

Rack forward FRS BRZ GT86 crossmember center section

Description & install tips

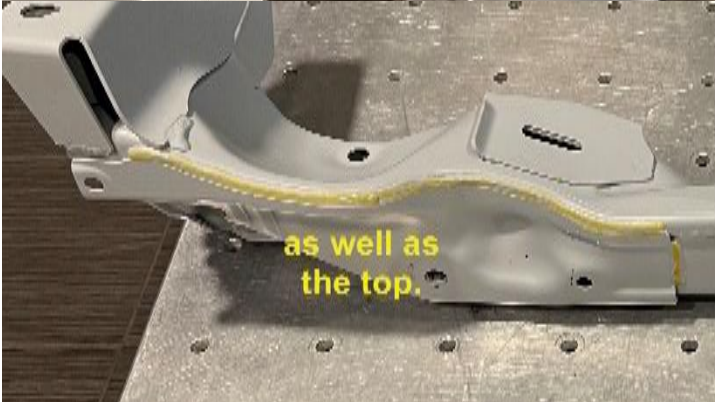
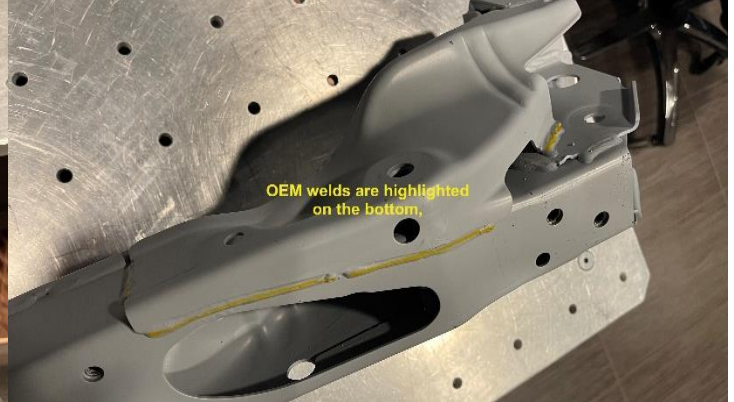
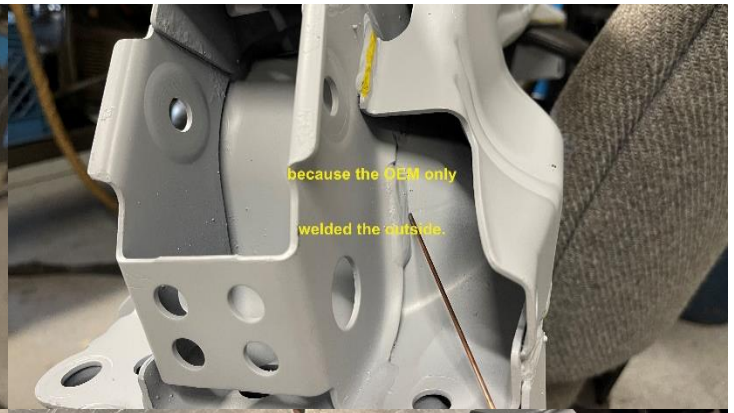
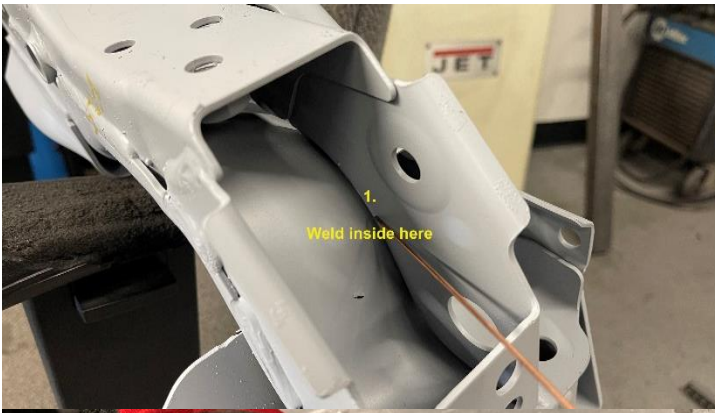
Forward movement of 33mm with this crossmember mod is very similar to the 36mm seen on our angle kit's rack to inner tie rod forward offsetter. However leverage on the rack is reduced & it's life expectancy is increased making this mod worth all the effort. Use FDITR494UP tie rods to make up for the length lost when removing offsetters. After the CM Center Section is in, bumpsteer is less progressive & can be eliminated by adjusting washer stack height between outer tie rod & knuckle. We've confirmed clearance with Both LS Swap & the stock exhaust / oil pans despite the giant reinforcement plate on the front side. The 1/4" of stock pan clearance may not be enough one day on blown stock motor and subframe mounts but you should have those things sorted out before this more advanced mod. This ZNC6CS plate will not need the steering shaft extension as seen on other cars because it has a relatively vertical shaft so this rack forward position is more of an angle change on the U joint than telescoping on the shaft so these OEM parts can accommodate both movements freely. V8 swap header tube(s) will need customized for shaft clearance. Our solid bushings require a little grinding on the OEM lock ring to match the shape in the rack casting. Install the centered steering shaft on the centered rack before securing the 2 bolts through our solid rack bushings to the crossmember plate.

