



**PIPER**

**Customer Services**

# SERVICE LETTER

No. 582A

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

June 3, 1974

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(Supersedes and voids Service Letter No. 582 dated June 22, 1971)

Subject: Turbocharger Exhaust System Inspection and Modification -- reference attached Avco Lycoming Service Bulletin No. 339A, dated March 29, 1974.

Reason for Revision: Refer to attached Avco Lycoming Service Bulletin No. 339A, Page 4, NOTE: -- at bottom of page.

Models Affected: PA-23-250 (six place) Aztec Lycoming Turbocharged only.

Serial Numbers Affected: Refer to attached Avco Lycoming Service Bulletin No. 339A, Models Affected section.

Compliance Time: Refer to attached Avco Lycoming Service Bulletin No. 339A, Time of Compliance section.

Purpose: To provide distribution of the attached Avco Lycoming Service Bulletin No. 339A, dated March 29, 1974, and to urge compliance with the provisions of the modifications specified thereon.

Instructions: Refer to attached Avco Lycoming Service Bulletin No. 339A for appropriate inspection and modification instructions.

Material Required: Refer to attached Avco Lycoming Service Bulletin No. 339A, Page 4, for modification material requirements.

Availability of Parts: Your Piper Field Service Facility.

Effectivity Date: This service release is effective upon receipt.

Summary: Please contact your Piper Field Service Facility to make arrangements for compliance with the attached Avco Lycoming Service Bulletin No. 339A, in accordance with the provisions of the Time of Compliance section specified thereon. Necessary installation/modification material as required by the provisions of Avco Lycoming Service Bulletin No. 339A are available free of charge and/or upon a prorated basis, in accordance with the first NOTE on Page 4 of Avco Lycoming Service Bulletin No. 339A.

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## Service Bulletin



DATE: March 29, 1974

Service Bulletin No. 339A  
(Supersedes Service Bulletin No. 339)  
Engineering Aspects are  
FAA (DEER) Approved

SUBJECT: Turbocharger Exhaust System Inspection and Modification

MODELS AFFECTED: TIO-540-C1A engines installed in PA-23-250 (Six Place) Aztec serial numbers 27-4053 and 27-4226 thru 27-4681. Engine serial numbers L-994-61 thru L-1911-61 inclusive.

TIME OF COMPLIANCE: Within the next 25 hours of operation, inspect and install additional clamping in accordance with attached instructions.

Purpose:

To provide information to inspect the exhaust manifold on the left side of the right engine and the turbine outlet/tailpipe v-band coupling for possible cracks in the welded area. Also to install a supporting member and bracket for the tailpipe on the right hand engine to minimize motion, which could cause damage in the area.

