



SNORKEL

RAM 2500/3500/4500/5500

NEW PRODUCT

Please visit www.aev-conversions.com to view the most current installation guide for this product.

This is a new product and we want to make sure that you receive the latest and most accurate information based on customer feedback, product revisions, and/or model year updates. We value customer feedback, so we encourage you to contact our Technical Support department if you have any suggestions on how to make the installation of this product easier or if you have any questions regarding the installation of this product. AEV's Technical Support can be reached by email at tech@aev-conversions.com or by giving us a call at (248)-926-0256.

**PLEASE READ BEFORE YOU START**

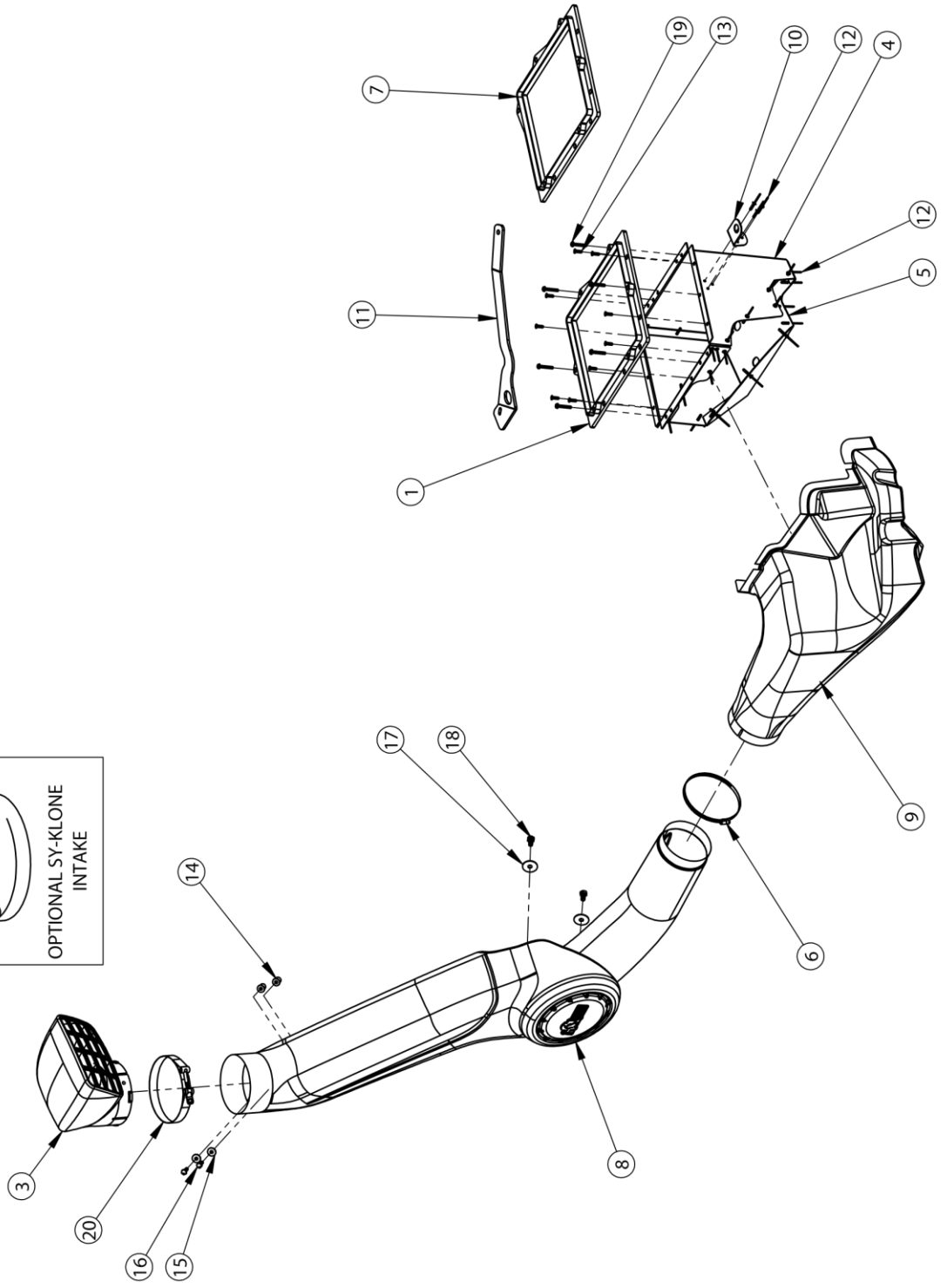
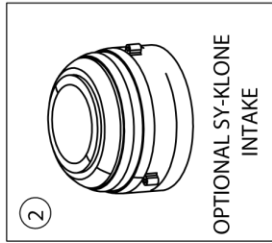
To guarantee a quality installation, we recommend reading these instructions thoroughly before beginning any work. These instructions assume a certain amount of mechanical ability and are not written nor intended for someone not familiar with auto repair.

