

Introduction

The XJ Hybrid Cage kit provides increased safety while maintaining interior headroom in these little vehicles. This is a weld it yourself kit and some fabrication skills are necessary. Welding should be done by a qualified professional only. The tubing is pre bent and notched to fit as shown in the pictures, however the safety of the end system is highly dependent on the installation. Please don't attempt to install this kit if you are not qualified, we would rather lose a sale than have someone get injured enjoying offroading.

Unlike other kits on the market this kit is fully notched on both ends of the tubing. With the exception of the bottom of the a-pillar. Only a few straight cuts are necessary for this kit and very minimal.

Exterior (INCLUDED)

- Roof hoop and bracing
- A-pillars and windshield bracing

Interior(INCLUDED)

- B pillar and bracing
- C/D pillar and bracing

16 - 4 bolt cage plates with 3/8 holes – you'll need to source bolts

KIT DOES NOT INCLUDE

- Front fender tubing
- Rock Sliders (optional custom upgrade in the future)
- Unibody stiffeners – not required for installation but do these first!

Instructions

This kit is prebent and cut to fit however there is some skill required in assembly. The parts and pieces will fit together perfectly if they are assembled as designed in the computer, however this is difficult to do in real life. Also depending on vehicle age and condition the vehicle might be slightly different/tweaked. We recommend fitting ALL parts prior to tacking anything. Use ratchet straps and extra hands to trial fit all parts in a dry run first then on the second run light tacks should be used. You will have to cut and break tack welds it's just part of the process everyone has to do it.

Prep work

- Remove front fenders
- Remove headliner (can be re-installed with trimming around interior cage parts)
- Remove rear seat (optional but helpful) can be reinstalled later
- Remove rear carpet (at least pull it back) will need to be trimmed to re-install

Order of Assembly

Assemble the exterior roof hoop and their mirrored parts. Rest this assembly on the roof supported by mounting plates and part 19's.

Next fit interior b-pillar parts with mounting plates top and bottom. Clamp or tack weld plates in place and align with the exterior plates for drilling mounting holes.

Be mindful of seat placement and harness bar height when fitting 16-18, there is some adjustability in there to ensure proper location.

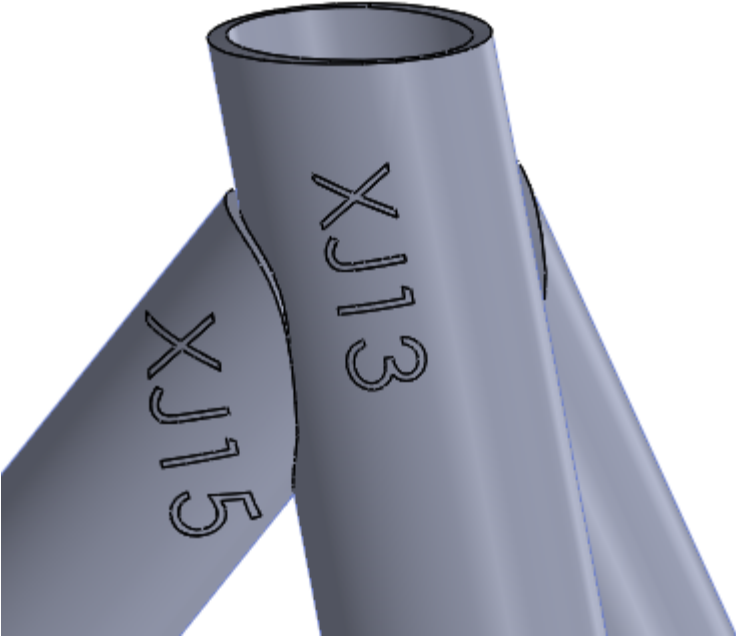
Instructions

C/D Pillars

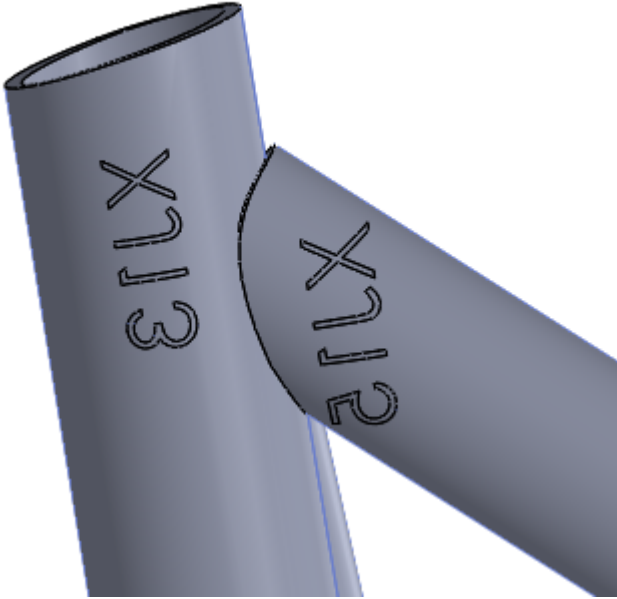
Parts 13, 14, 15, 16 and their mirrored parts will be all on the same plane and have slot and tabs. These parts can be assembled on a flat surface and then installed in place. Lining up with the exterior plates. The entire C/D pillar assembly can be removed for welding and paint. The floor plates will be welded directly to the unibody. Remove any and all coatings before welding to the unibody. If there is significant rust this must be repaired or braced to ensure safety.

