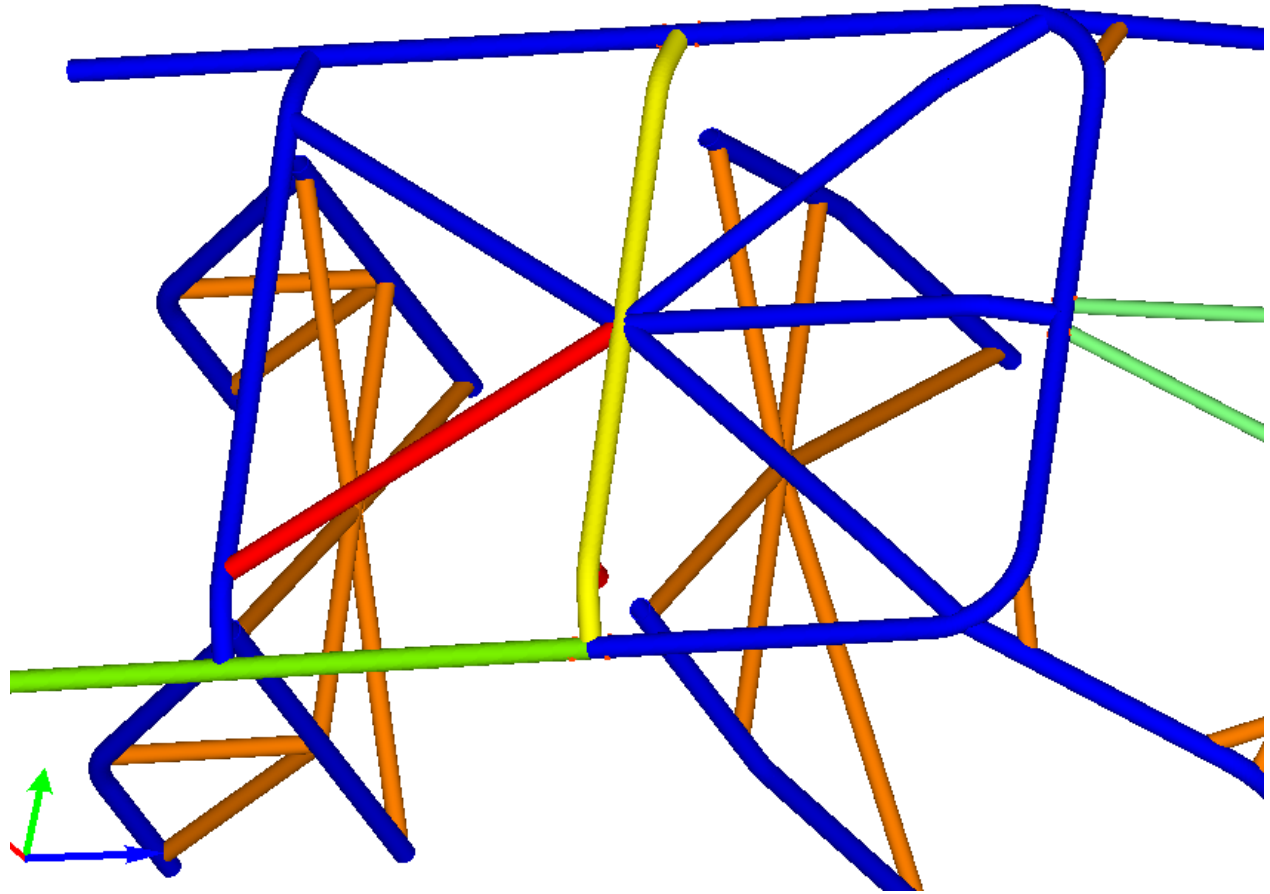


UPDATES!!!



Due to increase requests all intersecting tubes has been made as fully overlapping nodes. This means identically mirrored parts will have different notches to overlap the other tube. **ALL JOINTS SHOULD BE FULLY WELDED!!** We don't recommend welding only the visible joints. Tubes must be ALL fit together and then disassembled and welded in sequence to ensure full strength.

This requires more skill in assembly and slight grinding to clear previous welds.

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 the only straight cuts are necessary for this kit and very minimal.

Exterior (INCLUDED)

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

Interior(INCLUDED)

