PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. Section 39.13 is amended by adding the following new airworthiness directive:

2003–11–24 Dornier Luftfahrt GMBH: Amendment 39–13184. Docket 2003–NM–102–AD.

Applicability: Model 328–100 series airplanes, certificated in any category, as listed in Dornier Service Bulletin SB–328–27–298, Revision 1, dated November 21, 2002.

Compliance: Required as indicated, unless accomplished previously.

To prevent a spring tab torsion bar from slipping through its retaining adaptors, which could result in a loose spring tab; and to further prevent the loss of both tension springs, which could allow the spring tab to flutter and result in reduced controllability of the airplane, accomplish the following:

Retainer Installation

(a) Within 2 months after the effective date of this AD: Install a retainer instead of a washer in the upper and the lower torsion bars of the rudder, in accordance with Dornier Service Bulletin SB–328–27–298, Revision 1, dated November 21, 2002. Installation of a retainer before the effective date of this AD in accordance with Dornier Service Bulletin SB–328–27–298, dated March 26, 1999, is acceptable for compliance with the requirements of this paragraph.

Alternative Methods of Compliance

(b) In accordance with 14 CFR 39.19, the Manager, International Branch, ANM–116, FAA, is authorized to approve alternative methods of compliance for this AD.

Incorporation by Reference

(c) Unless otherwise specified in this AD, the actions shall be done in accordance with Dornier Service Bulletin SB–328–27–298, Revision 1, dated November 21, 2002. 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 Fairchild Dornier, Dornier Luftfahrt GmbH, P.O. Box 1103, D–82230 Wessling, Germany. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

Note: The subject of this AD is addressed in German airworthiness directive 2003–104, dated April 3, 2003.

Effective Date

(d) This amendment becomes effective on June 23, 2003.

Issued in Renton, Washington, on May 29, 2003.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 03–13974 Filed 6–5–03; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000–NE–47–AD; Amendment 39–13177; AD 2003–11–18]

RIN 2120–AA64

Airworthiness Directives; Pratt and 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 and Whitney (PW) model 4000 series 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. This amendment requires the same actions as that AD, adds on-wing Testing–21 to engines installed on Boeing 747 and MD–11 airplanes, and adds the requirement to install a new Ring Case Configuration (RCC) rear HPC on engines installed in the Boeing fleet as terminating action to the requirements of this AD. This amendment is prompted by the development of an RCC rear HPC for PW4000 series turbofan engines installed in the Boeing fleet. The actions specified by this AD are intended to prevent engine takeoff power losses due to HPC surge.

DATES: Effective July 7, 2003. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of July 7, 2003.

The incorporation by reference of certain other publications, as listed in the regulations, were approved previously by the Director of the Federal Register as of January 17, 2002 (67 FR 1, January 2, 2002), and November 12, 2002 (67 FR 65484, October 25, 2002).

ADDRESSES: The service information referenced in this AD may be obtained from Pratt & Whitney, 400 Main St., East Hartford, CT 06108, telephone (860) 565–6600; fax (860) 565–4503. 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 2002–21–10, Amendment 39–12916 (67 FR 65484, October 25, 2002), which is applicable to PW model 4000 series turbofan engines was published in the **Federal Register** on April 7, 2003, (68 FR 16736). That action proposed to require interim actions to address engine takeoff power loss events until the HPC case is redesigned and available for incorporation on the PW4000 engines. That action also proposed to add on-wing Testing–21 to engines installed on Boeing 747 and MD–11 airplanes, and add the requirement to install a new RCC rear HPC on engines installed in the Boeing fleet as terminating action to the requirements of this AD.

Comments

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

Embedded Engine Configuration

One commenter states that proposed paragraph (u)(1)(ii) embeds an engine configuration that is not listed in Table 1 of the proposed AD and requires operators to replace the rear hook regardless of whether or not it is worn beyond serviceable limits. In addition, the commenter states that it is an undue burden on the operators to track and maintain an additional build configuration not previously tracked.

The FAA does not agree. For engines installed on Boeing airplanes, after the effective date of this AD, any time a Segmented Case Configuration (SCC) HPC module is disassembled to a level that separates the HPC rear case assembly from the HPC module at the H flange, the RCC rear HPC must be incorporated making the replacement of the rear hook a non-issue. After May 31, 2006, any SCC HPC engine installed on

Boeing airplanes must have incorporated a Haynes material HPC inner case rear hook. This requirement maintains the appropriate safety level and the intent of the fleet management plan to reduce the risk of a group 3 surge event. The FAA does not agree that tracking SCC engines with a Haynes material HPC inner case rear hook as well as RCC HPC engines imposes an undue burden on operators.

Service Bulletin Updated

One commenter notes that proposed paragraphs (j)(5), (m), (o)(1), (t)(1), (u), (u)(3), and Table (9) reference service bulletin (SB) PW4ENG 72–755, dated February 28, 2003, however the subject SB has been updated to Revision 1, dated April 8, 2003.

