

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [64 FR 66554 11/29/99]

[Docket No. 95-ANE-39; Amendment 39-11440; AD 99-24-15]

RIN 2120-AA64

Airworthiness Directives; General Electric Company CF6 Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes 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 amendment defines more aggressive inspection intervals for certain HPCR stage 3-9 spools, adds CF6-80E1 engines to the inspection program, adds inspection requirements for spools manufactured from 8 inch diameter billet, adds inspection requirements for stage 3-5 blade slot bottoms, and adds inspection requirements for web and hub-to-web transition areas. This amendment 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 this 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: Effective January 28, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 28, 2000.

ADDRESSES: The service information referenced in this AD 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 Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA 01803-5299; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

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: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 95-23-03, Amendment 39-9423 (60 FR 57803, November 21, 1995), which is applicable to General Electric Company (GE) CF6-45, -50, -80A, -80C2 and -80E1 series turbofan engines, was published in the Federal Register on November 25, 1998 (63 FR 65136). That action proposed to define more aggressive inspection intervals for certain high

pressure compressor rotor (HPCR) stage 3-9 spools, add CF6-80E1 engines to the inspection program, add inspection requirements for spools manufactured from 8-inch diameter billet forgings, 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.

Comments Received

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

Request for Clarification

One commenter states that the proposed rule needs simplification and clarification. The FAA concurs in part. The FAA has outlined the organization of the compliance paragraphs in Note 2 of the Compliance Section. The FAA has added paragraph headings and references to applicable paragraphs for all Tables.

Request for Longer Transition Times

One commenter requests longer transition times, for example, by changing transition times that appear in the proposal as "from 18 to 24 months" to read "from 36 to 48 months." The FAA does not concur, as no substantiating data was included with this comment and extensions to the transition times would increase risks to an unacceptable level .

Request for Extended Effective Date

One commenter requests that the final rule be published at least 60 days prior to the effective date. Two operators request that GE compliance aid software be available 60 days before date the AD becomes effective. The FAA concurs in part. The effective date of the AD has been set to 60 days from the date that the AD is published. GE is planning to offer to their customers computer software that will forecast spool cycles since new and cycles since last inspection and automatically compare those projections with the spool inspection limits in effect at any time in the future. In particular, the software would look at the transition plan change points to identify spools that will be affected when the next phase is effective. GE's intention is to have the software available concurrently with the publication of the AD, allowing 60 days to introduce the software before the AD becomes effective.

Comment on Economic Analysis

One commenter states that additional information should be included in the economic analysis, such as the cost of repeat inspection, cost of forced engine removals, cost of lost life for early replacement of spools, and incremental cost of early shop visits forced by inspection. The FAA concurs in part. The work hours stated in the proposed rule was based on an estimated average for a spool that includes the forecast percentage of forced engine removals and the incremental shop disassembly time for three inspections during a spool lifetime. The 10,500 cycle since new (CSN) reinstallation limit will affect approximately 68% of the spools. The average part lost life for all affected spools is estimated to be 12%. At the current catalogue price the total lost life for the 1,197 engines installed on US registered aircraft is \$18,948,989. In addition, the cost of the stage 3-5 dovetail slot bottom and the stage 6-9 web repeat inspections is estimated to be 8 work hours at \$60 per work hour for 389 engines installed on US registered aircraft, totaling \$186,720. The FAA has revised the economic analysis accordingly.

Earlier Versions of Service Bulletins

One commenter states that web and slot bottom inspections performed in accordance with earlier revisions of the Service Bulletins (SBs) are evidence of compliance with the web and slot bottom inspections performed in accordance with the revisions of the SBs incorporated by reference in the AD. The FAA concurs. All changes to the web and web-to-hub transition inspection SBs and to the dovetail slot bottom inspection SBs to date have been administrative. Therefore, inspections performed to all revisions to date of those SBs are technically equivalent. Also, the FAA has added references to these earlier SBs for web and dovetail slot inspections.

Standard Practice Manuals

One commenter states that paragraph (g) of the Compliance Section should not reference specific revisions to Standard Practice Manuals because they may change, or specify working or later revision to the Standard Practice Manuals. The FAA does not concur. It is necessary to include references to the Standard Practice inspection procedures in Table 26 of the Compliance Section because some of the newer spool part numbers were not included in the earlier inspection SBs. Some of these parts have been inspected to the Standard Practices procedures in accordance with the Shop or Engine Manual serviceability inspection instructions. The inclusion of these Standard Practice procedures in Table 26 will enable operators to consider these inspections as compliance to the new AD. The references to the Standard Practices in Table 26 will only be applicable to spool inspections already completed. For the future, all parts requiring inspection under this AD will be included in the SBs also listed in Table 26 and inspections of those parts will be done to the SB requirements which will specify the Standard Practice procedures to be used. Any future approved changes to the Standard Practice procedures will be accompanied by revisions to the applicable SBs and will be processed as alternate methods of compliance (AMOC), if appropriate.

