual.

Alternative Methods of Compliance (AMOC)

(i) You must perform these mandatory inspections using the TLS of the manufacturer's engine manual unless you receive approval to use an AMOC under paragraph (j) of this AD. Section 43.16 of the Federal Aviation Regulations (14 CFR 43.16) may not be used to approve alternative methods of compliance or adjustments to the times in which these inspections must be performed.

(j) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Maintaining Records of the Mandatory Inspections

(k) You have met the requirements of this AD when you revise the TLS of the manufacturer's engine manual as specified in paragraph (f) of this AD. For air carriers operating under part 121 of

the Federal Aviation Regulations (14 CFR part 121), you have met the requirements of this AD when you modify your continuous airworthiness maintenance plan to reflect those changes. You do not need to record each piece-part inspection as compliance to this AD, but you must maintain records of those inspections according to the regulations governing your operation. For air carriers operating under part 121, you may use either the system established to comply with section 121.369 or an alternative accepted by your principal maintenance inspector if that alternative:

- (1) Includes a method for preserving and retrieving the records of the inspections resulting from this AD; and
- (2) Meets the requirements of section 121.369(c); and
- (3) Maintains the records either indefinitely or until the work is repeated.

(l) These record keeping requirements apply only to the records used to document the mandatory inspections required as a result of revising the TLS of the manufacturer's engine manual as specified in paragraph (f) of this AD. These record keeping requirements do not alter or amend the record keeping requirements for any other AD or regulatory requirement.

Related Information

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

Issued in Burlington, Massachusetts, on January 24, 2011.
Thomas A. Boudreau,
Acting Assistant Manager, Engine and Propeller Directorate,
Aircraft Certification Service.