Part Numbering

Part Numbers engraved near the end of part with an XJ prefix
Mirrored parts have the part numbers backwards (mirrored)



Driver side labels

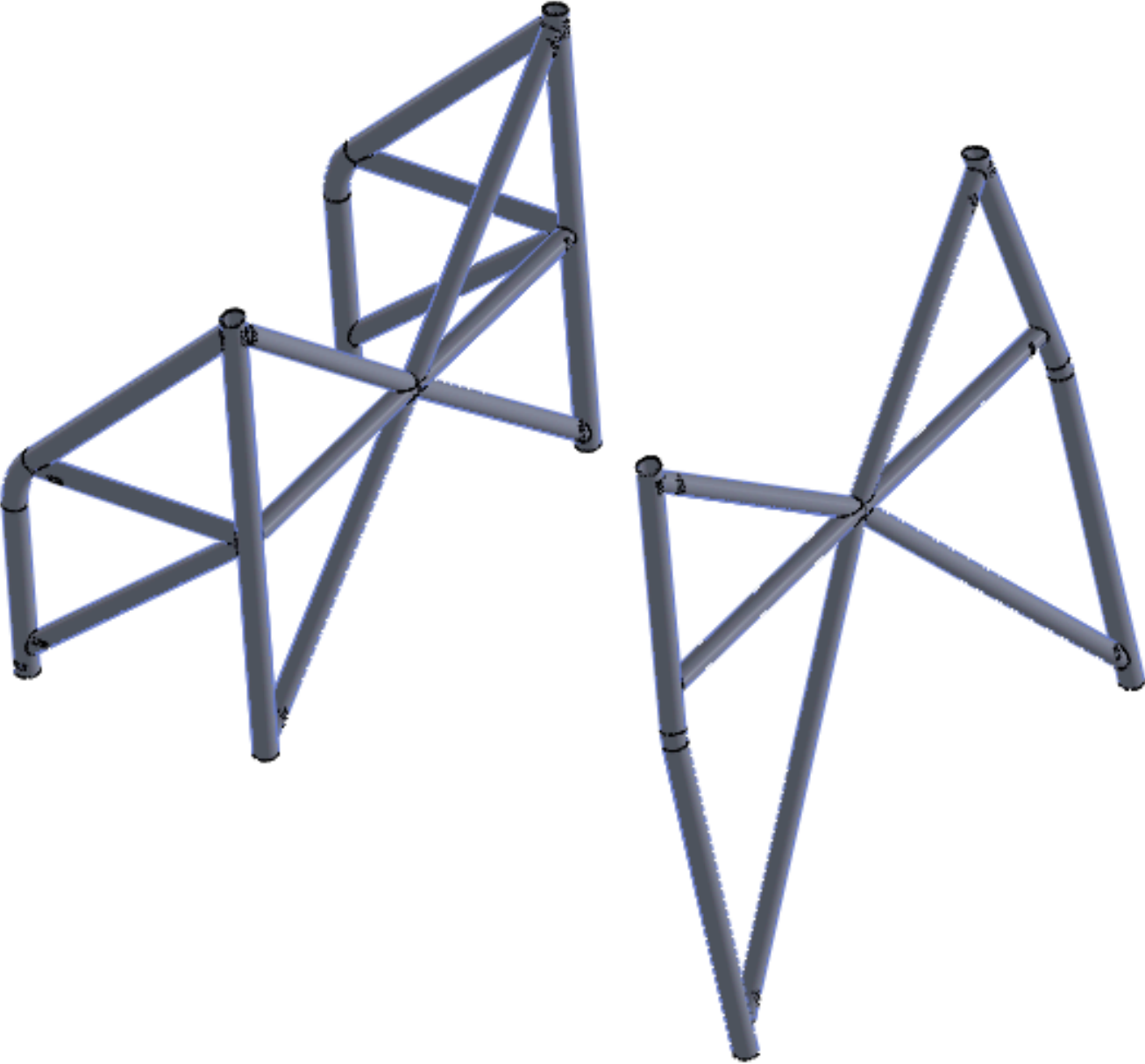


Mirrored labels

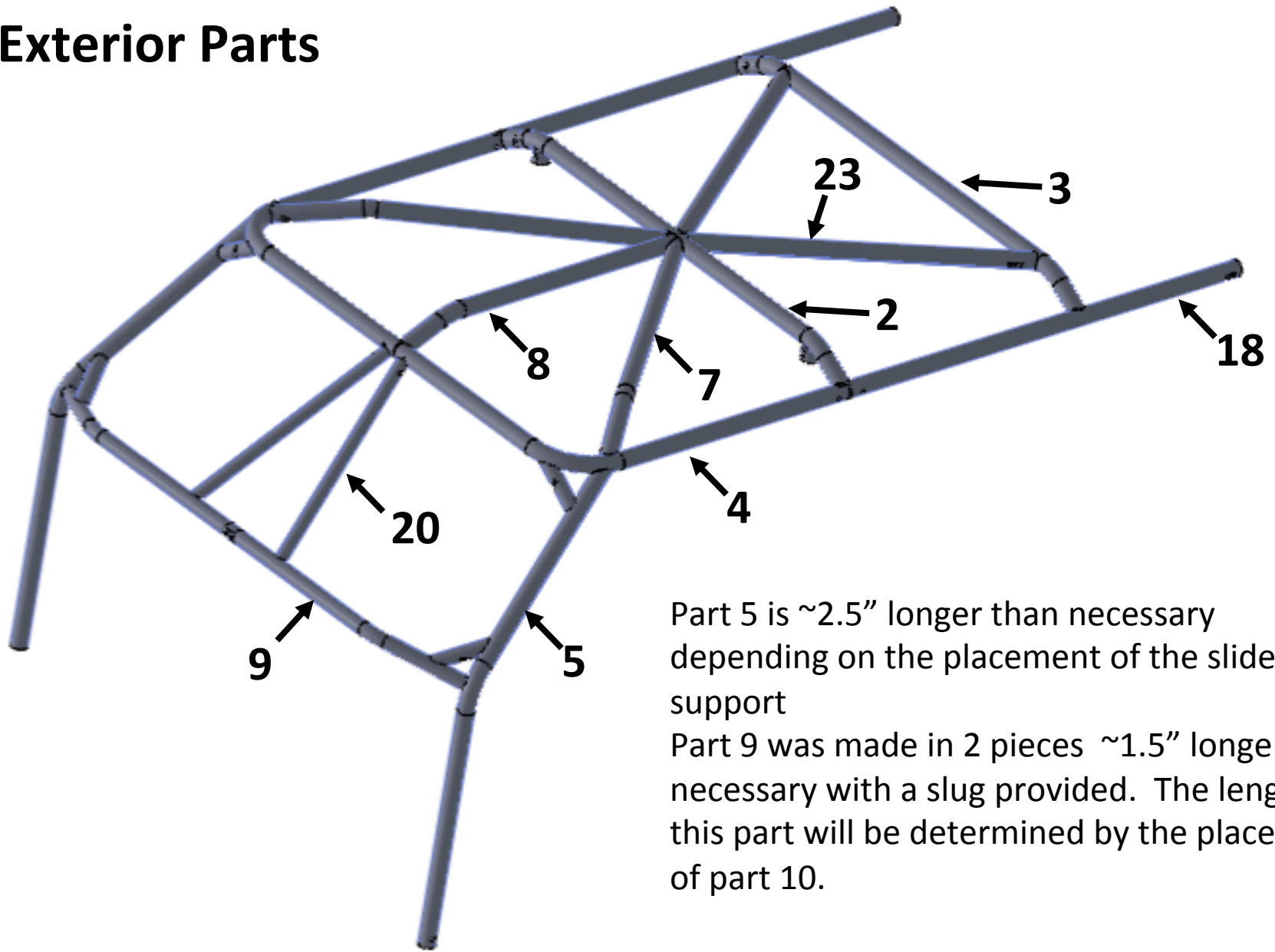
Exterior



Interior



Exterior Parts

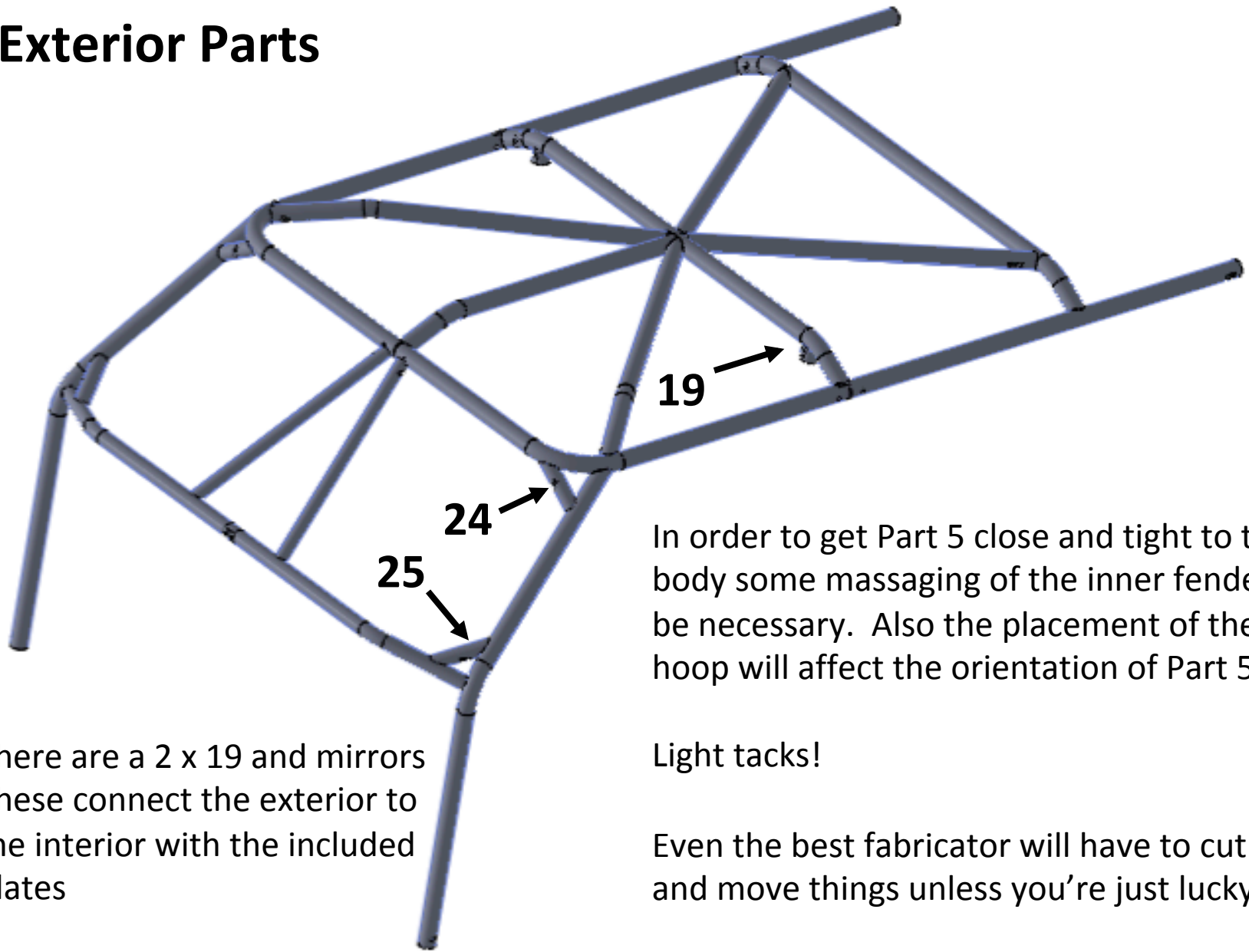


Part 5 is ~2.5" longer than necessary depending on the placement of the slider support

Part 9 was made in 2 pieces ~1.5" longer than necessary with a slug provided. The length of this part will be determined by the placement of part 10.

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Exterior Parts



There are a 2 x 19 and mirrors
These connect the exterior to
the interior with the included
plates