AMOCs

One commenter states that paragraph (k) of the Compliance Section should allow AMOC approved for the current AD 95-23-03 to be valid for compliance to the proposed rule. The FAA does not concur. Previously approved AMOC to AD 95-23-03 may not be considered as AMOC to this AD. However, these AMOC have been reviewed and all service documents that have been approved as AMOC for AD 95-23-03 were considered in formulating this new rule.

Table 26 Changes (Serviceable Spool)

One commenter states that web and slot bottom inspection SBs should be included in Table 26 of the Compliance Section, which defines the requirements for a serviceable spool. The FAA concurs. These SBs have been added to Table 26 of this final rule.

Engine Cycles vs. Calendar Time

One commenter states that the implementation of the transition plan should be governed by engine cycles rather than calendar time. The FAA does not concur. The use of engine cycles to control this aspect of the transition plan was considered. However, the goal of the overall transition plan is to maximize safety by transitioning to the new inspection plan as quickly as shop capacity permits. Calendar time limits were established to achieve that maximum rate of compliance within the limitations of shop capacity and spare engines for the operators most affected by the program.

Consistent Terminology

One commenter states that consistent terminology should be used throughout the AD. Specifically, the inspection tables use the term "module level exposure" but paragraph (h) only defines "core module

exposure." The FAA concurs. Paragraph (h) has been changed to define the term "module level exposure" in this final rule.

Request to Change Docket Number

One commenter states that the use of the same docket number (95-ANE-39) for the proposed rule was used for AD 95-23-03 and is confusing to airline computer systems and requests that this AD be given a new docket number. The FAA does not concur. All ADs related to the same unsafe condition are included in the same docket file to facilitate tracking of the history of an issue. The AD number in this final rule has changed but the docket number will remain the same.

Short Haul Operators' Concerns

One commenter states that the use of hard cyclic intervals has a significant impact on short haul operators. The comment implies that the proposal should provide relief for short haul operators by making the compliance intervals unrelated to engine cycles. The FAA does not concur. The underlying spool cracking is related to low cycle fatigue. The greater the number of cycles accumulated, the greater the risk for fatigue induced failure. Therefore, short haul operators or operators with fleets that accumulate a large number of cycles per year are more significantly at risk of spool failure. Hard time limits reflect the increased risk with increased cyclic exposure of the spools.

Reporting Requirement

One commenter requests that the reporting requirement for spools with rejectable inspections be changed to 5 calendar days from the time written notification is received from the inspection facility. The FAA does not concur and believes that 5 days from the detection of a rejectable indication is adequate for the reporting requirement.

Correcting Table References

One commenter notes that some Table references are incorrect. The FAA concurs and has corrected the Table references in this final rule.

Reinspection Limit Changes

One commenter states that the reinspection limits should be changed to be consistent with initial inspection limits. The FAA concurs. Tables 4, 5, and 6 have been changed to become consistent with paragraph (b)(4)(ii). Paragraph (c)(5)(i) has been revised from 3,500 CSN to 5,000 CSN to make the text consistent with Tables 11, 12, and 13. Paragraph (c)(6)(i) has been revised from 3,500 CSN to 5,000 CSN to make the text consistent with Tables 14, 15, and 16.

Spools Manufactured from 8-inch Diameter Billet 2-piece Forgings

One commenter states that repeat inspection requirements for spools manufactured from 8-inch diameter billet 2-piece forgings should be deleted. The FAA concurs. Cracks have not been observed to date in spools manufactured from 8-inch diameter billet forgings. The manufacturer has provided metallurgical and mechanical property data to the FAA indicating that dwell time fatigue cracks will not occur during the life of CF6 spools manufactured from 8" diameter billet forgings. This final rule deletes the repeat inspection requirements for spools manufactured from 8" diameter billet forgings.

Complexity of Inspection Intervals

One commenter states that the inspection intervals are complex. The commenter prefers that the repetitive inspection intervals not be based on Cycles At Last Inspection (CALI). The FAA does not concur. The inspection intervals are complicated but reflect the increased risk with increased cyclic exposure. Therefore, a repetitive inspection interval based on CALI is appropriate.

