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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NE-47-AD; Amendment 39-13318; AD 2003-19-15]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney PW4000 Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), that is applicable to Pratt & Whitney (PW) models PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4650 turbofan engines. That AD currently requires interim actions to address engine takeoff power loss events until the high-pressure-compressor (HPC) case is redesigned and available for incorporation on the PW4000 engines. That amendment also requires terminating actions for engines installed in the Boeing fleet by incorporating a new Ring Case Configuration (RCC) rear HPC. This amendment requires the same interim and terminating action requirements as that AD, and in addition, expands the terminating action requirements to engines installed on Airbus and McDonnell Douglas fleets. This amendment is prompted by the certification of an RCC rear HPC for PW4000 series turbofan engines installed in the Airbus fleet and McDonnell Douglas fleet. The actions specified by this AD are intended to prevent engine takeoff power losses due to HPC surge.

DATES: Effective October 30, 2003. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of October 30, 2003. The incorporation by reference of certain other publications as listed in the regulations was approved previously by the Director of the Federal Register as of January 17, 2002 (67 FR 1, January 2, 2002), November 12, 2002 (67 FR 65484, October 25, 2002), and July 7, 2003 (68 FR 43033, June 6, 2003).

ADDRESSES: The service information referenced in this AD may be obtained from Pratt & Whitney, 400 Main St., East Hartford, CT 06108, telephone (860) 565-7700; fax (860) 565-1605. This information may be examined, by appointment, at the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Diane Cook, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7133; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 2003-11-18, Amendment 39-13177 (68 FR 33844, June 7, 2003), which is applicable to PW model PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4650 turbofan engines, was published in the Federal Register on July 21, 2003 (68 FR 43033). That action proposed to mandate the same interim actions as AD 2003-11-18 (with some modifications based on AMOC approvals) to address engine takeoff power loss events, until the RCC rear HPC is incorporated in the PW4000 engines. That action also proposed to mandate the same terminating actions as AD 2003-11-18, which incorporates the RCC rear HPC on engines installed in the Boeing fleet. That action also proposed to mandate the terminating actions to incorporate the RCC rear HPC on engines installed in the Airbus fleet.

AD 2003-11-18 and the proposal noted that RCC rear HPC certification to 14 CFR part 25 was pending for engines installed in the McDonnell Douglas fleet. The AD and proposal noted that once certified, the terminating action requirements would be added for the McDonnell Douglas MD-11 fleet, by a superseding AD. Based on comments received on the proposal, and the recent 14 CFR part 25 certification for RCC rear HPC engines to be installed in McDonnell Douglas MD-11 airplanes, this AD adds the terminating action requirements for the MD-11 fleet.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. We received comments from four operators and one airframe manufacturer, who all agree with the technical aspects of the proposal, but have concerns with the procedural aspects of the proposal. Due consideration has been given to the comments received.

Typographical Error

One commenter states there is a typographical error in proposal paragraph (u)(3)(ii). In that paragraph, August 31, 2007, should read August 31, 2006.

The FAA agrees and has changed the final rule accordingly.

Request To Add Two Engine Manual References

One commenter recommends adding the engine manual references of PW4000 EM 50A605, 71-00-00, Testing-21, dated June 15, 2003, and PW4000 EM 50A822, 71-00-00, Testing-21, dated March 15, 2002, to paragraph (j)(2) of the proposal. The commenter states that this is needed to ensure that engines tested before the effective date of this superseding AD but after the effective date of AD 2003-11-18 are in compliance.

The FAA does not agree. AD 2003-11-18 already requires Testing-21 to be done in paragraph (j)(1) of the proposal, in accordance with the recommended references regardless if the testing was done before or after the effective date of AD 2003-11-18. Therefore, compliance is achieved, and no changes are made to the final rule based on this comment.

Undue Economic Burden

Three commenters state that in general, when the FAA supersedes ADs, operators must review and revise engineering and maintenance program documentation because the superseded AD carries a new AD number. In this case, the commenters state that since the changes proposed in the NPRM are essentially changes to the effectivity, and not to any of the technical requirements, the expense to operators that results from this AD being superseded would create an undue economic burden. The commenters suggest that the FAA either delay issuing this AD until the McDonnell Douglas MD-11 terminating action can be included, in order to prevent yet another supersedure, or change the superseding AD to a revision to AD 2003-11-18, or issue separate ADs to cover the Airbus fleet and the McDonnell Douglas MD-11 fleet instead of combining all fleets into a single AD as proposed.

The FAA does not agree. Almost a year ago the FAA announced that it would be adding required terminating action to the existing AD by superseding the AD as that terminating action was approved for use on engines installed in the various airplane fleets. The FAA received no comments regarding the use of that method of adding terminating action. When the FAA first superseded the AD to add required terminating action for engines installed in the Boeing fleet, no commenters objected and one commenter even stated that it expected the FAA to supersede the AD again once the terminating action was approved for use on engines installed in the Airbus and McDonnell Douglas fleets. Therefore, the FAA provided ample notice to operators of the intention to supersede the AD on multiple occasions. Including this action, the FAA has superseded a total of eight ADs while addressing the takeoff power surge condition in PW4000 engines. Therefore, the FAA does not agree that this additional supersedure will create an undue or unforeseen economic burden. The FAA does recognize, however, that by issuing an AD that supersedes a previous AD, rather than revising the previous AD, that operators may have to make additional entries in their maintenance records. This is a long-standing issue that pre-dates by many years this particular series of ADs addressing the PW4000 takeoff power surge issue. Approximately 13 years ago, in response to the desires of many operators who did not include a revision number in their maintenance documentation programs, the FAA established criteria for when we would issue an AD as a revision, thus keeping the root AD number the same, and when we would issue a superseding AD, thereby changing the AD number. Generally, the FAA issues a superseding AD when making a change to an instruction or referenced document that affects the substance of the required actions. Even though the applicability of each of the ADs in this series remained the same, supersedures were warranted as we made substantive changes to the regulatory requirements in each subsequent AD, for example, adding mandatory terminating action. Therefore, this AD remains as a supersedure, as proposed. In an effort to keep the economic burden on operators as low as possible, however, the FAA has decided to include in this final rule the mandatory terminating action for engines installed in McDonnell Douglas MD-11 airplanes. Engines incorporating the RCC rear HPC were only recently approved for installation on McDonnell Douglas MD-11 airplanes. Since the original proposal to add mandatory terminating action contemplated that the RCC rear HPC would eventually be required for engines installed in the McDonnell Douglas MD-11 fleet, and since operators expected that the FAA would take that action, the FAA is adding that mandatory action to this final rule, in part, to avoid having to propose yet another superseding AD.