The FAA agrees. Since the issuance of the proposed rule, Revision 1 to SB PW4ENG 72–755 was issued on April 8, 2003, to correct various typographical errors, and Revision 2 was issued on May 23, 2003, to change the part number of two brackets due to interference concerns. The FAA has reviewed the data and concurs with these minor changes to the SB. The final rule incorporates SB PW4ENG 72–755, Revision 2, dated May 23, 2003.

Alternate Shroud Repair

Two commenters state that proposed paragraph (m) defines a minimum build standard for Boeing 747 and 767 airplanes that requires an HPC module to incorporate the requirements of SB PW4ENG 72–755. One of the requirements of that SB changes the abradable sealing surface material for the stage 5, 6, and 7 shrouds from felt metal (PWA 24–1) to plasma spray (PWA279), and states that this work should be done by a PW repair facility. The commenters note that Chromalloy Georgia has an FAA-approved procedure for repairing these shrouds with plasma spray and request that the FAA include the alternate Chromalloy Georgia process in the Additional Service Information section of the AD, and in paragraphs (m), (u) and (u)(3).

The FAA does not agree. The AD mandates the incorporation of the RCC HPC into the module in accordance with SB PW4ENG 72–755 and mandates any concurrent requirements of SB PW4ENG 72–755. The other provisions of SB PW4ENG 72–755 may be done by any method, technique, and practice that is either prescribed in the current manufacturer's maintenance manual or Instructions for Continued Airworthiness or is acceptable to the administrator. Thus, the final rule requires only that after the effective date of that AD, the RCC rear HPC must have a plasma spray abradable sealing surface, but does not mandate how that surface must be applied. In this instance, the Chromalloy Georgia procedures numbers 96 CGT 073–08 and 96 CGT 085–05 are acceptable methods for applying plasma spray abradable material for this shroud repair.

Accuracy of Economic Analysis

Two commenters question the accuracy of the economic analysis. These commenters suggest that the NPRM's economic analysis understated the required parts cost of approximately $119,500 per engine.

The FAA does not agree. The NPRM's economic analysis reflects the average incremental cost of incorporating the RCC per engine during a heavy maintenance HPC compressor shop visit. This is based on the cost of the RCC hardware including the valve and harness changes, and deducts the cost of the SCC overhaul. While the actual cost for an engine may be higher or lower than the $119,500, based on variations between the worldwide overhaul facilities to perform a SCC HPC overhaul and variations of work done in-house by the operator, the FAA believes its use of an average cost fairly estimates the economic burden of this AD.

Typographical Error

Three commenters note a typographical error in proposed Table 1, item 9 (Configuration I), where Service Bulletin ''PW4ENG 72–55'' should read ''PW4ENG 72–755''.

The FAA agrees, and has changed the final rule accordingly.

Clarifications

One commenter notes that in proposed paragraph (c) (1) the text of CSN limits should be revised to read ''CSN or CST limits'', to eliminate any possible confusion.

The FAA agrees and has changed the final rule accordingly.

One commenter suggests a wording change to proposed paragraph (e)(3) and (e)(4) from ''remove from service'', to ''remove from service or perform on-wing Testing-21''. The commenter states that this change would highlight that on-wing Testing-21 is an option.

The FAA agrees and has changed the final rule accordingly.

Service Bulletin 72–749

One commenter requests that proposed paragraph (u)(2)(ii) include a reference to PW SB PW4ENG 72–749, Revision 1, dated January 8, 2003, since this SB incorporates the Haynes material HPC inner case rear hook and HPC inner case mid hook.

The FAA agrees and has added a reference to PW SB PW4ENG 72–749, dated June 2002, and Revision 1 of that SB, dated January 8, 2003, as additional methods of compliance to this paragraph as well as paragraph (u)(1)(ii) of the final rule.

Requirements Too Restrictive

Two commenters state that proposed paragraph (o)(2) is too restrictive and will result in numerous requests for alternative methods of compliance (AMOC). The commenters gave examples when the flange between ''A'' and ''T'' can be separated, without disturbing the gas path. These commenters request that the FAA remove the requirement for Testing-21 on engines that, during a shop visit, have a flange separation without disturbing the gas path hardware.

The FAA agrees. Paragraph (o)(2) of the final rule has been changed to be less restrictive for engines in the shop that have had a flange separation between ''A'' and ''T'' flanges by removing the Testing-21 requirement if, the engine is reassembled with the gas path-related components remaining in the as-removed condition.

Remove Reference to Service Document

One commenter states that in paragraph (l)(2)(i) of the proposed rule, the PW Clean, Inspect, and Repair (CIR) Manual 51A357, Section 72–35–68, Inspection/Check-04, Indexes 8–11, dated September 15, 2001, or dated March 15, 2002, should have only used the March 15, 2002 date.