Additional Part Numbers

One commenter states that additional part numbers (P/Ns) should be added to the Applicability Section. The FAA concurs. These P/Ns, added since the publication of the proposed rule, identify spools that have been repaired for wear in the seal wire grooves. In the Applicability Section and paragraph (d) of this final rule, P/Ns 1854M95P07 and 1854M95P08 have been added.

Latest Revisions to Service Documents

One commenter states that the latest revisions to GE service documents revised to include new P/Ns, new inspection procedures, and new repeat inspection requirements should be included. The FAA concurs and the latest revisions to date of the GE service documents have been included in this final rule.

Reinspection Threshold for CF6-80A 13-inch Billet Diameter Spools

One commenter states that the reinspection threshold for the CF6-80A 13" billet diameter spools should be changed to 15,000 cycles-since-new (CSN). The FAA does not concur. Adequate substantiation for changing the inspection requirements for these spools, which is required by the current AD 95-23-03, has not been provided.

Repeat Inspection Requirements

One commenter states that repeat inspection requirements for certain stage 3-5 dovetail slot bottoms (CF6-50 16" billet, CF6-80A 16" billet, CF6-80C2 13" billet and CF6-80E1 9/10" billet spools), stage 3-5 bores (CF6-50 16" billet, CF6-80A 16" billet, CF6-80C2 13" billet and CF6-80E1 9/10" billet spools) and stage 6-9 webs and web-to-hub transition areas (CF6-80C2 13" billet, CF6-80C2 9/10" billet, and CF6-80E1 9/10" billet spools), should be added to the AD. The commenter also states that a 4,000 CIS limit on the number of cycles that could be accumulated between inspections should be added to the inspection program for CF6-50 and CF6-80A spools manufactured from 13" billet. The FAA concurs. The need for these added inspections and cyclic limits was prompted by recent inspection results and an assessment of the existing inspection program to prevent spool cracking and separation.

Engine Shop Visit Definition

One commenter states that fan forward case replacement should be exempted from the engine shop visit definition. The FAA concurs. The fan forward case replacement condition has been removed from the engine shop visit definition in this final rule.

Revised Economic Analysis

In this final rule, the economic impact has been changed in response to the comment on the economic analysis. 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 will be affected by this AD, that it will take approximately 219 work hours per engine to accomplish the required inspections. The total prorated life reduction on affected engines is approximately \$18,948,989. Therefore, the revised total estimated cost of this AD on U.S. operators is \$34,677,569.

Conclusion

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

Regulatory Impact

This rule does not have federalism implications, as defined in Executive Order No. 13132, because it does 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 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 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 removing Amendment 39-9423 (60 FR 57803, November 21, 1995) and by adding a new airworthiness directive, Amendment 39-11440, to read as follows:

AIRWORTHINESS DIRECTIVE



REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
**Federal Aviation
Administration**

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, 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).

99-24-15 General Electric Company: Amendment 39-11440. Docket 95-ANE-39. Supersedes AD 95-23-03, Amendment 39-9423. Issued October 18, 1999.

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, 1669M22G03, 1781M52P01, 1781M53G01, 1782M22G01, 1782M22G02, 1782M22G04, 1854M95P01, 1854M95P02, 1854M95P03, 1854M95P04, 1854M95P05, 1854M95P06, 1854M95P07, 1854M95P08, 9136M89G02, 9136M89G03, 9136M89G06, 9136M89G07, 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:

Abbreviations

- (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.

CF6-45/50 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:

(1) 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:

Dovetail Slot Bottom Inspection

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-50 Alert Service Bulletin (ASB) No. 72-A1157, Revision 1, dated October 28, 1999 or any earlier version of this SB, perform eddy current and ultrasonic inspections in accordance with GE CF6-50 ASB No. 72-A1157, Revision 1, dated October 28, 1999, at the next piece-part exposure after 1,000 CSN

(ii) For HPCR stage 3-9 spools with P/Ns 9136M89G08, 9253M85G02, 9273M14G01, and 9331M29G01 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, that have been previously inspected using the procedures in GE CF6-50 ASB No. 72-A1157, Revision 1, dated October 28, 1999 or any earlier version of this ASB, perform repeat inspections in accordance with GE CF6-50 ASB No 72-A1157, Revision 1, dated October 28, 1999, at piece-part exposure after 1,000 CSLI and 3,500 CSN.

Web and Web-to-Hub Transition Area Inspection

(iii) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-50 ASB No. 72-A1131, Revision 2, dated October 28, 1999 or any earlier version of this ASB, perform eddy current and ultrasonic inspections in accordance with GE CF6-50 ASB No. 72-A1131, Revision 2, dated October 28, 1999, at the next piece-part exposure after 1,000 CSN.

