

# Do It Yourself: Body Hanging Tips For Your Next Build



By **JEFF HUNEYCUTT** APRIL 24, 2015



**This Super Street body was hung by two regular guys, not professional body hangers. If they can do it, you can too.**

One of the many reasons why we love the entry-level dirt racing classes is the potential to do so much yourself. Not everyone has the tools or inclination to build their own race engines, but when racing a Street Stock there is much else that you can do. Besides saving a buck, doing the work yourself can help you understand your race car and the changes you can make to improve performance in the future.

After building your own race engine, the most intimidating aspect of race car building for most people is probably hanging a new body from scratch. Granted, it's definitely a big project and does require a lot of time and attention to detail. But body hanging is something that you can do. Although you can spend to the moon and back on specialized tools, all you really need beyond the basic shop tools is a good sheet metal brake to help you make good, sharp bends.

A good, blow-by-blow accounting of every step required to fabricate and hang your own race car body would require a book, and that would only be one method. In this article we hope to provide you with plenty of tips and good ideas to show you one way to do it that works well. We recently spent several days visiting the shop of racer Jody Bigham while he helped a friend, fabricate and hang a new sheet metal body on a new Monte Carlo metric Super Street chassis. Bigham is a perfect example of how this can be done: He is a regular guy who works a regular job and works on race cars in the evenings and weekends. He isn't a professional body hanger and only hangs bodies when necessary. We suspect, he's a lot like our readers.

But the end result of this project is a race car body that looks great, wastes minimal material and should be easy to repair once the inevitable happens.



By the time we got on board with car owner Jason Gullede and body hanger Jody Bigham, they had already begun work on the chassis. At this point the front and rear bumper covers from Performance Bodies, as well as some of the interior sheet metal has already been hung. Nothing too technical or difficult, just yet.



This chassis is built specifically for the Monte Carlo-style nose. It simply rivets directly to the bumper and upper support. We'll go back and add some support to the bottom of the cover later.



The chassis builder has already made some provisions for hanging the body. Here, you can see the lower body supports welded up from one-inch square tubing. The tubing extends just beyond the driver's door protection in the roll cage. Two sticks are run down the side of the car to provide just a bit more protection.

#### **Church Built:**

I like Mr. Bigham's side rails. We are going to simulate this using a little stronger material. I will also apply "spring steel" (1/8 by 1") in order to allow some rub-ability to the door panels. You will see that Bigham uses a two piece front fender. I will design a single piece fender simply because where we will be racing, you cannot afford to camp out on the inside. The normal Penn-Ohio Pro Stock car is going to be 73/74 inches wide. We took off 8" because the turns at Latrobe are tight, however the track is long and fast...so any one who misses their entry, they are going to be drifting high into the upper groove.

We placed our master cylinders inside the driver tub. Service access is through a panel behind the fender. Brake line fittings are protected by a 1/8 inch panel of mild steel. Our drivers tub is entirely mild steel,

Add picture -



Street Stock racing is a contact sport. Out back this rounded piece of tubing not only provides a place for the flanges of the rear bumper cover to be connected to the car, but it also provides some rigidity to the rear quarter panel just behind the left rear tire. Racers love to stick the nose of their car here to get the driver loose, and this piece of tubing keeps the body from getting crushed from the contact that's sure to happen.

Church Built:



Bigham prefers to hang the body from the back to the front. After determining the overall length with the bumper covers, he lays in the rear decking. Here, he starts with the center panel and cuts it so that it extends all the way to the rear down tubes of the roll cage. This way the outer panels can simply have U-shaped holes cut into them for the chassis tubes. The end result is clean without the need for elaborate patch panels.

#### **Church Built:**

I decided to look into the rear panel using a different approach. Since our rear down-bars are not extended as they are with Big's (Bigham) chassis, I took the one piece design and pushed it out to the limit. The panel will be 48" from rear to just inside the down tubes and 76" total across. I plan to have the quarters 66" wide at the rear of the seat and 64" wide at the rear bumper cover and deck panel. This will afford me two smaller quarter rear wheel panels that can be changed out rapidly and at less cost than a series of "groom panels" for added beauty. I am looking for ease of replacement and strength where there is a great deal of potential "rubbin' is racing" going on. Of course I will bead roll the deck and prepare an 8" by 8" access panel for fuel. There will be a slight slope toward the rear.