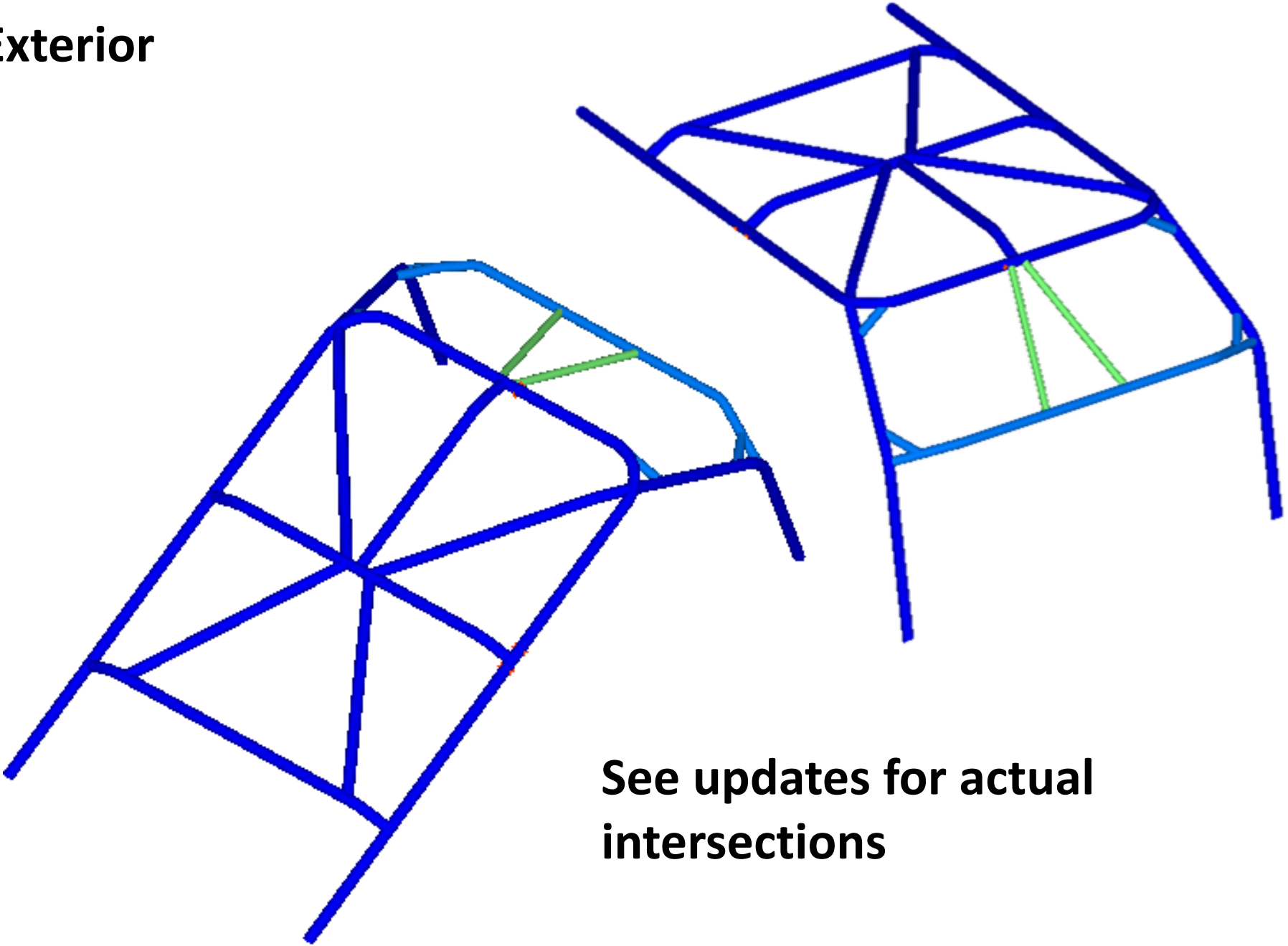
- B pillar and bracing
- C/D pillar and bracing

