Swan Neck Rear Wing Kit – BMW M3 (G80)

Install Manual



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Document Revisions

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01	2026/10/30	M. Deckard	Initial release of install manual

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Introduction

Overview: Detailed instructions on installing the Verus Engineering Rear Wing Kit for the BMW M3 (G80).

Difficulty: Moderate

Time Required: 2 hours

Tools Recommended:



- Ratchet
- Torque Wrench
- 12mm Socket
- 5/16” 12-Point Socket (V1X only)
- 10mm Wrench
- 12mm Wrench
- 5/16” Wrench (V1X only)
- 2.5mm Hex (Allen) Key
- 4mm Hex (Allen) Key
- 5mm Hex (Allen) Key
- Trim Removal Tool
- Flat Head Screwdriver
- Drill
- 5/16” Drill Bit
- Step Drill Bit or various drills *needs to have 5/8” or slightly larger*
- Straight Edge
- Level
- Painter’s Tape
- Touch-Up Paint
- 50/50 Mix of Isopropyl Alcohol and Water
- Microfiber Towel
- Sawhorse with Towels (not pictured)
- Carpeting (Optional)
- Red Loctite (Optional)

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A0828A UCW Rear Wing Kit Components

- (1) Rear Wing Assembly
- (2) Wing Upright
- (1) Left Trunk Mount
- (1) Right Trunk Mount
- (2) Carbon Endplate
- **Hardware Bag**
  - **M8**
  - (4) M8 x 25mm Flanged Hex Head Cap Screw (FHHCS), Zinc Plated Steel
  - (4) M8 x 24mm Fender Washer, Stainless
  - (4) Trunk Mount Standoff Spacer, Machined Stainless
  - **M6**
  - (4) M6 x 16mm Button Head Cap Screw (BHCS), Stainless (1 extra in bag)
  - (4) M6 x 22mm Socket Head Cap Screw (SHCS), Stainless (1 extra in bag)
  - (12) M6 x 12mm OD Washer, Stainless (2 extra in bag)
  - (8) M6 x 0.5mm Washer Shim, Stainless
  - (4) M6 Nyloc Nut, Stainless (1 extra in bag)
  - **M4**
  - (4) M4 x 16mm Flat Head Cap Screw (FHCS), Stainless
  - (4) M4 Machined Aluminum Endplate Washer
  - **Miscellaneous**
  - (4) #013 Buna-N O-Ring
  - (1) Left Pre-Cut VHB Double Sided Tape
  - (1) Right Pre-Cut VHB Double Sided Tape



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A0886A V1X Rear Wing Kit Components

- (1) Rear Wing Assembly
- (2) Wing Upright
- (1) Left Trunk Mount
- (1) Right Trunk Mount
- (2) Carbon Endplate
- (1) Gurney Flap
- **Hardware Bag**
  - **M8**
  - (4) M8 x 25mm Flanged Hex Head Cap Screw (FHHCS), Zinc Plated Steel
  - (4) M8 x 24mm Fender Washer, Stainless
  - (4) Trunk Mount Standoff Spacer, Machined Stainless
  - **M6**
  - (4) M6 x 16mm Button Head Cap Screw (BHCS), Stainless
  - (4) M6 x 12mm OD Washer, Stainless
  - (8) M6 x 0.5mm Washer Shim, Stainless
  - **M4**
  - (4) M4 x 16mm Flat Head Cap Screw (FHCS), Stainless
  - (4) M4 Machined Aluminum Endplate Washer
  - **1/4”**
  - (4) 1/4” x 0.887” NAS 12 - Point Bolt
  - (8) 1/4” Thin Washer
  - (4) 1/4” Self - Locking Hex Nut
  - **Miscellaneous**
  - (4) #013 Buna-N O-Ring
  - (1) Roll – 3M VHB Double Sided Tape
  - (1) Left Pre-Cut VHB Double Sided Tape
  - (1) Right Pre-Cut VHB Double Sided Tape



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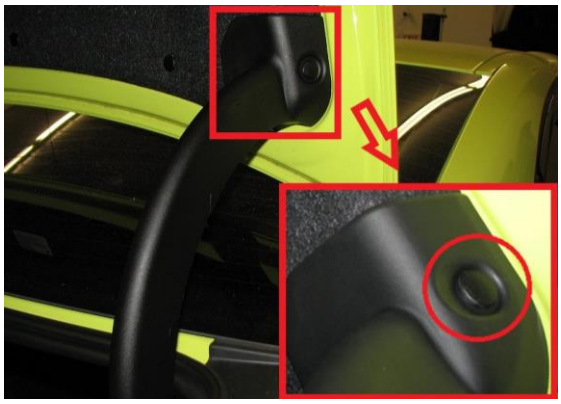
Swan Neck Rear Wing Kit Install

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.

