



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

SERVICE NO. 1242A BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: May 12, 2020

(S) (M)

Service Bulletin (SB) 1242A supersedes SB 1242 and SL 671 in their entirety. Aircraft that have previously complied with SL 671 must still comply with SB 1242A. Aircraft that have previously complied with SB 1242 are in compliance with SB 1242A until the next inspection interval is reached, per Compliance Time.

SUBJECT:

RUDDER PEDAL ASSEMBLY INSPECTION

REASON FOR REVISION:

SB 1242A adds additional inspection locations in Part II. Other changes update the document to the current Piper format.

MODELS AFFECTED:

- PA-28-140 Cherokee

- PA-28-150/-160 Cherokee
- PA-28-180 Cherokee

- PA-28S-160 Cherokee
- PA-28S-180 Cherokee

- PA-28-235 Cherokee Pathfinder

- PA-28-236 Dakota

- PA-28-151 Warrior
- PA-28-161 Cadet
- PA-28-161 Warrior II

- PA-28-161 Warrior III
- PA-28-180 Archer
- PA-28-181 Archer II

- PA-28-181 Archer III
- PA-28-201T Turbo Dakota
- PA-28R-180 Arrow

- PA-28R-200 Arrow

SERIAL NUMBERS AFFECTED:

- 28-20001 through 28-26946; 28-7125001 through 28-7725290
- 28-03; 28-1 through 28-4377; 28-1760A
- 28-03; 28-671 through 28-5859; 28-7105001 through 28-7205318
- 28-1 through 28-1760; 28-1760A
- 28-671 through 28-5859; 28-7105001 through 28-7105234
- 28E-11; 28-10001 through 28-11378; 28-7110001 through 28-7710089
- 28-7911001 through 28-8611008; 2811001 through 2811050
- 28-7415001 through 28-7715314
- 2841001 through 2841365
- 28-7716001 through 28-8216300; 28-8316001 through 28-8616057; 2816001 through 2816109
- 2816110 through 2816119; 2842001 and up
- 28-E13; 28-7305001 through 28-7505260
- 28-7690001 through 28-8690056; 28-8690061, 28-8690062; 2890001 through 2890205
- 2890206 through 2890231; 2843001 and up
- 28-7921001 through 28-7921095
- 28R-30002 through 28R-31270; 28R-7130001 through 28R-7130013
- 28R-35001 through 28R-35820; 28R-7135001 through 28R-7135229

ATA/JASC: 2710

(OVER)

PA-28R-200 Arrow II	28R-7235001 through 28R-7635545
PA-28R-201 Arrow III	28R-7737002 through 28R-7837317; 2837001 through 2837061; 2844001 and up
PA-28R-201T Turbo Arrow III	28R-7703001 through 28R-7803374; 2803001 through 2803012
PA-28RT-201 Arrow IV	28R-7918001 through 28R-8218026
PA-28RT-201T Turbo Arrow IV	28R-7931001 through 28R-8631005; 2831001 through 2831038
PA-32-260 Cherokee Six	32-03; 32-04; 32-1 through 32-1297; 32-7100001 through 32-7800008
PA-32-300 Cherokee Six 300	32-15; 32-21; 32-40000 through 32-40974; 32-7140001 through 32-7940290
PA-32S-300 Cherokee Six 300 Seaplane	32S-15; 32S-40000 through 32S-40974; 32S-7140001 through 32S-7240137
PA-32R-300 Lance	32R-7680001 through 32R-7880068
PA-32RT-300 Lance II	32R-7885002 through 32R-7985106
PA-32RT-300T Turbo Lance II	32R-7787001; 32R-7887002 through 32R-7987126
PA-32R-301 Saratoga SP	32R-8013001 through 32R-8613006; 3213001 through 3213028; 3213030 through 3213041
PA-32R-301 Saratoga II HP	3213029; 3213042 through 3213103; 3246001 through 3246244
PA-32R-301T Turbo Saratoga SP	32R-8029001 through 32R-8629008; 3229001 through 3229003
PA-32-301 Saratoga	32-8006002 through 32-8606023; 3206001 through 3206019; 3206042 through 3206044; 3206047; 3206050 through 3206055; 3206060
PA-32-301T Turbo Saratoga	32-8024001 through 32-8424002
PA-32R-301T Saratoga II TC	3257001 through 3257483
PA-32-301FT Piper 6X	3232001 through 3232074
PA-32-301XTC Piper 6XT	3255001 through 3255027; 3255051
PA-34-200 Seneca	34-E4; 34-7250001 through 34-7450220
PA-34-200T Seneca II	34-7570001 through 34-8170092
PA-34-220T Seneca III	34-8133001 through 34-8633031; 3433001 through 3433172; 3448001 through 3448037
PA-34-220T Seneca IV	3448038 through 3448079; 3447001 through 3447029
PA-34-220T Seneca V	3449001 and up
PA-44-180 Seminole	44-7995001 through 44-8195026; 4495001 through 4495013; 4496001 and up
PA-44-180T Seminole	44-8107001 through 44-8207020

