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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-24145; Directorate Identifier 2006-NE-06-AD; Amendment 39-15823; AD 2009-04-17]

RIN 2120-AA64

Airworthiness Directives; General Electric Company CF6-45 and CF6-50 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) CF6-45 and CF6-50 series turbofan engines. This AD requires replacing certain forward and aft centerbodies of the long fixed core exhaust nozzle (LFCEN) assembly. This AD results from the engine manufacturer issuing new service information. We are issuing this AD to prevent the forward and aft centerbody of the LFCEN assembly from separating due to high imbalance engine conditions, leading to damage to the airplane.

DATES: This AD becomes effective April 2, 2009. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of April 2, 2009.

ADDRESSES: You can get the service information identified in this AD from General Electric Company via GE-Aviation, Attn: Distributions, 111 Merchant St., Room 230, Cincinnati, Ohio 45246, telephone (513) 552-3272; fax (513) 552-3329.

The Docket Operations office is located at the 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: Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: robert.green@faa.gov; telephone (781) 238-7754; 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) CF6-45 and CF6-50 series turbofan engines. We

published the proposed AD in the Federal Register on January 2, 2008, (73 FR 77). That action proposed to require replacing the centerbodies with centerbodies that were modified using the Accomplishment Instructions, Section 3, of GE SB No. CF6-50 S/B 78-0244, dated July 30, 2007, within 42 months of the effective date of the proposed AD.

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.

Requests To Allow Credit for Rework Performed Using GE Service Bulletin CF6-50 S/B 78-0242

Two commenters, Atlas Air and Evergreen International Airlines, asked us to allow credit for rework performed using GE Service Bulletin (SB) CF6-50 S/B 78-0242, dated September 26, 2005. The commenters state the original issue and later revision of GE SB CF6-50 S/B 78-0244 state in Section 1, Planning Information, that forward and aft centerbody assemblies reworked in accordance with GE SB CF6-50 S/B 78-0242, meet the requirement of the GE SB.

We agree. The rework defined by GE SB CF6-50 S/B 78-0242 meets the requirements of GE SB CF6-50 S/B 78-0244, Revision 1. Also, there might be forward and aft centerbody assemblies that have been reworked using the original issue of GE SB CF6-50 S/B 78-0244, which is acceptable. We have added references to GE SB CF6-50 S/B 78-0244, dated July 30, 2007, and GE SB CF6-50 S/B 78-0242, dated September 26, 2005, to paragraph (f) of this AD.

Request To Add GE SB CF6-50 S/B 78-0244, Revision 1, Dated March 13, 2008 to the AD Compliance Section

Two commenters, GE Aviation and Boeing Commercial Airplane Services, ask us to reference SB CF6-50 S/B 78-0244, Revision 1, dated March 13, 2008, in the compliance section of the proposed AD. The commenters state that operators cannot get the rivets identified in Section 2. Material Information, paragraph A. (1) of the original issue of GE SB CF6-50 S/B 78-0244. Those rivets are part numbers (P/Ns) NAS1398M3-2 and NAS 1398M3-3. GE identified alternative rivets P/Ns NAS13984-2 and NAS13984-3 in SB CF6-50 S/B 78-0244, Revision 1, dated March 13, 2008.

We agree. We have changed GE SB CF6-50 S/B 78-0244, dated July 30, 2007, to GE SB CF6-50 S/B 78-0244, Revision 1, dated March 13, 2008, in the regulatory text.

Recommendation To Use Rivet P/N NAS9307 as an Alternative to P/Ns NAS13984-2 and NAS13984-3

One commenter, Nordam Prism, recommends we allow using alternative rivets, P/N NAS9307, for installing the forward centerbody forward doubler. The commenter suggests the P/N NAS9307 rivet is more reliable than the specified P/N NAS1398 rivet. The commenter states the P/N NAS9307 rivet locking collar is designed as a positive security device that forms the rivet sleeve into the

locking stem, thereby promoting joint integrity while in service. The commenter states the P/N NAS1398 rivet doesn't offer this feature, and the lock has a tendency to release in service. The commenter further notes the P/N NAS9307 rivet design provides a more consistent installation with visual confirmation of an acceptable mechanical fit. Previous experience with P/N NAS1398 rivets would often result in inspectors not accepting rivet installation due to misplaced locking collars. The resulting removal increased the tendency for an oversized rivet hole. In this particular GE SB CF6-50 S/B 78-0244 application, there exists no tolerance for oversizing the hole and installing a larger rivet. The first article assembly effectively used the P/N NAS9307 rivet in this application.

