

G Series BMW M3/M4 Hood Louver Install

Installation Manual



Author: E. Hazen Release Date: 2024/11/06 Approvals: C. Warner

Document Revisions

| Rev | Date | Author | Description | |
|-----|------------|----------|--------------------|--|
| 01 | 2024/11/06 | E. Hazen | Issued for Release | |
| | | | | |
| | | | | |



CONTENTS

| | Introduction | |
|----|---------------------------------|-------|
| | 1.1. Overview | <<3> |
| | 1.2. Difficulty | <<3> |
| | 1.3. Time Required | |
| | 1.4. Tools Needed | <<3> |
| | 1.5. Hood Louver Kit Components | <3-4> |
| 2. | Hood Louver Kit Install | <4-8> |



- **1.1. Overview:** Detailed instructions on installing the hood louver for the G-Series BMW M3 and M4.
- 1.2. Difficulty: Moderate
- 1.3. Time Required: 3-4 hours
- 1.4. Tools Needed:
- **1.4.1.** Ratchet and/or Impact
- **1.4.2.** 13mm socket
- 1.4.3. Scissors
- **1.4.4.** Painter's tape
- 1.4.5. Microfiber Cloth
- 1.4.6. 50/50 Isopropyl Alcohol and Water Mix
- 1.4.7. Tape Measure
- **1.4.8.** Sharpie
- 1.4.9. Cut-Off Wheel
- 1.4.10. Body Saw or Jig Saw
- 1.4.11. Deburring Flap Disk or Hand Debur Tool and File
- 1.4.12. Safety Glasses
- 1.4.13. Vacuum
- 1.4.14. Touch-Up Paint (Optional)



1.5. Hood Louver Components

- **1.5.1.** (1) Left-Hand Hood Louver
- **1.5.2.** (1) Right-Hand Hood Louver
- 1.5.3. Hardware Bag
 - **1.5.3.1.** (2) Cut Templates, One for Each Side

3



- **1.5.3.2.** (1) Pre-Cut Left Side 3M VHB Tape
- **1.5.3.3.** (1) Pre-Cut Right Side 3M VHB Tape



2. Hood Louver Kit Install

- **2.1.** Verus Engineering is not responsible for damage to your vehicle by following this manual.
- 2.2. Remove the hood by removing the four 13mm nuts and set the hood on a soft flat surface. We like to use soft carpet to ensure the hood surface does not get scratched or damaged. We also use saw horses if you do not want to work on the ground. Note: You may want to mark the nut locations on the hood for reinstallation purposes with a sharpie or paint pen. This allows the hood to be put back on in the same exact location. Having a second set of hands here is extremely helpful as well.





- **2.3.** Cut out the templates.
- **2.4.** Place these on the hood to mock up where they will go and then use painter's tape on the hood where we will be installing the hood louver.



2.5. With the tape down, we can tape the template to the hood (as shown below) using the marked locations as your guidelines for placement.



2.6. Check measurements to various points to ensure that the template is square and even on the hood. Measure twice, cut once!



2.7. Using a felt tip marker, trace the cut-out location so that if the template gets ruined during cutting, we have another mark/line to use as a reference.



2.8. Using a cut-off wheel, cut along with marked lines on the template and blue tape. We found using the cut off wheel works well for this part. Towards the front of the cut, you can cut deep/into the structure beneath it. Towards the rear, avoid going deep into the hood as we end up keeping a decent bit of the structure underneath the skin of the hood.





- 2.9. After the top skin has been cut, remove it by prying up. These edges are very sharp, so using gloves is advised here. After the top skin is removed, you should have something like the photo above. Note: There is a bonding agent holding this top skin to the under-hood structure. You will need to pull fairly hard to remove the top skin, therefore, do so carefully.
- **2.10.** Note the "marked" area in step 2.8, this is where we will be cutting the structure underneath the hood. This is what we found worked well.
- **2.11.** Using the cut-off wheel again, cut the interior part of the hood out. We found using a combination of cut off wheel and body saw helped to cut this part out with sharp corners.



- **2.12.** Test fit the hood louver before the template is removed. We do this to ensure the hood louver will sit flush with the hood. If it does not, make the necessary cuts to ensure it does sit flush. This could be a result of the hole(s) not being large enough, so figure out what is causing the interference and remove accordingly. It could be the skin or the structure.
- **2.13.** Once the louver flange sits flush with the hood surface, you may remove the template and painter's tape.
- **2.14.** Clean, and deburr the raw edges with whatever deburr tools you have available. We used a deburr wheel as well as a machinist's deburr tool. A file would work as well. Vacuum up any loose debris. Coat the raw edges with touch up paint at this point if you would like to do so. It may not be necessary on this hood, as the hood is aluminum.
- **2.15.** Prepare both the hood vent and the hood with a 50/50 mix of isopropyl alcohol and water.



- 2.16. It is ***highly*** recommended to follow 3M's VHB install instructions, which are as follows: **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.**
- **2.17.** Install the pre-cut 3M VHB onto the hood louver. For easier installation, consider cutting the tape in half. We found that a single piece of tape was challenging to install, and cutting it in half made the process much smoother.



2.18. Prepare the hood to install the hood louver. Using a tape measure and painter's tape, mark the outer profile of the louver on the hood to aid during install when installing with tape. Use the straight edges of the tape to line up with the edges of the louver.





2.19. Peel the red backing off a small section of the double-sided tape on each side leaving this as a tab you can pull once the hood louver is installed. This is done so that you can set the hood louver onto the hood while still being able to make adjustments.



- **2.20.** Once, you are happy with the placement, pull the rest of the red backing off of the tape and apply pressure to adhere the tape.
- **2.21.** To aid in adhesion, we placed microfiber towels (to protect the carbon fiber) and weights on the louver for 48 hours.





- **2.22.** Align and reinstall the hood on the car.
- **2.23.** Congratulations! You have completed the installation of the G Series M3 / M4 Hood Louver! If you have any comments, concerns, or issues, please contact <u>sales@verus-engineering.com</u>.