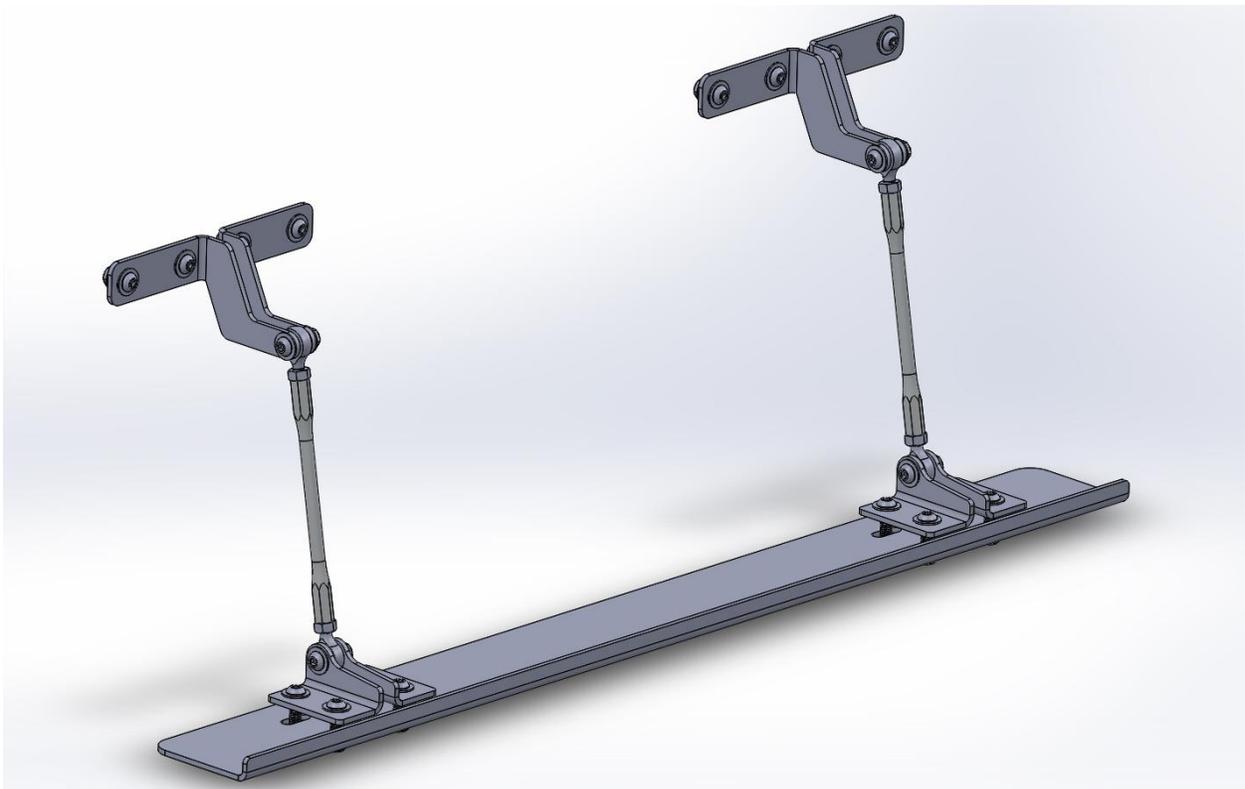




Race Splitter Upgrade Kit

Installation Instructions



Overview: Detailed instructions on installing the FT86 Speed Factory Race Splitter Upgrade Kit on a BRZ; FR-S grills are different and may require modification.

Difficulty: Intermediate to Advanced

Time required: 60-120 minutes

Tools Needed:

- Jack and jack stands (Not Necessary)
- Ratchet
- Flat & Philips screwdrivers
- 10mm socket
- 7/16 socket
- 4mm hex head socket or allen wrench
- 5/32 hex head socket or allen wrench
- 3/8 wrench
- 7/16 wrench
- Drill
- ¼ Drill Bit
- Center Punch (or un-used tap works well)
- Counter Sink
- Spray paint or underbody spray (optional)



In the box you should receive:

