VA Chassis WRX Front Splitter and Splitter Tie Kit

Install Manual

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Release Date: 2016/09/23
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Document Revisions

Rev	Date	Author	Description
01	2016/09/23	E.Hazen	Initial release of install manual
02	2017/08/08	P. Lucas	Company name change from Velox to Verus

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VA Chassis WRX Front Splitter and Splitter Rod Kit – Install Manual

1. Introduction

1.1. Overview: Detailed instructions on installing the Front Splitter and Support Rod Kit for the VA chassis WRX and STI.

1.2. Difficulty: Beginner to Moderate

1.3. Time Required: 1.5-4 hours, depending on support rod kit

1.4. Tools Needed:

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- **1.4.1.2.** Screwdriver
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- **1.4.1.4.** 12mm Socket
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- **1.4.1.6.** 4mm Allen Wrench
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1.6.2. (4) Clevis Mounts
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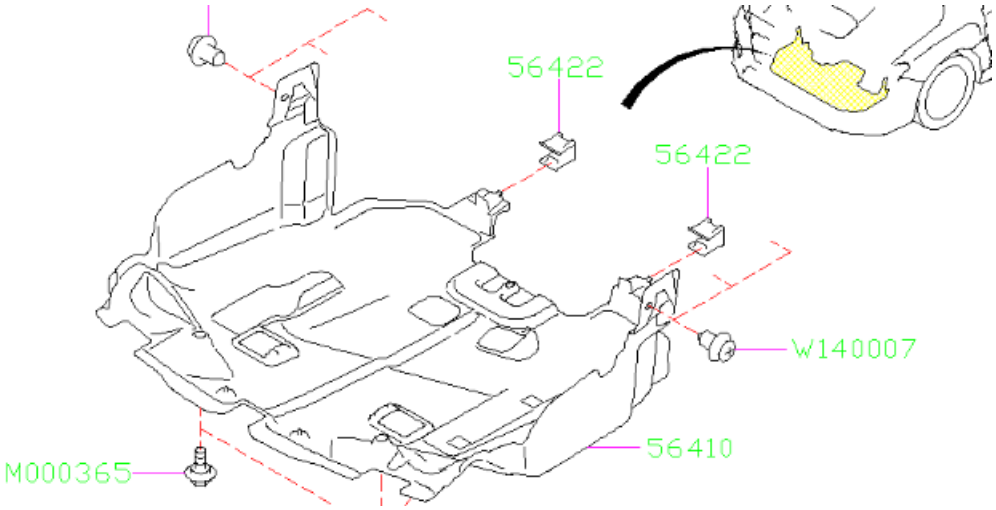
2. Front Splitter Installation

2.1. Velox is not responsible for damage to you or your vehicle by following this manual and/or installing Verus Engineering products

2.2. We begin by jacking the car up. You'll want to choke the rear wheels and use the e-brake.

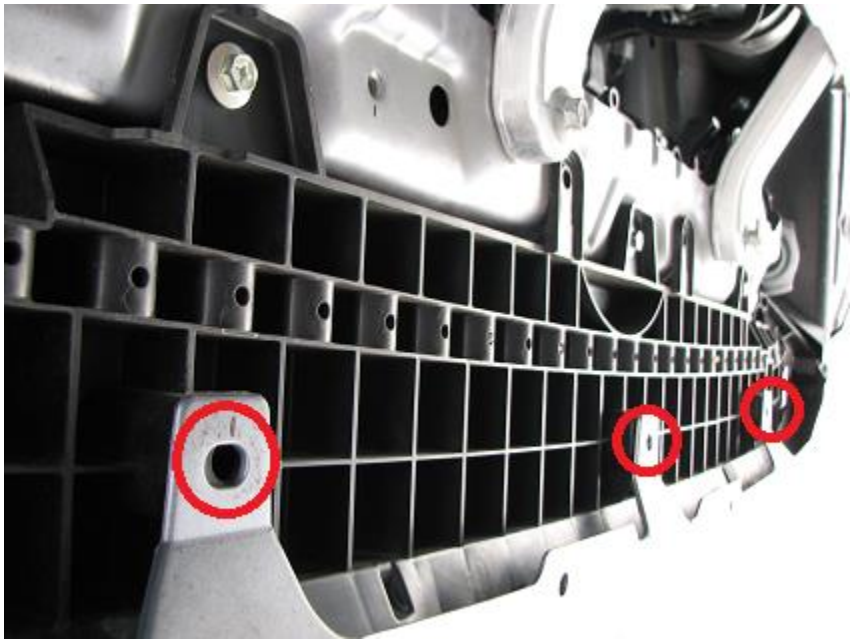
2.3. Place a jack stand on either side of the car, you can use the frame rails or the pinch welds.

