

VERUS ENGINEERING

UCW Rear Wing Kit – E92 BMW M3

Install Manual



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1. Introduction

1.1. Overview: Detailed instructions on installing the Verus Engineering UCW Rear Wing Kit for the E92 BMW M3.

1.2. Difficulty: Moderate

1.3. Time Required: 1.5 – 2.5 hour

1.4. Tools Needed:

- 1.4.1. Drill
- 1.4.2. Starter Drill Bit
- 1.4.3. Center Punch
- 1.4.4. Step Drill Bit *Needs to have 17/32”*
- 1.4.5. Hammer
- 1.4.6. 10mm Socket or Wrench
- 1.4.7. Ratchet
- 1.4.8. 4mm Allen Wrench or Socket
- 1.4.9. 2.5mm Allen Wrench or Socket
- 1.4.10. Scissors
- 1.4.11. Painter’s Tape
- 1.4.12. Microfiber Towel
- 1.4.13. 50/50 mix of Isopropyl Alcohol and Water



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1.5. UCW Rear Wing Kit Components

- 1.5.1. UCW Rear Wing Assembly
- 1.5.2. (2) Upright
- 1.5.3. (1) Trunk Mount - Left
- 1.5.4. (1) Trunk Mount - Right
- 1.5.5. (2) Carbon Endplate
- 1.5.6. Hardware Bag
 - 1.5.6.1. (2) Spacer - M6, 11mm Long - Aluminum
 - 1.5.6.2. (2) Spacer - M6, 8mm Long - Aluminum
 - 1.5.6.3. (4) M6 x 1.0, 35mm Long BHCS (Button Head Cap Screw), Stainless
 - 1.5.6.4. (8) M6 x 1.0, 18mm OD Fender Washer
 - 1.5.6.5. (4) M6 x 1.0, 20mm Long BHCS, Stainless
 - 1.5.6.6. (20) M6 x 1.0, 12mm OD Flat Washer
 - 1.5.6.7. (12) M6 x 1.0, Nyloc Nut
 - 1.5.6.8. (4) M6 x 1.0, 25mm Long BHCS
 - 1.5.6.9. (4) Machined Aluminum Endplate Washer
 - 1.5.6.10. (4) Buna-N O-Ring, #013
 - 1.5.6.11. (4) M4 x 0.7 FHCS (Flat Head Cap Screw) x 16mm Long, Stainless
 - 1.5.6.12. (1) VHB Double Sided Tape - Left
 - 1.5.6.13. (1) VHB Double Sided Tape - Right
 - 1.5.6.14. (1) Drill Template, Paper

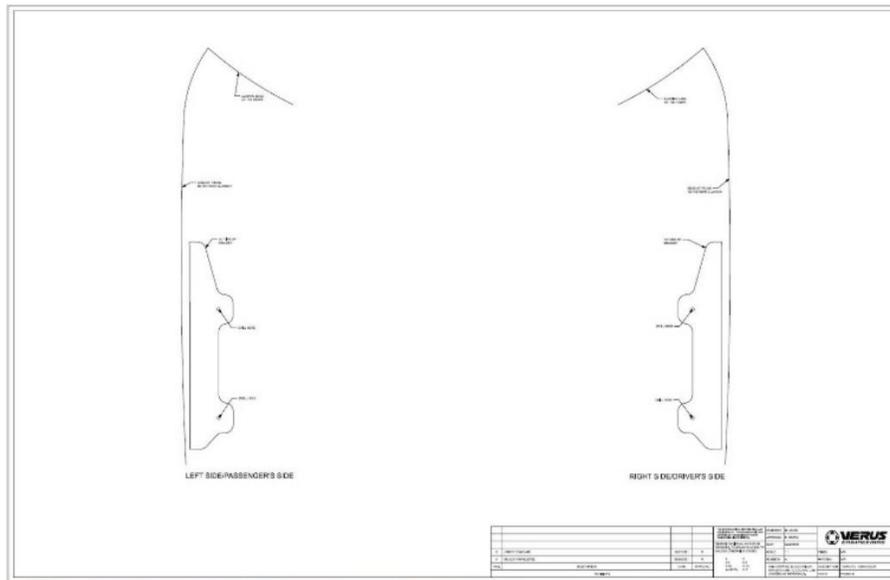
**2. UCW Rear Wing Install**

- 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. We begin by gaining access to the trunk. You can leave the trunk on car during the install but removing the trunk is also quite easy. We decided to keep the trunk installed on the car.

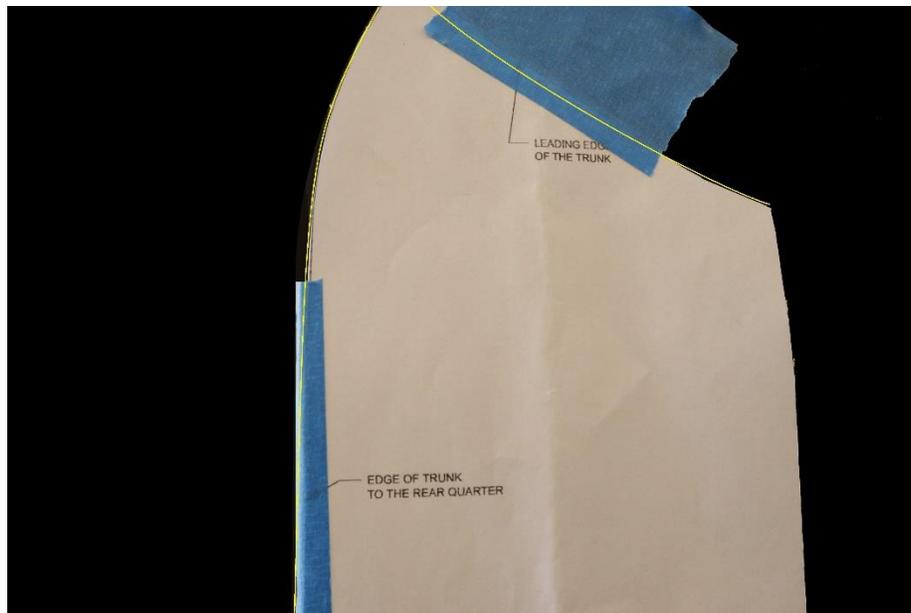
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2.3. First, we have to cut the drill template out.

