



**DATE: November 4, 2021**  
**AD #: 2021-23-51**

Emergency Airworthiness Directive (AD) 2021-23-51 is sent to owners and operators of General Electric Company (GE) CF34-8C and CF34-8E model turbofan engines.

### **Background**

This emergency AD was prompted by an in-flight shutdown of an engine and subsequent investigation by the manufacturer that revealed a broken compressor variable geometry (VG) actuator rod end caused by corrosion and seizure of the rod end bearing. This condition, if not addressed, could result in failure of one or more engines, loss of engine thrust control, and reduced control of the airplane.

### **Relevant Service Information**

The FAA reviewed GE CF34-8C Service Bulletin (SB) 75-0028 R00 and GE CF34-8E SB 75-0023 R00, both dated November 2, 2021. These SBs specify procedures for performing a one-time inspection of the master compressor VG actuator and slave compressor VG actuator, differentiated by engine model, to identify possible rod end corrosion or seizure.

### **FAA's Determination**

The FAA is issuing this AD because the agency has determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **AD Requirements**

This AD requires performing an inspection of the master compressor VG actuator and slave compressor VG actuator and, depending on the results of the inspection, replacement of the part with a part eligible for installation. This AD may also require reporting the results of the inspection to GE.

### **Interim Action**

The FAA considers this AD to be an interim action. The FAA anticipates that further AD action will follow.

### **Paperwork Reduction Act**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to take approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding

this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

### **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.

### **Presentation of the Actual AD**

The FAA is issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

**2021-23-51 General Electric Company:** Project Identifier AD-2021-01192-E.

#### **(a) Effective Date**

This emergency AD is effective upon receipt.

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to General Electric Company (GE) CF34-8C1, CF34-8C5, CF34-8C5A1, CF34-8C5A2, CF34-8C5A3, CF34-8C5B1, CF34-8E2, CF34-8E2A1, CF34-8E5, CF34-8E5A1, CF34-8E5A2, CF34-8E6, and CF34-8E6A1 model turbofan engines installed on an airplane that has accumulated more than 250 parked days outdoors in the last 24 months within 10 miles (16 km) from a saltwater coastline.

Note 1 to paragraph (c): A "parked day" is 24 consecutive hours with no engine operation.

#### **(d) Subject**

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

#### **(e) Unsafe Condition**

This AD was prompted by an in-flight shutdown of an engine and subsequent investigation by the manufacturer that revealed a broken variable geometry (VG) actuator rod end caused by corrosion and seizure of the rod end bearing. The FAA is issuing this AD to detect corrosion and seizure of the rod end bearing. The unsafe condition, if not addressed, could result in failure of one or more engines, loss of engine thrust control, and reduced control of the airplane.

## **(f) Compliance**

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

## **(g) Required Actions**

(1) On one engine installed on an airplane, before accumulating 30 flight hours (FHs) or within 5 calendar days, whichever occurs first after the effective date of this AD, perform an inspection of the master compressor VG actuator, significant item number (SIN) 30401, and slave compressor VG actuator, SIN 30402, in accordance with the Accomplishment Instructions, paragraphs 3.A.(1) and (2), of GE CF34-8C Service Bulletin (SB) 75-0028 R00 (GE CF34-8C SB 75-0028) or GE CF34-8E SB 75-0023 R00 (GE CF34-8E SB 75-0023), both dated November 2, 2021, as applicable to the engine model.

(2) On the other engine installed on the airplane, not inspected as required by paragraph (g)(1) of this AD, before accumulating 350 FHs or within 60 calendar days, whichever occurs first after the effective date of this AD, perform an inspection of the master compressor VG actuator, SIN 30401, and slave compressor VG actuator, SIN 30402, in accordance with the Accomplishment Instructions, paragraphs 3.A.(1) and (2), of GE CF34-8C SB 75-0028 or GE CF34-8E SB 75-0023, as applicable to the engine model.

(3) For engines not in service, before further flight, perform an inspection of the master compressor VG actuator, SIN 30401, and slave compressor VG actuator, SIN 30402, in accordance with the Accomplishment Instructions, paragraphs 3.A.(1) and (2), of GE CF34-8C SB 75-0028 or GE CF34-8E SB 75-0023, as applicable to the engine model.

(4) If the master compressor VG actuator, SIN 30401, or the slave compressor VG actuator, SIN 30402, does not pass any inspection required by paragraphs (g)(1) through (3) of this AD, before further flight, remove the part and replace with a part eligible for installation.

## **(h) Reporting Requirements**

Within 10 days after performing the inspections required by paragraphs (g)(1) through (3) of this AD, in accordance with paragraphs 3.A.(1) and (2), of GE CF34-8C SB 75-0028 or GE CF34-8E SB 75-0023, send your inspection report form, pictures, or report findings to GE at [aviation.fleetsupport@ae.ge.com](mailto:aviation.fleetsupport@ae.ge.com).

## **(i) Special Flight Permit**

Special flight permits are prohibited.

## **(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, ECO 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)(1) of this AD. Information may be emailed to: [ANE-AD-AMOC@faa.gov](mailto: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.

**(k) Related Information**

(1) For further information about this AD, contact: Scott M. Stevenson, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7132; fax: (781) 238-7199; email: [scott.m.stevenson@faa.gov](mailto:scott.m.stevenson@faa.gov).

(2) For service information identified in this AD, contact: General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; phone: (513) 552-3272; email: [aviation.fleetsupport@ae.ge.com](mailto:aviation.fleetsupport@ae.ge.com); website: [www.ge.com](http://www.ge.com). You may view this referenced service information 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 (781) 238-7759.

Issued on November 4, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.