- (8) Lightweight, high density airfoil shaped splitter vanes
- (4) Hard Anodized Black Upper Splitter Supports
- (1) Hard Anodized Black Lower Splitter Support
- (4) Hard Anodized Black Crash Beam Mounts
- (2) Hard Anodized Black Splitter Rods w/ Rod ends and Stainless Jam Nuts
- (1) Bag of Hardware



Necessary Supplied Hardware Bag:

- (16) M6 x 1.0 Stainless FHCS (Flat Head Cap Screw) x 35mm Long
- (16) M6 Stainless Nyloc Flange Nut
- (40) 1/4" Stainless Washer
- (20) 1/4-28 Stainless Nyloc Short Nut
- (8) 1/4-28 Stainless BHCS (Button Head Cap Screw) x 0.63" Long
- (12) 1/4-28 Stainless BHCS x 1.00" Long



Installation:

- 1) Begin by jacking the car up on a level surface. Use of the e-brake or wheel chocks is suggested. Secure car on two jack stands with enough room to have access under the front bumper. This step is not necessary but may make subsequent steps easier later on.
- 2) Remove the street front splitter by reversing the installation from the Street Front Splitter installation manual. It will require the use of the 4mm Allen wrench and should result in the removal of (12) M6 BHCS.
- 3) At this time we can install the splitter vanes, which add downforce over the Street Front Splitter. Locate the (16) engraved hole centers which locates where the splitter vanes are to be installed.



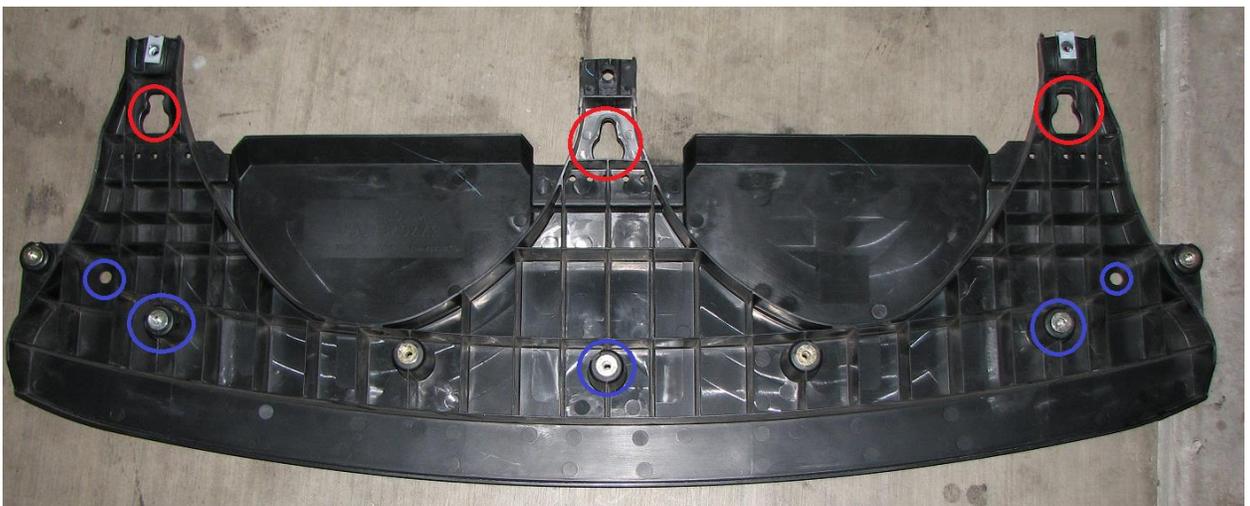
- 4) Utilizing the center punch and counter sink, increase the size of these engraved holes to decrease the chance of the drill bit wandering while drilling. Using a drill and 1/4" drill bit, drill the 16 holes as straight through as possible. Place the splitter on something soft to reduce scratching the surface (I used a towel on the leading lip and then propped it up on the wood as shown below).



