Ford Fiesta ST Hood Louver Install

Installation Manual

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Approvals: P. Lucas

Document Revisions

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1.1. **Overview:** Detailed instructions on installing the hood louver kit for the Ford Fiesta ST.

1.2. **Difficulty:** Moderate

1.3. **Time Required:** 3-4 hours

1.4. **Tools Needed:**

- Ratchet or electric powered ratchet
- 10mm socket
- 11/32 socket
- Scissors
- Hammer
- 1/16” drill bit (any small drill)
- 1/2” stepped drill
- Center punch (or un-used tap with a sharp point)
- 11/64" drill bit
- Countersink
- 90 degree air grinder
- Abrasive roll-lock wheels
- Drill
- Painter’s tape
- Tape Measure
- Straight Air Grinder
- Cut-off Wheel
- Goggles or safety glasses
- Large piece of carpet
- Vacuum

1.5. **Hood Louver Components**

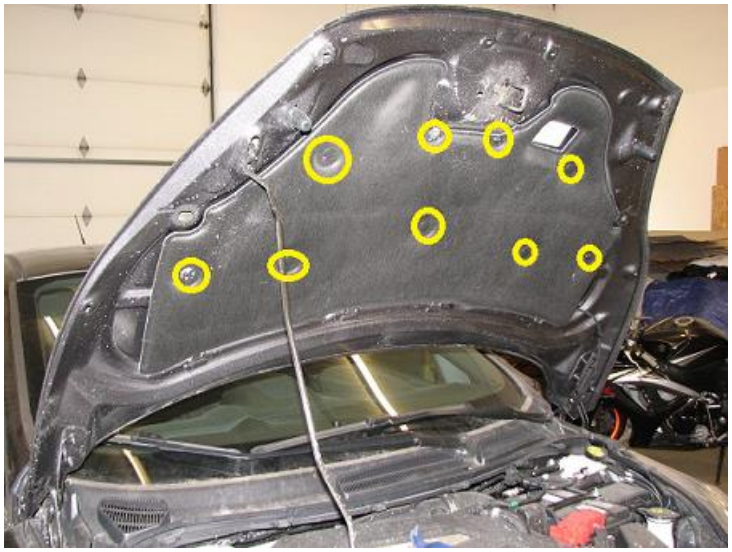
- (2) Powdercoated black or raw aluminum louvers with installed studs
- (2) Powdercoated black or raw aluminum wickers
- Hardware Bag
    - (2) Vinyl Cut and Drill Templates
    - (32) 8-32 Flanged Serrated Nuts

2. Hood Louver Kit 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. Begin with disconnecting the battery, negative first, if this makes you feel more comfortable working on the car. It is always a good idea to disconnect the battery anytime when working on the vehicle. We were nowhere near the battery or electrical system so we left it connected for this install, but again, never a bad idea.

2.3. Open the hood to gain access to the hinge bolts holding the hood on.



2.4. Remove the under hood cover by removing the plastic clips circled above in yellow.

2.5. Below is a photo of the hood cover removed.

2.6. Remove the washer fluid nozzle hose from the hood. Blue circle is the hose you must remove, and red circles are clips that need removed.

2.7. Using the 10mm socket and ratchet, loosen and remove the (4) bolts from the hood latches and remove the hood from the car. These are circled in blue below.

2.8. Place the hood on a large piece of carpet to prevent scratches from forming. We had good luck with this; however if you feel safer doing another technique, by all means protect the paint in whatever fashion you feel best.

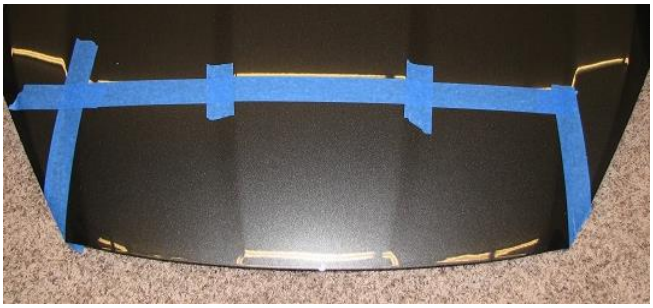
2.9. You will need scissors to cut the template in half to install the templates on the hood.

