

TABLE 804.—MANDATORY INSPECTION REQUIREMENTS

Part name/part No.	Chapter/section subject	Mandatory inspection
Fan Disk (all)	72-21-00, INSPECTION	All Areas (FPI) ¹ Bores (ECI) ²
Stage 1 HPT Rotor Disk (all)	72-46-00, INSPECTION	All Areas (FPI) ¹ Bores (ECI) ² Boltholes (ECI) ² Air Holes (ECI) ²
Stage 2 HPT Rotor Disk (all)	72-46-00, INSPECTION	All Areas (FPI) ¹ Bores (ECI) ² Boltholes (FPI) ¹ Air Holes (FPI) ¹
(a) Boltless Rim Configuration	Boltholes (ECI) ² Air Holes (ECI) ²
(b) Bolted Rim Configuration	All Areas (FPI) ¹ Bores (ECI) ²
HPT Rotor Outer Torque	72-46-00, INSPECTION	All Areas (FPI) ¹
Coupling (all)	Bores (ECI) ²

¹ FPI = Fluorescent Penetrant Inspection Method.
² ECI = Eddy Current Inspection Method.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99-CE-49-AD; Amendment 39-11646; AD 2000-06-06]

RIN 2120-AA64

Airworthiness Directives; The New Piper Aircraft, Inc. PA-31 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This document adopts a new airworthiness directive (AD) that applies to all The New Piper Aircraft, Inc. PA-31 series airplanes that are equipped with pneumatic deicing boots. This AD requires revising the Airplane Flight Manual (AFM) to include requirements for activation of the airframe pneumatic deicing boots. This AD is the result of reports of in-flight incidents and an accident that occurred in icing conditions where the airframe pneumatic deicing boots were not activated. The actions specified by this AD are intended to assure that flightcrews activate the pneumatic wing and tail deicing boots at the first signs of ice accumulation. This action will prevent reduced controllability of the aircraft due to adverse aerodynamic effects of ice adhering to the airplane prior to the first deicing cycle.

EFFECTIVE DATE: May 5, 2000.

ADDRESSES: You may examine information related to this AD at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 99-CE-49-AD, 901 Locust, Room 506, Kansas City, Missouri 64106.

FOR FURTHER INFORMATION CONTACT: Mr. John P. Dow, Sr., Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 506, Kansas City, Missouri 64106; telephone: (816) 329-4121; facsimile: (816) 329-4090.

SUPPLEMENTARY INFORMATION:

Events Leading to the Issuance of This AD

What caused this AD? This AD is the result of reports of in-flight incidents and an accident that occurred in icing conditions where the airframe pneumatic deicing boots were not activated.

What is the potential impact if the FAA took no action? The information necessary to activate the pneumatic wing and tail deicing boots at the first signs of ice accumulation is critical for flight in icing conditions. If we did not take action to include this information, flight crews could experience reduced controllability of the aircraft due to adverse aerodynamic effects of ice adhering to the airplane prior to the first deicing cycle.

Has the FAA taken any action to this point? Yes. We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply all Piper PA-31 series airplanes that are equipped with pneumatic deicing boots. This proposal was published in the **Federal Register** as a notice of proposed rulemaking (NPRM) on October 12, 1999 (64 FR 55204). The NPRM proposed to require revising the Limitations Section

of the AFM to include requirements for activating the pneumatic deicing boots at the first indication of ice accumulation on the airplane.

Was the public invited to comment? Yes. Interested persons were afforded an opportunity to participate in the making of this amendment. The following paragraphs present the comments received on the NPRM. Also included is the FAA's response to each comment, including any changes incorporated into the final rule based on the comments.

Comment Issue No. 1: Coordinate With Original Equipment Manufacturer

What is the Commenter's Concern? One commenter states that the FAA should coordinate with the original equipment manufacturer before issuing the AD.

What is the FAA's Response to the Concern? We concur. The FAA coordinates and will continue to coordinate with the manufacturer of any affected airplanes before issuing an AD.