INCLUDED PARTS	QTY	REQUIRED TOOLS
Snorkel Body	1	Drill
Air-Ram Snorkel Topper	1	1/16" Drill Bit
Snorkel Mounting Kit	1	1/2" Step Bit
2025+ Patch Panel	1	5/32" Drill Bit
		1" Hole Saw
		Air or Electric Cut-off Wheel
		Die Grinder with Carbide Bit
		Center Punch
		Deburring Tool
		Rivet Tool
		Rust Preventative such as <i>Permatex</i>
		<i>81773 Rust Treatment Masking</i>
		RTV Automotive Sealant such as
		<i>Permatex Black RTV Silicone Multi-</i>
		<i>Purpose Adhesive Sealant</i>
		Tape



SNORKEL

2019+ RAM 2500/3500





I. VEHICLE PREPARATION

1. Clean the vehicle including the fender liner area.
2. Remove the radiator cover by removing the 14 push clips (fig. 1).

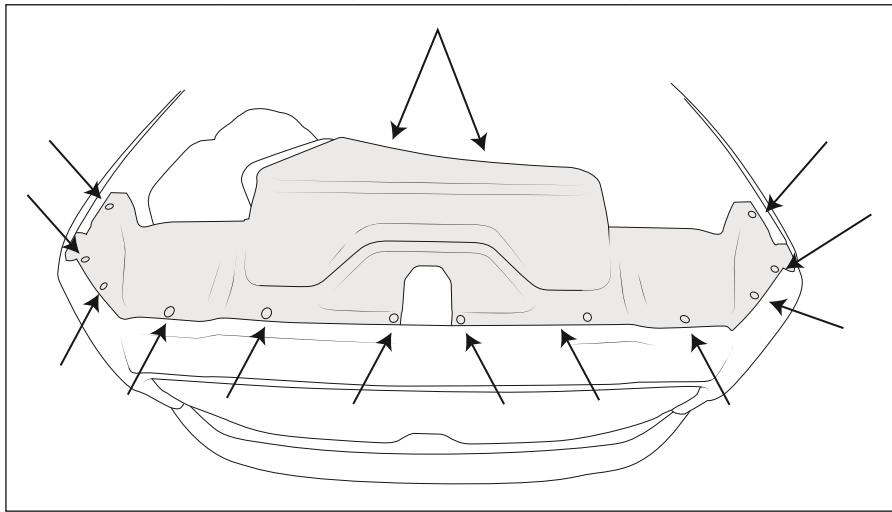


Figure 1

3. Remove the upper grille trim by removing the 10 bolts (fig. 2).

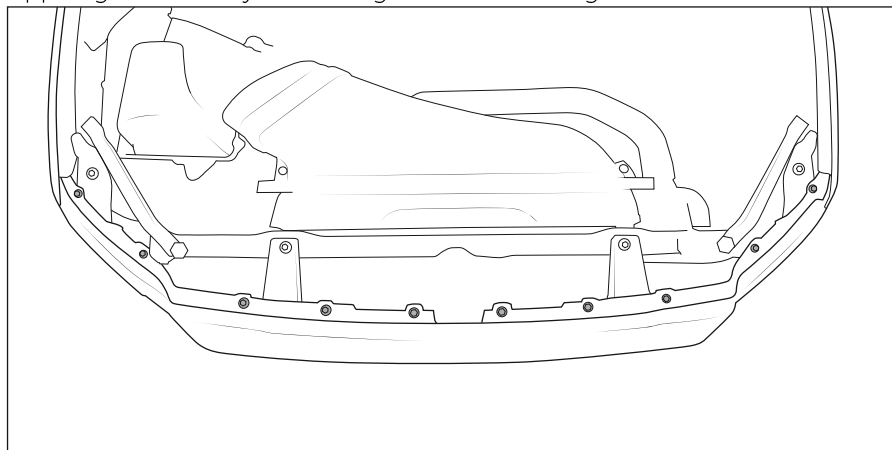


Figure 2

4. Remove lower grille trim.
 - A. The trim pieces beneath the headlamps are removed using a pry tool, being careful not to damage paint.
 - B. The center section has 7 bolts securing it to the grille (these will need to be loosened from below the vehicle but not fully removed) from underneath the vehicle, and 2 bolts below each headlamp (these need to be fully removed (fig. 3)).