Minimal temperature for 3M VHB installation 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.

1. We begin by gaining access to the trunk.

2. Take off the covers on the trunk hinges by removing the push clip circled in red below. Remove this with a Flat Head Screwdriver or Trim Removal Tool.

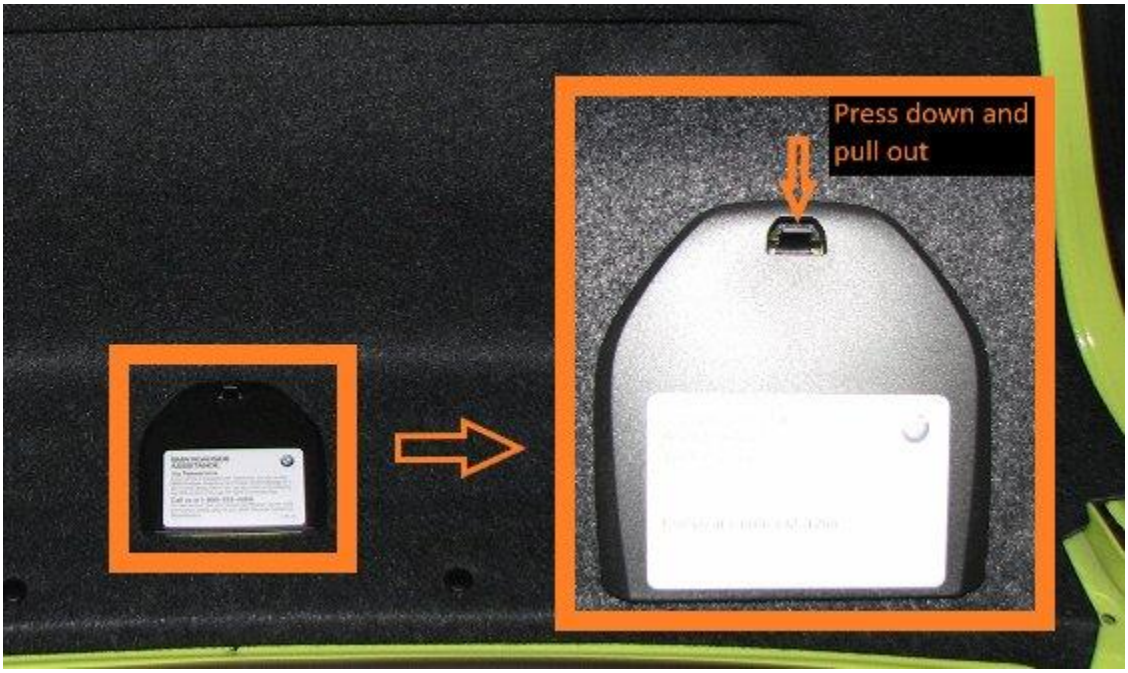


3. Disengage the “coupler” holding the cover on the hinge using a Flat Head Screwdriver and pull the trim cover towards you to remove it from the trunk hinge.



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4. Remove the cover shown in the image below.



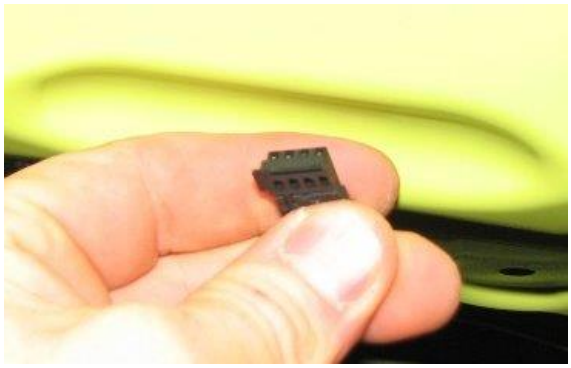
5. Remove the (8) push clips holding the trunk insulation using a Trim Removal Tool.