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

KIT DOES NOT INCLUDE

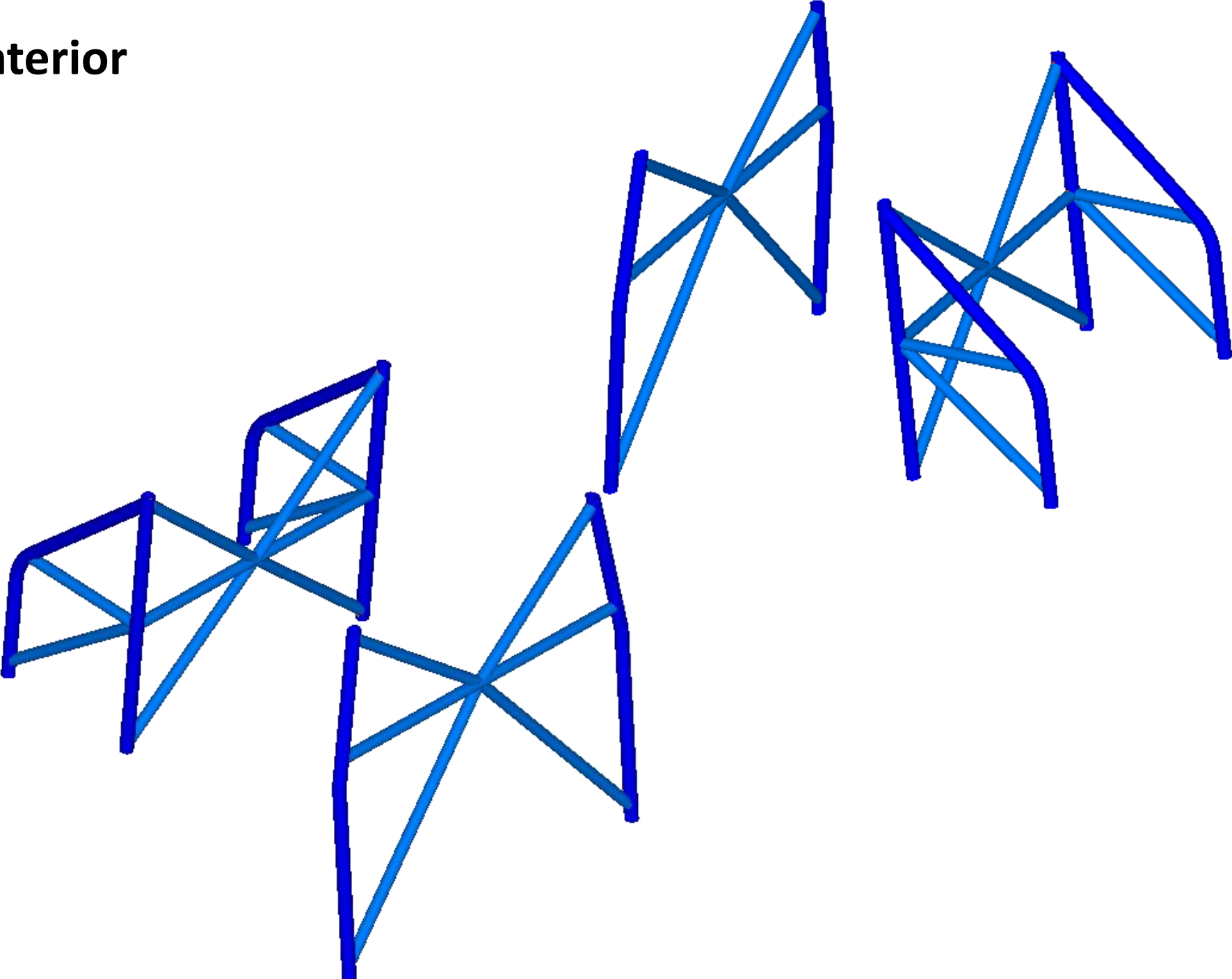
- Front fender tubing (We no longer have time for these - sorry)
- Rock Sliders (We no longer have time for these - sorry)
- Unibody stiffeners – not required for installation but do these first!