2.4. With the front of the car off the ground, we'll want to start by removing the underbody plastic piece. This piece is quite large and has multiple plastic push rivets and a few bolts holding it on. Be sure to follow it into the fender to fully remove the component.



2.5. Below is a picture with this piece removed from the car.

2.6. You will now have access to the holes that need the rivet nuts installed into them. These middle (3) units are circled in red below.

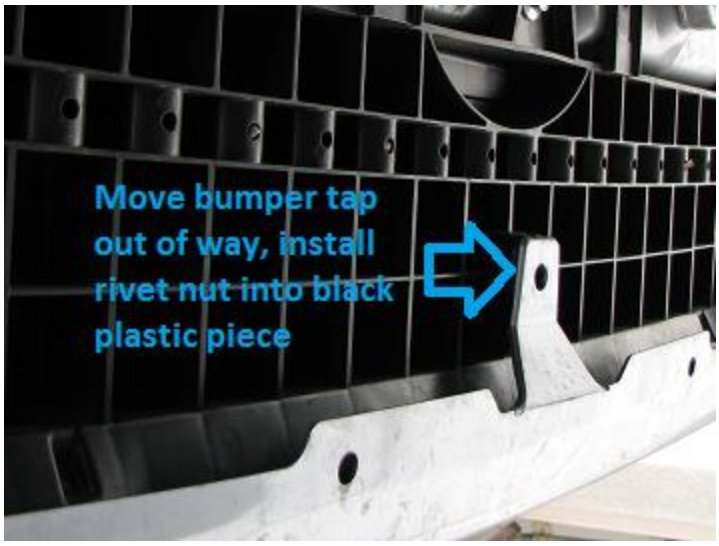


2.7. Moving outward, the outside three holes that need a rivet nut installed are circled in yellow below.

2.8. To properly install the rivet nut, you'll want to thread the rivet nut onto the tool as shown below.

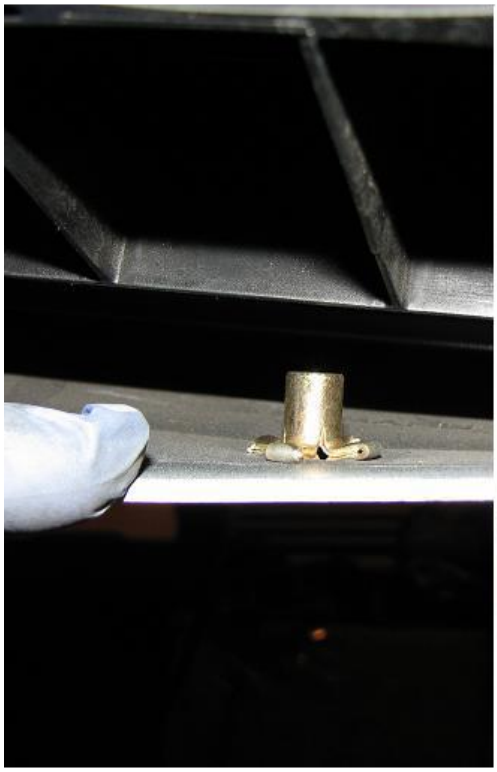
2.9. Place the rivet nut into the hole. If you'd like to use the rivet nut backing washer, you'll need access to the top side of the material you are riveting onto. Note, the backing washer is not necessary but will decrease the chance that the rivet gets pulled through the bumper.

2.10. **You'll want to only rivet the base material**, which means on the front (3) holes, you'll want to move the bumper tabs out of the way, and the plastic shield away on the outside holes.



