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 adding the following new airworthiness directive:

99–17–14 Bombardier, Inc. (Formerly de Havilland, Inc.): Amendment 39–11262. Docket 99–NM–55–AD.

Applicability: Model DHC–8 series airplanes, as listed in Bombardier Alert Service Bulletin S.B. A8–27–82, dated July 10, 1998; certificated in any category.

Note 1: This AD applies to each airplane 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 airplanes 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 (d) 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 an asymmetric rudder force condition, which could result in reduced controllability of the airplane and consequent potential for center line deviation, accomplish the following:

General Visual Inspection

(a) Within 100 flight hours or 14 days after the effective date of this AD, whichever occurs later: Perform a one-time visual inspection of the spring assemblies located in the rudder control feel unit to verify that dual rate configuration springs are installed, in accordance with Bombardier Alert Service Bulletin S.B. A8–27–82, dated July 10, 1998.

(1) If dual rate configuration springs are installed, no further action is required by this AD.

Note 2: For the purposes of this AD, a general visual inspection is defined as: ''A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked.''

AFM Revision

(2) If any single rate configuration springs are installed, prior to further flight:

Revise the Limitations Section of the de Havilland Dash 8 Airplane Flight Manual (AFM) to include the following statement. This action may be accomplished by inserting a copy of this AD into the AFM.

''OPERATION FROM RUNWAYS LESS THAN 75 FEET WIDE IS PROHIBITED.''

Terminating Action

(b) At the next scheduled maintenance visit, but no later than 36 months after the effective date of this AD: Replace any single rate configuration springs located in the rudder control feel unit with dual rate configuration springs, in accordance with Part C through Part H inclusive, of the Accomplishment Instructions of Bombardier Alert Service Bulletin S.B. A8–27–82, dated July 10, 1998. Such replacement constitutes terminating action for the requirements of this AD. After the replacement has been accomplished, the AFM limitation required by paragraph (a)(2) of this AD may be removed from the AFM.

Spares Paragraph

(c) As of the effective date of this AD, no person shall install any spring assembly having part number 82760050–003 on any airplane.

Alternative Methods of Compliance

(d) 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, New York Aircraft Certification Office (ACO), FAA, Engine and Propeller Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the New York ACO.

Special Flight Permits

(e) 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 accomplished.

Incorporation by Reference

(f) Except as provided by paragraph (a)(2), the actions shall be done in accordance with Bombardier Alert Service Bulletin S.B. A8–27–82, dated July 10, 1998. 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 Bombardier, Inc., Bombardier Regional Aircraft Division, Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Engine and Propeller Directorate, New York Aircraft Certification Office, 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.

Note 4: The subject of this AD is addressed in Canadian airworthiness directives CF–98–39, dated October 23, 1998, and CF–98–39R1, dated December 31, 1998.

(g) This amendment becomes effective on September 24, 1999.

Issued in Renton, Washington, on August 10, 1999.

D. L. Riggin, Acting

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 99–21362 Filed 8–19–99; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99–NE–22–AD; Amendment 39–11263; AD 99–17–16]

RIN 2120–AA64

Airworthiness Directives; Pratt & Whitney PW4000 Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to Pratt & Whitney (PW) PW4000 series turbofan engines, that requires short term criteria for limiting

the number of engines with potentially reduced stability on each airplane to no more than one engine, would require initial and repetitive on-wing or test cell cold-engine high pressure compressor (HPC) stability tests, would require removal of engines from service that fail on-wing test acceptance criteria, and would allow a follow-on test cell stability test. The AD also establishes required intervals for stability testing of the remaining engine with potentially reduced stability on the airplane and requirements for reporting test data. This amendment is prompted by a report of a dual-engine HPC surge event and reports of single-engine HPC surge events during the takeoff and climb phases of flight. The actions specified by this AD are intended to prevent an HPC surge event, which could result in engine power loss at a critical phase of flight such as takeoff or climb.

DATES: Effective date September 24, 1999. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of September 24, 1999.

ADDRESSES: The service information referenced in this AD may be obtained from Pratt & Whitney, 400 Main St., East Hartford, CT 06108; telephone (860) 565–8770, 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; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Peter White, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803–5299; telephone (781) 238–7128, fax (781) 238–7199.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to Pratt & Whitney PW4000 series turbofan engines was published in the **Federal Register** on April 22, 1999 (64 FR 19726). That action proposed to require short term criteria for limiting the number of engines with potentially reduced stability on each airplane to no more than one engine, would require initial and repetitive on-wing or test cell cold-engine high pressure compressor (HPC) stability tests for all affected PW4000 series engines, would require removal from service of engines that fail on-wing test criteria, and would allow a follow-on test-cell stability test. Initial on-wing or test cell stability testing is required to limit the number of engines on the airplane to no more than one engine that has exceeded the initial threshold. The AD also establishes requirements to perform a stability test of the remaining engine with potentially reduced stability on the airplane. These tests are performed in accordance with Pratt & Whitney (PW) Special Instructions (SI) 49F–96, dated August 9, 1996; PW SI 7F–96, dated January 10, 1996; PW PW4000 Engine Manual (EM) Temporary Revisions (TR) 71–0016, 71–0025, and 71–0030, all dated April 13, 1999; PW EM 50A605 Section 71–00–00, Testing-20, PW EM 50A443 Section 71–00–00, Testing -20, and PW EM 50A822, Section 71–00–00, Testing -20, all dated June 15, 1999; PW SI 32F–99, dated April 13, 1999; and PW Cactus Wire C042 G 930902, dated September 2, 1993, which describe procedures for assessing the stability of PW4000 engines.

