



Installation Instructions

8449 – 14' to 22' Ram Promaster Propex HS2800 Install Kit

- **Component List:**

Part Number:	QTY:	Description:
6446	1	Face Plate – Matte Black Powdercoat
8450	1	Front Kick Plate – Matte Black Powdercoat
6447	1	LH Propex Mount
6448	1	RH Propex Mount
8452	1	Large Block off Plate
8453	1	Small Block off Plate
8451	1	Hardware Kit
7908	20Ft	¼" Copper Propane Supply Line
7686	20Ft	¼" Plastic Split Loom

- **Hardware Kit Contents:**

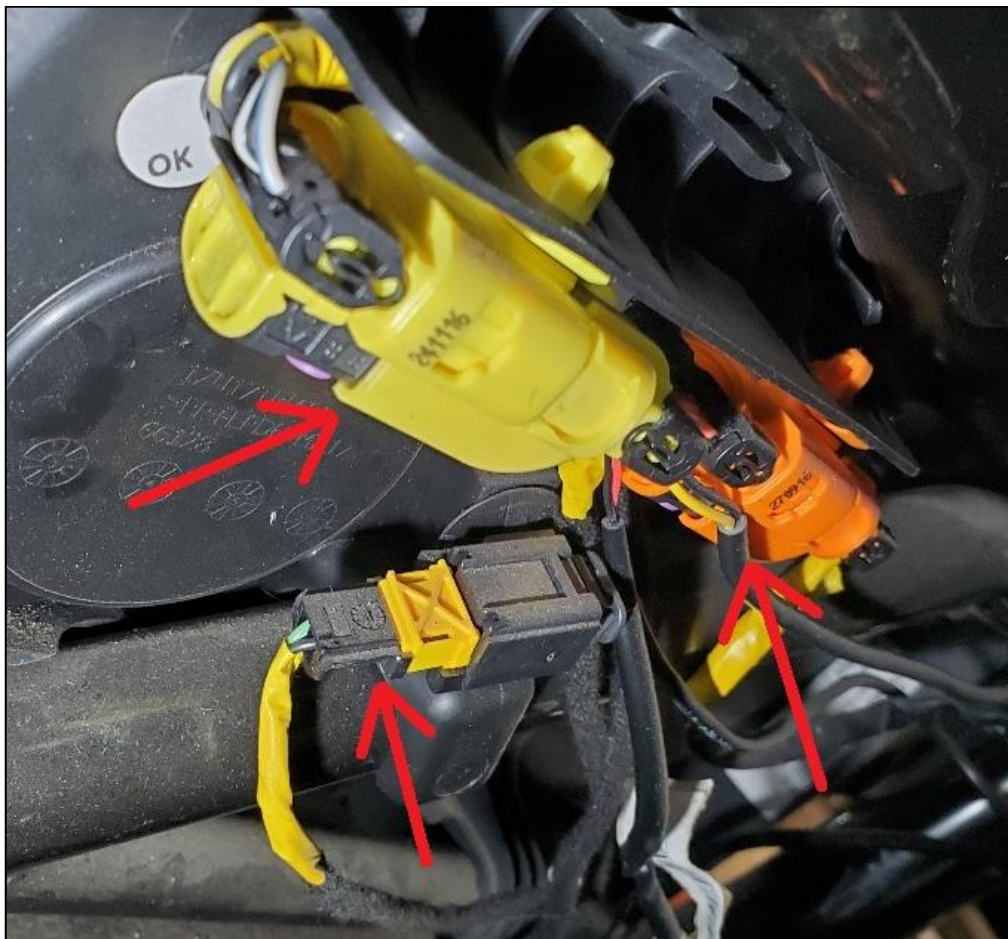
Part Number:	QTY:	Description:
518	12	#8X1/2 Truss Head Drill Point Screw (2 extra)
8461	12	Plastic Push in Rivets (2 extra)
3089	1	3/8" ID Rubber Grommet
2862	4	#16 Worm Drive Clamps
7865	1	3/8" NPT x 1/4" NPT Compression Fitting, Brass
2574	4	1" Stainless Steel Cable Clamp
437	12	10x1/2" Hex Tek drill point Screw
2671	8	3/8" insulated Cable Clamps

- **Required Tools:**

3/8" Ratchet	Box Cutter or Razor blade	3/8" Drill bit
5mm Hex Bit	Cordless Drill	Touch Up Paint
6mm Hex Bit	2" Hole Saw	½" Yellow Gas line Tape
5/16" Driver Bit	9/16" Drill Bit	Tape Measure
T20 Torx Bit		Permanent marker

Installation:

Step 1: Disconnect the positive battery cable to prevent any short circuits. Next, disconnect the (3) electrical connectors located under the passenger seat. You can access them from the front end of the seat base. (Tip: slide the seat all the way to the back for more room) There is one yellow, one orange and one small black connector. The yellow and orange connectors have a spring-loaded release slider on the bottom of the connector (Red arrows in picture below). Take your time and pull the slider back while pulling the connector from the connector body. The small black connector has a push-in style lock on the underside. Once the connectors have been unplugged, carefully pull the seat harness up and out of the seat swivel or base and safely tuck it away.