2.10. Utilizing blue painters tape, we can map out the location on the hood where we recommend them being installed.

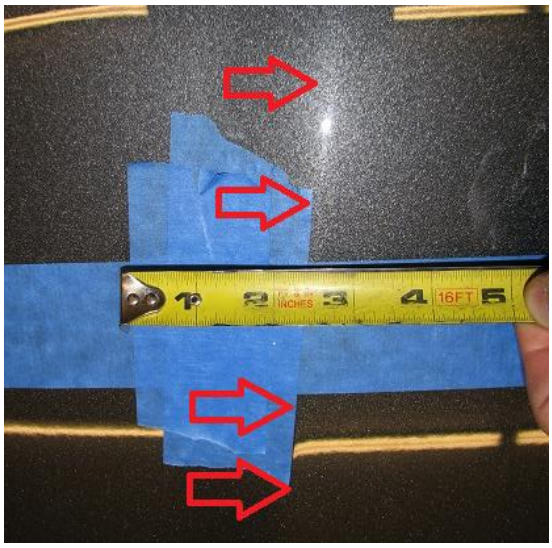
2.11. Starting on the sides, we mark two lines longitudinally up from the point in the hood (red arrow below).

2.12. Measure up from these points, along the blue tape, 9”; as shown below.

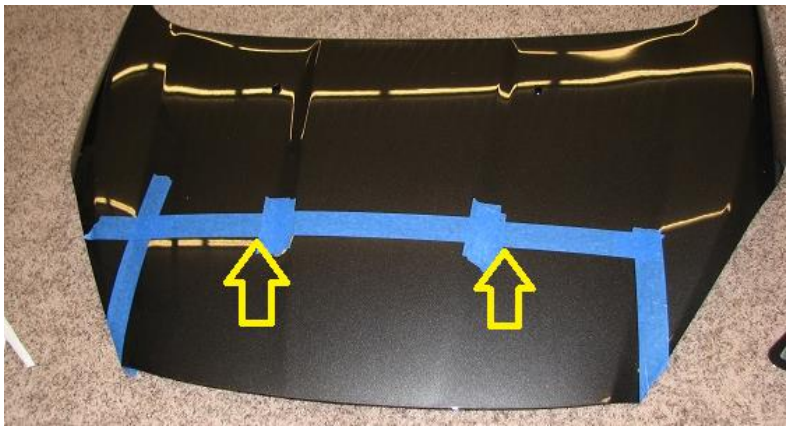
2.13. Place a single piece across the entire hood between these two spots.



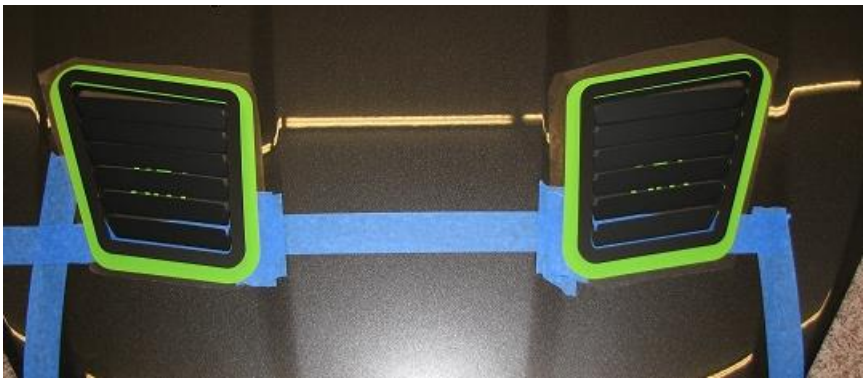
2.14. Measure 2.5” outward from the inner creases (located by red arrows below).