NOTE: If you already have an AEV Bumper installed, it will be required to unbolt the bumper assembly and slide it forward to allow for this trim piece to be removed.

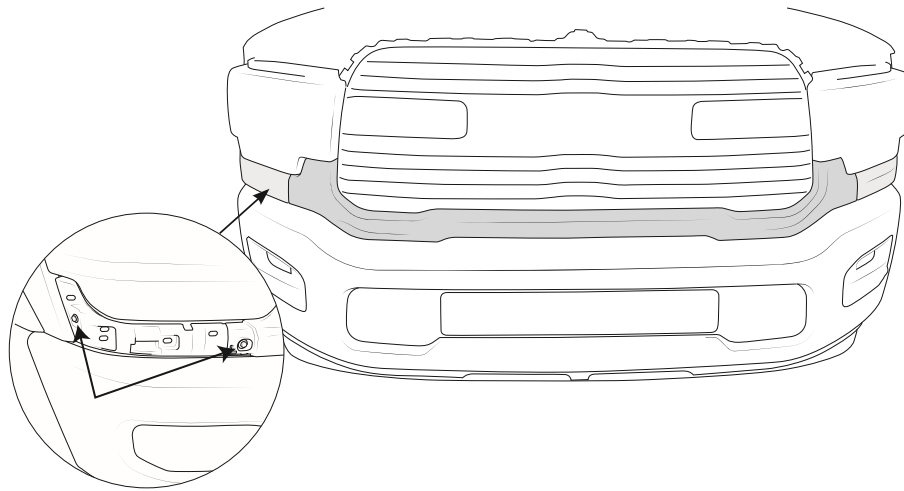


Figure 3

5. Remove the right front fender liner. Factory fender flares do not need to be removed.
6. Remove the right-side headlamp assembly. This will require removing the grille assembly.
7. Remove the factory radiator core support bracket, save the hardware.
8. Remove the factory intake components shown below by removing 2 bolts, SAVE the shaded portion, this will be re-installed (fig. 4). SAVE the three rubber grommets from the lower factory lower airbox.

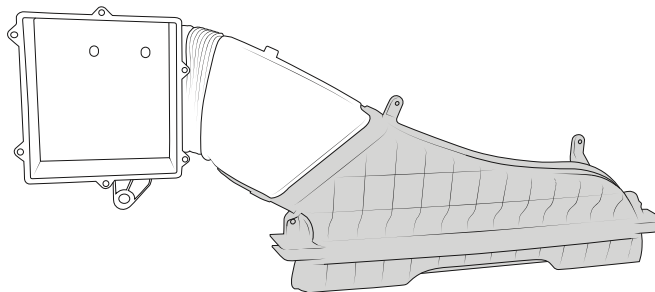


Figure 4

1. Remove factory air dam (fig. 1):
 - A. Remove the "Scrivet" fasteners at the front and back side of the air dam. Use a Phillips screwdriver to back out the plastic pin and pull out the fastener. The pin will tend to spin. Use a flat screwdriver under the base of the fastener to apply pressure as you turn the screw



II. PREPARE TEMPLATES & LOWER BOX/FENDER CUTTING

NOTE: Disregard steps 1-8 if installing on 2019-2024.

