Rear Diffuser – GR WRX/STI

Install Manual

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Document Revisions

Rev	Date	Author	Description
01	2018/10/06	E. Hazen	Initial release of install manual.

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GR WRX/STI Rear Diffuser Install

1. Introduction

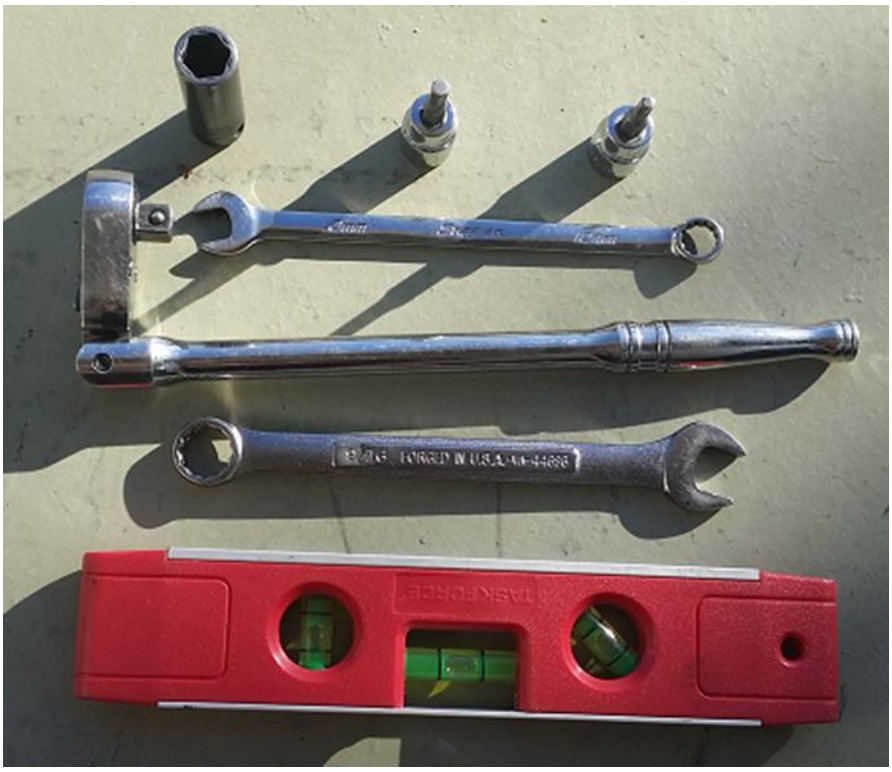
1.1. Overview: Detailed instructions on installing the Verus Engineering rear diffuser for the GR WRX and STI

1.2. Difficulty: Beginner

1.3. Time Required: 1.5 hours

1.4. Tools Needed:

1.4.1. Jack and Jack Stands (or a lift)
1.4.2. 10mm Socket/Wrench
1.4.3. 12mm Socket/Wrench
1.4.4. Ratchet
1.4.5. 9/16 Wrench
1.4.6. 4mm Allen Wrench or Socket
1.4.7. 5mm Allen Wrench or Socket
1.4.8.Level



GR WRX/STI Rear Diffuser Install

1.5. Rear Diffuser Components:

- **1.5.1.** Rear Diffuser
- **1.5.2.** (2) Front Brackets
- **1.5.3.** (2) Side Brackets
- **1.5.4.** (2) Rear Brackets
- **1.5.5.** (2) Loose Diffuser Strakes
- **1.5.6.** (1) Hardware Bag
  - **1.5.6.1.** (19) M6x1.0 Button Head Cap Screw (BHCS) x 16mm Long, SS
  - **1.5.6.2.** (24) M6 Fender Washers, SS
  - **1.5.6.3.** (15) M6x1.0 Serrated Flanged Nut, SS
  - **1.5.6.4.** (4) M8x1.25 Serrated Flanged Nut, SS
  - **1.5.6.5.** (1) M6x1.0 Rivet Nut Install Tool and Bolt
  - **1.5.6.6.** (2) M6x1.0 Rivet Nut for Plastic
  - **1.5.6.7.** (2) M6x1.0 BHCS x 45mm Long, SS
  - **1.5.6.8.** (2) M6 5mm Long Nylon Spacer
  - **1.5.6.9.** (2) M6 10mm Long Nylon Spacer
  - **1.5.6.10.** (2) M6 15mm Long Nylon Spacer

