

TABLE 2.—UNIT RATES

Service ^{1 3}	Rough rice	Brown rice for processing	Milled rice
Inspection for quality (per lot, subplot, or sample inspection)	\$32.90	28.40	20.20
Factor analysis for any single factor (per factor):			
(a) Milling yield (per sample)	25.50	25.50
(b) All other factors (per factor)	12.10	12.10	12.10
Total oil and free fatty acid interpretative line samples: ²		40.00	40.00
(a) Milling degree (per set)			85.10
(b) Parboiled light (per sample)			21.30
Extra copies of certificates (per copy)	3.00	3.00	3.00

¹ Fees apply to determinations (original or appeals) for kind, class, grade, factor analysis, equal to type, milling yield, or any other quality designation as defined in the U.S. Standards for Rice or applicable instructions, whether performed singly or combined at other than at the applicant's facility.

² Interpretive lines samples may be purchased from the U.S. Department of Agriculture, GIPSA, FGIS, Technical Services Division, 10383 North Executive Hills Boulevard, Kansas City, Missouri 68030. Interpretive line samples also are available for examination at selected FGIS field offices. A list of field offices may be obtained from the Director, Field Management Division, USDA, GIPSA, FGIS, 1400 Independence Avenue, SW, STOP 3630, Washington, DC 20250-3630. The interpretive line samples illustrate the lower limit for milling degrees only and the color limit for the factor "Parboiled Light" rice.

³ Fees for other services not referenced in Table 2 will be based on the noncontract hourly rate listed in Section 868.90, Table 1.

Dated: November 20, 1998.

James R. Baker,
Administrator.

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BILLING CODE 3410-EN-M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 95-ANE-39]

RIN 2120-AA64

Airworthiness Directives; General Electric Company CF6 Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the superseding of an existing airworthiness directive (AD), applicable to General Electric Company (GE) CF6 series turbofan engines, that currently requires initial and repetitive ultrasonic and eddy current inspections of high pressure compressor rotor (HPCR) stage 3-9 spools for cracks. This action would define more aggressive inspection intervals for certain HPCR stage 3-9 spools, add CF6-80E1 engines to the inspection program, add inspection requirements for spools manufactured from 8 inch diameter billet, add a one-time inspection of the stage 3-5 blade slot bottoms, and add a one-time inspection of the web and hub-to-web transition areas. This proposal is prompted by analysis of recent HPCR stage 3-9 spool inspection results and separations, and assessment of the adequacy of the existing program to

prevent HPCR stage 3-9 spool cracking and separation. As a result of that assessment, the FAA has determined there is a need to make changes to the existing AD. The actions specified by the proposed AD are intended to prevent HPCR stage 3-9 spool cracking and separation, which can result in an uncontained engine failure and aircraft damage.

DATES: Comments must be received by January 25, 1999.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 95-ANE-39, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may also be sent via the Internet using the following address: "9-ad-engineprop@faa.dot.gov". Comments sent via the Internet must contain the docket number in the subject line. Comments may be inspected at this location between 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from General Electric Company via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215, telephone (513) 672-8400, 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.

FOR FURTHER INFORMATION CONTACT:

William S. Ricci, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7742, fax (781) 238-7199.

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 notice 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 notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 95-ANE-39." The postcard will be date-stamped and returned to the commenter.

Availability of NPRMs

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. 95-ANE-39, 12 New

England Executive Park, Burlington, MA 01803-5299.

Discussion

On January 31, 1995, the Federal Aviation Administration (FAA) issued airworthiness directive (AD) 95-03-01, Amendment 39-9138 (60 FR 8930, February 16, 1995), applicable to General Electric Company (GE) CF6-45/-50/-80A series turbofan engines, to require initial and repetitive ultrasonic and eddy current inspections of a certain population of high pressure compressor rotor (HPCR) stage 3-9 spools for cracks. That action was prompted by a finding of several cracked parts in service.

Since the issuance of AD 95-03-01, the FAA received a report of an in-service uncontained failure of an HPCR stage 3-9 spool. The investigation revealed that the uncontained failure was caused by a crack that developed from the same metallurgical condition which prompted AD 95-03-01. However, that spool was not part of the population required to be inspected by AD 95-03-01. Further investigation indicated that the scope of AD 95-03-01 had to be expanded to include other HPCR stage 3-9 spools installed on GE CF6-45/-50/-80A engines, and also HPCR stage 3-9 spools installed on GE CF6-80C2 series engines, and that the inspection schedule for the spools affected by AD 95-03-01 needed to be accelerated. The FAA issued AD 95-23-03, amendment 39-9423 on November 13, 1995 (60 FR 57803, November 21, 1995) that superseded AD 95-03-01 and incorporated these inspection program changes and added a reporting requirement for operators to advise the FAA of the results of the inspections.

Since issuing AD 95-23-03, the FAA has analyzed the inspection reports submitted in accordance with AD 95-23-03, the results of an investigation of an uncontained failure caused by a crack that developed from a hard alpha inclusion material defect in the hub-to-web transition area of CF6-50 stage 6 disk, and the results of an investigation of an uncontained failure caused by a crack that developed in a CF6-80C2 stage 3 blade slot bottom. The stage 3-9 spool is one of the major structural elements of the fourteen-stage axial flow HPCR installed in the CF6 engine. The CF6 HPCR is manufactured from Ti 6-2-4-2 titanium alloy. Since 1974 there have been 9 events where CF6 stage 3-9 spools have failed due to cracking. All of these events have resulted in the release of engine fragments, and a majority have resulted in an uncontained engine failure. The root cause of the cracking and separation

events has been attributed to two failure mechanisms. The first failure mechanism is crack initiation from hard alpha inclusions. Hard alpha inclusions are hard brittle areas within the material which can crack under service loads and propagate in fatigue. The second failure mechanism is dwell time fatigue (DTF). DTF is a crack initiation mode associated with certain creep resistant titanium alloys under sustained loading (dwell) at temperatures below 400 degrees Fahrenheit that results in internal crack initiations at flat facets. The facets are associated with groups or colonies of primary alpha grains having a common alpha phase crystal orientation. Crack initiation by both of these failure mechanisms can occur at relatively low cyclic exposures and result in HPCR stage 3-9 failure. Based on this analysis, the FAA has determined that the inspection program required by AD 95-23-03 must be accelerated and expanded to include spools manufactured from 8 inch diameter billets. This condition, if not corrected, could result in HPCR stage 3-9 spool cracking and separation, which can result in an uncontained engine failure and aircraft damage.

The FAA has reviewed and approved the technical contents of the following GE Service Bulletins (SBs) and Alert Service Bulletins (ASBs): CF6-50 SB No. 72-1108, Revision 1, dated July 29, 1996; CF6-80A SB No. 72-678, Revision 1, dated July 29, 1996; CF6-80C2 SB No. 72-812, Revision 1, dated January 30, 1998, CF6-80E1 ASB No. 72-A135, Original, dated August 13, 1998, CF6-50 SB No. 72-1157, Original, dated June 10, 1998, CF6-80A SB No. 72-719, Revision 1, dated September 24, 1998, CF6-80C2 SB No. 72-934, Original, dated June 10, 1998, CF6-80E1 SB No. 72-137, Original, dated June 9, 1998, CF6-50 ASB No. 72-A1131, Revision 1, dated March 12, 1998, CF6-80A ASB No. 72-A691, Revision 2, dated September 23, 1998, CF6-80C2 ASB No. 72-A848, Revision 2, dated March 12, 1998, CF6-80E1 ASB No. 72-A126, Revision 1, dated March 31, 1998, and Table 801 of GE CF6-50 Shop Manual GEK 50481, section 05-11-02 Time Limits. These service documents describe procedures for eddy current and ultrasonic inspections of HPCR stage 3-9 spools for cracks.