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6. Disconnect the trunk opening connector as shown below. ***If equipped***





7. Pull on the rear/bottom most part of the insulation, away from the trunk. These plastic push clips, shown below, are final part to remove the insulation.



8. Disconnect the (4) electrical connectors.



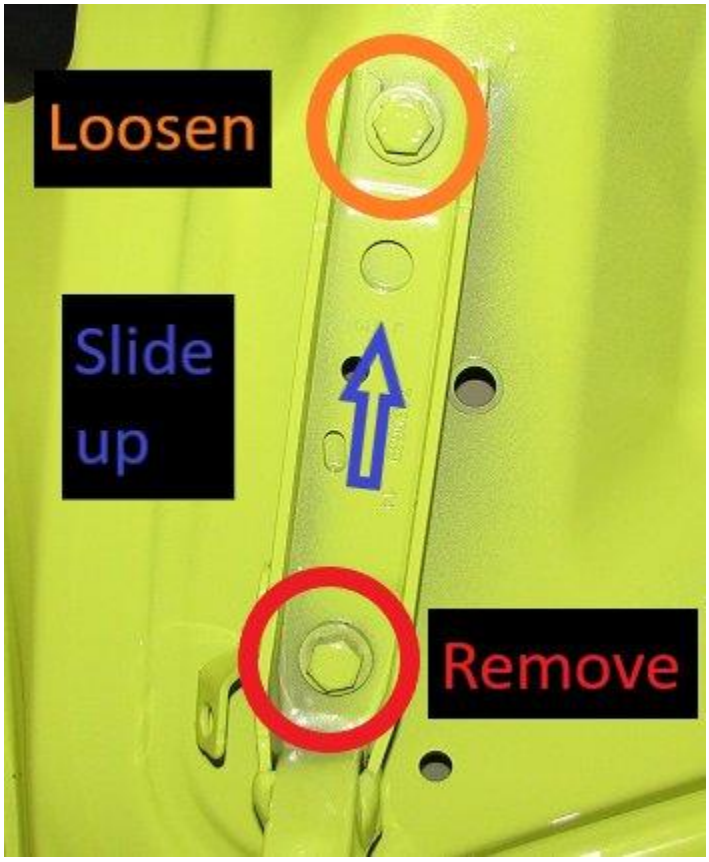
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9. Remove all of the wire holders that hold the wire harness to the trunk with a Trim Removal Tool.



10. Remove the bottom (2, Red) bolts from the trunk and loosen the top (2, Orange) bolts using a 12mm Socket and Ratchet. The trunk can then come off by removing it straight up.

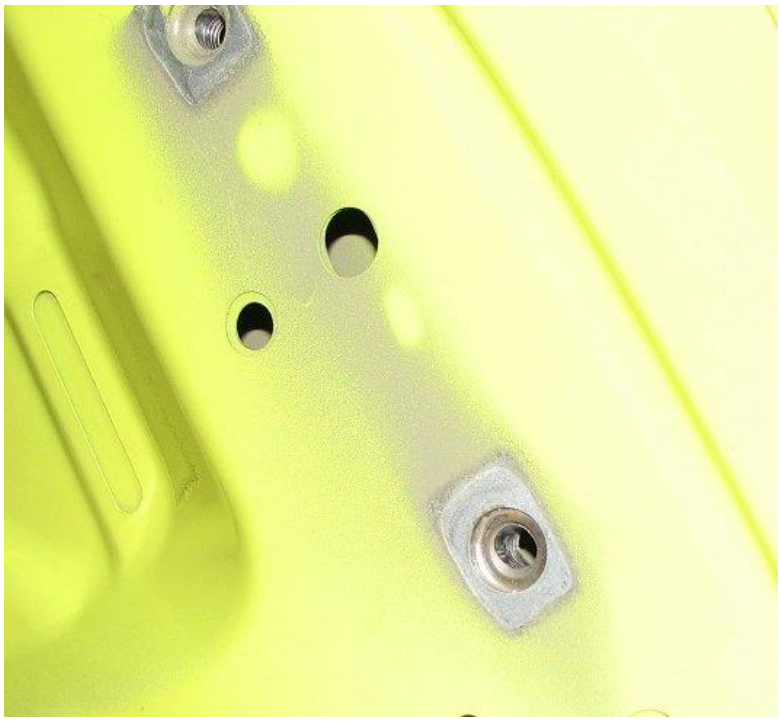


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11. Carefully remove the trunk and set it on a soft surface. **Note: We used a sawhorse with some towels. Carpeting on the ground can also work.**