Step 2: Next, unbolt the seat from the swivel plate or seat base. There are (6) M8 cap screws to remove (2 in front, 4 in back). You will need a 6mm hex bit/tool. Slide the seat all the way

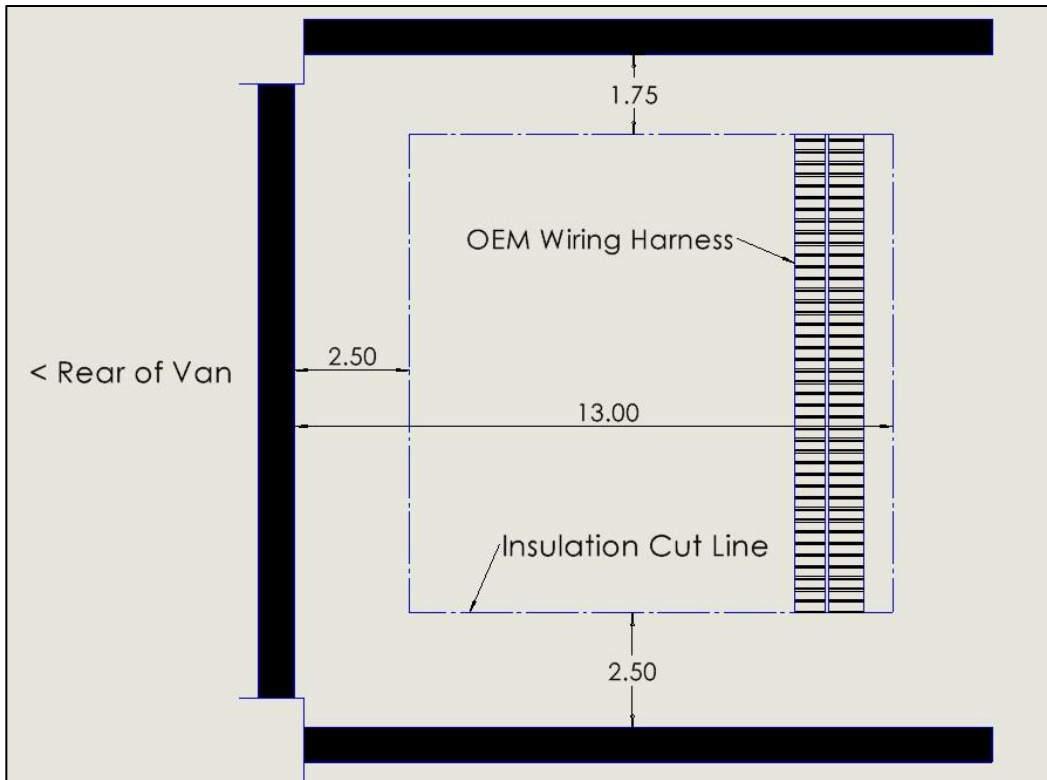
back to remove the front screws, and all the way forward to remove the rear screws. While taking care to ensure the seat wiring is protected, you may now remove the seat from the van.



Step 3: With the seat removed, remove the seat slider (if applicable). To do so, you'll need to rotate it roughly 45degrees to access the (6) countersunk M8 bolts. You will need a 5mm hex bit/tool.



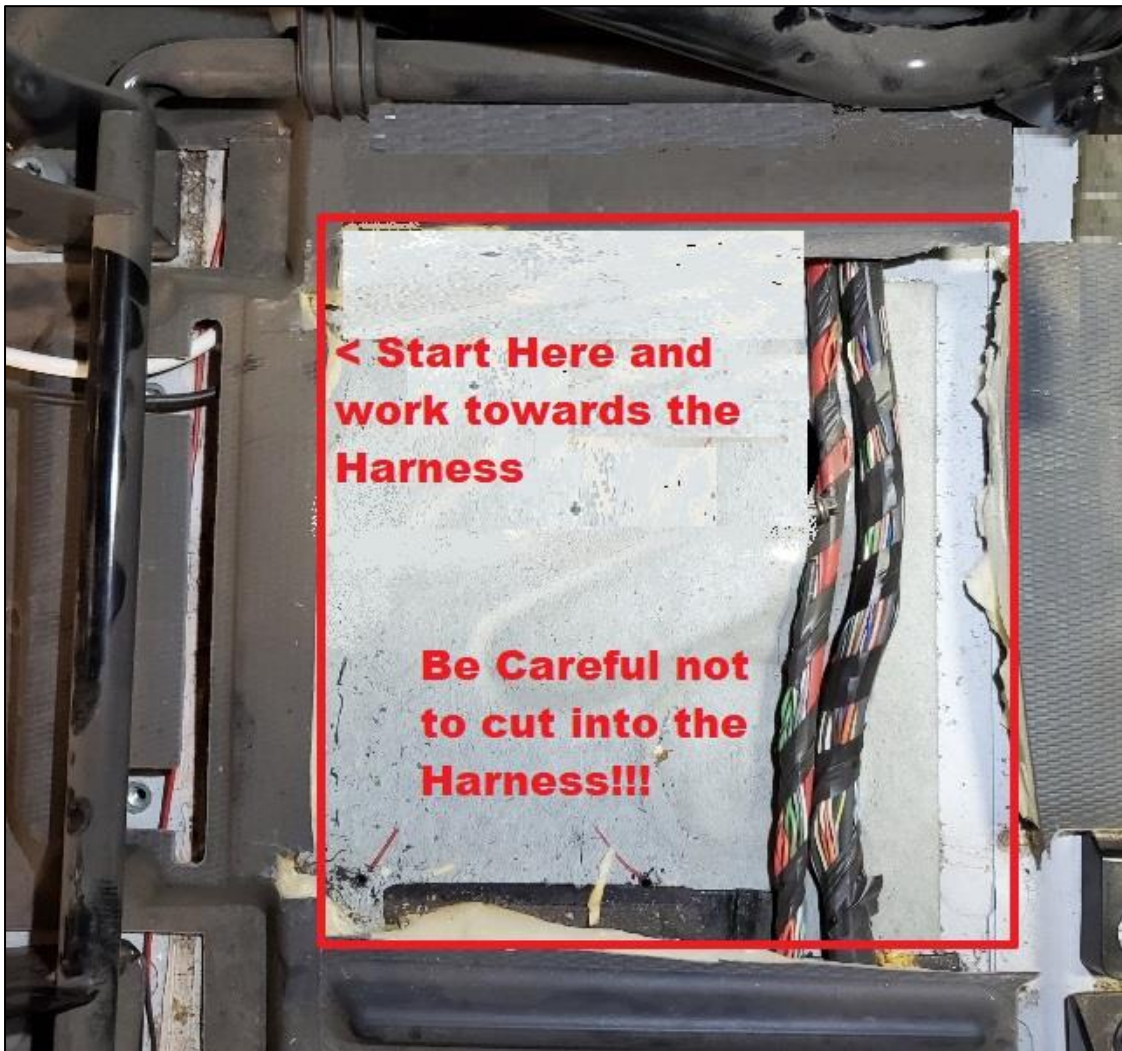
Step 4: Now we can measure out and mark the insulation where we will cut and remove it to make room for the heater. Use the diagram below to **measure off the seat base tubes** to properly locate the four cut lines.