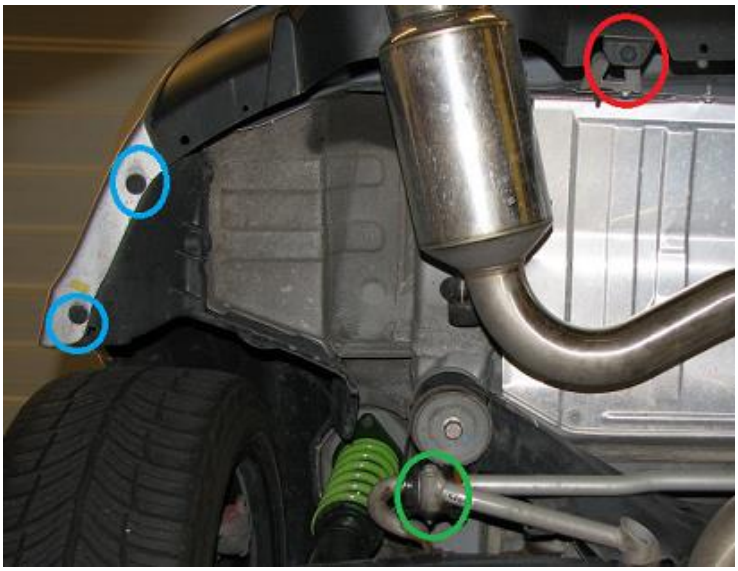
2. Rear Diffuser Install

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

2.2. We begin by jacking the car up on a level surface. Use of wheel chocks is suggested to keep the front wheels from rolling. Using a lift is also a possibility.

2.3. Secure the car with two jack stands with enough room to access all the area under the rear bumper. The pinch welds are good choices, as are frame rails.

2.4. With the car up in the air, we can have a good look at what we are working with! The front brackets will go where the green circle is located, the mid-bracket will be installed where the blue circles are located, and finally the rear brackets will go where the red circle is located.



2.5. Starting with the front mounting points, we install the bracket under the sway bar mount utilizing the factory supplied hardware; which should be a 12mm hex bolt. Leave this loose for the meantime.

2.6. NOTE: There is a short and a long side of the bracket. The long side of the brackets both go towards the inside of the vehicle when being installed!

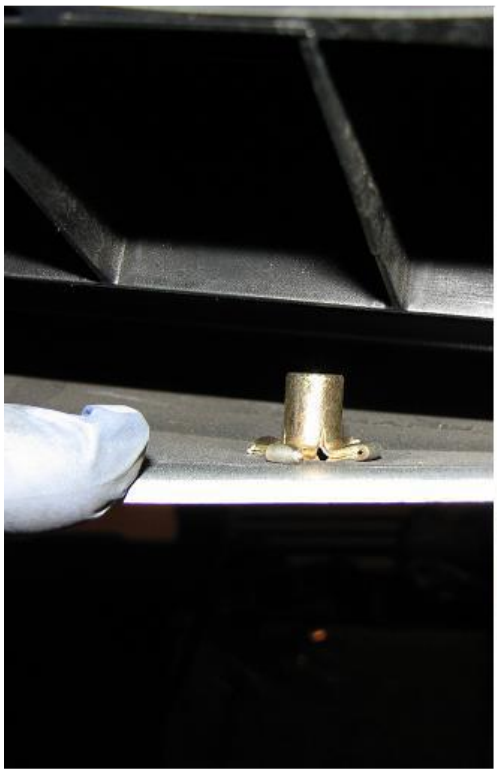
2.7. Moving onto the mid-bracket, remove the OEM plastic rivets circled in orange below.

2.8. We will be installing the plastic rivet nuts on the front most hole, this is shown below.

2.9. To properly install the rivet nut, you will want to thread the rivet nut onto the tool as shown below.

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

2.11. Below are pictures of a properly installed rivet nut.



2.12. With the rivet nut installed, we can install the side mounting bracket. Utilize the supplied M6x1.0 x 16mm BHCS, with a washer on the bottom side. On the front hole, the rivet nut is installed; on the rear hole, you can utilize a serrated nut on the top side.

2.13. Finally, we move to the rear brackets. Install the rear brackets as shown below in the hole that had a plastic rivet in previously.

