

# */// Race Louvers*

Professional R&D - Wind Tunnel Tested - Track Proven

info@racelouvers.com - www.racelouvers.com

908-447-5788



Hood Louver Installation Instructions

Thank you for choosing Race Louvers. Below are detailed instructions on how and where to install your hood louvers. If at any point you need assistance please give us a call. Race Louvers is not responsible for any damage resulting from the installation or use of any Race Louver products.

### **Whats in the box**

- Hood Louver(s)
- Color matched fasteners
- Template(s)
- Installation instructions
- Decals

### **Recommended Tools**

- Masking tape
- Tape measure
- String
- Scissors
- Saw horses, work bench, cushions
- Hood removal tools
- Drill with assorted bits
- Reciprocating saw, jig saw, cut off wheel or similar
- Sanding drum or file
- Spray paint or touch up paint
- Die grinder
- Rivet fastener

**Important** - Prior to performing any work please verify the supplied template is the appropriate size for the extractor.

**Note** - An extra template may be included in cases where only one of the dual kits are purchased. This allows the customer to locate and install the single kit so that the other matching kit can be installed at a later date.

### **Marking the Louver Location on the Hood**

1. Open the hood of the vehicle.
2. Using masking tape, tape measure and some string mark the location of the back of the radiator on both sides of the fender.
3. Close the hood.
4. Using the masking tape on the fenders as a reference add masking tape on the center of the hood marking the location of the back of the radiator.



5. Using the tape measure and masking tape measure the distance from the base of the windshield glass to the point of maximum louver setback on the hood.
  - 20-24" for car center hood louvers.
  - 16-20" for car side hood louvers.
  - Offroad / Truck louvers can be slightly less.
6. Using masking tape, tape over the entire area between these two points. This is the sweet spot for our extractors.
7. Using scissors, carefully cut out the louver template and verify it is the same size as the louver.
8. Locate the supplied louver templates on the hood in the proper orientation and the front 2-4" behind the back of the radiator mark. NOTE for maximum efficiency the louver should be mounted 2" behind the back of the radiator even if it does not fully extend to the maximum windshield setback.

- Templates: For louver pairs two of the same templates are provided. Simply flip one over for the left and right sides.
  - Center hood louvers should start 2-4" behind the radiator and centered on the hood.
  - Side hood louvers should start 2-6" behind the radiator and centered approximately between the engine and strut towers.
  - If two hood extractor kits are used or a second kit will be added in the future, the fronts should be aligned with each.
  - If there is a strut tower brace or other component that limits hood clearance the louvers can be shifted slightly to not interfere.
9. Using a marker carefully mark the inside perimeter (cut line) of the template onto the hood.
  10. This is your cut line.

### **Removing the Hood**

1. Using necessary tools carefully remove the hood from the vehicle.
2. Place the hood on a suitable work surface such as a bench or saw horses using cushions to prevent damaging the painted surfaces of the hood.
3. Remove any underside insulation.
4. Cover the remaining parts of the hood for protection.

### **Cutting the Hood**

Note: It is recommended that you cut the hole approximately  $\frac{1}{8}$ " larger on all sides than the cut line to provide sufficient clearance.

Note: When removing hood structure the perimeter, latch and hinge support structure should remain unaltered. If altering these we recommend hood pins be used.

1. Use a drill with a  $\frac{3}{8}$ " drill bit to drill holes, 1 at each corner just inside the cut line so once the perimeter is cut the corners will be rounded.
2. Using a reciprocating saw, jig saw, cut off wheel or similar tool, carefully cut out the perimeter including any support structure on the bottom.
3. With the same cutting tools remove more support structure on the bottom around the louver perimeter for airflow clearance. We recommend 2" of forward clearance and 1" on the rear and sides.



4. Place the louvers in the cut hole and check fitment. Adjust as needed to get a proper fitment and clearances.
5. If the louvers do not sit flush on the hood's surface you may carefully bend the louvers outer mounting flange slightly so it sits flush. DO NOT bend any of the blades.
6. With the louvers still located in the cut hole, use a marker to mark all of the mounting holes in the hood.
7. Remove the louvers and drill all of the mounting holes with a 3/16" bit.
8. Using a sanding drum or file smooth out all cut and drilled edges.
9. Clean the hood and remove masking tape.
10. Paint all cut edges by spraying paint on a q-tip and rolling it on the cut edges or brush it on with touch up style paint. Allow to dry.

### **Reinstalling the Hood**

1. Using necessary tools carefully reinstall the hood on the vehicle.
2. Slowly close the hood checking fitment and gaps. Adjust as needed.
3. Close the hood and verify the hood latches properly.



## Installing the Louvers

1. With the hood closed, temporarily place the louvers in its mounting location on top of the hood and check fitment within the hood. Make sure there is sufficient clearance between the louvers and any engine compartment components.
2. If there is contact between the louver blades and any engine bay components we recommend first trying to relocate those components. If that is not possible you may carefully trim the louver blade using a die grinder at the point of contact removing only enough material so there is no contact. DO NOT bend any of the blades.
3. Paint the clearanced area on the louvers if needed.
4. If desired you may place black electrical tape on the bottom side of the louvers as a cushion prior to installation.
5. Place the louvers in its mounting location on top of the hood with the blades angled rearward (decal facing up).



6. Permanently install the louvers using the supplied fasteners. If using our standard rivets no back up washer is needed.
7. Repeat step 6 for all remaining mounting holes.

## **Setting Up the Louvers**

Race Louvers hood louvers can be set up for maximum cooling, maximum front downforce or anywhere in the middle by changing the size of the front grill opening. Race Louvers sells a Grill Blocker Kit to compliment our louvers.

### **Maximum cooling**

1. Simply use the OEM front grill opening for maximum cooling setup.

### **Maximum front downforce**

1. Add 1 piece of masking tape to the outside edges of the front grill opening to restrict the airflow and operate the vehicle. **DO NOT OVERHEAT THE VEHICLE.**
2. Repeat step 1 until coolant temperatures increase above the thermostat temperature rating. Remove 1 piece of masking tape and this would be the maximum front downforce setup.

### **Compromise between maximum cooling and maximum front downforce**

1. Simply restrict the front grill opening size somewhere between maximum cooling and maximum front downforce.

After a desired setup is reached, tape can be removed and reinstalled as needed or a more permanent part can be used such as a smaller front grill or grill blockers.

**Congratulations! Your Race Louvers are now installed.**