Exterior



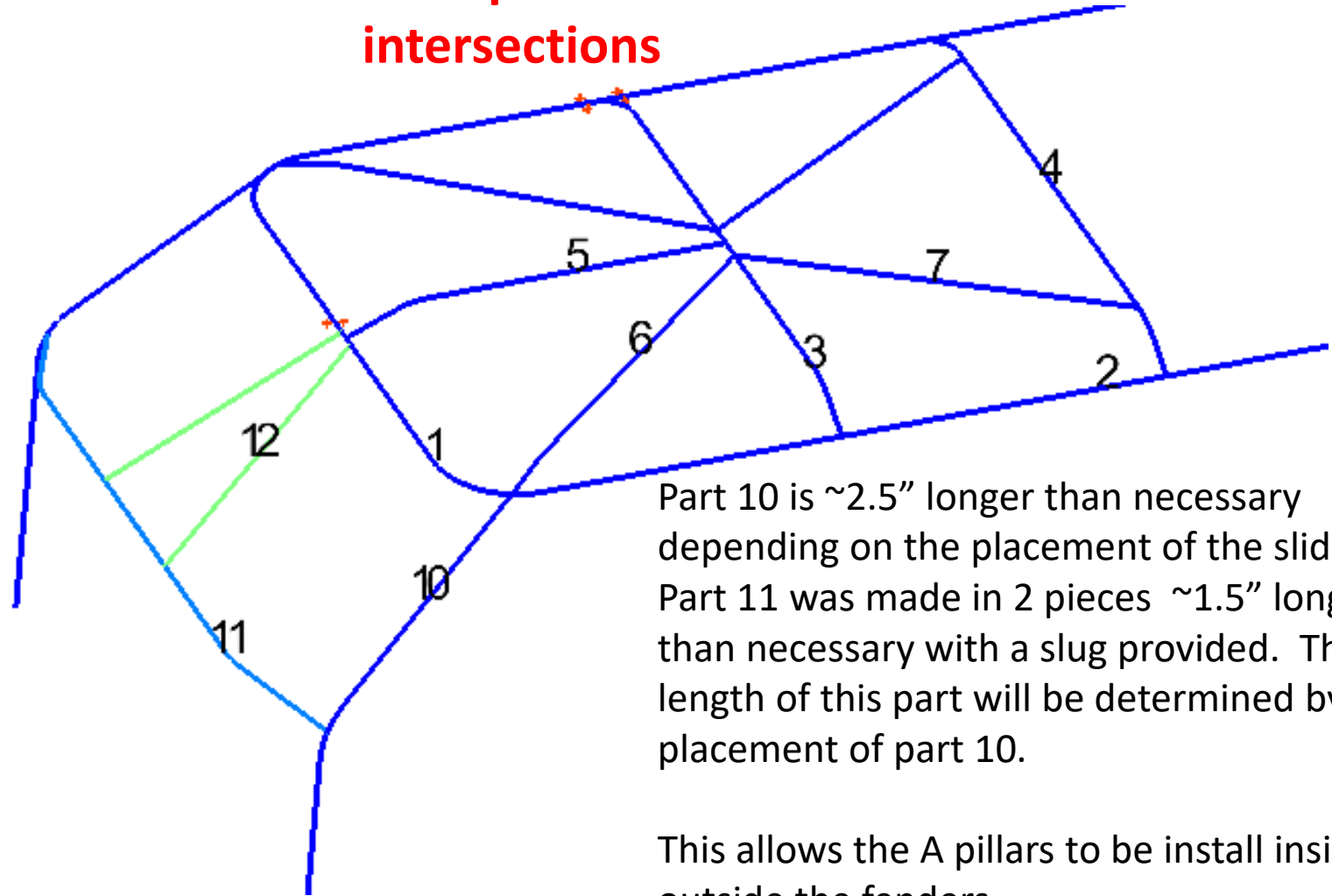
See updates for actual intersections

Interior



Exterior Parts

See updates for actual intersections



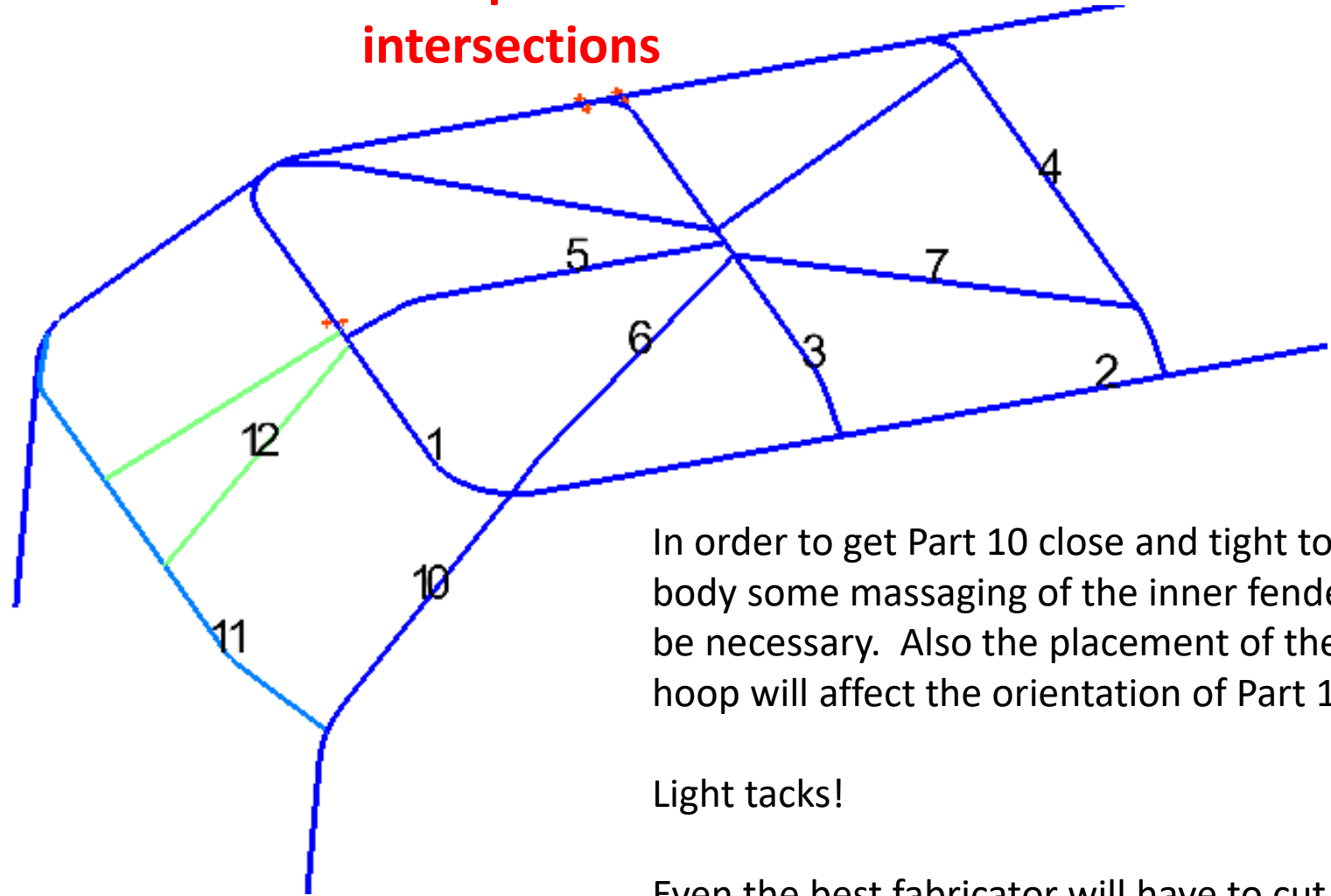
Part 10 is ~2.5" longer than necessary depending on the placement of the slider
Part 11 was made in 2 pieces ~1.5" longer than necessary with a slug provided. The length of this part will be determined by the placement of part 10.