COMPLIANCE TIME: For airplanes with 1,200 hours or more time in service, initial inspection to occur at the next regularly scheduled maintenance event, not to exceed the next 100 hours time in service. Thereafter, a recurring inspection shall take place every 100 hours time in service.

Installation of a new pedal and bar assembly and, if applicable, a new rudder bar support assembly will relieve this recurring inspection requirement, until the new components reach 1,200 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: A review of the service history on the affected airplanes reveals that, over time, cracks may develop in specific locations on the pedal and bar assembly and the rudder bar support assembly. This service bulletin provides a schedule and instructions for the inspection of these critical components for cracks, and for modification or replacement, on condition.

INSTRUCTIONS:

Part I. Modification

Part I is applicable to the following airplanes only:

PA-28-140 Cherokee	28-20001 thru 28-7325073
PA-28-150/-160/-180 Cherokee	28-03, 28-1 thru 28-7305081
PA-28-235 Cherokee Pathfinder	28-10001 thru 28-7310048
PA-28R-180 Arrow	28R-30002 thru 28R-7130013
PA-28R-200 Arrow	28R-35001 thru 28R-35820; 28R-7135001 thru 28R-7135229
PA-28R-200 Arrow II	28R-7235001 thru 28R-7335089
PA-32-260 Cherokee Six	32-03, 32-04, 32-1 thru 32-7300011
PA-32-300 Cherokee Six 300	32-15, 32-21, 32-40000 thru 32-7340054
PA-34-200 Seneca	34-E4, 34-7250001 thru 34-7350129

- Examine the area identified in Figures 1 and 2 to determine which rudder bar assembly configuration is installed on the airplane.
 - If the rudder bar assembly conforms to Figure 2, Detail B, the airplane is already in compliance with Service Letter (SL) 671, and/or a replacement rudder bar assembly has been installed which includes these features. No modification is required. Proceed to Part II.
 - If the rudder bar assembly conforms to Figure 2, Detail A, modification is required. Proceed to Step 2, below.

NOTE: All new replacement rudder bar assemblies conform to the configuration shown in Detail B. At the operator's discretion, a new replacement rudder bar assembly may be installed in lieu of the modification described below.

- Remove the rudder bar assembly from the airplane and disassemble.

NOTE: Removing and reinstalling the rudder bar assembly from the aircraft will require disconnecting, reinstalling, and rigging of flight control, braking, and steering systems. Refer to the appropriate sections or chapters of the applicable Piper maintenance manual for specific instructions for each system, as well as the required installation torque for threaded fasteners. Strip the area to be modified using a commercially available chemical paint stripper, such as Cee-Bee E-2012 or E-2060 paint stripper.

