[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2025-3998; Project Identifier AD-2025-00432-E]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain General Electric Company (GE) Model CF34-8C1, CF34-8C5, CF34-8C5A1, CF34-8C5A2, CF34-8C5B1, CF34-8E2, CF34-8E2A1, CF34-8E5, CF34-8E5A1, CF34-8E5A2, CF34-8E5A2HA, CF34-8E6, and CF34-8E6A1 engines. This proposed AD was prompted by reports of in-flight "Engine Degraded" messages from the engine indicating and crew alerting system (EICAS) due to corrosion of the variable geometry (VG) system actuator. This proposed AD would require removing certain electronic engine control (EEC) full authority digital electronic control (FADEC) software versions from service and installing an updated EEC FADEC software that is eligible for installation. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA 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 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-2025-3998; 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 NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Daiyun Fang, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (206) 910-0063; email: daiyun.fang@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 using a method listed under the ADDRESSES section. Include "Docket No. FAA-2025-3998; Project Identifier AD-2025-00432-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 revise this 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 NPRM.

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 NPRM 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 NPRM, 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 NPRM. Submissions containing CBI should be sent to Daiyun Fang, 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 was notified of three separate events involving airplanes with Model GE CF34-8C5 engines installed in which "Engine Degraded" messages were received from the EICAS during flight. A subsequent investigation by the manufacturer revealed that these engines had been operated infrequently over the two-year period prior to these events and stored in close proximity to a saltwater coastline. The investigation further revealed the variable geometry (VG) actuation lever arms were stuck due to corrosion between the high-pressure compressor case and vane bushings, which increased the VG actuation loads and slowed the VG response. As a result of this increase, the VG command and actual positions exceeded acceptable disagreement parameters, triggering an EICAS "Engine Degraded" message. In response to the "Engine Degraded" message, the manufacturer and FAA determined that certain versions of the EEC FADEC software installed on GE CF34-8E and GE CF34-8C engines can potentially reduce the engine to idle and lock the throttle until the engine is shut down and restarted. This condition, if not addressed, could result in failure of one or more engines, loss of engine thrust control, and consequent reduced control of the airplane.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would require removal of certain EEC FADEC software versions from service and installing updated EEC FADEC software that is eligible for installation.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 3,040 engines installed on airplanes of U.S. registry. The FAA estimates that 70 of these affected engines will also require an additional memory upgrade of the EEC FADEC software from a three memory sector configuration to a seven memory sector configuration.

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
Remove and install EEC FADEC software	8 work-hours x $85 per hour = $680	$660	$1,340	$4,073,600
Upgrade EEC FADEC software to seven sectors (70 engines)	8 work-hours x $85 per hour = $680	$49,000	$49,680	$3,477,600

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-2025-3998; Project Identifier AD-2025-00432-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 the General Electric Company (GE) Model engines identified in paragraphs (c)(1) and (2) of this AD.

(1) CF34-8C1, CF34-8C5, CF34-8C5A1, CF34-8C5A2, and CF34-8C5B1 engines with an electronic engine control (EEC) full authority digital electronic control (FADEC) part number (P/N) 4120T00P29, 4120T00P30, 4120T00P37, 4120T00P38, 4120T00P45, 4120T00P46, 4120T00P53, 4120T00P54, 4120T00P57, or 4120T00P58 installed.

(2) CF34-8E2, CF34-8E2A1, CF34-8E5, CF34-8E5A1, CF34-8E5A2, CF34-8E5A2HA, CF34-8E6, and CF34-8E6A1 engines with an EEC FADEC P/N 4120T00P42 (VIN 111E9320G43), P/N 4120T00P44 (VIN 111E9320G45), P/N 4120T00P48 (VIN 111E9320G49), P/N 4120T00P50 (VIN 111E9320G51), or P/N 4120T00P60 (VIN 111E9320G61) installed.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by an “Engine Degraded” message received in-flight from the engine indicating and crew alerting system, due to corrosion of the variable geometry system actuator. The FAA is issuing this AD to prevent EEC FADEC software from automatically locking the engine at idle until it is restarted. The unsafe condition, if not addressed, could result in failure of one or more engines, loss of engine thrust control, and consequent reduced control of the airplane.

(f) Compliance

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

(g) Required Actions

(1) For Group 1 engines, within 12 months after the effective date of this AD, replace any EEC FADEC software version that is V6.50 or earlier with an EEC FADEC software version that is eligible for installation.

(2) For Group 2 engines, within 12 months after the effective date of this AD, replace any EEC FADEC software version that is V5.60 or earlier with an EEC FADEC software version that is eligible for installation.

(h) Definitions

For the purpose of this AD, the following definitions apply:

(1) "Group 1 engines" are GE Model CF34-8C1, CF34-8C5, CF34-8C5A1, CF34-8C5A2, and CF34-8C5B1 engines.

(2) "Group 2 engines" are GE Model CF34-8E2, CF34-8E2A1, CF34-8E5, CF34-8E5A1, CF34-8E5A2, CF34-8E5A2HA, CF34-8E6, and CF34-8E6A1 engines.

(3) An "EEC FADEC software version that is eligible for installation" on Group 1 engines is any software version that is V6.60 or later approved version.

(4) An "EEC FADEC software version that is eligible for installation" on Group 2 engines is any software version that is V5.70 or later approved version.

(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 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) Additional Information

For more information about this AD, contact Daiyun Fang, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (206) 910-0063; email: daiyun.fang@faa.gov.

(k) Material Incorporated by Reference

None.

Issued on November 6, 2025.

Peter A. White,
Deputy Director, Integrated Certificate Management Division,
Aircraft Certification Service.
[FR Doc. 2025-20089 Filed: 11/17/2025 8:45 am; Publication Date: 11/18/2025]