

PŘÍKAZ K ZACHOVÁNÍ LETOVÉ ZPŮSOBILOSTI

CAA-AD-137/1999

Datum vydání: 17. prosince 1999

MOTOR - ROTOR VYSOKOTLAKÉHO KOMPRESORU - KONTROLA

Týká se: motorů vyrobených firmou General Electric Company (GE) CF6-45, -50, -80A, -80C2 a -80E1, se zastavěným rotorem vysokotlakého kompresoru (HPCR) stupeň 3-9, katalogových čísel (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 a 9380M28P05. Tyto motory mohou být instalovány na těchto letadlech: Airbus A300, A310 a A330, Boeing 747 a 767 a McDonnell Douglas DC-10 a MD-11, ale nejen na těchto.

Datum účinnosti: 27. ledna 2000

Provést v termínech: Jak je popsáno v FAA AD 99-24-15 (příloha tohoto PZZ).

Postup provedení prací: Dle FAA AD 99-24-15.

Poznámky: Provedení tohoto PZZ musí být zapsáno do letadlové knihy. Případné dotazy týkající se tohoto PZZ adresujte na ÚCL technický inspektorát - Ing. Toman. Pokud to vyžaduje povaha tohoto PZZ musí být zapracován do příslušné části dokumentace pro obsluhu, údržbu a opravy letadla. Tento PZZ byl vypracován na základě FAA AD 99-24-15, který nahrazuje FAA AD 95-23-03.

Ing. Pavel MATOUŠEK
Ředitel technického inspektorátu
Úřad pro civilní letectví

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, Revision3, 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:

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.