

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [63 FR 31340 NO. 110 06/09/98]

[Docket No. 97-ANE-05; Amendment 39-10563; AD 98-12-07]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney JT8D Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to Pratt & Whitney JT8D series engines, that currently requires a determination of the utilization rate and coating type of the 7th, 8th, 9th, 10th, 11th, and 12th stage high pressure compressor (HPC) disks, and removal, inspection for corrosion, and recoating of those HPC disks based on utilization rate. This amendment shortens the inspection interval for certain low utilization disks. This amendment is prompted by reports of an additional uncontained 9th stage HPC disk failure due to corrosion pitting. The actions specified by this AD are intended to prevent fracture of the HPC disks, which can result in uncontained release of engine fragments, inflight engine shutdown, and airframe damage.

DATES: Effective August 10, 1998.

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

FOR FURTHER INFORMATION CONTACT: Christopher Spinney, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7175, fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding airworthiness directive (AD) 94-20-01, Amendment 39-9020 (59 FR 49175, September 27, 1994), applicable to Pratt & Whitney (PW) JT8D-1, -1A, -1B, -7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR turbofan engines was published in the Federal Register on September 17, 1997 (62 FR 48800). That action proposed the same record search and inspection program but on a more conservative inspection schedule, and that low utilization disks, regardless of the disk coating, would have to be inspected at an interval of 7 years since new, replate, or corrosion (YRSNRC) in accordance with the engine manual. Currently, the inspection interval for low utilization disks is based on the disk coating and the maximum inspection interval ranges from 9 to 11 YRSNRC depending on the part number and the type of coating. The high utilization disk inspection interval remained unchanged. Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Four commenters, comprising of 3 operators and the manufacturer, state that the proposed superseding rule should be withdrawn, based on the manufacturer's risk analysis, the lack of a defined unsafe condition, the lack of technical substantiation of the rule, and the belief that the current management plan is adequate to address the HPC disk corrosion issue. The FAA does not concur. The National Transportation Safety Board (NTSB) has determined from their investigation of the December 1995 accident that the most probable cause of the HPC disk failure was a fatigue crack which originated at a corrosion pit. The failed disk was last stripped of its protective coating and replated 8 years prior to the failure. The current AD and management plan requires reinspection of the disk at 10 year intervals. Therefore, the unsafe condition has been identified as the failure of a low utilization HPC disk prior to its currently mandated inspection interval. Risk analysis is used to develop a management plan to lower the probability of future events from occurring and cannot preclude a future event from occurring. The FAA establishes its confidence in the manufacturer's risk assessment by thoroughly reviewing the assumptions and modeling involved in developing the risk values. Although the FAA concurs that the manufacturer's risk assessment produces risk values that fall within typically acceptable limits, the FAA concludes that a more conservative corrective action is necessary. The acceptable risk limits are meant to be limits, and not typical values for allowable future risk. Establishing 7 years as the maximum inspection interval provides lowered risk without an onerous effect on the inspection and removal schedule, and, therefore, represents a desirable tradeoff. Furthermore, the reduced interval captures the concern of allowing a maximum inspection 25% in excess (10 years) of the recently-observed failure (8 years). While studies have determined that low utilization engines are more susceptible to corrosion because of the longer intervals between engine overhauls and the increased time spent stationary, subject to condensation, the FAA has determined that the statistical modeling of the onset and growth of a corrosion pit does not provide the level of confidence for the FAA to accept a longer interval. Therefore, the 7 year inspection interval was determined by the circumstances of the December 1995 accident. The disk failed 8 years after replating; therefore, in order to lower the risk of a similar event 7 years was chosen as the maximum inspection interval. This provides an adequate margin of safety against an incident occurring 8 years after replating.

