

(25) Rudder Bar Assembly 100 Hour Inspections

The following incorporates the recurring inspection requirements of Piper SL 1242.

Refer to Figure 3-24.

In airplanes with a rudder pedal and bar assembly or, for fixed gear airplanes only, with a rudder bar support assembly, that has 1,200 hours or more time-in-service each 100 hours inspect the rudder pedal and bar assembly and/or the rudder bar support assembly for cracks, as follows:

3-241. Install a new rudder pedal and bar assembly and/or, if applicable, a new rudder bar support assembly will relieve this recurring inspection requirement, until the new component(s) reach 1,200 hours time in service.

(a) Rudder Pedal And Bar Assembly Inspection

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

- 1) Gain access to the areas identified in "Figure 3-24 (Sheet 1 of 2)" on page III-91.
- 2) Using a 10X magnifier, a mirror, and a suitable light source (or other equipment capable of providing equal or better resolution), visually inspect all welds, with specific emphasis on the locations identified in "Figure 3-24" Sheet 1.
- 3) Any cracked components must be replaced prior to next flight.
- 4) If the rudder bar assembly conforms to Detail A in "Figure 3-24 (Sheet 2 of 2)", modification is required. Proceed to Step "(d)" on page III-93.

(b) Rudder Bar Support Assembly Inspection

In fixed gear models only:

- 1) 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.

- 2) Visually inspect the four (4) bolt holes for cracks and elongation. See "Figure 3-24 (Sheet 1 of 2)" on page III-91. The diameter of the four bolt holes should measure 0.250 +0.005/-0.001 inches.
- 3) 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 3-24" Sheet 1.
- 4) If cracking or elongated bolt holes are found, the Rudder Bar Support Assembly must be replaced before further flight. See the Cherokee Airplane Parts Catalog, P/N 753-582 to order the appropriate replacement part.
- 5) Reinstall the four (4) bolts that secure the rudder bar support assembly to the cockpit floor.

- (c) If no cracks are detected (or upon appropriate replacement of cracked or damaged parts), make proper log book entry documenting completion of this inspection.

