

VERUS ENGINEERING

Rear Diffuser – GV WRX/STI Sedan

Install Manual



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01	2019/08/19	E. Hazen	Initial release of install manual.

GV WRX/STI Rear Diffuser Install

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GV WRX/STI Rear Diffuser Install

1. Introduction

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

1.2. Difficulty: Beginner

1.3. Time Required: 1.5 hours

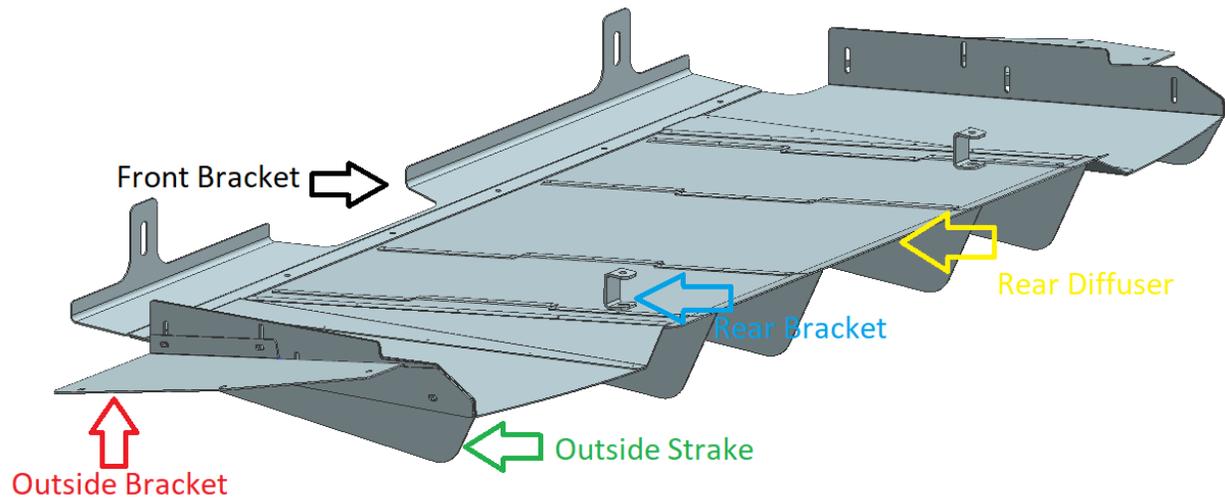
1.4. Tools Needed:

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

1.5. Rear Diffuser Components:

- 1.5.1.** Rear Diffuser
- 1.5.2.** (1) 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.** (26) M6x1.0 Button Head Cap Screw (BHCS) x 16mm Long, SS
 - 1.5.6.2.** (30) M6 Fender Washers, SS
 - 1.5.6.3.** (20) M6x1.0 Serrated Flanged Nut, SS
 - 1.5.6.4.** (1) M6x1.0 Rivet Nut Install Tool and Bolt
 - 1.5.6.5.** (6) M6x1.0 Rivet Nut for Plastic
 - 1.5.6.6.** (2) M6x1.0 BHCS x 45mm Long, SS
 - 1.5.6.7.** (2) M6 5mm Long Nylon Spacer
 - 1.5.6.8.** (2) M6 10mm Long Nylon Spacer
 - 1.5.6.9.** (2) M6 15mm Long Nylon Spacer

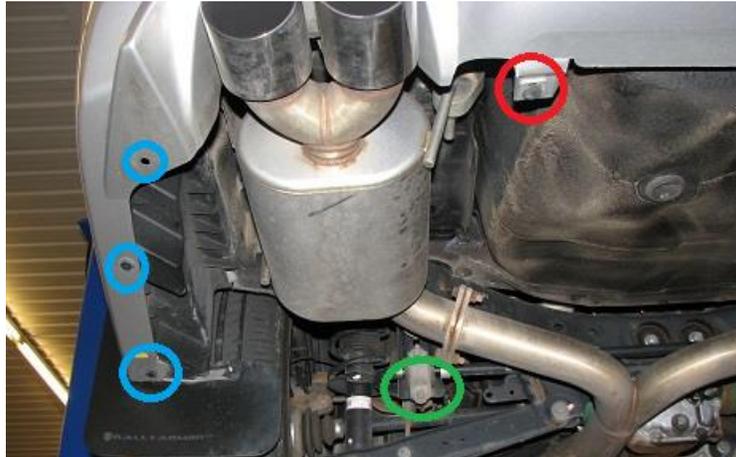
GV WRX/STI Rear Diffuser Install

**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.

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- 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:** The front bracket will have to go under the exhaust, as shown above.

