

[Federal Register Volume 83, Number 192 (Wednesday, October 3, 2018)]  
[Rules and Regulations]  
[Pages 49784-49786]  
From the Federal Register Online via the Government Publishing Office [www.gpo.gov]  
[FR Doc No: 2018-21378]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2018-0142; Product Identifier 2018-NE-04-AD; Amendment 39-19368; AD 2018-17-14]**

**RIN 2120-AA64**

#### **Airworthiness Directives; General Electric Company CF34-8E Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain General Electric Company (GE) CF34-8E turbofan engines. This AD was prompted by a report from GE regarding a quality escape of nonconforming thrust reverser fire seals. This AD requires a one-time inspection of the gap between the core cowl seal and the pylon seal of the thrust reverser for correct gap width, and replacement of the seals, if needed. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective November 7, 2018.

**ADDRESSES:** For service information identified in this final rule, contact General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; telephone 513-552-3272; email: aviation.fleetsupport@ge.com. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0142.

#### **Examining the AD Docket**

You may examine the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0142; 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, the regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) 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.

**FOR FURTHER INFORMATION CONTACT:** David Bethka, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7129; fax: 781-238-7199; email: david.bethka@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain GE CF34-8E turbofan engines. The NPRM published in the Federal Register on April 17, 2018 (83 FR 16794). The NPRM was prompted by a report from the manufacturer about a fire seal gap quality escape on GE CF34-8E turbofan engines. Some thrust reverser fire seals, installed on thrust reverser part numbers (P/Ns) 15G0002-013, 15G0002-014, 15G0003-013, and 15G0003-014, were shipped from a supplier with nonconforming seal gaps. The NPRM proposed to require a one-time inspection of the gap between the core cowl seal and the pylon seal of the thrust reverser for correct gap width, and replacement of the thrust reverser fire seals, if needed. We are issuing this AD to address the unsafe condition on these products.

### **Comments**

We gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Request To Change the Applicability**

Two commenters, Horizon Air and Republic Airline, requested that we limit the applicability of this AD to a specific group of GE CF34-8E turbofan engine thrust reverser halves that are known to have a fire seal gap nonconformance. A change of applicability from all GE CF34-8E turbofan engines to only the known group of affected thrust reverser halves would reduce the inspection burden on operators.

We agree. We changed the applicability of this AD to list only the affected half thrust reverser P/Ns and serial numbers. We also updated the number of affected thrust reverser assemblies and estimated costs.

### **Request To Change Required Actions**

Horizon Air requested that we change the required actions of this AD to replace “all GE CF34-8E turbofan engines” with “all thrust reversers listed in paragraph (c).”

We agree. We reworded the required actions of this AD to indicate that these actions are only required for GE CF34-8E turbofan engines with affected half thrust reversers installed.

### **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

## Related Service Information

We reviewed GE CF34-8E Service Bulletin (SB) 78-0066 R01, dated June 20, 2018. The SB describes procedures for measuring the width of the RTV filled gap between the thrust reverser fire seals at the 12 o'clock core cowl seal and pylon seal installed on thrust reverser P/Ns 15G0002-013, 15G0002-014, 15G0003-013, and 15G0003-014, and replacing with parts eligible for installation, if needed.

## Costs of Compliance

We estimate that this AD affects 194 thrust reverser assemblies installed on airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

### Estimated Costs

| Action     | Labor cost                                | Parts cost | Cost per product | Cost on U.S. operators |
|------------|-------------------------------------------|------------|------------------|------------------------|
| Inspection | 0.25 work-hours × \$85 per hour = \$21.25 | \$0        | \$21.25          | \$4,122.50             |

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these replacements:

### On-Condition Costs

| Action                                        | Labor cost                                 | Parts cost | Cost per product |
|-----------------------------------------------|--------------------------------------------|------------|------------------|
| Remove and replace thrust reverser fire seals | 2.75 work-hours × \$85 per hour = \$233.75 | \$3,228    | \$3,461.75       |

## 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.

We are 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

## **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) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

## **Adoption of 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 (AD):



FAA  
Aviation Safety

## AIRWORTHINESS DIRECTIVE

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

**2018-17-14 General Electric Company:** Amendment 39-19368 Docket No. FAA-2018-0142; Product Identifier 2018-NE-04-AD.

### (a) Effective Date

This AD is effective November 7, 2018.