The FAA does not agree. The final rule retains the September 15, 2001, reference and adds CIR 72–35–68 Insp/Chk-04, Indexes 8–11, dated December 15, 2002, as an additional method to inspect the HPC mid hook and rear hook of the HPC inner case for wear.

Table 1 Serial Number Errors

One commenter states that proposed Table 1 has serial number errors in the configuration designator ''G'' where the table identifies the Phase 3, 1st Run Subpopulation Engines by model and serial numbers. The serial numbers for the PW4052, PW4056, PW4060, PW4060A, PW4060C, and PW4062 rating are incorrect. The commenter states that the correct serial numbers should be SN 727732 through SN 728000 inclusive and SN 729001 through SN 729010 inclusive.

The FAA agrees and has changed the final rule accordingly.

Configuration Designator G Description

One commenter states that the description for configuration designator G in Table 1 of the proposed rule, should be more specific with respect to the Haynes material, and should reference PW4ENG 72–714, dated June 27, 2000; or Revision 1, dated November 8, 2001; or Chromalloy Florida Repair procedure 00CFL–039–0 dated December 27, 2000.

The FAA does not agree. Configuration G engines, listed by serial number, are first run Phase 3 engines produced without Haynes material in the HPC inner case rear hook. Since these engines specifically do not have Haynes material HPC inner case rear hooks, the FAA does not believe it is necessary to list out the PW SBs or Chromalloy Florida Repair procedure. However the wording in the description has been changed for clarification.

Include Future Revisions of Documents

One commenter requests that the FAA consider the practice of referencing a document with a specified control date, inclusive of future revisions in an effort to eliminate the errors to NPRMs and the need to request AMOCs when the referenced material is subsequently revised.

The FAA does not agree. The FAA cannot incorporate by reference a document before that document has been published. Therefore, since each revision to a SB is considered a separate document for purposes of incorporation by reference, it is not legally possible for the FAA to approve future revisions before they are published. The FAA will continue to use the AMOC process to approve a later revision of an SB or other service documents incorporated by reference in an AD as an AMOC to the original SB.

Use Compressor Age to Control Ring Case Configuration Incorporation

One commenter feels it would be more appropriate for the AD to control RCC incorporation based on compressor age, as opposed to a specified date based on forecasted aircraft utilization.

The FAA does not agree. The compliance dates within the final rule use the current average airplane and engine utilization rates for the total fleet. If an operator has a utilization rate outside of this average, the operator can use the AMOC process to seek relief. The risk accumulation of the operator's fleet would be evaluated against the risk model predictions of the total fleet.

Add Terminating Action for Engines Installed on Airbus Fleet

One commenter suggests that this final rule include the incorporation of the RCC rear HPC as terminating action for engines installed on the Airbus fleet.

The FAA does not agree. The FAA is currently evaluating proposals for terminating actions for Airbus and McDonnell Douglas fleets. Once those proposals are found to meet the airworthiness standards for both engines and transport category aircraft, the FAA will incorporate those terminating actions into this AD. The FAA believes, however, that the current rule should be revised now in order to maintain the desired level of safety based on the fleet-wide risk analysis.

Request to Add PW4062A Model to Applicability

One commenter states that the applicability section of the proposal does not include the PW4062A model engine. Since this engine is currently used on the Boeing 747–400F airplane and is subject to takeoff power losses due to HPC surges, this commenter requests that this model be included in the applicability section.

The FAA does not agree. The PW4062A engine model is intentionally not added to the applicability section of this AD. The amended Type Certificate adding the PW4062A model included as part of the PW4062A design the interim measures applied to other engine models to address this known high power surge issue. Those measures appear in the Limitation Section of Chapter 5 in the PW4062A Engine Manual. The terminating action for PW4062A model engines installed on Boeing aircraft, the installation of a ring case compressor (RCC), will be addressed in a separate AD that applies to the PW4062A model. The FAA will consider adding the PW4062A engine model to this AD in the future once terminating action is developed and approved for the Airbus and McDonnell Douglas fleets.

Minimum Build Requirements Inadvertently Omitted

One commenter notes that proposed paragraph (m) does not include the minimum build HPT/HPC mismatch requirement, or the incorporation of SB PW4ENG 72–514, both previously mandated for the SCC HPC engines installed on Boeing airplanes. This commenter points out that it is feasible to have a SCC HPC engine enter the shop, have no work done to the HPC, and be returned to a Boeing airplane. This commenter questions whether these omissions were an oversight.