Patch Panel Work

1. A Patch Panel kit is provided, if unavailable, please contact AEV Sales Rep about PN: 41060204AA. Included in Kit is [1] template, [1] panel, and 3 rivets.
2. Align the squared feature of template along the squared edge of AEV's Lower Box, ARMZ2021AA (fig. 5).
 - a. Front headlamp region when in vehicle position.



Figure 5

3. Trace inside edge of the template on surface of lower box (fig. 6).



Figure 6

4. Using AirSaw, trim along traced line of lower snorkel and discard section of lower box. Debur sides for a clean edge (fig. 7).



Figure 7

5. Glove panel over newly created hole, mark 3 rivet locations using panel.
6. Remove panel and drill locations recently marked with 5/32" drill bit.
7. Recommended to apply RTV automotive sealant around edge of lowerbox intended for patch panel.
8. Insert panel and assemble with 5/32" x 1/4" rivets supplied (fig. 8).



Figure 8

Fender Trim

NOTE: RAM 2021+ trucks will need to grind down the shown vertical bracket as shown (fig. 10) – Treat all bare metal with rust preventative

9. A cut template is provided in this kit, but if a replacement template is needed, they can be downloaded and printed from the AEV website. Template Part Number: AEV30394AA. (Be sure to print on 11x17" paper and check the scale before using).



10. Trim the template per the instructions and tape to the fender (fig. 9).

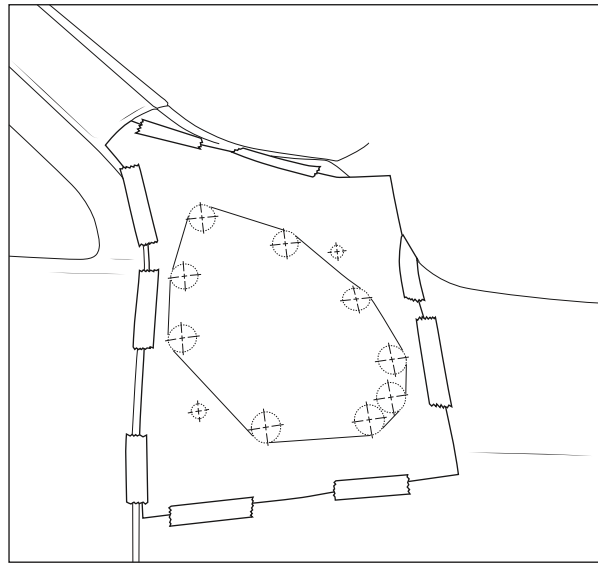


Figure 9

11. Protect surrounding area and center punch the drill points.
12. Drill holes and use air saw to cut the large opening. Be careful not to cut into the backside structure on the upper portion of the template.
13. Use a rust preventative on all bare surfaces.
14. Remove the fender entirely after cutting is complete and rust preventative has been applied.

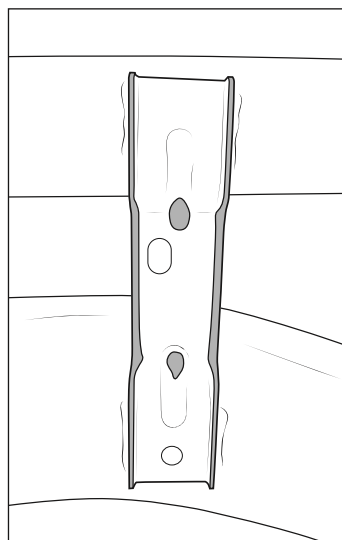


Figure 10



III. MAIN BODY INSTALLATION

1. Protect the A-pillar using tape.
2. Loosely install the snorkel main body onto the fender using the two supplied M8 x 16 bolts and washers.
3. Bring the assembled fender and snorkel body back to the truck and ensure that it is sitting against the fender and the A-pillar appropriately (fig. 11).