2.14. Repeat steps until all brackets are installed.

2.15. The rear diffuser is now ready to install!

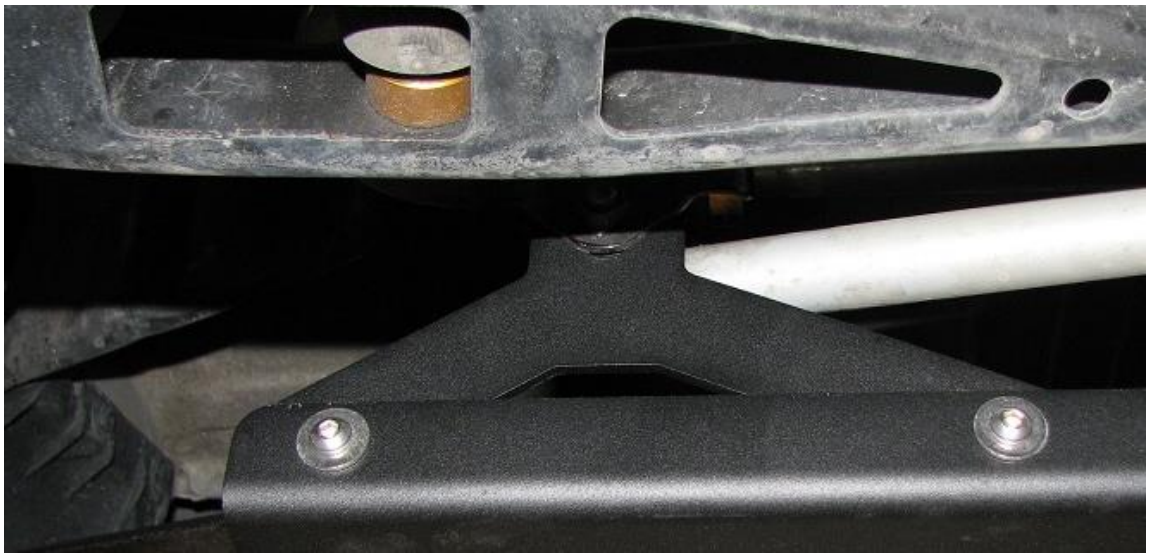
2.16. Installing the diffuser is aided by a second pair of hands, but it can be done alone.

2.17. The front **four** bolts receive a M6 x 1.0 x 16mm bolt and a washer from the front, and get a nut on the rear.

2.18. The middle bracket receive (3) M16 bolt and washer on the outside, with a nut on the inside of each side.

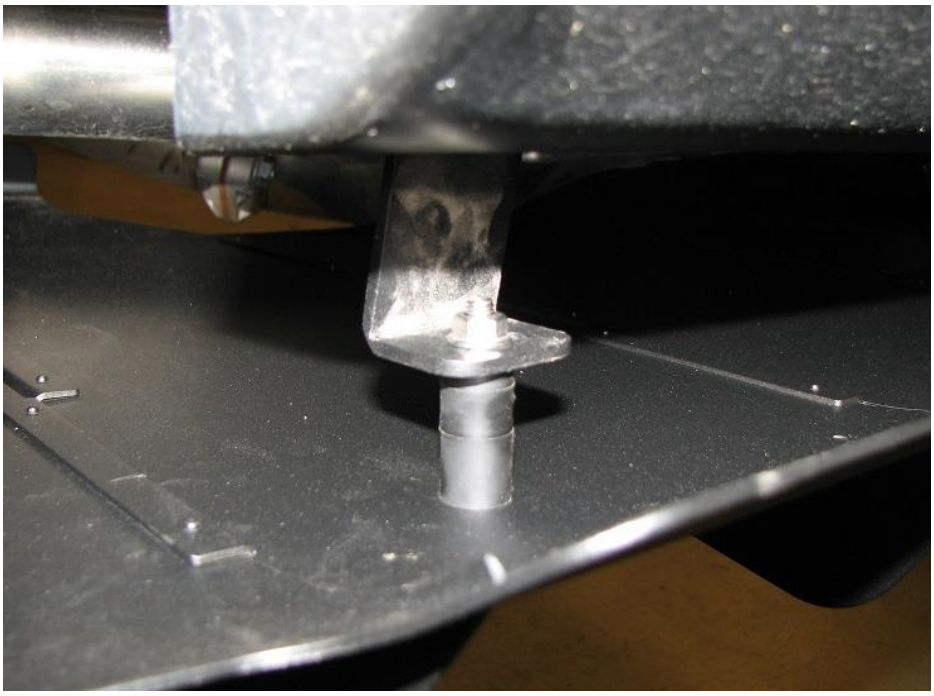
2.19. Finally, the rear brackets receive either the 16mm long bolt, if the diffuser can be installed in the highest position; or, if the diffuser has to be installed lower, the M6 x 1.0 x 45mm long BHCS. Washers go on the bottom side, serrated nuts on the top.