12. Use the threaded mounting holes as a guide to drill holes all the way through the top skin of trunk with a Drill and 5/16” Drill Bit. Repeat this for all four trunk holes as shown below. **Note: Do your best to drill in the centermost of the threads and just remove the threads of the nut in the trunk.**

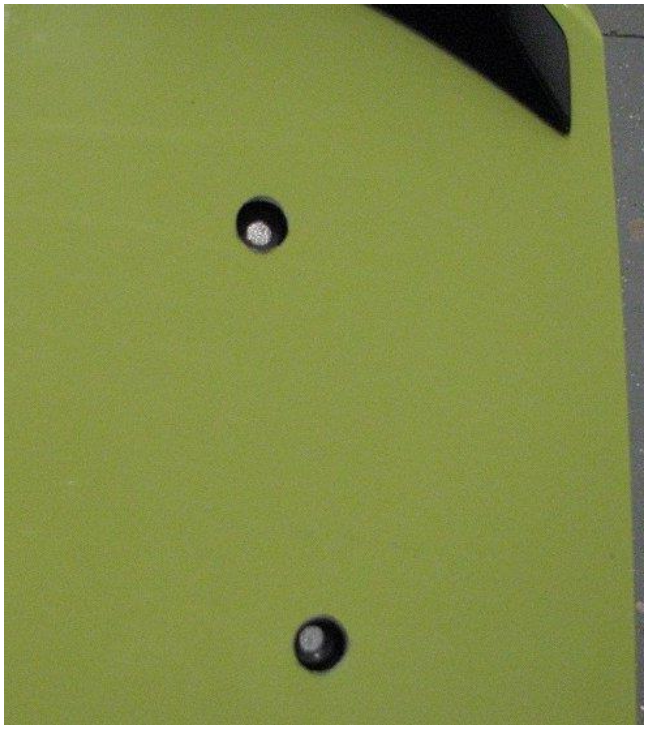


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13. Once you puncture the top skin, this is what the top of the trunk should look like.



14. Using a Drill and Step Drill Bit, open the holes on the top of the trunk to 5/8”. **Note: We used a Step Drill Bit but other options are possible as well.**

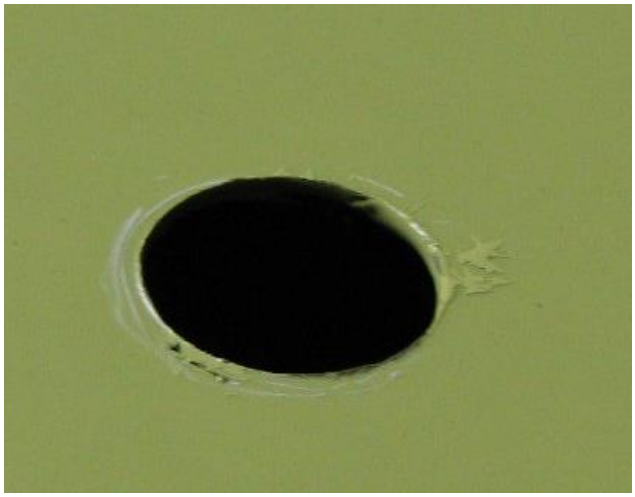


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15. Install 2 Trunk Mount Standoff Spacer per Trunk Mount, 4 total, as shown below. Install by hand first, and then use a 12mm Wrench and tighten them to about 6 ft-lbs.



16. Use Touch-Up Paint to seal up the raw metal left from drilling.





17. Clean both the trunk surface and the bottom side of the trunk mounts with a Microfiber Towel and 50/50 Mix of Isopropyl Alcohol and Water.

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18. Install the white side of the Left/Right Pre-Cut VHB Double Sided Tape on the Trunk Mount.