Over 100 photos can be found in the fabricator's guide below. On other cars, we've made a 3D steel cut-marking template or heavy duty precision welding jig, however in this case where we can move the rack forward on a perfectly flat plate, there's an opportunity to avoid the added costs of marking and fixturing tools. Every preproduction step from 3D scan of the OEM part and clearances, to CAD design, prototype testing and these instructions insure that everyone can save time and costs using this mod.

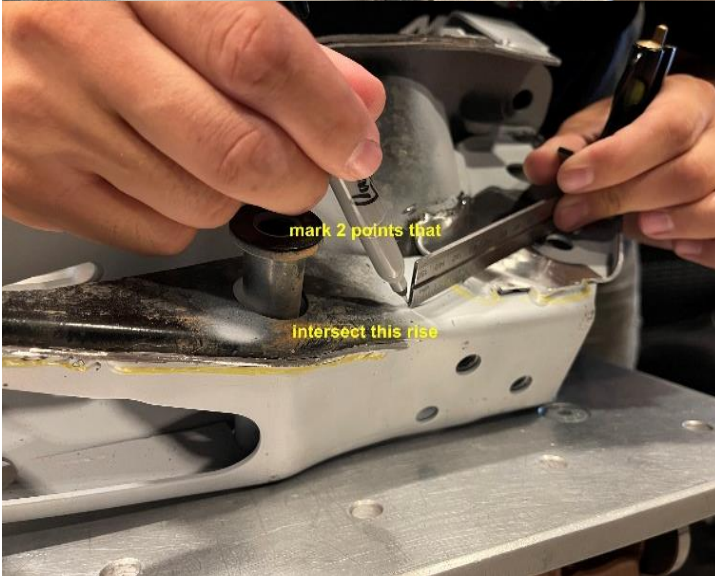
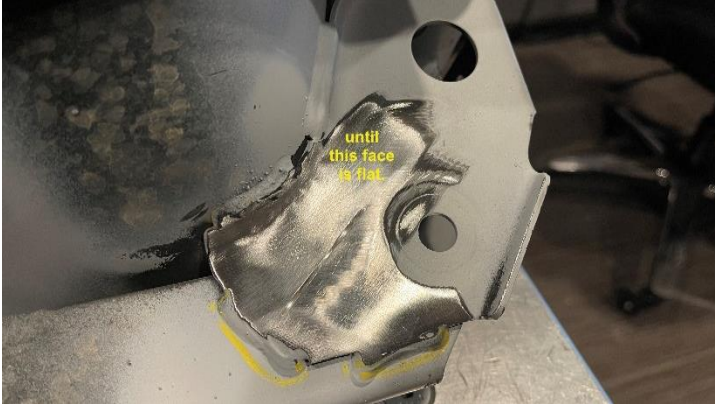
Parts we supply in this set for your Cross Member modification