Is it Necessary to Change the AD? No.

Comment Issue No. 2: Provide the Criteria for Determining Acceptable Stall Warning Margins

What is the Commenter's Concern? One commenter requests that the FAA provide the criteria for determining whether an airplane has an acceptable stall warning margin. The commenter references recent NPRM AD withdrawals in the FAA's Transport Airplane Directorate.

What is the FAA's Response to the Concern? We cannot provide such information because no regulatory basis exists for determining or applying a mandatory stall margin with contamination. We can review manufacturer-provided data to determine what testing was conducted, and then determine the effects of ice

accretion on the stall angle and the handling characteristics in the roll axis. This would include reviewing the service history of each airplane. With all of this information, we could determine whether the stall warning margin was acceptable and if the AD action could be withdrawn.

Such was the case with the NPRM withdrawals in the FAA's Transport Airplane Directorate. The airplanes affected were Cessna Models 500, 501, 550, 551, and 560 series airplanes, and British Aerospace Jetstream Model 4101 airplanes. You may find the specific justification for each of these withdrawals in the **Federal Register** through the following citations:

- For the Cessna airplanes: 64 FR 62995, November 18, 1999; and
- For the Jetstream airplanes: 64 FR 62990, November 18, 1999.

No specific information was submitted for the Piper PA-31 series airplanes.

Is it Necessary to Change the AD? No.

Comment Issue No. 3: Define the Term "Modern" Pneumatic Boot Systems

What is the Commenters' Concern?

Two commenters request explanation on the use of the term "modern" in a similar AD action that the FAA's Transport Airplane Directorate initiated.

What is the FAA's Response to the Concern? The FAA's Transport Airplane Directorate addressed the issue of "modern" versus "older" pneumatic boot systems in a recent AD action. That information, in its entirety, follows:

"Several commenters request that the difference between the "older" and "modern" boot systems be explained. These commenters express concern that although both systems are addressed in the proposal, there may not be a sound technical reason to apply the requirements of the proposal to both types of boot systems.

The FAA acknowledges that definitions of "older" and "modern" pneumatic boot systems should be provided. Therefore, for the purposes of this AD, "modern" pneumatic boot systems may be characterized by short segmented, small diameter tubes, which are operated at relatively high pressures [18–23 pounds per square inch (psi)] by excess bleed air that is provided by turbine engines. "Older" pneumatic boot systems may be characterized by long, uninterrupted, large diameter tubes, which were operated at low pressures by engine driven pneumatic pumps whose pressure varied with engine revolutions per minute (rpm). This low pressure coupled with long and large diameter tubes caused early deice systems to have very lengthy inflation and deflation cycles and dwell times. (Dwell time is the period of time that the boot remains fully expanded following the completion of the inflation cycle until the beginning of the deflation cycle.)"

Is it Necessary to Change the AD? No.

Comment Issue No. 4: No Justification for This AD

What is the Commenter's Concerns?

One commenter cites reasons why the proposed AD is not justified. These consist of the following:

1. The original equipment manufacturer installs pneumatic airframe components based on ice impingement and accretion analysis and best engineering judgement. The pneumatic boot manufacturer performed ice tunnel testing of deicers representative of those installed on PA-31 series airplanes and has issued operating instructions for its components. The original equipment manufacturer performs flight test in natural icing conditions where the operating instructions on specific installations (with unique geometry, speeds, etc.) without flight testing to substantiate those procedures. This would seem to violate the current FAA rationale for testing for flight into known icing; and

2. There is no data in the NPRM that pertains to the Piper PA-31 series airplanes to justify AD action.

What is the FAA's Response to the Concerns? We do not concur that the AD is not justified. Our response to each concern is as follows:

1. While the information the commenter presents is accurate, the intent of this AD is to mandate when the pneumatic deicing boots should be activated. As the commenter discusses, the original equipment manufacturer tests the components and issues operating instructions for its components. The type certificate holder works with the original equipment manufacturer to assure that the operating instructions adhere to the original design configuration of the affected airplanes. This AD only provides the information for and mandates when the pneumatic deicing system is activated; and

2. The AD is based upon reports of in-flight incidents and an accident that occurred in icing conditions where the airframe pneumatic deicing boots were not activated. Although Piper PA-31 series airplanes were not among those in the reports, these airplanes incorporate a similar type design. Therefore, the unsafe condition could exist on the Piper PA-31 series airplanes and AD action is appropriate.