This allows the A pillars to be install inside or outside the fenders

For visualization the parts are shown as centerlines only
Part Numbers engraved within 3" of the end of part
Passenger side parts are followed with a M (for Mirrored)

Exterior Parts

See updates for actual intersections



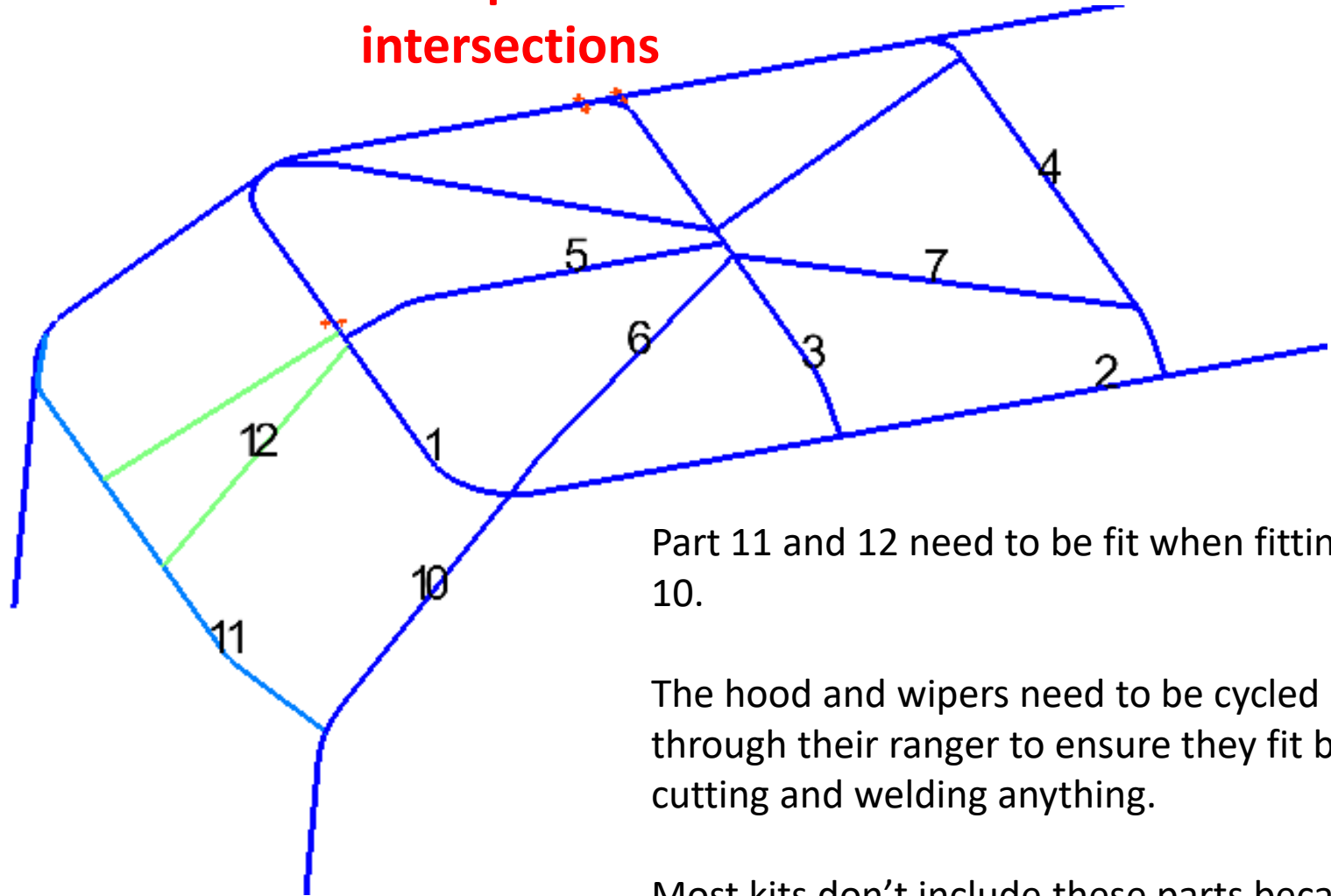
In order to get Part 10 close and tight to the body some massaging of the inner fender may be necessary. Also the placement of the roof hoop will affect the orientation of Part 10.

Light tacks!