Paragraph Added To Allow Credit For RCC Incorporation

Based on the potential for operators to have already incorporated the RCC rear HPC before the effective date of this AD, a paragraph has been added to the AD to allow credit for incorporating the RCC rear HPC before the effective date of the AD.

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

Regulatory Analysis

This final rule does not have federalism implications, as defined in Executive Order 13132, because it would 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 final 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 the 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 by contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, 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 39-13177 (68 FR 33844, June 7, 2003) and by adding a new airworthiness directive, Amendment 39-13318, to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) 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).

CORRECTION: [*The FAA failed to add the amendment number to the AD title line of this AD. We will issue a correction to the Federal Register. This copy is correct.*]

2003-19-15 Pratt & Whitney: Amendment 39-13318; Docket No. 2000-NE-47-AD. Supersedes AD 2003-11-18, Amendment 39-13177.

Applicability: This airworthiness directive (AD) is applicable to: Pratt & Whitney (PW) models PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462, and PW4650 turbofan engines. These engines are installed on, but not limited to, certain models of Airbus Industrie A300, Airbus Industrie A310, Boeing 747, Boeing 767, and McDonnell Douglas MD-11 series airplanes.

Note 1: This 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 (u) 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: Compliance with this AD is required as indicated, unless already done.

To prevent engine takeoff power losses due to high-pressure-compressor (HPC) surges, do the following:

(a) When complying with this AD, determine the configuration of each engine on each airplane using the following Table 1:

TABLE 1.—ENGINE CONFIGURATION LISTING

Configuration	Configuration	Designator
(1) Phase 1 without high pressure turbine (HPT) 1st turbine vane cut back stator (1TVCB).	A	Engines that did not incorporate the Phase 3 configuration at the time they were originally manufactured, or have not been converted to Phase 3 configuration; and have not incorporated HPT 1TVCB using any Revision of service bulletin (SB) PW4ENG 72–514.
(2) Phase 1 with 1TVCB	B	Same as Configuration A except that HPT 1TVCB has been incorporated using any Revision of SB PW4ENG 72–514.

(3) Phase 3, 2nd Run	C	Engines that incorporated the Phase 3 configuration at the time they were originally manufactured, or have been converted to the Phase 3 configuration during service; and that have had at least one HPC overhaul since new.
(4) Phase 3, 1st Run	D	Same as Configuration C except that the engine has not had an HPC overhaul since new, except those engines that are defined as Configuration Designator G.
(5) HPC Cutback Stator Configuration Engines	E	Engines that currently incorporate any Revision of SBs PW4ENG 72–706, PW4ENG 72–704, or PW4ENG 72–711.
(6) Engines that have passed Testing-21	F	Engines which have successfully passed Testing-21 performed in accordance with paragraph (i) of this AD. Once an engine has passed a Testing-21, it will remain a Configuration F engine until the HPC is overhauled, or is replaced with a new or overhauled HPC, or the HPC is retrofitted to Configuration I.
(7) Phase 3, 1st Run Subpopulation Engines. These engines are identified by model and serial numbers (SNs) as follows: PW4152: SN 724942 through SN 724944 inclusive; PW4158: SN 728518 through SN 728533 inclusive; PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062: SN 727732 through SN 728000 inclusive and SN 729001 through SN 729010 inclusive; PW4460, PW4462: SN 733813 through SN 733840 inclusive.	G	Engines that incorporated the Phase 3 configuration and did not incorporate Haynes material HPC inner case rear hook at the time they were originally manufactured, that were built from August 29, 1997 up to the incorporation of the HPC inner rear case with Haynes material rear hook at the original engine manufacturer and have not had an HPC overhaul since new.
(8) Engines from Configuration G that have passed Testing-21.	H	Engines that have successfully passed Testing-21 performed in accordance with paragraph (i) of this AD. Once an engine has passed a Testing-21, it will remain a Configuration H engine untilthe HPC is overhauled, or is replaced with a new or overhauled HPC, or the HPC is retrofitted to Configuration I.
(9) Engines installed on Boeing, Airbus, or MD–11 airplanes with a build standard that incorporates a ring case configuration (RCC) rear HPC.	I	Engines that have incorporated PW SB PW4ENG 72–755, Revision 2, dated May 23, 2003; or Revision 3, dated September 16, 2003; or PW SB PW4ENG 72–756, dated July 7, 2003; or Revision 1, dated September 15, 2003; or PW SB PW4ENG 72–759, dated July 7, 2003; or Revision 1, dated September 16, 2003; PW SB PW4ENG 72–757, Revision 1, dated September 15, 2003; or have been manufactured with an RCC rear HPC.

Configuration E Engines Installed on Boeing 747, 767, and McDonnell Douglas MD-11 Airplanes

(b) For Configuration E engines, do the following:

(1) Before further flight, limit the number of engines with Configuration E as described in Table 1 of this AD, to one on each airplane.

(2) Remove all engines with Configuration E from service before accumulating 1,300 cycles-since-new (CSN) or cycles-since-conversion (CSC) to Configuration E, whichever is later.

Configuration G and H Engines Installed on Boeing 747, 767, McDonnell Douglas MD-11, and Airbus A300 and A310 Airplanes

(c) For Configuration G and H engines installed on Boeing 747 and 767, McDonnell Douglas MD-11, and Airbus A300 and A310 airplanes, except as provided in paragraph (b) of this AD:

(1) Before further flight, remove from service engines that exceed the CSN or cycles-since-Testing-21 (CST) limits listed in the following Table 2, or perform on-wing Testing-21 on Boeing 747 or McDonnell Douglas MD-11 airplanes in accordance with paragraph (i)(3) or (i)(4) respectively, of this AD. Thereafter, ensure that no Configuration G or H engines exceed the HPC CSN or CST limits listed in Table 2 of this AD.