(iv) Remove from service, prior to further flight, HPCR stage 3-9 spools that equal or exceed the reject criteria established by ASB No. 72-A1157, Revision 1, dated October 28, 1999, or ASB No. 72-A1131, Revision 2, dated October 28, 1999, as applicable, and replace with a serviceable part.

Spools Manufactured from 16-inch Diameter Billet Forgings

(2) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/Ns 9136M89G08, 9253M85G02, 9273M14G01, and 9331M29G01 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 ASB No. 72-A1108, Revision 3, dated November 12, 1999, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE Service Bulletin (SB) No. 72-888, Revision 6, dated December 22, 1995; or SB No. 72-1000, Revision 3, dated December 22, 1995; or ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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 3, dated December 22, 1995; or ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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 (reference paragraphs (b)(2)(ii),(iii),(v))

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 (reference paragraphs (b)(2)(ii),(iii),(v))

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 (reference paragraphs (b)(2)(ii),(iii),(v))

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 ASB No. 72-A1108, Revision 3, dated November 12, 1999, and replace with a serviceable part.

(v) Use the Tables as follows:

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

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

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

Spools Manufactured from 13-inch Diameter Billet Forgings

(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 ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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 3, dated December 22, 1995; or ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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, and, after 18 months after the effective date of this AD, not later than 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 3, dated December 22, 1995; or ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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, and, after 18 months after the effective date of this AD, before 4,000 CSLI.

(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, and, after 18 months after the effective date of this AD, before 4,000 CSLI.

(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 ASB No. 72-A1108, Revision 3, dated November 12, 1999, and replace with a serviceable part.

Spools Manufactured from 9 or 10-inch Diameter Billet Forgings

(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 ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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 3, dated December 22, 1995; or ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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 19 through 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 3, dated December 22, 1995; or ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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 (reference paragraphs (b)(4)(ii),(iii),(vi))

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.

Table 5 (reference paragraphs (b)(4)(ii),(iii),(vi))

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:

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 (reference paragraphs (b)(4)(ii),(iii),(vi))

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 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 ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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 through 18 months from the effective date of this AD.

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

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

Spools Manufactured from 8-inch Diameter Billet Forgings

(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 ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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 3, dated December 22, 1995; or ASB No. 72-A1108, Revision 3, dated November 12, 1999, 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 (reference paragraphs (b)(5)(i), and (c)(7)(i), and (d)(4)(i), and (e)(3)(i))

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,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-10, Revision 75, dated December 15, 1998,

or any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70-32-13, Temporary 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,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-13, Revision 75, dated December 15, 1998,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-13, Temporary Revision 70-41, dated February 10, 1999,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-13, Revision 76, dated May 15, 1999,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-17, Temporary Revision 70-39, dated December 15, 1998,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-17, Revision 76, dated May 15, 1999,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-17, Temporary Revision 70-47, dated October 28, 1999,

and any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70-32-14, Temporary 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,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-14, Revision 75, dated December 15, 1998,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-14, Temporary Revision 70-42, dated February 10, 1999,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-14, Revision 76, dated May 15, 1999,

CF6 Standard Practice Manual GEK9250 Procedures 70-32-18, Temporary Revision No. 70-40, dated December 15, 1998.

CF6 Standard Practice Manual GEK9250 Procedure 70-32-18, Revision 76, dated May 15, 1999,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-18, Temporary Revision 70-48, dated October 28, 1999.

(ii) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by GE CF6-50 ASB No. 72-A1108, Revision 3, dated November 12, 1999, and replace with a serviceable part.

CF6-80A Series Engines

(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:

Dovetail Slot Bottom Inspection

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-80A ASB No. 72-A0719, Revision 2, dated October 28, 1999 or any earlier version of this SB, perform eddy current and ultrasonic inspections in accordance with GE CF6-80A ASB No. 72-A0719, Revision 2, dated October 28, 1999, at the next piece-part exposure after 1,000 CSN.

(ii) For 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, that have been previously inspected using the procedures in GE CF6-80A ASB No. 72-A0719, Revision 2, dated October 28, 1999, or any earlier version of this SB, perform repeat inspections in accordance with GE CF6-80A ASB No. 72-A0719, Revision 2, dated October 28, 1999, at each piece-part exposure after 1,000 CSLI and 3,500 CSN.

Web and Web-to-Hub Transition Area Inspection

(iii) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-80A ASB No. 72-A0691, Revision 3, dated October 28, 1999 or any earlier version of this SB, perform eddy current and ultrasonic inspections in accordance with GE CF6-80A ASB No. 72-A0691, Revision 3, dated October 28, 1999, at the next piece-part exposure after 1,000 CSN.

