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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-27023; Directorate Identifier 98-ANE-47-AD; Amendment 39-16971; AD 2012-04-15]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) for all Pratt & Whitney (PW) JT9D series turbofan engines. That AD currently requires revisions to the Airworthiness Limitations Section (ALS) of the manufacturer's Instructions for Continued Airworthiness (ICA) to include required enhanced inspection of selected critical life-limited parts at each piece-part opportunity. This new AD requires additional revisions to the JT9D series engines ALS sections of the manufacturer's ICA. This AD was prompted by the need to require enhanced inspection of selected critical life-limited parts of JT9D series 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.

DATES: This AD is effective April 23, 2012.

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 & 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:
Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2007-05-17, Amendment 39-14978 (72 FR 10350, March 8, 2007). That AD applies to the specified products. That NPRM published in the Federal Register on November 22, 2011 (76 FR 72130). That NPRM proposed to continue to require revisions to the ALS of the manufacturer's ICA to include required enhanced inspection of selected critical life-limited parts at each piece-part opportunity. That NPRM also proposed to require additional revisions to the JT9D series engines ALS sections of the manufacturer's ICA.

Comments

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

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 438 JT9D series engines are installed on airplanes of U.S. registry and will be affected by this AD. We also estimate that about 4 work hours per engine are needed to perform the actions, and that the average labor rate is $85 per work hour. Since this is an added inspection requirement that will be part of the normal maintenance cycle, no additional parts costs are involved. Based on these figures, we estimate the total cost of the AD to U.S. operators to be $148,920.

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

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, Incorporation by reference, 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 airworthiness directive (AD) 2007-05-17, Amendment 39-14978 (72 FR 10350, March 8, 2007) and adding the following new AD:

2012-04-15 Pratt & Whitney: Amendment 39-16971; Docket No. FAA-2007-27023; Directorate Identifier 98-ANE-47-AD.

(a) Effective Date

This AD is effective April 23, 2012.

(b) Affected ADs

This AD supersedes AD 2007-05-17, Amendment 39-14978 (72 FR 10350, March 8, 2007).

(c) Applicability

This AD applies to Pratt & Whitney (PW) JT9D-3A, -7, -7A, -7H, -7AH, -7F, -7J, -20J, -59A, -70A, -7Q, -7Q3, -7R4D, -7R4D1, -7R4E, -7R4E1, -7R4E4, -7R4G2, and -7R4H1 series turbofan engines.

(d) Unsafe Condition

This AD results from the need to require enhanced inspection of selected critical life-limited parts of JT9D 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.

(e) Compliance

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

(f) Inspections

Within the next 30 days after the effective date of this AD, add the following section to the Airworthiness Limitations Section (ALS) of your copy of the manufacturer's Instructions for Continued Airworthiness (ICA) and, for air carrier operations, to your continuous airworthiness air carrier maintenance program:

Mandatory Inspections

(1) Inspect the following life-limited parts at each piece-part opportunity in accordance with the instructions provided in the applicable manual provisions:

Engine Model	Engine Manual Part Number (P/N)	Part Nomenclature	Inspect per Manual Section	Inspection/ Check
3A/7/7A/7AH/ 7F/7H/7J/20/ 20J	*646028 (or the equivalent customized versions, 770407 and 770408)	All Fan Hubs	72-31-04	Inspection-02
		All HPC Stage 5 – 15 Disks and Rear Compressor Drive Turbine Shafts	72-35-00	Inspection-03
		All HPT Stage 1-2 Disks and Hubs	72-51-00	Inspection-03
		**All HPT Stage 1 Disk Web Cooling Holes	72-51-02	Inspection -06
		All HPT Stage 2 Disk Web Tie rod Holes	72-51-02	Inspection-05
		All LPT Stage 3 – 6 Disks and Hubs	72-52-00	Inspection-03
59A/70A	754459	All Fan Hubs	72-31-00	Check-00
		All HPC Stage 5 – 15 Disks and Rear Compressor Drive Turbine Shafts	72-35-00	Check-00
		All HPT Stage 1-2 Disks and Hubs	72-51-00	Check-03
		All HPT Stage 1 Disk Web Cooling Holes	72-51-02	Check-03
		**All HPT Stage 2 Disk Tie rod and Web Cooling Holes	72-51-02	Check-04
		All LPT Stage 3 – 6 Disks and Hubs	72-52-00	Check-03
7Q/7Q3	777210	All Fan Hubs	72-31-00	Inspection-03
		All HPC Stage 5 – 15 Disks and Rear Compressor Drive Turbine Shafts	72-35-00	Inspection-03
		All HPT Stage 1-2 Disks and Hubs	72-51-00	Inspection-03
		All HPT Stage 1 Disk Web Cooling Holes	72-51-06	Inspection-03
		**All HPT Stage 2 Disk Tie rod and Web Cooling Holes	72-51-07	Inspection-03
		All LPT Stage 3 – 6 Disks and Hubs	72-52-00	Inspection-03

Engine Model	Engine Manual Part Number (P/N)	Part Nomenclature	Inspect per Manual Section	Inspection/ Check
7R4 ALL	785058, 785059, and 789328	All Fan Hubs	72-31-00	Inspection/ Check-03
		**All Fan Hub Slots	72-31-01	Inspection/ Check-02
		All HPC Stage 5 – 15 Disks and Rear Compressor Drive Turbine Shafts	72-35-00	Inspection/ Check 03
		All HPT Stage 1-2 Disks and Hubs	72-51-00	Inspection/ Check 03
		All LPT Stage 3 – 6 Disks and Hubs	72-52-00	Inspection/ Check 03
		**All HPT Stage 2 Disk Tie rod and Web Cooling Holes	72-51-07	Inspection/ Check-02
7R4D/D1/E/E1	785058 and 785059	All HPT Stage 1 Disk Web Cooling Holes	72-51-06	Inspection/ Check-02
		**All HPT Stage 2 Disk Tie rod and Web Cooling Holes	72-51-07	Inspection/ Check-02

* P/N 770407 and 770408 are customized versions of P/N 646028 engine manual.
** Two asterisks identify the part nomenclatures and inspections added to the table.

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

(i) The part is considered completely disassembled when disassembly is in accordance with the disassembly instructions in the manufacturer's engine shop manual; 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.

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

(h) Alternative Methods of Compliance (AMOC)

(1) You must perform these mandatory inspections using the ALS of the ICA and the applicable Engine Manual, unless you receive approval to use an AMOC under paragraph (h)(2) of this AD. Section 43.16 of 14 CFR may not be used to approve AMOCs or adjustments to the times in which these inspections must be performed.

(2) The Manager, Engine Certification Office, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(i) Maintaining Records of the Mandatory Inspections

(1) You have met the requirements of this AD when you revise your copy of the ALS of the manufacturer's ICA as specified in paragraph (f) of this AD. For air carriers operating under part 121 of 14 CFR, you have met the requirements of this AD when you modify your continuous airworthiness air carrier maintenance program as specified in paragraph (f) of this AD. 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:

(i) Includes a method for preserving and retrieving the records of the inspections resulting from this AD;

(ii) Meets the requirements of section 121.369(c); and

(iii) Maintains the records either indefinitely or until the work is repeated.

(2) These record keeping requirements apply only to the records used to document the mandatory inspections required as a result of revising the ALS of the manufacturer's ICA 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.

(j) Related Information

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.

(k) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on February 22, 2012.
Peter A. White,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.