3. Examine the area to be modified for cracks, using the inspection criteria described in Part II. Any cracked components must be replaced prior to proceeding.
4. Order one each of Piper part numbers (P/N) 99938-000 and 99938-001 rudder bar straps. TIG weld in place as shown in Detail B, per Chapter 4 of AC 43.13-1B (or latest revision). After welding, relieve residual stress in the affected area: Heat with a non-carburizing torch flame to 1,000 – 1,100 °F (538 – 593 °C) (a brown red color) then air cool to room temperature. All welding must be performed by a certified welder.

NOTE: Installation of the rudder bar straps does not relieve the requirement for the recurring inspection in Part II.

NOTE: The following information will assist in the modification:

- All materials are 4130 normalized steel.
- The rudder bar tubes have a nominal outside diameter of 0.875 inches and nominal wall thickness of 0.058 inches.
- P/N 99938-000 and 99938-001 rudder bar straps are made from sheet steel with a nominal thickness of 0.040 inches.

5. Descal, degrease and repaint the bare steel on the rudder bar assembly using epoxy primer (two coats) and a topcoat of matching black color.
6. Reassemble the rudder bar and reinstall into the airplane.
7. Make a logbook entry documenting compliance with Part I of this service bulletin.

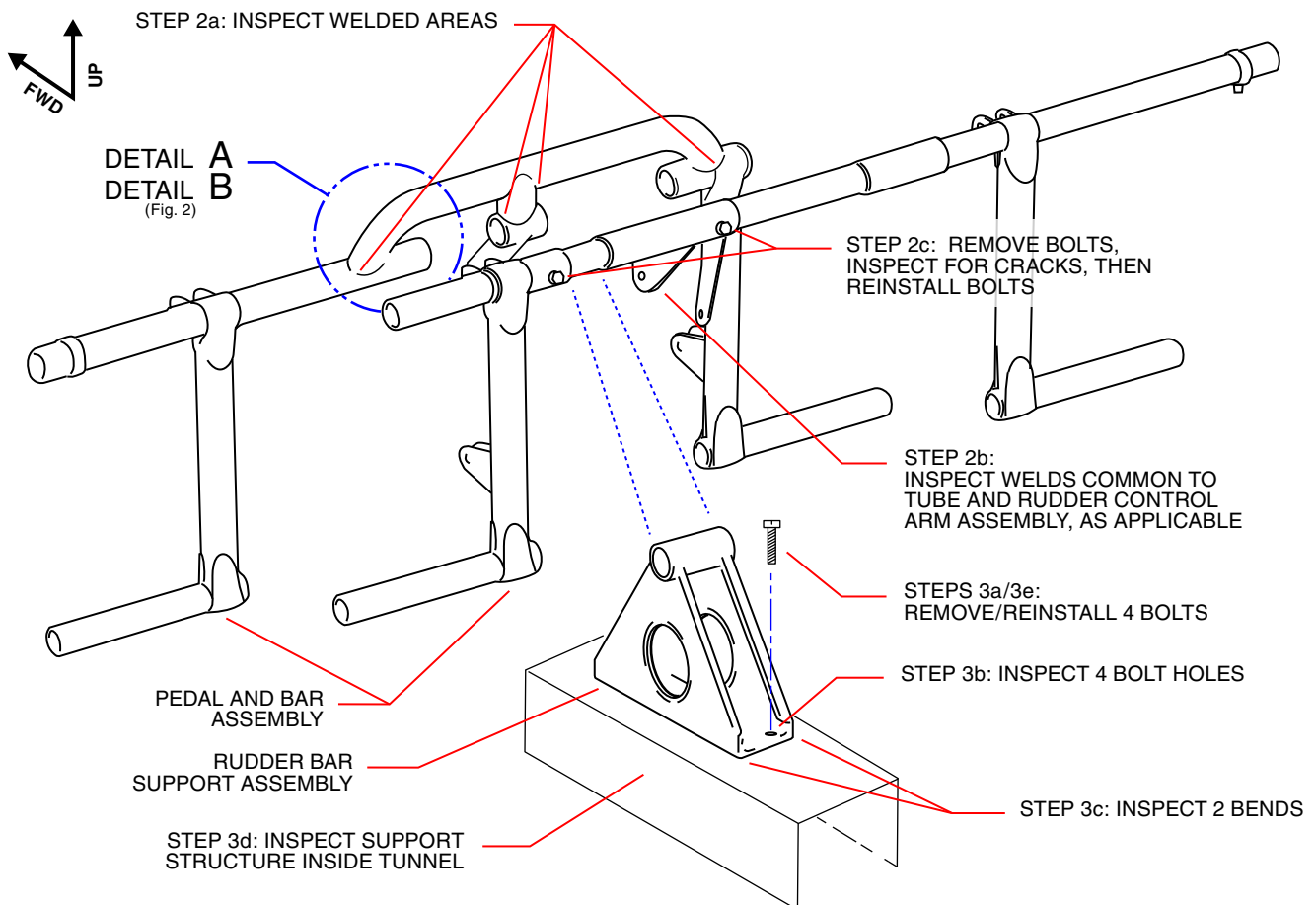
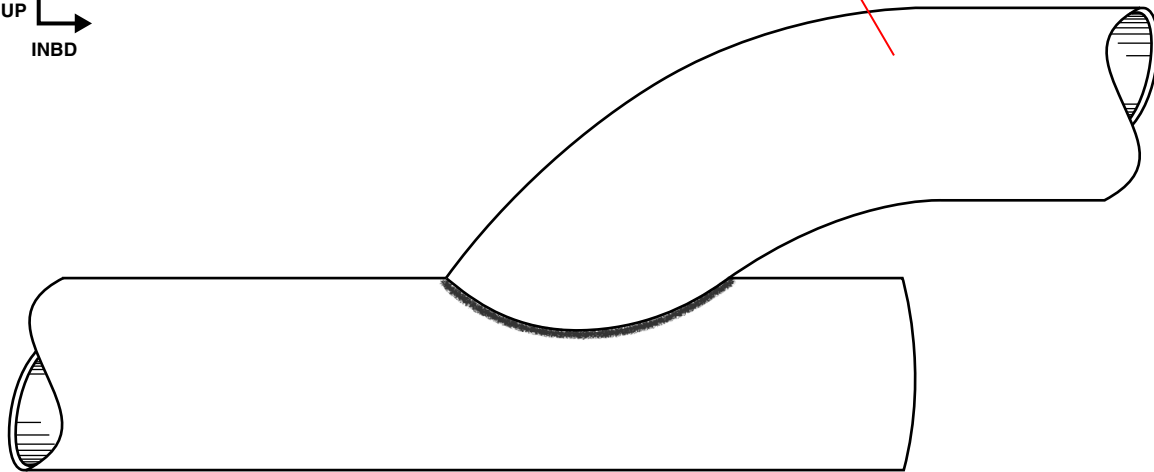


