

## General Welding:

Sheet metal is difficult to work with because it's so thin. The sheet metal thickness for a 1965 Chevelle is 18 gauge.

There are basically two methods for fitting patches; I call them the "cut to fit" method and the "overlap" method.

In the cut to fit method, you cut out the bad metal, usually making some type of oval. Then you cut your patch to be the exact same size. Then you butt weld or stitch weld the patch in. A good video of this method is from

Chris Fix here: <https://www.youtube.com/watch?v=C0M5tUQSaps>

I prefer the other method, "overlap." Here, you overlap the patch and cut both the original metal (floor, trunk, etc) and the patch together. As you cut, usually with an air saw, you peel away the old metal and tack in the patch.

Here's a good video for this method:

[https://www.youtube.com/watch?v=\\_u31t13QO6A](https://www.youtube.com/watch?v=_u31t13QO6A)

Some good feedback from a group member: *GAPS: I try to avoid them in the first place. Looking at your picture, you would overlap your lower piece of metal onto the upper piece. Then take a skinny 1/16" cut off wheel and cut through both panels at a 45 degree angle. Doing this cut creates virtually no gaps you can do this every 4-6" and weld. Otherwise, dealing with the gap you have can be difficult but hot and fast tack welds are the best way to deal with the gap you have. If possible a piece of copper sheet on the backside makes a good aid in closing up gap. Weld won't stick to copper.*

Summary: I prefer the overlap method because making the patch the exact size you need is very difficult and takes a lot of time. The overlap method gives you an exact fit with very little gap. That said, sometimes you can't use the overlap method because there is something underneath the old metal, like a brace of something. \*ALSO, for the overlap method, MAKE SURE you patch is flush with the old metal; otherwise, you might get huge gaps.

Additionally, I've realized that you need some gap for the weld. I think the thickness of an air saw blade is about right. Otherwise there's nowhere for the weld to go so you'll have a lot of grinding to do!

### **Spot Welds:**

If a piece originally had spot welds, make sure you also add spot welds. This is important to eliminate rattles. You don't need a fancy tool to do it. From a group member: *I have a 1/4" pneumatic hole puncher. Hole has to be minimum 1/4" or spot weld won't work. Both surfaces bare metal and spray with weld through primer. I use a Lincoln 180C 220V machine with .025" wire set to almost full power. The key is hot and fast. Screw or clamp the 2 surfaces tight. Start in the center of the hole and spiral out until the hole is filled. It takes practice but be persistent.*

### **Body Fitting:**

Advice from the group:

**Convertible:** One point to keep in mind with a convertible is put the vent window in the door and insure that the roof is on to help with the door alignment. It's really easy to have the door too low and match the body lines and then put that stuff in after and find that you need to raise the door for it to seal at the roof and now the body lines don't match up.

Another thing is **fender shimming**. Shim the fender at the top to match the cowl vent panel, then shim it forward or back at the firewall for the door gap. Once you're happy with that then shim the bottom to get the body line and the curve of the fender to desired levels.

Also the fender is supposed to stick out a 1/16" further out than the door, the door at the quarter is supposed to stick out a 1/16" more than the quarter. That is how they were made at the plant. The reason behind this was to not get paint chips from sand, gravel, bugs etc. The previous panel sticking out protects the next panel's edges.

You shouldn't install the fender liners until everything else is done. Also when installing the fenders put the rad support in and a couple of bolts loose to keep things relatively in shape.

