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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-29001; Directorate Identifier 2007-NE-36-AD; Amendment 39-15395; AD 2008-05-01]

RIN 2120-AA64

Airworthiness Directives; General Electric Company CF34-8C1/-8C5/-8C5B1/-8E5/-8E5A1, and CF34-10E Series Turbofan Engines

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for General Electric Company (GE) CF34-8C1/-8C5/-8C5B1/-8E5/-8E5A1, and CF34-10E series turbofan engines with certain part number (P/N) and serial number (SN) fuel metering units (FMU) installed. This AD requires a onetime test of the FMU for a miswired (reversed polarity) condition of the input wires to the overspeed solenoid. This AD results from the discovery of miswired FMU overspeed solenoids in the field. We are issuing this AD to prevent the engine from failing to shutdown during an overspeed which may lead to uncontained engine failure.

DATES: This AD becomes effective April 3, 2008. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of April 3, 2008.

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

The Docket Operations office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

FOR FURTHER INFORMATION CONTACT: Tara Chaidez, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: tara.chaidez@faa.gov; telephone (781) 238-7773; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 with a proposed AD. The proposed AD applies to GE CF34-8C1/-8C5/-8C5B1/-8E5/-8E5A1, and CF34-10E series turbofan engines with certain P/N and SN fuel metering units installed. We published the proposed AD in the Federal Register on September 7, 2007 (72 FR 51384). That action proposed to require a onetime test of the FMU for a miswired (reversed polarity) condition of the input wires to the overspeed solenoid.

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 provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

Request to Reference the Latest GE Service Bulletin Revisions

One commenter, GE, requests that we reference the latest GE service bulletin (SB) revisions, which are SB No. CF34-8C-AL S/B 73-0030, Revision 3, dated November 1, 2007, SB No. CF34-8E-AL S/B 73-0015, Revision 3, dated November 1, 2007, and SB No. CF34-10E S/B 72-0067, Revision 2, dated August 28, 2007.

We agree. We made that change in the AD.

Request to Modify the Discussion Paragraph

One commenter, Woodward Governor Company, requests that we modify the Discussion paragraph of the proposed AD by deleting the statement "If the solenoid is miswired, the engine will fail to shut down as commanded". The commenter interprets this statement as meaning that if the engine can be shut down normally, the AD is not required.

We partially agree. The statement is needed to explain that the AD is required by stating that shutdown failure is tied to overspeed in the unsafe condition statement in this AD. However, we deleted "as commanded" from the unsafe condition statements in the AD.

Request to Include 13 Additional FMU Serial Numbers

Woodward Governor Company requests that we include 13 additional FMU serial numbers, that were discovered to be affected since we issued the NPRM.

We agree. We changed the SN range of WYG94939 through WYGB4222 to WYG89156 through WYGB4222 in the AD and added the costs for them to the Cost section.

Request to Clarify Costs of Compliance

Woodward Governor Company requests that in the Costs of Compliance paragraph we clarify the statement "We estimate that about 2 percent of the inspected solenoids are defective, and it will cost about \$5,000 to replace each FMU" to "We estimate that about 2 percent of the inspected solenoids are defective, and it will cost about \$5,000 to replace each FMU solenoid."

We agree. We clarified the Cost statement in the AD.

Request to Extend the Compliance Time

One commenter, Mesa Airlines, requests that we extend the compliance time from 2,200 flight hours to 4,000 flight hours, due to potentially longer repair turn around times of failed FMUs from the manufacturer.

We do not agree. Our compliance interval includes anticipated repair turn-around times. We did not change the AD.

Removal of Reporting Requirement

We removed the reporting requirement from the AD, since we determined it was unnecessary.

Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

We estimate that this AD will affect 1,055 engines installed on airplanes of U.S. registry. We also estimate that it will take about 0.25 work-hour per engine to perform the FMU inspections, and that the average labor rate is \$80 per work-hour. We estimate that about 2 percent of the inspected solenoids are defective. Replacement solenoids will cost about \$5,000 each. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$126,600. Our cost estimate is exclusive of possible warranty coverage.

