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[Page 62229-62231]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0317; Directorate Identifier 79-ANE-18; Amendment 39-16087; AD 2009-24-01]

RIN 2120-AA64

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

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD) for Pratt & Whitney JT8D-1, -1A, -1B, -7, -7A, -7B, -9, -9A, -11, -15, and -17 turbofan engines with 2nd stage fan blades, part number (P/N) 433802, 645902, 759902, 695932, 678102, or 746402, installed. That AD currently requires initial and repetitive ultrasonic inspection (UI) and fluorescent penetrant inspection (FPI) of those P/N 2nd stage fan blades. This AD replaces the required FPI with eddy current inspection (ECI) on all affected 2nd stage fan blades and maintains the requirement of UI of the blade root attachment on some of the affected 2nd stage fan blades. This AD also introduces an optional terminating action to the repetitive blade inspections for certain engine models. This AD results from reports of 10 fractures of 2nd stage fan blades since AD 87-14-01R1 became effective. We are issuing this AD to prevent uncontained failure of 2nd stage fan blades, which could result in damage to the airplane.

DATES: This AD becomes effective January 4, 2010. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of January 4, 2010.

ADDRESSES: You can get the service information identified in this AD from Pratt & Whitney, 400 Main St., East Hartford, CT 06108; telephone (860) 565-8770; fax (860) 565-4503.

The Docket Operations office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

FOR FURTHER INFORMATION CONTACT: Kevin Dickert, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park,

Burlington, MA 01803; e-mail: kevin.dickert@faa.gov; telephone (781) 238-7117, fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 by superseding AD 87-14-01 R1, Amendment 39-6359 (54 FR 43954, October 30, 1989), with a proposed AD. The proposed AD applies to JT8D-7, -7A, -7B, -9, -9A, -11, -15, and -17 turbofan engines with 2nd stage fan blades, P/N 433802, 645902, 759902, 695932, 678102, or 746402 installed. We published the proposed AD in the Federal Register on August 7, 2009 (74 FR 39582). That action proposed to replace the required FPI with ECI on all affected 2nd stage fan blades and would maintain the requirement of UI of the blade root attachment on some of the affected 2nd stage fan blades. That action also proposed to introduce an optional terminating action to the repetitive blade inspections for certain engine models.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office 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 street address for the Docket Operations office (telephone (800) 647-5527) is provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comment received.

One commenter, FedEx Express, requests that we add a requirement to the AD to mandate the inspections to be performed at a repair agency having engine overhaul capabilities.

We do not agree. Code of Federal Regulations, 14 Part 43 (Maintenance, Preventative Maintenance, Rebuilding, and Alteration) establish the requirements as to who can perform these types of actions on type-certificated products, including the actions specified in this AD. Restating these requirements in the AD is unnecessary. We did not change the AD.

Conclusion

We have carefully reviewed the available data, including the comment received, 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 1,380 engines installed on airplanes of U.S. registry. We also estimate that it will take about 25 work-hours per engine to perform one inspection cycle, and that the average labor rate is \$80 per work-hour. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$2,760,000.

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); 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.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

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 Federal Aviation Administration 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 39-6359 (54 FR 43954, October 30, 1989), and by adding a new airworthiness directive, Amendment 39-16087, to read as follows:



2009-24-01 Pratt & Whitney: Amendment 39-16087. Docket No. FAA-2009-0317; Directorate Identifier 79-ANE-18.

Effective Date

- (a) This airworthiness directive (AD) becomes effective January 4, 2010.

Affected ADs

- (b) This AD supersedes AD 87-14-01 R1, Amendment 39-6359.

Applicability

(c) This AD applies to Pratt & Whitney JT8D-7, -7A, -7B, -9, -9A, -11, -15, and -17 turbofan engines, with 2nd stage fan blades, part number (P/N) 433802, 645902, 759902, 695932, 678102, or 746402, installed. These engines are installed on, but not limited to, Boeing 727, 737, and McDonnell Douglas DC-9 series airplanes.

Unsafe Condition

(d) This AD results from reports of 10 fractures of 2nd stage fan blades since AD 87-14-01R1 became effective. We are issuing this AD to prevent uncontained failure of 2nd stage fan blades, which could result in 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.

2nd Stage Fan Blade Inspections

(f) For 2nd stage fan blades, P/N 678102 and P/N 746402, perform an eddy current inspection (ECI) of the blade pin-root holes for cracks, and for 2nd stage fan blades, P/Ns 433802, 645902, 759902, and 695932, perform an ECI of the blade pin-root holes and perform an ultrasonic inspection (UI) of the blade root attachment for cracks, as follows:

(1) Perform an inspection at the first disassembly of the 2nd stage fan rotor from the low-pressure (LP) compressor after accumulation of 3,000 cycles-in-service (CIS) since the last inspection of the blade root attachment, not to exceed 10,000 CIS since last inspection.

(2) If the 2nd stage fan blades were new at their last installation onto the 2nd stage fan disk, inspect at the first disassembly of the 2nd stage fan rotor from the LP compressor after accumulating 3,000 cycles-since-new (CSN), not to exceed 10,000 CSN.

(3) Thereafter, inspect the 2nd stage fan blades at each disassembly of the 2nd stage fan rotor from the LP compressor after accumulating 3,000 CIS, not to exceed 10,000 CIS since the last inspection.

(4) Guidance on performing ECIs and UIs of the 2nd stage fan blade pin-root holes and blade root attachments can be found in Pratt & Whitney Maintenance Advisory Notice MAN-JT8D-1-08.

Contact Pratt & Whitney, 400 Main St., East Hartford, CT 06108; telephone (860) 565-8770; fax (860) 565-4503, for a copy of this service information.

(5) Remove from service before further flight any 2nd stage fan blades that are found cracked.

Optional Terminating Action

(g) For JT8D-9, -9A, -11, -15, and -17 engines, as optional terminating action to the repetitive inspections required by this AD, replace the affected 2nd stage fan blades with redesigned 2nd stage fan blades using Pratt & Whitney Service Bulletin No. 5866, Revision 2, dated October 20, 1998.

Alternative Methods of Compliance

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

Related Information

(i) Contact Kevin Dickert, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: kevin.dickert@faa.gov; telephone (781) 238-7117, fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(j) You must use Pratt & Whitney Service Bulletin No. 5866, Revision 2, dated October 20, 1998, to perform the optional terminating action in this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Pratt & Whitney, 400 Main St., East Hartford, CT 06108; telephone (860) 565-8770; fax (860) 565-4503, for a copy of this service information. You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or 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 November 9, 2009.

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