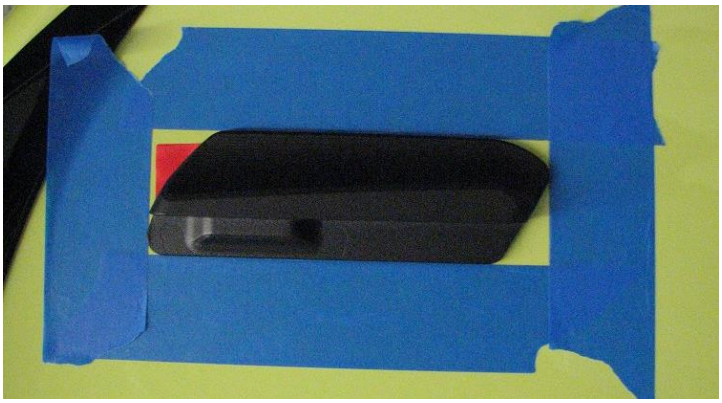
19. Verify that the M8 x 25mm FHHCS will thread into the Trunk Mount Standoff Spacer while installed on the trunk. **Note: If M8 x 25mm FHHCS do not thread in, make adjustments until they do.**

20. Before fully installing the Trunk Mount onto the trunk, we will test fit them to see if we need to add any shims so the distance from the Trunk Mount to the inner trunk hinge nut is correct. **Note: On our shop car, we found that the left- and right-hand sides differed.**

21. To determine if shims are necessary, bolt the Trunk Mounts onto the trunk and gauge if the double-sided tape is squishing or if the Trunk Mount is pulling into the skin.

22. If the mount is pushing into the top skin, add M6 x 0.5mm Washer Shims between the Trunk Mount Standoff Spacer and the Trunk Mount to increase the standoff height. Repeat **step 20 - 21** until the double-sided tape just slightly squishes when fully tightened down. **Note: You may now use some Red Loctite where the spacer threads into the trunk mount if you want.**

23. Once the holes are clearanced and the M8 x 25mm FHHCS thread in without issues, mark trunk mount placement with Painter's Tape. **Note: The Driver side is shown below.**



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24. Make sure that the sloped side of the trunk mounts face outward, then peel off the red backing of the Left/Right Pre-Cut VHB Double Sided Tape and install the Trunk Mount on the trunk and massage the double-sided tape gently into the trunk surface to ensure proper adhesion. **Note: The Passenger side is shown below**



25. Loosely install the rear most M8 x 25mm FHHCS, and M8 x 24mm Fender Washer so that it can be slid onto the hinges.



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26. Install the trunk onto the car. Place the trunk back onto the hinges using the top bolts as a guide to slide it into.



27. Use the previous unpainted edges to try to get the trunk to line up where it was previously. This should align the trunk properly to the chassis.



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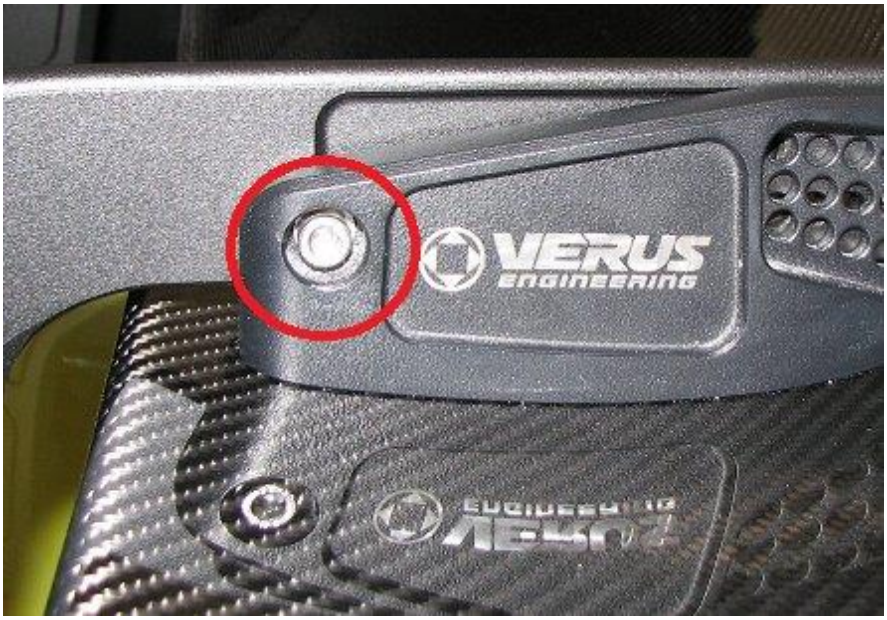
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28. After verifying proper trunk alignment, use a 12mm Socket and Torque Wrench to tighten the M8 x 25mm FHHCS and M8 x 24mm Fender Washer to 12 ft-lbs.

