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[Page 70004-70006]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NE-13-AD; Amendment 39-12946; AD 2002-23-02]

RIN 2120-AA64

Airworthiness Directives; General Electric Company CF34-8C1 Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness (AD), that is applicable to General Electric Company CF34-8C1 turbofan engines. This amendment requires revisions to the Airworthiness Limitations Section (ALS) of the manufacturer's Instructions for Continued Airworthiness (ICA) to include required enhanced inspection of selected critical life-limited parts at each piece-part exposure. This amendment also requires an air carrier's approved continuous airworthiness maintenance program to incorporate these inspection procedures. Air carriers with an approved continuous airworthiness maintenance program will be allowed to either maintain the records showing the current status of the inspections using the record keeping system specified in the air carrier's maintenance manual, or establish an acceptable alternate method of record keeping. This amendment is prompted by the need to require enhanced inspection of selected critical life-limited parts of CF34-8C1 turbofan engines at each piece-part exposure. The actions specified by this AD are intended to prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane.

DATES: Effective December 26, 2002.

ADDRESSES: The information contained in this AD 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: Keith Mead, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7744; 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 General Electric Company CF34-8C1 turbofan engines was published in the Federal Register on July 10, 2002 (67 FR 45675). That action proposed to require an air carrier's approved continuous airworthiness maintenance program to incorporate these inspection procedures. That action also proposed that air carriers with an approved continuous airworthiness maintenance program would be allowed to either maintain the records showing the current status of the inspections using the record keeping system specified in the air carrier's maintenance manual, or establish an acceptable alternate method of record keeping.

Comments

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

One commenter expresses concern that compliance with this amendment will require removal of coatings on four parts located in noncritical areas. These include the HPT outer torque coupling, HPT shaft, HPC aft shaft spool and the HPC discharge rotating seal listed in Table 805 of the proposal. The FAA agrees that it is unnecessary to remove the coating on these four parts to meet the intent of the enhanced inspection procedures specified in this AD. Table 805 has been changed accordingly.

After careful review of the available data, including the comment noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the change described previously. The FAA has determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Economic Analysis

Since this proposal was published in July of 2002, additional aircraft have been added to the domestic and worldwide fleet. Therefore, the numbers cited in the Economic Analysis have also increased.

There are approximately 104 General Electric Company CF34-8C1 turbofan engines of the affected design in the worldwide fleet. The FAA estimates that 60 engines installed on airplanes of U.S. registry will be affected by this AD, that it will take approximately 75 work hours per engine to perform the required actions, and that the average labor rate is \$60 per work hour. Using average shop visitation rates, five engines are expected to be affected per year. Based on these figures, the total cost of the AD on U.S. operators is estimated to be \$22,500 per year.

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.airweb.faa.gov/rgl"

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).

2002-23-02 General Electric Company: Amendment 39-12946. Docket No. 2002-NE-13-AD.

Applicability: This airworthiness directive (AD) is applicable to General Electric Company CF34-8C1 turbofan engines. These engines are installed on, but not limited to, Bombardier Aerospace CRJ700 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 (c) 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 critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane, do the following:

(a) Within the next 30 days after the effective date of this AD, revise the Time Limits Section (TLS) of the manufacturer's Engine Manual (EM), GEK 105091 and for air carrier operations revise the approved continuous airworthiness maintenance program, by adding the following:

"MANDATORY INSPECTIONS

(1) Perform inspections of the parts listed in the following Table 805 at each piece-part opportunity in accordance with the instructions provided in the applicable manual provisions:

TABLE 801.—MANDATORY INSPECTION REQUIREMENTS

Part nomenclature	Manual/Chapter Section /Subject	Mandatory Inspection
Fan Disk	72-21-15, INSPECTION	All areas (FPI). ¹ Bores (ECI). ²
Fan Drive Shaft	72-22-00, INSPECTION	All areas (FPI). ¹
Stage 1 High Pressure Turbine (HPT) Rotor Disk	72-51-06, INSPECTION	All areas (FPI). ¹ Bores (ECI). ² Boltholes (ECI). ² Air Holes (ECI). ²
HPT Rotor Outer Torque Coupling	72-51-10, INSPECTION	All non-coated areas (FPI). ¹ Bores (ECI). ²