Three commenters state that the economic analysis is inadequate, as the costs don't take into account required early shop visits, costs associated with aircraft down time, and industry's inability to perform engine overhauls due to shortages of engine parts. The FAA does not concur as these costs do not directly stem from the AD's required actions. This AD does not require any additional action over and above the original AD; however, the FAA has chosen to adopt the original economic analysis for inclusion in this revision. The indirect costs associated with performing the maintenance actions required by this AD are not directly related to this proposed rule, and, therefore, are not addressed in the economic analysis for this rule. A full cost analysis for each AD, including such indirect costs, is not necessary since the FAA has already performed a cost benefit analysis when adopting the part 33, airworthiness requirements to which these engines were originally certificated. A finding that an AD is warranted means that the original design no longer achieves the level of safety specified by those airworthiness requirements, and that other required actions are necessary, as in this case, stripping, corrosion inspecting and recoating or removing HPC disks. Because the original level of safety was already determined to be cost beneficial, these additional requirements needed to return the engine to that level of safety do not add any additional regulatory burden, and, therefore, a full cost analysis would be redundant and unnecessary.

Two commenters state that the years since last inspection (YRSLI) criteria has been removed from the AD. The FAA concurs with the following exception. The years since last corrosion inspection was in the original AD as a one-time relief to operators who may have recently installed a disk and had not replated, but had performed a corrosion inspection. It was intended

as a one-time only category for a disk and is not intended for repetitive inspections. The FAA concludes, however, that the original intent of YRS LI should remain intact and will change the compliance accordingly, but has reduced in this final rule the compliance interval of YRS LI by 3 years to be consistent with the 3 year compliance interval reduction for years since new, replated, or corrosion inspected (YRSNRC).

One commenter states that the mixed utilization disks category has been removed from the AD, as high utilization disks that become low utilization disks in the current AD receive a 40% time credit for the years they are operated as high utilization disks. The FAA concurs and has added to this final rule the time credit for disks that are operated as high utilization disks and then become low utilization disks. Low utilization disks that become high utilization disks must remain in the low utilization category until replated, and thus receive no time credit for time spent as a high utilization disk.

One commenter states that engines will require immediate removal upon publication of the AD. The FAA does not concur. The FAA has considered the impact on industry from immediate removals of engines upon publication of the AD. Since this superseding AD contains the requirements of the current AD, only engines that are not currently in compliance with AD 94-20-01 should require immediate removal upon publication of this AD. Engines that fall outside of the new reinspection interval are given a reasonable drawdown period before compliance is required. Operators finding that immediate removal of engines is required may apply for relief through the procedures contained in the AD allowing for approval of an alternate method of compliance or an adjustment to the compliance time.

One commenter states that they will follow the FAA-approved data contained in the PW Centralized and Coordinated Telecommunications Utility System (CACTUS) wire dated January 1, 1997. The FAA does not concur. Operators are reminded that PW's CACTUS wire is not FAA-approved data. It is simply PW's method of communicating their recommendations to their operators. Further, FAA approval of maintenance plans does not constitute approval of an alternate method of complying with actions required by an AD. The exclusive procedure for seeking approval of an alternate method of compliance is provided in the AD. One commenter requests that previous alternative methods of compliance (AMOCs) should be applicable to this AD. The FAA concurs in part. The AMOCs to this AD are not intended to be different from the AD which it is superseding; however, the intervals for compliance are being adjusted by this AD. Therefore, approved AMOCs to AD 94-20-01 are approved for this AD, but adjustments to compliance times which were approved for 94-20-01 are not approved for this AD.

One commenter requests clarification of partial year calculations. The FAA concurs in part. The FAA agrees that a partial year calculation of utilization rate is acceptable if a disk enters service at a time other than an operator's calculation interval. However, the FAA does not concur that a note is necessary in the AD to clarify this as it would unduly add to the complexity of the AD and that individual questions of this nature can best be handled on an individual basis.

Five commenters concur with the rule as proposed. New part numbers compressor disks have been introduced by PW and approved for use by the FAA. However, these disks also require a corrosion inspection for all of the same reasons stated in the NPRM and this AD. Not adding the additional part numbers to the NPRM was an unintentional oversight. Since the introduction of the new part numbers was only introduced last year, no drawdown interval is specified or required. The addition of paragraph (d)(5) in the final rule poses no undue burden on operators and meets the intent of the NPRM. In addition, the FAA has clarified the phrasing in the compliance section of this AD to better explain the requirements for corrosion inspections.