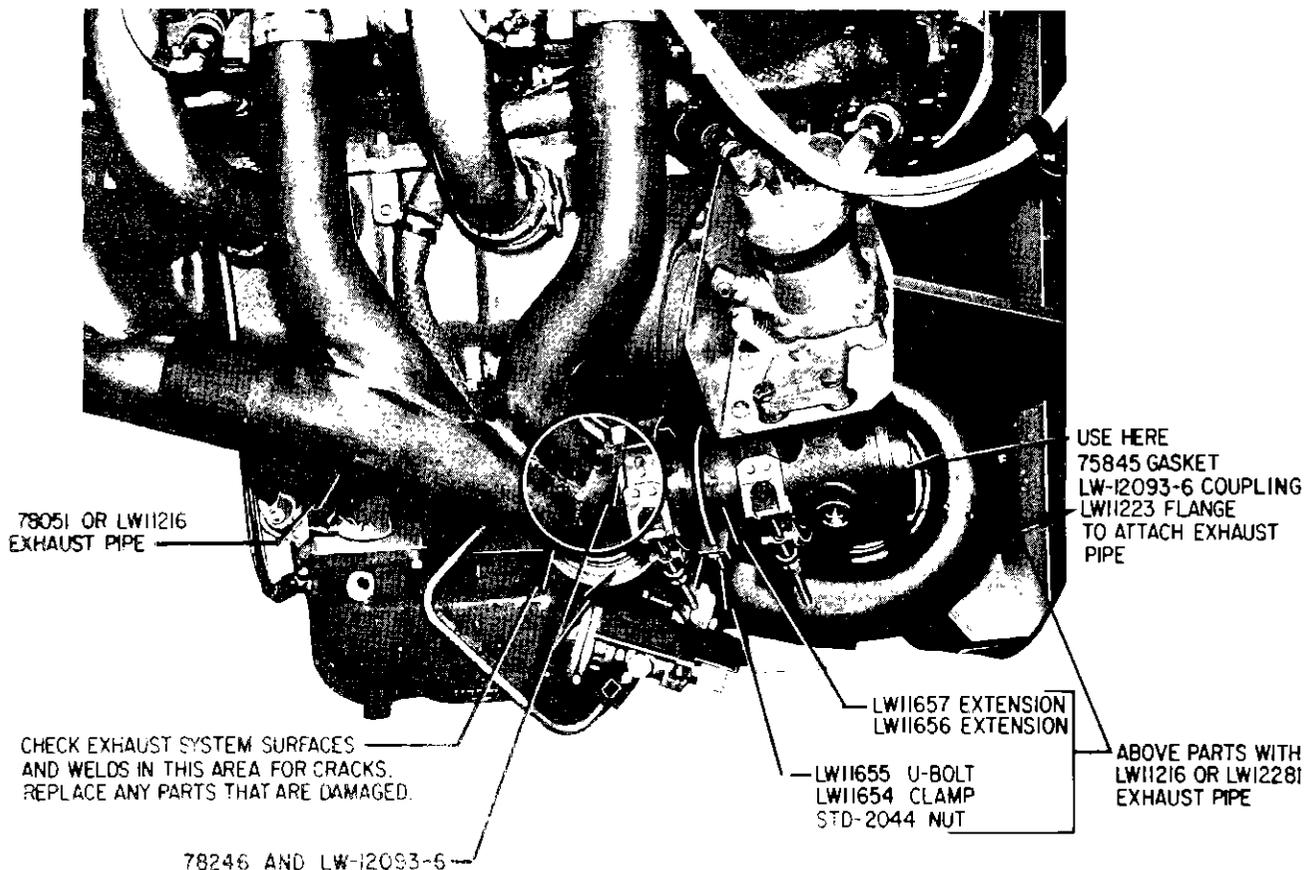


Figure 1. Left Side of Engine Showing Area for Inspection

Tailpipe and Exhaust Manifold Inspection:

1. Remove inboard and outboard engine cowl panel assemblies and grasp the tailpipe assembly to determine if movement is discernible between the tailpipe and the turbine outlet at the v-band coupling (Maraman clamp). See figure 3. If movement is evident remove the bottom cowl assembly and remove the v-band coupling; reinstall it and tighten the coupling nut to 40-50 in. lbs. torque.
2. Again check the tailpipe for movement. If still loose, install a new v-band coupling (Piper part no. 555376) and safe-tie the nut after tightening to 40-50 inch lbs. torque.

NOTE

Evidence of excessive exhaust gas leakage around the v-band coupling is also indicative of improper assembly of the tailpipe to the turbine outlet.

3. With the aid of a flashlight and mirror, visually examine the exhaust system on the left side of the engine; pay particular attention to the surfaces and weldments of the pipe leading to the exhaust bypass valve. Replace any part of the exhaust assembly that shows any evidence of cracks. See figure 1; also see Parts Data list for replacement parts information.

Support Bracket Installation:

1. Flatten the tabs of the two lockplates located at the turbine housing as shown in figure 2.

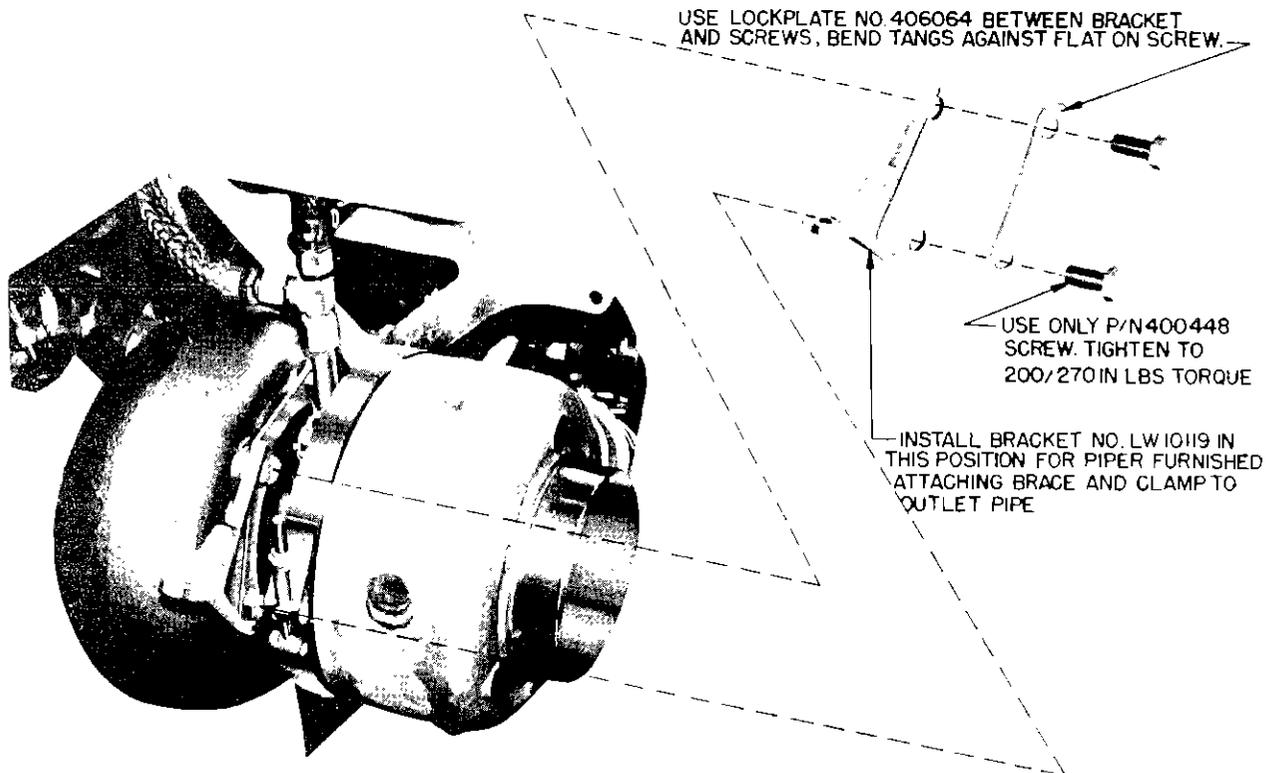


Figure 2. Rear View of Turbocharger Showing Details for Bracket Installation

2. Saturate the area of the two cap screws indicated in figure 2 with Kano Kroil, Liquid Wrench or equivalent solvent 12 hours prior to removing the screws as described in the following step: this will tend to loosen the screws and permit their removal.
3. Remove the two 3/8-16 screws from the location shown in figure 2 and scrap, and make sure the tabs of the lockplates are reasonably flat so that they will not cause a false torque indication when the new bracket is assembled over old lock tabs.
4. Orient the new bracket (with its flanged side toward the right) and a new lockplate and attach them to the turbine housing using new 3/8-16 screws. Apply Fel Pro C5-A or C100 to the threads of the screws before assembly. Torque each screw to 200/270 inch pounds and bend the tabs of the new lockplate against the flat on the screws. See figure 2.
5. See figure 3 for installation of tailpipe bracket and clamp assembly.
6. Indicate compliance with this bulletin in aircraft records.