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

Questions About Table Formats

One commenter notes that the formatting of Tables 1 and 2 as published in the **Federal Register** is somewhat unusual and not to standard guidelines. The FAA disagrees. The tables appeared as intended when published in the Federal Register. When obtaining the document from the Internet, however, if not downloaded in a specific file format, the formatting of the document may be lost and the document may appear quite different. The problems described are functions of the method in which the document is accessed, not in how it was published.

Request to Change Reference to McDonnell Douglas MD–11 to Boeing MD–11

One commenter believes that the reference to the MD–11 airplane is incorrect. The NPRM refers to it as the McDonnell Douglas MD–11. The commenter notes that the McDonnell Douglas company was bought by the Boeing Co., and should therefore be the Boeing MD–11. The FAA does not agree. The FAA refers to the product by the name that currently appears on the Type Certificate Data Sheet, which is still McDonnell Douglas MD–11.

Questions about Applicability of PW4000 Phase 3 Configuration Engines

Several commenters question whether or not PW4000 Phase 3 engines are affected by this AD, and request that the proposed rule be modified to more clearly identify Phase 3 engines in the applicability section. The FAA does not agree. The applicability section of the AD lists those model PW4000 engines to which the AD applies. Note 1 reminds operators that this AD applies to all products mentioned in the applicability section, no matter how modified, altered, or repaired. The AD therefore applies to Phase 3 configuration engines of any listed model.

One commenter noted that the new production PW4056 engines they are receiving do not list three of the SB's listed in the definition of ''first run, full up engines'' in their SB incorporation summaries. The FAA agrees. Paragraph (a)(1)(iii) of the AD has been changed to include as ''first run, full up engines'' those PW4056, PW4156, and PW4156A original manufacture engines that incorporate a (-3) suffix, denoting the Phase 3 configuration that incorporates the intent of these SB's.

One commenter notes that AD 98–23–08 does not affect Phase 3 engines, and recommends a similar approach for this AD, with a more liberal retest interval for the Phase 3 engines. The FAA disagrees. The fleet has been thoroughly evaluated to search for any subpopulations that exhibit a different wear-out threshold, and to select the most appropriate initial threshold for each apparent population. The evaluation of the Phase 3 engine population does not justify a distinct initial threshold, except in the case of first run, full up PW4056, PW4156, and PW4156A engines, which receive unique initial thresholds.

One commenter suggests that PW SB 72–514 be modified to read ''PW 72–514 (or 72–504)'', in the definition of first run, full up engines. The FAA disagrees. SB 72–514 incorporates the larger HPT nozzle, which lowers compressor op-line, increasing surge margin. SB 72–504 references several SB's, and is the engine manufacturer's documentation detailing conversion of a standard PW4052/4056 engine to a Phase 3. As they involve the extensive modification of ''used'' engines, converted engines do not meet the requirements of a ''first run'' engine. In addition, the larger area HPT nozzle is a critical part of the first run, full up engine definition, as it offers a significant benefit to operability. To include recent shipment engines where these SB's are not listed in the SB incorporation paperwork, paragraph (a)(1)(iii) of the AD has been changed to include those PW4056, 4156, and 4156A original manufacture, first run engines that incorporate a (-3) suffix after the data plate engine model designation as

first run, full up engines for purposes of using that initial threshold in Table 1.

Question About Higher Initial Threshold for PW4158 Engines

One commenter notes that PW4056 engines receive a lower initial threshold than did the PW4158 engines, and questions whether or not this is in error. The FAA concludes that the PW4158 population demonstrates a relatively high cyclic threshold for surge occurrence for its thrust rating level. This fleet operates with a high average take-off derate level, and based on its demonstrated surge rate, this subfleet receives a higher initial threshold.

Requests for Credit for Previously Accomplished Tests

Several commenters state that the proposed rule is not clear as to whether or not credit is allowed for previously accomplished tests, and requested that the AD be more specific. The FAA agrees in part. The AD states that compliance is ''required as indicated, unless accomplished previously.'' Any previously accomplished testing performed in accordance with the requirements of this AD is acceptable, and tests performed to other than the procedures specified in the AD are not acceptable as having previously accomplished the requirements of the AD. However, paragraphs (b) and (g) have been changed based on comments received. Changes were made to the cold-engine fuel spike test definition to cover additional tests performed under the instructions supplied in PW Cactus Wire ID C042 G 930902 ZRH, issued September 2, 1993. This instruction was omitted from the NPRM, and its inclusion in this AD will allow acceptance of additional testing performed in the past.