We don't agree. GE states the P/N NAS9307 rivet doesn't offer a 0.094-inch diameter option that is consistent with the existing repair. The proposed P/N NAS9307M-4-0X rivet size (0.125-inch diameter) would work in this configuration, but the repair area might not accommodate the next higher, P/N NAS9307M-5-0X rivet size (0.165-inch diameter), precluding oversized rivet holes or future repairs. GE further notes the spindle material of the P/N NAS9307 rivet might be made of PH15-7 corrosion resistant steel. The P/N PH15-7 material doesn't offer the same corrosion resistance in an exhaust environment as the A386 spindle material used in the P/N NAS1398 rivets. We didn't change the Regulatory text.

Request To Remove the KC-10A Airplane From the "Used on" Section of Paragraph (c) of the Proposed AD

One commenter, Boeing Commercial Airplane Services, asks us to remove the reference to the KC-10A airplane from the "used on but not limited to" sentence in paragraph (c) of the proposed AD. Boeing states the KC-10A doesn't use the LFCEN configuration.

We agree. We supply the "used on, but not limited to" list of airplanes in paragraph (c) of the proposed AD to aid operators and users in identifying if their airplane might use the affected engines. Since the list is for information only, we are not expanding the scope of the proposed AD by adding or removing any airframe. We removed the KC-10A from the "installed on but not limited to" sentence in paragraph (c) of this AD.

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 379 GE CF6-45 and CF6-50 series turbofan engines installed on airplanes of U.S. registry. We also estimate that it will take about 44 work hours per engine to perform the actions, and that the average labor rate is \$80 per work hour. Required parts would cost about \$11,000 per engine. Based on these figures, we estimate the total cost of this AD to U.S. operators to be \$2,802,360.

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, 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:



2009-04-17 General Electric Company: Amendment 39-15823. Docket No. FAA-2006-24145; Directorate Identifier 2006-NE-06-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective April 2, 2009.

Affected ADs

(b) None.

Applicability

(c) This AD applies to General Electric Company (GE) CF6-45A, CF6-45A2, CF6-50A, CF6-50C, CF6-50CA, CF6-50C1, CF6-50C2, CF6-50C2B, CF6-50C2D, CF6-50E, CF6-50E1, CF6-50E2, and CF6-50E2B series turbofan engines with a long fixed core exhaust nozzle (LFCEN) assembly forward centerbody, part number (P/N) 1313M55G01 or G02, P/N 9076M28G09 or G10, and aft centerbody P/N 1313M56G01 or 9076M46G05, installed. These engines are installed on, but not limited to, Airbus A300 series, Boeing 747 series, McDonnell Douglas DC-10 series, and DC-10-30F (KDC-10) airplanes.

Unsafe Condition

(d) This AD results from reports of separation of LFCEN assembly forward and aft centerbodies due to high imbalance engine conditions. This AD results from the GE issuing new service information. We are issuing this AD to prevent the forward and aft centerbody of the LFCEN assembly from separating due to high imbalance engine conditions, leading to damage to the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within 42 months after the effective date of this AD, unless the actions have already been done.

(f) Replace the forward centerbody, P/N 1313M55G01 or G02, P/N 9076M28G09 or G10, and aft centerbody, P/N 1313M56G01 or 9076M46G05 with a forward and aft centerbody that have been modified using with the Accomplishment Instructions, Section 3, of GE Service Bulletin No. CF6-50 S/B 78-0244, Revision 1, dated March 13, 2008, CF6-50 S/B 78-0244, dated July 30, 2007, or CF6-50 S/B 78-0242, dated September 26, 2005.

Alternative Methods of Compliance

(g) 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

(h) Contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: robert.green@faa.gov; telephone (781) 238-7754; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(i) None.

Issued in Burlington, Massachusetts, on February 12, 2009.
Francis A. Favara,
Manager, Engine and Propeller Directorate,
Aircraft Certification Service.