

[Federal Register: January 31, 2008 (Volume 73, Number 21)]
[Rules and Regulations]
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[DOCID:fr31ja08-6]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-27891; Directorate Identifier 2007-NE-14-AD; Amendment 39-15349; AD 2008-02-19]

RIN 2120-AA64

Airworthiness Directives; Honeywell International Inc. TFE731-2C, -3B, -3BR, -3C, -3CR, -3D, -3DR, -4R, -5AR, -5BR, -5R, -20R, -20AR, -20BR, -40, -40AR, -40R, and -60 Series Turbofan Engines

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for Honeywell International Inc. (Honeywell) TFE731-2C, -3B, -3BR, -3C, -3CR, -3D, -3DR, -4R, -5AR, -5BR, -5R, -20R, -20AR, -20BR, -40, -40AR, -40R, and -60 series turbofan engines. This AD requires removal from service of certain high pressure (HP) turbine rotor assemblies with part numbers (P/Ns) 3075772-1 and 3060841-1 using a drawdown schedule, and returning them to Honeywell for curvic root radius inspection. This AD results from the manufacturer's report that some HP turbine rotor discs received improperly machined radii in the root of the forward and aft curvic teeth during manufacture. We are issuing this AD to prevent uncontained failure of the HP turbine rotor assembly, which could result in damage to the airplane.

DATES: This AD becomes effective March 6, 2008. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of March 6, 2008.

ADDRESSES: You can get the service information identified in this AD from Honeywell Technical Publications and Distribution, M/S 2101-201, P.O. Box 52170, Phoenix, AZ 85072-2170; telephone: (602) 365-2493 (General Aviation), (602) 365-5535 (Commercial Aviation), fax: (602) 365-5577 (General Aviation and Commercial Aviation).

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: Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; e-mail: joseph.costa@faa.gov; telephone: (562) 627-5246; fax: (562) 627-5210.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 with a proposed AD. The proposed AD applies to Honeywell TFE731-2C, -3B, -3BR, -3C, -3CR, -3D, -3DR, -4R, -5AR, -5BR, -5R, -20R, -20AR, -20BR, -40, -40AR, -40R, and -60 series turbofan engines. We published the proposed AD in the Federal Register on September 4, 2007 (72 FR 50648). That action proposed to require removal from service of certain HP turbine rotor assemblies with P/Ns 3075772-1 and 3060841-1 using a drawdown schedule, and returning them to Honeywell for curvic root radius inspection.

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 received no comments on the proposal or on the determination of the cost to the public.

Conclusion

We have carefully reviewed the available 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 400 HP turbine rotor discs installed in TFE731-20R, -20AR, -20BR, -40, -40AR, -40R, and -60 series turbofan engines, and 170 HP turbine rotor discs installed in TFE731-2C, -3B, -3BR, -3C, -3CR, -3D, -3DR, -4R, -5AR, -5BR, and -5R series turbofan engines, installed in airplanes of U.S. registry. We also estimate that it will take about 42 work-hours per engine to perform the actions at an unscheduled removal, and about 2 work-hours at a scheduled removal. The average labor rate is \$80 per work-hour. Required parts will cost about \$46,535 per engine. We estimate that 50 percent of the HP turbine rotor discs will fail the curvic root radius inspection. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$13,490,000.

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 adding the following new airworthiness directive:



2008-02-19 Honeywell International Inc. (formerly AlliedSignal Inc. and Garrett Turbine Engine Co.): Amendment 39-15349. Docket No. FAA-2007-27891; Directorate Identifier 2007-NE-14-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective March 6, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Honeywell International Inc. (Honeywell) TFE731-2C, -3B, -3BR, -3C, -3CR, -3D, -3DR, -4R, -5AR, -5BR, -5R, -20R, -20AR, -20BR, -40, -40AR, -40R, and -60 series turbofan engines with certain high pressure (HP) turbine rotor discs part numbers and serial numbers. These engines are installed on, but not limited to, the following airplanes:

Avions Marcel Dassault Mystere-Falcon 10 and 50 Series

Cessna Model 650; Citations III, VI, and VII

Dassault-Aviation 20, 50, 50EX, 900, MF900, and 900EX (900DX) Series

Gulfstream Aerospace LP (formerly IAI) 1125 Westwind Astra, Astra SPX, Gulfstream 100 Series

Israel Aircraft Industries (IAI) 1124 Series (Westwind 1124)

Learjet 31, 35, 36, 45 (or Learjet 40), and 55 Series

Lockheed-Georgia 3329-25 Series (731 Jetstar, Jetstar II)

Raytheon Corporate Jets (formerly British Aerospace) Hawker 800 and 850 Series

Sabreliner NA-265-65 (Sabreliner 65)

Unsafe Condition

(d) This AD results from the manufacturer's report that some HP turbine rotor discs received improperly machined radii in the root of the forward and aft curvic teeth during manufacture. We are issuing this AD to prevent uncontained failure of the HP turbine rotor assembly, 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.