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 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, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration 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:



2008-05-01 General Electric Company: Amendment 39-15395. Docket No. FAA-2007-29001; Directorate Identifier 2007-NE-36-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective April 3, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to:

(1) General Electric Company (GE) CF34-8C1/-8C5/-8C5B1/-8E5/-8E5A1 turbofan engines, with GE fuel metering unit (FMU) part number (P/N) 4120T01P02, serial numbers (SNs) WYG89156 through WYGB4222, and Woodward Governor FMU Vendor Identification Number (VIN) 8061-926, SNs 11954378 through 15140071.

(2) GE CF34-10E series turbofan engines, with GE FMU P/N 2043M10P05, SNs WYGA3251 through WYGB4085, and Woodward Governor FMU VIN 8063-884, SNs 13335695 through 15028283.

(3) CF34-8C1/-8C5/-8C5B1 turbofan engines are installed on, but not limited to, Bombardier Inc. Model CL-600-2C10 (CRJ-700 & -701), and CL-600-2D24/-2D15 (CRJ-900) airplanes.

(4) CF34-8E5/-8E5A1 turbofan engines are installed on, but not limited to, Embraer ERJ 170-100/-200 series airplanes.

(5) CF34-10E series turbofan engines are installed on, but not limited to, Embraer ERJ 190-100/-200 series airplanes.

Unsafe Condition

(d) This AD results from the discovery of miswired FMU overspeed solenoids in the field. We are issuing this AD to prevent the engine from failing to shutdown during an overspeed which may lead to uncontained engine failure.

Compliance

(e) You are responsible for having the actions required by this AD performed within 2,200 flight hours after the effective date of this AD, but not to exceed 24 months after the effective date of this AD, unless the actions have already been done.

Onetime Test of the FMU

(f) Perform a onetime test of the FMU for a miswired (reversed polarity) condition of the input wires to the overspeed solenoid.

(g) Use paragraph 3A of the Accomplishment Instructions of GE Service Bulletin (SB) No. CF34-8C-AL S/B 73-0030, Revision 3, dated November 1, 2007, SB No. CF34-8E-AL S/B 73-0015, Revision 3, dated November 1, 2007, or SB No. CF34-10E S/B 72-0067, Revision 2, dated August 28, 2007, as applicable, to do the test.

(h) If the FMU fails the test, remove the FMU.

Previous Credit

(i) If you performed the actions specified in paragraphs (f) through (h) of this AD using the inspection procedures in the following SBs, before the effective date of this AD, you satisfied the requirements of this AD.

(1) GE SB No. CF34-8C-AL S/B 73-0030, dated May 25, 2007, Revision 1, dated July 19, 2007, or Revision 2, dated August 28, 2007.

(2) GE SB No. CF34-8E-AL S/B 73-0015, dated June 1, 2007, Revision 1, dated July 19, 2007, or Revision 2, dated August 28, 2007.

(3) GE SB No. CF34-10E S/B 72-0067, dated June 7, 2007 or Revision 1, dated July 26, 2007.

Alternative Methods of Compliance

(j) 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

(k) Contact Tara Chaidez, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: tara.chaidez@faa.gov; telephone (781) 238-7773; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(l) You must use the service information specified in Table 1 of this AD to perform the testing required by this AD. The Director of the Federal Register approved the incorporation by reference of the documents listed in Table 1 in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. 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 a copy of this service information. You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Table 1 – Incorporation by Reference

GE Service Bulletin No.	Page	Revision	Date
CF34-8C-AL S/B 73-0030	ALL	3	November 1, 2007
Total Pages: 11			
CF34-8E-AL S/B 73-0015	ALL	3	November 1, 2007
Total Pages: 11			

Issued in Burlington, Massachusetts, on February 15, 2008.

Peter A. White,

Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. E8-3462 Filed 2-27-08; 8:45 am]