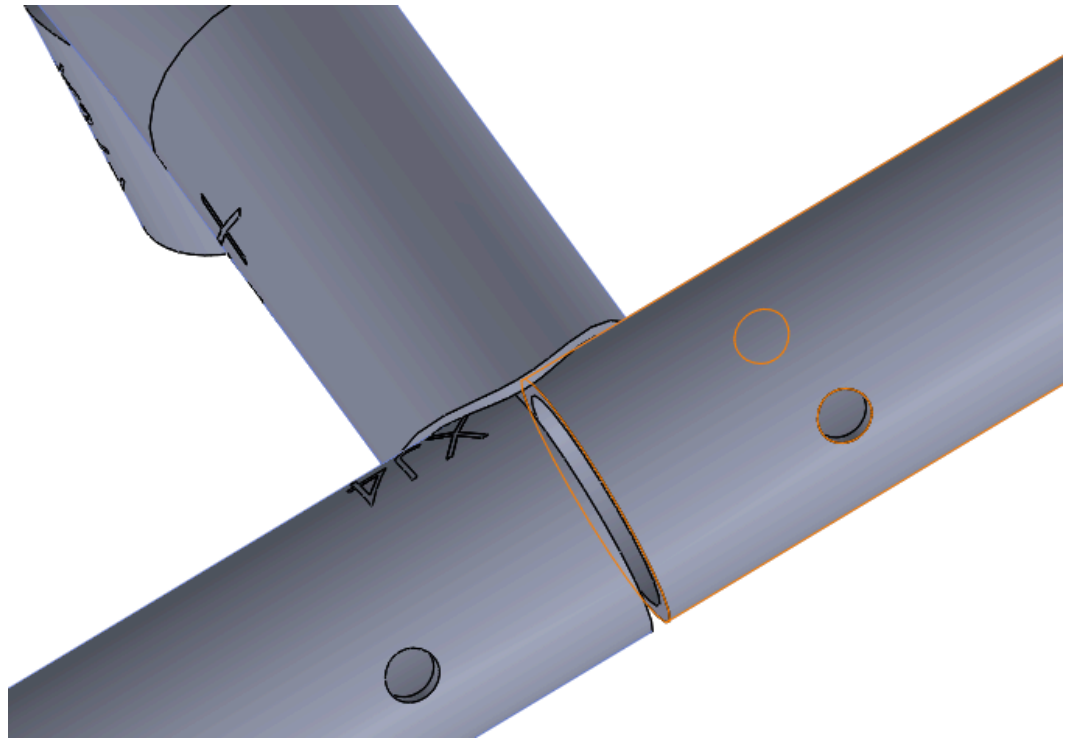
In order to get Part 5 close and tight to the body some massaging of the inner fender may be necessary. Also the placement of the roof hoop will affect the orientation of Part 5.

Light tacks!

Even the best fabricator will have to cut tacks and move things unless you're just lucky!