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.

There are approximately 11,119 engines of the affected design in the worldwide fleet. The FAA estimated that 6,815 engines installed on aircraft of U.S. registry were affected by AD 94-20-01, and 2 work hours would be necessary to determine the utilization rate and type of surface treatment. Based on domestic fleetwide data, the FAA estimated that approximately 8.7% or 593 engines were considered to have low utilization rates. Approximately 8.6 work hours would be required to remove these engines from the aircraft, 500 work hours to tear down, deblade, and to reassemble the engine, and 8.6 work hours to reinstall the reassembled engines. For the purposes of this cost analysis only, the FAA has conservatively estimated that 69% of the removed low utilization engines would require replacing the disks inspected. The FAA assumed that 3 disks per engine may require replacement, and the cost of a new disk would be approximately \$7,000. The average labor rate is \$60 per work hour. Based on these figures, the total cost impact of AD 94-20-01 on U.S. operators was estimated to be \$14,279,542. The cost increase between AD 94-20-01 and this superseding AD is based on the increased inspections of some low utilization disks. The FAA estimates 31% of the low utilization disks require an additional inspection. The cost of these additional inspections is estimated to be \$4,426,658.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES." List of Subjects in 14 CFR Part 39 Air Transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

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

Authority: 49 U.S.C. 106(g), 40113, 44701. §39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39-9029 (59 FR 49175, September 27, 1994) and by adding a new airworthiness directive, Amendment 39-10563, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

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

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

98-12-07 Pratt & Whitney: Amendment 39-10563. Docket 97-ANE-05. Supersedes AD 94-20-01, Amendment 39-9029.

Applicability: Pratt & Whitney (PW) JT8D-1, -1A, -1B, -7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR turbofan engines installed on but not limited to Boeing 737 and 727 series, and McDonnell Douglas DC-9 series aircraft.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (j) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fracture of the high pressure compressor (HPC) disks, which can result in uncontained release of engine fragments, inflight engine shutdown, and airframe damage, accomplish the following:

(a) Within four months of the effective date of this AD, determine the fleet and sub-fleet average engine utilization rate for the 12 months of operations prior to August 17, 1994, the issue date of PW Alert Service Bulletin (ASB) No. 6038, Revision 5, in accordance with paragraph 2.A of PW ASB No. 6038, Revision 5, dated August 17, 1994.

(1) For fleet or sub-fleet average utilization rates that are equal to or greater than 1,300 hours per year, and equal to or greater than 900 cycles per year, perform the following:

(i) For engines or stage 7 through stage 12 HPC disks that were added to a fleet or subfleet after November 28, 1994, and that were previously designated as low utilization disks in accordance with PW ASB No. 6038, Revision 5, dated August 17, 1994, comply with the requirements of paragraph (d) of this AD.

(ii) Designate all other stage 7 through stage 12 HPC disks as high utilization disks and comply with the requirements of paragraph (b) of this AD.

(2) For fleet or sub-fleet average utilization rates that are less than 1,300 hours per year or less than 900 cycles per year, within four months after the effective date of this AD, determine the utilization rate for each stage 7 through stage 12 HPC disk in accordance with paragraph 2.B.(1) of PW ASB No. 6038, Revision 5, dated August 17, 1994.

(i) For each stage 7 through stage 12 HPC disk with an initial utilization rate equal to or greater than 1,300 hours per year, and equal to or greater than 900 cycles per year, designate this disk as a high utilization disk and inspect in accordance with paragraph (c) of this AD.

(ii) For each stage 7 through stage 12 HPC disk with an initial utilization rate less than 1,300 hours per year or less than 900 cycles per year, designate this disk as a low utilization disk and inspect in accordance with paragraph (d) of this AD.

(iii) For each stage 7 through stage 12 HPC disk with an unknown initial utilization rate, designate this disk as a low utilization disk and inspect in accordance with paragraph (d) of this AD.

Note 2: Once a disk is designated as low utilization, then it must retain this designation for the life of the disk or until recoated.

