[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-1885; Project Identifier AD-2023-00995-E]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (SNPRM).

SUMMARY: The FAA is revising a notice of proposed rulemaking (NPRM) that applied to certain General Electric Company (GE) Model CF34-10E2A1, CF34-10E6, CF34-10E6A1, CF34-10E7, and CF34-10E7-B engines having certain high-pressure turbine (HPT) front rotating air seals installed. This action revises the NPRM by adding Model CF34-10E5 and CF34-10E5A1 engines to the applicability. The FAA is proposing this airworthiness directive (AD) to address the unsafe condition on these products. Since these actions would impose an additional burden over those in the NPRM, the agency is requesting comments on this SNPRM.

DATES: The FAA must receive comments on this SNPRM 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 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.

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2024-1885; 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 SNPRM, any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

• For GE material identified in this SNPRM, contact GE, 1 Neumann Way, Cincinnati, OH 45215; phone: (513) 552-3272; email: aviation.fleetsupport@ge.com; website: ge.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.

FOR FURTHER INFORMATION 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.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2024-1885; Project Identifier AD-2023-00995-E" at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may again revise the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this SNPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this SNPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this SNPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this SNPRM. Submissions containing CBI should be sent to Alexei Marqueen, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued an NPRM to amend 14 CFR part 39 by adding an AD that would apply to certain GE Model CF34-10E2A1, CF34-10E6, CF34-10E6A1, CF34-10E7, and CF34-10E7-B engines with certain part numbered high-pressure turbine (HPT) front rotating air seals installed. The NPRM was published in the Federal Register on July 24, 2024 (89 FR 59860). The NPRM was prompted by a report of indications found in certain HPT front rotating air seals at the rabbet surface where the affected part interacts with the HPT rotor disk tabs. The manufacturer investigated and determined that the indications were caused by a high edge of contact stress between the HPT rotor disk and the rabbet surface of the HPT front rotating air seal. In the NPRM, the FAA proposed to require repetitive FPIs to detect indications or linear indications (any indication that is four times longer than the width of that same indication) in the HPT front rotating air seal and, if necessary, replacement of the HPT front rotating air seal or HPT rotor disk with parts eligible for installation. Additionally, replacing the HPT front rotating air seal with an updated design part constitutes as a terminating action for the proposed AD.

Actions Since the NPRM was Issued

Since the FAA issued the NPRM, the FAA has determined changes to the applicability are necessary, primarily based on comments received from several commenters and additional review.

Comments

The FAA received comments on the NPRM from Japan Airlines and the Air Line Pilots Association, International (ALPA). ALPA supported the NPRM without change. The agency considered the comments received from Japan Airlines and the following discussion presents these comments and the FAA's response.

Request To Update the Applicability

Japan Airlines suggested that the applicability of the NPRM include Models CF34-10E5 and CF34-10E5A1, because the effectivity of GE CF34-10E Service Bulletin 72-0341 R02, dated September 24, 2021 (GE SB 72-0341 R02) applies to all CF34-10E engines with an installed high-pressure turbine (HPT) front rotating air seals, part number (P/N) 1865M49P04, P/N 2448M30P02, or P/N 2448M30P03. The FAA agrees and has revised paragraph (c) to include Model CF34-10E5 and CF34-10E5A1 engines.

Request To Revise Compliance Time

Japan Airlines also requested that the compliance time be revised to match the service bulletin in that the proposed actions be when the HPT rotor assembly is exposed instead of disassembled from the core module assembly. Japan Airlines stated that the compliance time in paragraph (g)(1) of the proposed AD shows to replace "at the next exposure of the HPT rotor assembly" and paragraph (i)(1) of the proposed AD shows that a "piece part exposure" is when the HPT front rotating air seal is disassembled from the HPT rotor assembly. If the FAA's intent was to match the service bulletin, Japan Airlines suggested that the compliance time of paragraph (g)(1) of the proposed AD be changed to "at the next exposure of the HPT rotor assembly and each exposure thereafter; and the definition in paragraph (i)(1) of the proposed AD be changed to "exposure of the HPT rotor assembly is when the HPT rotor assembly is disassembled from the core module assembly.

The FAA agrees and has revised paragraph (g)(1) to use "at next exposure of the HPT rotor assembly" and paragraph (i)(1) to define "exposure of HPT rotor assembly" to match the intent of the service bulletin.

FAA's Determination

The FAA is proposing this AD after determining the unsafe condition described previously is likely to exist or develop in other products of the same type design. Certain changes described above expand the scope of the NPRM. As a result, it is necessary to reopen the comment period to provide additional opportunity for the public to comment on this SNPRM.

Material Incorporated by Reference under 1 CFR Part 51

The FAA reviewed GE SB 72-0341 R02. This material specifies procedures for repetitive FPIs and eddy current inspections of certain HPT front rotating air seals for indications or linear indications and, if necessary, replacement of the affected HPT front rotating air seals or the HPT rotor disk with parts eligible for installation. 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 ADDRESSES.