One commenter questions if operators can define engines as either tested or untested on the effective date of the AD if previously accomplished testing is acceptable. The FAA determines that this approach is acceptable. Operators who have done prior acceptable testing on engines may take credit for that testing and proceed with repetitive testing based on the test schedule defined by the AD, or they may ignore the previously accomplished testing and comply with the requirements of the AD for initial and repetitive testing as if the engines had not been previously tested. The FAA strongly encourages operators with previously tested engines that have failed those previous stability tests to remove those engines from service immediately. The FAA, however, has determined that it is not necessary to include a requirement in this AD to remove previously tested engines from service based on a failure of the previous test. Surveys indicate that few, if any, such engines remain in service, and to include such a requirement in the final rule would necessitate a delay in this rulemaking.

In addition, one commenter notes that operators who test more frequently than required by the AD will be penalized, as they will, in some cases, be forced to remove an engine before the 800 cycle repetitive interval, if the engine fails a stability test. The commenter requests a time after test failure before which engines tested more frequently than the 800-cycle interval must be removed. The FAA disagrees. It is not consistent with safe practices to allow an engine with known reduced stability to remain in service.

Requests To Exempt Pilot Training Cycles From ''Cycles in Service''

Two commenters note confusion regarding the term ''Cycles in Service.'' They feel that this term should be more clearly defined. One requests that pilot training cycles, performed at a reduced thrust rating, should not be counted for the purposes of the AD. The FAA disagrees. The term ''Cycles in Service'' refers to the standard cycles counted for life tracking, and is generally viewed as any flight consisting of one takeoff and landing. The FAA has determined not to create a separate cycle counting procedure for this AD.

Request for Definition of ''HPC Overhaul''

Several commenters note that the term ''HPC Overhaul'' needs to be defined. The FAA agrees. Paragraph (g) of the AD has been changed to use the term ''overhaul'' and a new paragraph has been added to define an HPC overhaul as a stage 12 through stage 15 HPC tip clearance restoration.

Several commenters also pointed out that this definition should include HPC stages 12 through 15, not 12 through 14. The FAA agrees. This final rule has been changed accordingly.

One commenter requests that the term overhaul be avoided, and that repair be substituted in its place. The FAA disagrees. The level of work required to perform a stage 12 through stage 15 HPC tip clearance restoration is better viewed as an overhaul than a repair. In addition, the use of overhaul is consistent with the manufacturer's service documentation.

Request To Eliminate the Term ''On-Wing''

One commenter notes that the words ''on-wing'' should be eliminated from paragraph (a)(1), as these tests do not need to be performed on-wing, as the cold-engine fuel spike test is also acceptable. The FAA agrees. The words ''on-wing'' have been removed from paragraph (a)(1).

Request To Add Initial Threshold to Untested Engines Limits

Several commenters note that certain AD references appear to limit the airplane more strictly than intended in that compliance statements refer to limiting the airplane to no more than one, or no untested engines, without referencing the initial threshold exceedance. The FAA agrees. Paragraph (e) has been changed to include reference to the initial threshold.

Request To Allow Airplanes To Remain in Revenue Service After Test Failure or Exceeding Initial Threshold

One commenter requests that engines be allowed to remain in revenue service for a certain time after a threshold exceedance or test failure. The FAA disagrees. This AD is intended to remove from service engines identified to have low stability, or potentially reduced stability, from service immediately. It would not be consistent to allow further usage of engines known to be at a higher potential to surge during the takeoff phase of flight in-revenue service.

Request To Allow A Nonrevenue Flight

Several commenters object to the proposal that requires removing engines that fail a stability test or exceed a threshold prior to further flight. These commenters note that the stability tests, which require running an engine on the ground at high power for extended lengths of time, may not be performed at all locations due to noise concerns. These commenters request that a nonrevenue flight provision be added so that they can return airplanes to a maintenance facility where engine removal may be performed after the engine has failed a stability test. The FAA agrees in part. As proposed, the provision in the AD allowing special flight permits was intended to cover only the situation where an engine stability test was overdue and the aircraft needed to be moved to a location where that test could be performed. The FAA has determined that allowing ferry flights, after an engine fails a stability test to move the aircraft to a location where engine removal can be performed, is acceptable if the flight is made under specified conditions to minimize the risk of engine surge during that flight. The special flight provision in the final rule

has therefore been changed to allow nonrevenue flights after an engine fails a stability test. The FAA has determined, however, that ferry flights should continue to be handled under the provisions of the special flight permit authority contained in part 21. Operators can coordinate with the FAA office that oversees their operation to minimize the time required to issue a special flight permit.

Request for Clarification of Reporting Requirements

Several commenters note confusion regarding the reporting requirements. The FAA agrees. Paragraph (k) of the final rule, which contains the reporting requirement, has been changed to include a time limit within which reports must be made and to include an email address.