TABLE 2.—CONFIGURATION G AND H LIMITS

Configuration designator	B747 PW4056	B767 PW4052	B767 PW4056	B767 PW4060 PW4060A PW4060C PW4062	MD–11 PW4460 PW4462	A300/310 PW4152 PW4156A PW4158
G	1,700 CSN	3,000 CSN	2,100 CSN	1,350 CSN	1,150 CSN	2,800 CSN.
H	600 CST	600 CST	600 CST	600 CST.	600 CST	600 CST.

(2) Prior to return to service, Configuration G and H engines must meet the requirements of paragraph (i) of this AD.

Engines Installed on Boeing 767 and McDonnell Douglas MD-11 Airplanes

(d) For engines installed on Boeing 767 and McDonnell Douglas MD-11 airplanes, except as provided in paragraph (b) and (c) of this AD:

(1) Before further flight, limit the number of engines that exceed the HPC CSN, HPC cycles-since-overhaul (CSO), or HPC CST limits in Table 3 of this AD, to no more than one engine per airplane. Thereafter, ensure that no more than one engine per airplane exceeds the HPC CSN, CSO, or CST limit in Table 3 of this AD.

(2) Prior to return to service, engines must meet the requirements of paragraph (i) of this AD.

Engines Installed on Boeing 747 Airplanes

(e) Except as provided in paragraph (b) and (c) of this AD, before further flight, and thereafter, manage the engine configurations installed on Boeing 747 airplanes as follows:

(1) Limit the number of Configuration A, B, C, or E engines that exceed the HPC CSN or HPC CSO limits listed in Table 3 of this AD, to not more than one engine per airplane. Table 3 follows:

TABLE 3.—ENGINE LIMITS FOR BOEING AIRPLANES

Configuration designator	B747 PW4056	B767 PW4052	B767 PW4056	B767 PW4060 PW4060A PW4060C PW4062	MD–11 PW4460 PW4462
A	1,400 CSN or CSO	3,000 CSN or CSO	1,600 CSN or CSO	900 CSN or CSO	800 CSN or CSO.
B	2,100 CSN or CSO	4,400 CSN or CSO	2,800 CSN or CSO	2,000 CSN or CSO	1,200 CSN or CSO.
C	2,100 CSO	4,400 CSO	2,800 CSO	2,000 CSO	1,300 CSO.
D	2,600 CSN	4,400 CSN	3,000 CSN	2,200 CSN	2,000 CSN.
E	750 CSN or CSO	750 CSN or CSO	750 CSN or CSO	750 CSN or CSO	750 CSN or CSO.
F	800 CST	800 CST	800 CST	800 CST	800 CST.

(2) The single Configuration A, B, C, or E engine per airplane that exceeds the HPC CSN or CSO limits listed in Table 3 of this AD, must be limited to 2,600 HPC CSN or CSO for Configuration A, B, or C engines, or 1,300 HPC CSN or CSC to Configuration E, whichever is later, for Configuration E engines.

(3) Remove from service or perform on-wing Testing-21 in accordance with paragraph (i)(3) of this AD for Configuration D engines, before accumulating 2,600 CSN.

(4) Remove from service or perform on-wing Testing-21 in accordance with paragraph (i)(3) of this AD for Configuration F engines, before accumulating 800 CST.

(5) Prior to return to service, Configuration A, B, C, D, and F engines must meet the requirements of paragraph (i) of this AD.

Engines Installed on Airbus A300 and A310 Airplanes

(f) For Airbus operators that began operation of their A300 fleet after the effective date of this AD, use paragraphs (f)(7) through (f)(9) of this AD to determine which Airbus A300 PW4158 engine category 1 or 3 limits of the following Table 4 of this AD apply to your engine fleet. For Airbus operators that have been in operation before the effective date of this AD, use your PW4158 engine category classification previously determined for your fleet and continue to apply the A300 PW4158 Category limits in Table 4 of this AD, to your fleet.

TABLE 4.—ENGINE LIMITS FOR AIRBUS AIRPLANES

Configuration designator	A300 PW4158 Category 1, and A310 PW4156 and PW4156A	A300 PW4158 Category 2, and A310 PW4152	A300 PW4158 Category 3
A	900 CSN or CSO	1,850 CSN or CSO	500 CSN or CSO.
B	2,200 CSN or CSO	4,400 CSN or CSO	1,600 CSN or CSO.
C	2,200 CSO	4,400 CSO	1,600 CSO.
D	4,400 CSN	4,400 CSN	4,400 CSN.
E	Not Applicable	Not Applicable	Not Applicable.
F	800 CST	800 CST	800 CST.

(1) Determine the number of Group 3 Takeoff surges experienced by engines in your fleet before April 13, 2001. Count surge events for engines that had an HPC overhaul and incorporated either SB PW4ENG 72-484 or SB PW4ENG 72-575 at the time of overhaul. Do not count surge events for engines that did not have the HPC overhauled (i.e. 1st run engine) or had the HPC overhauled but did not incorporate either SB PW4ENG 72-484 or SB PW4ENG 72-575. See paragraph (s)(5) of this AD for a definition of a Group 3 Takeoff surge.

(2) Determine the number of cumulative HPC CSO accrued by engines in your fleet before April 13, 2001. Count HPC CSO for engines that had an HPC overhaul and incorporated either SB PW4ENG 72-484 or SB PW4ENG 72-575 at the time of overhaul. Do not count HPC CSO accrued on your engines while operating outside your fleet.

(3) Calculate the surge rate by dividing the number of Group 3 Takeoff surges determined in paragraph (f)(1) of this AD, by the number of cumulative HPC CSO determined in paragraph (f)(2) of this AD, and then multiply by 1,000.

(4) If the surge rate calculated in paragraph (f)(3) of this AD is less than 0.005, go to paragraph (f)(5) of this AD. If the surge rate calculated in paragraph (f)(3) of this AD is greater than or equal to 0.005, go to paragraph (f)(6) of this AD.