Example of measuring the cut line:

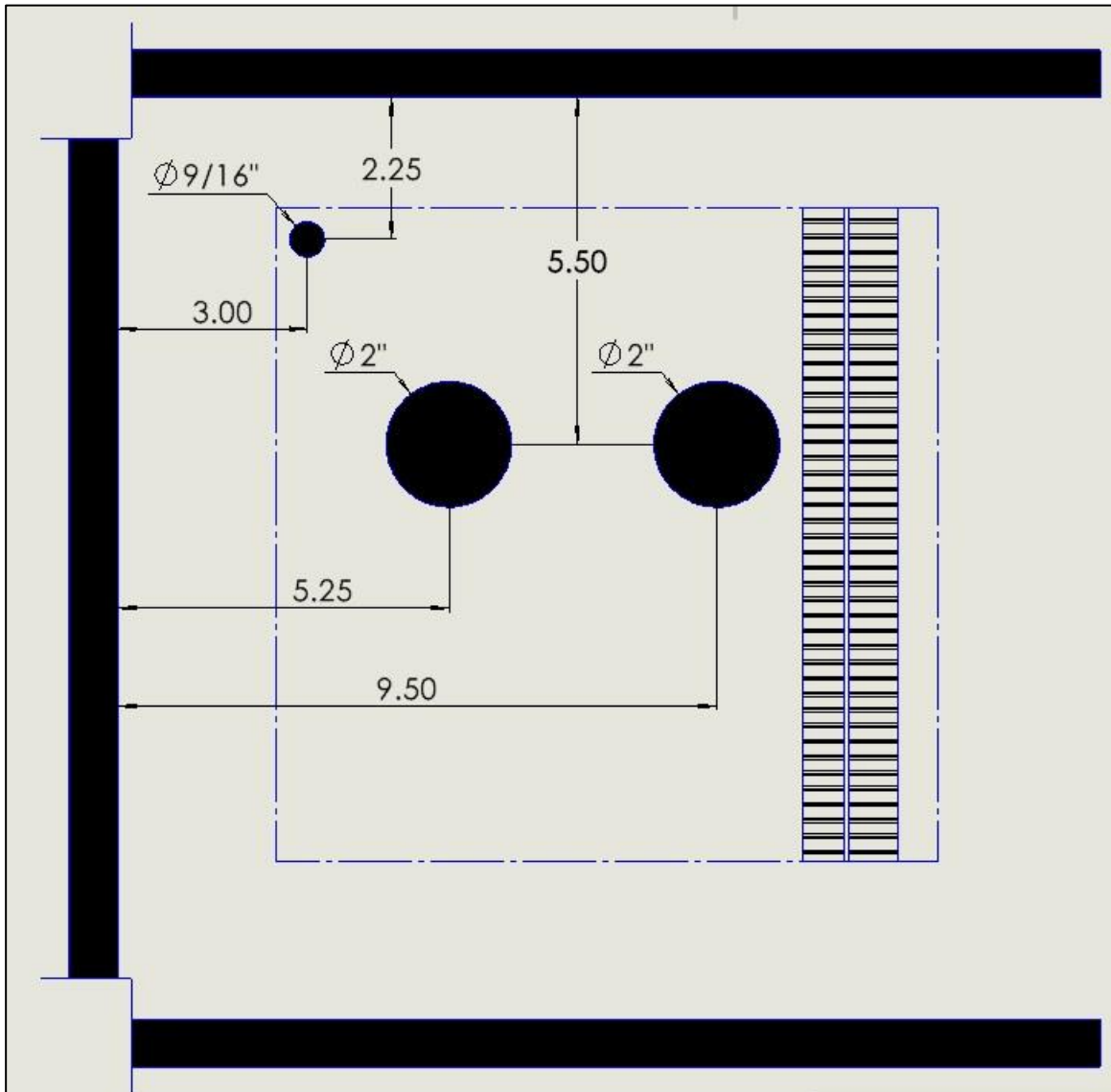


Step 5: With the cut lines marked out, carefully cut the rear portion first with a sharp box cutter or razor blade. **[IMPORTANT]** Start with the back portion and slowly work your way towards the harness. Peeling back the insulation as you cut will help ensure you avoid cutting into the harness.