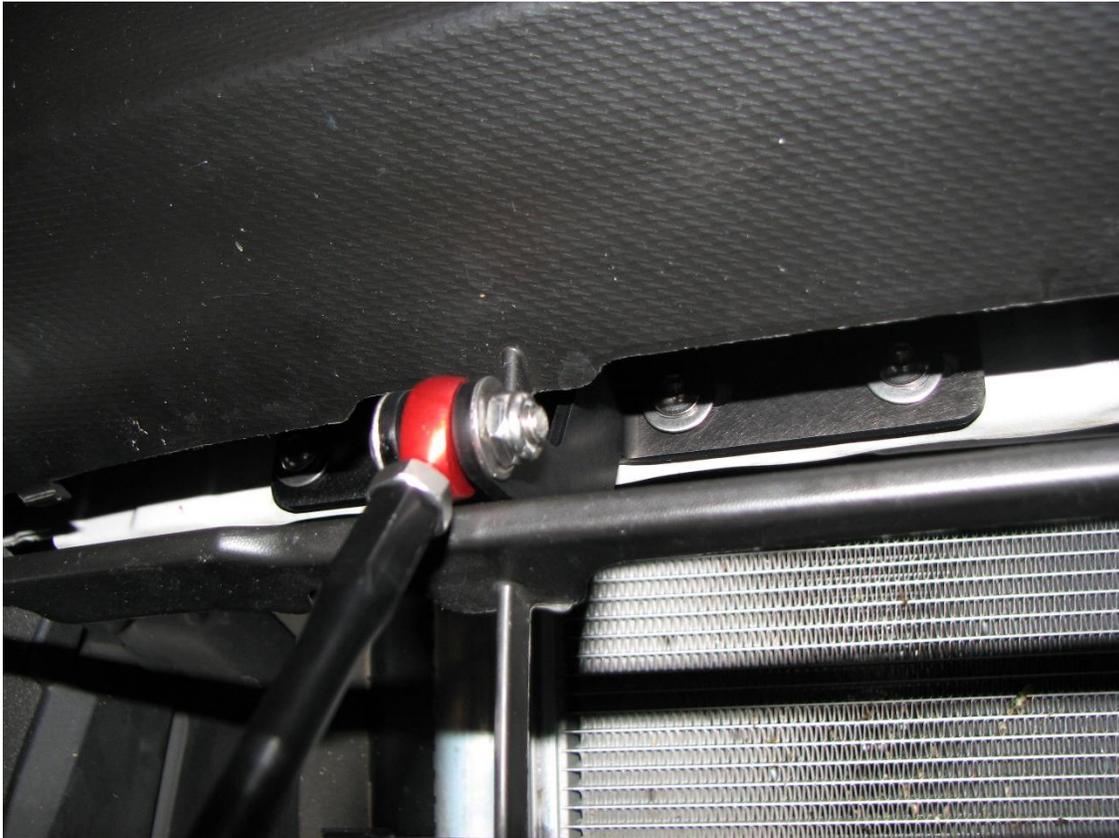
- 5) Find the bags with the M6 x 1.0 FHCS and the M6 Nyloc Flanged Nuts. Use a 4mm Allen wrench and a 10mm socket on a ratchet to tighten these vanes to the ***bottom*** of the splitter. There is no need to over tighten these as the nylon in the nuts will lock the bolts in place.



- 6) Place the splitter somewhere safe now that the vanes have been bolted on. Next up is to remove the plastic tray between the front bumper and the radiator support. This will allow you to reach your hands up to tighten the nuts and bolts for the crash beam supports. Remove the plastic push pins with a screwdriver (located in purple/blue). Also remove the (3) 10mm bolts with a ratchet and socket (located in red).



- 7) Now is a good time to take the crash beam mounts and check how they will be bolted to the crash beam. Hold them up and check where they will fit through the grill and look nice. The mounts were designed so that the bottom surface should be flush with the bottom of the crash beam, but every car is different. Ultimately this is where you need to use best judgment for an install you are happy with. In the following installed photo, notice how the bottom of the mount is flush with the bottom of the crash beam pinch weld.