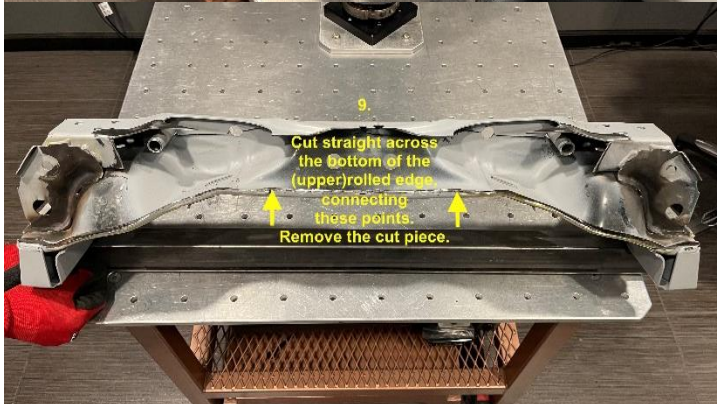
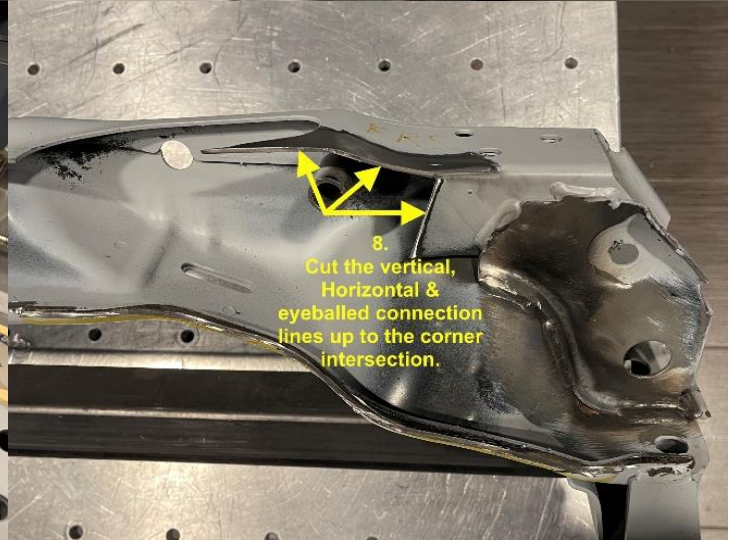
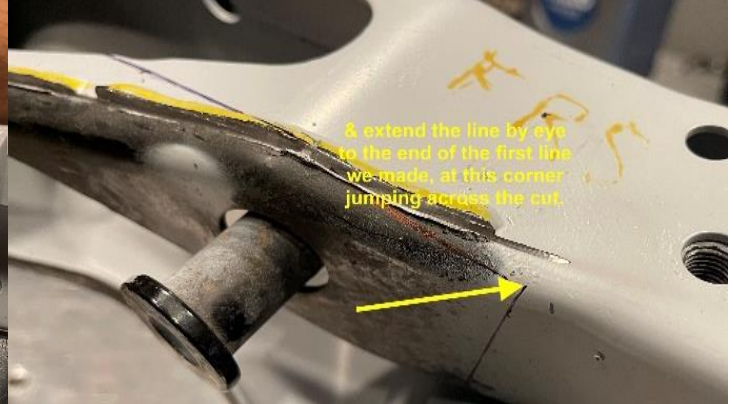
Fabricator's Guide

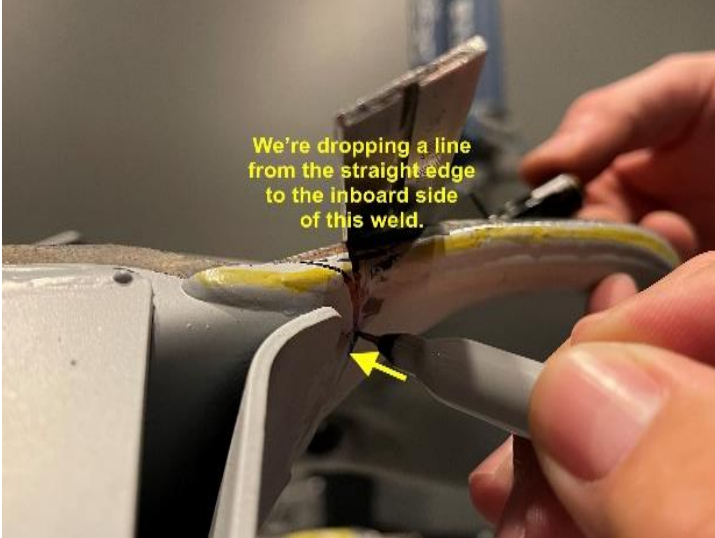


Fabricator's Guide



Fabricator's Guide







Hold a razor blade flat up against the plate wherever you can reach

through the bottom holes to scribe the line along the bottom of the plate.



