



## **ANGLE STRIP INSTALLATION FOR '37 - '53 GM PICKUP BEDSIDES**

The following instruction will guide you through the removal and replacement of the angle strips for the early GM pickups. If it is not damaged, the old angle strip is a good guide for positioning the new angle exactly as the original. Measurements should be made before removing the old angle strip. If the old angle strip has been removed or severely damaged or if you are working with new bedsides without angles, follow these steps to assure the angles will be installed in the correct location.

Be sure to measure carefully and test fit the assembly to the front panel, rear sill, and wood boards before welding or bolting the angle to the bedside.

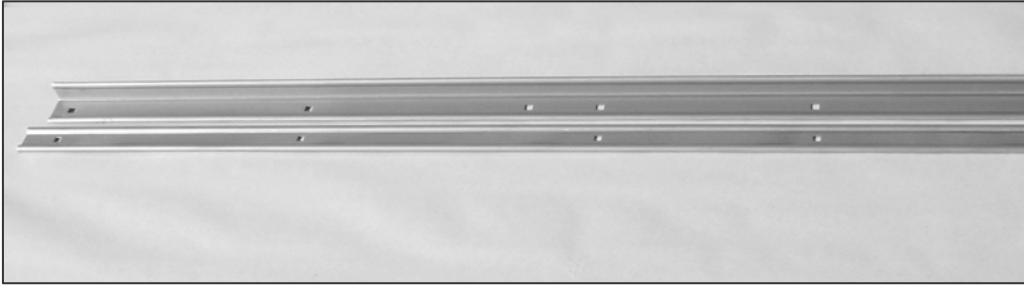
### **Removing the Old Angle Strip**

Angle strips are welded to the bedside and must be removed by drilling out the spot welds or by grinding them off using a body grinder. Generally, if you are going to weld the new angle to the bed side, the welds may be drilled out, and if you are going to bolt the new angle to the bedside the old angle should be removed by grinding. Follow these steps to remove angle strips.

1. Remove all angle strip bolts through the wood and through the bedside. Rusted bolts may require use of a cutting torch, grinder, or air chisel.
2. Slightly raise the bed to take the weight off the angles.
3. Remove the wood edge board from under the angle strip.
4. Make a diagram and measurements of the angle location so the new angle will be put back in the exact same location on the bedside.
5. Remove spot welds. This may be done either by drilling them out with a 1/4" drill bit or by grinding the angle strip away at the spot welds. There will be a spot weld about every 3" along the angle.
6. If some welds are not completely removed by the 1/4" drill, use a larger drill or try prying the angle loose with a screwdriver. Use care to prevent damage to the bedside.
7. Remove the angle strip and repair damage before installing the new angle strip

## Positioning the Angle Strip on the Bedside

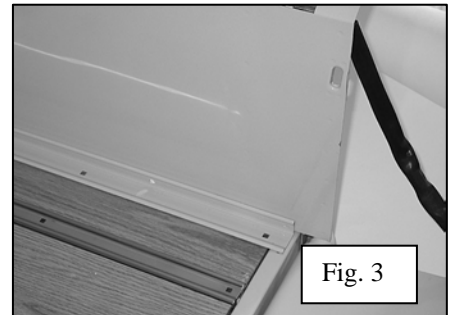
The bolt holes in the angle strips line up with the corresponding bolt holes in the bed strips except for one or two holes depending on the year. These are shown in figure 1. The rear of the bed strip has the last hole about 1/2" from the end of the bed strip and the front hole is noticeably farther from the front, about 1 3/4" from the front end of the bed strip. These dimensions are approximate and to be used only for identification. It is not obvious which end of the angle strip is front and rear, so line it up to the hole pattern of the bed strips to know which is front and rear on the angle strip. The angle strip in figure 1 is a passenger side with the front of the angle toward the left in the picture.



The angle strip **MUST BE SHIFTED REARWARD** about 7/8" on the bedside relative to the bed strips to make the holes line up. See figure 2. This shift is very important so that there is clearance at the front bed panel where it bolts inside the bedside. If you are using an angle strip without holes, it still must be shifted to the rear relative to the bed strips to make clearance for the front bed panel mounting flange. The rear end of the angle strip must not extend past the rear face of the rear sill.



Note that the angle strip extends over the rear sill and rests on the top surface of the rear sill, as shown in figure 3. The rear 5/16" square hole in the angle strip should align exactly with the corresponding hole in the rear sill when the angle strip is positioned properly. If you have disassembled the bed, temporarily bolt the rear sill back into the bedside rear stake pocket and the front bed panel to the bedside at front to establish the proper location of the angle strip, both vertically and front to back. The bed wood thickness should slide between the front bed panel lower mounting flange and the angle strip at the front. The bed wood thickness should slide snugly between the rear sill and the angle strip at the rear. Clamp the angle strip to the bedside in that position. Use several clamps to make sure the angle strip is straight and not bowed up or down.