Figure 1
Rudder Pedal Installation (Typical)

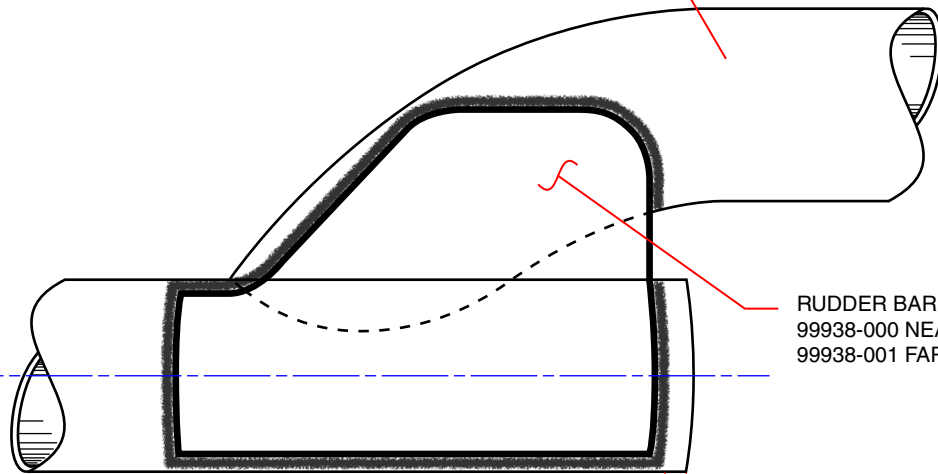
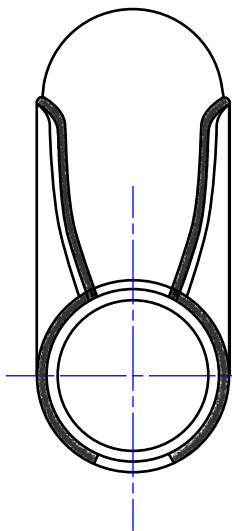