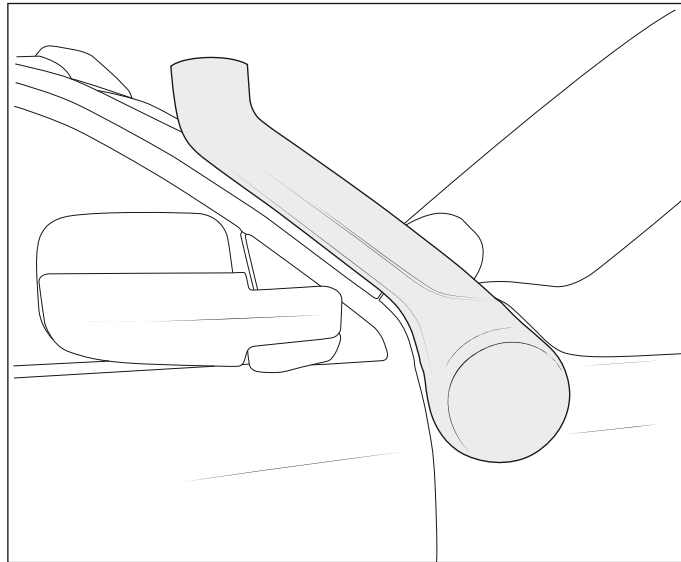


Figure 11

4. Install the fender onto the truck and ensure the panel gaps are appropriate.
5. Using a marker, mark the two upper main body mounting locations.
6. Remove the snorkel and fender from the truck.
7. Center punch and drill the two A-pillar mounting locations out to 1/2" (fig. 12).
 - a Be careful not to drill into the opposite side of the A-pillar.
 - b Treat all bare metal with rust preventative.

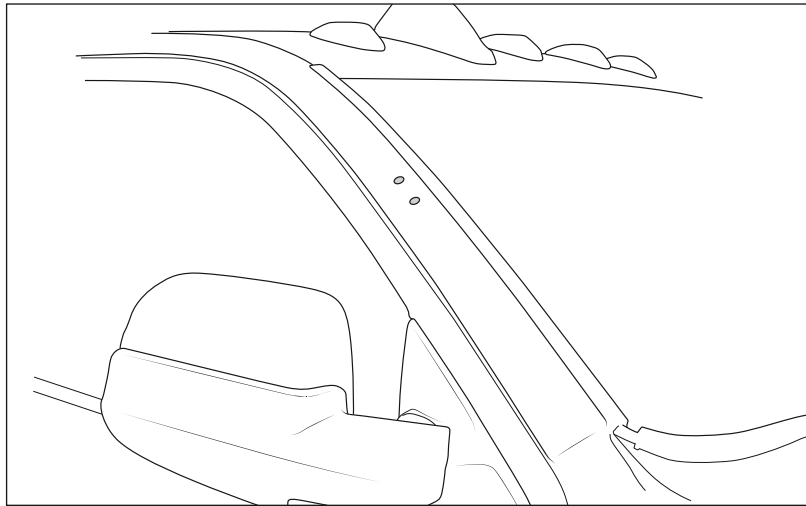


Figure 12

IV. FINAL ASSEMBLY

1. Assemble the lower airbox using the supplied $5/32"$ x $1/4"$ rivets. Sensor Safe RTV can be used between the panels (fig. 13).
2. Install the forward mounting tab onto the airbox using the supplied rivets (fig. 13).