Step 6: With the insulation cut, we will next mark out the hole locations for the heater's combustion, intake and propane pipes. Using the same measurement process as the insulation, mark out the (3) hole centers using the dimensions shown below. **[NOTE]** The 2" holes are oversized allowing some adjustment with the heater. After installing the heater you may choose to seal up the intake hole (the one towards the front of the van) using a large grommet.

Do NOT seal the exhaust hole as this pipe gets hot and will likely deteriorate the seal or potentially cause a fire. The lower heater mount acts as a block off for this so additional sealing isn't required.



Step 7: Pull the harness away from the hole to prevent nicking it during drilling. Using a 2" hole saw, carefully drill out the two holes as shown below. Use a 9/16" drill bit to drill out the hole for the propane supply line. **Make sure not to plunge further than needed into the sheetmetal to prevent hitting any of the components underneath.** Once the holes are drilled,

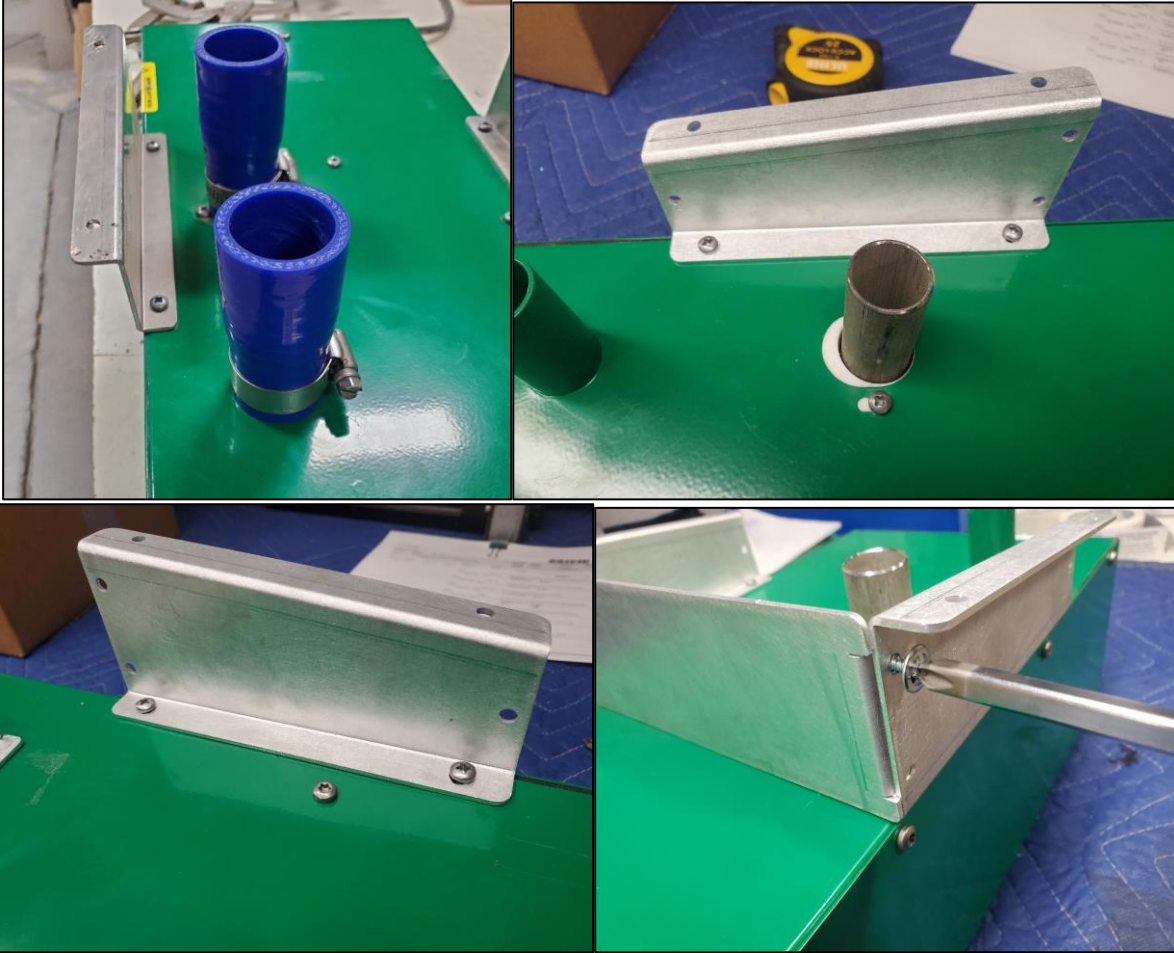
remove any burrs and touch up the edges with some paint to prevent rust. You can also now install the included 3/8" Grommet into the 9/16" hole for the propane line.



