

VERUS

ENGINEERING

UCW Wing Kit – BRZ, FR-S, and GT86

Install Manual



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Introduction

Overview: Detailed instructions on installing the Verus Engineering Rear Wing Kit for the BRZ, FRS, or GT86.

Difficulty: Moderate

Time Required: 1.5 – 2.5 hour

Tools Recommended:

- Ratchet
- 10mm Socket or Wrench
- 12mm Socket or Wrench
- 2mm Allen Wrench
- 4mm Allen Wrench
- 9/16" Wrench
- Drill
- Starter Drill Bit (usually 1/8" or smaller)
- Center Punch
- Step drill bit or various drills (needs to have 3/8")
- Hammer
- Scissors
- Painter's Tape
- Screwdriver
- Sealant
- 50/50 Isopropyl alcohol/water mixture
- Microfiber rag (clean)



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Bottom Mount UCW Rear Wing Kit Components

- (1) Wing Blade Assembly
- (2) Wing Upright
- (1) Left Trunk Mount
- (1) Right Trunk Mount
- (2) Endplate
- **Hardware Bag**
 - (13) M6 20mm long, BHCS (Button Head Cap Screw), Stainless (SS)
 - (6) M6 25mm long, BHCS, SS
 - (2) M6 30mm long SHCS (Socket Head Cap Screw), LP (Low Profile), SS
 - (1) M6 35mm long SHCS, SS
 - (4) M4 12mm long, FHCS (Flat Head Cap Screw), SS
 - (28) M6 12mm OD Standard Washer, SS
 - (12) M6 18mm OD Fender Washer, SS
 - (18) M6 Nyloc Nut, SS
 - (2) M6 Jam Nut, SS
 - (1) M6 Rivet Nut Install Tool
 - (8) M6 Rivet Nut
 - (4) Machined Aluminum Endplate Washer
 - (4) Buna-N O-Ring, #013
 - (6) VHB Double Sided Tape
 - (1) Drill Template, Paper



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Top Mount UCW Rear Wing Kit Components

- (1) Wing Blade Assembly
- (1) Left Wing Upright
- (1) Right Wing Upright
- (1) Left Trunk Mount
- (1) Right Trunk Mount
- (2) Endplate
- **Hardware Bag**
 - (13) M6 20mm long, BHCS (Button Head Cap Screw), Stainless (SS)
 - (4) M6 22mm long, SHCS (Socket Head Cap Screw), SS
 - (2) M6 30mm long SHCS a, LP (Low Profile), SS
 - (1) M6 35mm long SHCS, SS
 - (4) M4 12mm long, FHCS (Flat Head Cap Screw), SS
 - (28) M6 12mm OD Standard Washer, SS
 - (12) M6 18mm OD Fender Washer, SS
 - (18) M6 Nyloc Nut, SS
 - (2) M6 Jam Nut, SS
 - (1) M6 Rivet Nut Install Tool
 - (8) M6 Rivet Nut
 - (4) Machined Aluminum Endplate Washer
 - (4) Buna-N O-Ring, #013
 - (6) VHB Double Sided Tape
 - (1) Drill Template, Paper