We primed the crossmember

to easily see the line scribed under the plate.



Here you can see the result of the razor blade

scribed line transferred clearly to the primed crossmember surface.



A straight line will connect left and right scribe lines.



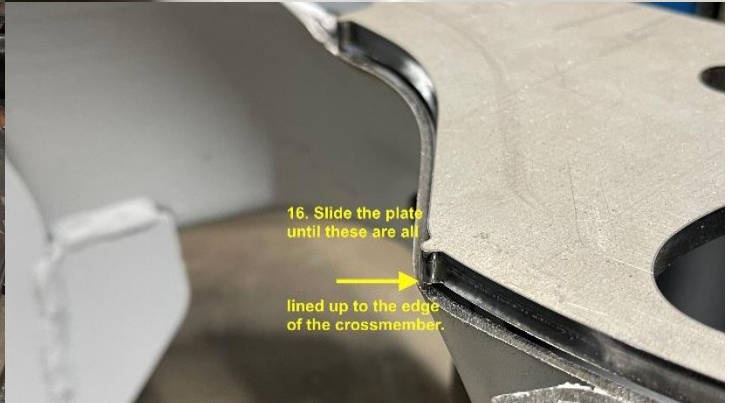
Complete the scribe line.



15. Cut over the scribed line so any burr leaves more material for fine grinding after the cut is complete.

