[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-9451; Directorate Identifier 2016-NE-24-AD]

RIN 2120-AA64

Airworthiness Directives; Honeywell International Inc. Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Honeywell International Inc. TFE731-20 and TFE731-40 turbofan engines. This proposed AD was prompted by two fan disks found with a manufacturing-caused flaw. This proposed AD would require removing affected fan disks, performing a one-time inspection, and replacing fan disks that fail inspection. We are proposing this AD to correct the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202-493-2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Honeywell International Inc., 111 S. 34th Street, Phoenix, AZ 85034-2802; phone: 800-601-3099; Internet: https://myaerospace.honeywell.com/wps/portal/!ut/. You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2016-9451; 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 proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; phone: 562-627-5246; fax: 562-627-5210; email: joseph.costa@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this NPRM. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2016-9451; Directorate Identifier 2016-NE-24-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all

comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

Discussion

We received reports of two fan disks with material rollover condition on the surface of the dovetail slot. The material rollover was caused by incomplete chamfering or edge-break of the fan disk dovetail slots after broaching and subsequent shot-peening. This material rollover was considered a crack-like stress riser that can cause reduction in fatigue life and cracking. This condition, if not corrected, could result in uncontained failure of the fan disk and damage to the engine and airplane.

Related Service Information under 1 CFR part 51

We reviewed Honeywell Service Bulletin (SB) TFE731-72-5256, Revision 0, dated October 7, 2016. The SB identifies affected fan disks by serial number and describes procedures for removing, inspecting, and replacing the fan disks. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require removing, inspecting, and replacing affected fan disks.

Differences Between this Proposed AD and the Service Information

Honeywell SB TFE731-72-5256, Revision 0, dated October 7, 2016 specifies a five year compliance time with no grace period. This NPRM proposes a tiered compliance time based on cycle accumulation. Also, Honeywell SB TFE731-72-5256 specifies compliance with two overhaul/ repair instructions (ORIs). Honeywell ORI T43374 addresses the fan disk material rollover condition and Honeywell ORI T43342 addresses additional material in the fan disk wings. This NPRM addresses only ORI T43374 corrective action for an unsafe condition.

Costs of Compliance

We estimate that this proposed AD affects 61 engines installed on airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Remove fan disk	8 work-hours X $85 per hour = $680.00	$0	$680.00	$41,480.00
Inspect fan disk	8 work-hours X $85 per hour = $680.00	$0	$680.00	$41,480.00
Install reworked or new fan disk	18 work-hours X $85 per hour = $1,530.00	$0	$1,530.00	$93,330.00

We estimate the following costs to do any necessary disk replacements that would be required based on the results of the proposed inspection. We estimate that 6 engines will need this replacement:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replace non-serviceable disks with new fan disk	1 work-hour X $85 per hour = $85.00	$50,000.00	$300,510.00

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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 determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD 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.

For the reasons discussed above, I certify this proposed regulation:

(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),

(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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 (AD):

Honeywell International Inc. (Type Certificate previously held by AlliedSignal Inc., Garrett Engine Division; Garrett Turbine Engine Company; and AiResearch Manufacturing Company of Arizona): Docket No. FAA-2016-9451; Directorate Identifier 2016-NE-24-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Honeywell International Inc. (Honeywell) TFE731-20 and TFE731-40 turbofan engines, with fan disk, part number (P/N) 3060287-2 and serial numbers (S/Ns) listed in Table 9 of Honeywell Service Bulletin (SB) TFE731-72-5256, Revision 0, dated October 7, 2016, that do not have "T43374" marked adjacent to the engine P/N or S/N.

(d) Subject

Joint Aircraft System Component (JASC) Code 7230, Turbine Engine Compressor Section.

(e) Unsafe Condition

This AD was prompted by a report of two fan disks found with surface rollovers in the dovetail slot area. We are issuing this AD to prevent uncontained failure of the fan disks and damage to the engine and airplane.

(f) Compliance

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

(g) Required Actions

(1) Remove fan disks with 9,000 cycles-since-new (CSN) or more on the effective date of this AD, within 100 cycles-in-service (CIS), or at the next shop visit, or at next access, whichever occurs first, after the effective date of this AD.

(2) Remove fan disks with between 8,000 and 8,999 CSN, inclusive, on the effective date of this AD, within 9,100 CSN or within 1,000 CIS, or at the next shop visit, or at next access, whichever occurs first, after the effective date of this AD.

(3) Remove fan disks with fewer than 8,000 CSN, on the effective date of this AD, before exceeding 9,000 CSN, or at the next shop visit, or at next access, whichever occurs first, after the effective date of this AD.

(4) Inspect removed fan disks in accordance with Paragraph 3.D.(2) in the Accomplishment Instructions of Honeywell SB TFE731-72-5256, Revision 0, dated October 7, 2016.

(5) Replace all removed fan disks with a part eligible for installation.

(h) Definitions

(1) For the purposes of this AD, shop visit is defined as the removal of the tie-shaft nut from the engine.

(2) For the purposes of this AD, access is defined as the removal of the fan rotor assembly from the engine.

(3) For the purposes of this AD, parts eligible for installation are those fan disks that pass the inspections and are marked with "T43374" adjacent to the P/N or S/N.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles Aircraft Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; phone: 562-627-5246; fax: 562-627-5210; email: joseph.costa@faa.gov.

(2) For service information identified in this AD, contact Honeywell International Inc., 111 S. 34th Street, Phoenix, AZ 85034-2802; phone: 800-601-3099; Internet: https://myaerospace.honeywell.com/wps/portal/!ut/.

(3) For service information on returning the fan disk for inspection identified in SB TFE731-72-5256 of this AD, contact Honeywell International Inc., 111 S. 34th Street, Phoenix, AZ 85034-2802; phone: 800-601-3099; Internet: https://myaerospace.honeywell.com/wps/portal/!ut/.

(4) You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts on February 8, 2017.

Carlos A. Pestana,
Acting Manager, Engine & Propeller Directorate,
Aircraft Certification Service.
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