

DEPARTMENT OF TRANSPORTATION
14 CFR Part 39

[Docket No. 90-CE-61-AD; Amendment 39-9620; AD 96-10-13]
RIN 2120-AA64

Airworthiness Directives; the New Piper Aircraft, Inc. (Formerly Piper Aircraft Corporation)
Models PA31T, PA31T1, PA31T2, and PA31T3 Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes Airworthiness Directive (AD) 84-08-06, which currently requires the following on certain The New Piper Aircraft, Inc. (Piper) Models PA31T, PA31T1, PA31T2, and PA31T3 airplanes: repetitively inspecting the fuselage station (FS) 332 bulkhead for cracks, and reinforcing or replacing the FS 332 bulkhead if cracks are found. The Federal Aviation Administration's policy on aging commuter-class aircraft is to eliminate or, in certain instances, reduce the number of certain repetitive short-interval inspections when improved parts or modifications are available. This action retains the current repetitive inspections contained in AD 84-08-06, and requires incorporating a stabilizer forward spar attachment bulkhead reinforcement kit or installing a reinforced bulkhead assembly as terminating action for the repetitive inspection requirement. The actions specified in this AD are intended to prevent structural failure of the horizontal stabilizer and the aft fuselage attachment caused by cracks in the FS 332 bulkhead, which, if not detected and corrected, could result in loss of control of the airplane.

DATES: Effective June 27, 1996.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of June 27, 1996.

ADDRESSES: Service information that applies to this AD may be obtained from The New Piper Aircraft, Inc., Customer Services, 2926 Piper Drive, Vero Beach, Florida 32960. This information may also be examined at the Federal Aviation Administration (FAA), Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket 90-CE-61-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Christina Marsh, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, Campus Building, 1701 Columbia Avenue, suite 2-160, College Park, Georgia 30337-2748; telephone (404) 305-7362; facsimile (404) 305-7348.

SUPPLEMENTARY INFORMATION:

Events Leading to the AD

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to Piper Models PA31T, PA31T1, PA31T2, and PA31T3 airplanes was published in the Federal Register on January 19, 1996 (61 FR 1303). The action proposed to supersede AD 84-08-06 with a new AD that would (1) retain the requirement of repetitively inspecting the FS 332 bulkhead for cracks, reinforcing the FS 332 bulkhead (Piper Kit 764-983) if any crack is found that does not exceed certain limits, and replacing the bulkhead assembly with a reinforced bulkhead assembly (part number 45583-16 or 45583-17) if any crack is found that exceeds certain limits; and (2) require incorporating a stabilizer forward spar attachment bulkhead reinforcement (Piper Kit 764-983) or a reinforced bulkhead assembly (part number 45583-16 or 45583-17) as terminating action for the repetitive inspection requirement. Accomplishment of the proposed inspections would be in accordance with Piper Service Bulletin No. 773A, dated May 3, 1984. The incorporation of Piper Kit 764-983 would be accomplished in accordance with the instructions to this kit (Revised June 18, 1990), and the reinforced bulkhead installations would be accomplished in accordance with the applicable maintenance manual.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposed rule or the FAA's determination of the cost to the public.

After careful review of all available information related to the subject presented above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. The FAA has determined that these 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

The FAA estimates that 736 airplanes in the U.S. registry will be affected by this AD, that it will take approximately 60 workhours per airplane to accomplish the required replacement, and that the average labor rate is approximately \$60 an hour. Parts cost approximately \$782 per airplane. Based on these figures, the total cost impact of this AD on U.S. operators is estimated to be \$3,225,152 or \$4,382 per airplane. This figure is based on the assumption that no affected airplane owner/operator has accomplished the required replacement.

Piper has informed the FAA that parts have been distributed to enough owners/operators to equip 348 of the affected airplanes. Assuming that each set of parts has been installed on an affected airplane, the cost impact of this AD upon U.S. owners operators of the affected airplanes is reduced by \$1,524,936 from \$3,225,152 to \$1,700,216.

The FAA's Aging Commuter Class Aircraft Policy

This AD is part of the FAA's aging commuter class airplane policy, which briefly states that, when a modification exists that could eliminate or reduce the number of required critical inspections, the modification should be incorporated.