(iv) For recoated or new disks, designate these disks as high utilization disks and inspect in accordance with paragraph (c) of this AD.

(b) For high average utilization fleets and sub-fleets, excluding those disks identified in paragraph (a)(1)(i) of this AD, perform the following for each stage 7 through stage 12 HPC disk in that fleet or sub-fleet:

(1) Inspect, and recoat or replace if necessary, at the next part accessibility of the disk, in accordance with paragraph 2.D.(1)(b) and Chart A of PW ASB No. 6038, Revision 5, dated August 17, 1994.

(2) Recalculate the fleet or sub-fleet average utilization rate at 12 month intervals after the previous date of utilization determination in accordance with paragraph 2.B of PW ASB No. 6038, Revision 5, dated August 17, 1994.

(i) For fleet or sub-fleet average utilization rates that are equal to or greater than 1,300 hours per year, and equal to or greater than 900 cycles per year, continue to designate all stage 7 through stage 12 HPC disks as high utilization disks and comply with the requirements of paragraph (b) of this AD.

(ii) For fleet or sub-fleet average utilization rates that are less than 1,300 hours per year or less than 900 cycles per year, within four months of compliance with paragraph (b)(2) of this AD, determine the utilization rate for each stage 7 through stage 12 HPC disk in accordance with paragraph 2.B.(1) of PW ASB No. 6038, Revision 5, dated August 17, 1994, as follows:

(A) For each stage 7 through stage 12 HPC disk with a utilization rate equal to or greater than 1,300 hours per year, and equal to or greater than 900 cycles per year, designate this disk as a high utilization disk and inspect in accordance with paragraph (c) of this AD.

(B) For each stage 7 through stage 12 HPC disk with a utilization rate less than 1,300 hours per year or less than 900 cycles per year, designate this disk as a low utilization disk and inspect in accordance with paragraph (d) of this AD.

(C) For each stage 7 through stage 12 HPC disk with an unknown utilization rate, designate this disk as a low utilization disk and inspect in accordance with paragraph (d) of this AD.

Note 3: Once a disk is designated as low utilization, then it must retain this designation for the life of the disk or until recoated.

(c) For high utilization stage 7 through stage 12 HPC disks, perform the following:

(1) Inspect, and recoat or replace if necessary, at the next part accessibility of the disk, in accordance with paragraph 2.D.(1)(b) and Chart A of PW ASB No. 6038, Revision 5, dated August 17, 1994.

(2) Calculate the disk utilization rate at 12 month intervals after the previous date of utilization determination, or after installation of new or recoated disks, in accordance with paragraph 2.B.(3) of PW ASB No. 6038, Revision 5, dated August 17, 1994.

(i) For stage 7 through stage 12 HPC disks designated as high utilization in accordance with (c)(2), comply with the requirements of paragraph (c)(1) of this AD.

(ii) For stage 7 through stage 12 HPC disks designated as low utilization in accordance with (c)(2), comply with the requirements of paragraph (d) of this AD.

(d) For low utilization stage 7 through stage 12 HPC disks, perform the following:

(1) For Nickel Cadmium coated disks listed by Part Number (P/N) in Chart B of PW ASB No. 6038, Revision 5, dated August 17, 1994, and Aluminide coated disks listed by P/N in Chart C of PW ASB 6038, Revision 5, dated August 17, 1994, strip protective coating, corrosion inspect, and recoat or remove from service in accordance with PW JT8D Engine Manual, P/N 481672, at the time intervals specified in Table A or Table B of this AD, whichever occurs later.

Table A

Years Since New, Recoated, or Corrosion Inspection (YRSNRC) Interval for Low Utilization Disks - NiCad coated disks from Chart B of PW ASB No. 6038, Revision 5, dated August 17, 1994, and Aluminide coated disks from Chart C of PW ASB No. 6038, Revision 5, dated August 17, 1994

Years Since New, Recoated or Corrosion Inspected (YRSNRC)

Less than or equal to 5
Greater than 5 but less than or equal to 6
Greater than 6 but less than or equal to 7
Greater than 7 but less than or equal to 8
Greater than 8 but less than or equal to 9
Greater than 9 but less than or equal to 10
Greater than 10

Remove to inspect and recoat or replace.