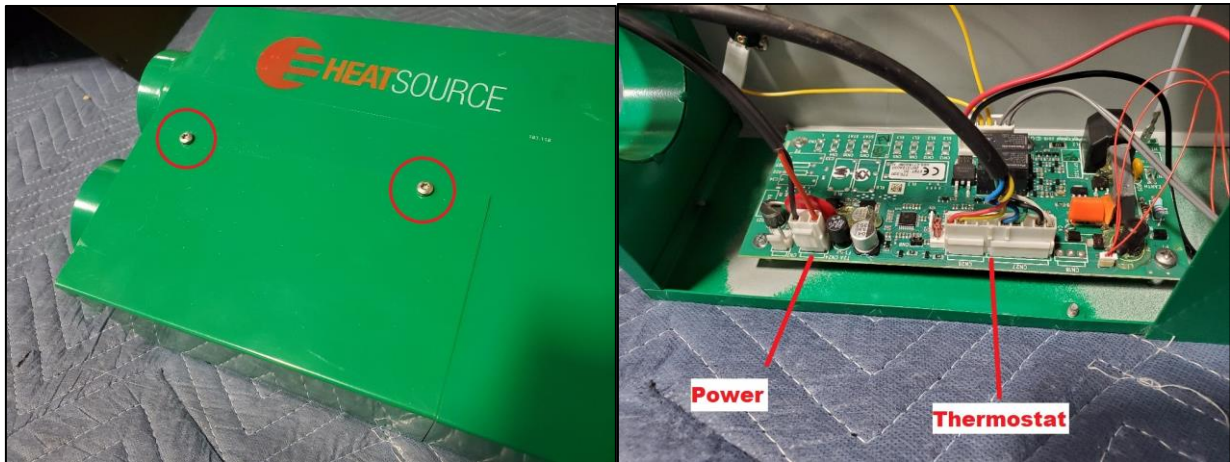
Step 8: Next, install the face plate on the back of the seat base using (4) of the provided plastic rivets. You can also now install the directional duct to the faceplate using the (4) included countersunk Philips head screws (provided with the HS2800 heater).



Step 9: With the face plate mounted, we will now prep the heater unit for installation. Install both blue silicone couplers to the inlet and outlet combustion tubes with the included worm drive clamps. **Leave roughly a ½" gap between the couplers and the heater body.** Once the couplers have been installed, install the sheetmetal mounts followed by the front and rear blockoffs to the heater as shown. The blockoffs will attach to the side mounts using (6) of the provided self-tapping sheetmetal screws.



Step 10: Next, remove the (2) T20 Torx screws in the top of the heater body and remove the cover plate to attach the thermostat and power wiring to the circuit board. The board is marked CN24 for Power and CN26 and 27 for the thermostat. Slide the wiring with the two grommets into the two slots above the air inlet and re-install the cover.



Step 11: With the heater prepped for installation, you can now place it in the van. The outlet of the heater should be positioned so that it fits tightly inside the directional plastic duct. **[TIP] Make sure the wiring isn't pinched or trapped under the mount.** Once positioned, screw the heater to the floor using (4) of the provided self-tapping screws.



Step 12: Select a suitable location for the thermostat between waist and shoulder height. Make sure that it is not mounted in an area with poor air circulation or in an area with above average heat, such as above a cooker, refrigerator or in direct sunlight. (Refer to your heater's instructions for further details on how to mount and route the wiring). Run the wiring to the thermostat and run the power wiring to your auxiliary battery making sure to utilize a 5A fused circuit or an inline fuse on the positive wire.

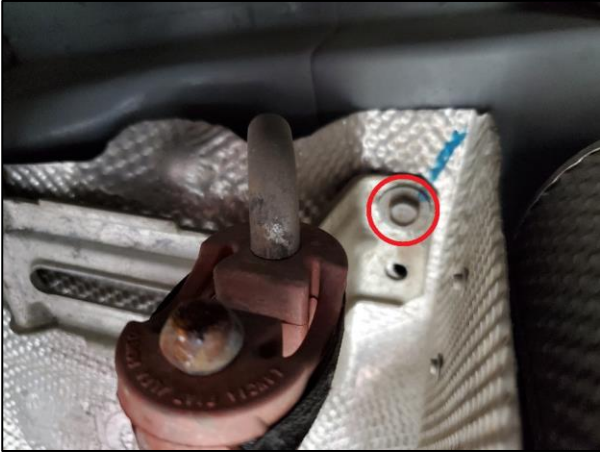
Below is an example of a thermostat mounted to a cabinet in the middle of the van away from any significant heat source.



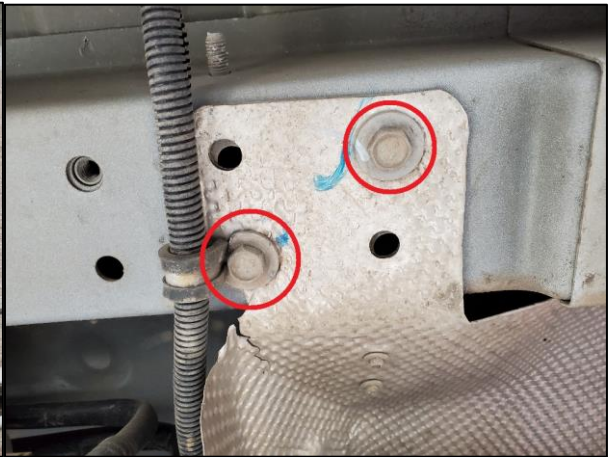
Step 13: For the next part of the installation, we will be working on the underside of the van. Jacking up the front end or putting the van onto some ramps will help get the room needed to perform the work. **Be thoughtful and follow all standard safety guidelines when raising any vehicle!**

First, remove the heatshield that covers the front muffler. There are 6 bolts that attach the heatshield and exhaust hangers that will need to be removed. With the hangers out of the way, carefully slide out the heatshield being careful not to damage it.