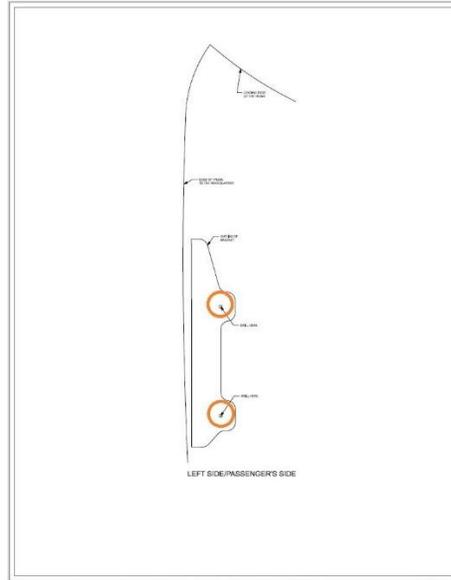


2.4. Install the paper template onto the trunk with painter's tape using the guidelines noted on the template. These markings are outlined in yellow in the below photo.



2.5. Using a center punch, mark the center of the holes outlined in orange.

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- 2.6. Using a 1/8" drill bit to start, create a starter hole for all of the holes. Drill through both the top and the bottom surface of the trunk. Make sure you are drilling as perpendicular to the trunk surface as possible. **Note: If you are installing the wing with the trunk on-car, ensure you do not drill into the chassis underneath the trunk. Opening the trunk slightly helps ensure this does not happen.**
- 2.7. We now need to open these holes to 1/4" for the M6 bolts to slip through.
- 2.8. On the top side of the trunk surface only, we need to enlarge these holes to 17/32" so that the aluminum spacers can fit inside the trunk skins as shown below. We recommend utilizing a large step bit for this. **Note: Do not enlarge the holes on the bottom side of the trunk. The holes on the bottom side need to stay 1/4".**



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- 2.9.** Once all of the holes on the top side of the trunk are opened up to 17/32", slide the aluminum spacers in the locations mentioned below. Keep the trunk slightly open for this step. The forwardmost spacer (green) is the smaller of the two sizes at 8mm tall. The rearward spacer (blue) will be the larger of the two and is 11mm tall.



- 2.10.** The top side of the trunk should now look like the following image.



- 2.11.** Prep the trunk and trunk mount surfaces for the 3M VHB install. Using your microfiber towel, wipe both surfaces clean with your 50/50 isopropyl alcohol and water mixture.

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- 2.12. Install the pre-cut 3M VHB onto the trunk mounts as shown below.



- 2.13. Remove the red backing from the 3M VHB and install onto trunk using the holes in the aluminum spacers as your reference points.
- 2.14. Using four M6x1.0, 35mm long BHCS and 18mm OD washers, place these through the mounting holes in the trunk mount and aluminum spacers until you see the threads poke out on the bottom side of the trunk.



- 2.15. Using M6x1.0 nyloc nuts and associated washers, fully install the trunk mounts as shown below. Tighten to roughly 6 ft-lbs. **Note: The frontmost location uses an 18mm OD washer, whereas the rearmost location a 12mm OD washer is needed.**

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- 2.16.** It is now time to install the uprights. Using the four M6x1.0, 20mm long BHCS, eight 12mm OD washers, and four nyloc nuts, install the uprights as shown below. Tighten to roughly 6 ft-lbs. **Note that the upright is on the *outside* of the upright in the below image. However, if you feel the aesthetics are better with the upright on the inside of the trunk mount, feel free to install in that fashion.**



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- 2.17. Choose the angle or attack, you would like to set the wing at. Below is a guideline of what we have designed and tested internally. That being said, every install and car can vary from this slightly. To ensure proper AOA, you should lay a straight edge from front to rear of the wing and check the degree measurement *in relation to the ground plane*.



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- 2.18. Use the four M6 x 1.0 x 25mm long BHCS, eight 12mm OD washers, and four nyloc nuts to install the rear wing onto the uprights. Tighten to roughly 6 ft-lbs.



- 2.19. To finish installing the rear wing, we have to install the endplates. We include aluminum washers that accept M4 flat head cap screws and o-rings to reduce marring of the endplate. Install the o-ring in the washer groove and install into the endplate and rear wing as shown below.

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- 2.20.** The endplate, top or bottom edge, should be parallel to the ground. Utilize a level and snug the bolts once the endplates are parallel to the ground. They are M4 and do not need much torque.
- 2.21.** Congratulations on installing the UCW rear wing for the E92 BMW M3! For more information on performance, please visit our website and take a look at the Ventus informative packets.
- 2.22.** Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; sales@verus-engineering.com.

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