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the proposed AD would supersede AD 95-23-03 to define more aggressive inspection intervals for certain HPCR stage 3-9 spools, add CF6-80E1 engines to the inspection program, add inspection requirements

for spools manufactured from 8 inch diameter billet, add a one-time inspection of the stage 3-5 blade slot bottoms, and add a one-time inspection of the web and hub-to-web transition areas. The proposed inspection program would also incorporate repetitive inspection intervals that change based on the calendar time that has elapsed since the effective date of this proposed AD. These calendar date triggers have the effect of tightening the repetitive inspection intervals as the affected population of engines ages through normal utilization. The dates also reflect the risk analysis performed by the manufacturer which took into consideration many factors including the shop capacity to perform the required inspections. The FAA chose to use calendar dates for these triggers rather than engine cycles or hours in order not to unduly penalize high utilization users while providing some definite ending point for each phase of the repetitive inspection program.

The FAA is also considering additional rulemaking that would require eddy current and ultrasonic inspections of the side fillet radii of the stage 3-5 blade slot bottoms, the stage 6-9 blade slot bottoms, and a module level inspection of the stage 3-5 bores.

There are approximately 4,506 engines of the affected design in the worldwide fleet. The FAA estimates that 1,197 engines installed on aircraft of U.S. registry would be affected by this proposed AD, that it would take approximately 216 work hours per engine to accomplish the proposed actions, and that the average labor rate is \$60 per work hour. Based on these figures, the total cost impact of the proposed AD on U.S. operators is estimated to be \$15,485,340.

The regulations proposed herein would 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 proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation (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 impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory

Flexibility Act. A copy of the draft regulatory evaluation prepared for this action 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.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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 removing amendment 39-9423 (60 FR 57803, November 21, 1995) and by adding a new airworthiness directive to read as follows:

General Electric Company: Docket No. 95-ANE-39. Supersedes AD 95-23-03, Amendment 39-9423.

Applicability: General Electric Company (GE) CF6-45, -50, -80A, -80C2 and -80E1 series turbofan engines, with High Pressure Compressor Rotor (HPCR) stage 3-9 spools, part numbers (P/Ns) 1333M66G01, 1333M66G03, 1333M66G07, 1333M66G09, 1333M66G10, 1669M22G01, 1781M52P01, 1781M53G01, 1782M22G01, 1782M22G02, 1782M22G04, 1854M95P01, 1854M95P02, 1854M95P03, 1854M95P04, 1854M96P05, 1854M95P06, 9136M89G02, 9136M89G03, 9136M89G06, 9187M89G07, 9136M89G08, 9136M89G09, 9136M89G10, 9136M89G11, 9136M89G17, 9136M89G18, 9136M89G19, 9136M89G20, 9136M89G21, 9136M89G22, 9136M89G27, 9136M89G28, 9136M89G29,

9253M85G01, 9253M85G02, 9273M14G01, 9331M29G01, and 9380M28P05 installed. These engines are installed on but not limited to Airbus A300, A310, and A330 series, Boeing 747 and 767 series, and McDonnell Douglas DC-10 and MD-11 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 (k) 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 HPCR stage 3-9 spool cracking and separation, which can result in an uncontained engine failure and aircraft damage, accomplish the following:

(a) For the purpose of this AD, the following abbreviations apply:

- (1) Cycles Since New (CSN).
- (2) Cycles Since Last Inspection (CSLI).
- (3) Cycles At Last Inspection (CALI).
- (4) Engine Shop Visit (ESV).

Note 2: Paragraph (b) of this AD is only applicable to GE CF6-45/50 series engines. Paragraph (c) of this AD is only applicable to GE CF6-80A series engines. Paragraph (d) of this AD is only applicable to GE CF6-80C2 series engines. Paragraph (e) of this AD is only applicable to GE CF6-80E1 series engines.

(b) For HPCR stages 3-9 spools installed in CF6-45/50 series engines, eddy current and ultrasonic inspect for cracks as follows:

(i) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/Ns 9136M89G02, 9136M89G03, 9136M89G06, 9136M89G07, 9136M89G08, 9136M89G09, 9136M89G17, 9136M89G18, 9136M89G19, 9136M89G21, 9136M89G22, 9136M89G27,

9136M89G29, 9253M85G01, 9253M85G02, 9273M14G01, and 9331M29G01, installed in GE CF6-45/-50 series engines, as follows:

(i) Perform eddy current and ultrasonic inspections in accordance with GE CF6-50 Service Bulletin (SB) No. 72-1157, Original, dated June 10, 1998, at the next piece-part exposure after 1,000 CSN.

(ii) Perform eddy current and ultrasonic inspections in accordance with GE CF6-50 Alert Service Bulletin (ASB) No. 72-A1131, Revision 1, dated March 12, 1998, at the next piece-part exposure after 1,000 CSN.

(iii) Remove from service, prior to further flight, HPCR stage 3-9 spools that equal or exceed the reject criteria established by SB No. 72-1157, Original, dated June 10, 1998, or ASB No. 72-A1131, Revision 1, dated March 12, 1998, as applicable, and replace with a serviceable part.

(2) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/Ns 9136M89G08, 9253M85G02, 9273M14G01, and 9331M29G01 and with Serial Numbers (S/Ns) listed in Table 801 of GE CF6-50 Shop Manual GEK50481, section 05-11-02 Time Limits, and with P/Ns 9136M89G02 and 9136M89G06 installed in GE CF6-45/-50 series engines. Perform the inspections in accordance with GE CF6-50 SB No. 72-1108, Revision 1, dated July 29, 1996, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE SB No. 72-888, Revision 6, dated December 22, 1995; or SB No. 72-1000, Revision 2, dated September 9, 1993; or SB No. 72-1108, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN but prior to accumulating 3,500 CSN, or prior to exceeding 30 days from the effective date of this AD, whichever occurs later.

(ii) For HPCR stage 3-9 spools that have been previously inspected using the procedures in GE SB No. 72-888, Revision 6, dated December 22, 1995; or SB No. 72-1000, Revision 2, dated September 9, 1993; or SB No. 72-1108, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, perform repeat inspections at the earliest occurrence of the requirements of Table 1, 2, or 3 of this AD, as applicable, based on elapsed calendar time from the effective date of this AD, as specified in paragraph (b)(2)(v) of this AD.

TABLE 1

First piece-part exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 2,000 CSLI and 3,500 CSN, and before 3,500 CSLI.