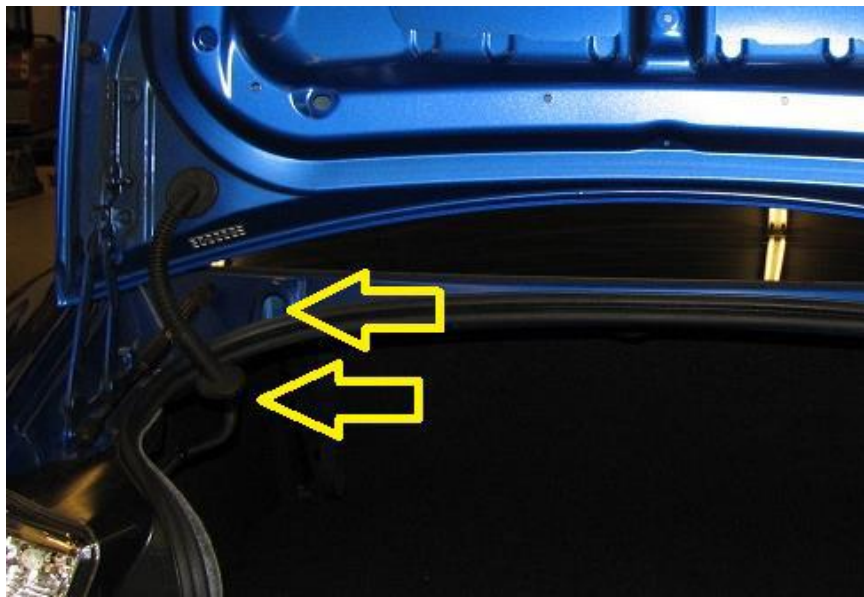


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UCW Rear Wing Install

1. Verus Engineering is not responsible for damage to you or your vehicle by following this manual and/or installing Verus Engineering products. Please seek professional service/guidance if you are uncomfortable/incapable of installing this in a safe manner. Contact us at support@verus-engineering.com if you have any questions/concerns.
2. We begin by gaining access to the trunk.
3. Remove the wiring harness from the vehicle as shown below.



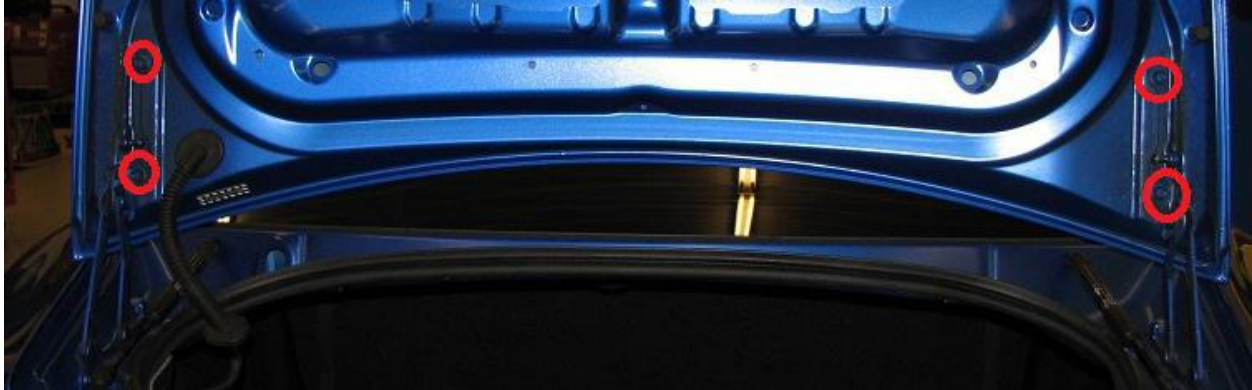
4. Remove the lift strut from the trunk with a small flat head screwdriver.



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5. Remove the (4) 12mm bolts circled below. **Note: It is helpful to have a second person to help remove the trunk.**



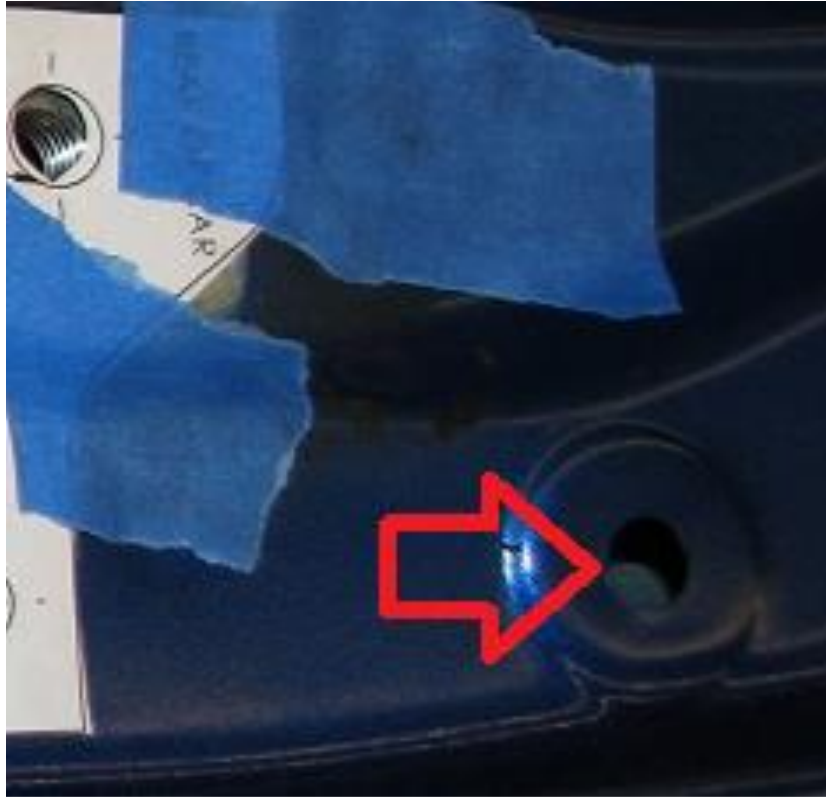
6. Place the trunk in your working space with the bottom side up. **Note: Place the trunk on something soft to ensure the paint is not damaged.**
7. If your vehicle has the rubber bump stops shown in the image below, remove them from the trunk.