29. Close the trunk and install the Uprights to the Trunk Mounts with M6 x 16mm BHCS and M6 x 12mm OD Washer. Start the bolts by hand and use a 4mm Hex (Allen) Key to tighten them to about 6 ft-lbs.

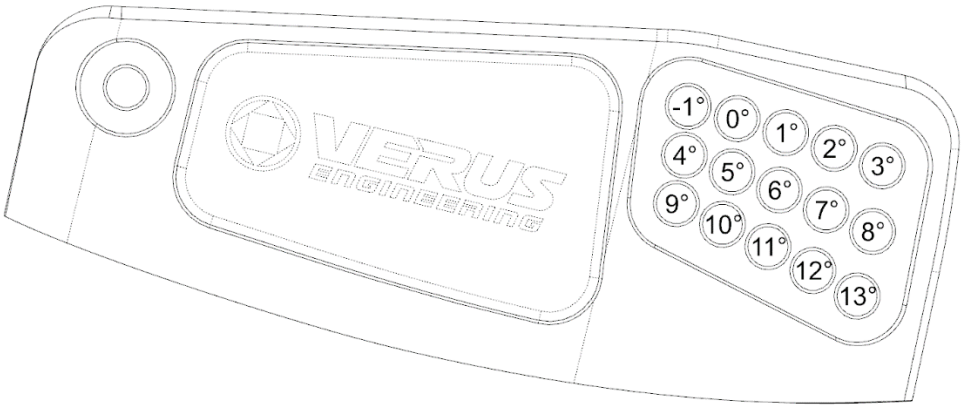


30. Loosely install the Wing Assembly to the uprights using the front mounting hole. The UCW uses an M6 x 22mm SHCS, (2) M6 x 12mm OD Washer, and a M6 Nyloc Nut. The V1X uses a 1/4” x 0.887” NAS 12 - Point Bolt, (2) 1/4” Thin Washer, and 1/4” Self - Locking Hex Nut.
Note: The UCW is shown in the image below.



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31. Below is a guideline of what we have designed and tested internally for AOA (Angle of Attack). That being said, every install and car can vary from this slightly. To ensure proper AOA, you should lay a Straight Edge from the front to the rear of the wing and check *in relation to the ground plane*.



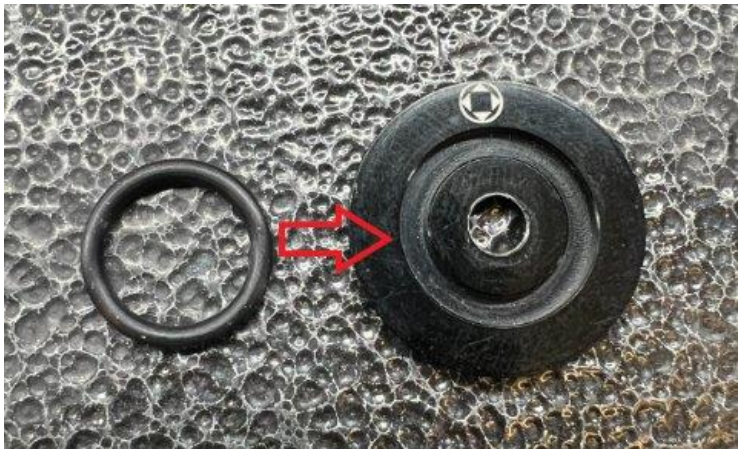
32. After your desired AOA is selected, install the remaining M6 x 22mm SHCS, (2) M6 x 12mm OD Washer, and M6 Nyloc Nut (UCW) or 1/4” x 0.887” NAS 12 - Point Bolt, (2) 1/4” Thin Washer, and 1/4” Self-Locking Hex Nut (V1X) in the rearmost locations. **Note: The UCW wing and hardware is shown in the image below.**



33. Use a 5mm Hex (Allen) Key and 10mm Wrench (UCW) or 5/16” 12 - Point Socket on a Ratchet and 5/16” Wrench (V1X) tighten to 6 ft-lbs. **Note: Be sure that you are using a washer on both the bolt head and nut side.**