The FAA agrees that these omissions were an oversight. While the HPC/HPT mismatch or SB PW4ENG 72–514 minimum build standard requirements are not required for RCC HPC engines, the FAA intended that these two requirements form part of the minimum build standard for all SCC HPC engines, regardless of whether the engine is installed on Boeing, Airbus or MD–11 airplanes. Therefore, the FAA revised paragraph (m) of the final rule to include these two requirements for the SCC HPC engines installed on the Boeing fleet.

AD Compliance Considered More Restrictive Than PW SB Compliance

One commenter states that the compliance of proposed paragraph (m), which requires the ring case incorporation when the HPC module is disassembled to a level that separates the HPC rear case assembly from the HPC module at the H flange, is more restrictive than the PW SBs compliance category 6. This commenter requests that paragraph (m) define the compliance to be the same as a PW SB compliance category 6.

The FAA agrees. It was intended that the compliance for paragraph (m) of the AD be equivalent to a PW SB compliance category 6. Therefore, for clarification, the FAA has added the word ''fully'', to paragraphs (m) and (u) of the final rule, to clarify that a fully separated H flange from the HPC module is the same as PW SB compliance category 6.

Request for Drawdown Time

One commenter requests that the FAA allow one or two months of drawdown time from the effective date of the AD, for RCC incorporation. The commenter asks that the FAA consider that some operators may not be ready to do the incorporation by the time the AD is in effect.

The FAA does not agree. The final rule will not be effective until 30 days after publication, providing adequate time to prepare to comply with this AD.

Request for Reduced Test Interval

One commenter asks the FAA to consider as an addition to proposed paragraph (u)(2)(i) to allow two SCC HPC engines on an airplane after January 31, 2007, provided that the Testing-21 interval be reduced in half, to 400 hours-since-last-test. The commenter suggests that the reduced interval can account for an additional SCC HPC engine installation.

The FAA does not agree. Proposing two SCC HPC engines on-wing after January 31, 2007, with a Testing-21

interval reduction by half, results in a dual engine group 3 surge risk greater than the FAA proposal. Since the commenter's proposal does not have an equivalent risk to the requirement of proposed (u)(2)(i), the FAA has not made this change.

Additional Clarification

In addition, the FAA has added clarification to proposed paragraph (f) to ensure that the intent of this AD is, after the effective date, to allow only new Airbus operators to apply the initial categorization criteria of proposed paragraphs (f)(1) through (f)(9). Those operators who have complied with paragraph (f) in accordance with the current AD, AD 2002–21–10, should not re-apply paragraphs (f)(1) through (f)(9) of the final rule after the effective date of this AD.

Revised or Added Service Documents

Since the issuance of the NPRM, service documents PW SB PW4ENG 72–714, Revision 2, dated February 28, 2003; PW SB PW4ENG 72–749, Revision 1, dated January 8, 2003; PW SB PW4ENG 72–755, Revision 2, dated May 23, 2003; PW CIR PN51357, Section 72–35–68, Inspection/Check-04, Index 8–11, dated December 15, 2002, and PW4000 EM 50A605, 71–00–00, Testing 21, dated June 15, 2003, and, have been issued as revisions to service documents referenced in the proposed rule. The FAA has reviewed and approved these documents, has added them to the appropriate compliance paragraphs as additional methods of compliance, and has added them to the list of documents that have been incorporated by reference.

Removal of a Service Document

The manufacturer has submitted data which supports removing from the final rule CIR 51A357, Section 72–35–68, Repair-16, which is an HPC inner rear case mid hook Greek Ascoloy weld repair. Currently, the existing AD allows the repair of the HPC inner mid hook using either Greek Ascoloy or Haynes material. Service Bulletin PW4ENG 72–749 replaces both the HPC inner rear case mid hook and inner case rear hook with hooks made of Haynes material. There is evidence that indicates that the best configuration for a SCC HPC inner rear case is to have Haynes material mid and rear hooks. The FAA has reviewed the data, and based on the incorporation of the RCC HPC modules, believes this configuration has low impact on the fleet. Therefore, proposed paragraph (l)(2)(i) has been revised to remove CIR 51A357, Section 72–35–68, Repair-16.

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 39–12916 (67 FR 65484, October 25, 2002) and by adding a new airworthiness directive, Amendment 39–13177, to read as follows:

2003–11–18 Pratt & Whitney: Amendment 39–13177. Docket No. 2000–NE–47–AD. Supersedes AD 2002–21–10, Amendment 39–12916.

Applicability: This airworthiness directive (AD) is applicable to Pratt & Whitney (PW) model 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 (w) 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	Description
(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.

TABLE 1.—ENGINE CONFIGURATION LISTING—Continued

Configuration	Configuration designator	Description
(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) or (j) 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.
(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) or (j) of this AD. Once an engine has passed a Testing-21, it will remain a Configuration H engine until the HPC is overhauled, or is replaced with a new or overhauled HPC.
(9) Engines installed on Boeing 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 have been manufactured with an RCC rear HPC.

