

# VERUS ENGINEERING

## Dive Plane Kit for E90 BMW M3 Install Manual



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### Document Revisions

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Dive Plane Kit for E90 BMW M3 – Install Manual

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## Dive Plane Kit for E90 BMW M3 – Install Manual

## 1. Introduction

**1.1. Overview:** Detailed instructions on installing the Verus Engineering dive planes on the E90 BMW M3.

**1.2. Difficulty:** Easy

**1.3. Time Required:** 1-1.5 hour

**1.4. Tools Needed:**

- 1.4.1. Tape
- 1.4.2. Scissors
- 1.4.3. Rubbing Alcohol
- 1.4.4. Microfiber Towel
- 1.4.5. Drill Bits (Optional)
- 1.4.6. Drill (Optional)
- 1.4.7. Center Punch (Optional)

**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. (2) Double Sided Tape
  - 1.5.3.2. (9) M4 x 0.7 x 16mm BHCS (Button Head Cap Screw), Stainless
  - 1.5.3.3. (9) M4 Fender Washer, Stainless

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- 1.5.3.4. (9) M4 Washer, Stainless
- 1.5.3.5. (9) M4 x 0.7 Nyloc Nut, Stainless
- 1.5.3.6. (1) Install Template



## 2. E90 M3 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. **A big thanks to Nick Alderson for helping with the install manual.**
- 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 double-sided tape, starting with a clean car reduces the risk of scratches and improves install ease.
- 2.3. **You can install the dive planes in two different ways. Mechanical fastening and chemical fastening (double sided tape). The choice is yours. If you utilize double sided tape, the install is simpler. If you utilize bolts and nuts, the install ensures the dive planes do not come off the bumper.**

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- 2.4. We begin by cutting out the templates for the dive plane install. We use this template to locate the dive planes on the front bumper in the correct location.



- 2.5. Place the template on the bumper as shown below. Note how it lines up properly with the side marker and bumper lines. Take care during install of this template, as it is easy to get this slightly off.



- 2.6. Do this to the other side of the vehicle as well.

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- 2.7. If you plan to install the bolts and nuts, skip to step 2.16 . If you plan to use double-sided tape, follow below.
- 2.8. We begin by installing the double-sided tape on the dive planes.
- 2.9. It is **\*highly\*** recommended to follow 3M's VHB install instructions, which are listed in these steps below. The ambient temperature should be over 50 degrees F. 50% of the ultimate bond strength will be achieved after 20 minutes, 90% after 24 hours, and 100% after 72 hours.
- 2.10. Thoroughly clean the dive plane mounting flange with a 50/50 solution of alcohol/water.
- 2.11. Install the doubled sided tape on the dive plane by removing the white side of the double-sided tape.



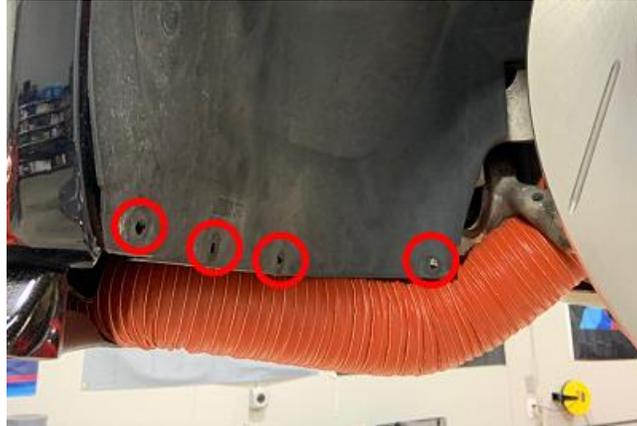
- 2.12. **Utilize a 50/50 alcohol/water mixture with a microfiber towel and thoroughly clean the area the dive plane will be installed.** This allows a clean surface for the tape to adhere to. If you do not feel comfortable using this mixture on the car's paint, then do not; however, this is the recommended solution to use prior to install from 3M.
- 2.13. Check fitment of the dive planes to the bumper before install. The dive planes should fit the bumper perfectly. **If they do not, ensure the template is installed correctly and adjust as necessary.**
- 2.14. Peel the red protective film off the tape, and install the dive plane. Work the dive plane into the bumper. Ensure the dive plane is massaged well into the bumper for maximum adhesion.

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- 2.15.** Allow the dive plane to stay on car for a minimum of 24 hours, 72 for the best possible adhesion. See step 2.9 for further clarification on bond strength. For mechanical style install, follow below on 2.15. Otherwise, congratulations on installing the Verus Engineering dive plane kit. Enjoy the benefits the dive planes have on front end downforce, sealing the sides of the BMW, and improving aesthetics. **Please send any questions, concerns, or photos to Verus Engineering via e-mail, [sales@verus-engineering.com](mailto:sales@verus-engineering.com).**
- 2.16. Mechanical Installation**
- 2.17.** To install bolts and nuts, we need to gain access to the back side of the bumper.
- 2.18.** We recommend loosening the fender liners to be able to get access to the back of the bumper with the bumper still on the car.
- 2.19.** Remove the necessary pins and hardware from the fender liner to gain access to the back side of the bumper.

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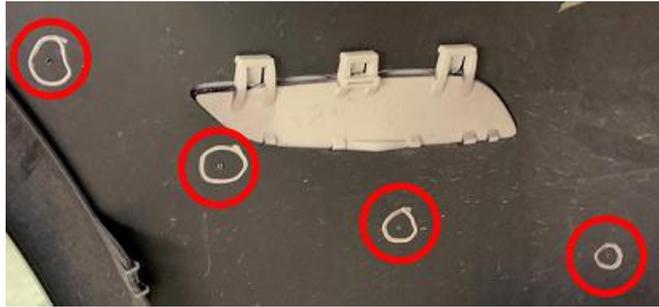


- 2.20.** With adequate access to the rear of the bumper, we can mark the holes to be drilled.
- 2.21.** With a center punch, mark the holes to be drilled using the dive plane as a template.  
Use a center punch or similar.



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- 2.22.** Using a small drill bit initially, something around 1/8", drill the marked holes in the bumper.
- 2.23.** Open these holes to roughly 3/16 initially. This should be enough room to get the M4 fasteners through the bumper.



- 2.24.** Install the dive plane onto the bumper by using a button head cap screw (BHCS) and a small washer (or no washer), then on the backside utilize a large washer and nyloc nut.



- 2.25.** Reinstall fender liners in reverse order.

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- 2.26.** Congratulations on installing the Verus Engineering dive plane kit. Enjoy the benefits the dive planes have on front end downforce, sealing the sides of the BMW, and improving aesthetics.
- 2.27.** Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; [sales@verus-engineering.com](mailto:sales@verus-engineering.com).



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