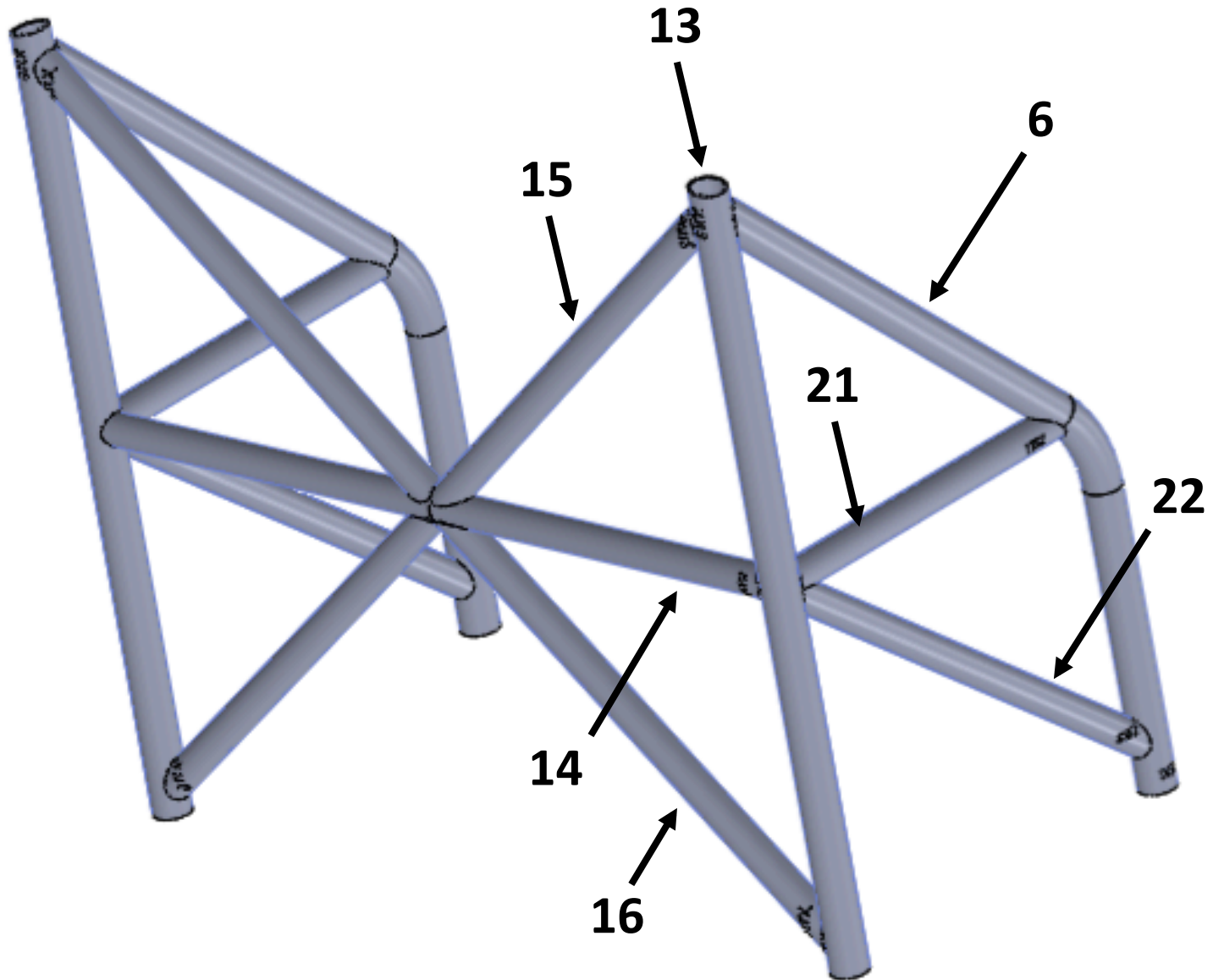
Exterior Parts

The exterior hoop can be assembled on the ground if desired. The main joints are designed to have an 1/8" gap for weld penetration to the slug as well as plug weld holes. Weld around the entire joint before covering it with the next tube. ONLY AFTER ensuring the whole kit has been fit to the vehicle and your happy with the appearance and location.



