

VERUS

ENGINEERING

Dive Plane Kit for GR/GV Subaru WRX/STI

Install Manual



Author: Eric Hazen

Release Date: 2019/05/11

Approvals: E. Hazen, P. Lucas

Document Revisions

Rev	Date	Author	Description
01	2019/05/11	E. Hazen	Initial release of install manual

Dive Plane for GR/GV Subaru WRX – Install Manual

CONTENTS

1. Introduction	<3>
1.1. Overview	<3>
1.2. Difficult	<3>
1.3. Time Required	<3>
1.4. Tools Needed	<3>
1.5. Dive Plane Components.....	<3-4>
2. Dive Plane Install, Bolts and Nuts	<4-9>
3. Dive Plane Install, Double Sided Tape.....	<9-10>

Dive Plane for GR/GV Subaru WRX – Install Manual

1. Introduction

1.1. Overview: Detailed instructions on installing the Verus Engineering dive planes on the GR/GV Subaru WRX and STI.

1.2. Difficulty: Easy

1.3. Time Required: 1-1.5 hour

1.4. Tools Needed:

- 1.4.1. Tape
- 1.4.2. Drill
- 1.4.3. Scissors
- 1.4.4. Phillips screwdriver
- 1.4.5. 1/8" Drill Bit
- 1.4.6. 11/64" Drill Bit
- 1.4.7. Center Punch or Sharp Tap
- 1.4.8. Counter Sink
- 1.4.9. 7mm Wrench
- 1.4.10. Flat Head Screwdriver
- 1.4.11. 2.5mm Allen Wrench

**1.5. Dive Plane Components**

- 1.5.1. Left-hand Dive Plane
- 1.5.2. Right-hand Dive Plane
- 1.5.3. Hardware Bag
 - 1.5.3.1. (9) M4 x 0.7 Stainless Button Head Cap Screw (BHCS), 12mm Long
 - 1.5.3.2. (9) M4 x 0.7 Nyloc Nut, Stainless
 - 1.5.3.3. (18) M4 Large Diameter Washers, Stainless
 - 1.5.3.4. (2) Paper Template

Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.

Dive Plane for GR/GV Subaru WRX – Install Manual

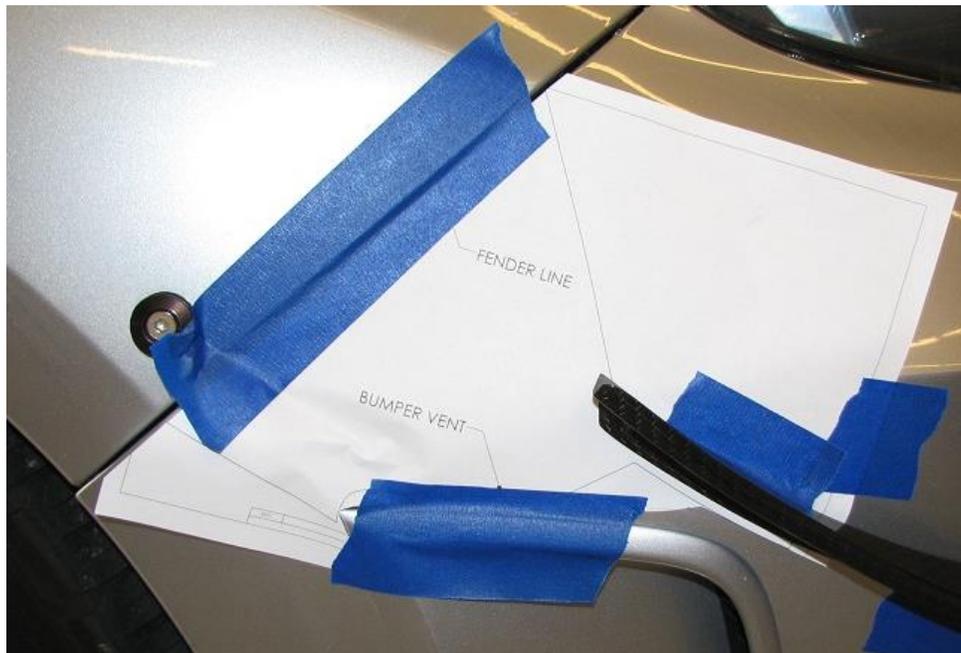
1.5.3.5. (2) Double-sided Tape**2. GR / GV Subaru WRX/STI Dive Plane Install**

- 2.1.** Verus Engineering is not responsible for damage to you or your vehicle by following this manual and/or installing Verus Engineering products.
- 2.2.** It is wise to have the car fairly clean for this install, or at least the front bumper. Due to the template and drilling on the vehicle, starting with a clean car reduces the risk of scratches and improves install ease.
- 2.3.** **There are (2) ways to install the dive planes. We recommend utilizing bolts/nuts/washers over double sided tape; but the decision is yours to make.**
- 2.4.** To install the double sided tape, move to step 3.
- 2.5.** We begin by gaining access to rear of the front bumper so that we can place the nuts on the back side of the bumper. To do this, we need to remove some of the fender liner.
- 2.6.** To remove the fender liner or at least gain access to the rear of the bumper, we will need to remove (3) plastic rivets from the fender liner, shown below.