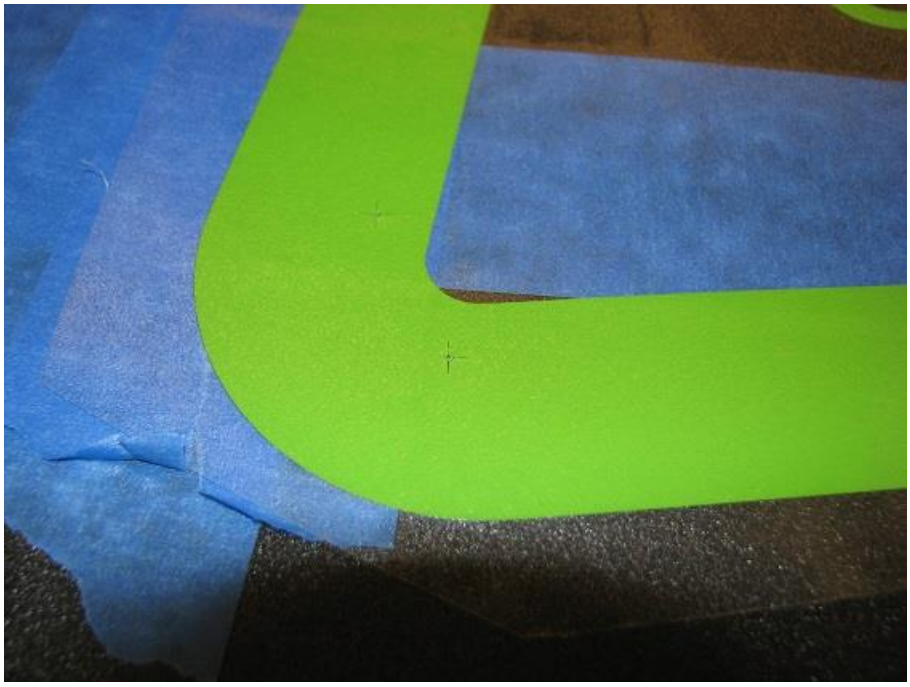
2.15. This is what the hood should look like right now. The yellow arrows are where we will place the inner corner of the louver for placement.



2.16. Place the templates on the hood, as shown below. The inside louver flange should be parallel to the vehicle's hood crease.



2.17. Utilize a center punch and mark all of the stud holes to be drilled, along with the (4) inner holes.



2.18. Using the small drill bit (1/16” or 1/8”), drill a hole through each of these points. If the drill bit begins to walk much, you need to center punch the hood harder.

2.19. Stepping up to the 11/64” hole, drill the (15) holes to 11/64”. The 11/64" hole allows a bit of misalignment for install; however you can start smaller if you would like (stud dia. is 0.164”).

2.20. Then using the 1/2" stepped drill bit, go all the way through the (4) holes that need to be between 3/8" to 1/2". The hood should look like the below picture once you do this.

2.21. Clean each of these holes up from burrs with the countersink tool. Hit the top and bottom just briefly to break the edge.

2.22. We now use the templates as straight lines between the outside of the holes that are the inside corners of the cutout we will need to remove.

2.23. Using the cut-off wheel and the straight grinder, carefully follow the edge of the template to help you keep the cut straight. There is no rush. This is the hardest part of the install, so take your time and do not get hasty with cutting through the hood.