Several commenters requested that the reporting requirements be changed to allow submittal of the data directly to PW. The FAA disagrees. The current Office of Management and Budget (OMB) approval for reporting requirements in AD's does not cover the submission of reports directly to manufacturers. The FAA is working to broaden the OMB's approval to cover that situation, but until that new approval is in place, reporting must be directly to the FAA. In addition, reporting to the FAA will allow the FAA to monitor the consistency of the collected test results to past history, verify the assumptions in the risk assessment, monitor fleet impact, monitor trends in the surge rate, and ensure that the desired level of safety is maintained.

Request for Clarification of How To Select Initial Threshold When the Electronic Engine Control (EEC) Programming Plug Is Used

One commenter notes that engine thrust rating changes can be accomplished in accordance with the manufacturer's instructions via the EEC programming plug, and requests clarification regarding how to select the initial threshold in these cases. The FAA agrees that clarification is needed, and has added a new paragraph (a)(3) that provides that in those cases where a thrust rating change has been made the highest thrust rating selected in the affected HPC overhaul period is to be used for determining the initial threshold.

Request To Redefine the Unsafe Condition

Several commenters feel that the unsafe condition should be defined as a dual-engine surge event, and that the AD goes too far in mandating safety by requiring that all engines be evaluated, rather than all but one engine, as in the airplane manufacturer's service documentation. The FAA disagrees. The FAA has concluded that the present single-engine surge rate and the increased likelihood of a dual-engine surge event, constitute an unsafe condition. Since these surges occur during a critical phase of flight (take-off or early climb), they place an extra demand on the flight crew during a high-workload period. While an airplane may be designed to be able to take-off with one engine inoperative, and procedures are in place for engine failures in flight, accident history indicates that a high percentage of single-engine failures result in accident or incidents due to combination with another failure or malfunction. For this reason, this rule addresses not only the dual-engine surge, but also the rate of single-engine surge.

Request To Allow Boeing Service Bulletin as an Alternate Method of Compliance

One commenter requests that compliance with Boeing service bulletins 767–72A0034, dated April 16, 1999, and SB 747–72A2038, dated April 16, 1999, be allowed as an alternate method of compliance. The FAA does not agree. The Boeing service bulletins allow one engine on an airplane to remain untested. Because the FAA has determined that the rate of single-engine surge events must also be addressed, allowing one engine on an airplane to remain untested would conflict with the goal of reducing the rate of single-engine surge events. Therefore, the Boeing service bulletins addressing this problem are only for reference, and are not approved as an alternate method of compliance.

Request To Tighten the Testing Intervals

One commenter feels that the proposed rule is not aggressive enough in evaluating the PW4000 fleet for low-stability engines, and that more aggressive initial and repetitive testing intervals and deadlines need to be established. The FAA disagrees. The compliance cyclic thresholds and calendar end dates were selected based on a detailed risk analysis to evaluate the effectiveness of the fleet management plan. Compliance thresholds were established at levels predicted to establish a very low rate of surge. The compliance deadlines were selected to minimize risk balanced with the logistical complications of achieving fleet-wide compliance considering the number of affected engines. This plan was carefully evaluated to provide the intended level of safety without unnecessarily requiring the grounding of aircraft.

Request To Allow In-situ Borescope Blending of HPC Airfoils for Minor Damage

One commenter notes that the definition of first run, full up engines does not allow in-situ borescope blending of the HPC airfoils for minor foreign object damage (FOD), and requests that the Final Rule be modified to allow this operation. The FAA agrees. Paragraphs (a)(iii) and (g)(3) and (g)(4) have been changed to replace ''no work performed on the HPC or HPT gaspaths'', to read ''have not had a separation of a major engine flange since new, with the exception of the 'A' or 'T' flanges.'' These changes will allow operators to consider engines that have undergone only in-situ borescope blending of the HPC airfoils for FOD to be a first run, full-up engines, and will also allow removal of the inlet and tailpipe.

Request for Definition of Actions To Return an Engine to Service

One commenter feels that the proposed rule must state required action to return a failed engine to service after stability test failure. The commenter feels it would be appropriate to require that HPC tip clearances on S12 through S15 blades be restored to manual limits. The FAA disagrees. The FAA has determined that it is not necessary to require blade tip restoration in all cases. The stability tests required prior to returning an engine to service will ensure that engines that do not receive stage 12 through stage 15 tip clearance restoration are adequately assessed before leaving the shop. In addition, tip clearance restoration is encouraged by resetting the initial threshold interval for those engines having undergone an HPC overhaul. HPC tip clearance restoration provides an increase in surge margin; however, other actions may also adequately restore surge margin, such as installation of the cutback HPT guide vane to lower compressor operating line.

Concern About Engine Manual Temporary Revisions

Two commenters note that the proposed rule references Engine Manual Temporary Revisions, and are concerned that once these changes are incorporated permanently into the manuals, a noncompliance issue will arise. The FAA does not agree. References to Temporary Manual

Revisions are included in the final rule primarily to allow credit for tests conducted previously in accordance with the instructions included in those documents. Since the issuance of the NPRM, those Temporary Manual Revisions have been incorporated into the Engine Manual, and this final rule includes the Engine Manual references as well. Copies of the Temporary Manual Revisions should always be available, however, through the manufacturer as stated in the AD under **ADDRESSES**.