Stage 2 HPT Rotor Disk	72-51-14, INSPECTION	All areas (FPI). ¹ Bores (ECI). ²
HPT Shaft	72-51-03, INSPECTION	All non-coated areas (FPI). ¹
Stage 1 and Stage 2 High Pressure Compressor (HPC) Rotor Blisks.	72-33-01, INSPECTION	All areas (FPI). ¹
HPC Forward Shaft	72-33-02, INSPECTION	All areas (FPI). ¹
Stage 3 HPC Rotor Blisk	72-33-03, INSPECTION	All areas (FPI). ¹
HPC Aft Shaft Spool	72-33-05, INSPECTION	All non-coated areas (FPI). ¹
HPC Discharge Rotating Seal	72-33-08, INSPECTION	All non-coated areas (FPI). ¹
Stage 3 Low Pressure Turbine (LPT) Rotor Disk	72-57-10, INSPECTION	All areas (FPI). ¹
Stage 4 LPT Rotor Disk	72-57-16, INSPECTION	All areas (FPI). ¹
Rear LPT Shaft	72-57-23, INSPECTION	All areas (FPI). ¹
Stage 5 LPT Rotor Disk	72-57-20, INSPECTION	All areas (FPI). ¹
Stage 6 LPT Rotor Disk	72-57-28, INSPECTION	All areas (FPI). ¹

¹FPI = Fluorescent Penetrant Inspection Method

²ECI = Eddy Current Inspection Method

(2) For the purposes of these mandatory inspections, piece-part opportunity means:

(i) The part is considered at "piece-part opportunity", when it is completely disassembled in accordance with the disassembly instructions in the manufacturer's engine manual; and

(ii) The part has accumulated more than 100 cycles in service since the last piece-part opportunity inspection, provided that the part was not damaged or related to the cause for its removal from the engine."

(b) Except as provided in paragraph (c) of this AD, and notwithstanding contrary provisions in section 43.16 of the Federal Aviation Regulations (14 CFR 43.16), these mandatory inspections shall be performed only in accordance with the TLS of the GE CF34-8C1 EM.

Alternative Methods of Compliance

(c) 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

(d) 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.

Continuous Airworthiness Maintenance Program

(e) FAA-certificated air carriers that have an approved continuous airworthiness maintenance program in accordance with the record keeping requirement of § 121.369 (c) of the Federal Aviation Regulations (14 CFR 121.369 (c)) must maintain records of the mandatory inspections that result from revising the CF34 Engine Maintenance Program and the air carrier's continuous airworthiness program. Alternatively, certificated air carriers may establish an approved system of record retention that provides a method for preservation and retrieval of the maintenance records that include the inspections resulting from this AD, and include the policy and procedures for implementing this alternate method in the air carrier's maintenance manual required by § 121.369 (c) of the Federal Aviation Regulations (14 CFR 121.369 (c)). However, the alternate system must be accepted by the appropriate PMI and require the maintenance records be maintained either indefinitely or until the work is repeated. Records of the piece-part inspections are not required under § 121.380 (a) (2) (vi) of the Federal Aviation Regulations (14 CFR 121.380 (a) (2) (vi)). All other operators must maintain the records of mandatory inspections required by the applicable regulations governing their operations.

Note 3: The requirements of this AD have been met when the engine manual changes are made and air carriers have modified their continuous airworthiness maintenance plans to reflect the Engine Maintenance Program requirements specified in the GE CF34-8C1 Engine Manual.

Effective Date

(f) This amendment becomes effective on December 26, 2002.

Issued in Burlington, Massachusetts, on November 7, 2002.

Jay J. Pardee,
Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 02-29355 Filed 11-19-02; 8:45 am]
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