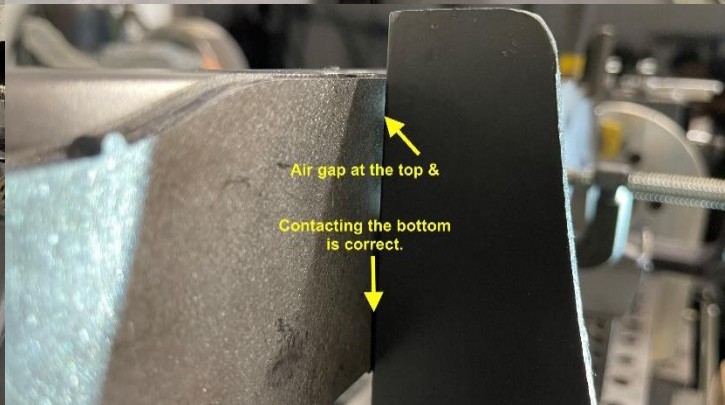
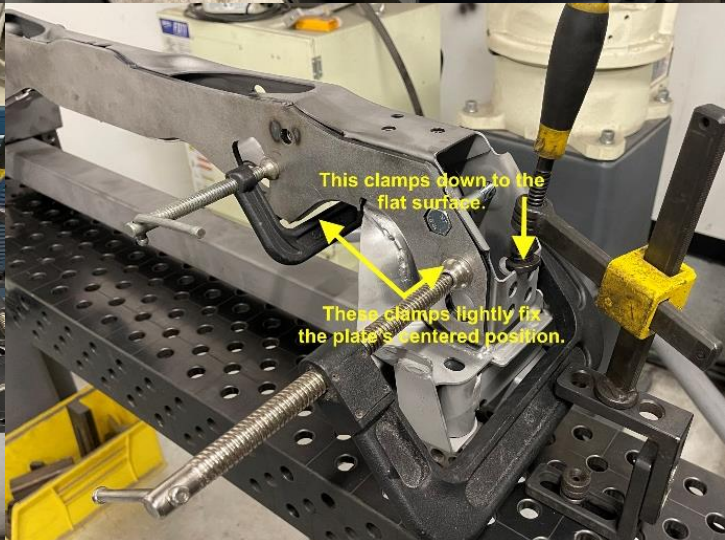
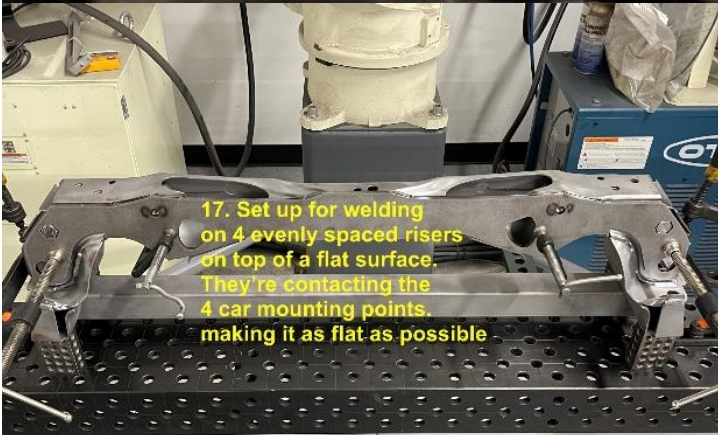
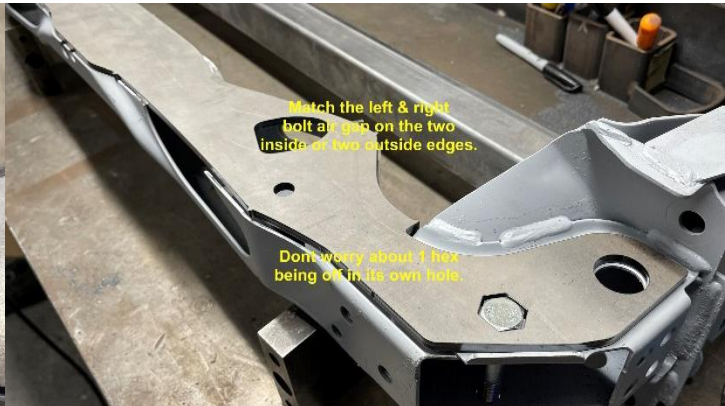
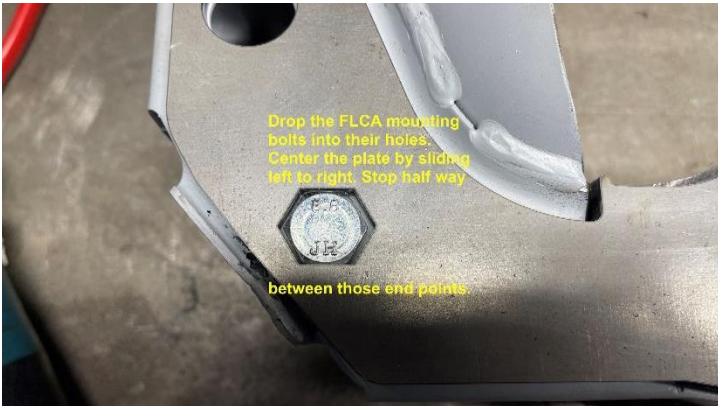


Cut is finished



16. Slide the plate until these are all

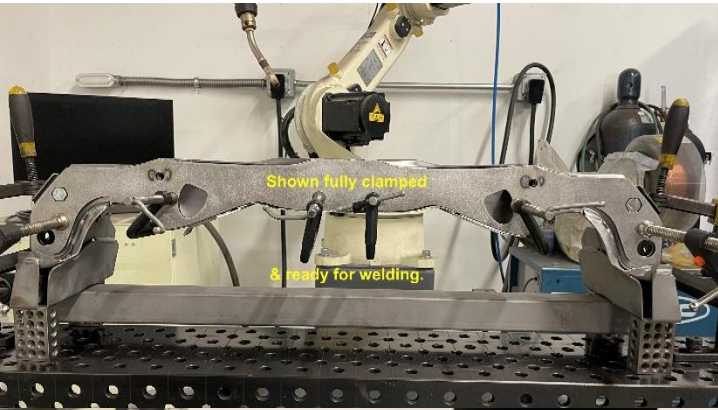
lined up to the edge of the crossmember.





2.3mm gap from square

to plate tells us we are at the correct angle.



Shown fully clamped

& ready for welding.