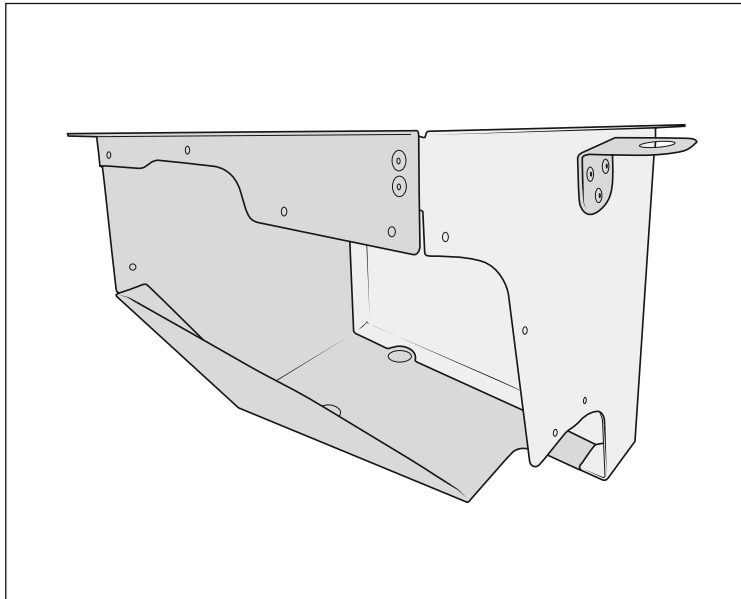


Figure 13

3. Using the 9 supplied screws, attach the adapter ring to the top flange of the airbox (fig. 14).

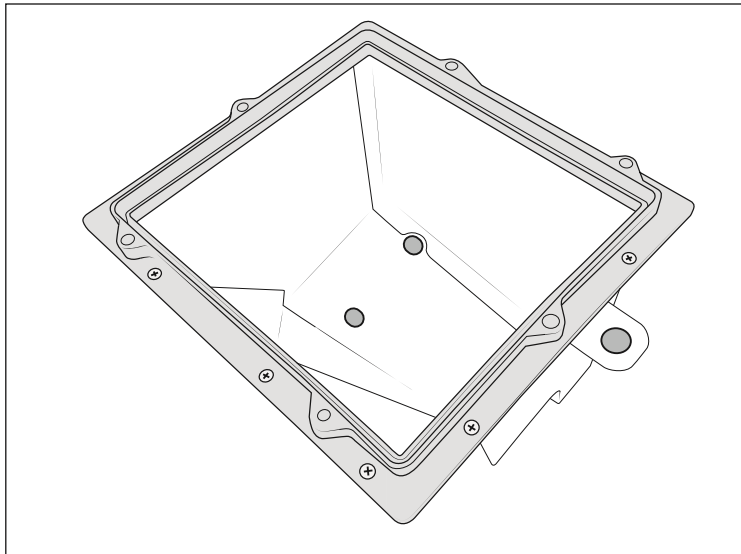


Figure 14

4. Install the three rubber grommets, saved earlier, into the lower airbox (fig 14).
5. Fit the lower air box and plastic airbox connection together and pre-drill the four holes shown (fig. 15)

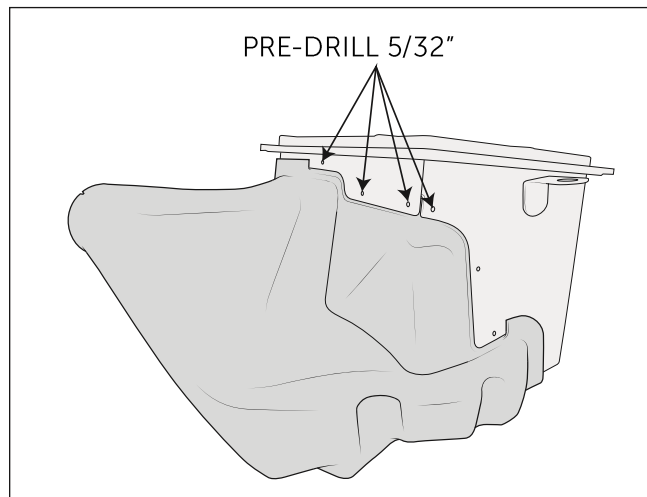


Figure 15

6. Feed the plastic airbox connection part through the fender opening as shown (fig. 16).
 - A. Place the smaller of the two hose clamps supplied onto the inlet of this component.
 - B. Let this part sit loosely in the engine bay for the time being.