Request To Change the Definition of a Shop Visit

One commenter was concerned that the text omitting the Cold-Engine Fuel Spike test requirement in certain cases was too restrictive, and that the phrase ''The shop visit was only for replacement of a line replaceable unit, with no other work done'' should be expanded to include a broader population. The FAA agrees. Paragraph (g)(3) of the proposed rule, which appears as paragraph (g)(4) in this final rule, has been changed to reference engines that have not had a major flange separation.

Request To Include an Engine With an Overhauled HPC as a Replacement for an Engine That Has Failed Stability Testing

Two commenters request that paragraph (d) be modified to include engines which have received HPC overhaul as acceptable replacements for an engine which has failed a stability assessment test. The FAA agrees. The final rule includes a definition of a serviceable engine in paragraph (j) to define more clearly return to service requirements and the text in paragraphs (a) and (d) has been modified.

Request To Eliminate the Cyclic Limits and Use Only Calendar Dates

One commenter requests that the final rule be modified to reference only calendar end dates, and to omit the cyclic accumulation caps. The FAA disagrees. The wearout of the compressor is tied directly to cyclic usage and not dates on the calendar. In addition, use of calendar dates only to determine initial and repetitive inspection thresholds may allow high-usage engines to accumulate excessive wear before being evaluated. The FAA will maintain the cyclic limits to ensure that engines do not accumulate excessive wear prior to a stability assessment.

Request To Eliminate the Calendar End Dates and Use Only the Cyclic Limits

One commenter requests that the final rule be modified to reference only the cyclic limits, and to omit the calendar end dates. The FAA disagrees. Omission of the calendar end date would allow low usage engines to remain in service for an extended period without being evaluated. Based on the risk analysis, the FAA has determined that calendar end dates are necessary to ensure that all engines are evaluated for reduced stability margin by the specified dates, and to hasten compliance of low usage engines.

Request To Include Statement About Engines That Are Not Installed on Airplanes

One commenter notes that the AD applies to engines that are both on and off the airplane, so the applicability statement should be changed to specify ''engines installed on, or intended to be installed on.'' The FAA does not agree. The accomplishment instructions of the AD address engines in the shop and detail actions that must be taken ''prior to return to service.'' The phrase ''installed on but not limited to'' that appears in the applicability statement of AD's that apply to aircraft engines is intended only to provide some information as to the types of aircraft on which operators might find the affected engines. The phrase does not affect the applicability of the AD and does not limit the AD to only those engines installed on the listed airplanes. Therefore, it is unnecessary to add the requested phrase to the applicability statement.

Concern About the Financial Impact of This AD Upon the Worldwide Fleet

One commenter notes that financial impact quadruples if the worldwide fleet, and not just the domestic fleet, is considered. The commenter also notes that due to the large number of affected engines, and a large time requirement to incorporate corrective action, the potential exists for an adverse effect on the airline industry. The FAA agrees in part, and has considered the affects on the worldwide fleet in determining the necessary required actions to maintain an acceptable level of safety. The economic analysis required by Executive Order, however, considers only the affects on domestic operators.

Changes to the Economic Analysis

One commenter questioned the fleet size used for the financial impact analysis, and provided a different fleet size for use in the calculations. The FAA agrees, and has modified the economic analysis to reflect the fleet size provided.

Request for Incorporation of HPC Cutback Stators and HPC Overhaul as Terminating Action for This AD

One commenter requests that the FAA reference incorporation of the HPC Cutback Stators and HPC overhaul as terminating action to the repetitive testing requirements of this AD. The FAA disagrees. At this time, the Cutback HPC Stator configuration has not been certified, and therefore cannot be referenced as terminating action. The FAA will continue to monitor the fleet-wide trend analysis as inspection results are reported and will incorporate terminating action into this AD by further rulemaking once that terminating action becomes available.

Question About the Timeliness of This AD

One commenter notes that this problem has existed since 1992, when the first surge event occurred, and that the rate has been steadily decreasing to a much lower rate today. The commenter feels that the FAA should have issued this kind of AD years ago when the rate was much higher. The FAA does not agree. While the FAA does not dispute that single engine surge rates may have been higher in the past, until recently, surge events were considered independent events, and the primary concern was with the dual-engine surge possibility. Because statistically, the probability of a dual-engine occurrence for the same cause as two single independent events is the square of the single engine probability, the probability of a dual-engine occurrence was calculated as being extremely remote. However, recent events have highlighted the need to re-examine that calculation and it underlying assumptions. The FAA now believes that unidentified common causes exist that can push reduced surge margin engines into a surge. If multiple reduced-surge margin engines are operating on an airplane when these yet unidentified influences exist, a multiple engine event is a stronger possibility. The FAA views single-engine events as a leading contributing factor in accidents when combined with other complicating factors such as crew response, other failures, etc. The FAA has focussed more strongly on defects that affect the critical phases of flight where crew workload is high and which have a high rate of occurrence. For this reason, and due to an event which occurred last year involving a single engine PW4000 surge and crew response, the FAA issued AD 98–23–08

to address that issue, and is now issuing this AD to address the overall single-engine surge rate, as well as the dual-engine event concern.