(5) If the cumulative HPC CSO determined in paragraph (f)(2) of this AD is greater than or equal to 200,000 cycles, use A300 PW4158 Category 2 limits of Table 4 of this AD. If less than 200,000 cycles, go to paragraph (f)(7) of this AD.

(6) If the surge rate calculated in paragraph (f)(3) of this AD is greater than 0.035, use A300 PW4158 Category 3 limits of Table 4 of this AD. If less than or equal to 0.035, go to paragraph (f)(7) of this AD.

(7) Determine the percent of takeoffs with greater than a 1.45 Takeoff engine pressure ratio (EPR) data for engines operating in your fleet. Count takeoffs from a random sample of at least 700 airplane takeoffs that have occurred over at least a 3-month time period, for a period beginning no earlier than 23 months prior to the effective date of this AD. See paragraph (s)(6) of this AD for definition of Takeoff EPR data.

(8) If there is insufficient data to satisfy the criteria of paragraph (f)(7) of this AD, use A300 PW4158 Category 3 limits of Table 4 of this AD.

(9) If the percentage of takeoffs with greater than a 1.45 Takeoff EPR data determined in paragraph (f)(7) of this AD is greater than 31%, use A300 PW4158 Category 3 limits listed in Table 4 of this AD. If the percentage of takeoffs with greater than a 1.45 Takeoff EPR data determined in paragraph (f)(7) of this AD is less than or equal to 31%, use A300 PW 4158 Category 1 limits listed in Table 4 of this AD.

(g) For engines installed on Airbus A300 or A310 airplanes, except as provided in paragraph (c) of this AD, before further flight, limit the number of engines that exceed the CSN, CSO, or CST limits listed in Table 4 of this AD, to no more than one engine per airplane. Thereafter, ensure that no more than one engine per airplane exceeds the HPC CSN, CSO, or CST limits listed in Table 4 of this AD. See paragraph (i) of this AD for return to service requirements.

(h) For Airbus A300 PW4158 engine operators, except those operators whose engine fleets are determined to be Category 3 classification based on surge rate in accordance with paragraph (f)(6) of this AD, re-evaluate your fleet category within 6 months from the last evaluation, and thereafter, at intervals not to exceed 6 months, using the following criteria:

(1) For operators whose engine fleets are initially classified as Category 1 or 3 in accordance with paragraph (f) of this AD, determine the percent of takeoffs with greater than a 1.45 Takeoff EPR data for engines operating in your fleet. Count takeoffs from a sample of at least 200 takeoffs that occurred over the most recent six month time period since the last categorization was determined, or the total number of takeoffs accumulated over 6 months if less than 200 takeoffs. See paragraph (s)(6) of this AD for definition of takeoff EPR data.

(i) If there is insufficient data to satisfy the criteria of paragraph (h)(1) of this AD, use A300 PW4158 Category 3 limits listed in Table 4 of this AD.

(ii) If the percentage of takeoffs with greater than a 1.45 Takeoff EPR data determined in paragraph (h)(1) of this AD is greater than 31%, use A300 PW4158 Category 3 limits listed in Table 4 of this AD.

(iii) If the percentage of takeoffs with greater than a 1.45 Takeoff EPR data determined in paragraph (h)(1) of this AD is less than or equal to 31%, use A300 PW4158 Category 1 limits listed in Table 4 of this AD.

(2) For operators whose engine fleets are initially classified as Category 2 in accordance with paragraph (f) of this AD, determine the percent of takeoffs with greater than a 1.45 Takeoff EPR data for engines operating in your fleet. Count takeoffs from a sample of at least 200 takeoffs that occurred over the most recent six month time period since the last categorization was determined, or the total number of takeoffs accumulated over 6 months if less than 200 takeoffs. See paragraph (s)(6) of this AD for definition of takeoff EPR data.

(i) If there is insufficient data to satisfy the criteria of paragraph (h)(2) of this AD, use A300 PW4158 Category 3 limits listed in Table 4 of this AD.

(ii) If the percentage of takeoffs with greater than a 1.45 Takeoff EPR data determined in paragraph (h)(2) of this AD is greater than 37%, use A300 PW4158 Category 3 limits listed in Table 4 of this AD.

(iii) If the percentage of takeoffs with greater than a 1.45 Takeoff EPR data determined in paragraph (h)(2) of this AD is greater than or equal to 21% and less than or equal to 37%, use A300 PW4158 Category 1 limits listed in Table 4 of this AD.

(iv) If the percentage of takeoffs with greater than a 1.45 Takeoff EPR data determined in paragraph (h)(2) of this AD is less than 21%, use A300 PW4158 Category 2 limits listed in Table 4 of this AD.

Return to Service Requirements

(i) Engines removed from service in accordance with paragraph (c), (d), (e), or (g) of this AD may be returned to service under the following conditions:

(1) After passing a cool-engine fuel spike stability test (Testing-21) that has been done in accordance with PW4000 Engine Manual (EM) 50A605, 71-00-00, Testing-21, dated June 15, 2003; or PW4000 EM 50A443, 71-00-00, Testing-21, dated March 15, 2002; or PW4000 EM 50A822, 71-00-00, Testing-21, dated March 15, 2002; except for engines configured with Configuration E; or engines that have experienced a Group 3 takeoff surge; or

(2) Engines tested before the effective date of this AD, in accordance with PW4000 EM 50A605, 71-00-00, Testing-21, dated March 15, 2002; or PW4000 EM 50A443, 71-00-00, Testing-21, dated November 14, 2001; or PW4000 EM 50A443, Temporary Revision No. 71-0026, dated November 14, 2001; or PW4000 EM 50A605, Temporary Revision No. 71-0035, dated November 14, 2001; or PW4000 EM 50A822, 71-00-00, Testing-21, dated November 14, 2001; or PW4000 EM 50A822, Temporary Revision No. 71-0018, dated November 14, 2001; or PW Internal Engineering Notice (IEN) 96KC973D, dated October 12, 2001, meet the requirements of Testing-21; or

