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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0187; Directorate Identifier 2011-NE-07-AD; Amendment 39-16784; AD 2011-18-02]

RIN 2120-AA64

Airworthiness Directives; General Electric Company CF34-10E2A1; CF34-10E5; CF34-10E5A1; CF34-10E6; CF34-10E6A1; CF34-10E7; and CF34-10E7-B Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above with certain part number (P/N) fan rotor spinners installed. This AD requires removing from service certain fan rotor blade retainers, and removing from service the fan rotor spinner support that was installed with those fan rotor blade retainers. This AD was prompted by a fan rotor spinner support found cracked at the attachment lugs. We are issuing this AD to prevent high-cycle fatigue cracking of the fan rotor spinner support attachment lugs, leading to separation of the fan rotor spinner assembly, uncontained failure of the engine, and damage to the airplane.

DATES: This AD is effective September 26, 2011.

ADDRESSES: For service information identified in this AD, contact GE-Aviation, M/D Rm. 285, One Neumann Way, Cincinnati, OH 45215, phone: 513-552-3272; e-mail: geae.aoc@ge.com. You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, 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: John Frost, Aerospace Engineer, Engine Certification Office, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7756; fax: 781-238-7199; e-mail: john.frost@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on May 11, 2011 (76 FR 27282). Investigation of a General Electric Company CF34-10E turbofan engine experiencing high fan frame vibrations led to removal of the fan rotor spinner. Eight of the twelve attachment lugs on the fan rotor spinner support were found cracked. The cause of the vibration was determined to be a non-synchronous vibration induced by a spinner redesign that removed an interference between the fan blade retainers and the spinner. That NPRM proposed to require removing from service certain fan rotor blade retainers, and removing from service the fan rotor spinner support that was installed with those fan rotor blade retainers. We are issuing this AD to prevent high-cycle fatigue cracking of the fan rotor spinner support attachment lugs, leading to separation of the fan rotor spinner assembly, uncontained failure of the engine, and damage to the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. We received one comment which is presented below.

Request for Compliance Clarification

One commenter, Regionla Compagnie Aerienne Europeene, requests that we clarify the AD as to what parts are allowed to be reinstalled when affected parts are removed for either scheduled or unscheduled maintenance before the AD compliance time is reached.

We do not agree. When the affected parts are removed from the engine, paragraphs (h) and (i) of this AD are clear that those parts are not to be reinstalled into the engine. Any FAA-approved part except those prohibited by paragraphs (h) and (i), is eligible for installation. We did not change the AD.

Conclusion

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

We estimate that this AD will affect 164 engines installed on airplanes of U.S. registry. We also estimate that it will take about 2 work-hours per engine to perform the actions required by this AD, and that the average labor rate is $85 per work-hour. If all removed parts get replaced, required parts will cost about $10,458 per engine. Based on these figures, we estimate the total cost of the AD to U.S. operators to be $1,742,992.

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.

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):

2011-18-02 General Electric Company: Amendment 39-16784 ; Docket No. FAA-2011-0187; Directorate Identifier 2011-NE-07-AD.

Effective Date

(a) This AD is effective September 26, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to General Electric Company (GE) CF34-10E2A1; CF34-10E5; CF34-10E5A1; CF34-10E6; CF34-10E6A1; CF34-10E7; and CF34-10E7-B turbofan engines, with a fan rotor spinner part number (P/N) 2050M34G03; 2050M34G04; 2050M34G05; 2050M34G06; 2437M60G01; or 2437M60G02, installed.

Unsafe Condition

(d) This AD was prompted by a fan rotor spinner support found cracked at the attachment lugs. We are issuing this AD to prevent high-cycle fatigue cracking of the fan rotor spinner support attachment lugs, leading to separation of the fan rotor spinner assembly, uncontained failure of the engine, and damage to the airplane.

Compliance

(e) Comply with this AD within 1,800 hours-in-service after the effective date of this AD, unless already done.

Removal of Fan Rotor Blade Retainers

(f) Remove from service the 24 fan rotor blade retainers, P/N 2050M56P02.

Removal of Fan Rotor Spinner Support

(g) Remove from service the fan rotor spinner support that operated with the fan rotor blade retainers removed in paragraph (f) of this AD.

Installation Prohibition

(h) After the effective date of this AD, do not install any fan rotor blade retainer, P/N 2050M56P02, into any engine. Do not attempt to repair, make serviceable, or re-install, this part.

(i) After the effective date of this AD, do not install any fan rotor spinner support removed in paragraph (g) of this AD, into any engine. Do not attempt to repair, make serviceable, or re-install, this part.

Alternative Methods of Compliance (AMOCs)

(j) The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

Related Information

(k) For more information about this AD, contact John Frost, Aerospace Engineer, Engine Certification Office, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7756; fax: 781-238-7199; e-mail: john.frost@faa.gov.

(l) Refer to GE Service Bulletin No. CF34-10E S/B 72-0186, for related information. Contact GE-Aviation, M/D Rm. 285, One Neumann Way, Cincinnati, OH 45215, phone: 513-552-3272; e-mail: geae.aoc@ge.com, for a copy of this service information. You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on August 15, 2011.
Peter A. White,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.