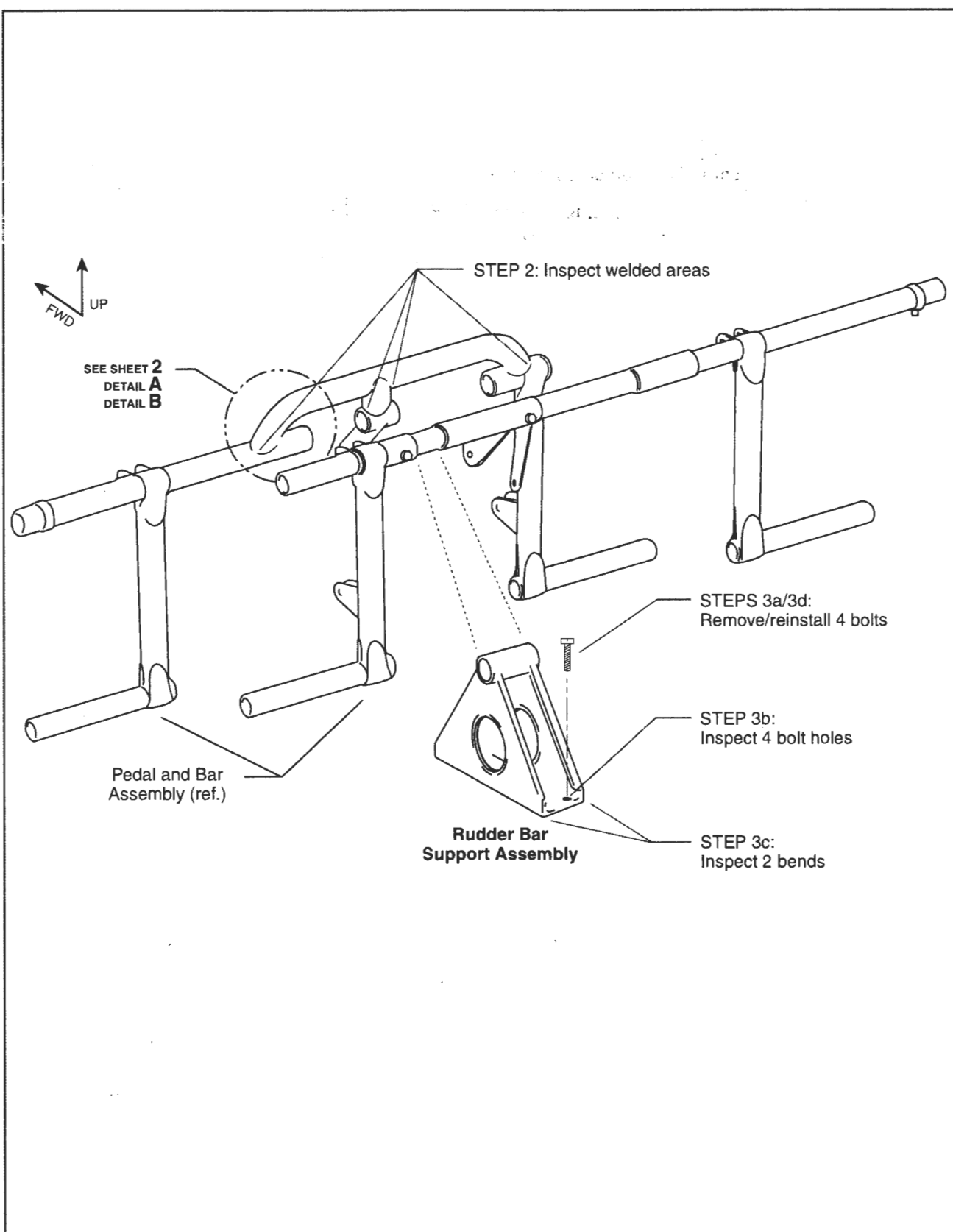


Figure 3-24 (Sheet 1 of 2)
Rudder Bar Assembly 100 Inspection

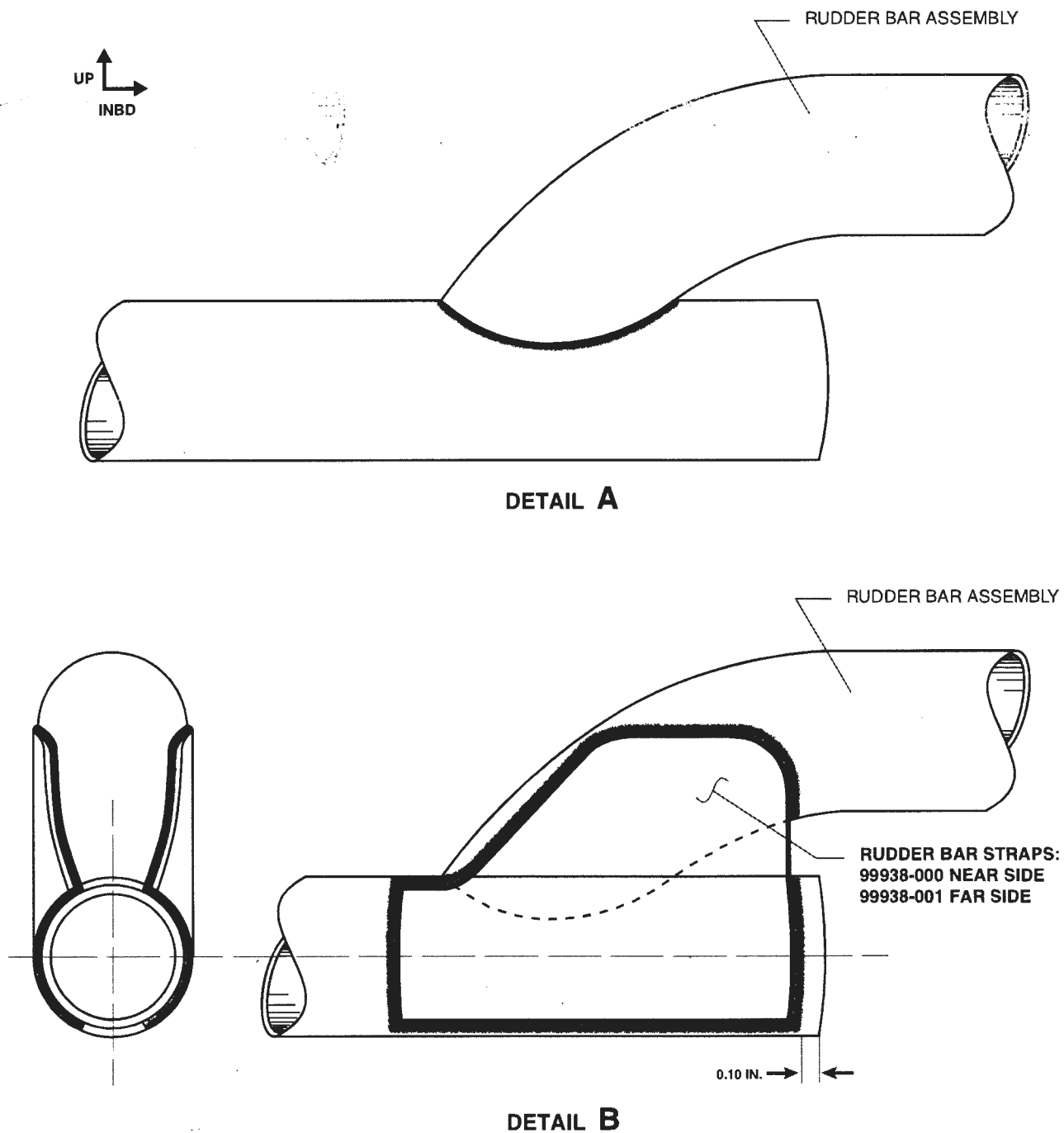


Figure 3-24 (Sheet 2 of 2)
Rudder Bar Assembly 100 Inspection

(d) Rudder Bar Assembly Modification

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.

- 1) Order one each of Piper part numbers (P/N) 99938-000 and 99938-001 rudder bar straps.
- 2) 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 in this manual for specific instructions for each system, as well as the required installation torque for threaded fasteners.

- 3) Strip the area to be modified using a commercially available chemical paint stripper, such as Cee-Bee E-2012 or E-2060 paint stripper.
- 4) Examine the area to be modified for cracks, using the inspection criteria described in the "Rudder Pedal And Bar Assembly Inspection" on page III-90. Any cracked components must be replaced prior to proceeding.
- 5) TIG weld in place one each of (P/N) 99938-000 and 99938-001 rudder bar straps, as shown in Detail B in "Figure 3-24 (Sheet 2 of 2)" on page III-92, 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 the "Rudder Pedal And Bar Assembly Inspection" on page III-90.

- 6) The following information will assist in the modification:
 - a) All materials are 4130 normalized steel.
 - b) The rudder bar tubes have a nominal outside diameter of 0.875 inches and nominal wall thickness of 0.058 inches.
 - c) P/N 99938-000 and 99938-001 rudder bar straps are made from sheet steel with a nominal thickness of 0.040 inches.
- 7) Descal, degrease and repaint the bare steel on the rudder bar assembly using epoxy primer (two coats) and a topcoat of matching black color.
- 8) Reassemble the rudder bar and reinstall into the airplane.
- 9) Make a logbook entry documenting the modification.