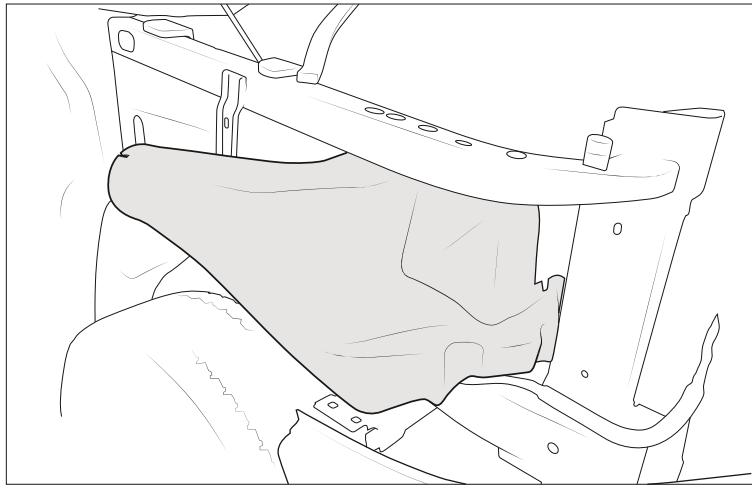


Figure 16

7. Place adhesive foam squares onto the backside of the main body as shown (fig. 17).

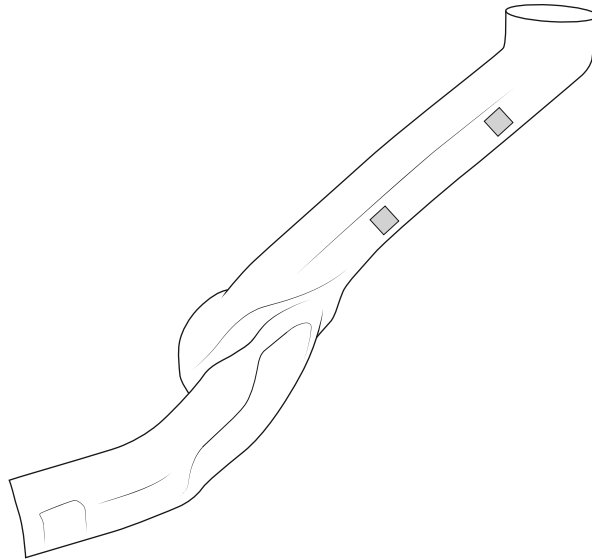


Figure 17

8. Reinstall the fender and main body back onto the truck for the final time, being sure to insert the main body outlet into the inlet of the plastic component installed in the previous step (fig. 18).

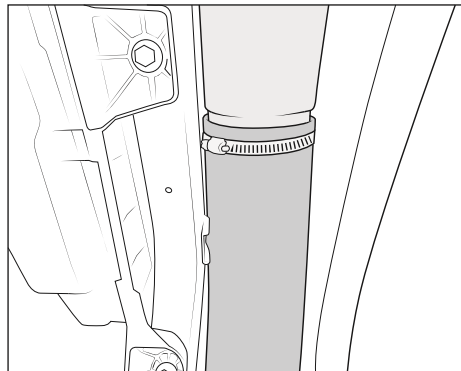


Figure 18 : Shown from below



9. Install the lower airbox into the engine bay, being sure to fully seat the rubber grommets onto the mounting studs (fig. 19).

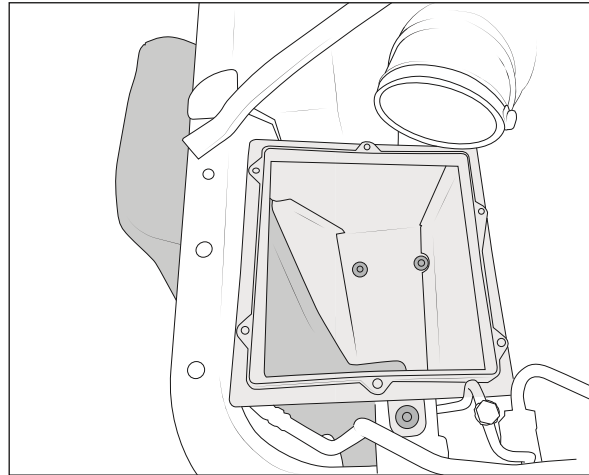


Figure 19

- A. The metal airbox should seat into the plastic airbox connection part installed in the previous step (see figs. 15 & 19).
 - B. Use a 5/32" drill bit to drill out the remaining holes in the plastic component, being sure to full seat the metal airbox before marking and drilling.
 - C. Rivet these components together – Use sensor safe RTV on the interfaces if desired.
10. With the new lower intake system installed, the filter and factory upper airbox lid can be reinstalled using the supplier 1.25" slotted hex head screws (fig.20).