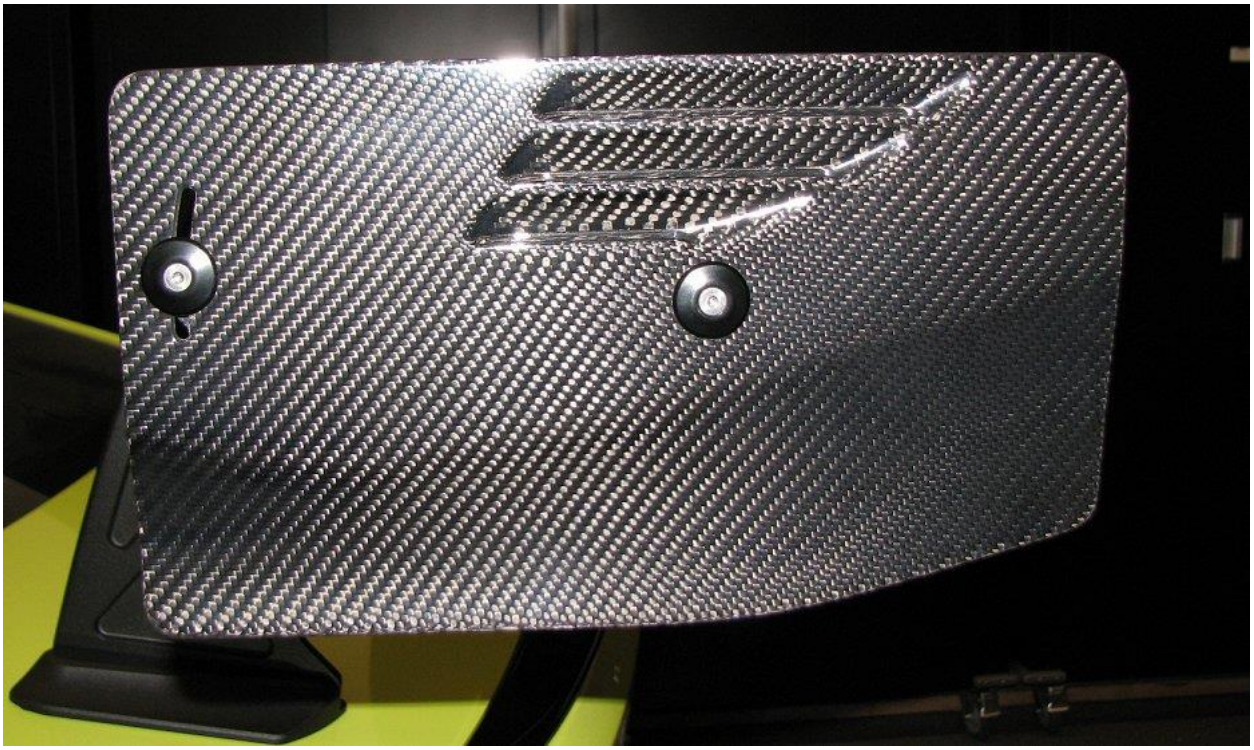
34. Install an #013 Buna-N O-Ring in the washer groove. **Note: If the #013 Buna-N O-Ring won’t stay in the groove, lightly grease the #013 Buna-N O-Ring and then install it.**

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35. Attach the endplate by loosely installing the M4 Machined Aluminum Endplate Washer (with the O-Ring fitted) and M4 x 16mm FHCS. **Note: The endplate in the image below is the Driver side of a UCW wing.**



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36. Using a Level, adjust the endplate so that the top edge is parallel to the ground. Then, tighten the M4 x 16mm FHCS using a 2.5mm Hex (Allen) Key 1/8 turn past finger tight. **Note: The Driver side if a V1X wing is shown below.**



37. The V1X wing has an optional gurney flap. Clean the gurney flap and mounting groove on the wing with the 50/50 Mix of Isopropyl Alcohol and Water. **Note: If you are installing a UCW, skip steps 37 – 40.**

38. Install the Roll - 3M VHB Double Sided Tape onto the gurney flap.

39. Peel the first 2 inches of red backing from the 3M VHB and place the gurney flap in the mounting groove/parallel to the rear edge of the wing blade.

40. Gradually peel the rest of the red backing off as you place the gurney flap.



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Swan Neck Rear Wing Kit, BMW M3 (G80) – Install Manual

Congratulations on installing the UCW or V1X Rear Wing for the BMW M3 (G80)! For more information on performance, please visit our website and take a look at our informative packet.

Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; support@verus-engineering.com.



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