Gary and I started with a full deck panel, we meet the rear bumper cover at the same slope and angle as the original Monte Carlo. The deck is completed in two pieces, while Bigham used three. Our two piece makes it a little harder to repair, but after bead rolling the deck the car looks sharper and it is functionally stronger. What we have is different from Bigham's car; our down bars are not as steep, so we can get away with a larger deck panel and a smaller fuel access door. The bends are shaping the body that is 67 inches wide at the door, but only 64 at the rear of the car. The quarter panel will be one piece, and there will be a crush panel located where the door meets the quarter.

Our intention is to build a "narrow car". The Pro-Stock cars we will face will be 75 inch wide "late model" style bodies. Similar to "outlaw" stocks that ran back in 2003/04. Our intention is to look more like the old "street stocks" that ran 10 inch wheels that hung outside the body. Bigham's 8 inch wheels are tucked away, our 10 inch wheels will hang outside the string line.



Poster paper is a great material to use when making a template. It is cheap, yet thick enough that you can crease it in a sheet metal brake and it will hold its shape. Cut and trim it in small amounts until you finally get what you need.

#### **Church Built:**

Again, Bigs is doing it right, we use old box cardboard. Same idea, he has a much larger shop and that makes it easy to work off the floor. At the age of 76, that ain't quit as easy to do.

It is obvious that Mr. Bigham has some experience with G-Body builds. My sheet metal (aluminum) experience is mainly late models. We have an 8' break to work with and plenty of shears, air and electric. The basic principal is applied no matter how you do this, but at the end of this installment I will not leave you guys guessing panel length and width. Expect to use 8 panels of Wrisco .050 sheet aluminum for your build. These sheets are 48" by 120" so you should get most of the rear deck and one quarter out of one sheet, with a good bit left-over if you cut correctly. You lose ¼ inch with every sheer cut!! Remember to fold and double fold where panels are going to over-lap. Your G Body wheel base will be 109 inches maximum. You should be able to design your body sides using two 48" wide panels front and rear, 67" for the doors.





**Bigham traces the template for the rear quarter panel onto a sheet of aluminum. In areas where he plans to fold the aluminum over for extra strength, he adds an inch to his template.**



Nothing fancy necessary when it comes to cutting out the fenders from the aluminum sheet. Just air powered shears right on an open space on the shop floor.



Here's the rough fender trimmed up and held in position with Cleco fasteners. Right now the chassis isn't sitting at ride height, so the wheel opening is kept small. It will be trimmed later.



This shot lets you see a little more clearly how the beginnings of the interior metal work with integrate with the body to keep the driver sealed off from the elements. A panel on top of the lower spacer bars will create a floor. The first of two pieces that will create the crush panel in front of the right rear tire is also in place.



Here the Bigham test fits the left-rear quarter panel. As you can see he's added more defining creases from the shot you saw of the first mockup of the fender on the right-hand side.



Bigham pulled the fender out wide to cover the rear wheels but needed it to come back in to fit the rear bumper cover. The 90-degree bend at the top provides a mounting point where the fender meets the deck, but with a little time on the shrinker that bend can also be used to pull the fender around.



It's a small bend, but it serves to give the body a little more shape and not be quite so boxy.



The creases help give the rear quarter a little more dimension to help it look better, but it also helps add just a bit of rigidity so that the sheet metal won't be flopping as the car goes down the track. Those creases will be followed the length of the body.

**Quarter Panel Dimensions:**





Bigham works his way to the front. The front fender is broken into sections. The piece you see attached to the door skin is relatively permanently attached. The rest of the fender can be put on with just a few rivets or Dzeus fittings so that it can be quickly removed for suspension repairs or adjustments.



Here's a better view of the upper portion of the fenders. The edges are folded over twice on the sheet metal brake to add strength. The shape is created with the crimper-shrinker.



The finished fender, note the nice roll flare back to the cage.



A large sail panel helps keep the rear of the car planted when it is thrown into the turns.



The A pillar is just there to connect the roof to the fender, but the quarter window just behind it should help clean up the airflow around the cockpit.



A couple of braces connected to the lower valance on the front bumper cover will help keep the plastic from rolling under when the car is at speed.



The maximum width of the rear spoiler is constrained by the rules, so Bigham rolls the side panels out to help catch more air.



The finished product ready for its decal wrap.

**Thread Chart - size**

**course TPI**

**fine TPI**

Thread Chart - size	course TPI	fine TPI
#5	40	44
#6	32	40
#8	32	36
#10	24	32
#12	24	28
1/4"	20	28
5/16"	18	24
3/8"	16	24
7/16"	14	20
1/2"	13	20
9/16"	12	18
5/8"	11	18
3/4"	10	16
7/8"	9	14
1"	8	12*
1-1/8"	7	12
1-1/4"	7	12