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



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- 2.8. We will be installing the plastic rivet nuts on these three holes. We want to make sure that we are installing the rivet nuts into the black plastic and not through the bumper as well.



- 2.9. The rear most holes are through the bumper, as shown below.



- 2.10. To install the rivet nut, we will grab the install tool and utilize the long SHCS with the rivet nut installed on the other side.



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2.11. 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.

2.12. Below is a picture of a properly installed rivet nut.



2.13. With the rivet nut installed, we can install the rear bracket.

2.14. Remove the plastic rivet.



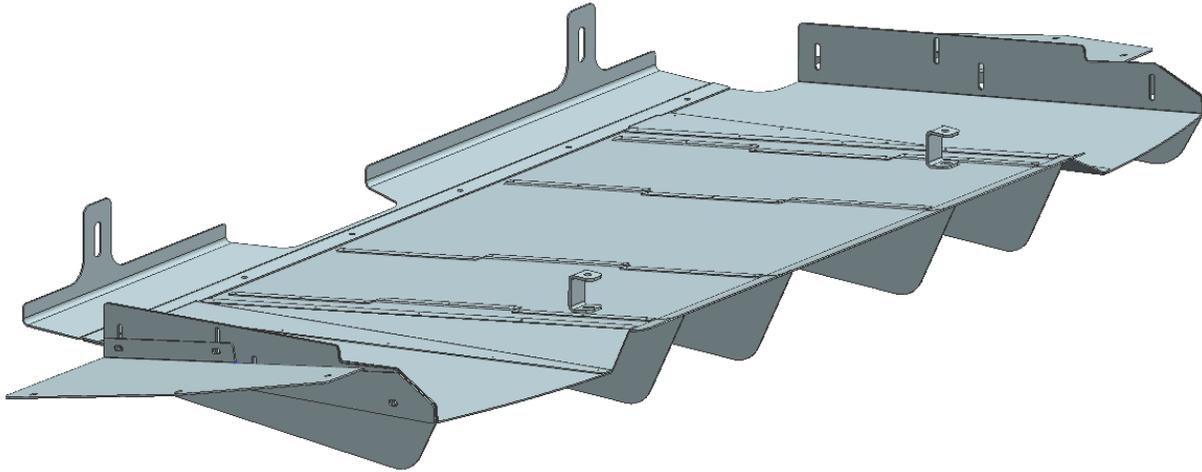
2.15. Install the rear bracket as shown below with a 16mm long M6 BHCS, washer, and serrated nut.



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- 2.16.** There is two ways to install the rear diffuser. One way involves installing the diffuser strakes and side mounts onto the rear diffuser and installing on car in one shot (shown below). The other route is to install the side mounts onto the rivet nuts installed in 2.8 and 2.9. We chose the latter for our particular install but either route will work.



- 2.17.** Installing the diffuser is aided by a second pair of hands, but it can be done alone.
- 2.18.** You will utilize 16mm Long BHCS from either side of the diffuser, with a large washer, and a serrated nut on the back side. The diffuser strake will go between the outside mounting and the diffuser.



- 2.19.** Serrated nuts will be used on the back (inside) side of these (4) points per side.

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- 2.20.** The front bracket to rear diffuser will receive (6) 16mm Long BHCS with washers on the bottom side, and the serrated nuts on the top.



- 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 no spacers, but below you will see 25mm of spacers used for reference.

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- 2.23.** With all the bolts and nuts installed, we can start tightening everything. For the BHCS and serrated nuts, we recommend 4-6 ft-lbs.
- 2.24.** We can now tighten the sway bar 12mm bolts. Tighten these to 12-18 ft-lbs.
- 2.25.** 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 bottom of the strake. Shown below is a car with no rake.



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

GV WRX/STI Rear Diffuser Install

- 2.27.** Congratulations, you have successfully installed the Verus Engineering GV WRX/STI Rear Diffuser! You can now benefit from an increase in rear end downforce and a reduction in vehicle drag among other benefits.
- 2.28.** Please contact Verus with any feedback, concerns, and questions via e-mails, sales@verus-engineering.com.