Configuration E Engines Installed on Boeing 747, 767, and 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, MD–11, and Airbus A300 and A310 Airplanes

(c) For Configuration G and H engines installed on Boeing 747, 767, 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. 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 600 CST	3,000 CSN 600 CST	2,100 CSN 600 CST	1,350 CSN 600 CST	1,150 CSN 600 CST	2,800 CSN 600 CST
H						

(2) Prior to return to service and installed on Boeing 747 and 767 airplanes, Configuration G and H engines must meet the requirements of paragraph (j) of this AD.

(3) Prior to return to service and installed on Airbus or McDonnell Douglas airplanes, Configuration G or H engines must meet the requirements of paragraph (i) of this AD.

Engines Installed on Boeing 767 and MD–11 Airplanes

(d) For engines installed on Boeing 767 and 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 and installed on MD–11 airplanes, engines must meet the requirements of paragraph (i) of this AD.

(3) Prior to return to service and installed on Boeing 767 airplanes, engines must meet the requirements of paragraph (j) 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 (j)(3) for Configuration D engines, before accumulating 2,600 CSN.

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

(5) Prior to return to service and installed on Boeing airplanes, Configuration A, B, C, D, and F engines must meet the requirements of paragraph (j) 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)(1) through (f)(9) to determine which Airbus A300 PW4158 engine category 1, 2, 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 PW 4158 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 PW 4ENG 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 (v)(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 PW 4158 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 has 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 (v)(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 PW 4158 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 (v)(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 (v)(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 for Engines To Be Installed on Airbus or McDonnell Douglas Airplanes

(i) Engines removed from service in accordance with paragraph (c), (d), or (g) of this AD may be returned to service and installed on Airbus or McDonnell Douglas airplanes under the following conditions:

(1) After passing a cool-engine fuel spike stability test (Testing-21) that has been done in accordance with one of the following PW4000 Engine Manuals (EM) as applicable, except for engines configured with Configuration E, or engines that have experienced a Group 3 takeoff surge:

(i) PW4000 EM 50A443, 71–00–00, TESTING–21, dated March 15, 2002.

(ii) PW4000 EM 50A822, 71–00–00, TESTING–21, dated March 15, 2002.

(2) Engines tested before the effective date of this AD, in accordance with PW4000 EM 50A443, 71–00–00, Testing-21, dated November 14, 2001; or PW4000 EM 50A822, 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 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) After passing an on-wing Testing-21 on PW4460 and PW4462 engines installed on the MD–11 airplanes that has been done in accordance with Major IEN 02KCW13H, dated December 9, 2002 or 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

(4) The engine HPC was replaced with an HPC that is new from production with no time in service; or

(5) The engine HPC has been overhauled, or the engine HPC replaced with an overhauled HPC with zero cycles since overhaul; or

(6) 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), or (g) of this AD are met at the time of engine installation.

Return to Service Requirements for Engines To Be Installed on Boeing 747 or 767 Airplanes

(j) Engines removed from service in accordance with paragraph (c), (d), or (e) of this AD may be returned to service and installed on Boeing airplanes under the following conditions:

(1) After passing a cool-engine fuel spike stability test (Testing-21) that has been done in accordance with PW4000 EM 50A605, 71–00–00, Testing-21, dated June 15, 2003, 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 PW IEN 96KC973D, dated October 12, 2001; or PW4000 EM 50A605, Temporary Revision No. 71–0035, dated November 14, 2001 meet the requirements of Testing-21; or

(3) For PW4056 engines installed on Boeing 747 airplane, 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) 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), or (e) of this AD are met at the time of engine installation.

(5) Engine has incorporated the RCC rear HPC in accordance with PW SB PW4ENG 72–755, Revision 2, dated May 23, 2003. Completing this SB changes the engine configuration to Configuration I.

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

(k) 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 (k) of this AD using the weight restriction compliance method, must perform Testing-21 in accordance with paragraph (i) or (j) 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) or (j) 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 For Engines Installed on Airbus and McDonnell Douglas Airplanes

(l) Use the following minimum build standards for engines to be returned to service and installed on Airbus and McDonnell Douglas airplanes:

(1) After the effective date of this AD, do not install an engine with HPC and HPT modules where the CSO of the HPC is 1,500

cycles or greater than the CSN or CSO of the HPT.

(2) For any engine that undergoes an HPC overhaul after the effective date of this AD:

(i) Inspect the HPC mid hook and rear hook of the HPC inner case for wear in accordance with PW Clean, Inspect and Repair (CIR) Manual PN 51A357, Section 72–35–68 Inspection/Check-04, Indexes 8–11, dated December 15, 2002, or March 15, 2002, or September 15, 2001. If the HPC rear hook is worn beyond serviceable limits, replace the HPC inner case rear hook with an improved durability hook in accordance with PW SB PW4ENG 72–714, Revision 1, dated November 8, 2001, or Revision 2, dated February 28, 2003; or Chromalloy Florida Repair Procedure 00 CFL–039–0, dated December 27, 2000. If the HPC inner case mid hook is worn beyond serviceable limits, repair the HPC inner case mid hook in accordance with PW SB PW4ENG 72–749, dated June 17, 2002, or Revision 1, dated January 8, 2003; or Chromalloy Florida Repair Procedure 02 CFL–024–0, dated September 15, 2002.

