



Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, FL, U.S.A. 32960

SERVICE NO. 540B BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: February 9, 2021

(M)

Service Bulletin (SB) 540B supersedes SB 540A in its entirety. Aircraft that were previously made compliant with SB 540A must continue the recurring inspections mandated by SB 540B, regardless of prior maintenance and repair history.

SUBJECT:

**INSPECTION AND REINFORCEMENT OF
STABILATOR TIP TUBE AND WEIGHT ASSEMBLY**

REASON FOR REVISION:

SB 540B expands serial number effectivity and mandates a recurring inspection of all affected aircraft. Other changes are to bring the document up to current format.

MODELS AFFECTED:

PA-23-250 (Six-Place) Aztec "F"

SERIAL NUMBERS AFFECTED:

27-7654001 through 27-7954121

COMPLIANCE TIME:

If not already accomplished, the initial inspection is to coincide with the next regularly scheduled maintenance event, but not to exceed the next ten (10) hours time in service. Thereafter, inspection is on a recurring basis at a frequency interval not to exceed 100 hours time in service.

APPROVAL:

The engineering aspects of this service document have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved.

PURPOSE:

Field reports indicate that cracks have been found in the stabilator tip tube and weight assembly installed on the affected aircraft, regardless of prior maintenance and repair history. If not identified and addressed, this condition could result in separation of the weight from the tube.

This service bulletin provides instructions to inspect the stabilator tip tube and weight assembly for cracks, and provides options to address any cracks discovered.

SAFETY INTENT:

The safety intent of this service bulletin is to require inspections to prevent the separation of weight assemblies from the stabilator tip tubes, which could result in an unsafe flying condition.

**CONFIGURATION
DESCRIPTION:**

Incorporating this service bulletin will ensure that if cracks should develop in stabilator tip tubes and weight assemblies, the cracks are repaired appropriately.

INSTRUCTIONS:

NOTE: Some steps in these instructions are identified as “required for compliance” (RC). If this service bulletin is mandated by an airworthiness directive (AD), the steps identified as RC must be done to comply with the AD. Steps not identified as RC are recommended and may be deviated from, done as a part of other actions, or done with accepted methods different from those given in this service bulletin, if the RC steps can be done and the airplane can be put back in a serviceable condition.

WARNING: ANY CRACKS DISCOVERED IN THE AIRCRAFT STRUCTURE MUST BE REPAIRED PRIOR TO THE NEXT FLIGHT. AN AIRPLANE WITH CRACKS IN ITS STRUCTURE DOES NOT MEET ITS TYPE DESIGN AND NO LONGER POSSESSES ITS REQUIRED TYPE DESIGN STRENGTH.

NOTE: The temporary removal of some components and/or access panels may be required in order to accomplish the instructions in this service bulletin.

NOTE: These instructions apply to both the left and right stabilator tip tube and weight assemblies.

NOTE: The kits and service replacements for some components mentioned in this service bulletin are not currently available. If repair or replacement is necessary, some other FAA approved replacement or repair may be required. Contact Piper Customer Service for assistance at (+1) 772-299-2141 or CustomerService@piper.com. Piper’s normal business hours are Monday through Friday, 7:30 a.m. to 4:30 p.m. (Eastern).

Part I. Inspection

NOTE: The repair or replacement of the tip tube and weight assembly does not alleviate the recurring inspection mandated by this service bulletin.