Rear:

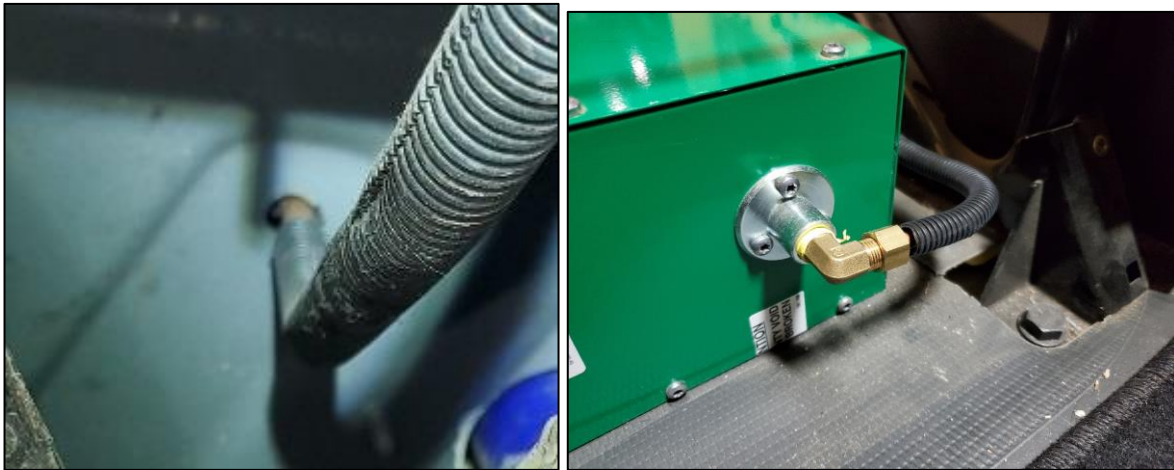


Front:

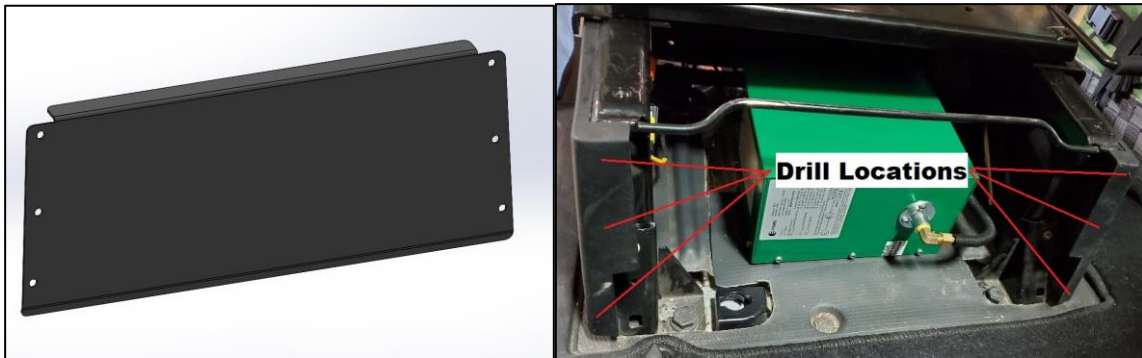


Step 14: With the heatshield safely out of the way, we can install the ¼" copper line for the propane supply. First insert the corrugated loom into the grommet through the floor (from the bottom) and pull the loom (from the top) and route it towards the back of the heater. Take your time to ensure the grommet stays in place. Next, straighten out 20" or so of the copper line and insert it into the loom from the bottom of the van. Carefully bend and route the line by hand towards the inlet fitting on the back of the heater making sure not to kink it.

Using some ½" Yellow gas line tape, wrap the ¼" BSP thread of the 90° inlet fitting 2-3 times and install into the back of the heater as shown below. **[TIP] Wrap the fitting clockwise when looking at the threads.** Install the brass compression nut, followed by the compression ferrule over the end of the copper tube, and screw into the 90° fitting. Before tightening, make sure the copper tube is fully inserted into the 90° fitting.

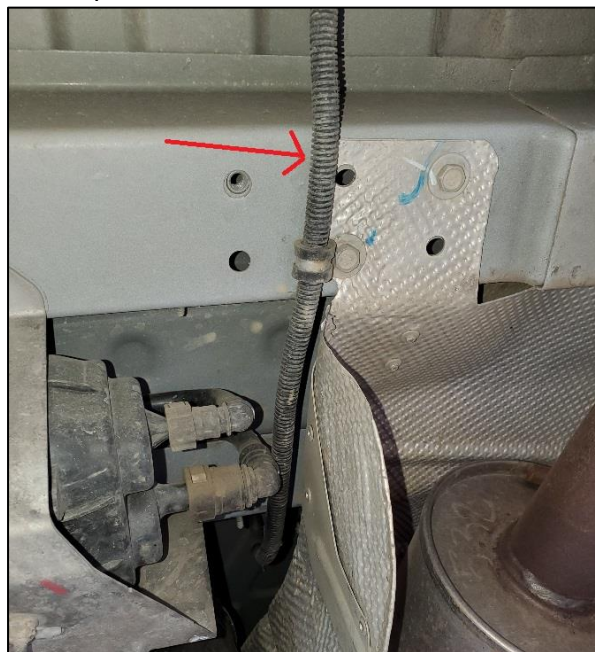


Step 15: With the gas line secured to the heater, we can now install the Front Kick Panel onto the front of the seat base. Place the panel on the front face of the plastic side covers and hold it against the floor. Center it between the sides and drill one of the upper holes with a ¼" drill bit. Install one of the provided plastic rivets to hold it in place. Repeat the process for the remaining holes.