Proposed AD Requirements in this SNPRM

This proposed AD would require, at the next exposure of the HPT rotor assembly, repetitive FPIs to detect indications or linear indications (any indication that is four times longer than the width of that same indication) in the HPT front rotating air seal and, if necessary, replacement of the HPT front rotating air seal or HPT rotor disk with parts eligible for installation. Additionally, replacing the HPT front rotating air seal with an updated design part constitutes terminating action for the proposed AD.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, affects 228 engines installed on airplanes of U.S. registry.

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

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
FPI of the HPT front rotating air seal.	8 work-hours x $85 per hour = $680	$0	$680	$155,040

The FAA estimates the following costs to do any necessary replacements that would be required based on the results of the proposed inspections. The agency has no way of determining the number of engines that might need these replacements:

On-condition costs

Action	Labor Cost	Parts Cost	Cost per product
Replace HPT front rotating air seal.	8 work-hours x $85 per hour = $680	$332,000	$332,680
Replace HPT rotor disk.	8 work-hours x $85 per hour = $680	$341,800	$342,480

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

The FAA 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) Would not affect intrastate aviation in Alaska, and

(3) Would 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:

General Electric Company: Docket No. FAA-2024-1885; Project Identifier AD-2023-00995-E.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to General Electric Company CF34-10E2A1, CF34-10E6, CF34-10E6A1, CF34-10E7, CF34-10E7-B, CF34-10E5, and CF34-10E5A1 engines with an installed high-pressure turbine (HPT) front rotating air seal having a part number (P/N) 1865M49P04, 2448M30P02, or 2448M30P03.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by a report of cracks found in the HPT rotating air front seal. The FAA is issuing this AD to detect indications and linear indications (any indication which is four times longer than the width of that same indication) of the HPT front rotating air seal. The FAA is issuing this AD to prevent failure of the HPT front rotating air seal or HPT rotor disk. The unsafe condition, if not addressed, could result in uncontained release of the HPT front rotating air seal or HPT rotor disk, 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

(1) At the next exposure of the HPT rotor assembly after the effective date of this AD and each exposure thereafter, perform a fluorescent penetrant inspection (FPI) of the HPT front rotating air seal for indications or linear indications in accordance with paragraphs 3.B.(1)(a) through (f), of GE CF34-10E Service Bulletin (SB) 72-0341 R02, dated September 24, 2021 (GE CF34-10E SB 72-0341 R02).

(2) If during any FPI required by paragraph (g)(1) of this AD, any indication greater than 0.015 in. (0.38mm) or any linear indication is found, before further flight, remove the HPT front rotating air seal from service and replace with a part eligible for installation, in accordance with paragraphs 3.B.(1)(g) and (h) of GE CF34-10E SB 72-0341 R02.

(3) If during any FPI required by paragraph (g)(1) of this AD, any indication is found that extends beyond the rabbet diameter M, as specified in paragraph 3.B.(1)(i), Figure 1, and Figure 4 (Sheet 2) of GE CF34-10E SB 72-0341 R02, before further flight, remove the HPT rotor disk from service and replace with a part eligible for installation, in accordance with paragraph 3.B.(1)(i)2 of GE CF34-10E SB 72-0341 R02.

(h) Optional Terminating Action

Replacing the HPT front rotating air seal with an HPT front rotating air seal having P/N 2929M57P01 terminates the requirements of this AD.

(i) Definitions

For the purpose of this AD, the definitions in paragraphs (i)(1) through (3) of this AD apply:

(1) An "exposure of the HPT rotor assembly" is when the HPT rotor assembly is removed from the core module assembly.

(2) A "linear indication" is any indication whose length is at least four times greater than its width.

(3) A "part eligible for installation" is defined as the following, as applicable:

(i) An HPT front rotating air seal that is eligible for installation is an HPT front rotating air seal having P/N 1865M49P04, P/N 2448M30P02, or P/N 2448M30P03 that has passed the inspection required by paragraph (g)(1) of this AD, or an HPT front rotating air seal having P/N 2929M57P01.

(ii) An HPT rotor disk that is eligible for installation is an HPT rotor disk having P/N 1865M51P03 or P/N 1865M51P04 that has not been removed from service as a result of the actions required by paragraph (g)(3) of this AD.

(j) 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 (k) of this AD and email to: 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.

(k) 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.

(l) 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) GE CF34-10E Service Bulletin 72-0341 R02, dated September 24, 2021.

(ii) [Reserved]

(3) For GE material identified in this AD, contact the General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; phone: (513) 552-3272; email: aviation.fleetsupport@ge.com; website: ge.com.

(4) You may view this material at 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 April 18, 2025.

Peter A. White,
Deputy Director, Integrated Certificate Management Division,
Aircraft Certification Service.

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