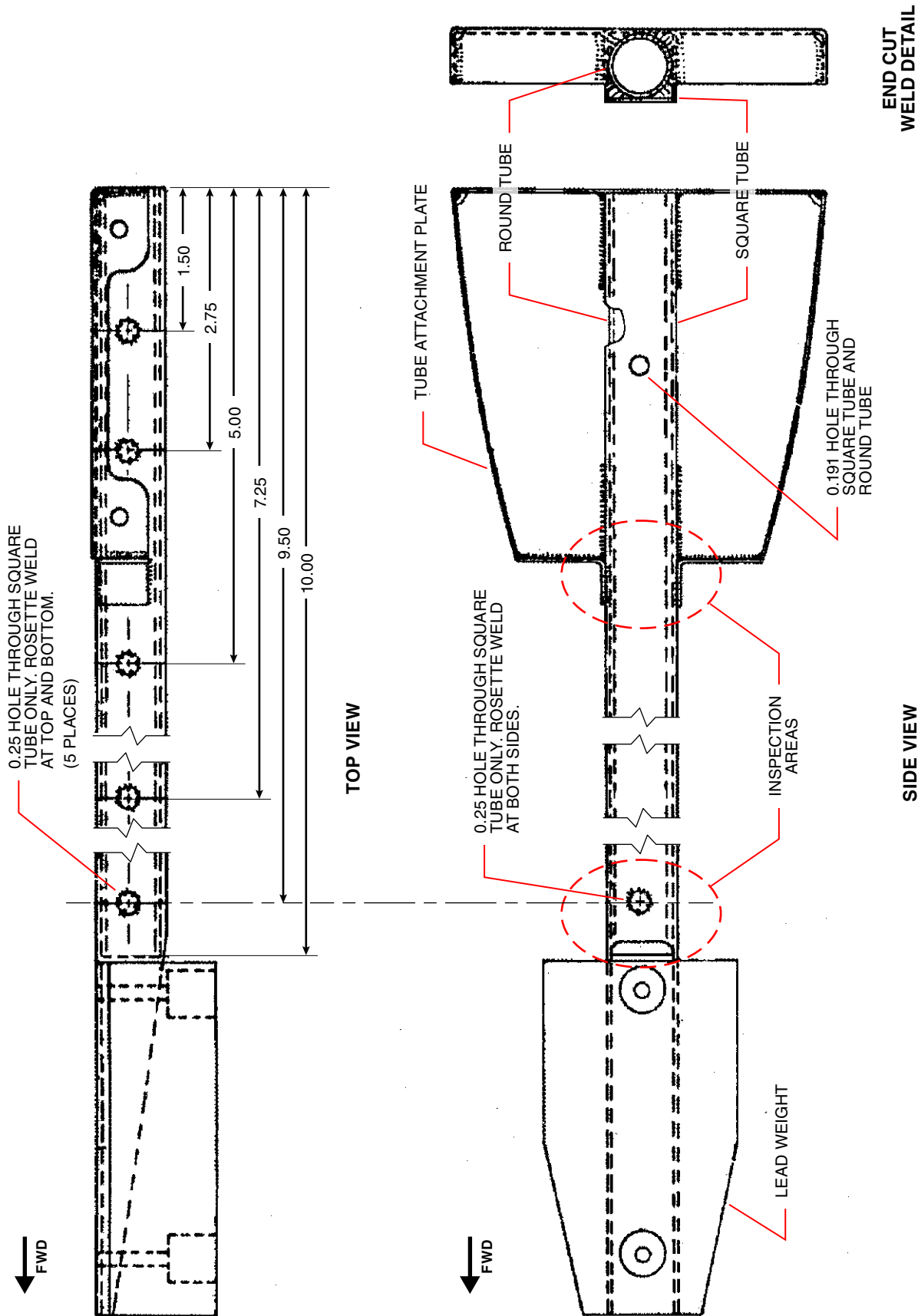
1. RC – Prior to inspection, wipe surfaces clean using a soft cloth dampened with isopropyl alcohol, mineral spirits, naphtha, or another suitable cleaning agent or method.
2. RC – If Stabilator Balance Weight Replacement Kit, Piper P/N 763-987, is installed, and Stabilator Nose Rib Installation Kit, P/N 761-141, is not, then modification of the nose rib may be required. Refer to Piper Service Letter 807, latest revision, to identify the affected aircraft.
3. RC – For serial numbers (S/Ns) 27-7654001 through 27-7954035 if Stabilator Balance Weight Replacement Kit, Piper P/N 763-987, **is not installed**: examine the inspection areas identified in Figure 1. Perform the inspection using a 10X magnifier, a mirror, and a suitable light source or other equipment capable of providing equal or better resolution.
 - **If cracks are found**, repair the tube and weight assembly as described in Part II, prior to next flight.
 - **If no cracks are found**, then proceed to Part III.

NOTE: Figure 1 shows a stabilator tip tube and weight assembly after repair.

NOTE: At the discretion of the owner/operator, the repair described in Part II may be accomplished on a stabilator tip tube and weight assembly without cracks. However, the recurring inspection mandated by this service bulletin shall still apply.