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

Exterior Parts

See updates for actual intersections

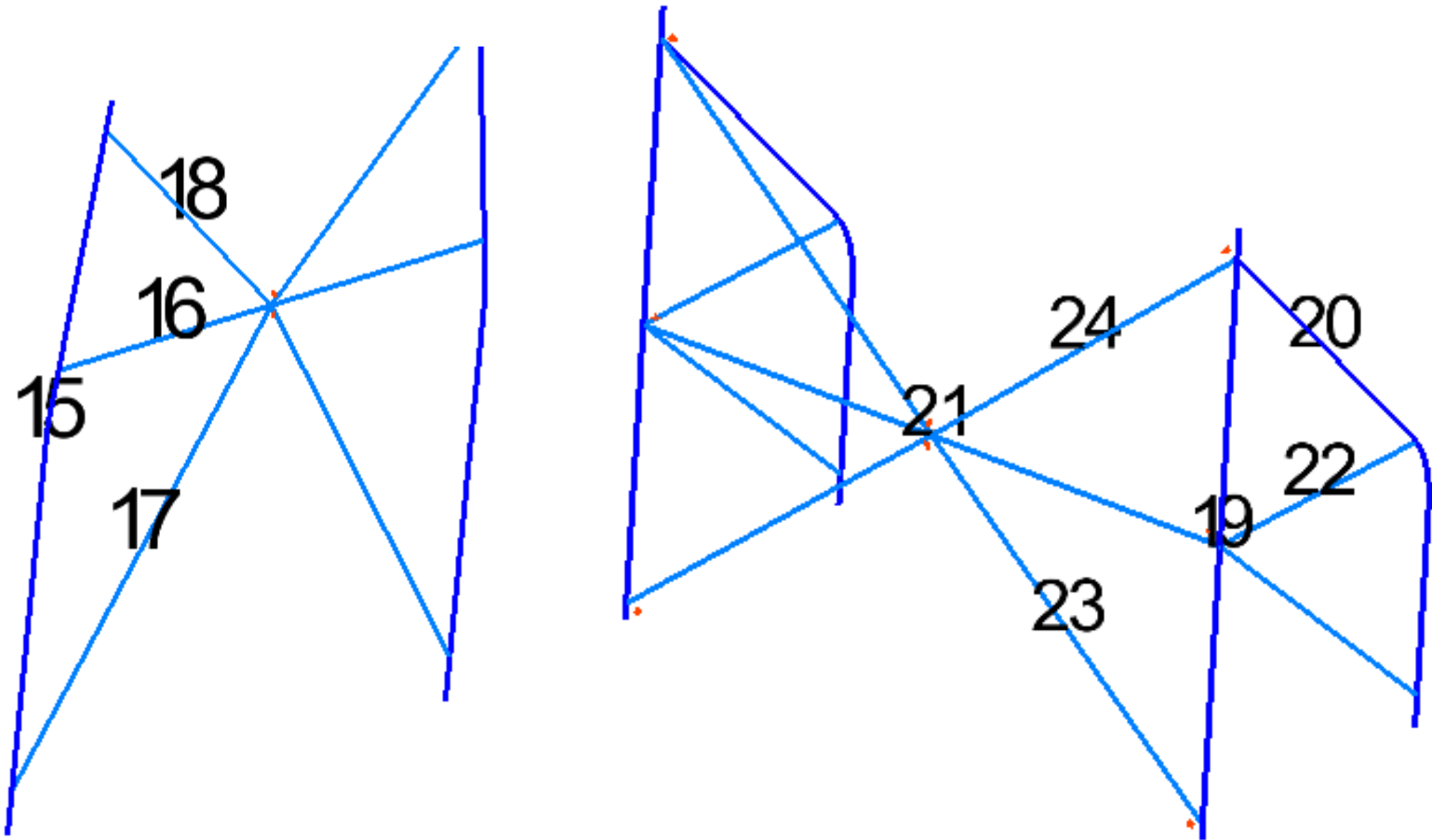


Part 11 and 12 need to be fit when fitting part 10.

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.

