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[FR Doc No: 2024-14939]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-0461; Project Identifier AD-2023-00994-E; Amendment 39-22767; AD 2024-12-03]

RIN 2120-AA64

Airworthiness Directives; CFE Company Engines

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule.

SUMMARY:

The FAA is adopting a new airworthiness directive (AD) for certain CFE Company (CFE) Model CFE738-1-1B engines. This AD was prompted by a manufacturer investigation that revealed certain high-pressure turbine (HPT) stage 1 and stage 2 disks were manufactured from powder metal material suspected to contain iron inclusion. This AD requires replacement of affected HPT stage 1 and stage 2 disks with parts eligible for installation. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective August 13, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of August 13, 2024.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2024-0461; 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, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For CFE material, contact CFE Company, 111 S 34th Street, Phoenix, AZ 85034; phone: (800) 601-3099; email: CFE738DataCenter@honeywell.com; website: aerospace.honeywell.com.
- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at regulations.gov under Docket No. FAA-2024-0461.

FOR FURTHER INFORMATION CONTACT:

Alexei Marqueen, Aviation Safety Engineer, FAA, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7178; email: alexei.t.marqueen@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend [14 CFR part 39](#) by adding an AD that would apply to certain CFE Model CFE738-1-1B engines with HPT stage 1 and HPT stage 2 disks installed. The NPRM published in the **Federal Register** on March 8, 2024 ([89 FR 16710](#)). The NPRM was prompted by a manufacturer investigation that revealed certain HPT stage 1 and HPT stage 2 disks, installed on certain CFE738-1-1B model engines, were manufactured from powder metal material suspected to contain iron inclusion. Further investigation by the manufacturer determined that the iron inclusion is attributed to deficiencies in the manufacturing process and may cause reduced material properties and a lower fatigue life capability, which may result in structural failure. The manufacturer also informed the FAA that additional risk assessments determined that there were no failed events associated with the discovery of this iron inclusion material, however concluded that replacement of the affected HPT stage 1 and HPT stage 2 disks is necessary. In the NPRM, the FAA proposed to require replacement of affected HPT stage 1 and HPT stage 2 disks with parts eligible for installation. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM.

Related Material Under [1 CFR Part 51](#)

The FAA reviewed CFE Service Bulletin CFE738-72-A8082, dated July 4, 2023, which specifies the affected part and serial numbers of the HPT stage 1 and stage 2 disks and specifies replacement instructions for the affected parts. This material 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

The FAA estimates that this AD affects 29 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S operators
Replace HPT stage 1 disk (25 engines)	8 work-hours × \$85 per hour = \$680	\$78,797	\$79,477	\$1,986,925
Replace HPT stage 2 disk (4 engines)	8 work-hours × \$85 per hour = \$680	56,268	56,948	227,792

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.

The FAA is 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) Will not affect intrastate aviation in Alaska, 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.

List of Subjects in [14 CFR Part 39](#)

- Air transportation
- Aircraft
- Aviation safety
- Incorporation by reference
- Safety

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 adding the following new airworthiness directive:

2024-12-03 CFE Company: Amendment 39-22767; Docket No. FAA-2024-0461; Project Identifier AD-2023-00994-E.

(a) Effective Date

This airworthiness directive (AD) is effective August 13, 2024.

(b) Affected ADs

None.

(c) Applicability

This AD applies to CFE Company (CFE) Model CFE738-1-1B engines with an installed high-pressure turbine (HPT) stage 1 disk or HPT stage 2 disk with a part number (P/N) and serial number (S/N) identified in Section 1. Planning Information, paragraph E. Compliance, Tables 2 and 3 of CFE Service Bulletin (SB) CFE738-72-A8082, dated July 4, 2023 (CFE738-72-A8082).

(d) Subject

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

(e) Unsafe Condition

This AD was prompted by a manufacturer investigation that revealed certain HPT stage 1 disks and HPT stage 2 disks were manufactured from powder metal material suspected to contain iron inclusion. The FAA is issuing this AD to prevent premature fracture and consequent uncontained failure. The unsafe condition, if not addressed, could result in uncontained debris 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

At the applicable times specified in paragraphs (g)(1) and (2) of this AD, remove each affected HPT stage 1 disk and HPT stage 2 disk from service and replace with a part eligible for installation, in accordance with steps (1) through (9) in paragraph B. of the Accomplishment Instructions of CFE738-72-A8082.

(1) For affected HPT stage 1 disks, at the next piece-part exposure or before exceeding 2,450 cycles since new (CSN), whichever occurs first.

(2) For affected HPT stage 2 disks, at the next piece-part exposure or before exceeding 2,930 CSN, whichever occurs first.

(h) Definition

For the purpose of this AD:

(1) A “part eligible for installation” is any HPT stage 1 disk or HPT stage 2 disk with a P/N and S/N that is not identified in Section 1. Planning Information, paragraph E. Compliance, Tables 2 and 3 of CFE738-72-A8082.

(2) “Piece-part exposure” is when the affected part is removed from the engine.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR-520 Continued Operational Safety 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 AIR-520 Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (j) of this AD and email to: ANE-AD-AMOC@faa.gov.

(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

For more information about this AD, contact Alexei Marqueen, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7178; email: alexei.t.marqueen@faa.gov.

(k) Material Incorporated by Reference

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

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

(i) CFE Service Bulletin CFE738-72-A8082, dated July 4, 2023.

(ii) [Reserved]

(3) For CFE material, contact CFE Company, 111 S 34th Street, Phoenix, AZ 85034; phone: (800) 601-3099; email: CFE738DataCenter@honeywell.com; website: aerospace.honeywell.com.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on June 11, 2024.

Suzanne Masterson,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[[FR Doc. 2024-14939](#) Filed 7-8-24; 8:45 am]

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