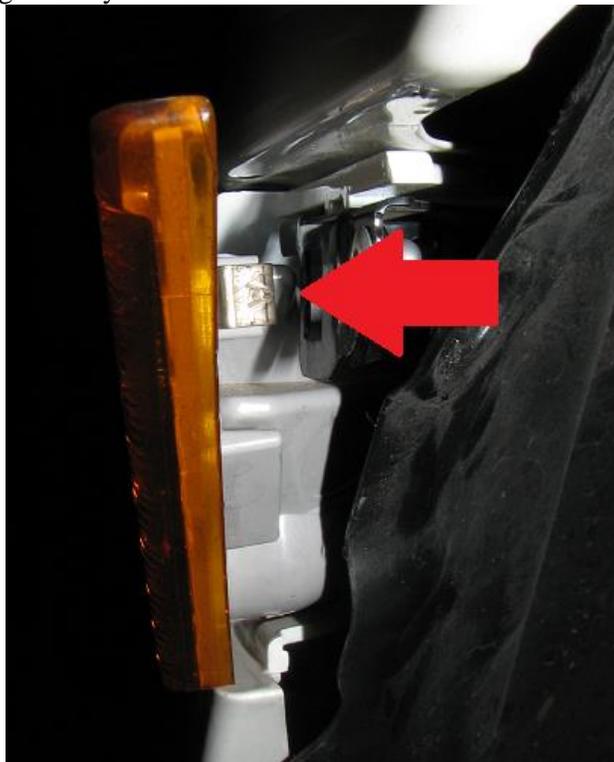
- 8) Next up is removing the front bumper. To remove the front bumper, remove the strip of 10mm bolts and plastic push pins across the top of the front bumper under the hood.



- 9) Then on each side of the car in the wheel wells, remove 4 plastic screw pins. Three are located down low (see below photo), the last one is up by the turn signal on the inside of the fender. Ignore that the splitter is installed in this photo, it was taken after the installation.



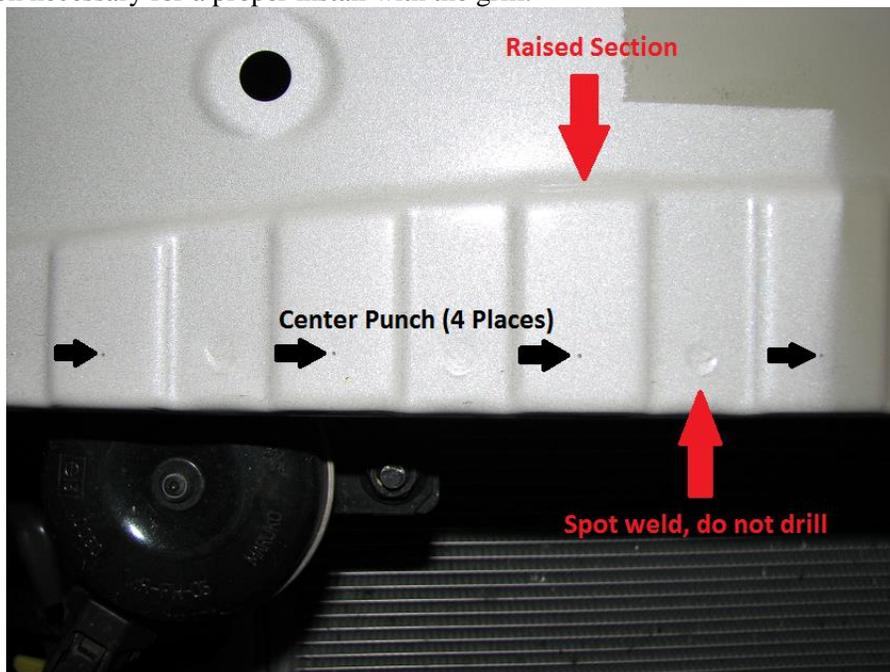
- 10) The turn signal has to be removed to expose the final plastic push pin and then the front bumper will come off. There is a metal tab that needs to be push towards the ***front*** of the car. The arrow in the picture shows this well. I used a flat head screwdriver to push this forward and then gently pried the signal away from the car.



