



SERVICE BULLETIN

No. 273

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

"FAA DOA EA-1 Approved"

May 8, 1968

Subject: Inspection of Turbocharger Tailpipe Clearance to Firewall
(See attached AiResearch Service Bulletin No. 14.1.8)

Models Affected: PA-23-250 and PA-E23-250 Aztecs (Turbocharged)

Serial Numbers Affected: 27-2505 to 27-3858 incl. - Turbocharged only

Compliance Time: See attached AiResearch Service Bulletin No. 14.1.8

Purpose: To provide distribution of and insure compliance with the attached AiResearch Service Bulletin No. 14.1.8.

Material Required: AiResearch Kit No. 301-P23-063

Availability of Parts: Piper Dealer

Material Allowance: See "Note to Distributors" below.

Labor Allowance: Six (6) hours labor allowance for modification of both power plants.
Three (3) hours labor allowance for modification of one power plant only.

Labor Allowance Termination
Date: November 30, 1968

----- NOTE TO DISTRIBUTORS -----

AiResearch Kit No. 301-P23-063 must be ordered from AiResearch and will be supplied on a no charge basis. It is suggested that you refer to AiResearch Service Bulletin No. 14.1.8 when placing your order for the above kit.



Service Bulletin

BULLETIN NO. 14.1.8

REVISION

DATE 4/25/68

PAGE 1 of 2

INSPECTION OF TURBOCHARGER TAILPIPE CLEARANCE TO FIREWALL

A. Aircraft Effectivity:

All AiResearch Turbocharged Piper PA-23-250 and PA-E23-250 aircraft, Serial No. 27-2505 through 27-3858.

B. Reason:

To ensure sufficient clearance between the tailpipe and firewall.

C. Compliance:

Inspect immediately upon receipt of this Bulletin. If interference is evident, modification kit No. 301-P23-063 (See "Parts or Special Tool Requirements," below) must be installed immediately upon receipt of the kit.

If no interference is evident, but clearances do not meet requirements outlined under inspection, modification kit No. 301-P23-063 must be installed prior to but not later than the next 100 hours of operation.

D. Manpower:

An estimated six (6) manhours is required per aircraft.

E. Weight and Balance:

Negligible.

F. Parts or Special Tool Requirement:

AiResearch Kit P/N 301-P23-063 (Provided at No Charge.)

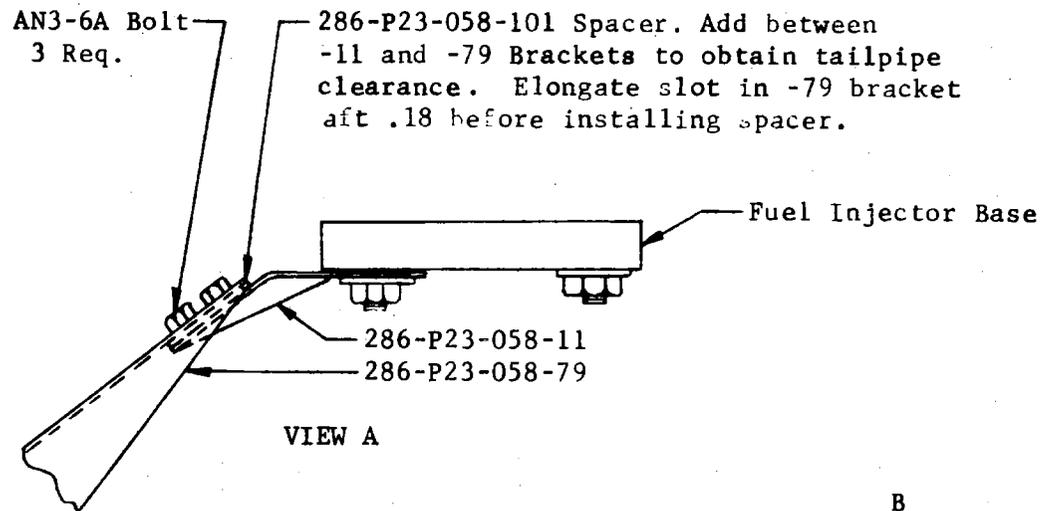
INSPECTION

Inspect both the left and right engine tailpipes for sufficient clearance to the firewall. Cowl flap clearance should not be less than .12" or more than .38". The tailpipe should be generally centered in the nacelle cutout and should clear the structure by not less than .50" or more than .75".