TFE731-2C, -3B, -3BR, -3C, -3CR, -3D, -3DR, -4R, -5AR, -5BR, and -5R Series Turbofan Engines

(f) For TFE731-2C, -3B, -3BR, -3C, -3CR, -3D, -3DR, -4R, -5AR, -5BR, and -5R series turbofan engines, remove HP turbine rotor assemblies from service containing HP turbine rotor discs, part number (P/N) 3075772-1, having any serial number (SN) in Table 1 of Honeywell Service Bulletin (SB) No. TFE731-72-3720, dated July 5, 2006. Use the following drawdown schedule:

(1) For HP turbine discs with 4,200 cycles-since-new (CSN) or more on the effective date of this AD, remove HP turbine rotor assemblies within 100 cycles-in-service (CIS) after the effective date of this AD.

(2) For HP turbine discs with fewer than 4,200 CSN on the effective date of this AD, remove HP turbine rotor assemblies at the next access to the HP turbine rotor discs, but not to exceed 4,300 CSN.

TFE731-20R, -20AR, -20BR, -40, -40AR, -40R, and -60 Series Turbofan Engines

(g) For TFE731-20R, -20AR, -20BR, -40, -40AR, -40R, and -60 series turbofan engines, remove HP turbine rotor assemblies from service containing HP turbine rotor discs, P/N 3060841-1, having any SN in Table 1 of Honeywell Alert SB No. TFE731-A72-5185, dated July 5, 2006. Use the following drawdown schedule:

(1) For HP turbine discs with 3,200 CSN or more on the effective date of this AD, remove HP turbine rotor assemblies within 100 CIS after the effective date of this AD.

(2) For HP turbine discs with fewer than 3,200 CSN on the effective date of this AD, remove HP turbine rotor assemblies at the next access to the turbine rotor discs, but not to exceed 3,300 CSN.

For All Engines

(h) HP turbine rotor discs removed per paragraphs (f) and (g) of this AD must pass a curvic root radius inspection performed by Honeywell Engines, Systems and Services, Phoenix, Arizona, Certificate Repair Station No. ZN3R030M, before the discs are eligible for reinstallation in an engine.

(i) For the purposes of this AD, access to the HP turbine rotor discs is defined as the removal of the HP turbine rotor assembly from the engine.

Alternative Methods of Compliance

(j) The Manager, Los Angeles Aircraft 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.

Related Information

(k) Contact Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; e-mail: joseph.costa@faa.gov; telephone: (562) 627-5246; fax: (562) 627-5210, for more information about this AD.

(l) For more information regarding the engine manufacturer's accomplishment instructions or material information, refer to Honeywell Alert SB No. TFE731-A72-5185, dated July 5, 2006, and SB No. TFE731-72-3720, dated July 5, 2006.

(m) Also, for technical support regarding the curvic root dimensional inspection criteria, contact the Technical Operations Center: telephone: (800) 601-3099 (U.S.) or (602) 365-3099 (International) and press option 9; e-mail: AeroTechSupport@Honeywell.com; or fax: (602) 365-3343.

Material Incorporated by Reference

(n) You must use Table 1 of Honeywell Alert Service Bulletin No. TFE731-A72-5185, dated July 5, 2006, or Table 1 of Honeywell Service Bulletin No. TFE731-72-3720, dated July 5, 2006, as applicable, to determine SN applicability of HP turbine rotor discs requiring removal by this AD. The Director of the Federal Register approved the incorporation by reference of these service bulletins in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Honeywell Technical Publications and Distribution, M/S 2101-201, P.O. Box 52170, Phoenix, AZ 85072-2170; telephone: (602) 365-2493 (General Aviation), (602) 365-5535 (Commercial Aviation), fax: (602) 365-5577 (General Aviation and Commercial Aviation) 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 January 16, 2008.

Peter A. White,

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

[FR Doc. E8-1238 Filed 1-30-08; 8:45 am]