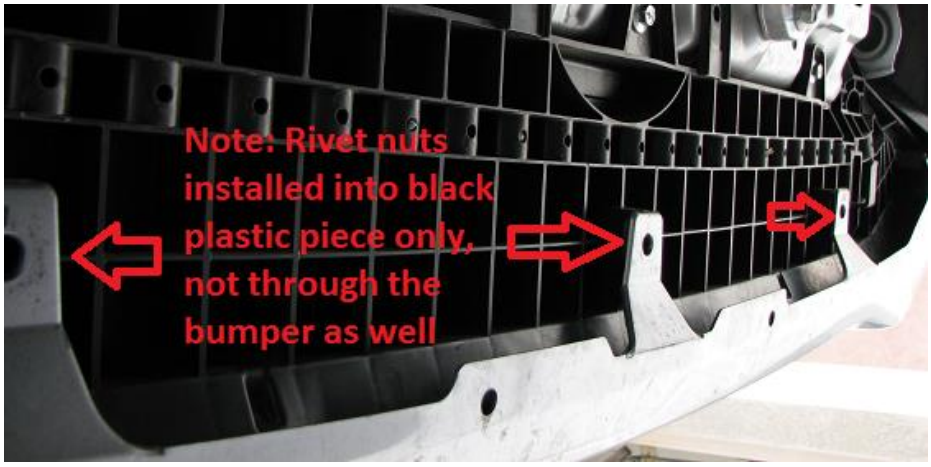
2.11. Using the 9/16" wrench and the 5mm allen wrench, hold the nut steady and tighten the allen bolt. You'll have some initial resistance, than the rivet nut will begin to pull tighter on the material.

2.12. Below are pictures of a properly installed rivet nut. We did not use the backing washers here though feel free to if you would like, they are supplied with each kit.



2.13. Below is a photo of the outside three rivet nuts installed on the car. Note how the rivet nut is above the black plastic shield.

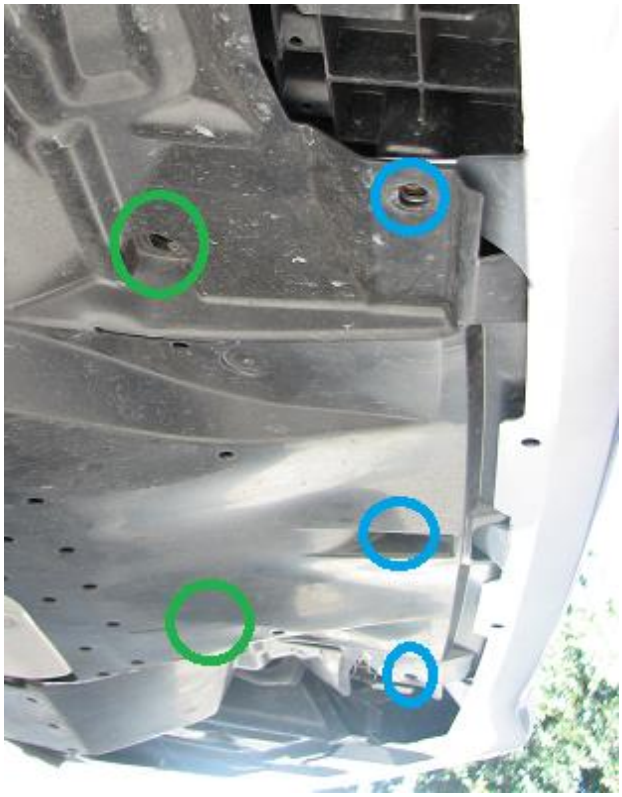
2.14. Below is a photo of the middle three rivet nuts installed on the car. Note how the rivet nuts are above the bumper tabs.



2.15. **If you are installing the splitter rod kit as well, skip to step 3 at this time.**