(ii) After the effective date of this AD, any engine that undergoes an HPC overhaul may not be returned to service unless it meets the build standard of PW SB PW4ENG 72–484, PW4ENG 72–486, PW4ENG 72–514, and PW4ENG 72–575. Engines that incorporate the Phase 3 configuration already meet the build standard defined by PW SB PW4ENG 72–514.

(3) After the effective date of this AD, any engine that undergoes separation of the HPC and HPT modules must not be installed on an airplane unless it meets the build standard of PW SB PW4ENG 72–514. Engines that incorporate the Phase 3 configuration already meet the build standard defined by PW SB PW4ENG 72–514.

Minimum Build Standard for Engines Installed on Boeing 747 and 767 Airplanes

(m) For engines to be returned to service and installed on Boeing 747 and 767 airplanes, after the effective date of this AD:

(1) Any 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 PW SB PW4ENG 72–755, Revision 2, dated May 23, 2003. Any SCC HPC module that is not disassembled in accordance with (m)(1), must meet the following minimum build standard:

(i) Do not install an engine with 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 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 for Engines To Be Installed on Airbus or McDonnell Douglas Airplanes

(n) For engines to be installed on 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) The engine HPC was overhauled, or replaced with an overhauled HPC with zero cycles since overhaul; or the engine HPC was replaced with an HPC that is new from production with no time in service, or

(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 with an HPC having zero CSN or CSO, or 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 Engine Manual.

Stability Testing Requirements for Engines To Be Installed on Boeing 747 or 767 Airplanes

(o) For engines to be installed on Boeing 747 or 767 airplanes, after the effective date of this AD, Testing-21 must be performed in accordance with paragraph (j) 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 PW SB PW4ENG 72–755, Revision 2, dated May 23, 2003. Completing this SB changes the engine configuration to Configuration I; or

(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

(p) 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, 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 (v)(2) for definition of HPC overhaul period.

(q) 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.

(r) 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.

(s) 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, are exempt from the lowest cyclic limit requirement in paragraphs (p), (q), and (r) of this AD.

Engines That Surge

(t) 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, remove the engine from service before further flight and for engines that will be installed on Airbus or McDonnell Douglas airplanes, perform an HPC overhaul; or for engines that will be installed on Boeing airplanes, incorporate the RRC rear HPC in accordance with PW SB PW4ENG 72–755, Revision 2, dated May 23, 2003.

(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) or (j) 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 (t)(1) and (t)(2) are not applicable to engines that incorporate the RCC rear HPC in accordance with PW SB PW4ENG 72–755, Revision 2, dated May 23, 2003.

Terminating Action for Boeing Airplanes

(u) For Boeing operators with PW4000 engines installed on Boeing 747 or Boeing 767 airplanes, modify the engine HPC assembly by incorporating the RCC rear HPC in accordance with PW SB PW4ENG 72–755, Revision 2, dated May 23, 2003 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, 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 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) 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 PW SB PW4ENG 72–755, Revision 2, dated May 23, 2003. Engines incorporating the RCC rear HPC are Configuration I engines. See paragraph (v)(7) for definition of HPC rear case assembly.

(4) Incorporation of the RCC rear HPC constitutes terminating action to the Testing-21 requirements as specified in paragraph (o) of this AD, and engine stagger limit requirements as specified in paragraphs (c), (d), and (e) of this AD for engines installed on Boeing airplanes.

Note 2: Terminating action to this AD for engines installed on Airbus and McDonnell Douglas airplanes is pending RCC rear HPC certification to 14 CFR part 25. Once approved, this AD will be superseded to add terminating action requirements for the Airbus and McDonnell Douglas fleets.

Definitions

(v) 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.

Alternative Methods of Compliance

(w) 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 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the ECO.

Special Flight Permits and Testing-21 Reports

(x) 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. 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

(y) The actions must be done in accordance with the following Pratt and Whitney (PW) service bulletin (SB), Internal Engineering Notice (IEN), Temporary Revisions, (TR's), Clean, Inspection, and Repair Manual (CIR) repair procedures, engine manual (EM) sections, and Chromalloy Florida Repair Procedure:

Document No.	Pages	Revision	Date
PW SB PW4ENG72–714	1–2	1	Nov. 8, 2001.
	3	Original	Jun. 27, 2000.
	4	1	Nov. 8, 2001.
	5–12	Original	Jun. 27, 2000.
Total pages: 12			
PW SB PW4ENG72–714	All	2	Feb. 28, 2003.
Total pages: 14			
PW SB PW4ENG72–749	All	Original	Jun. 17, 2002.
Total pages: 14			
PW SB PW4ENG72–749	1	1	Jan. 8, 2003.
	2–4	Original	Jun. 17, 2002.
	5–7	1	Jan. 8, 2003.
	8	Original	Jun. 17, 2002.
	9–10	1	Jan. 8, 2003.