(3) For PW4056 engines installed on Boeing 747 airplanes, after successfully completing on-wing Testing-21 in accordance with Major IEN 02KCW13E, dated November 21, 2002; or if done prior to the approval of Major IEN 02KCW13E, dated November 21, 2002; in accordance with Minor IENs 02KCW13, dated October 14, 2002; 02KCW13A, dated October 14, 2002; 02KCW13C, dated July 25, 2002; or 02KCW13D, July 29, 2002; except for engines configured with Configuration E, or engines that have experienced a Group 3 takeoff surge; or

(4) For PW4460 and PW4462 engines installed on McDonnell Douglas MD-11 airplanes, after successfully completing on-wing Testing-21, in accordance with Major IEN 02KCW13H, dated December 9, 2002; or if done prior to the approval of Major IEN 02KCW13H, dated December 9, 2002, in accordance with Minor IEN 02KCW13F, dated October 14, 2002; except for engines configured with Configuration E, or engines that have experienced a Group 3 takeoff surge; or

(5) An engine that is either below or exceeds the limits of Table 3 or Table 4 of this AD may be removed and installed on another airplane without Testing-21, as long as the requirements of paragraph (c), (d), (e), or (g) of this AD are met at the time of engine installation.

(6) An engine that has incorporated the RCC rear HPC in accordance with:

(i) PW SB PW4ENG 72-755, Revision 3, dated September 16, 2003, for engines installed in Boeing airplanes, or

(ii) PW SB PW4ENG 72-756, Revision 1, dated September 15, 2003, or PW SB PW4ENG 72-759, Revision 1, dated September 16, 2003, for engines installed in Airbus airplanes, or

(iii) PW SB PW4ENG 72-757, Revision 1, dated September 15, 2003, for engines installed in McDonnell Douglas MD-11 airplanes; or

(iv) RCC rear HPCs that were incorporated before the effective date this AD are allowed credit, in accordance with paragraph (t) of this AD.

(v) Completing the SBs referenced in paragraphs (i)(6)(i) through (i)(6)(iii) of this AD changes the engine configuration to Configuration I.

Phase 0 or Phase 1, FB2T or FB2B Fan Blade Configurations

(j) For Configuration A, B, C, D, E, F, G, and H engines with Phase 0 or Phase 1, FB2T or FB2B fan blade configurations complying with the requirements of AD 2001-09-05, (66 FR 22908, May 5, 2001); AD 2001-09-10, (66 FR 21853, May 2, 2001); or AD 2001-01-10, (66 FR 6449, January 22, 2001); do the following:

(1) Operators complying with the ADs listed in paragraph (j) of this AD using the weight restriction compliance method, must perform Testing-21 in accordance with paragraph (i) of this AD whenever any quantity of fan blades are replaced with new fan blades, overhauled fan blades, or with fan blades having the leading edges recontoured after the effective date of this AD, if during the shop visit the HPC is not overhauled and separation of a major engine flange, located between "A" flange and "T" flange, does not occur.

(2) If an operator changes from the weight restriction compliance method to the fan blade leading edge recontouring method after the effective date of this AD, Testing-21 in accordance with paragraph (i) of this AD is required each time fan blade leading edge recontouring is done, if the fan blades accumulate more than 450 cycles since new or since fan blade overhaul, or since the last time the fan blade leading edges were recontoured.

Minimum Build Standard

(k) For engines to be installed on Boeing airplanes that are inducted into the shop after July 7, 2003; for engines to be installed on Airbus airplanes that are inducted into the shop after the effective date of this AD; and for engines to be installed on McDonnell Douglas MD-11 airplanes that are inducted into the shop 30 days after the effective date of this AD:

(1) Any Segmented Case Configuration (SCC) HPC module that is disassembled to a level that fully separates the HPC rear case assembly at H flange from the HPC module may not be returned to service unless the RCC rear HPC is incorporated in accordance with paragraphs (i)(6)(i) through (i)(6)(iii) of this AD.

(2) Any engine with a SCC HPC module that is not disassembled in accordance with paragraph (k)(1) of this AD, must meet the following minimum build standard:

(i) Do not install an engine with SCC HPC and HPT modules where the CSO of the HPC is 1,500 cycles or more than the CSN or CSO of the HPT.

(ii) Any engine that undergoes separation of the SCC HPC and HPT modules must not be installed on an airplane unless it meets the build standard defined by PW SB PW4ENG 72-514. Engines that incorporate the Phase 3 configuration meet the build standard defined by PW SB PW4ENG 72-514.

Stability Testing Requirements

(l) For engines to be installed on Boeing, Airbus, or McDonnell Douglas airplanes, after the effective date of this AD, Testing-21 must be performed in accordance with paragraph (i) of this AD, before an engine can be returned to service after having undergone maintenance in the shop, except under any of the following conditions:

(1) Engine HPC has incorporated the RCC rear HPC in accordance with paragraphs (i)(6)(i) through (i)(6)(iii) of this AD.

(2) Engine maintenance intended to maintain the airworthiness of the engine between planned shop visits, that requires separation of a major engine flange located between "A" flange and "T" flange, that results in the engine being reassembled with all gas path-related components remaining in the as-removed condition; or

(3) Engines that successfully passed Testing-21 with zero CST, and are split at Flange E for transportation reasons as specified in the applicable Storage/Transport section of the applicable EM.

Thrust Rating Changes, Installation Changes, and Engine Transfers for Non-Configuration I Engines

(m) When a thrust rating change has been made by using the Electronic Engine Control (EEC) programming plug, or an installation change has been made during an HPC overhaul period, use the lowest cyclic limit of Table 3 or Table 4 of this AD, associated with any engine thrust rating change or with any installation change made during this period. See paragraph (s)(2) for definition of HPC overhaul period.

(n) When a PW4158 engine is transferred to another PW4158 engine operator whose engine fleet has a different category, use the lowest cyclic limit in Table 4 of this AD that was used or will be used during the affected HPC overhaul period.

(o) When a PW4158 engine operator whose engine fleet changes category in accordance with paragraph (h) of this AD, use the lowest cyclic limits in Table 4 of this AD that were used or will be used during the affected HPC overhaul period.