TABLE 2

First piece-part exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 2,000 CSLI and 3,500 CSN, and before:

3,500 CSLI, if spool CALI is 0-6,500, or
9,500 CSN, if spool CALI is 6,501-7,000, or
2,500 CSLI, if spool CALI is 7,001-8,000, or
10,500 CSN, if spool CALI is 8,001-8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

TABLE 3

First piece-part exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 2,000 CSLI and 3,500 CSN, and before:

3,500 CSLI, if spool CALI is 0–5,000, or
8,500 CSN, if spool CALI is 5,001–5,500, or
3,000 CSLI, if spool CALI is 5,501–6,500, or
9,500 CSN, if spool CALI is 6,501–7,000, or
2,500 CSLI, if spool CALI is 7,001–8,000, or
10,500 CSN, if spool CALI is 8,001–8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

(iii) Thereafter, inspect HPCR stage 3–9 spools at intervals not to exceed the earliest occurrence shown in Table 1, Table 2, or Table 3 of this AD, as applicable, based on the elapsed calendar time from the effective date of this AD, as specified in paragraph (b)(2)(v) of this AD.

(iv) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by GE CF6–50 SB No. 72–1108, Revision 1, dated July 29, 1996, and replace with a serviceable part.

(v) Use the Tables as follows:

(A) Use Table 1 from the effective date of this AD to 18 months from the effective date of this AD.

(B) Use Table 2 after 18 months from the effective date of this AD to 36 months from the effective date of this AD.

(C) Use Table 3 after 36 months from the effective date of this AD.

(3) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/Ns 9136M89G08, 9253M85G02, 9273M14G01, and 9331M29G01, with S/Ns not listed in Table 801 of GE CF6–50 Shop Manual GEK50481, section 05–11–02 Time Limits, and with P/Ns 9136M89G03, 9136M89G07, 9136M89G09, 9136M89G17, 9136M89G18, and 9253M85G01 installed in GE CF6–45/–50 series engines. Perform the inspections in accordance with GE CF6–50 SB No. 72–1108, Revision 1, dated July 29, 1996, as follows:

(i) For HPCR stage 3–9 spools that have not been previously inspected using the procedures in GE SB No. 72–888, Revision 6, dated December 22, 1995; or SB No. 72–1000, Revision 2, dated September 9, 1993; or SB No. 72–1108, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN but not later than the first ESV after 4,000 CSN.

(ii) For HPCR stage 3–9 spools that have been previously inspected using the procedures in GE SB No. 72–888, Revision 6, dated December 22, 1995; or SB No. 72–1000, Revision 2, dated September 9, 1993; or SB No. 72–1108, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, perform repeat inspections at the first piece-part exposure after both 1,000 CSLI and 4,000 CSN, but not later than the first ESV after both 2,000 CSLI and 4,000 CSN.

(iii) Thereafter, inspect HPCR stage 3–9 spools at intervals not to exceed the first piece-part exposure after both 1,000 CSLI and 4,000 CSN, but not later than the first ESV after both 2,000 CSLI and 4,000 CSN.

(iv) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by GE CF6–50 SB No. 72–1108, Revision 1, dated July 29, 1996, and replace with a serviceable part.

(4) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/Ns 9136M89G19, 9136M89G21, 9136M89G22, and 9136M89G27 installed in GE CF6–45/–50 series engines. Perform the inspections in accordance with GE CF6–50 SB No. 72–1108, Revision 1, dated July 29, 1996, as follows:

(i) For HPCR stage 3–9 spools that have not been previously inspected using the procedures in GE SB No. 72–888, Revision 6, dated December 22, 1995; or SB No. 72–1000, Revision 2, dated September 9, 1993; or SB No. 72–1108, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN but not later than the first ESV after 3,000 CSN, provided, however, from 18 to 36 months after the effective date of this AD, inspect not later than 9,500 CSN, and after 36 months after the effective date of this AD, inspect not later than 3,500 CSN.

(ii) For HPCR stage 3–9 spools that have been previously inspected using the procedures in GE SB No. 72–888, Revision 6, dated December 22, 1995; or SB No. 72–1000, Revision 2, dated September 9, 1993; or SB No. 72–1108, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, perform repeat inspections at the earliest occurrence of the requirements of Table 4, 5, or 6 of this AD, as applicable, based on elapsed calendar time from the effective date of this AD, as specified in paragraph (b)(4)(vi) of this AD.

TABLE 4

First piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 2,000 CSLI and 5,000 CSN.

TABLE 5

First piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 2,000 CSLI and 5,000 CSN, and before:

9,500 CSN, if spool CALI is 0–7,000, or
2,500 CSLI, if spool CALI is 7,001–8,000, or
10,500 CSN, if spool CALI is 8,001–8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

TABLE 6

First piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 2,000 CSLI and 5,000 CSN, and before:

5,000 CSN, if spool CALI is 0–1,500, or
3,500 CSLI, if spool CALI is 1,501–5,000, or
8,500 CSN, if spool CALI is 5,001–5,500, or
3,000 CSLI, if spool CALI is 5,501–6,500, or

TABLE 6—Continued

9,500 CSN, if spool CALI is 6,501–7,000, or
 2,500 CSLI, if spool CALI is 7,001–8,000, or
 10,500 CSN, if spool CALI is 8,001–8,500, or
 2,000 CSLI, if spool CALI is greater than 8,500.

(iii) Thereafter, inspect HPCR stage 3–9 spools at intervals not to exceed the earliest occurrence shown in Table 4, Table 5, or Table 6 of this AD, as applicable, based on the elapsed calendar time from the effective date of this AD, as specified in paragraph (b)(4)(vi) of this AD.

(iv) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by GE CF6–50 SB No. 72–1108, Revision 1, dated July 29, 1996, and replace with a serviceable part.

(v) HPCR stage 3–9 spools with a CSN of 10,500 or greater may not be put back in service after an ESV.

(vi) Use the Tables as follows:

(A) Use Table 4 from the effective date of this AD to 18 months from the effective date of this AD.

(B) Use Table 5 after 18 months from the effective date of this AD to 36 months from the effective date of this AD.

(C) Use Table 6 after 36 months from the effective date of this AD.

(5) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/N 9136M89G29 installed in GE CF6–45/–50 series engines. Perform the inspections in accordance with GE CF6–50 SB No. 72–1108, Revision 1, dated July 29, 1996, as follows:

(i) For HPCR stage 3–9 spools that have not been previously inspected using the procedures in GE SB No. 72–888, Revision 6, dated December 22, 1995; or SB No. 72–1000, Revision 2, dated September 9, 1993; or SB No. 72–1108, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, or any of the combinations of service documents specified by Table 7 of this AD, inspect at the next piece-part exposure after 1,000 CSN.

TABLE 7

Either any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70–32–09, Revision 71, dated October 1, 1995,

CF6 Standard Practice Manual GEK9250 Procedures 70–32–09, Revision 72, dated November 15, 1996,

CF6 Standard Practice Manual GEK9250 Procedures 70–32–09, Revision 74, dated May 1, 1998,

and any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70–32–10, Revision 71, dated October 1, 1995,

CF6 Standard Practice Manual GEK9250 Procedures 70–32–010, Revision 72, dated November 15, 1996,

CF6 Standard Practice Manual GEK9250 Procedures 70–32–010, Revision 74, dated May 1, 1998;

or any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70–32–13, Revision 70–25, dated August 26, 1996,

CF6 Standard Practice Manual GEK9250 Procedure 70–32–13, Revision 72, dated November 15, 1996,

CF6 Standard Practice Manual GEK9250 Procedures 70–32–13, Revision 73, dated November 1, 1997,

and any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70–32–14, Revision 70–26, dated August 26, 1996,

CF6 Standard Practice Manual GEK9250 Procedure 70–32–14, Revision 72, dated November 15, 1996,

CF6 Standard Practice Manual GEK9250 Procedures 70–32–14, Revision 73, dated November 1, 1997.