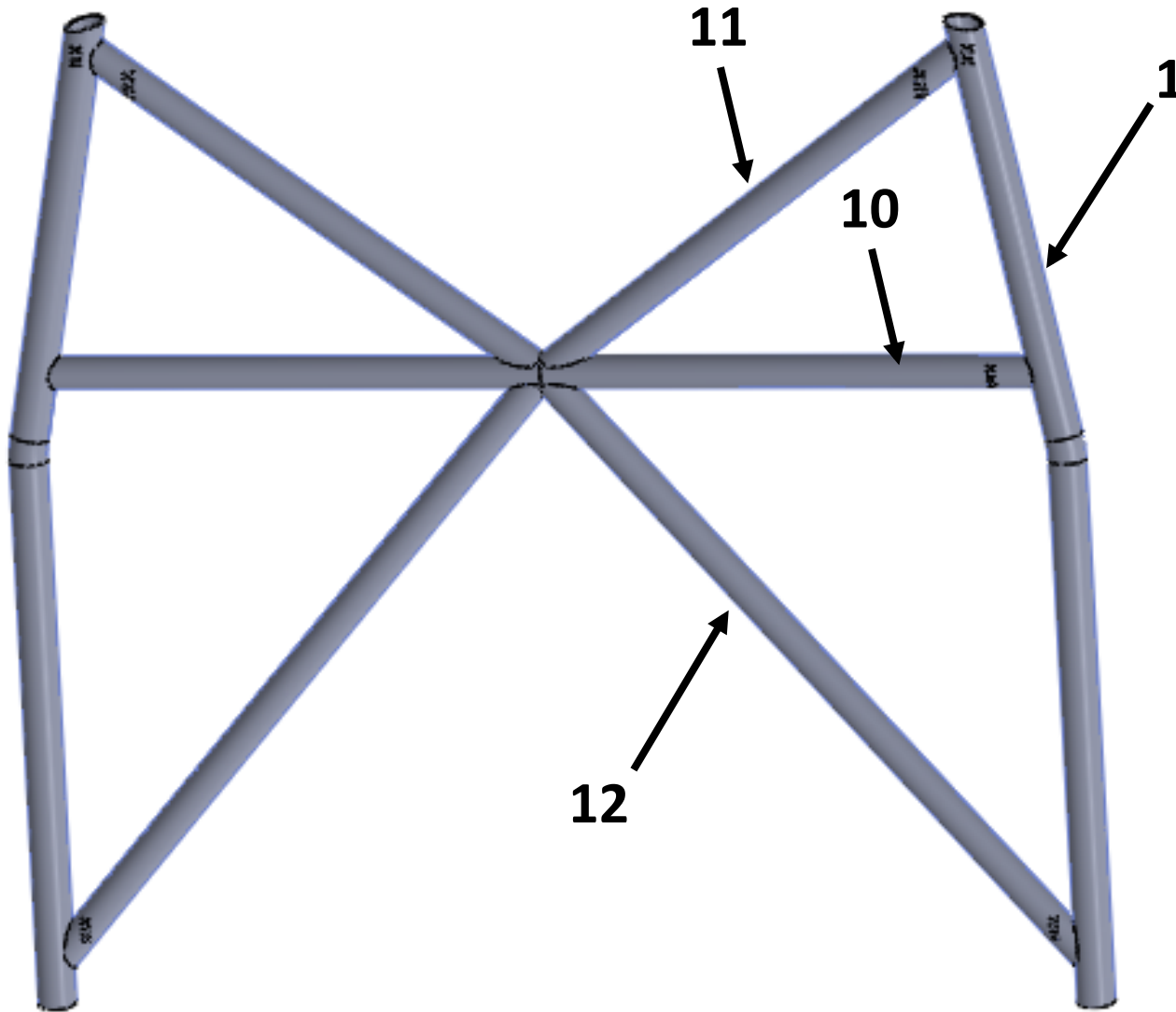
Part 9 and 20 need to be fit when fitting part 5. The hood and wipers need to be cycled through their ranger to ensure they fit before cutting and welding anything. Most kits don't include these parts because this is a difficult balance to achieve and still have everything work. Have patients and measure twice and cut once, the end result will be worth the extra time to fit everything nicely.