Document No.	Pages	Revision	Date
	11	Original	Jun. 17, 2002.
	12–14	1	Jan. 8, 2003.
Total pages: 14			
PW SB PW4ENG72–755	1	2	May 23, 2003.
	2–37	1	Apr. 8, 2003.
	38–39	2	May 23, 2003.
	40–54	1	Apr. 8, 2003.
	55	2	May 23, 2003.
	56–152	1	Apr. 8, 2003.
	153	2	May 23, 2003.
	154–166	1	Apr. 8, 2003.
	167–171	2	May 23, 2003.
	172–179	1	Apr. 8, 2003.
	180–183	2	May 23, 2003.
	184–195	1	Apr. 8, 2003.
	196	2	May 23, 2003.
	197–233	1	Apr. 8, 2003.
	234	2	May 23, 2003.
	235–287	1	Apr. 8, 2003.
Total pages: 287			
PW IEN 96KC973D	All	Original	Oct. 12, 2001.
Total pages: 19			
PW TR 71–0018	All	Original	Nov. 14, 2001.
Total pages: 24			
PW TR 71–0026	All	Original	Nov. 14, 2001.
Total pages: 24			
PW TR 71–0035	All	Original	Nov. 14, 2001.
Total pages: 24			
PW CIR 51A357, Section 72–35–68, Inspection/Check-04, Indexes 8–11.	All	Original	Sep. 15, 2001.
Total pages: 5			
PW CIR 51A357, Section 72–35–68, Inspection/Check-04, Indexes 8–11.	All	N/A	Mar. 15, 2002.
Total pages: 5			
PW CIR 51A357, Section 72–35–68, Inspection/Check-04, Indexes 8–11.	All	N/A	Dec. 15, 2002.
Total pages: 10			
PW4000 EM 50A443, 71–00–00, TESTING–21	All	Original	Mar. 15, 2002.
Total pages: 20			
PW4000 EM 50A605, 71–00–00, TESTING–21	All	Original	Mar. 15, 2002.
Total pages: 20			
PW4000 EM 50A605, 71–00–00, TESTING–21	1–7	Original	Mar. 15, 2002.
	8–25	N/A	Jun. 15, 2003.
Total pages: 25			
PW4000 EM 50A822, 71–00–00, TESTING–21	All	Original	Mar. 15, 2002.
Total pages: 20			
Chromalloy Florida Repair Procedure, 00 CFL–039–0			
Summary	1–3	Original	Dec. 27, 2000.
Insp/chk-01	801	Original	Dec. 27, 2000.
Repair-01	901–903	Original	Dec. 27, 2000.
Total pages: 7			
Chromalloy Florida Repair Procedure, 02 CFL–024–0			
Summary	1–5	Original	Sep. 15, 2002.
Inspection	801–802	Original	Sep. 15, 2002.
Repair	901–906	Original	Sep. 15, 2002.
Total pages: 13			

The incorporation by reference of IEN 96KC973D, dated October 12, 2001; TR 71–0018, TR 71–0026, and TR 71–0035, all dated November 14, 2001; and CIR 51A357, Section 72–35–68, Inspection/Check-04, Indexes 8–11, dated September 15, 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 SB PW4ENG 72–714, Revision 1, dated November 8, 2001, SB PW4ENG 72–749, dated June 17, 2002; EM 50A443, Section 71–00–00, Testing-21, EM 50A822, Section 71–00–00, Testing-21, EM 50A605, and Section 71–00–00, Testing-21, all dated March 15, 2002; Chromalloy Florida Repair Procedure, 00 CFL–039–0, dated December 27, 2000; and Chromalloy Florida Repair Procedure, 02 CFL–024–0, dated September 15, 2002; 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 SB PW4ENG 72–714, Revision 2, February 28, 2003, SB PW4ENG 72–755, Revision 2, dated May 23, 2003; SB PW4ENG 72–749, Revision 1, dated January 8, 2003; SB PW4ENG 72–714, Revision 2, dated February 28, 2003; CIR 51A357, Section 72–35–68, Inspection/Check-04, Indexes 8–11, dated March 15, 2002; and dated December 15, 2002; and EM 50A605, Section 71–00–00, Testing-21, dated June 15, 2003, was approved by the Director of the Federal Register on June 23, 2003, 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) 565–6600; fax (860) 565–4503. 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

(z) This amendment becomes effective on July 7, 2003.

