

VERUS ENGINEERING

Rear Wing Kits – Toyota GR86

Install Manual



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Introduction

Overview: Detailed instructions on installing the Verus Engineering Rear Wing Kits for the Toyota GR86 and Subaru BRZ (ZN8/ZD8).

Difficulty: Moderate to Difficult

Time Required: 2-3 hours

Tools Recommended:

- Ratchet or impact
- 12mm socket
- 8mm socket (High Efficiency Only)
- 12mm Wrench
- 10mm Wrench
- 5mm Allen Wrench
- 4mm Allen Wrench
- 2.5mm Allen Wrench
- 1/4" Drill bit
- Drill
- Touch up Paint
- 50/50 Mix of Isopropyl Alcohol and Water
- Microfiber Towel
- File or deburring tool of choice (not pictured)
- Vacuum (not pictured)



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Rear Wing Kit Components

- (1) Rear Wing Element
- (1) Left Upright
- (1) Right Upright
- (1) Left Trunk Mount
- (1) Right Trunk Mount
- (1) Left Support Bracket
- (1) Right Support Bracket
- (2) Endplate (not included with the High Efficiency wing)
- (1) Hardware Bag – **Bottom Mount UCW**
 - (1) Left Wing Mount Tape
 - (1) Right Wing Mount Tape
 - (5) M6 16mm long, Button Head Cap Screw (BHCS), Stainless (SS)
 - (5) M6 20mm long, Socket Head Cap Screw (SHCS), SS
 - (5) M6 25mm long, SHCS, SS
 - (18) M6 12mm OD, Washer, SS
 - (5) M6 Nyloc nut, SS
 - (4) M4 16mm long, Flat Head Cap Screw (FHCS), SS
 - (4) Buna-N O-Ring #013
 - (4) Endplate Washer
 - (1) 16mm Hole saw



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- (1) Hardware Bag – **Top Mount UCW**
 - (1) Left Wing Mount Tape
 - (1) Right Wing Mount Tape
 - (5) M6 16mm long Button Head Cap Screw (BHCS), Stainless (SS)
 - (9) M6 20mm long, Socket Head Cap Screw (SHCS), SS
 - (18) M6 12mm OD, Washer, SS
 - (4) M6 Nyloc Nut, SS
 - (4) M4 16mm long Flat head Cap Screw (FHCS), SS
 - (4) Buna-N O-Ring #013
 - (4) Endplate Washer
 - (1) 16mm hole saw



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- (1) Hardware Bag – **High-Efficiency Wing**
 - (1) Left Wing Mount Tape
 - (1) Right Wing Mount Tape
 - (5) M6 16mm long, Button Head Cap Screw (BHCS), Stainless (SS)
 - (5) M6 20mm long, Socket Head Cap Screw (SHCS), SS
 - (5) M5 22mm long, BHCS, SS
 - (9) M6 12mm OD, Washer, SS
 - (9) M5 Flat, Washer, SS
 - (5) M5 Nyloc Nut, SS
 - (1) 16mm hole saw

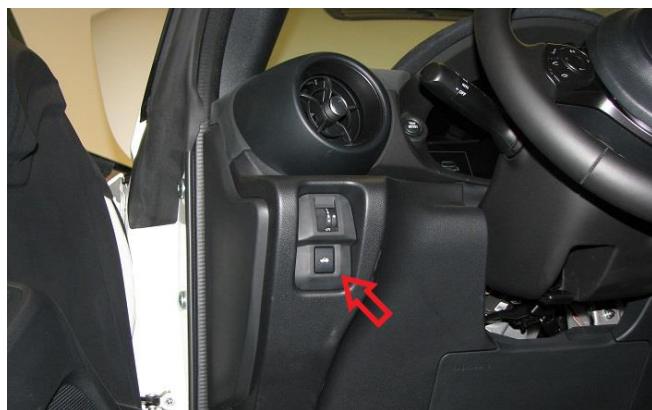


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Rear Wing Install

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. Once the trunk is opened, direct your attention to the hinge mounting points on either side of the trunk. This is where we will be working.



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4. Next, remove the mounting nuts on one side of the trunk. Work on one trunk mount at a time so that the trunk does not become misaligned. **Note: The vehicle in the following images had the first version of our UCW previously installed. There will be holes, and threaded inserts shown on this car that are not relevant to this installation guide.**



5. With the mounting nuts removed, install the support bracket as shown below.



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6. Reinstall the (2) OEM mounting nuts.

