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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0719; Product Identifier 2016-NE-24-AD; Amendment 39-19589; AD 2019-05-07]

RIN 2120-AA64

Airworthiness Directives; Honeywell International Inc. Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2017-20-01 for certain Honeywell International Inc. (Honeywell) TFE731-20 and TFE731-40 turbofan engines. AD 2017-20-01 required removing the affected fan disk and replacing it with a fan disk eligible for installation. Since we issued AD 2017-20-01, we determined that some turbofan engine models were omitted from the applicability of AD 2017-20-01. This AD adds turbofan engine models to the applicability and removes the Honeywell TFE731-20 turbofan engine model from the applicability. This AD requires removal of affected fan disks and replacement with parts eligible for installation. This AD was prompted by two fan disks found with surface rollovers in the dovetail slot area. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective April 25, 2019.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of November 2, 2017 (82 FR 45173, September 28, 2017).

ADDRESSES: For service information identified in this final rule, contact Honeywell International Inc., 111 S 34th Street, Phoenix, AZ 85034-2802; phone: 800-601-3099 (Toll Free U.S.A./Canada); 602-365-3099 (International Direct); website: www.myaerospace.com; email: engine.reliability@honeywell.com. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0719.

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-2018-0719; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) is Document Operations, 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: Joseph Costa, Aerospace Engineer, Los Angeles ACO Branch, FAA, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5246; fax: 562-627-5210; email: joseph.costa@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2017-20-01, Amendment 39-19058 (82 FR 45173, September 28, 2017), (“AD 2017-20-01”). AD 2017-20-01 applied to Honeywell TFE731-20 and TFE731-40 turbofan engines with fan disk part number (P/N) 3060287-2 and a serial number (S/N) listed in Table 9 of Honeywell Service Bulletin (SB) TFE731-72-5256, Revision 0, dated October 7, 2016. The NPRM published in the Federal Register on September 14, 2018 (83 FR 46664). The NPRM was prompted by two fan disks found with surface rollovers in the dovetail slot area. The NPRM proposed to require removing the Honeywell TFE731-20 turbofan engine from the applicability and prohibit the installation of affected fan disks that do not have “T43374” marked adjacent to the fan disk P/N or S/N. The NPRM also proposed adding Honeywell TFE731-20R, -20AR, -20BR, and TFE731-40AR, -40BR, and -40R turbofan engines to the applicability. We are issuing this AD to address the unsafe condition on these products.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Correct P/N Typographical Error

Honeywell requested that we correct the P/N from “P/N 3060267-2” to “P/N 3060287-2” in the “Actions Since AD 2017-20-01 Was Issued” paragraph and the Installation Prohibition paragraph.

We agree that we had a typographical error in the “Actions Since AD 2017-20-01 Was Issued” paragraph and the Installation Prohibition paragraph of the NPRM. We did not update the “Actions Since AD 2017-20-01 Was Issued” paragraph because this language is not included in this final rule. We, however, updated the P/N in the Installation Prohibition paragraph of this AD to “P/N 3060287-2.”

Request To Update the Location of the Marking

Honeywell requested that we update the location references in the AD of the “T43374” marking from the “engine P/N or S/N” to the “fan disk P/N or S/N.”

We agree. Because we want to maintain technical correctness and consistency with the service information, we updated the location of the “T43374” marking from “engine P/N or S/N” to “fan disk P/N or S/N” throughout this AD.

Request To Update Applicability

The European Union Aviation Safety Agency (EASA) requested that we update the applicability to include all Honeywell TFE731 engines for which the affected parts are eligible. EASA reasoned that the consequence of the applicability is that the Installation Prohibition, paragraph (h), of this AD, is not valid for those engines that do not have the affected parts installed. The commenter indicated that only revising the applicability paragraph will ensure that no spare (or removed) parts are installed on any engine that does not have an affected part installed.

We partially agree. We agree that the applicability paragraph will result in limiting the Installation Prohibition to only those engines that have the affected fan disk installed on the effective date of the AD. To be consistent with the Applicability paragraph, we revised the Installation Prohibition paragraph of this AD to refer only to engines identified in the Applicability paragraph of this AD.