2.16. We begin reassembling the car with the large plastic underbody shield with all the plastic rivets.

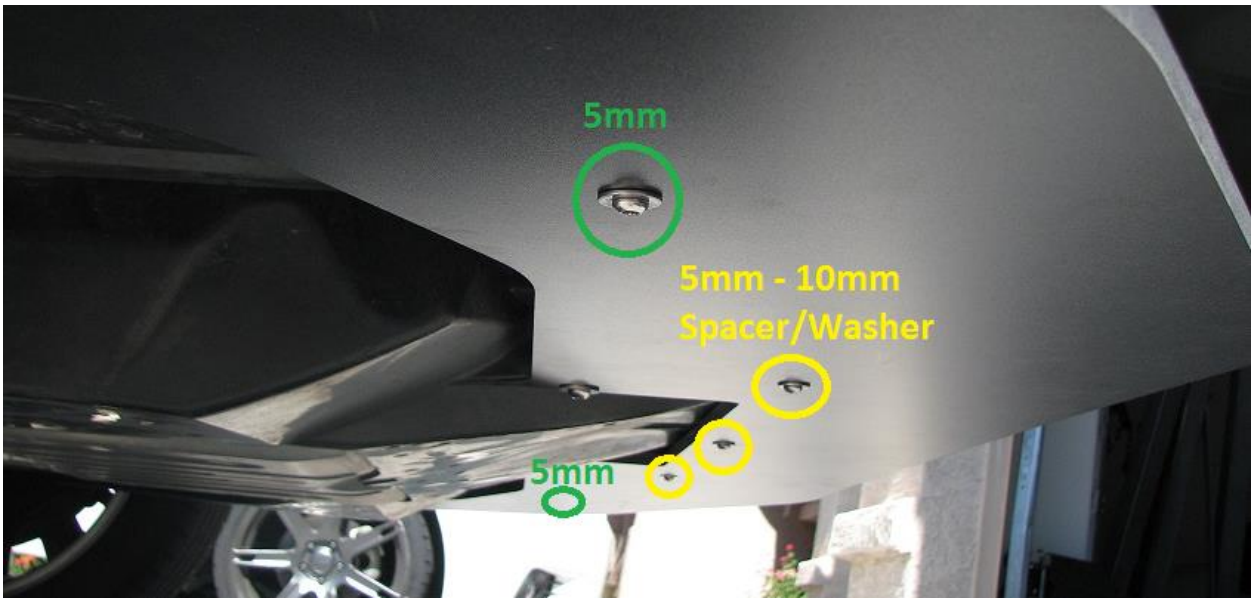
2.17. Leave the front (3) 10mm hex head bolts (circled in blue below) and the (2) 12mm hex head bolts (circled in green below) out of the plastic shield, we will use supplied hardware for these spots.



2.18. It's time to install the splitter now. You'll want to install all the bolts loosely first, **by hand!** The rear (4) bolts are M6 x 1.0 x 30mm long are installed without any spacers (circled in red). The rear two middle bolts are the M8 x 1.25 x 70mm long bolts, they need the 40mm nylon spacers installed between the splitter and the chassis (circled in blue).

2.19. The next bolts to be installed are the front five units, which all need spacers/washers installed above them to be installed perfectly flat. Typically the two units circled in green, which are M6 x 1.0 x 30mm long, use the 5mm spacer above the splitter (circled in green). **Hint: To slide the spacers in, pull down on the splitter and slide the spacer between the splitter and the car.**

2.20. The front most three units (circled in yellow) receive the longer M6 x 1.0 bolts, which are 40mm in length. These three holes receive between 5 and 10mm of spacers typically. Use the extra provided washers to achieve thicknesses between 5 and 10 mm.



2.21. With all the bolts loosely installed with the correct spacers, we can tighten all 11 of these bolts.

2.22. ***If the splitter does not sit perfectly flat, adjust the spacers/washers until the splitter sits completely flat.***

2.23. If you are installed just the splitter, you have completed the install! Enjoy an increase in front end downforce and an aggressive new look to your WRX. *If you are adding the front splitter support rods, which are suggested when the car is used at speeds above 100MPH, you can move to step 3!*

2.24. Please contact Verus Engineering with any questions, comments, concerns, and/or feedback via **sales@verus-engineering.com.**

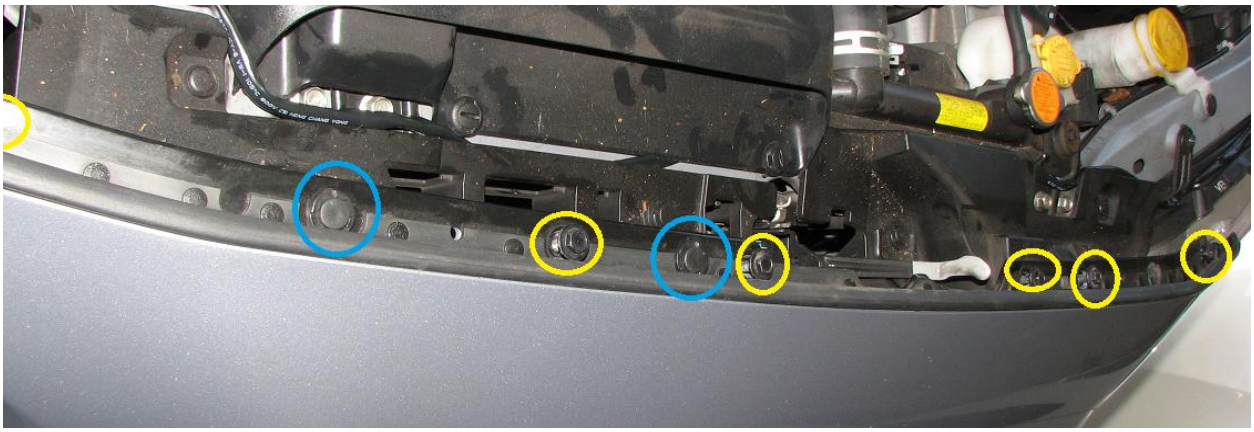
3. Front Splitter Support Rod Installation

3.1. We assume you are beginning the install at step 2.15, with all the rivet nuts installed but the splitter still off the car.