(ii) For HPCR stage 3–9 spools that have been previously inspected using the procedures in GE SB No. 72–888, Revision 6, dated December 22, 1995; or SB No. 72–1000, Revision 2, dated September 9, 1993; or SB No. 72–1108, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, or any of the combinations of service documents specified by Table 7 of this AD, inspect at first piece-part exposure after both 1,000 CSLI and 5,000 CSN.

(iii) Thereafter, inspect HPCR stage 3–9 spools at piece part exposure after both 1,000 CSLI and 5,000 CSN.

(iv) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by GE CF6–50 SB No. 72–1108, Revision 1, dated July 29, 1996, and replace with a serviceable part.

(c) For HPCR stages 3–9 spools installed in GE CF6–80A/–80A1/–80A2/–80A3 series engines, eddy current and ultrasonic inspect for cracks as follows:

(1) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/Ns 9136M89G10, 9136M89G11, 9136M89G20, 9136M89G21, 9136M89G22, 9136M89G27, and 9136M89G28 installed in GE CF6–80A/–80A1/–80A2/–80A3 series engines, as follows:

(i) Perform eddy current and ultrasonic inspections in accordance with GE CF6–80A SB No. 72–719, Revision 1, dated September 24, 1998, at the next piece-part exposure after 1,000 CSN.

(ii) Perform eddy current and ultrasonic inspections in accordance with GE CF6–80A ASB No. 72–A691, Revision 2, dated September 23, 1998, at the next piece-part exposure after 1,000 CSN.

(iii) Remove from service, prior to further flight, HPCR stage 3–9 spools that equal or exceed the reject criteria established by the SB No. 72–719, Revision 1, dated September 24, 1998, or ASB No. 72–A691, Revision 2, dated September 23, 1998, as applicable, and replace with a serviceable part.

(2) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/N 9136M89G10, with the following S/Ns: MPOM0054, MPOM7090, MPOM8303, MPOM8304, MPOM9263, MPOM9264, MPON0054, MPON0071, MPON0072, MPON1643, MPON4251, and MPON4253 installed in GE CF6–80A/–80A1/–80A2/–80A3 series engines. Perform the inspections in accordance with GE CF6–80A SB No. 72–678, Revision 1, dated August 8, 1996, as follows:

(i) For HPCR stage 3–9 spools that have not been previously inspected using the procedures in GE SB No. 72–500, Revision 6, dated December 22, 1995; or SB No. 72–583, Revision 5, dated December 22, 1995; or SB No. 72–678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN but before accumulating 3,500 CSN, or prior to exceeding 30 days from the effective date of this AD, whichever is later.

(ii) For HPCR stage 3–9 spools that have been previously inspected using the procedures in GE SB No. 72–500, Revision 6, dated December 22, 1995; or SB No. 72–583, Revision 5, dated December 22, 1995; or SB No. 72–678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, perform repeat inspections at the earliest occurrence of the requirements of Table 8, 9, or 10 of this AD, as applicable, based on elapsed calendar time from the effective date of this AD, as specified in paragraph (c)(2)(vi) of this AD.

TABLE 8

First piece-part exposure after both 1,000 CSLI and 3,500

CSN, but not later than the first ESV after both 3,500 CSN and 2,000 CSLI (for GE CF6-80A1/A3 engines) or 1,500 CSLI (for GE CF6-80A/A2 engines), and before 3,500 CSLI.

TABLE 9

First piece part exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 3,500 CSN and 2,000 CSLI (for GE CF6-80A1/A3 engines) or 1,500 CSLI (for GE CF6-80A/A2 engines), and before:

3,500 CSLI, if spool CALI is 0-6,500, or
9,500 CSN, if spool CALI is 6,501-7,000, or
2,500 CSLI, if spool CALI is 7,001-8,000, or
10,500 CSN, if spool CALI is 8,001-8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

TABLE 10

First piece-part exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 2,000 CSLI (for GE CF6-80A1/A3) or 1,500 CSLI (for GE CF6-80A/A2) and 3,500 CSN, and before:

3,500 CSLI, if spool CALI is 0-5,000, or
8,500 CSN, if spool CALI is 5,001-5,500, or
3,000 CSLI, if spool CALI is 5,501-6,500, or
9,500 CSN, if spool CALI is 6,501-7,000, or
2,500 CSLI, if spool CALI is 7,001-8,000, or
10,500 CSN, if spool CALI is 8,001-8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

(iii) Thereafter, inspect HPCR stage 3-9 spools at intervals not to exceed the earliest occurrence shown in Table 8, Table 9, or Table 10 of this AD, as applicable, based on the elapsed calendar time from the effective date of this AD, as specified in paragraph (c)(2)(vi) of this AD.

(iv) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by GE CF6-80A SB No. 72-678, Revision 1, dated August 8, 1996, and replace with a serviceable part.

(v) HPCR stage 3-9 spools with a CSN of 10,500 or greater may not be put back in service after an ESV.

(vi) Use the Tables as follows:

(A) Use Table 8 from the effective date of this AD to 18 months from the effective date of this AD.

(B) Use Table 9 after 18 months from the effective date of this AD to 36 months from the effective date of this AD.

(C) Use Table 10 after 36 months from the effective date of this AD.

(3) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/N 9136M89G10, with S/Ns other than those listed in paragraph (c)(2) of this AD, and P/N 9136M89G11, installed in GE CF6-80A/A2 series engines. Perform the inspections in accordance with GE CF6-80A SB No. 72-678, Revision 1, dated August 8, 1996, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE SB No. 72-500, Revision 6, dated December 22, 1995; or SB No. 72-583, Revision 5, dated December 22, 1995; or SB No. 72-678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN, but not later than the first ESV after 5,000 CSN.

(ii) For HPCR stage 3-9 spools that have been previously inspected using the procedures in GE SB No. 72-500, Revision 6, dated December 22, 1995; or SB No. 72-583, Revision 5, dated December 22, 1995; or SB No. 72-678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, perform repeat inspections at the first piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 1,500 CSLI and 5,000 CSN.

(iii) Thereafter, inspect HPCR stage 3-9 spools at intervals not to exceed the first piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 1,500 CSLI and 5,000 CSN.

(iv) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by GE CF6-80A SB No. 72-678, Revision 1, dated August 8, 1996, and replace with a serviceable part.

(4) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/N 9136M89G10, with S/Ns other than those listed in paragraph (c)(2) of this AD, and P/N 9136M89G11, installed in GE CF6-80A1/A3 series engines. Perform the inspections in accordance with GE CF6-80A SB No. 72-678, Revision 1, dated August 8, 1996, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE SB No. 72-500, Revision 6, dated December 22, 1995; or SB No. 72-583, Revision 5, dated December 22, 1995; or SB No. 72-678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN but not later than the first ESV after 5,000 CSN.

(ii) For HPCR stage 3-9 spools that have been previously inspected using the procedures in GE SB No. 72-500, Revision 6,

dated December 22, 1995; or SB No. 72-583, Revision 5, dated December 22, 1995; or SB No. 72-678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, perform repeat inspections at the first piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 2,000 CSLI and 5,000 CSN.