8. Open the bump stop hole to 3/8" to install a rivet nut. **Note: If you did not have a rubber bumper in this place, you will need to drill a new hole.**

Caution: Ensure you do not drill through the bottom side too quickly. You can cause the sheet metal to deform if the drill bit hits the outer trunk skin.

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9. Install the supplied rivet nut into the newly drilled holes. **Note: We recommend a bit of sealant to help reduce the chance of rust.**



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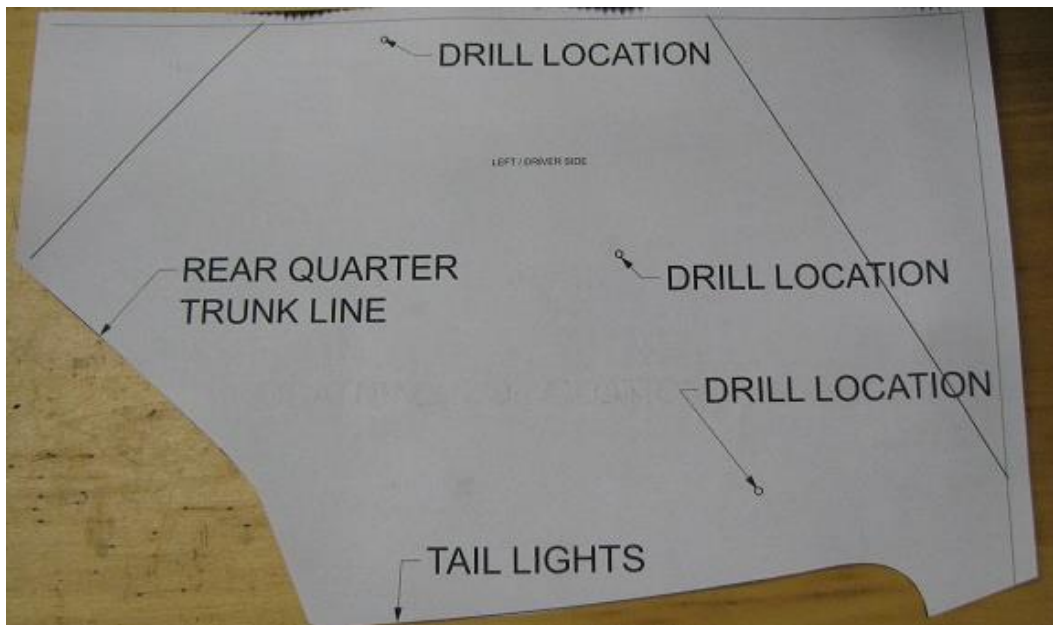
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10. Utilize a 9/16th wrench to hold the rivet nut tool and 10mm socket to install the rivet nut into the hole. **Note: The slight excess of sealant is desired to reduce rusting.**



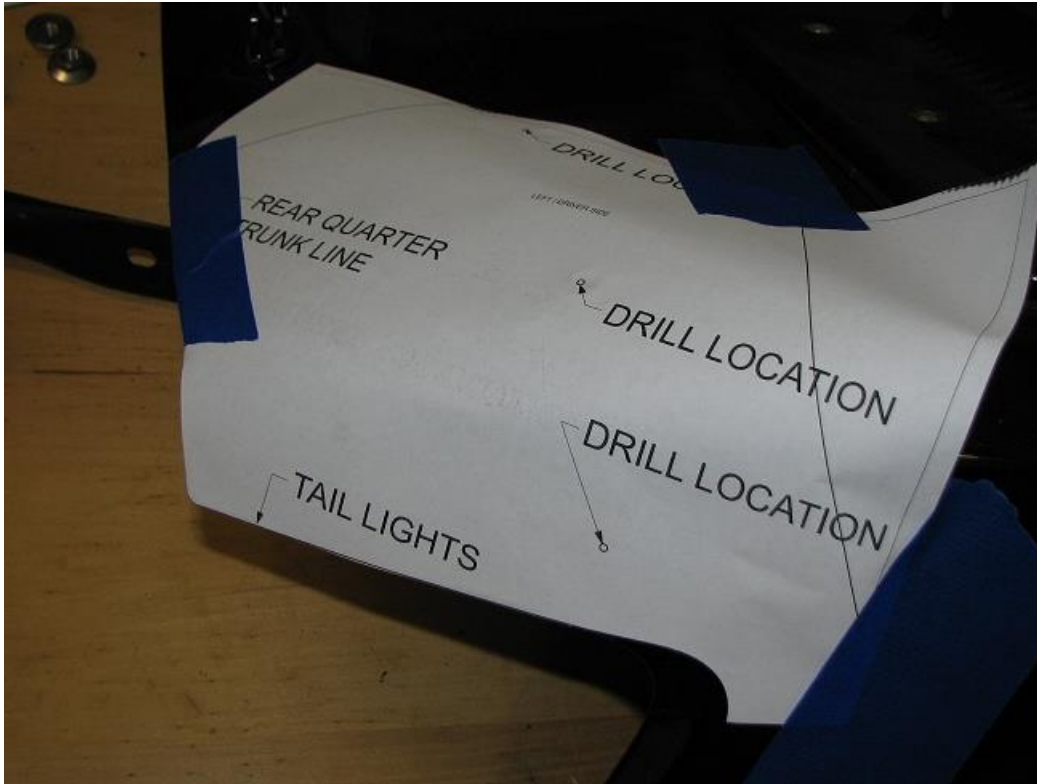
11. We can now flip over the trunk and work on the top side.