3.2. We have to remove the bumper for this part of the install.

3.3. Moving to the front of the fenders, we need to remove the plastic pop rivet located there (one on each side). This is shown below circled in red. Push the center in, then pull the rivet out.

3.4. Moving to the top of the bumper, we need to remove the plastic rivets here as well, and the 10mm bolts scattered throughout. The 10mm are circled in yellow. The plastic rivets are circled in blue.

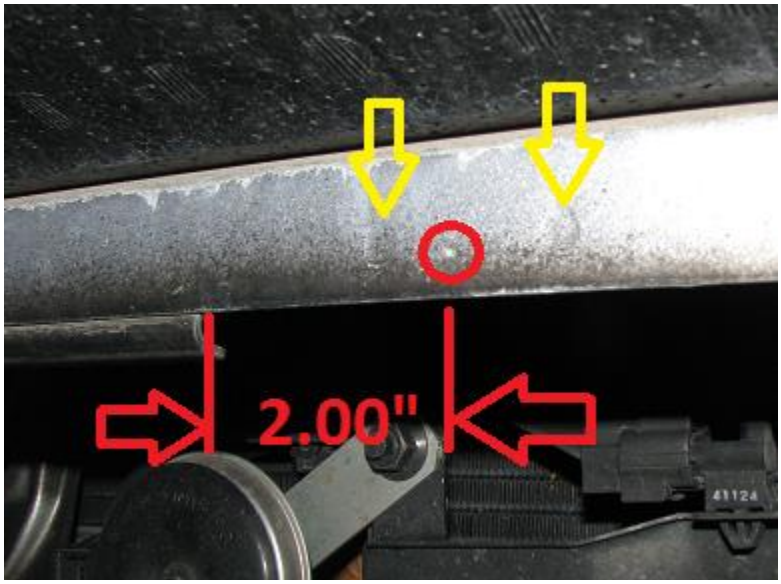


3.5. At this point, the bumper should be ready to come off. Starting at the front of the fender, pull the front bumper outward and slightly forward. It will require a tad bit of force to remove from the headlight surround tabs. Do this to both sides of the bumpers.

3.6. From the top, pull up slightly and forward, the bumper should come off the car at this point. If not, re-check to see if there are any bolts/rivets holding it on still and remove them.

3.7. We now have access to the crash beam, which is where the support rods mount to. The crash beam is shown below.

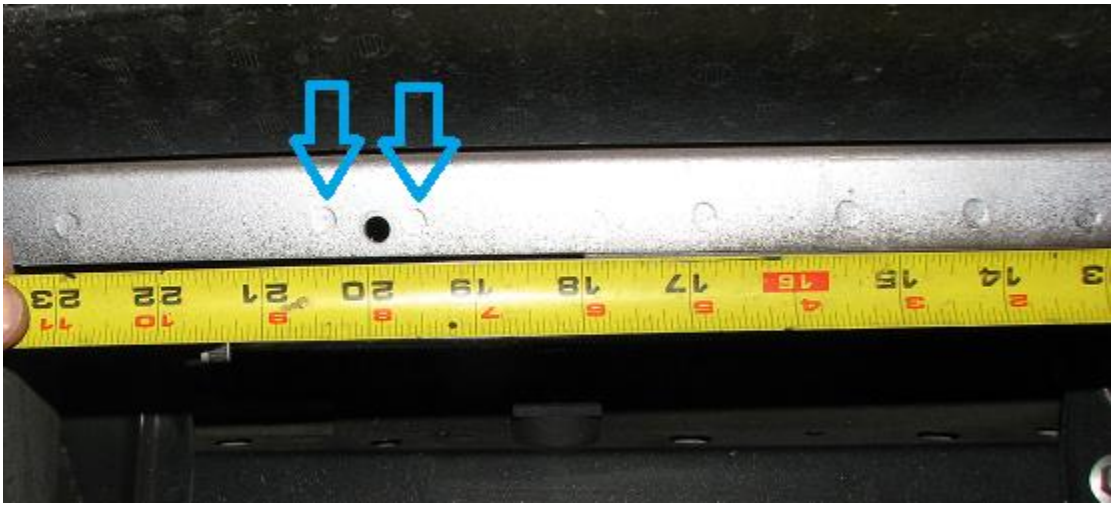
3.8. Using a tape measure, measure ~2” from the center strengthening rib on the crash beam (see below picture for a representation of this). Make a mark with a pencil or marker (circled in red). **Note: This should be in between the spot rivets, marked with yellow arrows in the below picture as well.**