(iii) Thereafter, inspect HPCR stage 3-9 spools at intervals not to exceed the first piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 2,000 CSLI and 5,000 CSN.

(iv) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by GE CF6-80A SB No. 72-678, Revision 1, dated August 8, 1996, and replace with a serviceable part.

(5) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/Ns 9136M89G20, 9136M89G21, 9136M89G22 and 9136M89G27, installed in GE CF6-80A1/A3 series engines. Perform the inspections in accordance with GE CF6-80A SB No. 72-678, Revision 1, dated August 8, 1996, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE SB No. 72-500, Revision 6, dated December 22, 1995; or SB No. 72-583, Revision 5, dated December 22, 1995; or SB No. 72-678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN but not later than the first ESV after 3,000 CSN, provided, however, from 18 to 36 months after the effective date of this AD, inspect not later than 9,500 CSN, and after 36 months after the effective date of this AD, inspect not later than 3,500 CSN.

(ii) For HPCR stage 3–9 spools that have been previously inspected using the procedures in GE SB No. 72–500, Revision 6, dated December 22, 1995; or SB No. 72–583, Revision 5, dated December 22, 1995; or SB

No. 72–678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, perform repeat inspections at the earliest occurrence of the requirements of Table 11, 12, or 13 of this AD, as applicable, based on elapsed

calendar time from the effective date of this AD, as specified in paragraph (c)(5)(vi) of this AD.

TABLE 11

First piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 2,000 CSLI and 5,000 CSN.

TABLE 12

First piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 2,000 CSLI and 5,000 CSN, and before:

9,500 CSN, if spool CALI is 0–7,000, or
2,500 CSLI, if spool CALI is 7,001–8,000, or
10,500 CSN, if spool CALI is 8,001–8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

TABLE 13

First piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 2,000 CSLI and 5,000 CSN, and before:

5,000 CSN, if spool CALI is 0–1,500, or
3,500 CSLI, if spool CALI is 1,501–5,000, or
8,500 CSN, if spool CALI is 5,001–5,500, or
3,000 CSLI, if spool CALI is 5,501–6,500, or
9,500 CSN, if spool CALI is 6,501–7,000, or
2,500 CSLI, if spool CALI is 7,001–8,000, or
10,500 CSN, if spool CALI is 8,001–8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

(iii) Thereafter, inspect HPCR stage 3–9 spools at intervals not to exceed the earliest occurrence shown in Table 11, Table 12, or Table 13 of this AD, as applicable, based on the elapsed calendar time from the effective date of this AD, as specified in paragraph (c)(5)(vi) of this AD.

(iv) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by GE CF6–80A SB No. 72–678, Revision 1, dated August 8, 1996, and replace with a serviceable part.

(v) HPCR stage 3–9 spools with a CSN of 10,500 or greater may not be put back in service after an ESV.

(vi) Use the Tables as follows:

(A) Use Table 11 from the effective date of this AD to 18 months from the effective date of this AD.

(B) Use Table 12 after 18 months from the effective date of this AD to 36 months from the effective date of this AD.

(C) Use Table 13 after 36 months from the effective date of this AD.

(6) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/Ns 9136M89G20, 9136M89G21, 9136M89G22, and 9136M89G27 installed in GE CF6–80A/A2 series engines. Perform the inspections in accordance with GE CF6–80A SB No. 72–678, Revision 1, dated August 8, 1996, as follows:

(i) For HPCR stage 3–9 spools that have not been previously inspected using the procedures in GE SB No. 72–500, Revision 6, dated December 22, 1995; or SB No. 72–583, Revision 5, dated December 22, 1995; or SB No. 72–678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN but not later than the first ESV after 3,000 CSN, provided, however, from 18 to 36 months after the effective date of this AD, inspect not later than 9,500 CSN, and after 36 months after the effective date of this AD, inspect not later than 3,500 CSN.

(ii) For HPCR stage 3–9 spools that have been previously inspected using the procedures in GE SB No. 72–500, Revision 6, dated December 22, 1995; or SB No. 72–583, Revision 5, dated December 22, 1995; or SB No. 72–678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, perform repeat inspections at the earliest occurrence of the requirements of Table 14, 15, or 16 of this AD, as applicable, based on elapsed calendar time from the effective date of this AD, as specified in paragraph (c)(5)(vi) of this AD.

TABLE 14

First piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 1,500 CSLI and 5,000 CSN.

TABLE 15

First piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 1,500 CSLI and 5,000 CSN, and before:

9,500 CSN, if spool CALI is 0–7,000, or
2,500 CSLI, if spool CALI is 7,001–8,000, or
10,500 CSN, if spool CALI is 8,001–8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

TABLE 16

First piece-part exposure after both 1,000 CSLI and 5,000 CSN, but not later than the first ESV after both 1,500 CSLI and 5,000 CSN, and before:

5,000 CSN, if spool CALI is 0–1,500, or
3,500 CSLI, if spool CALI is 1,501–5,000, or
8,500 CSN, if spool CALI is 5,001–5,500, or
3,000 CSLI, if spool CALI is 5,501–6,500, or
9,500 CSN, if spool CALI is 6,501–7,000, or
2,500 CSLI, if spool CALI is 7,001–8,000, or
10,500 CSN, if spool CALI is 8,001–8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

(iii) Thereafter, inspect HPCR stage 3–9 spools at intervals not to exceed the earliest occurrence shown in Table 14, Table 15, or Table 16 of this AD, as applicable, based on the elapsed calendar time from the effective date of this AD, as specified in paragraph (c)(6)(vi) of this AD.

(iv) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by GE CF6–80A SB No. 72–678, Revision 1, dated August 8, 1996, and replace with a serviceable part.

(v) HPCR stage 3–9 spools with a CSN of 10,500 or greater may not be put back in service after an ESV.

(vi) Use the Tables as follows:

(A) Use Table 14 from the effective date of this AD to 18 months from the effective date of this AD.

(B) Use Table 15 after 18 months from the effective date of this AD to 36 months from the effective date of this AD.

(C) Use Table 16 after 36 months from the effective date of this AD.

(7) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/N 9136M89G28 installed in GE CF6–80A/A1/A2/A3 series engines. Perform the inspections in accordance with GE CF6–80A SB No. 72–678, Revision 1, dated August 8, 1996, as follows:

(i) For HPCR stage 3–9 spools that have not been previously inspected using the procedures in GE SB No. 72–500, Revision 6, dated December 22, 1995; or SB No. 72–583, Revision 5, dated December 22, 1995; or SB No. 72–678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, or any of the combinations of service documents specified by Table 7 of this AD, inspect at the first piece-part exposure after both 1,000 CSN and the effective date of this AD.

(ii) For HPCR stage 3–9 spools that have been previously inspected using the procedures in GE SB No. 72–500, Revision 6, dated December 22, 1995; or SB No. 72–583, Revision 5, dated December 22, 1995; or SB No. 72–678, Revision 1, dated July 29, 1996, or any earlier versions of these SBs, or any of the service documents listed in Table 7 of this AD, inspect at first piece-part exposure after both 1,000 CSLI and 5,000 CSN.