(p) Engines with an HPC having zero CSN or CSO at the time of thrust rating change, or installation change, or engine transfer between PW4158 engine operators, or subsequent change in operator engine fleet category in accordance with paragraph (h) of this AD in the direction of lower to higher Table 4 limits of this AD, are exempt from the lowest cyclic limit requirement in paragraphs (m), (n), and (o) of this AD.

Engines That Surge

(q) For engines that experience a surge, and after troubleshooting procedures are completed for airplane-level surge during forward or reverse thrust, do the following:

(1) For engines that experience a Group 3 takeoff surge, do the following:

(i) Remove the engine from service before further flight and

(ii) Incorporate the RCC rear HPC in accordance with paragraphs (i)(6)(i) through (i)(6)(iii) of this AD.

(2) For any engine that experiences a forward or reverse thrust surge at EPR's greater than 1.25 that is not a Group 3 takeoff surge, do the following:

(i) For Configuration A, B, C, D, F, G, and H engines, remove engine from service within 25 CIS or before further flight if airplane-level troubleshooting procedures require immediate engine removal, and perform Testing-21 in accordance with paragraph (i) of this AD, as applicable.

(ii) For Configuration E engines, remove engine from service within 25 CIS or before further flight if airplane-level troubleshooting procedures require immediate engine removal.

(3) Paragraphs (q)(1) and (q)(2) of this AD are not applicable to engines that incorporate the RCC rear HPC in accordance with paragraphs (i)(6)(i) through (i)(6)(iii) of this AD.

Terminating Action for Boeing, Airbus, and McDonnell Douglas MD-11 Airplanes

(r) For Boeing, Airbus, and McDonnell Douglas operators with PW4000 engines installed on Boeing 747, 767, Airbus A300, A310, or McDonnell Douglas MD-11 airplanes, modify the engine HPC assembly by incorporating the RCC rear HPC in accordance with (i)(6)(i) through (i)(6)(iii) of this AD, as follows:

(1) For engines installed on Boeing 767 airplanes, manage the engine configuration installed on the airplanes in your fleet as follows:

(i) By May 31, 2006 and thereafter, ensure that at least one Configuration I engine is installed on the airplane.

(ii) After May 31, 2006, the non-Configuration I engine (SCC HPC module) installed on the airplane must have incorporated the Haynes material in the HPC inner case rear hook during the original engine build or during an HPC overhaul in accordance with PW4ENG 72-714, dated June 27, 2000; or Revision 1, dated November 8, 2001; or Revision 2, dated February 28, 2003; or SB PW4ENG 72-749, dated June 17, 2002; or Revision 1, dated January 8, 2003; or Chromalloy Florida Repair procedure 00CFL-039-0, dated December 27, 2000.

(2) For engines installed on Boeing 747 airplanes, manage the engine configuration installed on the airplanes in your fleet as follows:

(i) By January 31, 2007 and thereafter, ensure that no more than one non-Configuration I engine is installed on the airplane.

(ii) After January 31, 2007, the non-Configuration I engine (SCC HPC module) installed on the airplane must have incorporated the Haynes-material in the HPC inner case rear hook during the original build or during an HPC overhaul in accordance with SB PW4ENG 72-714, dated June 27, 2000; or Revision 1, dated November 8, 2001; or Revision 2, dated February 28, 2003; or SB PW4ENG 72-749, dated June 17, 2002; or Revision 1, dated January 8, 2003; or Chromalloy Florida Repair procedure 00CFL-039-0, dated December 27, 2000.

(3) For engines installed on Airbus A300, A310, or McDonnell Douglas MD-11 airplanes, manage the engine configuration installed on the airplanes in your fleet as follows:

(i) By August 31, 2006 and thereafter, ensure that at least one Configuration I engine is installed on the Airbus A300 or A310 airplane, and ensure that no more than one non-Configuration I engine is installed on the McDonnell Douglas MD-11 airplane.

(ii) After August 31, 2006, the non-Configuration I engine installed on the airplane must have incorporated the Haynes-material in the HPC inner case rear hook during the original build or during an HPC overhaul in accordance with SB PW4ENG 72-714, dated June 27, 2000; or Revision 1, dated November 8, 2001; or Revision 2, dated February 28, 2003; or SB PW4ENG 72-749, dated June 17, 2002; or Revision 1, dated January 8, 2003; or Chromalloy Florida Repair procedure 00CFL-039-0, dated December 27, 2000.

(4) Prior to June 30, 2009, or whenever the HPC module is disassembled to a level that fully separates the HPC rear case assembly at H flange from the HPC module, whichever occurs first, incorporate the RCC rear HPC in accordance with paragraphs (i)(6)(i) through (i)(6)(iii) of this AD. Engines incorporating the RCC rear HPC are Configuration I engines. See paragraph (s)(7) of this AD for definition of HPC rear case assembly.

(5) Incorporation of the RCC rear HPC constitutes terminating action to the Testing-21 requirements as specified in paragraph (l) of this AD, and engine stagger and or hard time limit requirements as specified in paragraphs (c), (d), (e) and (g) of this AD for engines installed on Boeing, Airbus, and McDonnell Douglas airplanes.

Definitions

(s) For the purposes of this AD, the following definitions apply:

(1) An HPC overhaul is defined as restoration of the HPC stages 5 through 15 blade tip clearances to the limits specified in the applicable fits and clearances section of the engine manual.

(2) An HPC overhaul period is defined as the time period between HPC overhauls.

(3) An HPT overhaul is defined as restoration of the HPT stage 1 and 2 blade tip clearances to the limits specified in the applicable fits and clearances section of the engine manual.

(4) A Phase 3 engine is identified by a (-3) suffix after the engine model number on the data plate if incorporated at original manufacture, or a "CN" suffix after the engine serial number if the engine was converted using PW SBs PW4ENG 72-490, PW4ENG 72-504, or PW4ENG 72-572 after original manufacture.

(5) A Group 3 takeoff surge is defined as the occurrence of any of the following engine symptoms that usually occur in combination during an attempted airplane takeoff operation (either at reduced, derated or full rated takeoff power setting) after takeoff power set, which can be attributed to no specific and correctable fault condition after completing airplane-level surge during forward thrust troubleshooting procedures:

(i) Engine noises, including rumblings and loud "bang(s)."