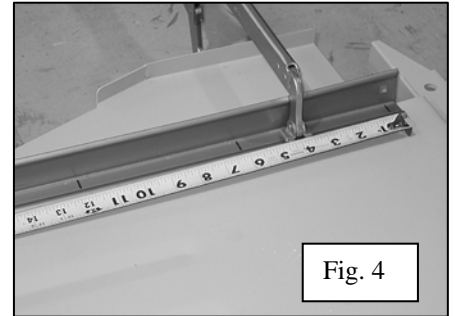


When you have the proper relationship between the angle strip and the rear sill and front bed panel, the angle is ready to install. Check that the front of the angle strip is toward the front of the bed and that it is exactly straight as clamped to the bedside. Be sure the bolt hole in the rear sill lines up with the rearmost angle strip bolt hole and that the bed strip holes line up with the angle strip holes.

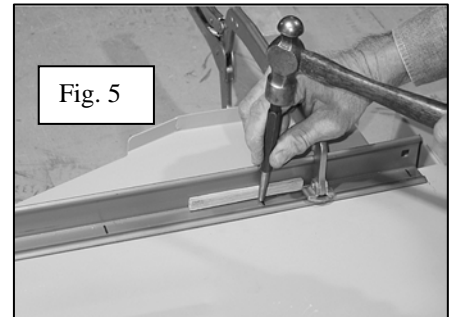
## Bolting the Angle Strip to the Bedside

If you plan to weld the angle strip to the bedside, skip to the next section. Be sure to repair any damaged areas on the bedside that would interfere with accurate positioning of the angle on the bedside. If the angle is to be bolted to the bed side, follow these steps to complete the installation.

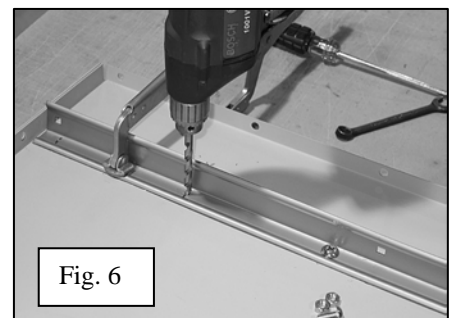
1. Place bolts about 6" apart, measuring to get even spacing. Mark the bolt locations on the angle strip. See figure 4. Note that there are one or two fender mounting holes that pass through the angle strip so be sure the angle strip mounting bolts do not interfere with the fender mounting bolts. Also note that the bolt holes may be positioned over the stake pockets at the front and rear to hide the nuts on the outside of the bedside. This will minimize the number of exposed angle mounting bolts visible from outside the bed. The nuts in the rear stake pocket will not be accessible unless the rear sill is removed.



2. Center punch the angle at each bolt hole location as shown in figure 5. The bolt holes must be centered between the lower leg and the rolled edge of the angle so the bolt head will seat properly against the angle strip. Use a guide to help assure all holes are the correct distance up from the angle lower leg.



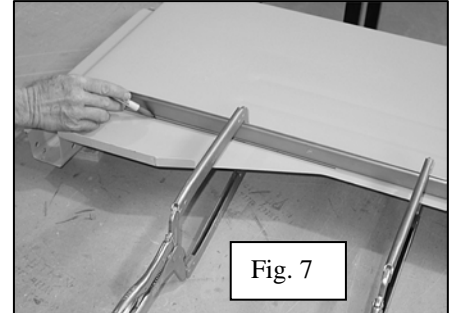
3. Drill the holes through the angle and bedside at each center punched location. See figure 6. 5/16 fender mounting bolts are recommended for the bolts, so drill the holes 5/16" diameter or slightly larger. Be sure the angle strip does not move during the drilling for mounting bolts. You can temporarily install a bolt in each hole after it is drilled to help hold the angle strip securely. After all the holes are drilled, remove the angle strip and deburr all the holes. Now the angle strip is ready to install. It is best to paint the mating surfaces of the angles and bed sides before installation to help prevent rust between the surfaces.