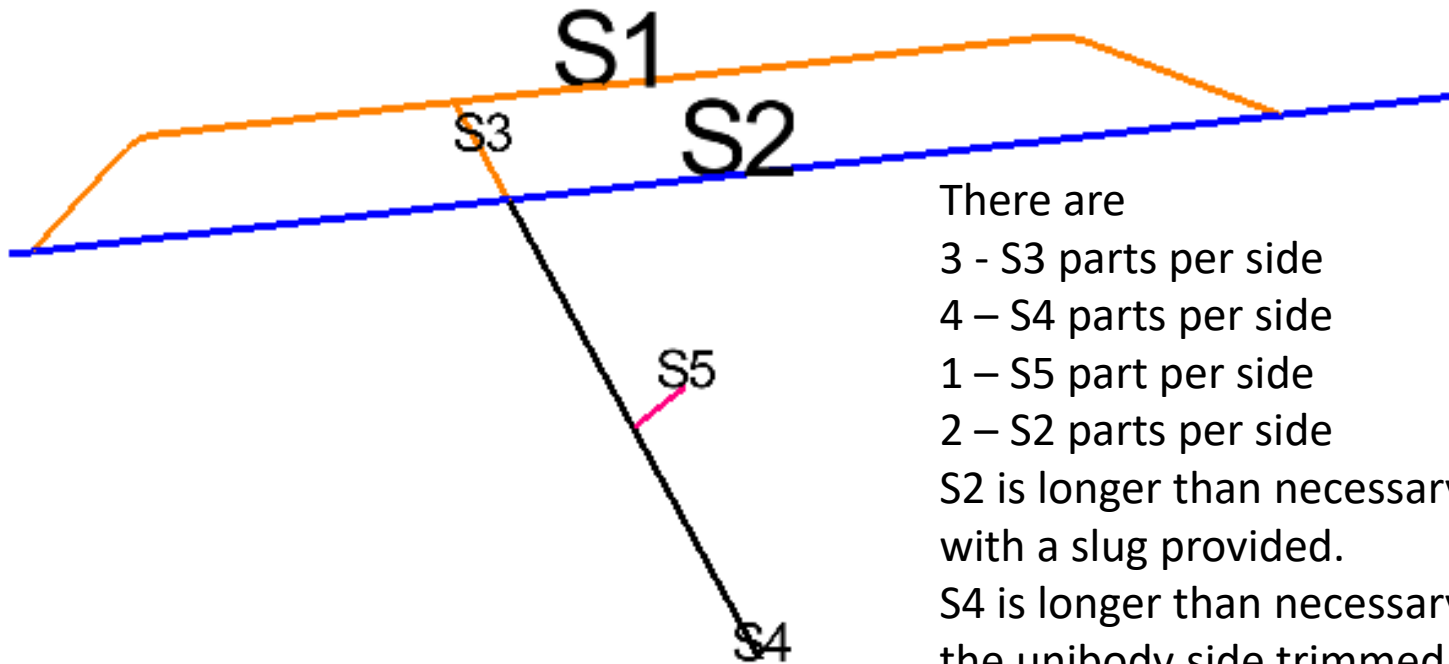
Interior Parts



For visualization the parts are shown as centerlines only
Part Numbers engraved within 3" of the end of part
Passenger side parts are followed with a M (for Mirrored)

Slider Parts NOT INCLUDED!

We don't have the time to include slider but do include Part S5 to tie in your b-pillar as well as a plate for the bottom of the b pillars. **THIS IS IMPORTANT!!!! B pillar MUST be tied into the unibody stiffeners – DO NOT JUST BOLT TO THE FLOOR!!!!**



There are

3 - S3 parts per side

4 - S4 parts per side

1 - S5 part per side

2 - S2 parts per side

S2 is longer than necessary and in 2 parts with a slug provided.

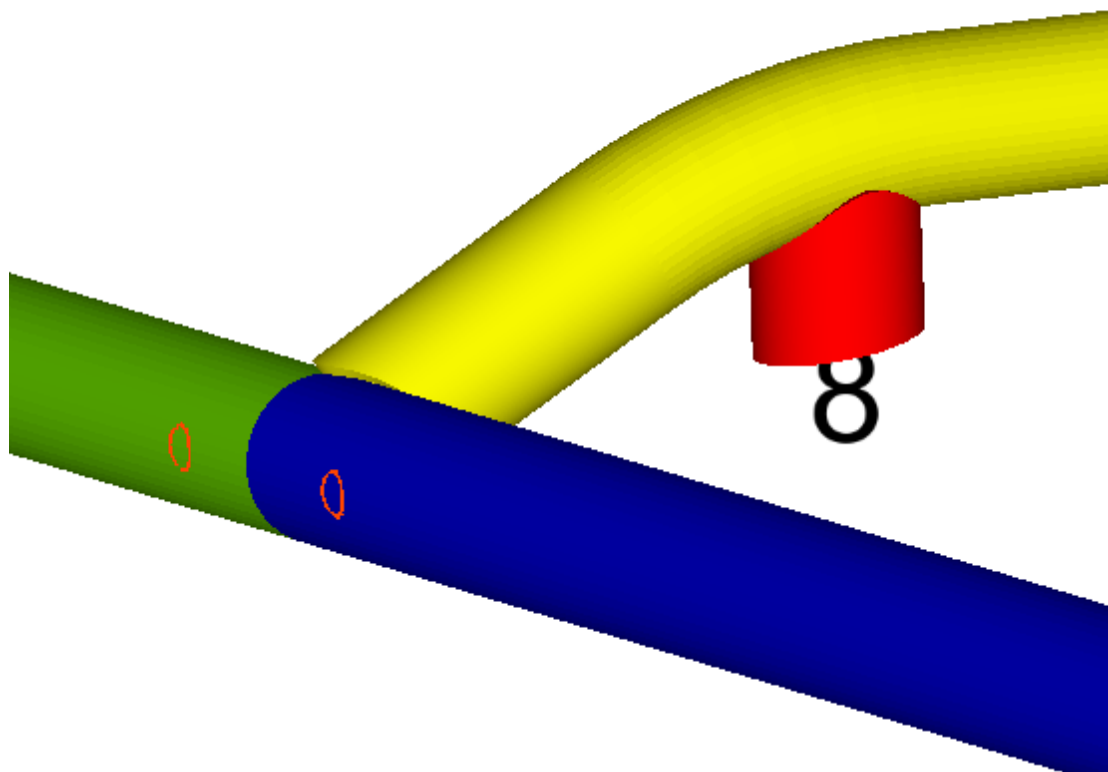
S4 is longer than necessary and will need the unibody side trimmed to fit.