Concern About the Reliability of the E1E Test

One commenter expresses concern regarding the implementation of the E1E test, believing it to be an unreliable tool in determining whether or not an engine is prone to a Group 3 surge. The FAA does not agree. The E1E test, the Cool Bodie test, and the Cold-Engine Fuel Spike tests have statistically proven themselves strong indicators of the likelihood of an engine to surge in subsequent service. While individual engines may provide different test results, the PW4000 fleet as a whole shows a strong correlation between these evaluations and the likelihood of a subsequent Group 3 surge event.

Request To Allow a Retest After Water Washing an Engine That Failed the Initial Tests

One commenter requests that engines which fail an E1E test be allowed a second test opportunity after a water wash is performed. The FAA does not agree. The database upon which the correlations were based comes from a sampling of status engines in the fleet. Those engines were not typically water washed prior to accomplishing the test. It is unknown whether allowing such a retest would invalidate the assumptions upon which the management plan was based. It is also unknown how long any benefit derived from the water-washing might be expected to last before returning to the prior unwashed level.

Editorial Changes for Clarity

One commenter requests that the word ''untested'' be replaced with ''not previously tested'' in the Final Rule. The FAA agrees. The word ''untested'' has been changed to ''has not been previously tested'' in paragraph (a) of this AD.

Administrative Changes and Corrections

Several minor format, typographical and administrative corrections were incorporated as appropriate.

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 1,975 engines of the affected design in the worldwide fleet. The FAA estimates that 495 engines installed on airplane of U.S. registry would be affected by this proposed AD. The FAA also estimates that, on average, approximately 190 on-wing tests, 74 test cell stability tests, 16 engine removals, and 22 HPC overhauls will be required annually. It is estimated that the cost to industry of an on-wing stability test will average $2,000, a test cell stability test will average $12,000, an engine removal is approximately $5,000, and an HPC overhaul will cost approximately $400,000. Based on these figures, the total average annual cost impact of the proposed AD to U.S. operators is estimated to be $10,148,000.

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 adding the following new airworthiness directive:

99–17–16 Pratt & Whitney: Amendment 39–11263. Docket 99–NE–22–AD.

Applicability: Pratt & Whitney PW4050, PW4052, PW4056, PW4060, PW4060A, PW4060C, PW4062, PW4152, PW4156, PW4156A, PW4158, PW4160, PW4460, PW4462 and PW4650 turbofan engines installed on, but not limited to certain models of Boeing 747, Boeing 767, Airbus Industrie A300, Airbus Industrie A310, and McDonnell Douglas MD–11 series airplanes.

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 (h) 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 a high pressure compressor (HPC) surge event, which could result in engine power loss at a critical phase of flight such as takeoff or climb, accomplish the following:

(a) Limit the number of engines on each airplane to no more than one engine that has not been previously tested and has exceeded the initial threshold specified in Table 1 of this AD, within 1,000 HPC cycles in service (CIS) from the effective date of this AD or by December 31, 1999, whichever comes first, by one of the following methods:

(1) Conduct an initial stability test on engines listed in Table 1 of this AD, which have accumulated cycles equal to or greater than the associated initial threshold listed in Table 1 of this AD, as follows:

(i) Perform either a Cool Bodie stability test in accordance with PW Special Instruction 7F–96, dated January 10, 1996. Refer to Table 2 of this AD for disposition instructions. Or;

(ii) Perform an E1E stability test in accordance with paragraphs A through D and F through H of the Run On-Wing E1E Testing section of PW Special Instructions 49F–96, dated August 9, 1996. Refer to Table 2 of this AD for disposition instructions.

(iii) For purposes of this AD, the initial threshold for PW4056, PW4156, and PW4156A, first run, full-up engines, applies only to engines that have incorporated service bulletins PW4ENG 72–474, 72–477, 72–484, 72–575, 72–485, 72-486, and 72–514 at original manufacture, and have not had a separation of a major engine flange, with the exception of the ''A'' flange or the ''T'' flange, since new. PW4056, PW4156, and PW4156A original manufacture engines that have a (-3) suffix after the data plate engine model

designation, denoting the ''Phase 3'' configuration, are allowed to use the PW4056, PW4156, and PW4156A first run, full up engine initial threshold in Table 1 if, since new, they have not had a separation of a major engine flange, with the exception of the ''A'' flange or ''T'' flange.

(2) Remove from service those engines listed in Table 1 of this AD with HPC's that have accumulated cycles equal to or greater than the initial threshold listed in Table 1 of this AD, and replace with a serviceable engine.

(3) When a thrust rating change has been made in accordance with the manufacturer's instructions utilizing the Electronic Engine Control (EEC) programming plug in the affected HPC overhaul period, the initial threshold associated with the highest thrust rating must be utilized.