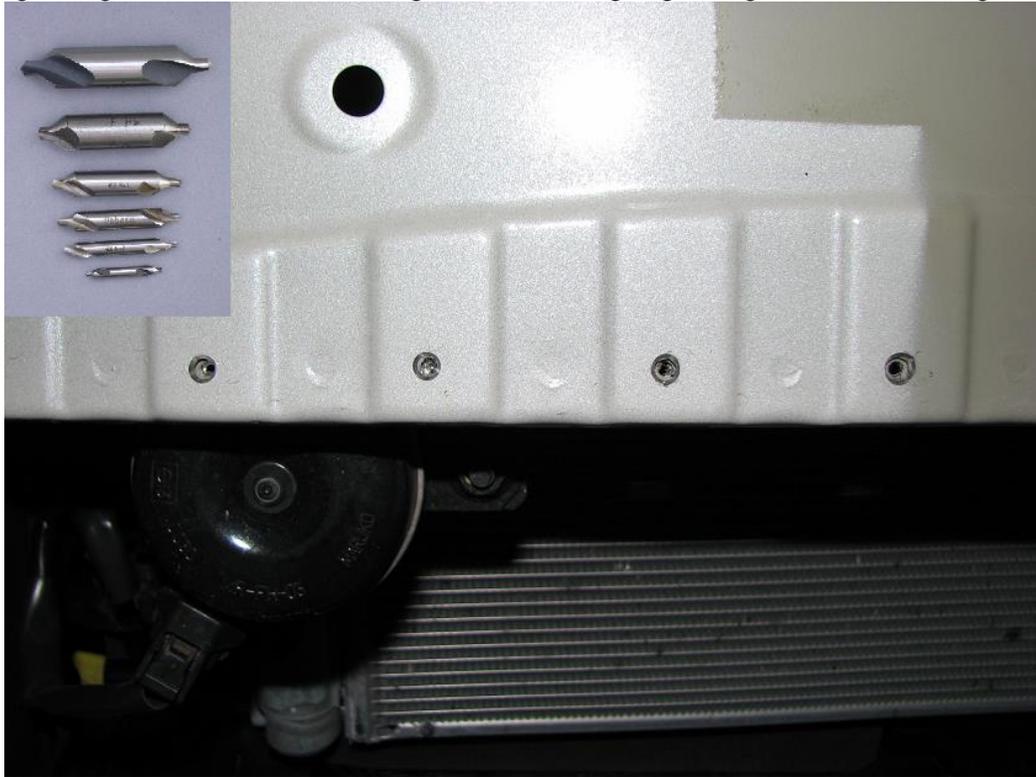
- 11) The final push pin is circled here! Remove this and gently pry around the front bumper to remove it completely.



- 12) Up next is drilling the front crash beam. You will notice that there are raised portions of the crash beam and then portions with spot welds on it. You will want to drill the raised portions as drilling through a spot weld can get bad quickly. The splitter supports were designed around an **18.50" spread**, which leaves ***6 raised*** sections between the brackets. Center punch the next 4 raised portions, using the brackets to ensure that you can bolt them on the crash beam in the location necessary for a proper install with the grill.



- 13) It is recommended to use a starter drill bit next (top left of picture) as these can greatly help cutting through sheet metal and ensuring that the drill is going through the material straight.