We disagree with rewording the Applicability paragraph of this AD because this paragraph meets the safety requirements of this AD. Further, revising the applicability of this AD would require renoticing the NPRM and therefore delay the effectivity of this AD. We did not change this AD.

Support for the AD

An individual commenter expressed support for the NPRM as written.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information Under 1 CFR Part 51

We reviewed Honeywell SB TFE731-72-5256, Revision 0, dated October 7, 2016. The SB identifies affected fan disks by S/N and describes procedures for removing, inspecting, and replacing the affected 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.

Costs of Compliance

We estimate that this AD affects 61 engines installed on airplanes of U.S. registry. We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Remove fan disk and send to Honeywell for inspection	8 work-hours × \$85 per hour = \$680	\$0	\$680	\$41,480
Install reworked or new fan disk	26 work-hours × \$85 per hour = \$2,210	0	2,210	134,810

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

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replace the non-serviceable disk with a new fan disk	1 work-hour × \$85 per hour = \$85	\$50,000	\$50,085

According to the manufacturer, some of the costs of this 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

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),

(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) 2017-20-01, Amendment 39-19058 (82 FR 45173, September 28, 2017), and adding the following new AD:



2019-05-07 Honeywell International Inc. (Type Certificate previously held by AlliedSignal Inc.): Amendment 39-19589; Docket No. FAA-2018-0719; Product Identifier 2016-NE-24-AD.

(a) Effective Date

This AD is effective April 25, 2019.

(b) Affected ADs

This AD replaces AD 2017-20-01, Amendment 39-19058 (82 FR 45173, September 28, 2017).

(c) Applicability

This AD applies to all Honeywell International Inc. (Honeywell) TFE731-20R, -20AR, -20BR, and TFE731-40, -40AR, -40BR, and -40R turbofan engines with a fan disk part number (P/N) 3060287-2 and with a serial number (S/N) 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 fan disk 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. The unsafe condition, if not addressed, could result in uncontained fan disk release, damage to the engine, and damage to the airplane.

(f) Compliance

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

(g) Required Actions

Remove the affected fan disk using the following criteria:

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

(4) Replace any removed fan disk with a part eligible for installation.

(h) Installation Prohibition

Do not install an affected fan disk, P/N 3060287-2, unless “T43374” is marked adjacent to the fan disk P/N or S/N onto any engine identified in the Applicability paragraph of this AD.

(i) Definitions

(1) For the purposes of this AD, an “engine 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, a “part eligible for installation” is:

(i) A fan disk not listed in the Accomplishment Instructions, Table 9, in Honeywell SB TFE731-72-5256, Revision 0, dated October 7, 2016; or

(ii) a fan disk listed in the Accomplishment Instructions, Table 9, in Honeywell SB TFE731-72-5256, Revision 0, dated October 7, 2016, that has been inspected, reworked, and marked with “T43374” adjacent to the fan disk P/N or S/N. Guidance on returning affected parts to Honeywell for inspection and rework is found in the Accomplishment Instructions, paragraph 3.D., of Honeywell SB TFE731-72-5256, Revision 0, dated October 7, 2016.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k) of this AD.

(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.

(k) Related Information

For more information about this AD, contact Joseph Costa, Los Angeles ACO Branch, FAA, 3960 Paramount Boulevard, Lakewood, CA, 90712-4137; phone: 562-627-5246; fax: 562-627-5210; email: joseph.costa@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on November 2, 2017.

(i) Honeywell Service Bulletin TFE731-72-5256, Revision 0, dated October 7, 2016.

(ii) [Reserved].

(4) For Honeywell service information identified in this AD, contact Honeywell International Inc., 111 S 34th Street, Phoenix, AZ 85034-2802; phone: 800-601-3099 (Toll-Free U.S.A./Canada); 602-365-3099 (International Direct); website: www.myaerospace.com; email: engine.reliability@honeywell.com.

(5) You may view this service information at FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(6) You may view this service information that is incorporated by reference 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 March 14, 2019.

Karen M. Grant,
Acting Manager, Engine and Propeller Standards Branch,
Aircraft Certification Service.