Is it Necessary to Change the AD? No.

Comment Issue No. 5: Pneumatic Deicing Boot Manufacturer Should Issue Operating Instructions

What is the Commenter's Concern?

One commenter states that the deice boot manufacturer should issue any change in the operating instructions of the pneumatic deicing system.

What is the FAA's Response to the Concern? We do not concur that the deice boot manufacturer is responsible for developing the operating instructions for a specific airplane. The original equipment manufacturer or airplane manufacturer should issue changes in the operating instructions of the pneumatic deicing system. As discussed in the previous comment, the original equipment manufacturer tests the components and issues operating instructions for its components. The type certificate holder works with the original equipment manufacturer to assure that the operating instructions adhere to the original design configuration of the affected airplanes. This AD only provides the information for and mandates when the pneumatic deicing system is activated.

Is it Necessary to Change the AD? No.

Comment Issue No. 6: The AD Should Also Apply to Other Airplane Models

What is the Commenter's Concern?

One commenter suggests that the AD apply to other Piper airplanes that are of a similar type design. The commenter states that the AD should also apply to the following airplane models: PA-31T, PA-31T1, PA-31T2, PA-31T3, PA-42, PA-42-720, PA-42-720R, and PA-42-1000.

What is the FAA's Response to the Concern? We concur that all of these airplane models are of a similar type design and AD action should be taken to address the safety issues. However, the Models PA-31T1, PA-31T2, and PA-31T3 airplanes were included in the NPRM. Rather than hold up the AD, we will initiate a separate AD action (NPRM) for the Piper Models PA-42, PA-42-720, PA-42-720R, and PA-42-1000 airplanes.

Is it Necessary to Change the AD? No. However, as discussed above, we will initiate a separate AD action (NPRM) for the Piper Models PA-42, PA-42-720, PA-42-720R, and PA-42-1000 airplanes.

Comment Issue No. 7: Limit the AFM Change to Approach and Hold Phases of Flight

What is the Commenter's Concern?

One commenter requests that the FAA limit the AFM change of operating the boots at the first sign of ice accretion to

the approach and hold phases of flight. This commenter references the work that the Ice Protection Harmonization Working Group (IPHWP) is currently doing. The commenter states that the IPHWP believes that the only phases of flight that demonstrate a safety concern are holding patterns and various approach segments. Since these operations occur at lower speeds, ice accumulating on the wing and tail surfaces could cause instability.

What is the FAA's Response to the Concern? We do not concur to limiting the AFM change to the holding and approach phases of flight. We acknowledge that the IPHWG is working on a proposed operations rule. The IPHWG continues to work on this proposed rule and has not reached technical agreement. We have records of in-flight roll upsets in icing during the climb and cruise phases of flight on small airplanes that are of a similar type design to the Piper PA-31 series airplanes.

We concur that the ice protection system should not be operated at times when no ice is accreting. We have changed the description of the atmospheric conditions that the deicing boots must be operated from "icing conditions" to "known or observed/detected icing that the flight crew visually observed on the aircraft or was identified by the on-board sensors." *Is it Necessary to Change the AD?* Yes. We have made the change described above in the final rule.

Comment Issue No. 8: Require Action To Reduce Adhesion Characteristics

What is the Commenter's Concern? In response to previous NPRM's on this subject, a commenter has requested that the FAA mandate actions to minimize or reduce the ice adhesion characteristics of boot material. The commenter stated that one reason flightcrews see large amounts of residual ice is because residual ice sticks to the boot surface as the boot ages. This may increase if the adhesion qualities of the boot material are not maintained. The commenter suggested the use of certain compounds, such as ICEX™ (an ice-phobic chemical spray), to reduce ice adhesion.