By 7 YRSNRC
Within 24 months
Within 18 months
Within 15 months
Within 12 months
Before reaching 10 YRSNRC
Before further flight.

Table B

Years Since Last Non-Corrosion Inspection (YRSLI) Interval for Low Utilization Disks - NiCad coated disks from Chart B of PW ASB No. 6038, Revision 5, dated August 17, 1994, and Aluminide coated disks from Chart C of PW ASB No. 6038, Revision 5, dated August 17, 1994

Years Since Last Non-Corrosion Inspection Prior to November 28, 1994 (YRSLI)	Remove to inspect and recoat or replace.
Less than or equal to 3	By 5 YRSLI
Greater than 3 but less than or equal to 5	Within 24 months
Greater than 5 but less than or equal to 6	Within 18 months
Greater than 6 but less than or equal to 7	Within 12 months
Greater than 7 but less than or equal to 8	Before reaching 8 YRSLI
Greater than 8	Before further flight.

(2) For Nickel Cadmium coated disks listed by P/N in Chart C of PW ASB No. 6038, Revision 5, dated August 17, 1994, strip protective coating, corrosion inspect, and recoat or remove from service in accordance with PW JT8D Engine Manual, P/N 481672, at the time intervals specified in Table C or Table D of this AD, whichever occurs later.

Table C

YRSNRC Inspection Interval for Low Utilization Disks - NiCad coated disks from Chart C of PW ASB No. 6038, Revision 5, dated August 17, 1994

Years Since New, Recoated or Corrosion Inspected (YRSNRC)	Remove to inspect and recoat or replace.
Less than or equal to 5	By 7 YRSNRC
Greater than 5 but less than or equal to 6	Within 24 months
Greater than 6 but less than or equal to 7	Within 21 months
Greater than 7 but less than or equal to 8	Within 18 months
Greater than 8 but less than or equal to 9	Within 15 months
Greater than 9 but less than or equal to 10	Within 12 months
Greater than 10 but less than or equal to 11	Before reaching 11 YRSNRC
Greater than 11	Before further flight.

Table D

YRSLI Inspection Interval for Low Utilization Disks - NiCad coated disks from Chart C of PW ASB No. 6038, Revision 5, dated August 17, 1994

Years Since Last Non-Corrosion Inspection Prior to November 28, 1994 (YRSLI)	Remove to inspect and recoat or replace.
Less than or equal to 4	By 6 YRSLI
Greater than 4 but less than or equal to 6	Within 24 months
Greater than 6 but less than or equal to 7	Within 18 months
Greater than 7 but less than or equal to 8	Within 12 months
Greater than 8 but less than or equal to 9	Before reaching 9 YRSLI
Greater than 9	Before further flight.

(3) For Aluminide coated disks listed by P/N in Chart B of PW ASB No. 6038, Revision 5, dated August 17, 1994, strip protective coating, corrosion inspect, and recoat or remove from service in accordance with PW JT8D Engine Manual, P/N 481672, at the time intervals specified in Table E or Table F of this AD, whichever occurs later.

Table E

YRSNRC Inspection Interval for Low Utilization Disks Aluminide coated disks from Chart B of PW ASB No. 6038, Revision 5, dated August 17, 1994

Years Since New, Recoated or Corrosion Inspected (YRSNRC)	Remove to inspect and recoat or replace.
Less than or equal to 5	By 7 YRSNRC
Greater than 5 but less than or equal to 6	Within 24 months
Greater than 6 but less than or equal to 7	Within 18 months
Greater than 7 but less than or equal to 8	Within 12 months
Greater than 8 but less than or equal to 9	Before reaching 9 YRSNRC
Greater than 9	Before further flight.

