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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 98-ANE-61-AD; Amendment 39-12778; AD 2002-12-06]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney (PW) PW2000 Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), that is applicable to certain Pratt & Whitney (PW) PW2000 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 exposure. This action modifies the airworthiness limitations section of the manufacturer's manual and an air carrier's approved continuous airworthiness maintenance program to incorporate additional inspection requirements. This amendment is prompted by an FAA study of in-service events involving uncontained failures of critical rotating engine parts that has indicated the need for mandatory inspections. The actions specified by this AD are intended to prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane.

DATES: Effective date July 17, 2002.

ADDRESSES: The information referenced in this AD may be examined, by appointment, at the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: Jason Yang, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7747; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 2000–21–09, Amendment 39–11941 (65 FR 65730, November 3, 2000), which is applicable to Pratt & Whitney (PW) PW2000 series turbofan engines, was published in the Federal Register on December 27, 2001 (66 FR 66819). That action proposed to modify the airworthiness limitations section of the manufacturer's manual and an air carrier's approved continuous airworthiness maintenance program to incorporate additional inspection requirements.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Typographical Errors

One commenter states that two typographical errors exist in the MANDATORY INSPECTIONS table of the proposal. Disk, LPT 4th stage EM Manual Section reads 72–35–41, but should read 72–53–41, and Disk, LPT 5th stage EM Manual Section reads 72–32–51, but should read 72–53–51.

The FAA agrees. The typographical errors are corrected in the final rule.

Question Regarding HPC Hub Inspections

One commenter asks why mandatory inspections of the HPC hub are not required by the proposed rule.

The FAA agrees that the proposed rule should include mandatory inspections of the HPC hub (HPC turbine drive shaft assembly). Therefore, EM Manual Section 72–35–08 has been added to the final rule to include Inspection/Check –05 for the HPC turbine drive shaft assembly.

Economic Effect

One commenter states that the additional cost of approximately \$1,200 per year per engine visit, for enhanced disk inspection will not result in any hardship to the airline and will not have a significant effect on the operation. The FAA agrees.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes described previously. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Economic Analysis

The FAA estimates that 724 engines installed on airplanes of U.S. registry would be affected by this AD, that it would take approximately 20 work hours per engine to do the required actions. The average labor rate is \$60 per work hour. The cost of the added inspections per engine is approximately \$1,200 per year, with the approximate total cost to the U.S. fleet of \$868,800 per year.

Regulatory Analysis

This final rule does not have federalism implications, as defined in Executive Order 13132, because it 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. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

For the reasons discussed above, I certify that this action (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); 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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by removing Amendment 39–11941 (65 FR 65730, November 2, 2000) and by adding a new airworthiness directive, Amendment 39–12778, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-12-06 Pratt & Whitney: Amendment 39-12778. Docket No. 98-ANE-61-AD. Supersedes AD 2000-21-09, Amendment 39-11941

Applicability

This airworthiness directive (AD) is applicable to Pratt & Whitney (PW) PW2037, PW2040, PW2037M, PW2240, PW2337, PW2043, PW2643, and PW2143, series turbofan engines. These engines are installed on, but not limited to Boeing 757 series and Ilyushin IL-96T series airplanes.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required as indicated, unless already done.

To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane, do the following:

(a) Within 30 days after the effective date of this AD, revise the manufacturer's Time Limits section (TLS) of the manufacturer's engine manual, as appropriate for PW PW2037, PW2040, PW2037M, PW2240, PW2337, PW2043, PW2643, and PW2143 series turbofan engines, and for air carriers revise the approved continuous airworthiness maintenance program, by adding the following:

Mandatory Inspections

(1) Perform inspections of the following parts at each piece-part opportunity in accordance with the instructions provided in PW2000 Engine Manuals 1A6231 and 1B2412:

Nomenclature	Part No.	EM manual section	Inspection/check	Subtask
Hub, LPC Assembly	ALL	72-31-04	-06	
Disk, HPT 1st Stage	ALL	72-52-02	FPI entire disk per 72-52-00, Inspection/Check-02	72-52-02-230-007
Hub, HPT 2nd Stage	ALL	72-52-16	FPI entire hub per 72-52-00, Inspection/Check-02	72-52-16-230-007
Hub, HPC Front	ALL	72-35-02	-05	
Disk, HPC Drum Rotor Assembly (7-15)	ALL	72-35-03	-04	
Disk, HPC Drum Rotor Assembly (16-17)	ALL	72-35-10	-05	
Disk, HPC 16th Stage	ALL	72-35-06	-04	
Disk, HPC 17th Stage	ALL	72-35-07	-04	
HPC Turbine Drive Shaft Assembly	ALL	72-35-08	-05	
LPC Drive Turbine Shaft	ALL	72-32-01	-06	
Hub, Turbine Rear	ALL	72-53-81	-06	
Disk, LPT 3rd stage	ALL	72-53-31	-01	
Disk, LPT 4th Stage	ALL	72-53-41	-01	
Disk, LPT 5th Stage	ALL	72-53-51	-01	
Disk, LPT 6th Stage	ALL	72-53-61	-01	
Disk, LPT 7th Stage	ALL	72-53-71	-01	

(2) For the purposes of these mandatory inspections, piece-part opportunity means:

(i) The part is considered completely disassembled when done in accordance with the disassembly instructions in the manufacturer's engine manual to either part number level listed in the table above, and

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

(b) Except as provided in paragraph (c) of this AD, and notwithstanding contrary provisions in § 43.16 of Federal Aviation Regulations (14 CFR 43.16), these enhanced inspections must be performed only in accordance with the TLS of the appropriate PW2000 series engine manuals.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector (PMI), who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

Continuous Airworthiness Maintenance Program

(e) FAA-certificated air carriers that have an approved continuous airworthiness maintenance program in accordance with the record keeping requirement of § 121.369 (c) of the Federal Aviation Regulations (14 CFR 121.369 (c)) of this chapter must maintain records of the mandatory inspections that result from revising the Time Limits section of the Instructions for Continuous Airworthiness (ICA) and the air carrier's continuous airworthiness program. Alternatively, certificated air carriers may establish an approved system of record retention that provides a method for preservation and retrieval of the maintenance records that include the inspections resulting from this AD, and include the policy and procedures for implementing this alternate method in the air carrier's maintenance manual required by § 121.369 (c) of the Federal Aviation Regulations (14 CFR 121.369 (c)); however, the alternate system must be accepted by the appropriate PMI and require the maintenance records be maintained either indefinitely or until the work is repeated. Records of the piece-part inspections are not required under § 121.380 (a) (2) (vi) of the Federal Aviation Regulations (14 CFR 121.380 (a) (2) (vi)). All other operators must maintain the records of mandatory inspections required by the applicable regulations governing their operations.

Effective Date

(f) This amendment becomes effective on July 17, 2002.

Issued in Burlington, Massachusetts, on June 4, 2002.

Francis A. Favara,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 02-14695 Filed 6-11-02; 8:45 am]

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