The OEM material that comes to a point here tends to flare up so

we simply hammer it down to close the gap for welding.



19. Tack weld the perimeter on top



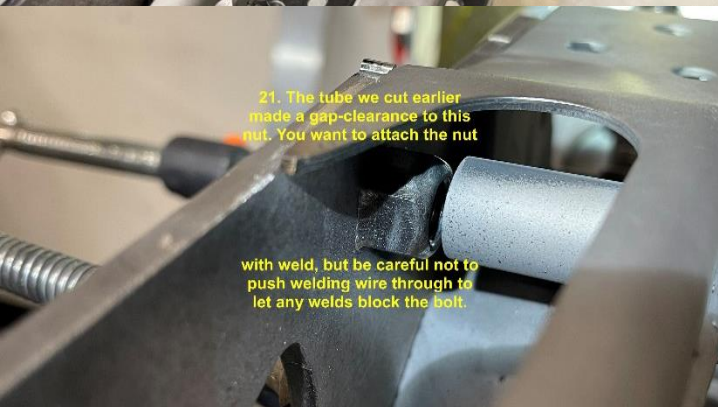
bottom. Notice there is a nice even valley to fill with weld all around.



20. Place the overlay plate on the front side of the crossmember where it wants to sit for best fitment.



Tack weld it top and bottom.



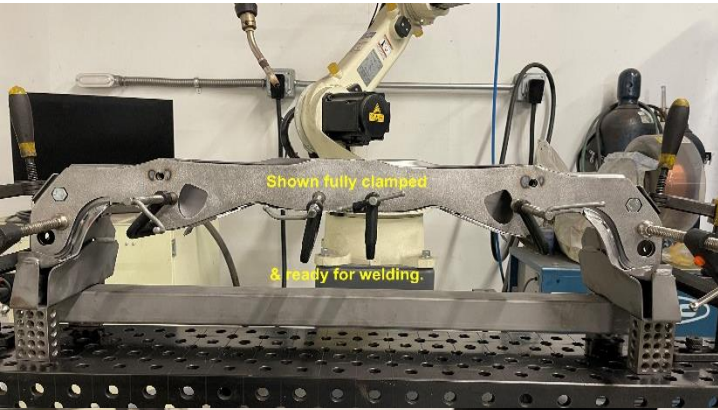
21. The tube we cut earlier made a gap-clearance to this nut. You want to attach the nut

with weld, but be careful not to push welding wire through to let any welds block the bolt.