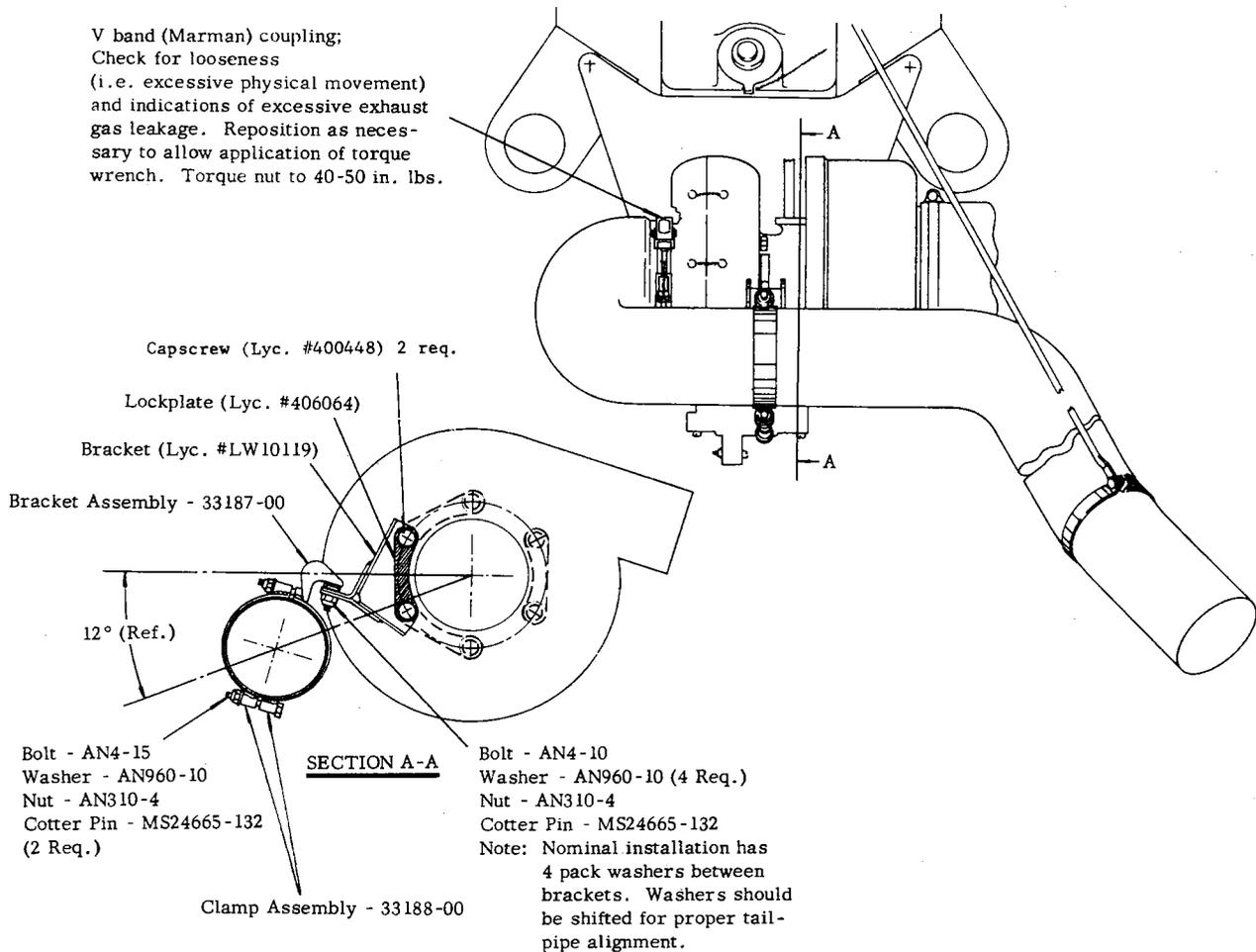


Figure 3. Assembly Procedure for Tailpipe Bracket and Clamp Components

Avco Lycoming Kit No. 12294 Exhaust Support Bracket, consists of: (This kit included with Piper Kit No. 760-544)

- 1 pc. no. LW-10119 bracket, exhaust support attaching
- 1 pc. no. 406064 lockplate
- 2 pc. no. 400448 capscrew (replaces no. 400448-1 screw)

NOTE

The above kit is required for compliance with this bulletin and is available at no cost, from Piper Aircraft Corporation, Lock Haven, Pa. The parts listed below are required only if the exhaust manifold is damaged. Replacement parts are available on submission of a warranty claim on a prorated schedule through your local Avco Lycoming Distributor.

- 1 pc. no. LW-11216 or LW-12281 exhaust pipe (replaces no. 78051 exhaust pipe)
- \*1 pc. no. LW-11657 waste gate extension - male
- \*1 pc. no. LW-11656 waste gate extension - female
- \*1 pc. no. LW-11655 U-bolt (used with LW-11657 and LW-11656)
- \*1 pc. no. LW-11654 clamp (used to attach LW-11655)
- \*2 pc. no. STD-2044 nut (used to attach LW-11654)
- 1 pc. no. 75845 V-band gasket (used with LW-12093-6 to attach exhaust pipe)
- 1 pc. no. LW-12093-6 V-band coupling (to attach exhaust pipe)
- \*1 pc. no. LW-11223 exhaust manifold flange (to attach exhaust pipe)
- \*\*1 pc. no. 555376 V-band coupling (to attach tailpipe to turbine housing)

NOTE

Avco Lycoming P/N 75845, V-band coupling gasket, and V-band coupling, P/N LW-12093-6, are shipped in the following manner: (1) each are attached at the location shown in figure 1 and (1) each are shipped loose to be attached during engine installation.

\* - Parts in above list marked with an asterisk are required only if 78051 exhaust pipe is replaced by LW-11216 or LW-12281 exhaust pipe.

\*\* - Piper Aircraft Corporation; procurable from Piper Distributors.

NOTE: Revision "A" changes figure 1 by revising part numbers, adding location of 78246 and LW-12093-6 gaskets and v-band couplings, and adds shipping note.

# Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A. 17745  
TELEX 841412 AREA CODE 717 748-6711

June 22, 1971



CABLE ADDRESS: CUB

## NOTE TO DISTRIBUTORS

SUBJECT: Service Letter No. 582, Dated June 22, 1971

Gentlemen:

Please be advised that the price structure of the material specified on the subject Service Publication is as follows:

Kit/Part No.	Suggested Unit List Price
<u>760 544</u>	<u>\$16.80A</u>
<u> </u>	<u> </u>

The above price information is current as of the subject Service Publication date, and is subject to subsequent revision.

This information is submitted only with Distributor advance copies of the subject publication, and is primarily intended for use by Piper Distributors.