(iii) Thereafter, inspect HPCR stage 3–9 spools at piece-part exposure after both 1,000 CSLI and 5,000 CSN.

(iv) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by GE CF6–80A SB No. 72–678, Revision 1, dated August 8, 1996, and replace with a serviceable part.

(d) For HPCR stages 3–9 spools installed in GE CF6–80C2 series engines, eddy current and ultrasonic inspect for cracks as follows:
(1) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/Ns 1333M66G01, 1333M66G03, 1333M66G07, 1333M66G09, 1333M66G10, 1781M52P01, 1781M53G01, 1854M95P01, 1854M95P02, 1854M95P03, 1854M95P04, 1854M95P05, 1854M95P06, and 9380M28P05 installed in GE CF6–80C2 series engines, as follows:

(i) Perform eddy current and ultrasonic inspections in accordance with GE CF6–80C2 SB No. 72–934, Original, dated June 10, 1998, at the next piece-part exposure after 1,000 CSN.

(ii) Perform eddy current and ultrasonic inspections in accordance with GE CF6–80C2 ASB No. 72–A848, Revision 2, dated March 12, 1998, at the next piece-part exposure after 1,000 CSN.

(iii) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by the SB No. 72–934, Original, dated June 10, 1998 or ASB No. 72–A848, Revision 2, dated March 12, 1998, as applicable and replace with a serviceable part.

(2) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/Ns 1781M52P01, 1854M95P02, 1854M95P05, and 9380M28P05 installed in GE CF6–80C2 series engines. Perform the inspections in accordance with GE CF6–80C2 SB No. 72–812, Revision 1, dated January 30, 1998, as follows:

(i) For HPCR stage 3–9 spools that have not been previously inspected using the procedures in GE SB No. 72–418, Revision 4, dated December 22, 1995; or SB No. 72–758, Revision 1, dated December 22, 1995; or SB No. 72–812, Revision 1, dated January 30, 1998, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN but prior to accumulating 3,500 CSN, or prior to exceeding 30 days from the effective date of this AD, whichever occurs later.

(ii) For HPCR stage 3–9 spools that have been previously inspected using the procedures in GE SB No. 72–418, Revision 4, dated December 22, 1995; or SB No. 72–758, Revision 1, dated December 22, 1995; or SB No. 72–812, Revision 1, dated January 30, 1998, or any earlier versions of these SBs, perform repeat inspections at the earliest occurrence of the requirements of Table 17, 18, or 19 of this AD, as applicable, based on elapsed calendar time from the effective date of this AD, as specified in paragraph (d)(2)(vi) of this AD.

TABLE 17

First piece-part or module level exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN, and before 3,500 CSLI.

TABLE 18

First piece-part or module level exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN, and before:

3,500 CSLI, if spool CALI is 0–6,500, or
9,500 CSN, if spool CALI is 6,501–7,000, or
2,500 CSLI, if spool CALI is 7,001–8,000, or
10,500 CSN, if spool CALI is 8,001–8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

TABLE 19

First piece-part or module level exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN, and before:

3,500 CSLI, if spool CALI is 0–5,000, or
 8,500 CSN, if spool CALI is 5,001–5,500, or
 3,000 CSLI, if spool CALI is 5,501–6,500, or
 9,500 CSN, if spool CALI is 6,501–7,000, or
 2,500 CSLI, if spool CALI is 7,001–8,000, or
 10,500 CSN, if spool CALI is 8,001–8,500, or
 2,000 CSLI, if spool CALI is greater than 8,500.

(iii) Thereafter, inspect HPCR stage 3–9 spools at intervals not to exceed the earliest occurrence shown in Table 17, Table 18, or Table 19 of this AD, as applicable, based on the elapsed calendar time from the effective date of this AD, as specified in paragraph (d)(2)(vi) of this AD.

(iv) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by GE CF6–80C2 SB No. 72–812, Revision 1, dated January 30, 1998, and replace with a serviceable part.

(v) HPCR stage 3–9 spools with a CSN of 10,500 or greater may not be put back in service after an ESV.

(vi) Use the Tables as follows:

(A) Use Table 17 from the effective date of this AD to 18 months from the effective date of this AD.

(B) Use Table 18 after 18 months from the effective date of this AD to 36 months from the effective date of this AD.

(C) Use Table 19 after 36 months from the effective date of this AD.

(3) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/Ns 1333M66G01, 1333M66G03, 1333M66G07, 1333M66G09, 1781M53G01, 1854M95P01, 1854M95P03, 1854M95P04, and 1854M95P06 installed in GE CF6–80C2 series engines. Perform the inspections in accordance with GE CF6–80C2 SB No. 72–812, Revision 1, dated January 30, 1998, as follows:

(i) For HPCR stage 3–9 spools that have not been previously inspected using the procedures in GE SB No. 72–418, Revision 4, dated December 22, 1995; or SB No. 72–758, Revision 1, dated December 22, 1995; or SB No. 72–812, Revision 1, dated January 30, 1998, or any earlier versions of these SBs, inspect at the first piece-part exposure after 1,000 CSN but not later than the first ESV after 3,000 CSN, provided, however, from 18 to 36 months after the effective date of this AD, inspect not later than 9,500 CSN, and after 36 months after the effective date of this AD, inspect not later than 3,500 CSN.

(ii) For HPCR stage 3–9 spools that have been previously inspected using the procedures in GE SB No. 72–418, Revision 4, dated December 22, 1995; or SB No. 72–758, Revision 1, dated December 22, 1995; or SB No. 72–812, Revision 1, dated January 30, 1998, or any earlier versions of these SBs, perform repeat inspections at the earliest occurrence of the requirements of Table 20, 21, or 22 of this AD, as applicable, based on elapsed calendar time from the effective date of this AD, as specified in paragraph (d)(3)(vi) of this AD.

TABLE 20

First piece-part or module level exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN.

TABLE 21

First piece-part or module level exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN, and before:

9,500 CSN, if spool CALI is 0–7,000, or
 2,500 CSLI, if spool CALI is 7,001–8,000, or
 10,500 CSN, if spool CALI is 8,001–8,500, or
 2,000 CSLI, if spool CALI is greater than 8,500.

TABLE 22

First piece-part or module level exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN, and before:

3,500 CSLI, if spool CALI is 0–5,000, or
 8,500 CSN, if spool CALI is 5,001–5,500, or
 3,000 CSLI, if spool CALI is 5,501–6,500, or
 9,500 CSN, if spool CALI is 6,501–7,000, or
 2,500 CSLI, if spool CALI is 7,001–8,000, or
 10,500 CSN, if spool CALI is 8,001–8,500, or
 2,000 CSLI, if spool CALI is greater than 8,500.

(iii) Thereafter, inspect HPCR stage 3–9 spools at intervals not to exceed the earliest occurrence shown in Table 21, Table 22, or Table 23 of this AD, as applicable, based on elapsed calendar time from the effective date of this AD, as specified in paragraph (d)(3)(vi) of this AD.

(iv) Remove from service prior to further flight HPCR stage 3–9 spools that equal or exceed the reject criteria established by GE CF6–80C2 SB No. 72–812, Revision 1, dated January 30, 1998, and replace with a serviceable part.

(v) HPCR stage 3–9 spools with a CSN of 10,500 or greater may not be put back in service after an ESV.