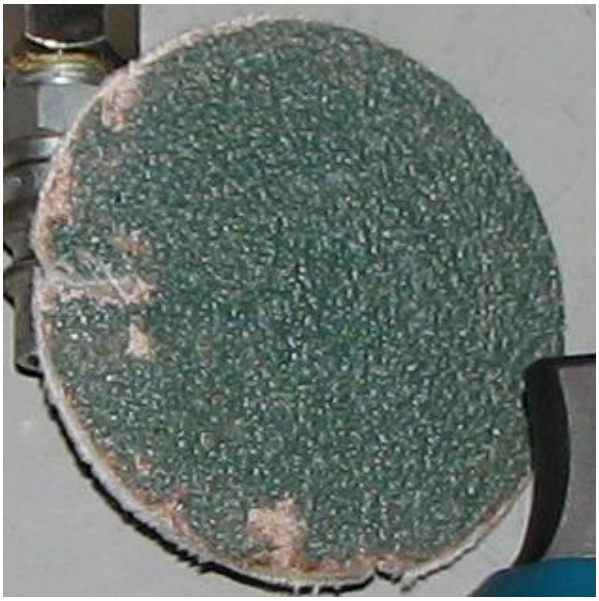
2.24. Below is a photo with the louver portion cut out from the bottom side.

2.25. We will need to remove the underside structure as well. Before flipping the hood over, cut the other side of the hood louver as well. Do so by repeating the steps listed above.

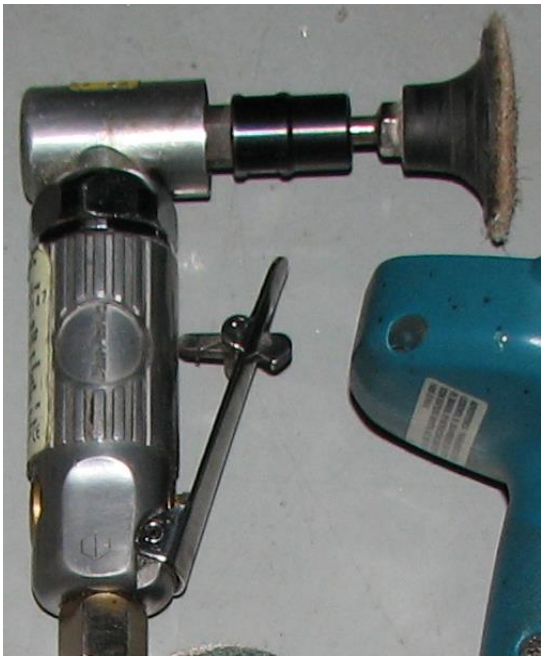
2.26. Utilizing painters tape again, mark the locations that need removed. Remember, you'll need to tighten the nuts on, so give slightly more room for the flange of the nut to slide past the under hood webbing.

2.27. Below is a photo with the structure removed.

2.28. Once you have these cut out, you will want to test fit the louvers and find out where you need to shave off more to ensure the louvers install un-obstructed. To shave off small amounts, we recommend using an abrasive wheel (shown below) on a 90 degree grinder.



2.29. When you are happy with fitment, we recommend finishing off the edges with a less abrasive wheel on the 90 degree angle grinder (shown below). This leaves the edges smooth and rounded, without burrs and lessens the chances of being cut.



2.30. Decide what configuration you want to run your louvers in and prepare for final install. We recommend installing the wickers for the greatest evacuation of the engine bay air. The wickers are side specific. The below photo illustrates this (note, this is on an FRS/BRZ).

2.31. Using the 8-32 flanged serrated nuts, install them on each of the studs. The studs are firmly pressed into the aluminum louver but do not be overly rough with them or the clinch

stud could work loose. Depending on configuration ran, you can install the wickers and/or rain guards. These units are installed on the bottom side.

2.32. ***The nuts only need to be snug, due to the serrated feature they should not back off***. Keep this in mind, as there is no need to be rough with them. We found snug then a 1/8 turn works well. Follow the red warning label included in the hardware kits for more information.

2.33. *The aluminum louvers can be molded slightly to conform to the hood better, don't be satisfied with poor fitment, we went with thin aluminum so that it can fully conform to the hood!*

2.34. Reinstall the hood with the OEM 10mm nuts and torque to approximately 10 ft-lbs.

2.35. Enjoy a cooler engine bay, a bump in front end downforce, and an aggressive new look. If you have any comments, concerns, or issues, please contact sales@verus-engineering.com.