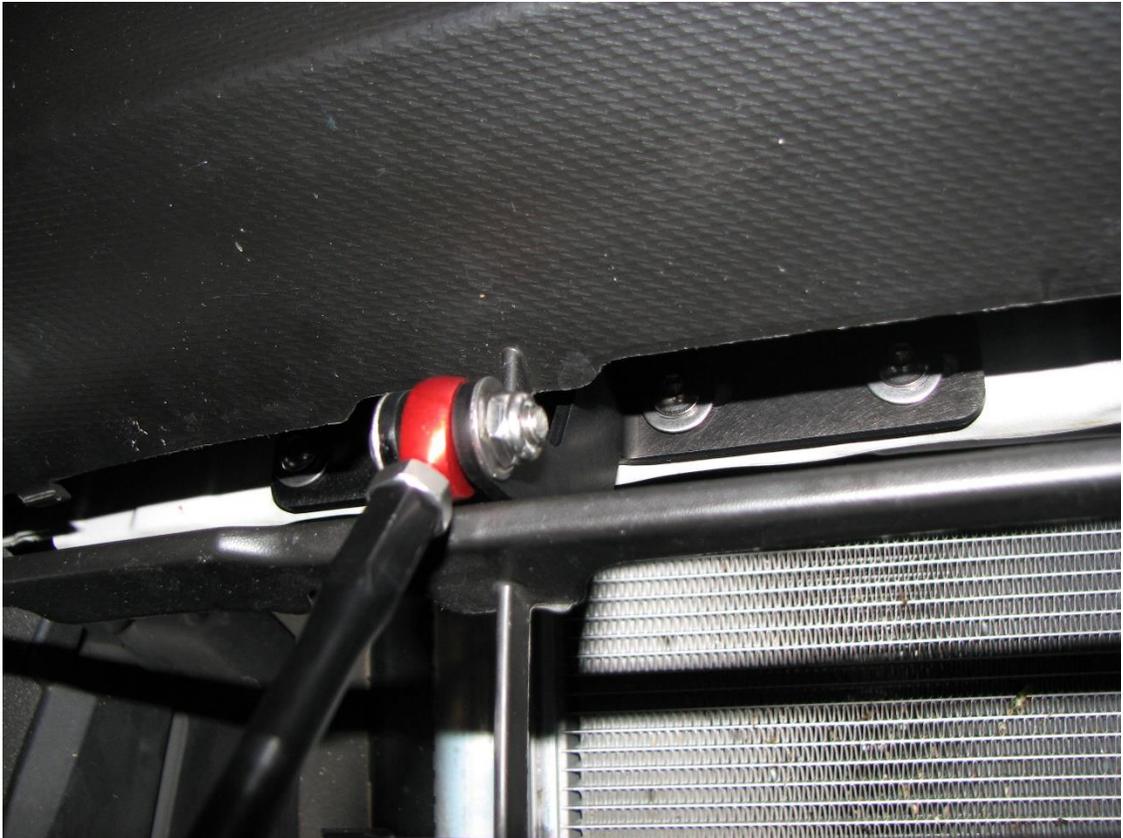


- 14) Using the 1/4" drill bit, drill through both parts of the sheet metal. Vacuum out all of the metal shavings you can. It is recommended to spray the holes with spray paint (at the very least) and underbody rust resistant if you have some. This ensures that the crash beam will not rust for years to come.



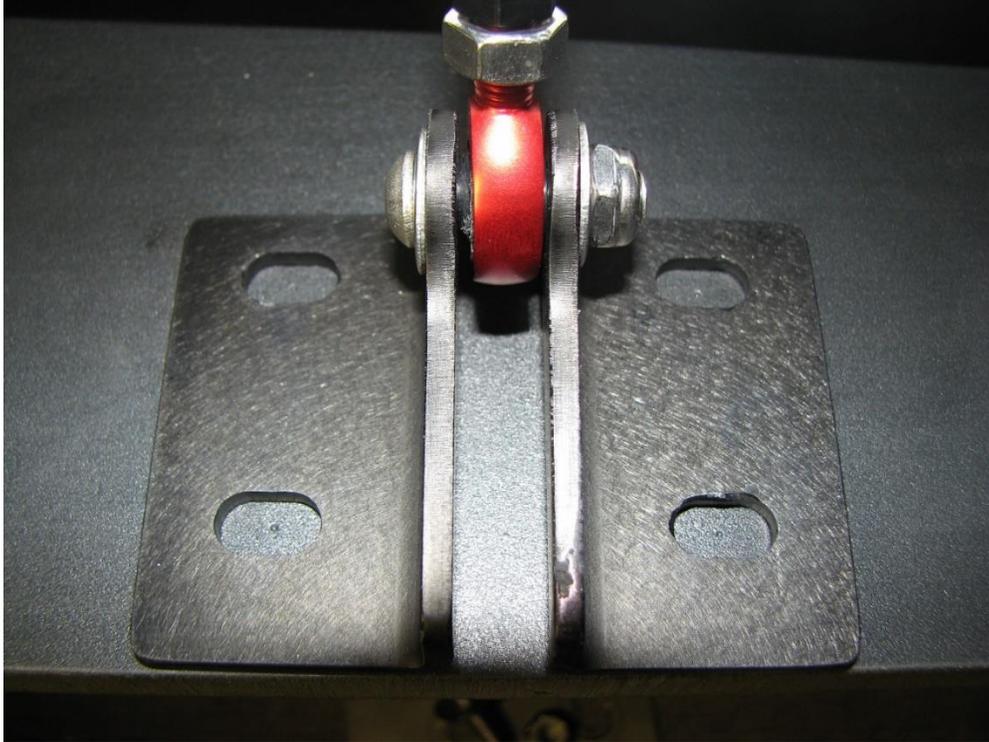
- 15) Ensure that the brackets will fit and that they can slide together till there is a 3/8" gap between the two mounting holes for the splitter tie rods. Do this by using the (8) 1/4-28 BHCS that are 0.63" long, (16) 1/4" washers, and (8) nyloc nuts. You do not need to tighten these down, just enough to know if the brackets will work once the bumper is put back on. Once you ensure the holes were drilled properly, remove the brackets and reinstall the bumper in reverse order.
- 16) Once the bumper is back on, start by installing the crash beam mounts first. Like before, use the shorter 1/4-28 bolts, a washer on the bolt and a washer on the nut, and bolt them to the core support. It will likely be necessary to move the horn; this can easily be done by loosening the 10mm bolt. Do ***not*** fully tighten the brackets to the support yet. I found it easiest to do this part of the install from the **bottom of the car**. Once all 4 of these brackets are loosely installed, install one side of the splitter rod on each side. Tighten this to ensure the brackets can fully clamp the rod end. Once this is done, find the final position (left or right) you want the splitter rod to rest and tighten the crash beam mounts fully.