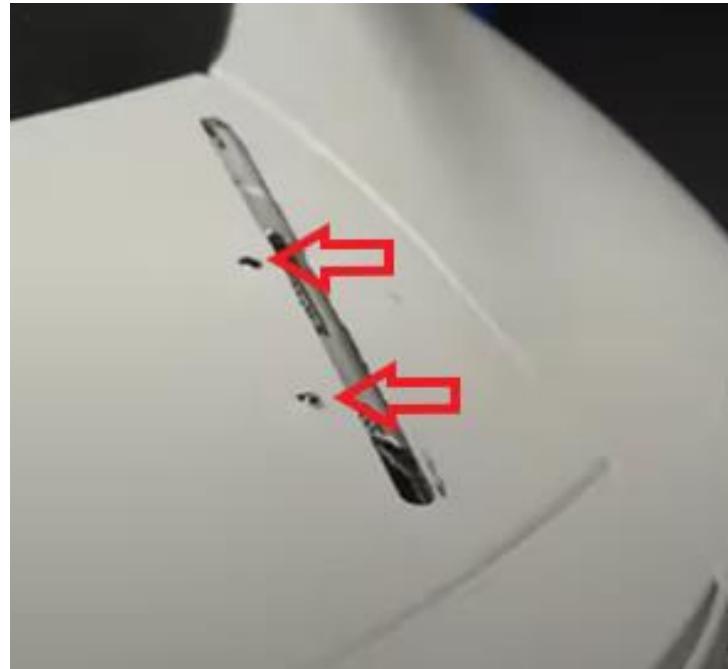


7. At this time, you may either mark your desired drill locations and then remove the trunk bracket to drill the holes. Or, you can use the mount as a drill template and drill through the holes on the bracket as we have done below. **Note: These holes will be drilled through all layers of the trunk, including the outer skin. That being said, drill as perpendicular to the mounting bracket surface as possible.**

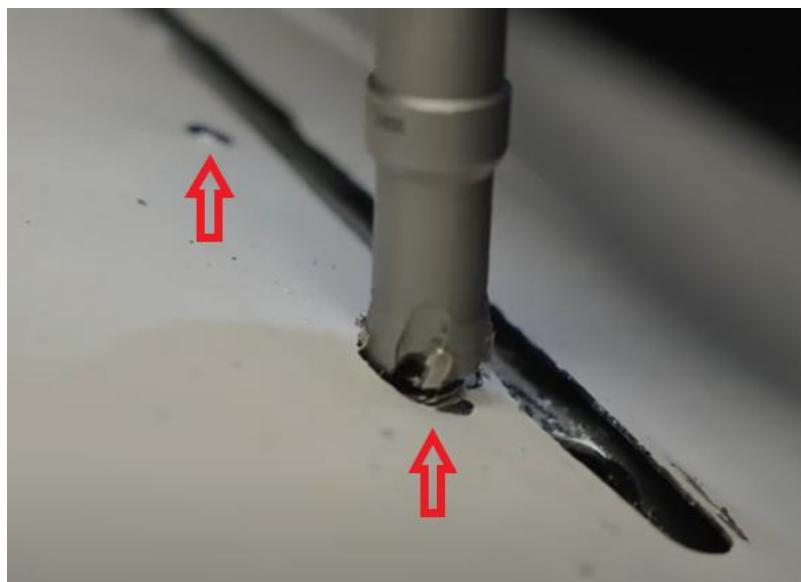


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8. Repeat **Steps 4 – 7** on the remaining side.
9. We now move to the top side of the trunk where we have drilled through. **Note: The large slot that is cut out was from our old UCW trunk mount. Do NOT cut out this slot, only the (2) mounting holes drilled in Step 7 are required for this installation.**



10. Using the provided 16mm hole saw, drill through the top two layers of the trunk.



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11. Once you are done drilling the 16mm holes, deburr/smooth the rough edges and apply touch-up paint as we do not want this exposed metal to rust.



12. It is now time to prepare the trunk mounts. Clean the groove in the trunk mount with 50/50 mix of isopropyl alcohol and water. This is where we will install our die cut 3M tape.