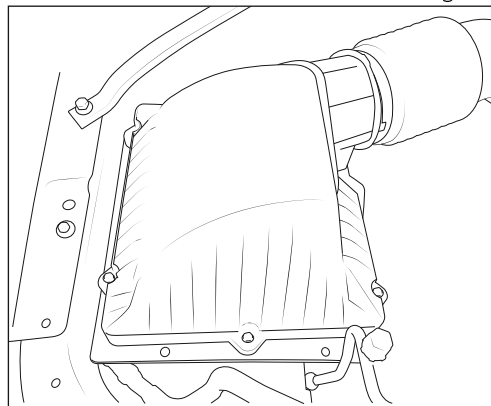


Figure 20

11. Reinstall the component saved in step 8 under truck prep figure 4.
12. Install the AEV provided radiator support bracket using the hardware saved during disassembly (fig 21).

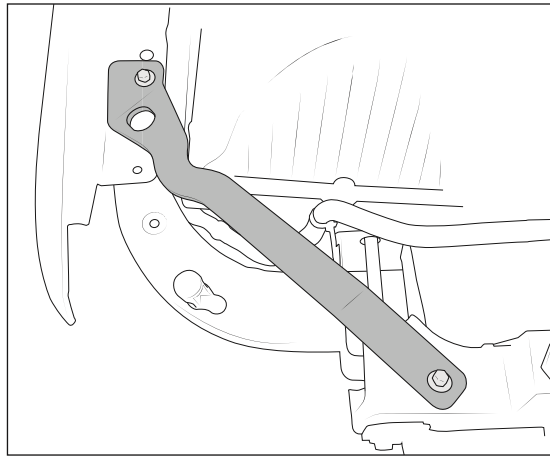


Figure 21

13. Reinstall the plastic radiator cover and trim slightly to clear the AEV radiator support bracket (fig. 22).

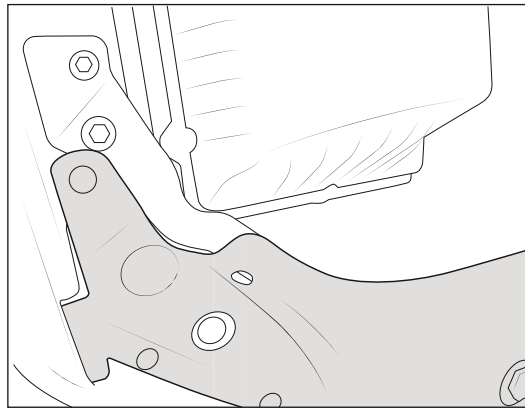


Figure 22

V. INSTALL AIR RAM

1. Slide the supplied hose clamp over the Intake Body.
2. Attach the Air Ram and adjust so it is forward facing.
3. Mark the hole location on the Intake body and drill a 5/16" hole (Fig 23).
4. Install the push pin.
5. Slide the hose clamp up around the Air Ram and tighten.

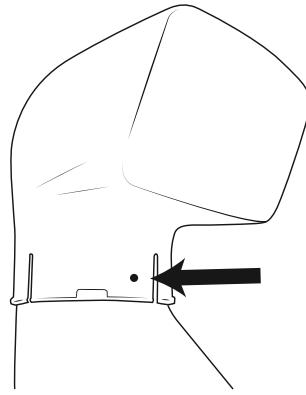


Figure 23

VI. INSTALLING OPTIONAL PRE-FILTER

1. Slide the supplied hose clamp over the Intake Body
2. Install the Pre-Filter. This must be installed with the vent to the rear of the vehicle (Fig. 24).
3. Slide the hose clamp up around the High Dust Filtration System and tighten.

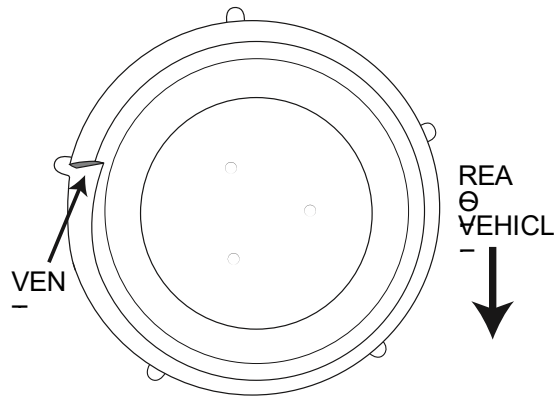


Figure 24