The intent of the FAA's aging commuter airplane program is to ensure safe operation of commuter-class airplanes that are in commercial service without adversely impacting private

operators. The FAA believes that a large number of the remaining 388 affected airplanes (736 affected airplanes--348 sets of parts distributed) that will be affected by the required modification AD are operated in various types of air transportation. This includes scheduled passenger service, air cargo, and air taxi.

This AD allows 600 hours time-in-service (TIS) after the effective date of this AD before mandatory accomplishment of the design modification. The average utilization of the fleet for those airplanes in air transportation is between 25 to 40 hours TIS per week. Based on these figures, operators of commuter-class airplanes involved in commercial operation will have to accomplish the required modification within four to six months after this AD becomes effective. For private owners, who typically operate between 100 to 200 hours TIS per year, this will allow three to six years before the required modification will be mandatory.

The FAA established the 600 hours TIS replacement compliance time based on its engineering evaluation of the problem. Among the issues examined in this engineering evaluation were analysis of service difficulty reports, the difficulty level of the inspection, and how critical the situation would be if cracks occurred in the subject area despite accomplishment of the repetitive inspections.

Usually, the FAA establishes the mandatory design modification compliance time on AD's affecting aging commuter-class airplanes upon the accumulation of a certain number of hours TIS on the airplane. For this action, the FAA is mandating the modification for all operators "within the next 600 hours TIS after the effective date of this AD."

The total TIS levels of the airplane fleet vary from under 1,000 hours TIS to over 5,000 hours TIS, and annual accumulation rates vary from 50 hours TIS to over 1,000 hours TIS. Establishing a long-term set compliance time of hours TIS accumulated on Piper Models PA31T, PA31T1, PA31T2, and PA31T3 airplanes (such as 5,000 hours TIS) imposes an undue burden on the manufacturer of having to maintain a supply of replacement parts for the entire fleet when many airplanes in the fleet may never reach this compliance time.

Instead, the FAA believes that Piper should maintain parts for several years; in this case about six years to allow low-usage airplanes time to accumulate the 600 hours after the effective date of the AD. The FAA has determined that the compliance time of this rule provides the level of safety required for commuter air service while still minimizing the impact on the private airplane owners of Piper Models PA31T, PA31T1, PA31T2, and PA31T3 airplanes.

Regulatory Impact

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 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 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 USC 106(g), 40113, 44701.

Sec. 39.13 [Amended]

2. Section 39.13 is amended by removing Airworthiness Directive (AD) 84-08-06, Amendment 39-4851, and by adding a new AD 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 FAR Subpart 39.3).

96-10-13 The New Piper Aircraft, Inc. (formerly Piper Aircraft Corporation): Amendment 39-9620; Docket No. 90-CE-61-AD. Supersedes AD 84-08-06, Amendment 39-4851.

Applicability: The following model and serial number airplanes, certificated in any category, that do not have either Piper Kit 764-983 (stabilizer forward spar attachment bulkhead reinforcement) incorporated at Fuselage Station (FS) 332 or have a part number (P/N) 45583-16 or P/N 45583-17 bulkhead assembly installed:

Models	Serial No.
PA31T.....	31T-7400002 through 31T-8120104.
PA31T1.....	31T-7804001 through 31T-8104101, 31T-8304003, and 31T-1104004 through 31T-1104007.
PA31T2.....	31T-8166001 through 31T-8166032, 31T-8166034 through 31T-8166065, 31T-8166067 through 31T-8166071, and 31T-8166073 through 31T-8166075.
PA31T3.....	31T-8275001, 31T-8275003 through 31T-8275012, 31T-8275014 through 31T-8275017, 31T-8275025, and 31T-8375001 through 31T-8375005.

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 (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 in the body of this AD, unless already accomplished.