(iv) Remove from service, prior to further flight, HPCR stage 3-9 spools that equal or exceed the reject criteria established by the ASB No. 72-A0719, Revision 2, dated October

28, 1999, or ASB No. 72-A0691, Revision 3, dated October 28, 1999, as applicable, and replace with a serviceable part.

Spools Manufactured from 16-inch Diameter Billet Forgings

(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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 (reference paragraphs (c)(2)(ii),(iii),(vi))

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 (reference paragraphs (c)(2)(ii),(iii),(vi))

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 (reference paragraphs (c)(2)(ii),(iii),(vi))

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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 through 18 months from the effective date of this AD.

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

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

CF6-80A/A2 Spools Manufactured from 13-inch Diameter Billet Forgings

(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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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, and, after 18 months after the effective date of this AD, not later than 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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, and, after 18 months after the effective date of this AD, before 4,000 CSLI or 5,000 CSN, whichever is later.

(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, and, after 18 months after the effective date of this AD, before 4,000 CSLI or 5,000 CSN, whichever is later.

(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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, and replace with a serviceable part.

CF6-80A1/A3 Spools Manufactured from 13-inch Diameter Billet Forgings

(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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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, and, after 18 months after the effective date of this AD, not later than 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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, and, after 18 months after the effective date of this AD, before 4,000 CSLI or 5,000 CSN, whichever occurs later.

(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, and, after 18 months after the effective date of this AD, before 4,000 CSLI or 5,000 CSN, whichever occurs later.

(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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, and replace with a serviceable part.

CF6-80A1/A3 Spools Manufactured from 9 or 10-inch Diameter Billet Forgings

(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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 19 through 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 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 (reference paragraphs (c)(5)(ii),(iii),(vi))

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 (reference paragraphs (c)(5)(ii),(iii),(vi))

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 (reference paragraphs (c)(5)(ii),(iii),(vi))

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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 through 18 months from the effective date of this AD.

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

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

CF6-80A/A2 Spools Manufactured from 9 or 10-inch Diameter Billet Forgings

(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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 19 through 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 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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)(6)(vi) of this AD.

Table 14 (reference paragraphs (c)(6)(ii),(iii),(vi))

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 (reference paragraphs (c)(6)(ii),(iii),(vi))

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 (reference paragraphs (c)(6)(ii),(iii),(vi))

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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 through 18 months from the effective date of this AD.

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

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

Spools Manufactured from 8-inch Diameter Billet Forgings

(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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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 ASB No. 72-A0678, Revision 3, dated November 12, 1999, 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) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by GE CF6-80A ASB No. 72-A0678, Revision 3, dated November 12, 1999, and replace with a serviceable part.

CF6-80C2 Series Engines

(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, 1854M95P07, 1854M95P08, and 9380M28P05 installed in GE CF6-80C2 series engines, as follows:

Dovetail Slot Bottom Inspections

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-80C2 ASB No. 72-A0934, Revision 1, dated October 28, 1999 or any earlier version of this SB, perform eddy current and ultrasonic inspections in accordance with GE CF6-80C2 ASB No. 72-A0934, Revision 1, dated October 28, 1999, at the next piece-part exposure after 1,000 CSN.

(ii) For HPCR stage 3-9 spools with P/Ns 1781M52P01, 1854M95P02, 1854M95P05, and 9380M28P05, installed in GE CF6-80C2 series engines, that have been previously inspected using the procedures in GE CF6-80C2 ASB No. 72-A0934, Revision 1, dated October 28, 1999 or any earlier version of this SB, perform repeat inspections in accordance GE CF6-80C2 ASB No. 72-A0934, Revision 1, dated October 28, 1999, at piece-part exposure after 1,000 CSLI and 3,500 CSN.

Web and Web-to-Hub Transition Area Inspections

(iii) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-80C2 ASB No. 72-A0848, Revision 4, dated November 12, 1999 or any earlier version of this SB, perform eddy current and ultrasonic inspections in accordance with GE CF6-80C2 ASB No. 72-A0848, Revision 4, dated November 12, 1999, at the next piece-part exposure after 1,000 CSN.

(iv) For HPCR stage 3-9 spools with P/Ns 1333M66G01, 1333M66G03, 1333M66G07, 1333M66G09, 1781M52P01, 1781M53G01, 1854M95P01, 1854M95P02, 1854M95P03, 1854M95P04, 1854M95P05, 1854M95P06, 1854M95P07 and 9380M28P05, installed in GE CF6-80C2 series engines, that have been previously inspected using the procedures in GE CF6-80C2 ASB No. 72-A0848, Revision 4, dated November 12, 1999 or any earlier version of this SB, perform repeat inspections in accordance GE CF6-80C2 ASB No. 72-A0848, Revision 4, dated November 12, 1999, at piece-part exposure after 1,000 CSLI and 3,500 CSN.