(vi) Use the Tables as follows:

(A) Use Table 21 from the effective date of this AD to 18 months from the effective date of this AD.

(B) Use Table 22 after 18 months from the effective date of this AD to 36 months from the effective date of this AD.

(C) Use Table 23 after 36 months from the effective date of this AD.

(4) Eddy current and ultrasonic inspect for cracks HPCR stage 3–9 spools with P/N 1333M66G10 installed in GE CF6–80C2 series engines. Perform the inspections in accordance with GE CF6–80C2 SB No. 72–812, Revision 1, dated January 30, 1998, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE SB No. 72-418, Revision 4, dated December 22, 1995; or SB No. 72-758, Revision 1, dated December 22, 1995; or SB No. 72-812, Revision 1, dated January 30, 1998, or any earlier versions of these SBs, or any of the combinations of service documents specified by Table 7 of this AD, inspect at the first piece-part exposure after both 1,000 CSN and the effective date of this AD.

(ii) For HPCR stage 3-9 spools that have been previously inspected using the procedures in GE SB No. 72-418, Revision 4, dated December 22, 1995; or SB No. 72-758, Revision 1, dated December 22, 1995; or SB No. 72-812, Revision 1, dated January 30, 1998, or any earlier versions of these SBs, or any of the combinations of service documents specified by Table 7 of this AD, inspect at first piece part exposure after both 1,000 CSLI and 3,500 CSN.

(iii) Thereafter, inspect HPCR stage 3-9 spools at piece part exposure after both 1,000 CSLI and 3,500 CSN.

(iv) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by GE CF6-80C2 SB No. 72-812, Revision 1, dated January 30, 1998, and replace with a serviceable part.

(e) For HPCR stages 3-9 spools installed in GE CF6-80E1 series engines, eddy current and ultrasonic inspect for cracks as follows:

(1) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/Ns 1669M22G01, 1669M22G03, 1782M22G01, 1782M22G02, and 1782M22G04 installed in GE CF6-80E1 series engines, as follows:

(i) Perform eddy current and ultrasonic inspections in accordance with GE CF6-80E1 SB No. 72-137, Original, dated June 9, 1998, at the next piece-part exposure after 1,000 CSN.

(ii) Perform eddy current and ultrasonic inspections in accordance with GE CF6-80E1 ASB No. 72-A126, Revision 1, dated March 31, 1998, at the next piece-part exposure after 1,000 CSN.

(iii) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by SB No. 72-137, Original, dated June 9, 1998 or ASB No. 72-A126, Revision 1, dated March 31, 1998, as applicable, and replace with a serviceable part.

(2) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/Ns 1669M22G01, 1669M22G03, 1782M22G01, and 1782M22G02 installed in GE CF6-80E1 series engines. Perform the inspections in accordance with GE CF6-80E1 ASB No. 72-A135, Original, dated August 13, 1998, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected in accordance with in accordance GE CF6-80E1 ASB No. 72-A135, Original, dated August 13, 1998, or any of the combinations of service documents specified by Table 7 of this AD, inspect HPCR stage 3-9 spools at the first piece-part exposure after 1,000 CSN, but not later than the first ESV after 3,000 CSN, provided, however, from 18 to 36 months after the effective date of this AD, inspect not later than 9,500 CSN, and after 36 months after the effective date of this AD, inspect not later than 3,500 CSN.

(ii) For HPCR stage 3-9 spools that have been previously inspected in accordance with GE CF6-80E1 ASB No. 72-A135, Original, dated August 13, 1998, or any of the combinations of service documents specified by Table 7 of this AD, perform repeat inspections at the earliest occurrence of the requirements of Table 24, 25, or 26 of this AD, as applicable, based on elapsed calendar time from the effective date of this AD, as specified in paragraph (e)(2)(vi) of this AD.

TABLE 24

First piece-part or module level exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN.

TABLE 25

First piece-part or module level exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN, and before:

9,500 CSN, if spool CALI is 0-7,000, or
2,500 CSLI, if spool CALI is 7,001-8,000, or
10,500 CSN, if spool CALI is 8,001-8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

TABLE 26

First piece-part or module level exposure after both 1,000 CSLI and 3,500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN, and before:

3,500 CSLI, if spool CALI is 0-5,000, or
8,500 CSN, if spool CALI is 5,001-5,500, or
3,000 CSLI, if spool CALI is 5,501-6,500, or
9,500 CSN, if spool CALI is 6,501-7,000, or
2,500 CSLI, if spool CALI is 7,001-8,000, or
10,500 CSN, if spool CALI is 8,001-8,500, or
2,000 CSLI, if spool CALI is greater than 8,500.

(iii) Thereafter, inspect HPCR stage 3-9 spools at intervals not to exceed the earliest occurrence shown in Table 24, Table 25, or Table 26 of this AD, as applicable, based on the elapsed calendar time from the effective date of this AD, as specified in paragraph (e)(2)(vi) of this AD.

(iv) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by GE CF6-80E1 ASB No. 72-A135, Original, dated August 13, 1998, and replace with a serviceable part.

(v) HPCR stage 3-9 spools with a CSN of 10,500 or greater may not be put back in service after an ESV.

(vi) Use the Tables as follows:

(A) Use Table 24 from the effective date of this AD to 18 months from the effective date of this AD.

(B) Use Table 25 after 18 months from the effective date of this AD to 36 months from the effective date of this AD.

(C) Use Table 26 after 36 months from the effective date of this AD.

(3) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/N 1782M22G04 installed in GE CF6-80E1 series engines. Perform the inspections in accordance GE CF6-80E1 ASB No. 72-A135, Original, dated August 13, 1998, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected in accordance with any of the service documents listed in Table 24 of this AD, inspect at first piece-part exposure after both 1,000 CSN and the effective date of this AD.

(ii) Thereafter, inspect at first piece part exposure after both 1,000 CSLI and 3,500 CSN.

(iii) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by GE CF6-80E1 ASB No. 72-A135, Original, dated August 13, 1998, and replace with a serviceable part.

(f) Report within 5 calendar days of inspection the results of inspections that equal or exceed the reject criteria to: William Ricci, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (718) 238-7742, fax (781) 238-7199, as follows:

- (1) Engine model in which the HPCR stage 3-9 spool was installed;
- (2) P/N;
- (3) S/N;
- (4) Part CSN;
- (5) Part CSLI;
- (6) Date and location of inspection.

Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056.

(g) For the purpose of this AD, a serviceable part for installation in an engine is defined as an HPCR stage 3-9 spool with less than 1,000 CSN or with less than 1,000 CSLI, in accordance with the inspection and pass/fail criteria contained in the applicable service documents or combinations of service documents provided by Table 27 of this AD.