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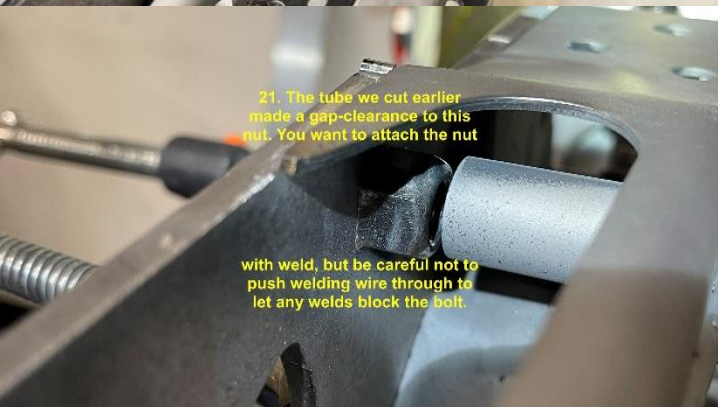
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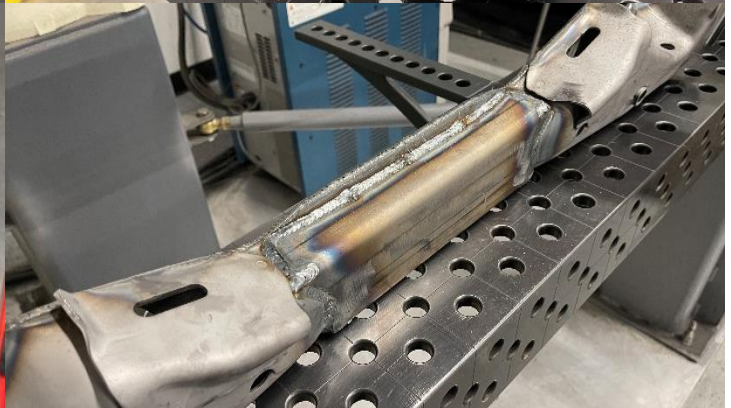
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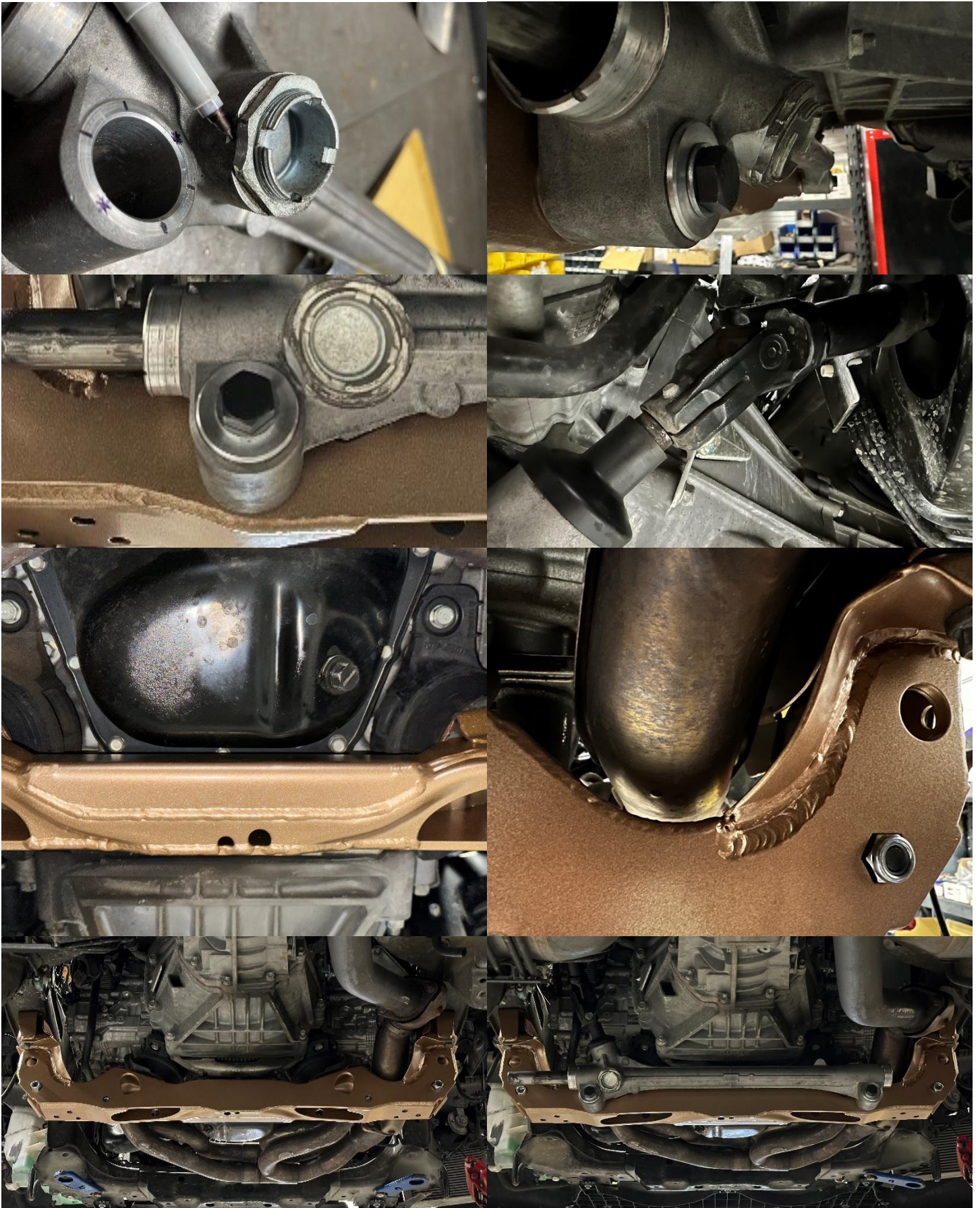
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Install Example



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