Dive Plane for GR/GV Subaru WRX – Install Manual



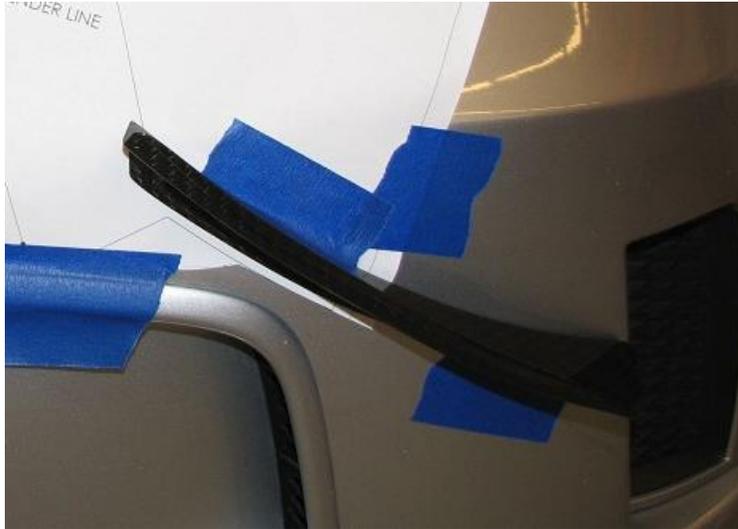
- 2.7. Using the supplied template, cut along the fender line and the bumper vent as written on the paper template.
- 2.8. Place the cut template on the bumper as shown below. Note how it lines up properly with the lines of the bumper.



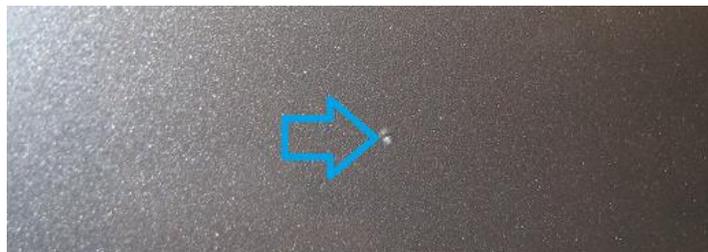
Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.

Dive Plane for GR/GV Subaru WRX – Install Manual

- 2.9.** Before marking the holes with a center punch or tap, ensure these holes on the template line up with the dive plane's holes and that the dive plane mount surface fits with the bumper well.



- 2.10.** Mark the center of the holes with a center punch or tap. **You will use the paper templates for the top (2) holes but will need to use the dive plane for the most forward hole.**



- 2.11.** Begin drilling the holes with a 1/8" drill bit.

Dive Plane for GR/GV Subaru WRX – Install Manual



- 2.12. Increasing the drill size to 11/64" and open the holes to 11/64".



- 2.13. Using the countersink, clean the holes from any burrs from drilling.



- 2.14. Using the M4 bolts, and a washer on the outside if you chose, begin installing the dive planes. **We chose not to use a washer on the outside but there is enough supplied in the kit to do a washer on both sides.**

Dive Plane for GR/GV Subaru WRX – Install Manual



- 2.15.** Reaching your hand behind the front bumper you can start threading on the washer and then the nyloc nut.



- 2.16.** Tighten torque should be no more than 40-60 in-lbs. The nyloc will resist backing off, so the fasteners only need to be snug to the bumper.

Dive Plane for GR/GV Subaru WRX – Install Manual



- 2.17. Repeat the steps on the other side of the car.
- 2.18. Reinstall everything in reverse order.
- 2.19. Congratulations on installing the Verus Engineering dive planes for the GR/GV Subaru WRX. Enjoy the benefits the dive planes have on front end downforce.
- 2.20. Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; sales@verus-engineering.com.

3. Double Sided Tape Install

- 3.1. For best adhesion, the following guidelines should be met for install: **Minimal temperature for install should be 50 degrees Fahrenheit. At room temperature approximately 50% of ultimate bond strength will be achieved after 20 minutes, 90% after 24 hours and 100% after 72 hours.**
- 3.2. Utilize the supplied template to correctly locate the dive plane on car.
- 3.3. Using double sided tape, mark out where to install the dive plane after ensure the template correctly locates the dive plane.
- 3.4. Wipe both dive plane mounting surface and vehicle with 50/50 isopropyl alcohol/water mix with a clean microfiber.
- 3.5. Apply the double sided tape to the dive planes first; kneading it into the carbon surface.
- 3.6. Peel the backing off the double sided tape on the dive plane, and install it on car.
- 3.7. Firmly knead the dive plane into the front bumper to get the best adhesion possible.

Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.

Dive Plane for GR/GV Subaru WRX – Install Manual

- 3.8.** It is recommend you let the car sit for at least 24 hours, as 90% of bond strength is achieved in that time-frame. It is best to let the bond joint sit for 3 days!
- 3.9.** Congratulations on installing the Verus Engineering dive planes for the GR/GV Subaru WRX. Enjoy the benefits the dive planes have on front end downforce.
- 3.10.** Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; sales@verus-engineering.com.



Confidential: Property of Verus Engineering. Not for Distribution outside intended recipient list.