Issued in Burlington, Massachusetts, on May 28, 2003.

Francis A. Favara,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 03–13782 Filed 6–5–03; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99–NE–12–AD; Amendment 39–13168; AD 2003–11–09]

RIN 2120–AA64

Airworthiness Directives; Turbomeca Turmo IV A and IV C Series Turboshaft Engines; Correction

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; correction.

SUMMARY: This document makes a correction to Airworthiness Directive (AD) 2003–11–09 applicable to Turbomeca Turmo IV A and IV C series turboshaft engines that was published in the **Federal Register** on May 29, 2003 (68 FR 31970). The engine model in the regulatory section, under applicability, is incorrect. This document corrects that model. In all other respects, the original document remains the same.

EFFECTIVE DATE: July 3, 2003.

FOR FURTHER INFORMATION CONTACT: Antonio Cancelliere, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803–5299; telephone (781) 238–7751; fax (781) 238–7199.

SUPPLEMENTARY INFORMATION: A final rule AD, FR Doc. 03–13115 applicable to Turbomeca Turmo IV A and IV C series turboshaft engines, was published in the **Federal Register** on May 29, 2003 (68 FR 31970). The following correction is needed:

§ 39.13 [Corrected]

■ On page 31970, in the third column, in the regulatory section, under applicability, in the first paragraph, in the fifth line, ''FA 330–PUMA'' is corrected to read ''SA 330–PUMA''.

Issued in Burlington, MA, on June 2, 2003.

Jay J. Pardee,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 03–14275 Filed 6–5–03; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000–NM–311–AD; Amendment 39–13179; AD 2003–11–20]

RIN 2120–AA64

Airworthiness Directives; Bombardier Model CL–600–2B19 (Regional Jet Series 100 & 440) Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain Bombardier Model CL–600–2B19 (Regional Jet Series 100 & 440) airplanes, that currently requires repetitive lubrication of the slide shaft of the input plunger of the brake control valve assembly. This amendment adds requirements for modifying the brake control valve assembly, which terminates the repetitive lubrications required by the existing AD. This amendment also adds subsequent repetitive lubrications of the valve utilizing the grease fittings installed during the modification. This amendment is prompted by reports of temporary loss of braking action upon landing. The actions specified by this AD are intended to prevent temporary loss of braking action due to the freezing of moisture on the input plunger of the brake control valve during steep descent.

DATES: Effective July 11, 2003.

The incorporation by reference of Bombardier Service Bulletin 601R–32–017, dated November 9, 1993, as listed in the regulations, is approved by the Director of the Federal Register as of July 11, 2003.

The incorporation by reference of Canadair Regional Jet Alert Service Bulletin S.B.A601R–32–016, dated October 14, 1993, as listed in the regulations, was approved previously by the Director of the Federal Register as of February 4, 1994 (59 FR 2952, January 20, 1994).

ADDRESSES: The service information referenced in this AD may be obtained from Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087, Station Centre-ville, Montreal, Quebec H3C 3G9, Canada. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, New York Aircraft Certification Office (ACO), 10 Fifth Street, Third Floor, Valley Stream, New York; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Dan Parrillo, Aerospace Engineer, Systems and Flight Test Branch, ANE–172, FAA, New York ACO, 10 Fifth Street, Third Floor, Valley Stream, New York 11581; telephone (516) 256–7505; fax (516) 568–2716.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 93–21–04, amendment 39–8801 (59 FR 2952, January 20, 1994), which is applicable to certain Bombardier Model CL–600–2B19 (Regional Jet series 100) series airplanes, was published in the **Federal Register** on January 13, 2003 (68 FR 1566). The action proposed to require repetitive lubrication of the slide shaft of the input plunger of the brake control valve assembly; modification of the brake control valve assembly, which would terminate the repetitive lubrications required by the existing AD; and subsequent repetitive lubrications of the valve utilizing the grease fittings that are installed during the modification.

Comments

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

Request To Revise Identification of Regional Jet Series 100

One commenter requests that the proposed AD be revised to either remove the reference to ''Regional Jet Series 100'' in association with the affected airplanes throughout the document or add a reference to series 440 airplanes. The commenter explains that the proposed AD applies to Model CL–600–2B19 airplanes. The type certificate data sheet (TCDS) identifies the affected airplane model as ''CL–600–2B19 (Regional Jet Series 100 & 440).'' The commenter suggests that the references to this airplane model should be revised to reflect both the 100 and 440 series.

The FAA concurs with the request. After the proposed AD was issued, the TCDS was revised to incorporate this change. The final rule has been revised accordingly to correctly identify the affected airplanes where appropriate.

Request To Incorporate AD Actions Into the Maintenance Program

Paragraph (c) of the proposed AD proposed to require repetitive