12. Cut out the trunk template.



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13. Tape the template onto the trunk. Line up the rear quarter trunk line and the tail light line with their respective locations.



14. Before any drilling locations are marked, line up the trunk mount with the template to check the mounting hole alignment as well as the trunk mount matching the mounting surface of the trunk. **Note: The trunk mounts are side dependent. The tabs on the mounts will face toward the center of the car.**



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15. Using a center punch, mark the (3 per side) holes for drilling. **Note: Flip the template over for the right/passenger side.**



16. Using a starter drill bit, drill the (6) holes. **Note: An 1/8" drill bit works well for this.**



17. There are two ways to install the trunk mount to the trunk skin; bolt and nut or with rivet nuts. The choice is yours. **Note: If you are using rivet nuts, open these holes to 3/8". If you are using bolts and nuts, open the hole sizes to 9/32".**



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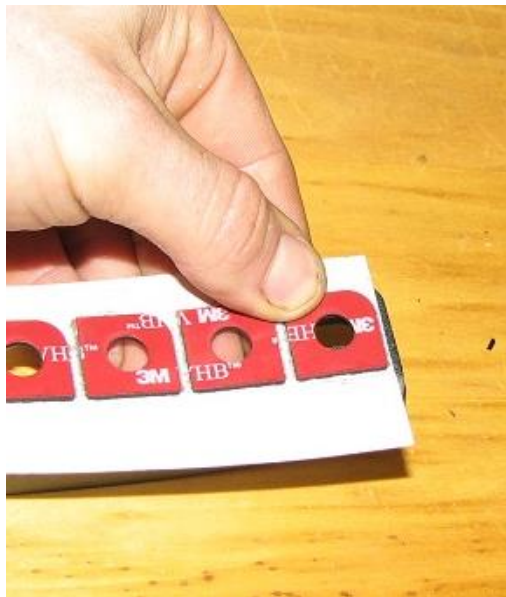
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- 18.** If you are using rivet nuts, use the provided tool and install (6) rivet nuts in the holes drilled in the previous step.



- 19.** Prepare for double sided tape installation by cleaning the trunk mount and trunk surfaces with the 50/50 isopropyl mixture and microfiber.

- 20.** Grab the double-sided tape and install it on the trunk mount bracket.

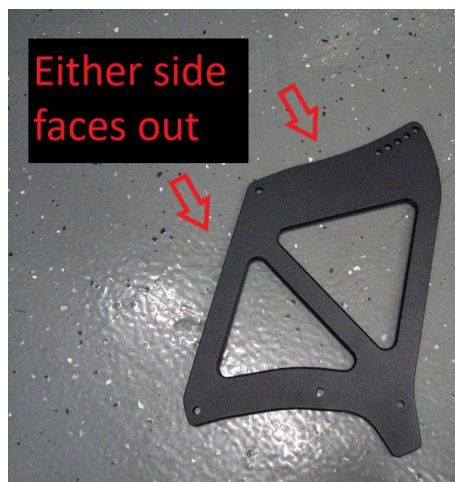


- 21.** Remove the red double-sided tape backing and install the trunk mount to the trunk using the M6x20 BHCS with M6 Fender Washers.