Table F

YRSLI Inspection Interval for Low Utilization Disks Aluminide coated disks from Chart B of PW ASB No. 6038, Revision 5, dated August 17, 1994

Years Since Last Non-Corrosion Inspection Prior to November 28, 1994 (YRSLI)	Remove to inspect and recoat or replace.
Less than or equal to 2	By 4 YRSLI
Greater than 2 but less than or equal to 4	Within 24 months
Greater than 4 but less than or equal to 5	Within 18 months
Greater than 5 but less than or equal to 6	Within 12 months
Greater than 6 but less than or equal to 7	Before reaching 7 YRSLI
Greater than 7	Before further flight.

(4) For all other low utilization stage 7 through stage 12 HPC disks, strip protective coating, corrosion inspect, and recoat or remove from service in accordance with the PW JT8D Engine Manual, P/N 481672, prior to 7 years since new, recoated, or corrosion inspected (YRSNRC).

(5) For disks that are categorized as high utilization and subsequently entered low utilization service, YRSNRC can be adjusted as follows and applied to Table A, Table C, and Table E of this AD:

(i) Adjusted YRSNRC = (0.60) X (years utilized at a rate greater than or equal to 1,300 hours per year, and greater than or equal to 900 cycles per year) + (years classified as low utilization).

(ii) Once a disk enters low utilization service it must remain in that category and an adjustment to YRSNRC cannot be made for any subsequent high utilization operation.

(iii) Years Since Last Non-Corrosion Inspection prior to November 18, 1994 (YRSLI) is a one-time interval only and cannot be used as a repetitive interval.

(e) For stage 7 through stage 12 HPC disks that have been recoated in accordance with paragraphs (b)(1), (c)(1), or (d)(1) of this AD, designate these disks as high utilization and perform the following:

(1) For disks installed in an engine that is part of a high utilization fleet, comply with the requirements of paragraph (b) of this AD.

(2) For disks installed in an engine that is part of a low utilization fleet, comply with the requirements of paragraph (c) of this AD.

(f) For the purpose of this AD, recoat of an HPC disk is defined as removal and application of new plating or coating in accordance with Sections 72-36-41, Repair 02; 72-36-42, Repair 02; 72-36-43, Repair 03; 72-36-44, Repair 03; 72-36-45, Repair 03; or 72-36-46, Repair 03, as applicable, of PW JT8D Engine Manual P/N 481672.

(g) For the purpose of this AD, a corrosion inspection is defined as performing an inspection in accordance with PW Engine Manual 481672, section 72-36-41, inspection 01 for stage 7 disks, section 72-36-42, inspection 02, for 8th stage disks, section 72-36-43, inspection 02 for 9th stage disks, section 72-36-44, inspection 02 for 10th stage disks, section 72-36-45, inspection 02 for 11th stage disks, section 72-36-46, inspection 02 for 12th stage disks.

(h) For the purpose of this AD, part accessibility is defined as the removal of the disk from the engine and deblading of that disk.

(i) For the purpose of this AD, a sub-fleet is defined as any individual aircraft or any portion of an operator's fleet that operates in a separate and unique route structure, characterized by different flight lengths, frequencies, or geographic location.

(j) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Engine Certification Office. Alternate methods of compliance approved for AD 94-20-01 are approved for this AD; adjustments to compliance times approved for AD 94-20-01 are not approved for this AD.

Note 4: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Engine Certification Office.

(k) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(l) The actions required by this AD shall be done in accordance with the following PW ASB:

Document No.	Pages	Revision	Date
PW ASB No. 6038	1	5	August 17, 1994
	2	Original	August 5, 1991
	3	5	August 17, 1994
	4-6	4	July 13, 1994
	7-26	5	August 17, 1994
Appendix A	27-41	5	August 17, 1994
Appendix B NDIP-803	1-33	4	July 13, 1994
Appendix to NDIP-803	1-2	4	July 13, 1994
Total Pages: 76.			

The incorporation by reference of PW ASB No. 6038, Revision 5, dated August 17, 1994, was approved previously by the Director of the Federal Register as of November 28, 1994 (59 FR 49175, September 27, 1994). Copies may be obtained from Pratt & Whitney, 400 Main St., East Hartford, CT 06108; telephone (860) 565-6600, fax (860) 565-4503. 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.

- (m) This amendment becomes effective on August 10, 1998.