(ii) Unstable engine parameters (EPR, N1, N2, and fuel flow) at a fixed thrust setting.

(iii) Exhaust gas temperature (EGT) increase.

(iv) Flames from the inlet, the exhaust, or both.

(6) Takeoff EPR data is defined as Maximum Takeoff EPR if takeoff with Takeoff-Go-Around (TOGA) is selected, or Flex Takeoff EPR if takeoff with Flex Takeoff (FLXTO) is selected. Maximum Takeoff EPR or Flex Takeoff EPR may be recorded using any of the following methods:

(i) Manually recorded by the flight crew read from the Takeoff EPR power management table during flight preparation (see Aircraft Flight Manual (AFM) chapter 5.02.00 and 6.02.01, or Flight Crew Operation Manual (FCOM) chapter 2.09.20) and then adjusted by adding 0.010 to the EPR value recorded; or

(ii) Automatically recorded during Takeoff at 0.18 Mach Number (Mn) (between 0.15 and 0.20 Mn is acceptable) using an aircraft automatic data recording system and then adjusted by subtracting 0.010 from the EPR value recorded; or

(iii) Automatically recorded during takeoff at maximum EGT, which typically occurs at 0.25-0.30 Mn, using an aircraft automatic data recording system.

(7) HPC rear case assembly is defined as the HPC rear case with heat shields and other minor detail parts installed within the HPC rear case, but not including the HPC rear segmented stators.

Credit for Incorporating the RCC Rear HPC Before the Effective Date of This AD

(t) Engines that have incorporated the RCC rear HPC before the effective date of this AD, in accordance with the following, comply with the RCC rear HPC incorporation requirements of this AD:

(1) PW SB PW4ENG 72-755, Revision 3, dated September 16, 2003, or with PW SB PW4ENG 72-755, Revision 2, dated May 23, 2003 for engines installed in Boeing airplanes; or

(2) PW SB PW4ENG 72-756, Revision 1, dated September 15, 2003, or PW SB PW4ENG 72-756, dated July 7, 2003, or PW SB PW4ENG 72-759, Revision 1, dated September 16, 2003, or PW SB PW4ENG 72-759, dated July 7, 2003, for engines installed in Airbus airplanes, or

(3) PW SB PW4ENG 72-757, Revision 1, dated September 15, 2003, for engines installed in McDonnell Douglas airplanes.

Alternative Methods of Compliance

(u) 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 (ECO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the ECO.

Special Flight Permits

(v) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

Testing-21 Reports

(w) Within 60 days of test date, report the results of the cool-engine fuel spike stability assessment tests (Testing-21) and on-wing Testing-21 to the ANE-142 Branch Manager, Engine Certification Office, 12 New England Executive Park, Burlington, MA 01803-5299, or by electronic mail to 9-ane-surge-ad-reporting@faa.gov. Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056. Be sure to include the following information:

(1) Engine serial number.

(2) Engine configuration designation per Table 1 of this AD.

(3) Date of the cool-engine fuel spike stability test or on-wing Testing-21, as applicable.

(4) HPC Serial Number, and HPC time and cycles-since-new and since-compressor-overhaul at the time of the test.

(5) Results of the test (Pass or Fail).

Documents That Have Been Incorporated By Reference

(x) The actions must be done in accordance with the following Pratt and Whitney (PW) service bulletins (SBs), Internal Engineering Notice (IEN), Temporary Revisions, (TR's), engine manual (EM) sections, and Chromalloy Florida Repair Procedure:

Document No.	Pages	Revision	Date
PW SB PW4ENG 72–714 Total pages: 12.	All	Original	June 27, 2000.
PW SB PW4ENG 72–714	1–2	1	November 8, 2001.
	3	Original	June 27, 2000.
	4	1	November 8, 2001.
Total pages: 12.	5–12	Original	June 27, 2000.
PW SB PW4ENG 72–714 Total pages: 14.	All	2	February 28, 2003.
PW SB PW4ENG 72–749 Total pages: 14.	All	Original	June 17, 2002.
PW SB PW4ENG 72–749	1	1	January 8, 2003.
	2–4	Original	June 17, 2002.
	5–7	1	January 8, 2003.
	8	Original	June 17, 2002.
	9–10	1	January 8, 2003.
	11	Original	June 17, 2002.
Total pages: 14.	12–14	1	January 8, 2003.
PW SB PW4ENG 72–755	1	2	May 23, 2003.
	2–37	1	April 8, 2003.
	38–39	2	May 23, 2003.
	40–54	1	April 8, 2003.
	55	2	May 23, 2003.
	56–152	1	April 8, 2003.
	153	2	May 23, 2003.
	154–166	1	April 8, 2003.
	167–171	2	May 23, 2003.
	172–179	1	April 8, 2003.
	180–183	2	May 23, 2003.
	184–195	1	April 8, 2003.
	196	2	May 23, 2003.
	197–233	1	April 8, 2003.
	234	2	May 23, 2003.
Total pages: 287.	235–287	1	April 8, 2003.
PW SB PW4ENG 72–755	1	3	September 16, 2003.
	2	1	April 8, 2003.
Total pages: 294.	3–294	3	September 16, 2003.
PW SB PW4ENG 72–756 Total pages: 283.	All	Original	July 7, 2003.

PW SB PW4ENG 72–756	1	1	September 15, 2003.
	2–4	Original	July 7, 2003.
	5–6	1	September 15, 2003.
	7–13	Original	July 7, 2003.
	14	1	September 15, 2003.
	15–48	Original	July 7, 2003.
	49	1	September 15, 2003.
	50–51	Original	July 7, 2003.
	52–64	1	September 15, 2003.
	65–109	Original	July 7, 2003.
	110	1	September 15, 2003.
	111–123	Original	July 7, 2003.
	124	1	September 15, 2003.
	125–165	Original	July 7, 2003.
	166	1	September 15, 2003.
	167–172	Original	July 7, 2003.
	173	1	September 15, 2003.
	174–189	Original	July 7, 2003.
	190–192	1	September 15, 2003.
	193	Original	July 7, 2003.
	194–196	1	September 15, 2003.
	197–204	Original	July 7, 2003.
	205–206	1	September 15, 2003.
	207–224	Original	July 7, 2003.
	225	1	September 15, 2003.
	226–241	Original	July 7, 2003.
	242–243	1	September 15, 2003.
	244	Original	July 7, 2003.
	245	1	September 15, 2003.
	246–247	Original	July 7, 2003.
	248	1	September 15, 2003.
	249–255	Original	July 7, 2003.
	256–258	1	September 15, 2003.
	259–281	Original	July 7, 2003.
Total pages: 283.	282–283	1	September 15, 2003.