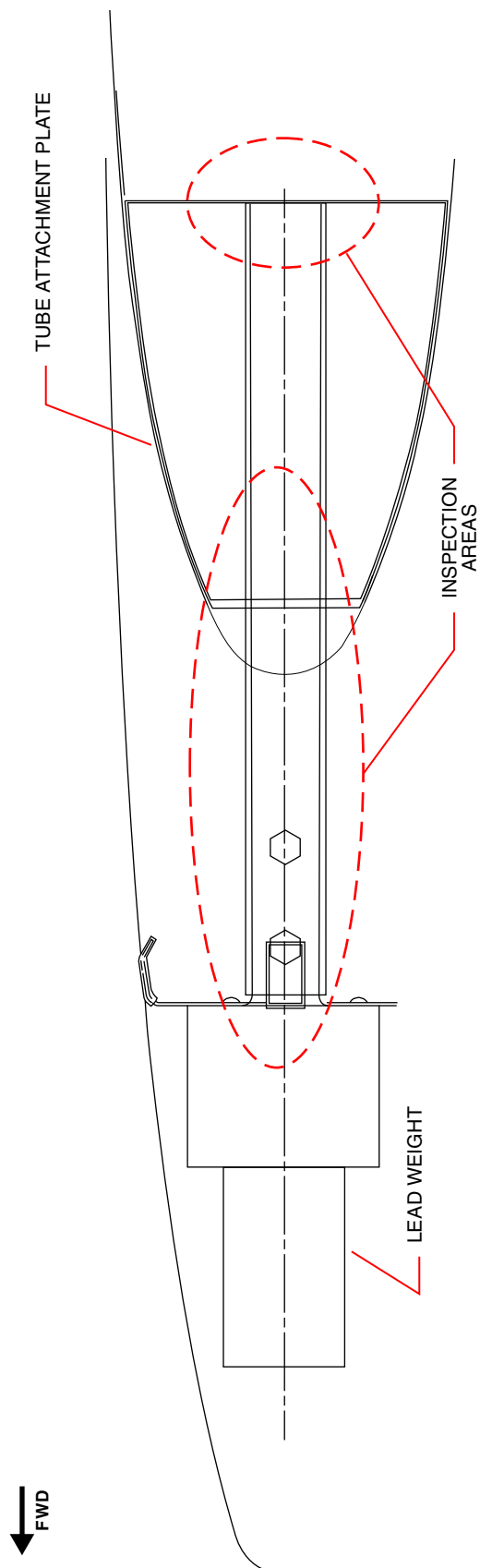
If the repair described in Part II has already been accomplished, and repair is necessary, then some other FAA approved repair is required. Contact Piper Customer Service for assistance at (+1) 772-299-2141 or CustomerService@piper.com. Piper’s normal business hours are Monday through Friday, 7:30 a.m. to 4:30 p.m. (Eastern).

4. RC – For S/Ns 27-7954036 through 27-7954121; and for S/Ns 27-7654001 through 27-7954035 if Stabilator Balance Weight Replacement Kit, P/N 763-987, is installed: examine the inspection areas identified in Figure 2. Perform the inspection using a 10X magnifier, a mirror, and a suitable light source or other equipment capable of providing equal or better resolution.
 - **If cracks are found**, then repair is necessary prior to next flight. Contact Piper Customer Service for assistance at (+1) 772-299-2141 or CustomerService@piper.com. Piper’s normal business hours are Monday through Friday, 7:30 a.m. to 4:30 p.m. (Eastern).
 - **If no cracks are found**, then proceed to Part III.



NOTE: All measurements are in inches unless otherwise identified.

Figure 1
Top View and Side View of Tube and Weight Assembly



SIDE VIEW
 APPLICABLE TO S/N 27-7654001 THROUGH 27-7954035 WITH PIPER KIT
 P/N 763-987 INSTALLED, AND S/N 27-7954036 THROUGH 27-7954121

Figure 2
 Side View of Tube and Weight Assembly

Part II. Repair Instructions

RC – These repair instructions are applicable only to S/Ns 27-7654001 through 27-7954035 without Kit P/N 763-987 installed. Refer to Figure 1.

NOTE: All measurements are in inches, unless otherwise identified.

NOTE: The repair or replacement of the tip tube and weight assembly does not alleviate the recurring inspection (Part I) mandated by this service bulletin.

1. RC – Remove the stabilator tip tube and weight assembly from the aircraft.
2. RC – Modify both tube and weight assemblies as follows:
 - a. Remove the tube and weight assemblies from both stabilators. Retain screws, washers and nuts for reinstallation; replace any hardware on condition.
 - b. Cut or drill a hole in the end of the tube attachment plate to allow a 5/8 inch diameter tube to be inserted into the square tube.
 - c. Locate and drill twelve (12) 0.250 holes in the square tube as shown in Figure 1.
 - d. Insert a 10-inch length of round steel tube (5/8 x 0.058 Type 4130 Cond. N) into the square tube and rosette weld the tubes together at the twelve (12) 0.250 holes.
 - e. Weld shut the area around the hole in the attachment plate and the tubes.
 - f. Weld shut any cracks that were discovered when inspecting the square tube.
- g. Drill a 0.191 hole through the round tube using existing hole in square tube as a guide.
- h. Clean, prime and paint tube and weight assembly.
- i. Reinstall the tube and weight assembly to the stabilator using existing attachment hardware.
- j. Reinstall the tip assembly to the stabilator.
- k. Refer to Piper Aztec Service Manual, P/N 753-564, paragraph 4-65, to balance the stabilator.

