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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NE-33-AD; Amendment 39-12637; AD 2002-02-09]

RIN 2120-AA64

Airworthiness Directives; General Electric Company (GE) CF6-45 and CF6-50 Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), that is applicable to GE CF6-45 and CF6-50 series turbofan engines. This AD requires a reduction of the cyclic life limit for certain low pressure turbine rotor (LPTR) stage 2 disks, and requires removing certain LPTR stage 2 disks from service before exceeding the new, lower cyclic life limit. In addition, this amendment requires removing from service certain LPTR stage 2 disks that currently exceed, or will exceed, the new, lower cyclic life limit according to the compliance schedule described in this action. This amendment is prompted by a report of a cracked LPTR stage 2 disk found initially by flourescent penetrant inspection and later confirmed by a visual inspection. The actions specified by this AD are intended to prevent an uncontained engine failure and damage to the airplane, resulting from cracks in the LPTR stage 2 disk.

DATES: Effective date: March 15, 2002.

FOR FURTHER INFORMATION CONTACT: Ann Mollica, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7740; 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 CF6-45 and CF6-50 series turbofan engines, was published in the Federal Register on October 30, 2001 (66 FR 54731). That action proposed to require a reduction of the cyclic life limit for certain low pressure turbine rotor (LPTR) stage 2 disks, and would require removing certain LPTR stage 2 disks from service before exceeding the new, lower cyclic life limit. In addition, the proposal would require removing from service certain LPTR stage 2 disks that currently exceed, or will exceed, the new lower cyclic life limit according to the compliance schedule described in this proposal.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

No Objection

One commenter states that he has no technical objections to the proposal.

Number of Affected Disks

GEAE states that the number of disks noted in the NPRM that will be effected by the proposal is incorrect. According to GEAE records, currently there are a total of 747 disks installed world-wide that would be affected by this AD, of which 201 disks are installed on airplanes of U.S. registry. The FAA agrees. The economic analysis provided in the proposed rule reflects the FAA's best estimates of fielded engines at that time. This estimate was based on historic data. The FAA, however, recognizes that the manufacturer's records are more up-to-date and accurate based on the active service reporting program they have established with the operators of their engines. Therefore, the economic analysis has been adjusted to reflect the decrease in impacted disks.

Cracked Disk Discovery

GEAE further states that the cracked LPTR stage 2 disk was initially discovered by fluorescent penetrant inpsection rather than visually, and was later confirmed by visual inspection. The FAA agrees.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

Economic Analysis

There are approximately 747 GE CF6-45 and CF6-50 series turbofan engines of the affected design in the worldwide fleet. The FAA estimates that 201 engines installed on airplanes of U.S. registry would be affected by this AD. The rule does not impose any additional labor costs. A new disk would cost approximately $72,870 per engine. Based on these figures, and on the prorating for the usage of the disks, the cost effect of the proposed AD on U.S. operators is estimated to be $3,133,775.

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) if promulgated, will not have a significant economic effect, 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.

Sec. 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 "av-info.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).

2002-02-09 General Electric Company: Amendment 39-12637. Docket No. 2001-NE-33-AD.

Applicability

This airworthiness directive (AD) is applicable to General Electric Company (GE) CF6-45 and CF6-50 series turbofan engines. These engines are installed on, but not limited to Airbus Industrie A300 series, Boeing 747 series, and 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 an uncontained engine failure and damage to the airplane, resulting from cracks in the low pressure turbine rotor (LPTR) stage 2 disk, do the following:

(a) Remove from service LPTR stage 2 disks, part numbers (P/N's) 9061M22P08 and 9061M22P10 in accordance with Table 1 as follows:

Table 1.--LPTR Stage 2 Disk Removal Schedule

If disk cycles-since-new (CSN) on the effective date of this AD are	Then remove disk
(1) Fewer than 5,300 CSN.....	Before exceeding 10,400 CSN.
(2) 5,300 CSN or more, but fewer than 10,400 CSN.	Within 5,100 additional cycles-in-service from the effective date of this AD.
(3) 10,400 CSN or more.....	At next LPTR stage 2 disk exposure, or by 15,500 CSN, whichever occurs earlier.

(b) After the effective date of this AD, do not install any LPTR stage 2 disk, P/N 9061M22P08 or 9061M22P10, that has 10,400 or more CSN into an engine.

(c) Except for as provided in paragraph (a) of this AD, this action establishes a new, cyclic life limit of 10,400 CSN for LPTR stage 2 disk, P/N 9061M22P08 and 9061M22P10, which is published in Chapter 05-10-00 of CF6-45 and CF6-50 Engine Shop Manual, GEK 50481.

Definition

(d) For the purpose of this AD, LPTR stage 2 disk exposure is defined as disassembly and removal of the LPTR stage 2 disk from the LPTR structure, regardless of whether any blades, bolts, nuts, bolt retainers, blade retainers, blade inserts, balance weights, wear strips, or seals remain assembled to the disk.

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 Secs. 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 March 15, 2002.

Issued in Burlington, Massachusetts, on January 31, 2002.

Francis A. Favara,

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

[FR Doc. 02-3064 Filed 2-7-02; 8:45 am]

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