(v) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by the ASB No. 72-A0934, Revision 1, dated October 28, 1999 or ASB No. 72-A0848, Revision 4, dated November 12, 1999, as applicable and replace with a serviceable part.

Spools Manufactured from 13-inch Diameter Billet Forgings

(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 ASB No. 72-A0812, Revision 2, dated October 28, 1999, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-80C2 SB No. 72-418, Revision 4, dated December 22, 1995; or SB No. 72-758, Revision 1, dated December 22, 1995; or ASB No. 72-A0812, Revision 2, dated October 28, 1999, 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 CF6-80C2 SB No. 72-418, Revision 4, dated December 22, 1995; or SB No. 72-758, Revision 1, dated December 22, 1995; or ASB No. 72-A0812, Revision 2, dated October 28, 1999, 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 (reference paragraphs (d)(2)(ii),(iii),(vi))

First piece-part or module level exposure after both 1,000 CSLI and 3500 CSN, but not later than the first ESV after both 1,500 CSLI and 3,500 CSN, and before 3,500 CSLI.

Table 18 (reference paragraphs (d)(2)(ii),(iii),(vi))

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 (reference paragraphs (d)(2)(ii),(iii),(vi))

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 ASB No. 72-A0812, Revision 2, dated October 28, 1999, 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 through 18 months from the effective date of this AD.

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

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

Spools Manufactured from 9 or 10-inch Diameter Billet Forgings

(3) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/Ns 1333M66G01, 1333M66G03, 1333M66G07, 1333M66G09, 1781M53G01, 1854M95P01, 1854M95P03, 1854M95P04, 1854M95P06, and 1854M95P07 installed in GE CF6-80C2 series engines. Perform the inspections in accordance with GE CF6-80C2 ASB No. 72-A0812, Revision 2, October 28, 1999, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-80C2 SB No. 72-418, Revision 4, dated December 22, 1995; or SB No. 72-758, Revision 1, dated December 22, 1995; or ASB No. 72-A0812, Revision 2, dated October 28, 1999, 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 19 through 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 CF6-80C2 SB No. 72-418, Revision 4, dated December 22, 1995; or SB No. 72-758, Revision 1, dated December 22, 1995; or ASB No. 72-A0812, Revision 2, dated October 28, 1999, 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 (reference paragraphs (d)(3)(ii),(iii),(vi))

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 (reference paragraphs (d)(3)(ii),(iii),(vi))

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 (reference paragraphs (d)(3)(ii),(iii),(vi))

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 20, Table 21, or Table 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.

(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 ASB No. 72-A0812, Revision 2, dated October 28, 1999, 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 20 from the effective date of this AD through 18 months from the effective date of this AD.

(B) Use Table 21 after 18 months from the effective date of this AD through 36 months from the effective date of this AD.

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

Spools Manufactured from 8-inch Diameter Billet Forgings

(4) Eddy current and ultrasonic inspect for cracks HPCR stage 3-9 spools with P/Ns 1333M66G10 and 1854M95P08 installed in GE CF6-80C2 series engines. Perform the inspections in accordance with GE CF6-80C2 ASB No. 72-A0812, Revision 2, dated October 28, 1999, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-80C2 SB No. 72-418, Revision 4, dated December 22, 1995; or SB No. 72-758, Revision 1, dated December 22, 1995; or ASB No. 72-A0812, Revision 2, dated October 28, 1999, 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) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by GE CF6-80C2 ASB No. 72-A0812, Revision 2, dated October 28, 1999, and replace with a serviceable part.

CF6-80E1 Series Engines

(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:

Dovetail Slot Bottom Inspection

(i) For HPCR stage 3-9 spools that have not been previously inspected using the procedures in GE CF6-80E1 ASB No. 72-A0137, Revision 1, dated October 28, 1999 or any earlier version of this SB, perform eddy current and ultrasonic inspections in accordance with GE CF6-80E1 ASB No. 72-A0137, Revision 1, dated October 28, 1999, at the next piece-part exposure after 1,000 CSN.

(ii) For HPCR stage 3-9 spools with P/Ns 1669M22G01, 1669M22G03, 1782M22G01, and 1782M22G02 installed in GE CF6-80E1 series engines, that have been previously inspected using the procedures with GE CF6-80E1 ASB No. 72-A0137, Revision 1, dated October 28, 1999 or any earlier version of this SB, perform repeat inspections in accordance with GE CF6-80E1 ASB No. 72-A0137, Revision 1, dated October 28, 1999, at piece-part exposure after 1,000 CSLI and 3,500 CSN.