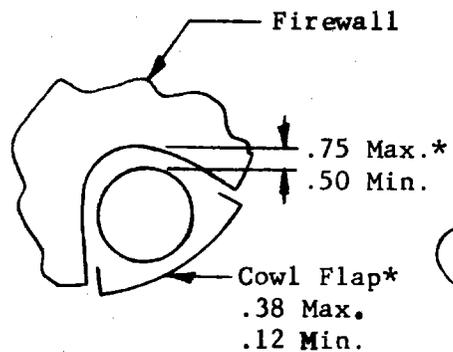
MODIFICATION

1. Remove the cowl scoop and lower cowl(s).
2. Adjust turbocharger to get desired tailpipe clearance as outlined in the AiResearch Maintenance Manual (Ref. Pg. 19). (As revised)
3. If the desired clearance cannot be obtained, install spacer(s) P/N 286-P23-058-101; between the 286-P23-058-11 and -79 brackets to obtain a .75" clearance. See Fig. I on Page 2.
4. After installing the cowling adjust the aft cowl flap to clear the tailpipe by .12 min. and .38 max.

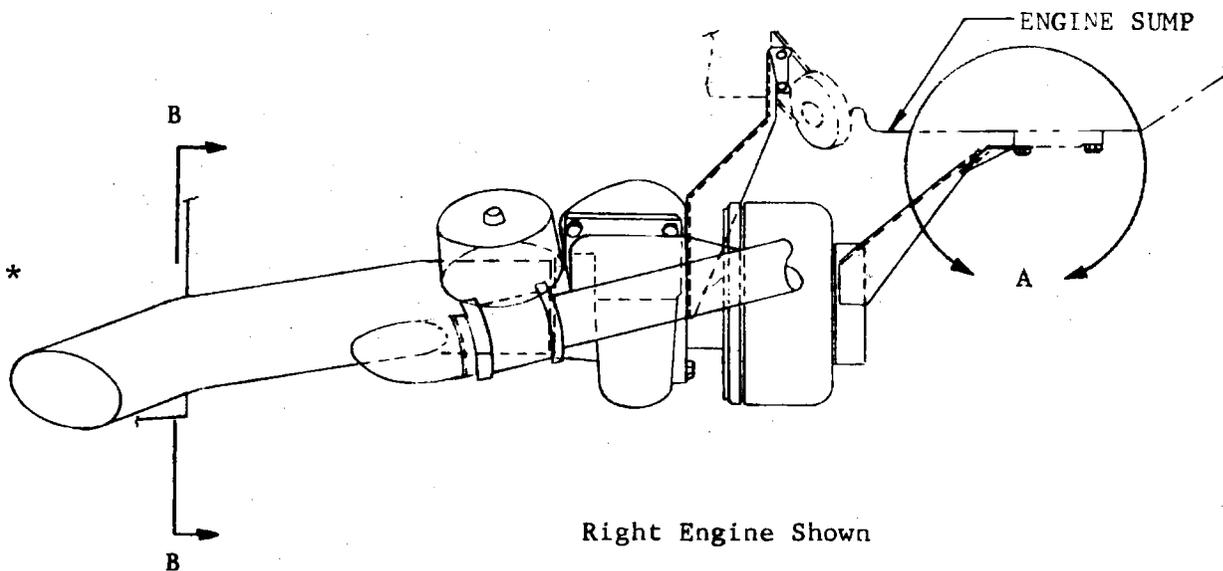
NOTE: Check clearance after running the engines to ensure that the tail pipe is not rubbing the firewall, and that the .50 min. and .75 max. clearance is maintained.



VIEW A



SECTION B



Right Engine Shown

Left Engine Opposite

*See Modification Instructions on Reverse Side

FIGURE I

8. Raise turbocharger into place starting the left mount leg onto studs first while guiding the right mount leg into position.
9. Install four (4) nuts and lock washers on studs and torque down.
10. Install remaining lower R/H Bolt (do not tighten).
11. Install compressor housing and orient to approximate position. Snug "V" band clamp (slight final adjustment may be necessary later).
12. Install upper plenum half and forward turbo mount (do not tighten large ring bolts or three (3) forward bolts in slotted holes).
13. Install turbine inlet plenum using new gasket and clamp bellows in position.
14. Install turbine discharge duct (tailpipe) torque clamp to 75 in. lbs.

ADJUSTMENT OF TURBOCHARGER POSITION

The clearance of the tailpipe to the nacelle determines the final position of the turbocharger.

The tailpipe should be generally centered in the nacelle cut out and should clear the structure by 3/4 inch at the closest point.

Roll adjustment is provided in the lower mount leg bolt holes.

Pitch adjustment is provided by the slotted holes at the forward end of the front mount.

When determining the pitch adjustment insure that the ring on the compressor inlet is properly positioned.

15. Tighten and safety the four (4) lower mount leg bolts.
16. Install air box and plenum assembly to injector.
17. Position and tighten compressor housing and install compressor discharge tube.
18. Tighten round forward mount clamp on compressor inlet and connect and tighten flex coupling between lower and upper plenum.
19. Install shims required (Maximum 1/8"), and tighten three (3) bolts in slotted holes on forward mount.
20. Connect turbine oil inlet and outlet oil lines, actuator oil lines, all air reference lines to air box and rig alternate air control.
21. Install ram air filter duct and cowl engine.

19.
Revised April 25, 1968