Interior Parts



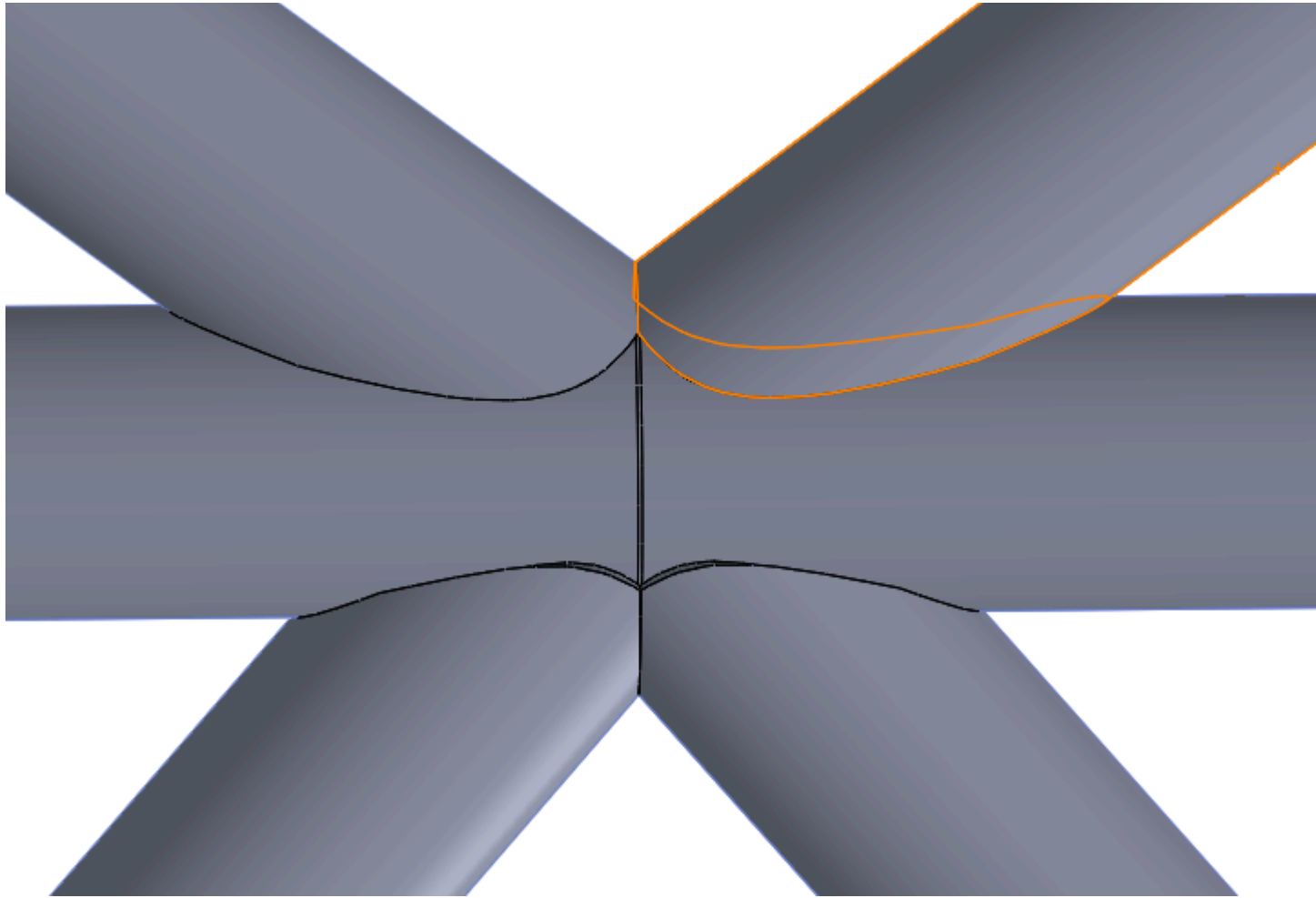
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Interior Parts