To prevent structural failure of the horizontal stabilizer and the aft fuselage attachment caused by cracks in the FS 332 bulkhead, which, if not detected and corrected, could result in loss of control of the airplane, accomplish the following:

(a) Within the next 200 hours time-in-service (TIS) after the effective date of this AD, unless already accomplished (compliance with AD 84-08-06), and thereafter at intervals not to exceed 200 hours TIS until the modification required by paragraph (c), (d), or (e) of this AD is incorporated, inspect (using dye penetrant methods) the FS 332 bulkhead for cracks. Accomplish the inspections in accordance with the INSTRUCTIONS section of Piper Service Bulletin (SB) No. 773A, dated May 3, 1984.

(b) The initial dye penetrant inspection type must be utilized for all future repetitive inspections. Dye penetrant inspection types consist of Type I: fluorescent; Type II: non-fluorescent or visible dye; and Type III: dual sensitivity.

(c) If cracks are found during any of the inspections required in paragraph (a) of this AD and no crack exceeds the limitations specified in Piper SB No. 773A, dated May 3, 1984, prior to further flight, repair the cracks in accordance with Piper SB No. 773A, dated May 3, 1984, and reinforce the FS 332 bulkhead by incorporating Piper Kit 764-983 in accordance with the instructions to Piper Kit 764-983, Revised June 18, 1990.

(d) If cracks are found during any of the inspections required in paragraph (a) of this AD and any crack exceeds the limitations specified in Piper SB No. 773A, dated May 3, 1984, prior to further flight, replace the bulkhead assembly with a reinforced bulkhead assembly, P/N 45583-16 or P/N 45583-17. Accomplish this replacement in accordance with the applicable maintenance manual.

(e) Upon the accomplishment of the third repetitive inspection required by this AD (600 hours TIS after the effective date of this AD), unless already accomplished as required by paragraph (c) or (d) of this AD, accomplish one of the following, as applicable:

(1) If cracks are found and no crack exceeds the limitations specified in Piper SB No. 773A, dated May 3, 1984, repair the cracks in accordance with Piper SB No. 773A, dated May 3, 1984, and reinforce the FS 332 bulkhead by incorporating Piper Kit 764-983 in accordance with the instructions to Piper Kit 764-983, Revised June 18, 1990;

(2) If cracks are found and any crack exceeds the limitations specified in Piper SB No. 773A, dated May 3, 1984, replace the bulkhead assembly with a reinforced bulkhead assembly, P/N 45583-16 or P/N 45583-17, in accordance with the applicable maintenance manual; or

(3) If no cracks are found, either reinforce the FS 332 bulkhead by incorporating Piper Kit 764-983 in accordance with the instructions to Piper Kit 764-983, Revised June 18, 1990; or replace the bulkhead assembly with a reinforced bulkhead assembly, P/N 45583-16 or P/N 45583-17, in accordance with the applicable maintenance manual.

(f) Incorporating Piper Kit 764-983 or installing reinforced bulkhead assembly, P/N 45583-16 or P/N 45583-17, as required by paragraphs (c) and (d) or (e) of this AD is considered terminating action for the repetitive inspection requirement of this AD.

(g) 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 airplane to a location where the requirements of this AD can be accomplished.

(h) An alternative method of compliance or adjustment of the compliance time that provides an equivalent level of safety may be approved by the Manager, Atlanta Aircraft Certification Office (ACO), Campus Building, 1701 Columbia Avenue, suite 2-160, College Park, Georgia 30337-2748. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

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

Note 3: Alternative methods of compliance approved in accordance with AD 84-08-06 (superseded by this action) are not considered approved as alternative methods of compliance with this AD.

(i) The inspections and possible repair required by this AD shall be done in accordance with Piper Service Bulletin No. 773A, dated May 3, 1984. The reinforcement required by this AD shall be done in accordance with the instructions to Piper Kit 764-983, Revised June 18, 1990. 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 The New Piper Aircraft, Inc., 2926 Piper Drive, Vero Beach, Florida 32960. Copies may be inspected at the FAA, Central Region, Office of the Assistant Chief Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street NW, suite 700, Washington, DC.

(j) This amendment (39-9620) supersedes AD 84-08-06, Amendment 39-4851.

(k) This amendment (39-9620) becomes effective on June 27, 1996.

Issued in Kansas City, Missouri, on May 8, 1996.

Henry A. Armstrong,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 96-12141 Filed 5-15-96; 8:45 am]

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