Web and Web-to-Hub Transition Area Inspection

(iii) For HPCR stage 3-9 spools that have not been previously inspected using the procedures GE CF6-80E1 ASB No. 72-A0126, Revision 2, dated October 28, 1999 or any earlier version of this SB, perform eddy current and ultrasonic inspections in accordance with GE CF6-80E1 ASB No. 72-A0126, Revision 2, dated October 28, 1999, at the next piece-part exposure after 1,000 CSN.

(iv) For HPCR stage 3-9 spools with P/Ns 1669M22G01, 1669M22G03, 1782M22G01, and 1782M22G02 installed in GE CF6-80E1 series engines, that have been previously inspected using the procedures in GE CF6-80E1 ASB No. 72-A0126, Revision 2, dated October 28, 1999 or any earlier version of this SB, perform repeat inspections in GE CF6-80E1 ASB No. 72-A0126, Revision 2, dated October 28, 1999, at piece-part exposure after 1,000 CSLI and 3,500 CSN.

(v) Remove from service prior to further flight HPCR stage 3-9 spools that equal or exceed the reject criteria established by ASB No. 72-A0137, Revision 1, dated October 28, 1999 or ASB No. 72-A0126, Revision 2, dated October 28, 1999, as applicable, and replace with a serviceable part.

Spools Manufactured from 9 or 10-inch Diameter Billet Forgings

(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-A0135, Revision 1, dated October 28, 1999, as follows:

(i) For HPCR stage 3-9 spools that have not been previously inspected in accordance with GE CF6-80E1 ASB No. 72-A0135, Revision 1, dated October 28, 1999 or any earlier version of this SB, 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 19 through 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-A0135, Revision 1, dated October 28, 1999 or any earlier version of this SB , 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 23, 24, or 25 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 23 (reference paragraphs (e)(2)(ii),(iii),(vi))

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 24 (reference paragraphs (e)(2)(ii),(iii),(vi))

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 25 (reference paragraphs (e)(2)(ii),(iii),(vi))

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 23, Table 24, or Table 25 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- A0135, Revision 1, dated October 28, 1999, 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 23 from the effective date of this AD through 18 months from the effective date of this AD.

(B) Use Table 24 after 18 months from the effective date of this AD through 36 months from the effective date of this AD.

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

Spools Manufactured from 8-inch Diameter Billet Forgings

(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- A0135, Revision 1, dated October 28, 1999, as follows:

(i) For HPCR stage 3-9 spools that have not previously been inspected in accordance with GE CF6-80E1 ASB No. 72-A0135, Revision 1, dated October 28, 1999, or any earlier version of this SB, or any of the service documents listed in Table 7 of this AD, inspect at first piece-part exposure after both 1,000 CSN and the effective date of this AD.

(ii) 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- A0135, Revision 1, dated October 28, 1999, and replace with a serviceable part.

Reporting Requirement

(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.

Serviceable Part Definition

(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 26 of this AD.

Table 26 (reference paragraph (g))

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 CF6-50 ASB No. 72-A1108, Revision 2, dated October 28, 1999,