TABLE 1.—INITIAL HPC AND ENGINES CYCLES THRESHOLDS

Models	Initial threshold
PW4052, PW4152, PW4158, PW4050, PW4650.	2400 HPC cycles since new or since HPC overhaul.
PW4056*, PW4156*, PW4156A*.	1700 engine cycles since new.
PW4056, PW4156, PW4156A.	1200 HPC cycles since new or HPC overhaul.
PW4060, PW4060A, PW4060C, PW4062, PW4160, PW4460, PW4462.	1200 HPC cycles since new or since HPC overhaul.

*First Run, Full Up Engines

TABLE 2.—ON-WING ACCEPTANCE CRITERIA

Test type	Test result	Disposition
Cool Bodie	Pass	Continue in service.
In accordance with SI 7F–96, dated January 10, 1996.	Failure	Remove from service or conduct E1E. If <0.020 continue in service. If E1E is ≥0.020 remove from service, prior to further flight.
E1E	<0.020	Continue in Service.
In accordance with SI 49F–96, dated August 9, 1996.	≥0.020 but ≤0.032	Conduct Cool Bodie, if pass continue in service. If fail remove engine from service, prior to further flight.
	>0.032	Remove from service, prior to further flight.

(b) For engines removed from service in accordance with paragraph (a) of this AD, a cold-engine fuel spike stability test (Testing–20) may be done in accordance with the associated PW4000 Engine Manual (EM) Temporary Revisions (TR's) 71–0016, 71–0025, and 71–0030, all dated March 15, 1999, or PW4000 EM 50A443, 50A822, or 50A605, Section 71–00–00, Testing–20, pages 1301–1316, dated June 15, 1999, or PW SI 32F–99, dated April 13, 1999. Cold-Engine fuel spike testing using a surge margin analysis control (SMAC) full authority digital electronic control (FADEC) P/N 50D341–SKX13041, P/N 50D341–SKX02, or P/N 53D063–SK07, and performed in conjunction with PW Cactus Wire C042 G 930902 ZRH, dated September 02, 1993,will also be acceptable for meeting the testing requirements of this AD. Engines must pass this test cell stability test to be returned to service.

(c) Repeat stability tests in accordance with paragraph (a)(1)(i) or (a)(1)(ii) on engines that meet the acceptance criteria of Table 2 of this AD or pass a test cell stability test in accordance with paragraph (b) before accumulating 800 CIS since last stability test.

(d) Remove from service engines that do not meet the acceptance criteria of Table 2, prior to further flight and replace with a serviceable engine.

(e) Conduct stability tests on the remaining engines on each airplane that exceed the initial threshold defined in Table 1 of this AD before accumulating 1800 engine CIS after the effective date of this AD or by December 31, 2000, whichever comes first, in accordance with paragraph (a) or (b) of this AD.

(f) Engines that have not reached the initial threshold specified in Table 1 of this AD by 1000 engine CIS after the effective date of this AD, or by December 31, 1999, whichever comes first, must be tested before the engine reaches the initial threshold so that no more than one engine per airplane that has exceeded its initial threshold has not been tested. After accumulating 1800 CIS or December 31, 2000,whichever comes first, the engines must be managed so that all engines have been tested in accordance with the initial thresholds specified in Table 1 of this AD or the repetitive 800 CIS threshold requirement of this AD.

(g) After the effective date of this AD, a cold-engine fuel spike stability test (Testing–20) must be performed in accordance with PW Temporary Revision 71–0016, 71–0025, or 71–0030, all dated March 15, 1999; PW EM 50A605 Section 71–00–00, Testing–20, PW EM 50A443 Section 71–00–00, Testing–20, and PW EM 50A822, Section 71–00–00, Testing 20, all dated June 15, 1999; or PW SI 32F–99, dated April 13, 1999; or PW Cactus Wire C042 G 930902 ZRH, dated September 02, 1993 before an engine can be returned to service after having undergone maintenance in the shop, except under any of the following conditions:

(1) The HPC was overhauled, or replaced with an overhauled HPC, or

(2) The HPC was replaced with an HPC that is new from production with no time in service, or

(3) Less than 800 CIS have passed since the last accomplishment of Testing–20, unless a major engine flange, except the ''A'' flange or the ''T'' flange, was separated during the shop visit, or

(4) The shop visit was only for replacement of a line replaceable unit, with no other work done, unless a major engine flange, except the ''A'' flange or the ''T'' flange, was separated during the shop visit.

Note 2: Boeing SB 767–72A0034, dated April 16, 1999, and SB 747–72A2038, dated April 16, 1999, include instructions similar to those contained in this AD, however, these SB's are not approved as alternate methods of compliance with this AD.

(h) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Engine Certification Office.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Engine Certification Office.