TABLE 27

GE CF6-50 SB No. 72-888, Revision 3, dated January 31, 1991,
 GE CF6-50 SB No. 72-888, Revision 4, dated March 28, 1991,
 GE CF6-50 SB No. 72-888, Revision 5, dated November 7, 1994,
 GE CF6-50 SB No. 72-888, Revision 6, dated December 22, 1995,
 GE CF6-50 SB No. 72-1000, Original, dated December 14, 1990,
 GE CF6-50 SB No. 72-1000, Revision 1, dated March 28, 1991,
 GE CF6-50 SB No. 72-1000, Revision 2, dated September 9, 1993,
 GE CF6-50 SB No. 72-1000, Revision 3, dated December 22, 1995,
 GE CF6-50 SB No. 72-1108, Original, dated November 6, 1995,
 GE CF6-50 SB No. 72-1108, Revision 1, dated July 29, 1996,
 GE CF6-80A SB No. 72-500, Revision 3, dated March 19, 1991,
 GE CF6-80A SB No. 72-500, Revision 4, dated July 1, 1991,
 GE CF6-80A SB No. 72-500, Revision 5, dated November 7, 1994,
 GE CF6-80A SB No. 72-500, Revision 6, dated December 22, 1995,
 GE CF6-80A SB No. 72-583, Original, dated December 20, 1990,
 GE CF6-80A SB No. 72-583, Revision 1, dated March 18, 1991,
 GE CF6-80A SB No. 72-583, Revision 2, dated July 15, 1991,
 GE CF6-80A SB No. 72-583, Revision 3, dated July 24, 1991,
 GE CF6-80A SB No. 72-583, Revision 4, dated September 15, 1993,
 GE CF6-80A SB No. 72-583, Revision 5, dated December 22, 1995,
 GE CF6-80A SB No. 72-678, Original, dated November 6, 1995,
 GE CF6-80A SB No. 72-678, Revision 1, dated July 29, 1996,
 GE CF6-80C2 SB No. 72-418, Revision 2, May 14, 1991,
 GE CF6-80C2 SB No. 72-418, Revision 3, November 7, 1994,
 GE CF6-80C2 SB No. 72-418, Revision 4, December 22, 1995,
 GE CF6-80C2 SB No. 72-758, Original, dated November 7, 1994,
 GE CF6-80C2 SB No. 72-758, Revision 1, dated December 22, 1995,
 GE CF6-80C2 SB No. 72-812, Original, dated November 6, 1995,
 GE CF6-80C2 SB No. 72-812, Revision 1, dated January 30, 1998,
 GE CF6-80E1 ASB No. 72-A135, Original, dated August 13, 1998,

Either any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70-32-09, Revision 71, dated October 1, 1995,
 CF6 Standard Practice Manual GEK9250 Procedures 70-32-09, Revision 72, dated November 15, 1996,
 CF6 Standard Practice Manual GEK9250 Procedures 70-32-09, Revision 74, dated May 1, 1998,

and any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70-32-10, Revision 71, dated October 1, 1995,
 CF6 Standard Practice Manual GEK9250 Procedures 70-32-10, Revision 72, dated November 15, 1996,
 CF6 Standard Practice Manual GEK9250 Procedures 70-32-10, Revision 74, dated May 1, 1998;

or any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70-32-13, Revision 70-25, dated August 26, 1996,
 CF6 Standard Practice Manual GEK9250 Procedures 70-32-13, Revision 72, dated November 15, 1996,
 CF6 Standard Practice Manual GEK9250 Procedures 70-32-13, Revision 73, dated November 1, 1997,

and any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70-32-14, Revision 70-26, dated August 26, 1996,
 CF6 Standard Practice Manual GEK9250 Procedure 70-32-14, Revision 72, dated November 15, 1996,
 CF6 Standard Practice Manual GEK9250 Procedure 70-32-14, Revision 73, dated November 1, 1997.

(h) For the purpose of this AD, core module exposure is defined as separation of the fan module from the engine.

(i) For the purpose of this AD, piece-part exposure is defined as disassembly and removal of the stage 3-9 spool from the HPC rotor structure, regardless of any blades, locking lugs, bolts or balance weights assembled to the spool.

(j) For the purpose of this AD, an ESV is defined as the introduction of an engine into a shop where the separation of a major engine flange will occur after the effective date of this AD. The following maintenance actions are not considered ESVs for the purpose of this AD:

- (1) Introduction of an engine into a shop solely for removal of the compressor top case for airfoil maintenance;
- (2) Introduction of an engine into a shop solely for removal or replacement of the Stage 1 Fan Disk;
- (3) Introduction of an engine into a shop solely for replacement of the Turbine Rear Frame;
- (4) Introduction of an engine into a shop solely for replacement of the Accessory and/or Transfer Gearboxes;

(5) Introduction of an engine into a shop for any combination of the above specified exceptions.

(k) 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.

(l) 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.

Issued in Burlington, Massachusetts, on November 17, 1998.

Jay J. Pardee,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 98-31437 Filed 11-24-98; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 97-CE-32-AD]

RIN 2120-AA64

Airworthiness Directives; The New Piper Aircraft, Inc. Models PA-31, PA-31-300, PA-31-325, PA-31-350, and PA-31P-350 Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes to adopt a new airworthiness directive (AD) that would apply to certain The New Piper Aircraft, Inc. (Piper) Models PA-31, PA-31-300, PA-31-325, PA-31-350, and PA-31P-350 airplanes. The proposed AD would require installing access holes for the inspection of the elevator spar; inspecting the elevator ice protection boots for looseness and reinstalling or replacing the elevator ice protection boots if looseness is found. The proposed AD also requires repetitively inspecting the elevator spars for cracks, and replacing the elevators or elevator spar assemblies with parts of improved design either at a certain time period or when cracks are found, whichever occurs first. The proposed AD is the result of reports of cracks developing in the elevator spar inboard of the outboard hinge location on the affected airplanes. The actions specified by the proposed AD are intended to prevent failure of the elevator spar caused by fatigue cracking, which could result in reduced airplane controllability.

DATES: Comments must be received on or before January 27, 1999.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 97-CE-32-AD, Room 1558, 601 E. 12th Street,

Kansas City, Missouri 64106. Comments may be inspected at this location between 8 a.m. and 4 p.m., Monday through Friday, holidays excepted.

Service information that applies to the proposed AD may be obtained from The New Piper Aircraft, Inc., Customer Services, 2926 Piper Drive, Vero Beach, Florida 32960. This information also may be examined at the Rules Docket at the address above.

FOR FURTHER INFORMATION CONTACT:

William Herderich, Aerospace Engineer, FAA, Atlanta Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6084; facsimile: (770) 703-6097.

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 notice 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 that summarizes 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 notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to

Docket No. 97-CE-32-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 97-CE-32-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

Discussion

The FAA has received several reports of cracks in the elevator spar inboard of the outboard hinge attachment location on Piper Models PA-31, PA-31-300, PA-31-325, PA-31-350, and PA-31P-350 airplanes. Initiation of these cracks is at the end rivets in the reinforcement doubler on the aft surface of the spar. These cracks are occurring at the end row of rivets that attach the spar and reinforcement doubler. The FAA has also received reports of cracks at the outboard end of the spar.

Poorly installed or maintained ice protection boots on the affected airplanes may aggravate the occurrence and growth of these cracks. If these ice protection boots become loose, they may set up a vibration and promote fatigue cracking of the elevator spar.

These conditions, if not corrected in a timely manner, could result in failure of the elevator spar with reduced airplane controllability.

Relevant Service Information

Piper has issued Service Bulletin No. 998A, dated August 4, 1997, which specifies procedures for installing access holes for the inspection of the elevator spar; inspecting the elevator ice protection boots for looseness and reinstalling or replacing the elevator ice protection boots if looseness is found; and repetitively inspecting the elevator spars for cracks.

The FAA's Determination

After examining the circumstances and reviewing all available information related to the incidents described above,