GE CF6-50 ASB No. 72-A1108, Revision 3, dated November 12, 1999,

GE CF6-50 SB No. 72-1157, Original, dated June 6, 1998,

GE CF6-50 ASB No. 72-A1157, Revision 1, dated October 28, 1999,

GE CF6-50 ASB No. 72-1131, Original, dated October 27, 1997,

GE CF6-50 ASB No. 72-A1131, Revision 1, dated March 12, 1998,

GE CF6-50 ASB No. 72-A1131, Revision 2, dated October 28, 1999,

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 CF6-80A ASB No. 72-A0678, Revision 2, dated October 28, 1999,
GE CF6-80A ASB No. 72-A0678, Revision 3, dated November 12, 1999,
GE CF6-80A SB No. 72-691, Original, dated October 22, 1997,
GE CF6-80A ASB No. 72-A691, Revision 1, dated March 12, 1998,
GE CF6-80A ASB No. 72-A691, Revision 2, dated September 23, 1998,
GE CF6-80A ASB No. 72-A0691, Revision 3, dated October 28, 1999,
GE CF6-80A SB No. 72-719, Original, dated June 10, 1998,
GE CF6-80A SB No. 72-719, Revision 1, dated September 24, 1998,
GE CF6-80A ASB No. 72-A0719, Revision 2, dated October 28, 1999,
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 CF6-80C2 ASB No. 72-A0812, Revision 2, dated October 28, 1999,
GE CF6-80C2 SB No. 72-848, Original, dated October 27, 1997,
GE CF6-80C2 SB No. 72-848, Revision 1, dated December 9, 1997,
GE CF6-80C2 ASB No. 72-A848, Revision 2, dated March 12, 1998,
GE CF6-80C2 ASB No. 72-A0848, Revision 3, dated October 28, 1999,
GE CF6-80C2 ASB No. 72-A0848, Revision 4, dated November 12, 1999,
GE CF6-80C2 SB No. 72-934, Original, dated June 10, 1998,
GE CF6-80C2 ASB No. 72-A0934, Revision 1, dated October 28, 1999,
GE CF6-80E1 ASB No. 72- A126, Original, dated January 27, 1998,
GE CF6-80E1 ASB No. 72- A126, Revision 1, dated March 21, 1998,
GE CF6-80E1 ASB No. 72- A0126, Revision 2, dated October 28, 1999,
GE CF6-80E1 ASB No. 72- A135, Original, dated August 13, 1998,
GE CF6-80E1 ASB No. 72- A0135, Revision 1, dated October 28, 1999,
GE CF6-80E1 SB No. 72- 137, Original, dated June 9, 1998,
GE CF6-80E1 ASB No. 72- A0137, Revision 1, dated October 28, 1999.

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,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-10, Revision 75, dated December 15, 1998;

or any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70-32-13, Temporary 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,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-13, Revision 75, dated December 15, 1998,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-13, Temporary Revision 70-41, dated February 10, 1999,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-13, Revision 76, dated May 15, 1999,

CF6 Standard Practice Manual GEK9250 Procedures 70-32-17, Temporary Revision 70-39, dated December 15, 1998,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-17, Revision 76, dated May 15, 1999,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-17, Temporary Revision 70-47, dated October 28, 1999,

and any one of the following:

CF6 Standard Practice Manual GEK9250 Procedures 70-32-14, Temporary 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.

CF6 Standard Practice Manual GEK9250 Procedure 70-32-14, Revision 75, dated December 15, 1998,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-14, Temporary Revision 70-42, dated February 10, 1999,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-14, Revision 76, dated May 15, 1999,

CF6 Standard Practice Manual GEK9250 Procedures 70-32-18, Temporary Revision 70-40, dated December 15, 1998.

CF6 Standard Practice Manual GEK9250 Procedure 70-32-18, Revision 76, dated May 15, 1999,

CF6 Standard Practice Manual GEK9250 Procedure 70-32-18, Temporary Revision 70-48, dated October 28, 1999.

Definition of Module Level Exposure

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

Definition of Piece-Part Exposure

(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.

Definition of ESV

(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 solely for replacement of the Fan Forward Case;

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

Alternative Methods of Compliance

(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.

Ferry Flights

(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.

Incorporation by Reference

(m) The actions required by this AD shall be done in accordance with the following service documents:

Document No.	Pages	Revision	Date
GE CF6-50 ASB No. 72-A1108	1-15	3	November 12, 1999
Total pages: 15.			
GE CF6-50 ASB No. 72-A1157	1-6	1	October 28, 1999
Total pages: 06.			
GE CF6-50 ASB No. 72-A1131	1-46	2	October 28, 1999
Total pages: 46.			
GE CF6-80A ASB No. 72-A0678	1-18	3	November 12, 1999
Total pages: 18.			
GE CF6-80A ASB No. 72-A0691	1-47	3	October 28, 1999
Total pages: 47.			
GE CF6-80A ASB No. 72-A0719	1-6	2	October 28, 1999
Total pages: 6.			
GE CF6-80C2 ASB No. 72-A0812	1-13	2	October 28, 1999

Total pages: 13.			
GE CF6-80C2 ASB No. 72-A0848	1-47	4	November 12, 1999
Total pages: 47.			
GE CF6-80C2 ASB No. 72-A0934	1-6	1	October 28, 1999
Total pages: 6.			
GE CF6-80E1 ASB No. 72-A0126	1-46	2	October 28, 1999
Total pages: 46.			
GE CF6-80E1 ASB No. 72-A0135	1-11	1	October 28, 1999
Total pages: 11			
GE CF6-80E1 ASB No. 72-A0137	1-6	1	October 28, 1999
Total pages: 6.			

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 via Lockheed Martin Technology Services, 10525 Chester Road, Suite C, Cincinnati, Ohio 45215, telephone (513) 672-8400, 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.

(n) This amendment becomes effective on January 28, 2000.

FOR FURTHER INFORMATION CONTACT:

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