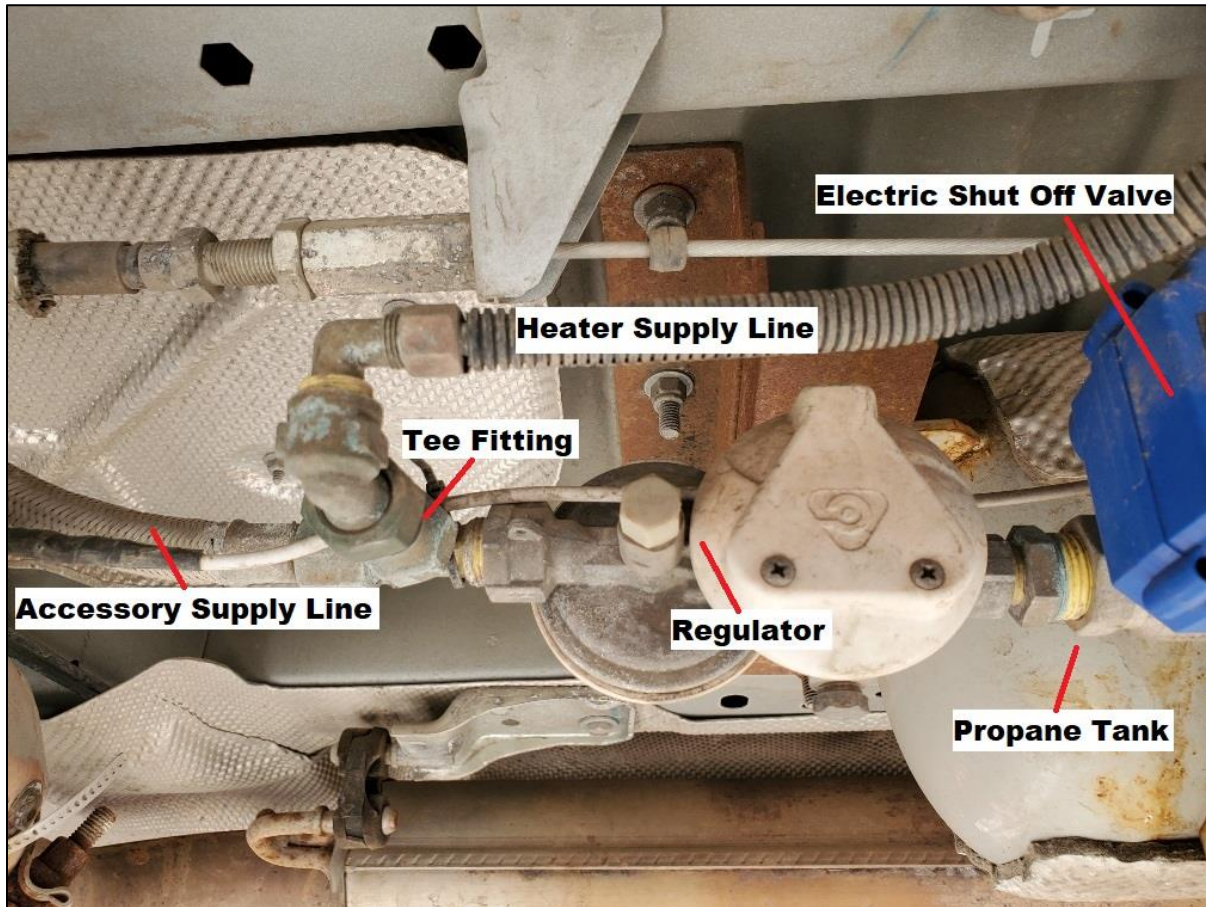
Step 16: Once the supply line has been connected to the heater, it can now be routed to the propane tank. The routing path will vary depending on the layout of your van and location of your propane tank, but some considerations are:

- Avoid any moving components (linkages, driveshafts...etc).
- Avoid any substantial sources of heat (Exhaust).
- Keep the line as tight to the chassis as possible to prevent any cuts or abrasions.
- Use insulated "P" clamps to secure the line to the chassis.