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Interior Parts



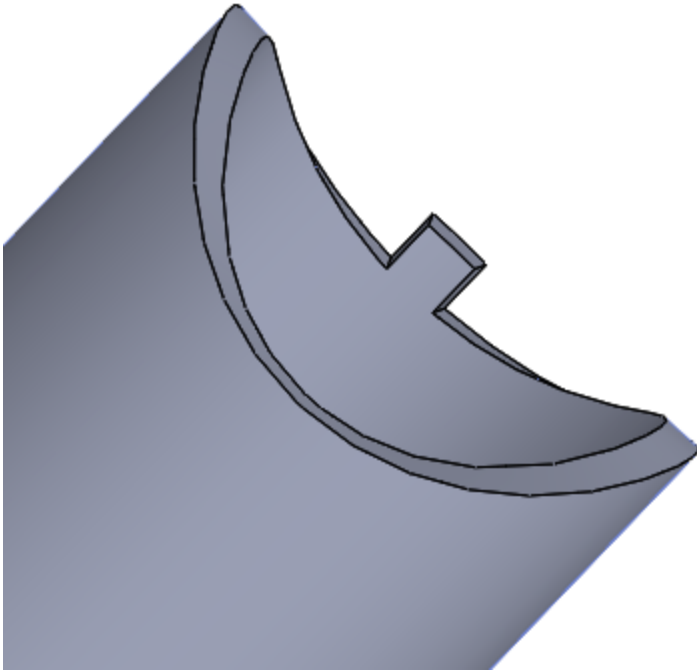
Part 10 has a centerline engraved on it to align the diagonal bracing and this should help square up the assembly.

SLOT AND TABS

Slot and tab cuts will locate the parts with these features.

It is a good practice to assemble ALL parts to ensure they fit prior to tacking any of the pieces. Good clamps, magnets, ratchet straps and a few extra hands make this easier.

It is possible to flip a part backwards and still fit, but the mating parts will not fit and you'll know something isn't right. Please check this before contacting us. We are glad to help but are trying to keep cost down and after sales support will drive future costs up.



Slider Parts



2 small prenotched pieces are included to connect the b-pillar to your existing sliders. These are made to weld to an included plate under the b-pillar interior pieces and connect to your sliders. This is a vital piece of the puzzle. You need to have unibody stiffeners and solid mounted rock sliders to properly support your new cage.

Most of our customers already have stiffeners and sliders installed so this piece may need to be modified or custom fabricated to tie directly to the unibody. But do not skip this step!

We may offer rock slider kits in the near future, contact us for more information.

Welding

Again this is a crucial part of your machine's safety and should only be assembled by a qualified welder, don't skimp here.

All tubes are mild steel and can be mig, tig or even stick welded.

Once the kit has been assembled/fit on the chassis with all the pieces you can start to tack pieces together. Having dry fit the kit once you should be able to figure out what pieces can be installed in what order. It's recommended to fully weld every joint, even under joints that will be covered by another tube, slight grinding to clear the previous weld may be necessary. Don't grind the weld down, grind the next tube to clear the weld.

There should be no excessive gaps or holes to fill, if there are STOP and check fitment of all the other tubes.

The tubes are CNC laser cut and therefore the edges may have some scale from the plasma. Tubes also have mill scale, contaminates and oils on or inside of them. For best results a light sanding of the outside/inside and edges to be welded is recommended. With any welding process bright shiny clean metal produces the best results.

RE-INSTALL

The exterior part should be able to be removed from the vehicle and welded completely and then bolted back in place and final weld part 5 to the sliders/unibody. Careful welding procedures will reduce warping.

The b-pillar assembly can be removed for final welding and paint and reinstalled. The c/d pillar assembly can also be removed for welding and paint but don't paint the feet that will be welded. Clean the body of ALL contaminants before attempting to weld. If your there is rust present this must be fixed prior to cage kit installation. DO NOT attempt to weld to rusty body parts. Remember this cage is only as good as what it is supported by.