

Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NE-24-AD]

RIN 2120-AA64

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

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The Federal Aviation Administration (FAA) proposes to adopt a new airworthiness directive (AD) that is applicable to General Electric (GE) CF6-6 series turbofan engines. This proposal would require a reduction of the cyclic life limit for certain high pressure turbine rotor (HPTR) rear shafts, and would require removing certain HPTR rear shafts from service before exceeding the new, lower cyclic life limit. In addition, the proposal would 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 this proposal. The actions specified by the proposed AD are intended to prevent cracks in HPTR rear shafts that could result in uncontained engine failure and damage to the airplane.

DATES: Comments must be received by March 10, 2003.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-NE-24-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected at this location, by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. Comments may also be sent via the Internet using the following address: "9-ane-

adcomment@faa.gov". Comments sent via the Internet must contain the docket number in the subject line.

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, e-mail: karen.curtis@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments, as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this action may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2002-NE-24-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRM's

Any person may obtain a copy of this NPRM by submitting a request to the FAA, New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-NE-24-AD, 12 New England Executive Park, Burlington, MA 01803-5299.

Discussion

An updated low-cycle fatigue (LCF) analysis of certain HPTR rear shaft part numbers installed in CF6-6 engines, including an improved 3D finite element analysis of certain features, was performed by the manufacturer. That analysis indicated the need to lower the cyclic life limit for these part numbers. The updated analysis was prompted by a recently completed analysis on the same rotor assembly, but with different blades.

This proposal will require a new life limit for these HPTR rear shaft P/N's of 8,950 cycles-since-new. On August 8, 2002, the manufacturer issued Temporary Revision TR 05-0022, revising the life limits section of the engine manual to reflect the new life limit for these shafts. Because the fleet contains rear shafts that exceed this new lower limit, a draw down plan is required. This condition, if not corrected could result in LCF cracking and failure of the shafts, which could result in uncontained engine failure and damage to the airplane.

FAA's Determination of an Unsafe Condition and Proposed Actions

Since an unsafe condition has been identified that is likely to exist or develop on other GE CF6-6 series turbofan engines of the same type design, the proposed AD would establish a new, lower cyclic life limit of 8,950 CSN for HPTR rear shafts P/N's 9137M13G01/G02/G03, 9138M22G01/G02/G09/G10, 9138M25G02, and 9687M22G04/G07/G10 and would require removing certain HPTR rear shafts from service before exceeding the new, lower cyclic life limit. In addition, the proposal would require removing from service certain HPTR rear shafts that currently exceed, or will exceed, the new, lower cycle life limit according to a compliance schedule based on accumulated cycles on the rear shaft on the effective date of this AD.

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 proposed AD. There are no foreign registered engines. There are no labor or parts costs associated with the implementation of this proposed action. The total cost of the proposed AD to U.S. operators is