RUDDER BAR ASSEMBLY



DETAIL A

RUDDER BAR ASSEMBLY



RUDDER BAR STRAPS:
99938-000 NEAR SIDE
99938-001 FAR SIDE

0.10 IN. → ←

DETAIL B

Figure 2
Rudder Bar Welding (Typical)

Part II. Inspection

NOTE: Temporary removal of interior components may be required in order to accomplish the instructions that follow.

NOTE: Refer to the appropriate section or chapter of the applicable Piper maintenance manual for the required installation torque for threaded fasteners that are reinstalled.

1. Gain access to the areas identified in Figure 1.

NOTE: The inspections described in this service bulletin shall be accomplished using a 10X magnifier, a mirror and a suitable light source or other equipment capable of providing equal or better resolution.

NOTE: Any cracked components must be replaced prior to next flight.

2. Pedal and Bar Assembly Inspection

Visually inspect the rudder pedal and bar assembly (locations identified in Figure 1), with specific emphasis on:

- a. Welds identified in Details A and B (see Figure 2).
- b. Welds common to the tube and the rudder control arm assembly, as applicable.
- c. Bolt holes: remove the bolts that fasten the left and right pedal assemblies to each pedal and bar assembly. Using a borescope or other suitable tool, visually inspect the bolt hole in both inner and outer tubes for cracks. Reinstall bolts.

NOTE: At the operator's discretion, or, if a borescope is not readily available, the left and right pedal assemblies may be disassembled, allowing direct visual examination of the inner tube for cracks at the bolt holes.

3. Rudder Bar Support Assembly Inspection

NOTE: The inspection described in Step 3 is applicable only to the following airplane models:

- PA-28 series, fixed gear models only
- PA-32 series, both fixed gear and retractable gear models
- PA-44 series

The retractable gear PA-28R series and the PA-34 series models use a different type of rudder bar support assembly, which does not have a service history of cracking.

- a. Remove and retain the four (4) bolts that secure the rudder bar support assembly to the cockpit floor.

NOTE: It is not necessary to remove the rudder bar support assembly to accomplish this inspection.

- b. Visually inspect the four (4) bolt holes for cracks and elongation. See Figure 1. The diameter of the four bolt holes should measure $0.250 +0.005/-0.001$ inches.
- c. Visually inspect the two (2) sheet metal bends common to the base for cracking, the entire length of each bend, both inner and outer surfaces. See Figure 1.
- d. Visually inspect the support structure for cracks or other damage. The support structure is located under the top surface of the tunnel, directly below the rudder bar support assembly.
- e. Reinstall the four (4) bolts that secure the rudder bar support assembly to the cockpit floor.

4. Perform a functional check on any system(s) that were disturbed during this inspection.

5. Make a logbook entry documenting compliance with this service bulletin, until the next inspection interval is reached per Compliance Time, above.

MATERIAL REQUIRED: Per aircraft:

- **Part I:** One each, on condition as determined by inspection, P/N 99938-000 and 99938-001 rudder bar straps
- **Part II:** On condition as determined by inspection, rudder pedal assembly components (see applicable parts catalog)

AVAILABILITY OF PARTS: 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"