(i) 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 accomplished, provided that in the case where an aircraft has an engine that has failed a stability assessment the following conditions are made part of the special flight permit:

(1) The engine must be operated for at least 20 minutes at Ground Idle prior to initiating the takeoff, or for 5 minutes at 1.2 Engine Pressure Ratio (EPR);

(2) If applicable, the Environmental Control System (ECS) bleed must be shut off prior to setting takeoff power, and left off until 5 minutes after power set;

(3) The affected engine must be operated at the appropriate minimum approved derated thrust for safe takeoff and climb in order to minimize the risk of a takeoff surge; and

(4) Only one engine per airplane may have failed a stability assessment to perform this flight.

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

(1) An HPC overhaul is defined as whenever the HPC stage 12 through 15 blade tip clearances are restored to the clearances specified in the applicable fits and clearances section of the engine manual during the shop visit.

(2) A serviceable engine is defined as an engine that either:

(i) Has not exceeded the initial threshold specified in Table 1 of this AD, or

(ii) Has passed a stability test performed in accordance with paragraphs (a)(1)(i) or (a)(1)(ii) or (b) or (g) of this AD within the last 800 CIS.

(k) Report the results of the stability assessment tests to the Manager, Engine Certification Office, 12 New England Executive Park, Burlington, MA 01803–5299, or by electronic mail to ''Robert.Guyotte@faa.gov.'' Data to be reported includes:

(1) Engine serial number;

(2) Type and date of the test;

(3) Results of the test (include E1E value if applicable);

(4) Position of engine on the airplane;

(5) Disposition of the engine after the test; and

(6) Time and cycles since compressor overhaul, total time on engine, and total cycles at the time of the test.

Results are due to the FAA New England Office within 60 days of test date, or for previously accomplished tests for which retroactive credit is taken, within 60 days of the effective date of this AD.

Reporting requirements have been approved by the Office of Management and Budget (OMB) and assigned OMB control number 2120–0056.

(l) The stability assessment tests shall be done in accordance with the following Pratt & Whitney service documentation:

Document No.	Pages	Revision	Date
SI 7F–96	All	Original	January 10, 1996.
SI 32F–99	All	Original	April 13, 1999.
SI 49F–96	All	Original	August 9, 1996.
TR 71–0016	All	Original	March 15, 1999.
TR 71–0025	All	Original	March 15, 1999.
TR 71–0030	All	Original	March 15, 1999.
EM 50A443, Section 71–00–00	All	Original	June 15, 1999.
EM 50A605, Section 71–00–00	All	Original	June 15, 1999.
EM 50A822, Section 71–00–00	All	Original	June 15, 1999.
PW Cactus Wire: C042 G 930902 ZRH Total pages: 108	All	Original	September 2, 1993.

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 Pratt & Whitney, 400 Main St., East Hartford, CT 06108; telephone (860) 565–8770, 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 September 24, 1999.

Issued in Burlington, Massachusetts, on August 12, 1999.

Kirk E. Gustafson,

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

[FR Doc. 99–21450 Filed 8–19–99; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99–SW–30–AD; Amendment 39–11265; AD 99–17–19]

RIN 2120–AA64

Airworthiness Directives; Bell Helicopter Textron, A Division of Textron Canada, Model 206L, L–1, L–3, and L–4 Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to Bell Helicopter Textron, A Division of Textron Canada (BHTC), Model 206L, L–1, L–3, and L–4 helicopters, that currently requires the creation of a component history card or equivalent record using the Retirement Index Number (RIN) system for certain mast and trunnions and a system for tracking increases to the accumulated RIN. That AD also establishes retirement lives for the mast and trunnion. This amendment requires the same actions required by the existing AD but increases the RIN multiplier for the mast and corrects a helicopter model number. This amendment is prompted by further tests and analyses that indicate the RIN multiplier for the Model 206L–4 helicopters needs to be increased and the discovery of an error in a model designation in the existing AD. The actions specified by this AD are intended to prevent fatigue failure of the mast or trunnion, which could result in loss of the main rotor system and subsequent loss of control of the helicopter.

DATES: Effective September 24, 1999.

The incorporation by reference of certain publications listed in the regulations was approved previously by the Director of the Federal Register as of May 9, 1997 (62 FR 16073, April 4, 1997).

ADDRESSES: The service information referenced in this AD may be obtained from Bell Helicopter Textron, a Division of Textron Canada, 12,800 Rue de L-Avenir, Mirabel, Quebec, Canada J7J1R4, ATTN: Product Support Engineering Light Helicopters. This information may be examined at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Jurgen Priester, Aerospace Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222–5159, fax (817) 222–5959.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 97–07–07, Amendment 39–9981 (62 FR 16073), applicable to BHTC Model 206L, L–1, L–3, and L–4 helicopters, was published in the **Federal Register** on May 26, 1999 (64 FR 28418). That action proposed requiring creation of a component history card or equivalent record using a RIN system, establishing a system for tracking increases to the accumulated RIN and establishing a maximum accumulated RIN for certain masts and trunnions. That action also proposed correcting an error in the increase in the RIN count for the Model 206L–4 in paragraph (c)(2), correcting a model number in paragraph (c)(1)(i), and