3.9. Using a center punch and a hammer, create a center punched hole in the sheet metal so the drill bit does not wander.

3.10. Using a starter drill bit or a pilot sized drill (1/8”), drill the center punched hole out. Using the 1/4” drill bit, increase the size of this hole to 1/4" as shown below.

3.11. Using the tape measure, the hole to hole spacing should be 20.0” as shown below. Using the same procedure (center punch, pilot hole, 1/4" hole), drill this hole out as shown below as well. **Once again note, the hole is drilled between the two spot welds (blue arrows), this is important as drilling through a spot weld is difficult.**



3.12. Using the 5/8” long button head cap screw and a washer, bolt the clevis onto the crash beam. Do not fully tighten the clevis.

3.13. Remove the grill from the front bumper by working your way around the grille and pulling the tabs. The grill removes rearward of the front bumper.

3.14. Place the front bumper back on the car, you can fasten it back onto the car as the bumper should not need removed again.

3.15. We are able to remove and install the grill quickly by placing it through the grill opening and then pulling it forward toward the front of the car. The other option is to remove more of the underbody plastic; but we suggest the above method.

3.16. Hold the grill up to the opening and figure out what locations need cut out. Start small as you can always take off more material, but you cannot put material back.

3.17. Using the Dremel and a small cut off wheel, slowly begin removing material while test fitting as often as possible. To reinstall the grill, go up from below the bumper and gently press the grill into place. Below is a picture of a properly cut grill off car. This is roughly what yours should look like when done properly.

3.18. Shown below are more photos of the grill installed during test fitting of the splitter support rod system. Attempt to keep material removed to a minimum.

3.19. Before final install of the grill, we will want to fully tighten the clevis and the rod end into the clevis. Tighten the clevis into the crash beam with the 5/32 allen wrench so that the ears are vertical.

3.20. Using the 5/32 allen wrench and the 7/16” wrench, tighten the rod end into the clevis, a washer is used between the bolt and the clevis and the nut and the clevis. Use the 1.00” long bolt and the nyloc nut on the other side.

3.21. Install the support rod onto the rod end. Keep in mind the support rod is both left hand and right hand thread and need used with that respective rod end. This does not need to be tightened at this time.

3.22. Re-install the grill into the bumper by pulling forward on the grill and holding the bumper still.

3.23. Go back to step 2.16 and follow the instructions until 2.24 and install the splitter fully.

3.24. With the splitter fully installed, we can make the holes for the support bracket to bolt to.

3.25. Place the lower aluminum plate underneath the splitter, roughly centered, and mark the center of the two slots as shown below.

3.26. Center punch this mark then drill straight through this mark with a 1/4" drill bit. This is how we will mount the bottom of the support rod to the splitter.

3.27. Using the 1.00” long 1/4-28 BHCS and the large fender washer from the bottom side, bolt through the support bracket, splitter, and capture the clevis to the top side of the splitter.

3.28. Ensure that the splitter is near horizontal by using a level. The front of the splitter's level is now controlled by the support rod system. Lengthen it to lower the front of the splitter, shorten it to raise the front of the splitter.

3.29. At this point, everything should be installed on the car and can be fully tightened. Ensure all bolts and nuts are tightened on the underside of the splitter and the support rods are fully tightened as well.

3.30. On the support rods themselves, hold the support rod and then tighten the nut on each end to keep the support rod from turning.

3.31. We have now concluded the install of both systems, admire your hard work! The splitter can see over 200 lbs of downforce at this point. ***It is not wise to stand on the splitter, it can handle this load but the aluminum bracket beneath can bend and lead to distortion.***

3.32. Please contact Verus Engineering with any questions, comments, concerns, and feedback via sales@verus-engineering.com.