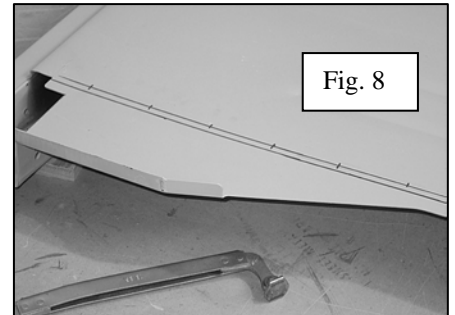
## Welding the Angle Strip to the Bedside

If you are going to weld the angle strip to the bedside, “plug” welding with a MIG welder is satisfactory. These were originally resistance (spot) welded at the factory but plug welding is a good alternative. The weld spacing should be about 3 inches apart which is similar to that of the original welds.

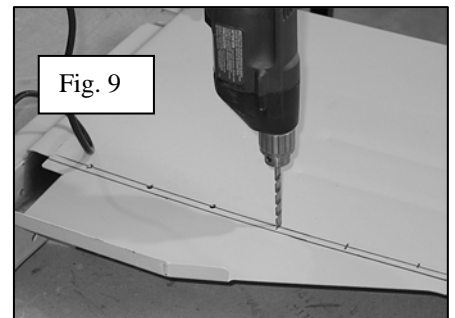
1. Draw or scribe a line on the bedside at the bottom of the angle strip and at the front end of the angle strip for reference as shown in figure 7. If you removed the original angle strips by drilling out the spot welds, skip to step 5 and use the same holes for plug welding the new angle strip to the bedsidess.



2. Remove the angle strip and draw a line the length of the bedside at the position of the plug welds, about 3/8” above the bottom of the angle strip. The welds should be midway between the bottom leg of the angle and the rolled edge of the top of the angle. See figure 8.

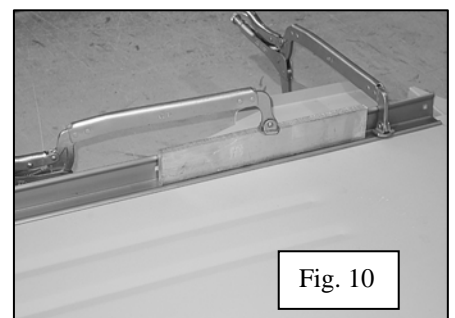


3. Mark three inch spacings along the length of the line drawn in step 2 to position the plug welds evenly. See figure 8. Drill a 1/4” hole through the bedside, not through the angle, at the location of each plug weld. See figure 9. Do not drill holes that go into the stake pocket cavity. Holes inside the stake pocket could not be welded. Deburr the holes to be sure there are no burrs that would hold the angle strip away from the bedside surface.

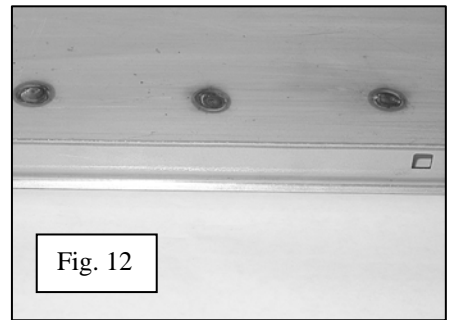
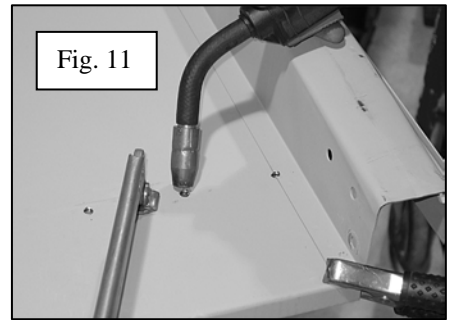


4. Clamp the angle strip back on the bedside in the exact location as it was in step 1 and prepare to weld it in place. Double check the position and securely clamp it to the bedside.

5. Clamp an aluminum or copper block to the angle strip at the position of each weld as shown in figure 10. This is especially important with stainless angles to reduce scaling or discoloring of the angle at the weld location. It also allows use of a higher weld heat setting without burning through the angle strip. This block will be moved and clamped along the angle strip as the weld progresses so that it always backs up the weld being done. Use caution because the block will become quite hot.



6. To do a plug weld of two pieces of sheet metal, there is a hole in one of them and the parts are welded together by clamping the two pieces together and welding through the hole. In this case, the angle is welded to the bed side by welding through the 1/4" holes drilled in step 3 above as shown in figure 11. The holes are filled with the weld puddle until they are level or slightly higher than the bedside metal. See figure 12. Lay the bedside horizontal and use plenty of weld heat to get the best weld strength and uniformity. Welding should begin in the center area of the bedside and progress alternately toward each end of the bedside. Be sure the bedside is supported level during the welding process. If you are not experienced with plug welding, it is recommended that you use some scrap 16 gage sheet metal to practice and develop the proper technique and welder settings.



7. Grind the plug welds smooth and prepare for painting. See figure 13.