2.20. The front bolts installed correctly is shown below.



2.21. At this point, we need to figure out how far up the diffuser can sit. This is determined by the exhaust used on the car. We recommend installing the diffuser as far upward on the car as possible without hitting the exhaust.

2.22. When you figure out how high up the diffuser can sit, we can install the rear-bracket bolts. Using washers and/or nylon spacers to achieve the correct height, install these between the rear diffuser and the bracket (as shown below). On our specific install, we used 15mm spacers for the desired diffuser install height.



2.23. Moving to the mid-brackets, we install the bolts, washers, and nuts.

2.24. Once all bolts and nuts are installed, tighten all button head cap screws to approximately 10 ft-lbs. The serrated nuts, when tightened, will resist backing off.

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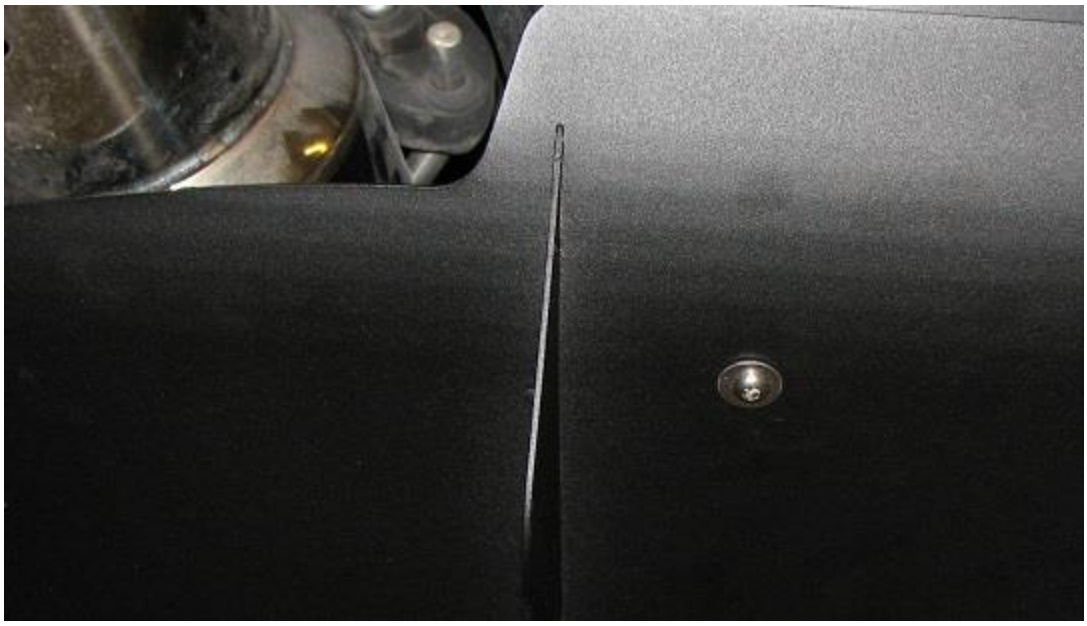
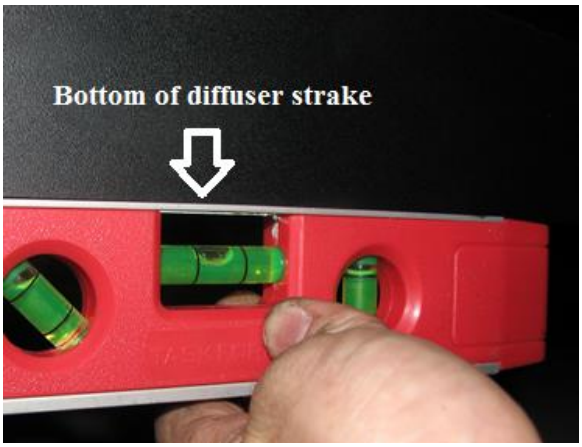


2.25. We can now tighten the sway bar 12mm bolts. Tighten these to 12-18 ft-lbs.

2.26. With the car on the ground and no rake, the diffuser strakes should be level. If the car does have some rake, you need to match the underbody's angle with the level of the bottom of the strake. Shown below is a car with no rake.



2.27. You should also ensure that the diffuser is level laterally (left to right) with a level when on a level surface.

2.28. Congratulations, you have successfully installed the Verus Engineering GR WRX/STI Rear Diffuser! You can now benefit from an increase in rear end downforce and a reduction in vehicle drag among other benefits.

2.29. Please contact Verus with any feedback, concerns, and questions via e-mails, sales@verus-engineering.com.