What is the FAA's Response to the Concern? We concur that materials such as ICEX™ could reduce ice adhesion. However, factors such as normal wear and tear, patching, and oxidation of boot material, prevent us from establishing an effective level of application or adequate intervals of application. We included a **Note** in previous AD's to recommend regular treatment of deicing boots with use of approved ice release

agents. This is in addition to the required actions.

Is it Necessary to Change the AD? No. However, as discussed above, the FAA included a **Note** in previous AD's to recommend regular treatment of deicing boots with use of approved ice release agents. We are including this **Note** in this AD also.

The FAA's Determination

What is the FAA's final determination on this issue? After careful review of all available information related to the subject presented above, we have determined that air safety and the public interest require the adoption of the rule as proposed except for the following:

- The change in the description of the atmospheric conditions that the deicing boots must be operated;
- The addition of the NOTE to recommend regular treatment of deicing boots with use of approved ice release agents; and
- Minor editorial corrections.

How does the change, addition, and corrections affect the AD? We have determined that the change, addition, and minor corrections will not change the meaning of the AD and will not add any additional burden upon the public than was already proposed.

Cost Impact

How many airplanes does this AD impact? We estimate that 2,314 airplanes in the U.S. registry will be affected.

What is the cost impact of the affected airplanes on the U.S. Register? There is no dollar cost impact. We estimate that to accomplish the AFM revision it will take you less than 1 workhour. You can accomplish this action if you hold at least a private pilot certificate as authorized by § 43.7 of the Federal Aviation Regulations (14 CFR 43.7). You must make an entry into the aircraft records that shows compliance with this AD, in accordance with § 43.9 of the Federal Aviation Regulations (14 CFR 43.9). The only cost impact of this AD is the time it will take you to insert the information into the AFM.

Regulatory Impact

The regulations adopted herein will 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

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 copy of the final evaluation prepared for this action 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 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, 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 a new airworthiness directive (AD) to read as follows:

2000-06-06 The New Piper Aircraft, Inc.:
Amendment 39-11646; Docket No. 99-CE-49-AD.

(a) *What airplanes are affected by this AD?* PA-31, PA-31-300, PA-31-325, PA-31-350, PA-31P, PA-31T, PA-31T1, PA-31T2, PA-31T3, and PA-31P-350 airplanes, all serial numbers, that are:

- (1) equipped with pneumatic deicing boots; and
- (2) certificated in any category.

(b) *Who must comply with this AD?* Anyone who wishes to operate any of the above airplanes on the U.S. Register. The AD does not apply to your airplane if it is not equipped with pneumatic de-icing boots.

(c) *What problem does this AD address?* The information necessary to activate the pneumatic wing and tail deicing boots at the first signs of ice accumulation is critical for flight in icing conditions. If we did not take action to include this information, flight crews could experience reduced controllability of the aircraft due to adverse aerodynamic effects of ice adhering to the airplane prior to the first deicing cycle.

(d) *What must I do to address this problem?* To address this problem, you must revise the Limitations Section of the FAA-approved Airplane Flight Manual (AFM) to

include the following requirements for activation of the ice protection systems. You must accomplish this action within the next 10 calendar days after the effective date of this AD, unless already accomplished. You may insert a copy of this AD in the AFM to accomplish this action:

• Except for certain phases of flight where the AFM specifies that deicing boots should not be used (e.g., take-off, final approach, and landing), compliance with the following is required.

• Wing and Tail Leading Edge Pneumatic Deicing Boot System, if installed, must be activated:

—At the first sign of ice formation anywhere on the aircraft, or upon annunciation from an ice detector system, whichever occurs first; and

—The system must either be continued to be operated in the automatic cycling mode, if available; or the system must be manually cycled as needed to minimize the ice accretions on the airframe.

• The wing and tail leading edge pneumatic deicing boot system may be deactivated only after:

—leaving known or observed/detected icing that the flight crew has visually observed on the aircraft or was identified by the on-board sensors; and

—after the airplane is determined to be clear of ice.”