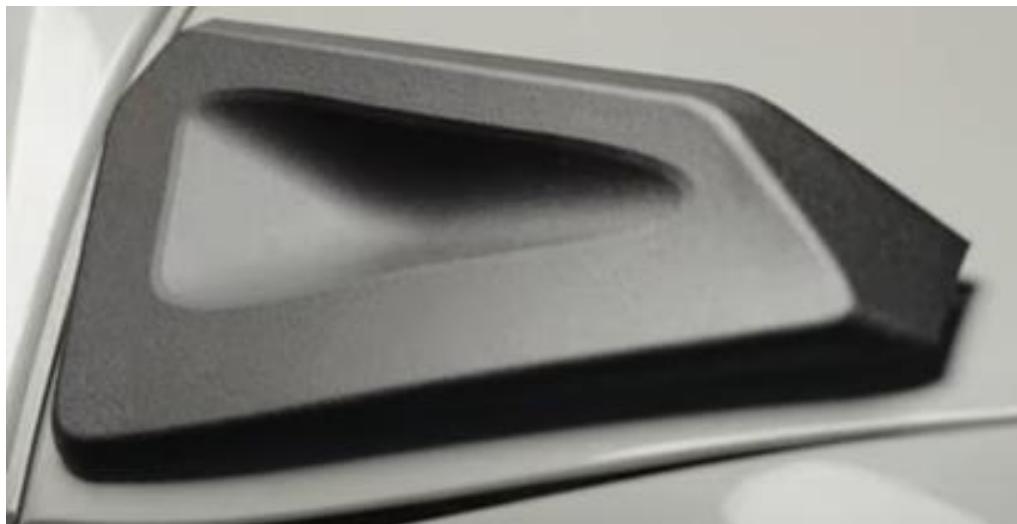


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13. Peel back the white backing and place the 3M VHB tape, red side up, into the groove and massage it into place.



14. Clean the trunk surface where the mount is going to sit with a microfiber and 50/50 alcohol water mix. Then, peel back the red tape layer and place the mount onto the trunk surface.



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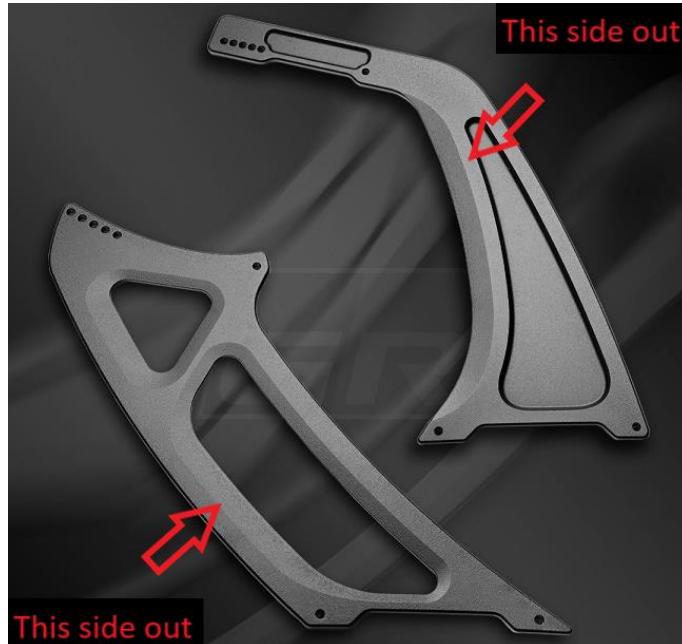
15. Use (2) M6 20mm long, SHCS with (2) washers to fasten the trunk mount to the trunk mount plate.



16. Repeat **Steps 12 – 15** for the remaining side.
17. With both trunk mounts tightened down, it's time to mount our wing uprights. This process is the same for all (3) wing variants available for the GR86.

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18. While the High Efficiency uprights can be mounted on both the left and right sides, the top and bottom mount UCW uprights are left-right dependent. The side with the larger beveled edge should face out when installing these UCW uprights.



19. Mount the uprights in your kit using (2) M6 16mm long, BHCS, and (2) M6 washers. The M6 hardware should be tightened to 6 – 8 ft lbs.

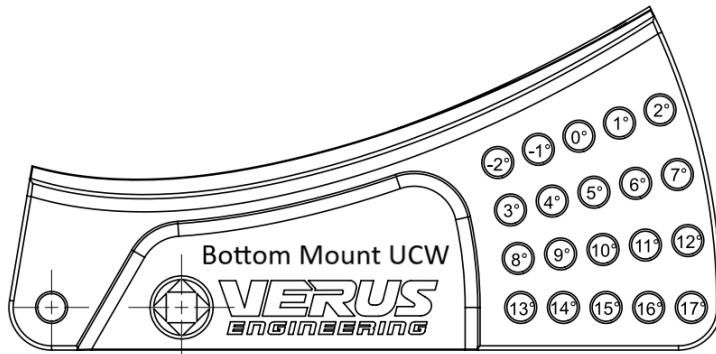
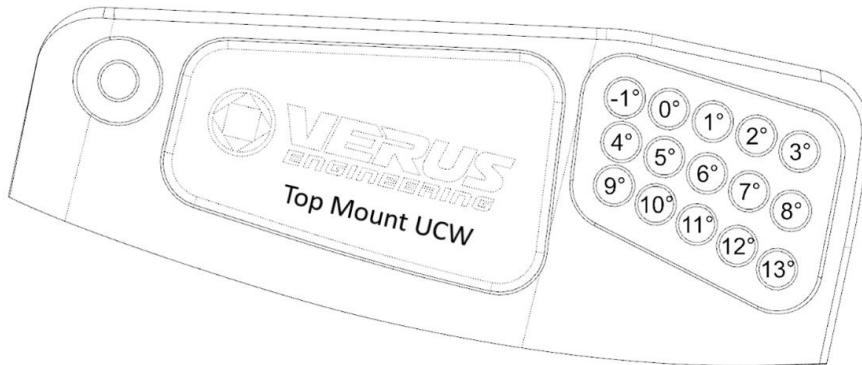