17)



- 18) Install the stock plastic underbody piece we removed in step #6 and the upgraded race splitter.

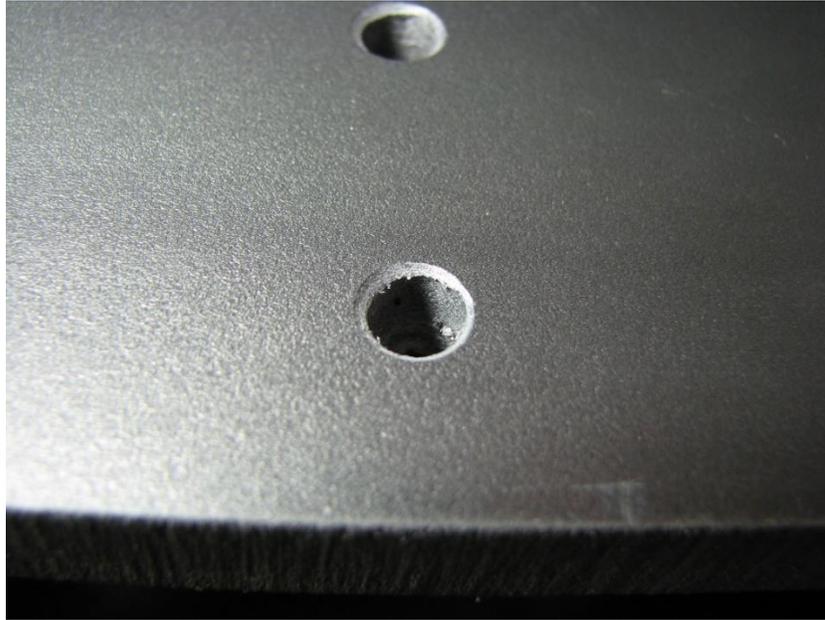
- 19) The upper splitter support brackets are next. Tighten two of these to the splitter side of the tie rod. Adjust the height by using the rod (**one side is left hand thread, one side is right hand thread, this allows the unit to grow while neither rod end spins**). Once the splitter supports are just touching the splitter, stop adjusting the rods. The splitter supports should be **flush with the front side** of splitter as shown below, with **18.50"** horizontally between the two splitter supports. We can now mark the splitter for drilling with the center punch.



- 20) Utilizing the starter drill bit or countersink, make these marks slightly larger to ensure the drill bit goes straight through the splitter when drilling.



21) Drill the 8 holes with the 1/4" drill bit. Countersink the holes lightly to finish off the holes (optional).



22) This step gets a little tricky and an extra set of hands makes the install go much easier. We are going to bolt the upper two splitter supports, and the lower splitter supports. Drop the remaining (8) 1/4-28 bolts with (8) washers through the brackets. Lift the lower brace upward and loosely install the (8) remaining nylocs with (8) washers on each as well. Once all eight nuts are on, you can center the lower brace how you see fit and then tighten the bolts and nuts together.



23) The install is finished, you may now enjoy your upgraded splitter! Please read the informative packet as well to better learn what the race splitter kit offers. We would like to re-iterate that we do ***not*** recommend standing on the splitter, even though it can support the load.