PW SB PW4ENG 72–757	1	1	September 15, 2003.
	2–3	Original	August 15, 2003.
	4	1	September 15, 2003.
	5–34	Original	August 15, 2003.
	35	1	September 15, 2003.
	36–39	Original	August 15, 2003.
	40–57	1	September 15, 2003.
	58–105	Original	August 15, 2003.
	106	1	September 15, 2003.
	107–147	Original	August 15, 2003.
	148	1	September 15, 2003.
	149–154	Original	August 15, 2003.
	155–156	1	September 15, 2003.
	157–167	Original	August 15, 2003.
	168	1	September 15, 2003.
	169–195	Original	August 15, 2003.
	196	1	September 15, 2003.
	197–218	Original	August 15, 2003.
	219–220	1	September 15, 2003.
Total pages: 237.	221–237	Original	August 15, 2003.
PW SB PW4ENG 72–759 Total pages: 228.	All	Original	July 7, 2003.
PW SB PW4ENG 72–759	1	1	September 16, 2003.
	2–4	Original	July 7, 2003.
	5–12	1	September 16, 2003.
	13–99	Original	July 7, 2003.
	100	1	September 16, 2003.
	101–134	Original	July 7, 2003.
	135	1	September 16, 2003.
	136–143	Original	July 7, 2003.
	144–146	1	September 16, 2003.
	147–174	Original	July 7, 2003.
	175	1	September 16, 2003.
	176–203	Original	July 7, 2003.
	204	1	September 16, 2003.
	205–224	Original	July 7, 2003.
	225–226	1	September 16, 2003.
Total pages: 227.	227	Original	July 7, 2003.
PW IEN 02KCW13E Total pages: 20.	All	Original	November 21, 2002.
PW IEN 02KCW13H Total pages: 21.	All	Original	December 9, 2002.
PW IEN 96KC973D Total pages: 19.	All	Original	October 12, 2001.
PW TR 71–0018 Total pages: 24.	All	Original	November 14, 2001.
PW TR 71–0026 Total pages: 24.	All	Original	November 14, 2001.
PW TR 71–0035 Total pages: 24.	All	Original	November 14, 2001.

PW4000 EM 50A443, 71–00–00, TESTING–21 Total pages: 20.	All	Original	March 15, 2002.
PW4000 EM 50A605, 71–00–00, TESTING–21 Total pages: 20.	All	Original	March 15, 2002.
PW4000 EM 50A605, 71–00–00, TESTING–21	1–7	Original	March 15, 2002.
Total pages: 25.	8–25	N/A	June 15, 2003.
PW4000 EM 50A822, 71–00–00, TESTING–21 Total pages: 20.	All	Original	March 15, 2002.
Chromalloy Florida Repair Procedure, 00 CFL–039–0:			
Summary	1–3	Original	December 27, 2000.
Insp/chk–01	801	Original	December 27, 2000.
Repair–01	901–903	Original	December 27, 2000.
Total pages: 7.			

The incorporation by reference of PW SB PW4ENG 72-714, Revision 1, dated November 8, 2001, PW IEN 96KC973D, dated October 12, 2001; PW TR 71-0018, PW TR 71-0026, and PW TR 71-0035, all dated November 14, 2001; was approved by the Director of the Federal Register as of January 17, 2002 (67 FR 1, January 2, 2002). The incorporation by reference of PW SB PW4ENG 72-749, dated June 17, 2002; PW4000 EM 50A443, Section 71-00-00, Testing-21, dated March 15, 2002; PW4000 EM 50A822, Section 71-00-00, Testing-21, dated March 15, 2002; PW4000 EM 50A605, Section 71-00-00, Testing-21, dated March 15, 2002; and Chromalloy Florida Repair Procedure, 00 CFL-039-0, dated December 27, 2000; was approved by the Director of the Federal Register as of November 12, 2002 (67 FR 65484, October 25, 2002). The incorporation by reference of PW SB PW4ENG 72-714, Revision 2, dated February 28, 2003; PW SB PW4ENG 72-755, Revision 2, dated May 23, 2003; PW SB PW4ENG 72-749, Revision 1, dated January 8, 2003; and PW EM 50A605, Section 71-00-00, Testing-21, dated June 15, 2003, was approved by the Director of the Federal Register as of July 7, 2003 (68 FR 33844; June 6, 2003). The Director of the Federal Register approves the incorporation by reference of PW SB PW4ENG 72-714, dated June 27, 2000; PW SB PW4ENG 72-755, Revision 3, dated September 16, 2003; PW SB PW4ENG 72-756, dated July 7, 2003; PW SB PW4ENG 72-756, Revision 1, dated September 15, 2003; PW SB PW4ENG 72-757, Revision 1, dated September 15, 2003; PW SB PW4ENG 72-759, dated July 7, 2003; PW SB PW4ENG 72-759, Revision 1, dated September 16, 2003; PW IEN 02KCW13E, dated November 21, 2002; and PW IEN 02KCW13H, dated December 9, 2002, in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. PW document copies may be obtained from Pratt and Whitney, 400 Main St., East Hartford, CT 06108; telephone (860) 565-7700; fax (860) 565-1605. Chromalloy Florida document copies may be obtained from Chromalloy Florida, 630 Anchors St., NW., Walton Beach, FL 32548; telephone (850) 244-7684; fax (850) 244-6322. 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.

Effective Date

(y) This amendment becomes effective on October 30, 2003.

Issued in Burlington, Massachusetts, on September 19, 2003.

Jay J. Pardee,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

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