



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-1883; Project Identifier AD-2023-01120-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 all General Electric Company (GE) Model CF34-10E2A1, CF34-10E6, CF34-10E6A1, CF34-10E7, and CF34-10E7-B engines with certain part-numbered high-pressure turbine (HPT) shroud/low pressure turbine (LPT) nozzle assemblies 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](https://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.

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-1883; 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 proposed AD, contact GE, 1 Neumann Way, Cincinnati, OH 45215; phone: (513) 552-3272; email: aviation.fleetsupport@ge.com; website: [ge.com](https://www.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-2024-1883; Project Identifier AD-2023-01120-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](https://www.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 GE Model CF34-10E2A1, CF34-10E6, CF34-10E6A1, CF34-10E7, and CF34-10E7-B engines with an installed HPT shroud/LPT nozzle assembly having part number (P/N) 2205M38G01, 2205M38G02, 2205M38G03, 2205M38G04, or 2205M38G05. The NPRM published in the *Federal Register* on July 10, 2024 (89 FR 56674). The NPRM was prompted by a report from the manufacturer that during disassembly, the retention features of the inner and outer support air ducts on GE Model CF34-10E series engines were found to have failed. This condition, if not addressed, could result in the inner surface of the combustion case having reduced load carrying capability for fan blade out or other extreme event with possible engine separation and loss of the airplane. In the NPRM, the FAA proposed to require a visual inspection of the combustion case for wear and gouges, repair if necessary, and rework of the affected HPT shroud/LPT nozzle assemblies.

Actions Since the NPRM was Issued

Since the FAA issued the NPRM, the FAA received comments and determined that Model CF34-10E5 and CF34-10E5A1 engines were inadvertently omitted from the

applicability of the NPRM. In addition, the Cost of Compliance section was modified to reflect a more accurate estimate of the number of affected engines. While the number of affected models increased, the number of affected engines is lower than previously estimated.

Comments

The FAA received comments from three commenters. The commenters were the Air Line Pilots Association, International (ALPA), Japan Airlines, and GE. ALPA supported the NPRM without change. The following presents the comments received from Japan Airlines and GE and the FAA's response.

Request To Update the Applicability

Japan Airlines and GE suggested that engine Model CF34-10E5 and CF34-10E5A1 be included in the applicability of the NPRM because the effectivity of GE CF34-10E Service Bulletin (SB) 72-0351 R01, dated July 17, 2019 (GE CF34-10E SB 72-0351 R01) applies to all CF34-10E engines with an installed HPT shroud/LPT nozzle assembly having part number (P/N) 2205M38G01, 2205M38G02, 2205M38G03, 2205M38G04, or 2205M38G05.

The FAA agrees and has revised paragraph (c) of this proposed AD to add engine Model CF34-10E5 and CF34-10E5A1.

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 CF34-10E SB 72-0351 R01, which provides instructions for a visual inspection of the combustion case for wear and gouges, repair if necessary, and rework of the affected HPT shroud/LPT nozzle assemblies. This material also introduces a new HPT shroud/LPT nozzle assembly P/N 2205M38G07 with welded retaining rings. 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.

Proposed AD Requirements in this SNPRM

This proposed AD would require a visual inspection of the combustion case for wear and gouges, repair if necessary, and rework of the affected HPT shroud/LPT nozzle assemblies to add a positive retention of the support air duct.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, affects 221 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
Visual inspection of the combustion case inner shell surface.	8 work-hours x \$85 per hour = \$680	\$0	\$680	\$150,280
Rework of the affected HPT shroud/LPT nozzle assembly.	8 work-hours x \$85 per hour = \$680	\$0	\$680	\$150,280

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

On-Condition Costs

Action	Labor Cost	Parts Cost	Cost per product
Repair of the combustion case	8 work-hours x \$85 per hour = \$680	\$0	\$680
Replacement of the combustion case	8 work-hours x \$85 per hour = \$680	\$647,000	\$647,680

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-2024-1883; Project Identifier AD-2023-01120-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

(1) This AD applies to General Electric Company (GE) CF34-10E2A1, CF34-10E5, CF34-10E5A1, CF34-10E6, CF34-10E6A1, CF34-10E7, and CF34-10E7-B engines with an installed high-pressure turbine (HPT) shroud/low-pressure turbine (LPT) nozzle assembly having part number (P/N) 2205M38G01, 2205M38G02, 2205M38G03, 2205M38G04, or 2205M38G05.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by a report of failed retention features of the inner and outer support air ducts (commonly referred to as spoolies) discovered during engine disassembly. The FAA is issuing this AD to prevent failure of the combustion case. The unsafe condition, if not addressed, could result in the inner surface of the combustion case having reduced load carrying capability for fan blade out or other extreme event with possible engine separation and loss of the airplane.

(f) Compliance

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

(g) Required Actions

(1) At the next engine shop visit after the effective date of this AD, do a visual inspection of the combustion case inner shell surface for wear and gouges in accordance with paragraphs 3.A.(1) and (2) of the Accomplishment Instructions in GE CF34-10E Service Bulletin (SB) 72-0351 R01, dated July 17, 2019 (GE CF34-10E SB 72-0351 R01).

(i) If any wear or gouges are found during any inspection required by paragraph (g)(1) of this AD, before further flight, repair the combustion case in accordance with Table 1 of GE CF34-10E SB 72-0351 R01.

(ii) If any wear or gouges exceed the maximum repairable limit in accordance with Table 1 of GE CF34-10E SB 72-0351 R01, before further flight, remove the combustion case from service.

(2) At the next engine shop visit after the effective date of this AD, rework the affected HPT shroud/LPT nozzle assembly, in accordance with paragraph 3.B. of the Accomplishment Instructions of GE CF34-10E SB 72-0351 R01.

(h) Definition

For the purpose of this AD, an “engine shop visit” is defined as when the HPT shroud/LPT nozzle assembly or the HPT rotor disk 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: 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, 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) GE CF34-10E Service Bulletin 72-0351 R01, dated July 17, 2019.

(ii) [Reserved]

(3) For GE material identified in this AD, contact GE, 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 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 January 6, 2025.

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

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