Note: The FAA recommends periodic treatment of deicing boots with approved ice release agents, such as ICEX™, in accordance with the manufacturer's application instructions.

(e) *Can the pilot accomplish the action?*

Yes. Anyone who holds at least a private pilot certificate, as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7), may incorporate the AFM revisions required by this AD. You must make an entry into the aircraft records that shows compliance with this AD, in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).

(f) *Can I comply with this AD in any other way?* Yes.

(1) You may use an alternative method of compliance or adjust the compliance time if:

(i) Your alternative method of compliance provides an equivalent level of safety; and

(ii) The Manager, Small Airplane Directorate, approves your alternative. Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager.

(2) 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 (f)(1) 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 you have not eliminated the unsafe condition, specific actions you propose to address it.

(g) *Where can I get information about any already-approved alternative methods of compliance?* Contact the Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4121; facsimile: (816) 329-4091.

(h) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD.

(i) *When does this amendment become effective?* This amendment becomes effective on May 5, 2000.

Issued in Kansas City, Missouri, on March 17, 2000.

Carolanne L. Cabrini,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 00-7224 Filed 3-22-00; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 97

[Docket No. 29960; Amdt. No. 1983]

Standard Instrument Approach Procedures; Miscellaneous Amendments

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment establishes, amends, suspends, or revokes Standard Instrument Approach Procedures (SIAP's) for operations at certain airports. These regulatory actions are needed because of the adoption of new or revised criteria, or because of changes occurring in the National Airspace System, such as the commissioning of new navigational facilities, addition of new obstacles, or changes in air traffic requirements. These changes are designed to provide safe and efficient use of the navigable airspace and to promote safe flight operations under instrument flight rules at the affected airports.

DATES: An effective date for each SIAP is specified in the amendatory provisions.

Incorporation by reference approved by the Director of the Federal Register on December 31, 1980, and reapproved as of January 1, 1982.

ADDRESSES: Availability of matters incorporated by reference in the amendment is as follows:

For Examination

1. FAA Rules Docket, FAA Headquarters Building, 800 Independence Avenue, SW., Washington, DC 20591;

2. The FAA Regional Office of the region in which the affected airport is located; or

3. The Flight Inspection Area Office which originated the SIAP.

For Purchase

Individual SIAP copies may be obtained from:

1. FAA Public Inquiry Center (APA-200), FAA Headquarters Building, 800 Independence Avenue, SW., Washington, DC 20591; or

2. The FAA Regional Office of the region in which the affected airport is located.

By Subscription

Copies of all SIAP's mailed once every 2 weeks, are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

FOR FURTHER INFORMATION CONTACT:

Donald P. Pate, Flight Procedure Standards Branch (AMCAFS-420), Flight Technologies and Programs Division, Flight Standards Service, Federal Aviation Administration, Mike Monroney Aeronautical Center, 6500 South MacArthur Blvd. Oklahoma City, OK. 73125) telephone: (405) 954-4164.

SUPPLEMENTARY INFORMATION: This amendment to part 97 of the Federal Aviation Regulations (14 CFR part 97) establishes, amends, suspends, or revokes SIAP's. The complete regulatory description of each SIAP is contained in official FAA form documents which are incorporated by reference in this amendment under 5 U.S.C. 552(a), 14 CFR part 51, and 14 CFR 97.20 of the Federal Aviation Regulations (FAR). The applicable FAA Forms are identified as FAA Form 8260-5. Materials incorporated by reference are available for examination or purchase as stated above.

The large number of SIAP's, their complex nature, and the need for a special format make their verbatim publication in the **Federal Register** expensive and impractical. Further, airmen do not use the regulatory text of the SIAPs, but refer to their graphic depiction on charts printed by publishers of aeronautical materials. Thus, the advantages of incorporation by reference are realized and publication of the complete description of each SIAP contained in FAA form documents is unnecessary. The provisions of this amendment, state the