

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. 97-ANE-28-AD; Amendment 39-10496; AD 98-09-15]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Model GE90-76B Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to General Electric Company (GE) Model GE90-76B turbofan engines, that requires reduced life limits for certain rotating components. This amendment is prompted by the results of a refined life analysis performed by the manufacturer which revealed minimum calculated low cycle fatigue lives lower than the published low cycle fatigue retirement lives for certain rotating components. The actions specified by this AD are intended to prevent a low cycle fatigue failure of a rotating component and possibly an uncontained engine failure.

DATES: Effective July 6, 1998.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of July 6, 1998.

ADDRESSES: The service information referenced in this AD may be obtained from General Electric Company Technical Services, Attention: Leader for distribution/microfilm, 10525 Chester Road, Cincinnati, OH 45215, telephone (513) 672-8400 Ext. 114, Fax (513) 672-8422. This information may be examined at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

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 airworthiness directive (AD) that is applicable to General Electric Company (GE) Model GE90-76B turbofan engines was published in the **Federal Register** on September 24, 1997

(62 FR 49179). That action proposed to require reduced life limits for certain rotating components.

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 supports the rule as proposed.

Since publication of the Notice of Proposed Rulemaking (NPRM), GE has provided the FAA with additional analysis that substantiates the original cyclic life for the stage 7 disks (part numbers 350-000-656-0 and 350-000-657-0) of 10,000 cycles. These disks are exempted from this AD based on recent FAA approval of GE's refined life analysis substantiating the original cyclic life of 10,000 cycles for this engine model. The latest revision of the GE90 Engine Manual, Chapter 05-11-00, Life Limits 001, restored the stage 7 disk lives for the model to 10,000 cycles.

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 changes described previously. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

There are approximately 24 engines of the affected design in the worldwide fleet. The manufacturer has advised the FAA that there are currently no engines installed on aircraft of U.S. registry that would be affected by this AD. Therefore, there is no associated cost impact on U.S. operators as a result of this AD.

The FAA estimates that the most representative engines will have 3 of the 6 life-limited-reduced components installed. Assuming the 3 components are the High Pressure Compressor Rotor (HPCR) 2-6 spool, HPCR CDP seal, and the Low Pressure Turbine cone shaft and that the parts cost is proportional to the reduction of the low cycle fatigue retirement lives, the required parts will cost approximately \$181,993 per engine. Based on these figures, the FAA estimates that if an engine were imported to the U.S., the total cost impact of this AD would be \$181,993 per engine.

The regulations adopted herein will not have substantial direct effects 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. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does

not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

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 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 from the Rules Docket at the location provided under the caption **ADDRESSES**.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, 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 the following new airworthiness directive:

98-09-15 General Electric Company:

Amendment 39-10496. Docket No. 97-ANE-28-AD.

Applicability: General Electric Company (GE) GE90-76B Model turbofan engines, installed on but not limited to Boeing 777 series aircraft.

Note 1: This airworthiness directive (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 (d) 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: Required as indicated, unless accomplished previously.

To prevent a low cycle fatigue failure of a rotating component and possibly an uncontained engine failure, accomplish the following:

(a) Remove from service those components listed in Table 1 of GE90 Alert Service Bulletin (ASB) No. 72-A318, dated June 27, 1997, (except as noted in paragraph (b) of this AD) and replace with a serviceable component, prior to exceeding the new cyclic life limits established in paragraph 1.D. (1) of GE90 ASB No. 72-A318, dated June 27, 1997.

(b) GE has provided the FAA with additional analysis that substantiates the original cycle life for the stage 7 disks (part numbers 350-000-656-0 and 350-000-657-0) of 10,000 cycles. These disks are exempted from this AD based on recent FAA approval of GE's refined life analysis substantiating the original cycle life of 10,000 cycles for this engine model.

Note 2: The revised component life limits noted in GE90 ASB No. 72-A318, dated June 27, 1997, were added to the GE90 Engine Manual Chapter 05-11-00, Life Limits 001, in the August 1, 1997, revision. The latest revision of the GE90 Engine Manual, Chapter 05-11-00, Life Limits 001, restored the stage 7 disk lives for the model to 10,000 cycles.

(c) Except as provided in paragraph (d) of this AD, no replacement times may be approved for these parts.

(d) 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. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Engine Certification Office.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Engine Certification Office.

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(f) The actions required by this AD shall be done in accordance with the following GE90 ASB:

Document No.	Pages	Date
72-A318	1-5	June 27, 1997.
Total Pages: 5.		

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from General Electric Company Technical Services, Attention: Leader for distribution/microfilm, 10525 Chester Road, Cincinnati, OH 45215, telephone (513) 672-8400 Ext. 114, Fax (513) 672-8422. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or

at the Office of the Federal Register, 800 North Capitol Street NW., suite 700, Washington, DC.

(g) This amendment becomes effective on July 6, 1998.

Issued in Burlington, Massachusetts, on April 20, 1998.

Jay J. Pardee,
Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 98-11440 Filed 5-5-98; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 97-NM-138-AD; Amendment 39-10510; AD 98-09-29]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-400 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747-400 series airplanes, that requires removal and reconfiguration of the battery grounds of the auxiliary power unit (APU). This amendment is prompted by reports of smoke or fire coming from the APU due to battery grounds that were not installed or maintained properly. The actions specified by this AD are intended to prevent overheating and heat damage of the APU battery grounds due to improper installation of the APU battery ground, which could result in heat damage and consequent smoke or fire on the airplane.

DATES: Effective June 10, 1998.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of June 10, 1998.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Forrest Keller, Senior Aerospace

Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2790; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 747-400 series airplanes was published in the **Federal Register** on November 25, 1997 (62 FR 62726). That action proposed to require removal and reconfiguration of the battery grounds of the auxiliary power unit (APU).

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

Support for the Proposal

One commenter supports the proposal.

Request To Extend the Compliance Time

The Air Transport Association (ATA) of America, on behalf of one of its members, requests that the proposed compliance time be extended to allow the modification to be accomplished within 12 months, rather than 6 months. This ATA member operates the largest number of U.S.-registered 747-400 airplanes. The ATA member claims that such an extension is warranted in light of the amount of time required for preparation and accomplishment of the actions required by this proposed AD, and in light of the results of inspections to detect discrepancies of the APU battery grounds performed subsequent to receipt of and in accordance with Boeing telex M-7240-96-0927, dated May 24, 1996. The ATA member maintains that the results of this inspection indicated that the APU grounds on its airplanes that are the subject of the unsafe condition of this proposed AD were retorqued and found to be free of discrepancies.

The FAA concurs with the commenter's request to extend the compliance time from 6 months to 12 months. In light of the information presented by the commenter, the FAA finds that such an extension will allow the modification to be performed with minimal effect on the maintenance schedule and no adverse effect on safety. Paragraph (a) of the final rule has been revised to specify a compliance time of 12 months.