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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NE-24-AD; Amendment 39-13144; AD 2003-10-01]

RIN 2120-AA64

Airworthiness Directives; General Electric Company CF6-6 Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), that is applicable to General Electric (GE) CF6-6 series turbofan engines. This amendment requires a reduction of the cyclic life limit for certain high pressure turbine rotor (HPTR) rear shafts, and requires removing certain HPTR rear shafts from service before exceeding the new, lower cyclic life limit. In addition, this amendment requires removing from service certain HPTR rear shafts that currently exceed, or will exceed, the new, lower cyclic life limit according to the compliance schedule described in this AD. This amendment is prompted by an updated low-cycle-fatigue (LCF) analysis performed by the manufacturer that resulted in a lower cyclic life limit for certain HPTR rear shaft part numbers (PNs) installed in CF6-6 engines. The actions specified by this AD are intended to prevent cracks in HPTR rear shafts that could result in uncontained engine failure and damage to the airplane.

DATES: Effective June 17, 2003.

ADDRESSES: Information regarding this action may be examined, by appointment, at the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: Karen Curtis, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: 781-238-7192; fax 781-238-7199.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that is applicable to GE CF6-6 series turbofan engines was published in the Federal Register on January 8, 2003 (68 FR 1016). That action proposed to require a reduction of the cyclic life limit for certain HPTR rear shafts, and to require removing certain HPTR rear shafts from service before exceeding the new, lower cyclic life limit. In addition,

that action proposed to require removing from service certain HPTR rear shafts that currently exceed, or will exceed, the new, lower cyclic life limit according to the compliance schedule described in that proposal.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

Economic Analysis

There are approximately 55 GE CF6-6 series turbofan engines of the affected design in the domestic fleet that would be affected by this AD. There are no foreign registered engines. There are no labor or parts costs associated with the implementation of this AD. Based on these figures, the total cost of the AD to U.S. operators is estimated to be $41,690 per engine, which is the cost of new rear shafts.

Regulatory Analysis

This final rule does not have federalism implications, as defined in Executive Order 13132, because it would 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. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

For the reasons discussed above, I certify that this action (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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to 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. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2003-10-01 General Electric Company: Amendment 39-13144. Docket No. 2002-NE-24-AD.

Applicability: This airworthiness directive (AD) is applicable to General Electric Company CF6-6 series turbofan engines. These engines are installed on, but not limited to McDonnell Douglas DC-10 series airplanes.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Compliance with this AD is required as indicated, unless already done.

To prevent cracks in high pressure turbine rotor (HPTR) rear shafts, which could result in uncontained engine failure and damage to the airplane, do the following:

(a) Remove from service HPTR rear shafts, part numbers (P/Ns) 9137M13G01/G02/G03, 9138M22G01/G02/G09/G10, 9138M25G02, and 9687M22G04/G07/G10 in accordance with Table 1 as follows:

TABLE 1.—HPTR REAR SHAFT REMOVAL SCHEDULE

If the rear shaft cycles-since-new (CSN) on the effective date of this AD are:	Then remove the rear shaft
(1) Fewer than 5,000 CSN	Before exceeding 8,950 CSN.
(2) 5,000 CSN or more, but fewer than 8,950 CSN	Within 3,950 additional cycles-in-service (CIS) from the effective date of this AD or before 11,550 CSN, whichever occurs earlier.
(3) 8,950 CSN or more	At next HPTR rear shaft piece part exposure, or within 2,600 additional CIS, which- ever occurs earlier.

(b) After the effective date of this AD, do not install any HPTR rear shaft, P/Ns 9137M13G01/G02/G03, 9138M22G01/G02/G09/G10, 9138M25G02, or 9687M22G04/G07/G10, that has 8,950 or more CSN into an engine.

(c) Except as provided in paragraph (a) of this AD, this action establishes a new, cyclic life limit of 8,950 CSN for HPTR rear shaft P/Ns 9137M13G01/G02/G03, 9138M22G01/G02/G09/G10, 9138M25G02, and 9687M22G04/G07/G10 which is published in Chapter 05-11-03 of CF6-6 Engine Shop Manual, GEK 9266.

Definition

(d) For the purpose of this AD, HPTR rear shaft piece-part exposure is defined as complete disassembly of the rear shaft from the HPTR structure using the manufacturer's engine manual.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

Effective Date

(g) This amendment becomes effective on June 17, 2003.

Issued in Burlington, Massachusetts, on May 5, 2003.
Jay J. Pardee,
Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 03-11864 Filed 5-12-03; 8:45 am]
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