### (b) Affected ADs

None.

### (c) Applicability

This AD applies to General Electric Company (GE) CF34-8E turbofan engines with:

(1) Left-hand (LH) half thrust reverser, part number (P/N) 15G0002-013, or LH half thrust reverser P/N 15G0002-014, with the following serial numbers (S/Ns): HRD00659 to HRD00662, HRD00675 to HRD00678, HRD00680, HRD00681, HRD00694 to HRD00697, HRD00711, HRD00831, HRD00856, HRD00878 to HRD00895, HRD01025, HRD01040, HRD01047, HRD01050 to HRD01057, HRD01059 to HRD01089, HRD01104, HRD01105, HRD01108, HRD01111 to HRD01116, HRD01118 to HRD01121, HRD01123, HRD01124, HRD01126, HRD01162, HRD01185 to HRD01198, HRD01201, HRD01202, or HRD01226 to HRD01243, installed.

(2) Right-hand (RH) half thrust reverser, P/N 15G0003-013, or RH half thrust reverser P/N 15G0003-014, with the following S/Ns: HRD00669 to HRD00678, HRD00680, HRD00681, HRD00703 to HRD00707, HRD00722, HRD00825, HRD00919, HRD00922, HRD01018, HRD01022, HRD01023, HRD01027 to HRD01033, HRD01035, HRD01036, HRD01038, HRD01039, HRD01041 to HRD01046, HRD01048, HRD01049, HRD01059 to HRD01079, HRD01081, HRD01082, HRD01084 to HRD01092, HRD01100, HRD01117, HRD01140, HRD01146, HRD01162, HRD01185 to HRD01187, HRD01189 to HRD01198, HRD01201, HRD01202, HRD01210, or HRD01213 to HRD01223, installed.

### (d) Subject

Joint Aircraft System Component (JASC) Code 7830, Thrust Reverser.

### (e) Unsafe Condition

This AD was prompted by a report from GE regarding a quality escape of nonconforming thrust reverser fire seal gaps. We are issuing this AD to inspect for nonconforming thrust reverser fire seal gaps that could result in a fire outside the fire zone. The unsafe condition, if not addressed, could result in an uncontrolled fire, 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) For all half thrust reversers listed in paragraph (c) of this AD, before the half thrust reverser accumulates 8,000 flight hours after the effective date of this AD, perform the following one-time inspection, and, if needed, replace the core cowl seal and pylon seal.

(i) Measure the width of the RTV filled gap between thrust reverser fire seals at the junction between 12 o'clock core cowl seal and pylon seal, at the following half thrust reverser locations: LH half thrust reverser, P/N 15G0002-013; LH half thrust reverser, P/N 15G0002-014; RH half thrust reverser, P/N 15G0003-013; and RH half thrust reverser P/N 15G0003-014.

(ii) If the gap width between the 12 o'clock core cowl seal and the pylon seal is greater than 1 mm, replace both seals with parts eligible for installation to form a new gap of 1 mm or less, prior to returning to service.

(2) You may refer to GE CF34-8E Service Bulletin 78-0066 R01, dated June 20, 2018, for guidance on inspecting and replacing the thrust reverser fire seals.

## **(h) 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 (i) of this AD. You may email your request 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.

## **(i) Related Information**

For more information about this AD, contact David Bethka, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7129; fax: 781-238-7199; email: david.bethka@faa.gov.

## **(j) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on September 26, 2018.  
Karen M. Grant,  
Acting Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.