S5 is also longer than needed if the slider is tucked tight to the body and will also need to be trimmed to fit on the flat side.

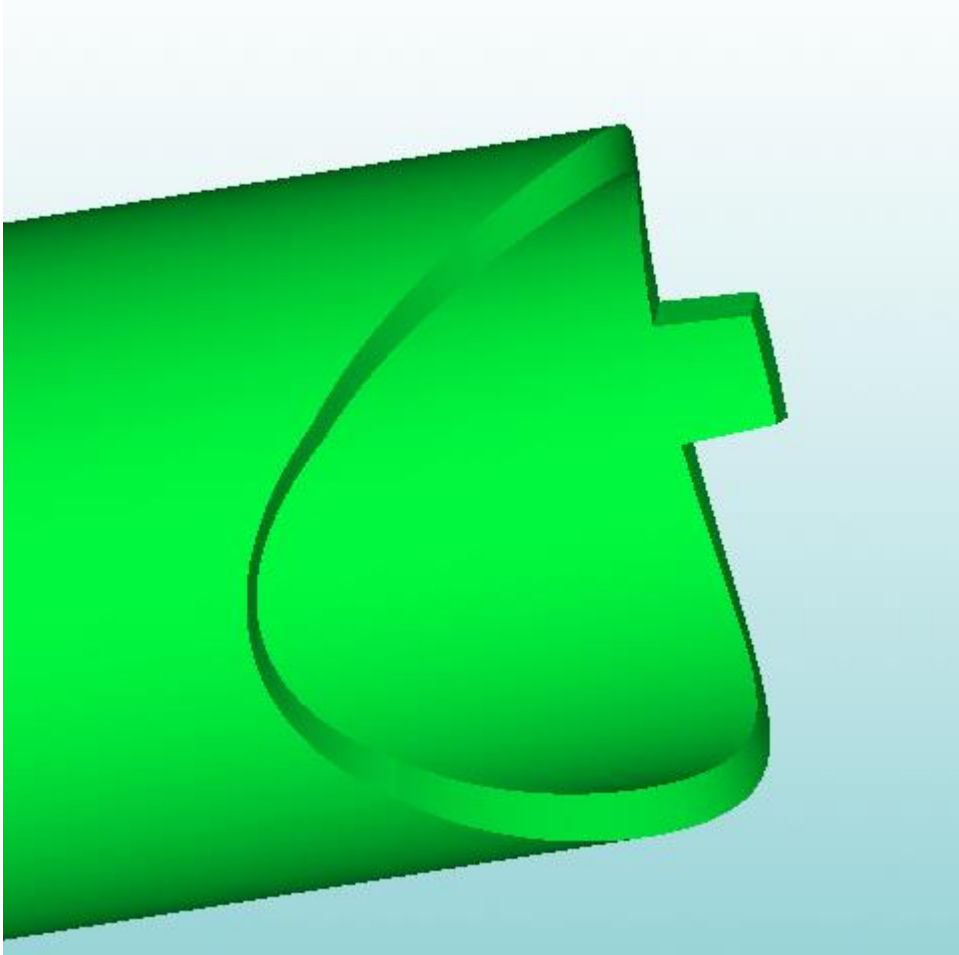
Details

Part 8 mounts to the plates and through the roof to the interior cage. All 4 part 8's are identical. As shown part 3 will be centered on the joint between parts 1 & 2. We like to leave a 3/16" gap between the parts to ensure a good weld to the slug.

The 1.75 tubing may have some slag from the cutting process, clean and inspect this prior to installing the slug – it will save you some headache. It will be a tight fit but should be adjustable without great force. Using a hammer to hit the slug into one tube will flare the end and cause issues with getting the other tube in.



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.

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 Parts 1-7 and their mirrored parts. Rest this assembly on the roof supported by mounting plates and part 8's.

Next fit parts 15-18 (b-pillar interior) 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 Cont'd

Order of Assembly – Cont'd

The slider or C/D pillars can be assembled next

Sliders

Slug two S2 parts together and tuck tightly to the pinch seam. Make sure it's level and extends forward of the front door so Part 10 can mount to it. Fit part 10 and S4's to this long S2 piece. Ensure that one of the S4's is as close to the joint at part 10 as possible and also another one directly under the b-pillar interior plates. Fit S5 and a mounting plate to the S4. Fit S1 and S3's to the assembly. It's best to heavy tack the slider assembly and then remove it for finish welding. The final welds will be to the unibody and part 10 at the very end.

C/D Pillars

Parts 19, 21,23 & 24 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 and all coatings before welding to the unibody. If there is significant rust this must be repaired or braced to ensure safety.

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. If nothing is working please don't hesitate to contact us!

The tubes are CNC plasma cut and therefore the edges 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 10 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. Better yet brace these parts underneath to be more thorough.

The sliders will be welded to the unibody stiffeners at the end and will not be able to be removed so welding and painting of the main parts is reccomended.