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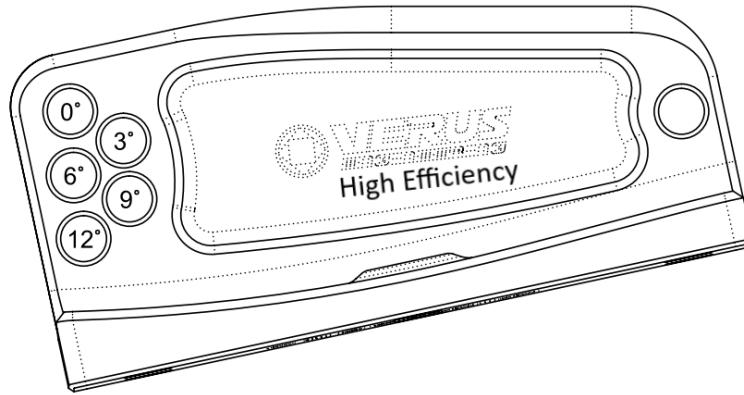
20. Next, mount your wing element using the following hardware; High efficiency: (4) M5 22mm long, BHCS, (8) M5 washer, and (4) M5 nyloc nut. Top mount UCW: (4) M6 20mm long, SHCS, (8) M6 washer, and (4) M6 nyloc nut. Bottom mount UCW: (4) M6 25mm long, SHCS, (8) M6 washer, and (4) M6 nyloc nut. **Note: The High Efficiency wing is mounted below for reference.**



21. Use the diagrams below to adjust your desired “Angle of Attack” for your wing blade before proceeding. **Note: We recommend starting with a higher Angle of Attack and slowly decreasing it to balance the vehicle to your liking.**



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22. At this time, if you have the High Efficiency wing, jump ahead to **Step 30**. If not, continue to **Step 23**.
23. Now that you have mounted and adjusted the wing blade to your desired “Angle of Attack”, the final step is to install the wing endplates. **Note: The image below shows the (standard) aluminum endplate as well as the (optional) Carbon endplate.**



24. The endplates will be mounted by using the M4 FHCS, endplate (grooved) washer, and O-ring. Place the O-ring in the groove of the washer.

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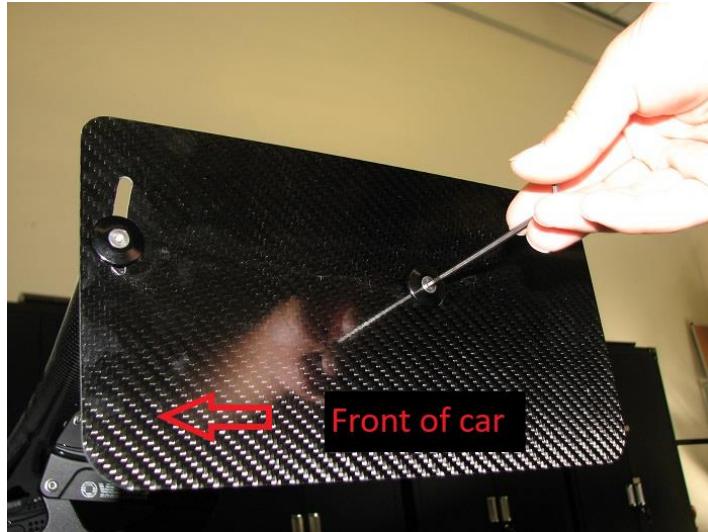
25. Then place it flat against the endplate so that the M4 FHCS can pass through the mounting hole. **Note: Be sure that the O-ring is lying flat inside the groove before proceeding.**



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26. Now, loosely install the endplate to the wing element using a 2.5mm allen key. The larger slot of the endplate should be in the upper corner and face the front of the car.



27. Before tightening down the endplate hardware, use the front/slotted hole to adjust the orientation of the endplate. We recommend having the top and bottom edges of the endplate parallel with the ground. **Note: We use a bubble level, as shown below, to check that the endplates are parallel to the ground.**



28. Once the endplate is level, tighten down the endplate fasteners. **Note: The endplate fasteners only need to be tightened a few in. lbs.**

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29. Repeat **Steps 24 – 28** for the remaining side.
30. Congratulations on installing the UCW/High-Efficiency Rear Wing for the GR86 and BRZ! For more information on performance, please visit our website and take a look at our informative packet.
31. Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; support@verus-engineering.com.



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