CAUTION: IF WELDING CRACKS NEAR THE LEAD WEIGHT, USE TIG OR MIG WELD TO REPAIR. DO NOT USE OXY-ACETYLENE.

NOTE: If the stabilator cannot be properly balanced with the trim weights at the stabilator balance arm, it is permissible to remove up to 1/4 inch of material from the forward ends of the lead weights on the stabilator tips. (Remove equal amounts from both lead weights.)

3. Proceed to Part III.

Part III. Documentation of Compliance

Make a logbook entry documenting compliance with this service bulletin.

MATERIAL REQUIRED: Per aircraft, on condition:
Per Part II: two (2) each, Round Steel Tube, 10 x 5/8 x 0.058 inch Type 4130 Cond. N. (The tube, P/N 15589-05, is unavailable from Piper Aircraft, Inc.)

AVAILABILITY OF PARTS: Procure locally or from your Piper Approved Service Center

EFFECTIVITY DATE: This service bulletin is effective upon receipt.

SUMMARY: Please contact your Piper Approved Service Center to make arrangements for compliance with this service bulletin in accordance with the compliance time indicated.

NOTE: Please notify the factory of any address/ownership corrections. Changes should include aircraft model, serial number, and current owner's name and address.

Corrections and/or changes should be directed to:

PIPER AIRCRAFT, INC.

Att'n: Customer Service

2926 Piper Drive

Vero Beach, FL 32960

or:

CustomerService@piper.com

Please include in subject line: "Aircraft ownership update"



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

Aircraft Certification Service
Compliance & Airworthiness Division

Atlanta ACO Branch
1701 Columbia Ave.
College Park, Georgia 30337

April 23, 2021

In Reply, Reference FAA Correspondence #: 7A0-21-5958

Mr. Mitch Cannon
ODA Administrator
Piper Aircraft
2626 Piper Drive
Vero Beach, FL 32960

Ref: Piper Service Bulletin 540, revision B, dated February 9, 2021

Subject: Alternative Method of Compliance (AMOC) for Airworthiness Directive (AD) 78-02-03, Paragraph (a) which requires inspections and modifications to the stabilator tip tube and weight assemblies per Piper Service Bulletin 540, dated January 4, 1977

Dear Mr. Cannon,

The Federal Aviation Administration (FAA) has received your proposal dated April 15, 2021, proposing an alternative method of compliance (AMOC) to paragraph (a) of Airworthiness Directive 78-02-03.

The Atlanta Aircraft Certification Office approves your AMOC proposal regarding paragraph (a) of AD 78-02-03. Your proposal to accomplish the inspections and modifications as specified in Piper Service Bulletin 540, revision B as an alternate means of compliance (AMOC) to paragraph (a) of AD 78-02-03 is acceptable for the serial numbers applicable to Piper Service Bulletin 540, revision B.

The following documentation provides the substantiating data used to establish the acceptable level of safety which was the basis for approving the AMOC.

1. Piper Letter dated April 15, 2021 indicating that Piper Service Bulletin 540, revision B meets the requirements of AD 78-02-03 paragraph (a) for PA23-250 aircraft with applicable serial numbers.
2. Piper Service Bulletin 540, revision B, dated February 9, 2021.

This FAA AMOC is transferable with the aircraft to an operator who operates the aircraft under U.S. registry.

Before using this AMOC notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local Flight Standards District Office/Certificate Holding District Office.

The preceding paragraph also applies to any applicable foreign-registered aircraft upon transfer of the aircraft to the U.S. registry if compliance with the AMOC has not been accomplished

This AMOC only applies to the FAA AD listed above. The FAA does not have the authority to approve this as an AMOC to any AD issued by another civil aviation authority (CAA). Approval of an AMOC to another CAA's AD must come from that CAA. A copy of this response will be forwarded to the CAA where these aircraft may be registered for their consideration

All provisions of AD 78-02-03 that are not specifically referenced above remain fully applicable and must be complied with accordingly.

The Atlanta Aircraft Certification Office (ACO) will revoke this AMOC if the Atlanta ACO later determines that this AMOC does not provide an acceptable level of safety.

If you have any questions or need additional information, please contact John R. Marshall, PE at telephone 404-474-5524, fax 404-474-5566, or electronic mail at john.r.marshall@faa.gov.

Sincerely,

(for)
Christina M. Underwood
Manager, Atlanta ACO Branch