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22. If you are utilizing nuts on the back side, you will need to create access holes on the bottom side of the trunk. With those holes in place, utilize a large washer and a nyloc nut on the inside of the trunk.
23. Reinstall the trunk on the car.
24. If you are installing the swan neck uprights, the face with the cut outs is meant to face out, but the bottom mount uprights can be installed on any side because both faces are the same.



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25. Install the wing upright using M6 20mm long bolts and 12mm OD washers. **Note: The uprights go on the *outside* of the trunk mount.**

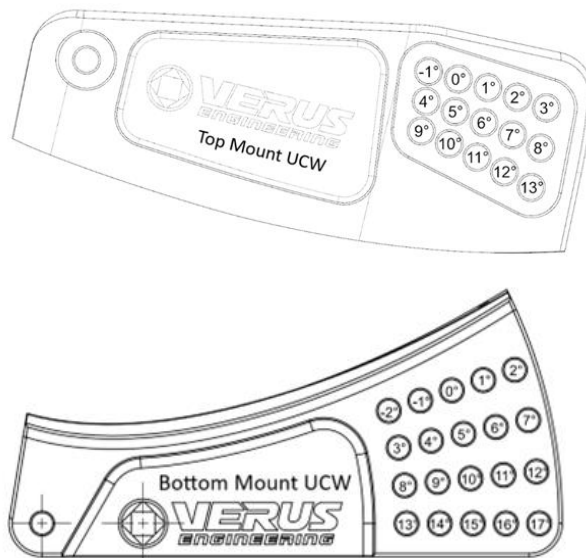


26. Install the wing blade assembly using the (4) M6 25mm long BHCS, (8) 12mm OD washer, and (4) M6 nyloc nut. **Note: The wing mounts will go on the *inside* of the upright.**



27. For Angle of Attack (AOA), use the guideline below as a reference. Every install and car can vary from this slightly. **Note: To ensure proper AOA, you should lay a straight edge from front to rear of the wing and measure the angle in relation to the ground.**

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28. Prepare the endplates. We offer sheet aluminum (standard), carbon (upgraded), and vented (improved efficiency), all install the same.



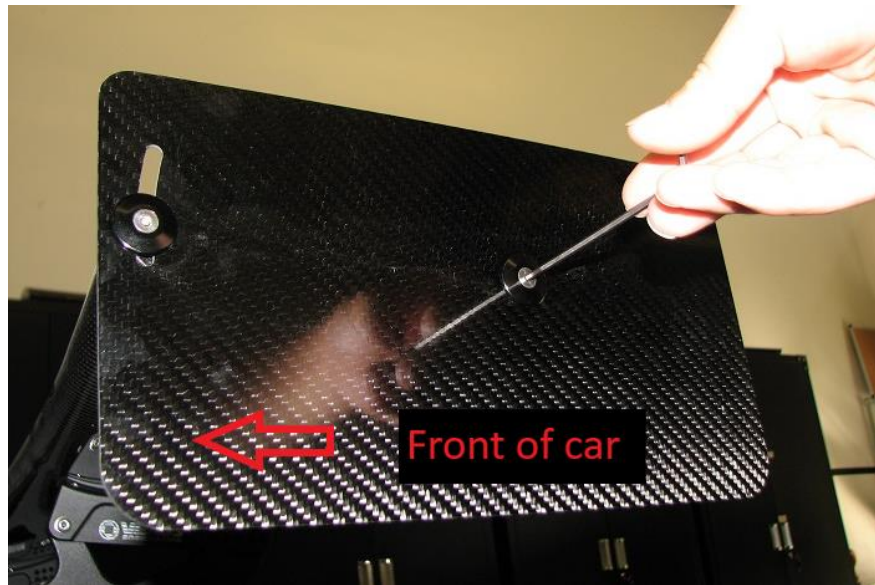
29. Install the o-ring into the endplate washer.



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- 30.** Install the endplate using the assembled endplate washers and M4 16mm long FHCS.



- 31.** Use a level to adjust the endplate so the top edge is parallel to the ground.



- 32.** Using the rivet nuts installed in **Step 10**, install the M6 35mm long SHCS LP with an M6 jam nut.

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- 33.** Slowly close the trunk and watch the SHCS and see how close it comes to touching the trunk hinge mount (shown below). **Note: You will want the SHCS to hit this piece on the hinge location when fully closed to reduce the amount of movement on the trunk at speed.**



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34. Congratulations on installing the UCW rear wing for the FRS/BRZ/GT86! For more information on performance, please visit our website and take a look at our Informative packet.
35. Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; support@verus-engineering.com.



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