

[Federal Register: July 31, 2008 (Volume 73, Number 148)]
[Rules and Regulations]
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[DOCID:fr31jy08-5]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0821; Directorate Identifier 2008-NE-20-AD; Amendment 39-13619; AD 2008-16-01]

RIN 2120-AA64

Airworthiness Directives; General Electric Co. (GE) CF34-8E Series Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for GE CF34-8E series turbofan engines with certain part numbers (N) full authority digital engine controls (FADECs) installed. This AD requires reprogramming the FADEC software from version 8Ev5.40 to an FAA-approved software version. This AD results from six loss of thrust control events from the same software fault scenario. We are issuing this AD to prevent loss of thrust control and controllability of the airplane.

DATES: This AD becomes effective August 15, 2008.

We must receive any comments on this AD by September 29, 2008.

ADDRESSES: Use one of the following addresses to comment on this AD:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: U.S. Docket Management Facility, Department of Transportation, 1200 New Jersey Avenue, SE, West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: (202) 493-2251.

Contact General Electric Company via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215; telephone (513) 672-8400; fax (513) 672-8422, for the service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Kenneth Steeves, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: kenneth.steeves@faa.gov; telephone (781) 238-7765; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: We have received reports of six events on CF34-8E turbofan engines that resulted in loss of thrust control. On March 2, 2008, the No. 1 engine on an ERJ 170 experienced a fluctuation of the interstage turbine temperature during decent that resulted in changes in thrust. The crew shut down the engine. On May 12, 2008, an ERJ 170 was at cruise when the ENG 2 Control Fault posted to the Engine Indicating and Crew Alerting System (EICAS) display. The FADEC software commanded the number two engine to idle and there was no response to throttle movement by the crew. The crew shut down the engine. Four more similar events occurred on May 29, June 10, June 14, and July 10, 2008, all resulting in loss of thrust control with an ENG 1 or 2 Control Fault message posted to the EICAS. Our investigation revealed that all events resulted from the same software fault scenario. We attribute the fault to FADEC software version 8175.40. This condition, if not corrected, could result in loss of thrust control and controllability of the airplane.

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other GE CF34-8E series turbofan engines of the same type design. For that reason, we are issuing this AD to prevent loss of thrust control and controllability of the airplane.

FAA's Determination of the Effective Date

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to send us any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. FAA-2008-0821; Directorate Identifier 2008-NE-20-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personally identifiable information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office 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 street address for the Docket Operations office (telephone (800) 647-5527) is

the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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

We have determined that 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 the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. 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.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation; Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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:



2008-16-01 General Electric Co.: Amendment 39-15619. Docket No. FAA-2008-0821; Directorate Identifier 2008-NE-20-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective August 15, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to General Electric Co. (GE) CF34-8E series turbofan engines with full authority digital electronic controls (FADECs), part numbers (P/N) 4120T00P47, 4120T00P48, 111E9320G48, or 111E9320G49, installed. These engines are installed on, but not limited to, Empresa Brasileira de Aeronautica S.A. (EMBRAER) ERJ-175 series airplanes.

Unsafe Condition

(d) This AD results from six loss of thrust control events from the same software fault scenario. We are issuing this AD to prevent loss of thrust control and controllability of the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within 660 flight hours time-in-service after the effective date of this AD, unless the actions have already been done.

Removal of CF34-8E FADEC Software Version 8Ev5.40

(f) For CF34-8E engines with a FADEC, P/N 4120T00P47, 4120T00P48, 111E9320G48, or 111E9320G49, installed, do either of the following:

- (1) Replace the FADEC, P/N 4120T00P47, 4120T00P48, 111E9320G48, or 111E9320G49, with a FADEC P/N not listed in paragraph (c) of this AD. Or,
- (2) For CF34-8E engines with a FADEC, P/N 4120T00P47, 4120T00P48, 111E9320G48, or 111E9320G49 installed, reprogram the FADEC software to an FAA approved version.

Installation Prohibition

(g) After the effective date of this AD, don't install any FADEC, P/N 4120T00P47, 4120T00P48, 111E9320G48, or 111E9320G49, onto any CF34-8E engine.

Alternative Methods of Compliance

(h) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(i) General Electric Alert Service Bulletin CF34-8E-AL S/B 73-A0019, dated June 17, 2008, contains information on removing software version 8Ev5.40 and installing an FAA-approved FADEC software version.

(j) Contact Kenneth Steeves, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: kenneth.steeves@faa.gov; telephone (781) 238-7765; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(k) None.

Issued in Burlington, Massachusetts, on July 23, 2008.
Carlos Pestana,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. E8-17422 Filed 7-30-08; 8:45 am]

SUPERSEDED