

BIG FLATS RIVET CO.

Instructions for installing rivets ¼ inch diameter and larger.

Safety Note:

This procedure is intended to be used by competent adults who are familiar with the proper safety precautions to be taken when using welding equipment and the other tools mentioned.

Please take proper precautions to avoid burns to yourself and the area around you.

ALWAYS use eye protection when you are welding, using tools including hammers and bucking bars, make sure your helpers are protected as well.

If you feel these procedures are beyond your abilities or equipment, locate a professional to do the job.

Choose the correct size rivet.

There should be about 1/32 or less clearance between the rivet and the hole. (A ¼ inch rivet should be in a hole no larger than 9/32 diameter.) If the hole is more than 1/32 larger, you should either go to the next diameter rivet or the hole should be welded shut and redrilled. When drilling, use the same size drill as the rivet. If installed correctly, the rivet will expand to fill the hole.

The length of the rivet is determined by the thicknesses of the material being held together. To make a round head you will need about 1 ½ times the diameter of the rivet. If you are using ¼ inch diameter rivet, you will need a rivet 3/8 inch longer than the combined thicknesses of the metal you are holding together. This should be used as a starting point, you may find that slightly more or less will produce a better head.

Installing the rivet.

Begin by bolting the assembly together. Be sure the alignments are satisfactory and everything is tight.

Remove one bolt and replace it with a rivet. Place the head on the side that is hardest to get to, and the end you will be working on the side easiest to work on. Hold the head of the rivet in place with a steel bar clamped with “c-clamps” or Vice Grips or however you can, to support the rivet **SECURELY** so that it will not move when you begin hitting the rivet. Try our new **Rivet Jacks** to secure the heads if you are working in a channel!

When the rivet is secure, begin heating the exposed shank of the rivet with a welding torch with a medium tip. If the tip is too small you will heat the surrounding area too much, **if** too large, the rivet will be overheated and distort. You are not welding the rivet into the hole!

Heat the shank of the rivet “cherry red” and begin working it with a ball peen hammer. You want to expand the rivet into the hole then have it swell to begin to make the head. You will need to reheat the rivet as it cools. Form a rough head using heat and the hammer. Once you have a rough head the final thing to do is to finish the head with the appropriate bucking bar. Place the bucking bar over the head and strike the bucking bar with your hammer to

form the head and tighten the rivet. When the rivet cools it should tighten the assembly. If there is a ring around the head of the rivet when you finish, the rivet was probably too long, try the next one slightly (1/32) shorter, if the head doesn't fill, try a little longer.

When using an air tool:

Heat the rivet as above. When the rivet is cherry red, place the cavity of the air tool over the end of the rivet and turn on the tool. This works great and is much quicker than a bucking bar. If necessary you can heat and re do with the air tool.

The finished job should look like the factory rivets or better and should be stronger than if the assembly were bolted together. This is not the easiest project in restoring an automobile but can be mastered with patience and common sense.

Model A Floor Rivet Kit Instructions

Model A Floor Rivet Kit consists of: 50 rivets - 3/16" dia x 1/4" long brazier head rivets to be used when riveting two thicknesses of metal together, 10 rivets - 3/16" dia x 3/8" long to be used when three thicknesses of metal are joined and 6 rivets - 3/16" x 1/2" long are for four thicknesses (corners, etc.).

A bucking bar of the same shape as the rivet head should be held against the head when setting from the bottom to prevent deforming the head from a steel block or similar tool. A helper is necessary to hold this tool while you set the rivet with an air tool from below.

Ford used a "waffle" shaped tool to "set" the rivet. I have obtained a supplier to produce this tool especially for the Big Flats Rivet Co. The tool is made to fit a standard .401 air tool. With a little practice you can produce authentic rivet installations using these tools.

Do not attempt to use a waffle tool or tubular rivet tool with a common hammer as this tool may chip if used this way and injury can result. I also doubt that the proper results can be achieved by hand riveting.

The bucking bar may be used with a common hammer to drive it back down if you push the head up from below.

Try to set the rivet in one "burst" from the air gun because getting the waffle tool realigned can be difficult.

Remember also that Ford's results were not all perfect – start someplace where it doesn't show.

Wear Eye Protection Whenever Using These Tools