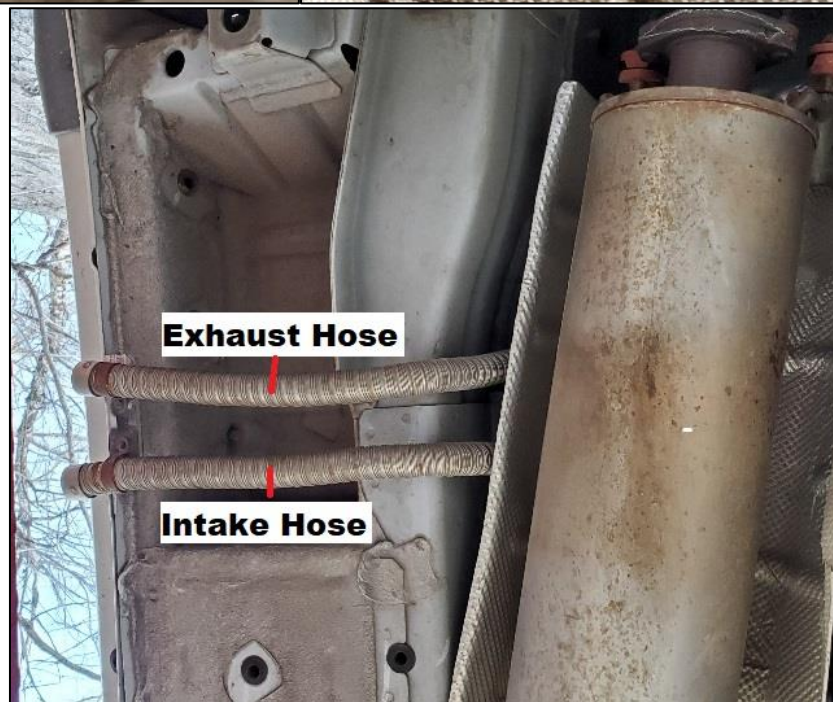
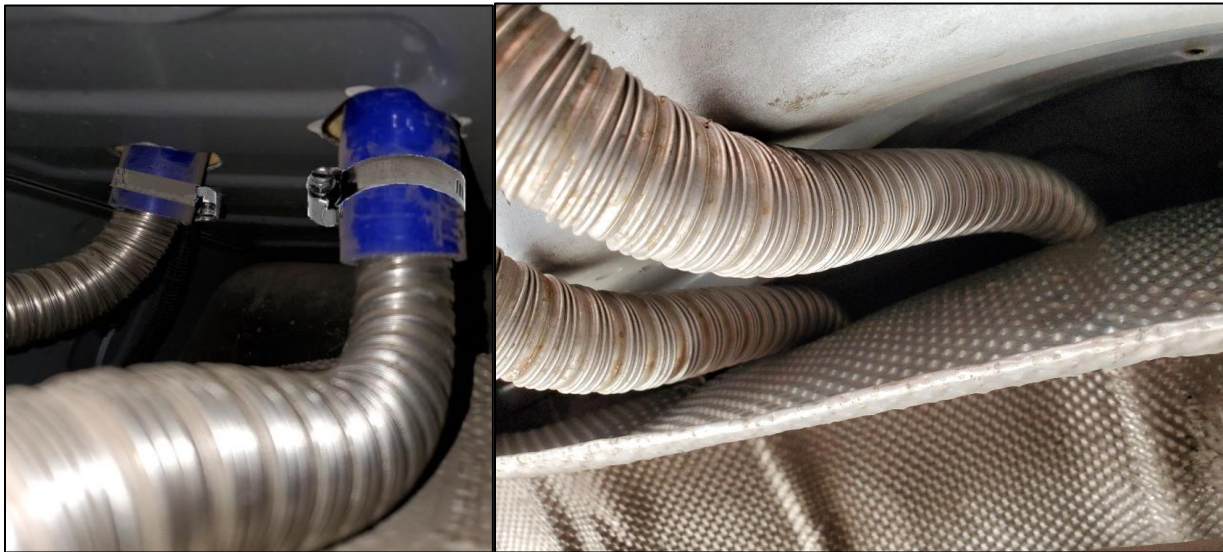
Step 17: Shown below is an example of how the heater propane supply line can be hooked up to the propane tank. This kit does not include tank fittings due to the variations in hook ups, regulators and tank layout. However, plumbing fittings can commonly be sourced at your local hardware store.

In the example below, there is an electronic shutoff valve which allows the tank to be turned on or off without having to access the physical shutoff valve on the tank itself (US Solid PN: JFMSV00074). This would be highly recommended for any “mid-ship” mounted tanks where physically getting to the shut off valve would be a pain.



Step 18: Next, Install the (2) metal intake and exhaust tubes into the blue silicone couplers as far as they will go and secure with the (2) remaining #16 worm drive clamps. Route the tubes close to the body, and towards the side of the van. Secure them to the van using the (4) stainless cable clamps and Hex Tek Screws.

Note: Keep the ends of the inlet and outlet at least 8" apart from one another to prevent recirculation of exhaust gases.



Step 19: With the installation of the heater completed, you can now reinstall the swivel base and torque the (6) M8 Flat Head bolts to 22 NM (194 in/lbs). Now reinstall the seat while inserting the wiring harness back through the center bulkhead fitting. Carefully pull the harness through the bottom and reattach the 3 wiring connectors. Reinstall the (6) M8 Sockethead bolts and torque to 41 NM (362 in/lbs).



Step 20: With the exterior plumbing complete, you can now test fire your heater! **Before firing, perform a leak test on the various fittings used in the propane supply with some soapy water (if you haven't already done so).** Refer to your heater's instructions for specific operating instructions.

Have questions? - If you have any issues with operation or installation, we have put together a comprehensive Propex Knowledge Base on the Van Cafe website that covers most issues: <https://vancafe.com/propex-heaters-for-vans/>

Thank you for purchasing your kit from Van Cafe and we hope you enjoy your new heater!

Cheers,
The Van Cafe Team.

Disclaimer: The end-user of this product assumes all responsibility for the installation, use or misuse of this product. Neither Van Cafe nor Rocky Mountain Westy shall be held liable for any damage to person or property.

