

## Polaris Ranger 570 COMPACT UNDERHOOD CAB HEATER KIT

### INSTALLATION INSTRUCTIONS

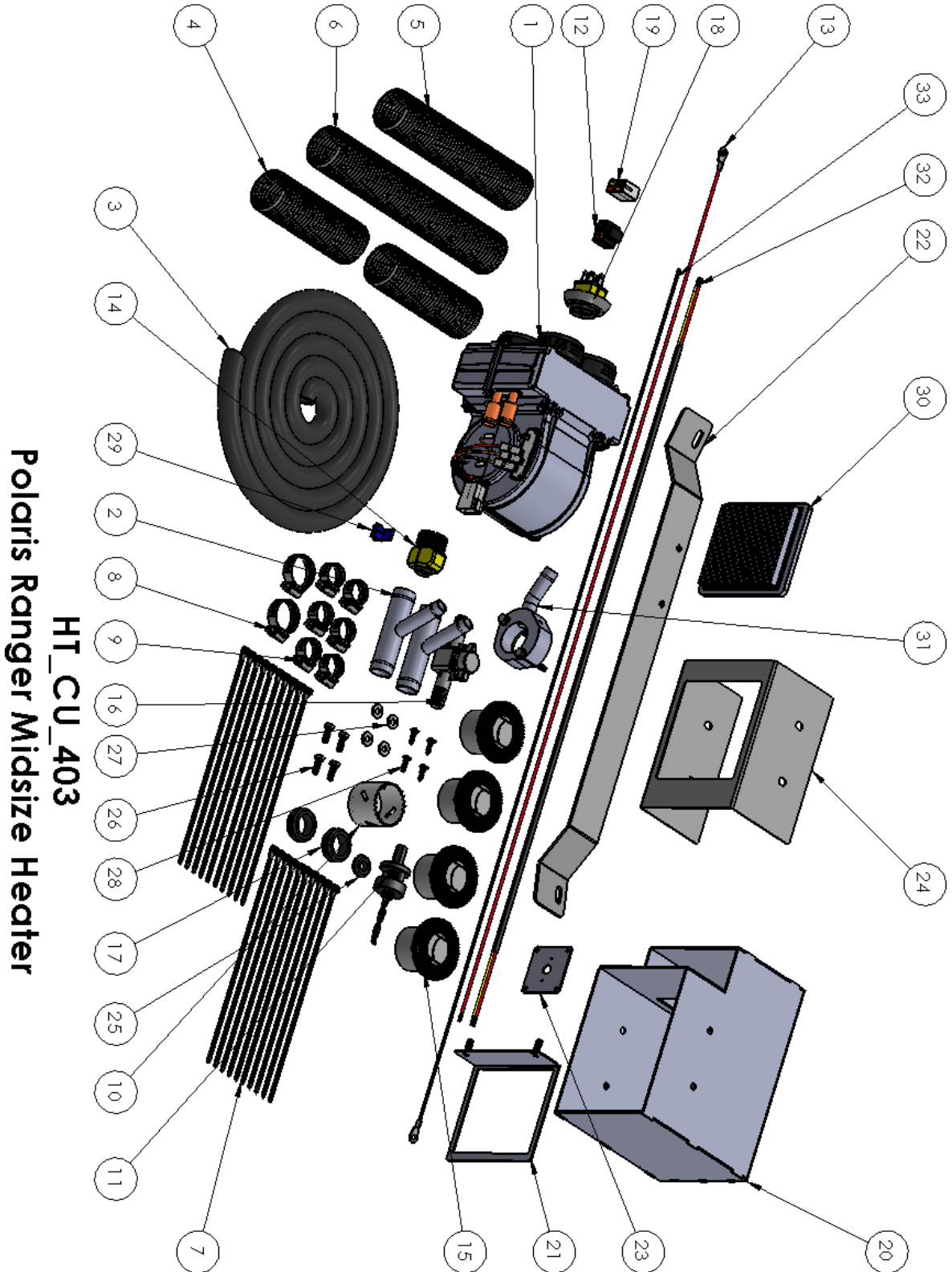
**Please read all instructions before beginning installation. When working on cooling systems always allow vehicles to cool to avoid being burned or scalded by hot coolant.**

**Before working with any electrical system on your vehicle, ALWAYS remove the negative battery cable and secure it away from the battery terminal.**

**Please check your kit with the parts list and picture below for all required parts.**

ITEM NO.	Description	QTY.
1	Compact Underhood Heater	1
2	1" Aluminum Y	2
3	5/8" Heater Hose (20 ft)	1
4	2" Duct Hose (5" Compressed)	2
5	2" Duct Hose (7" Compressed)	1
6	2" Duct Hose (10" Compressed)	1
7	Zip Ties	16
8	#16 Hose Clamp	2
9	#10 Hose Clamp	6
10	2" Hole Saw	1
11	Hole Saw Pilot Bit	1
12	Black 5 Pin Connector	1
13	Single Red Wire	1
14	5/8" Garden Hose Adapter	1
15	2" Vent	4
16	Plastic Shut Off Valve	1
17	1" ID Low Profile Grommet	2

ITEM NO.	Description	QTY.
18	3 Speed Fan Switch	1
19	White 4 Pin Connector	1
20	HT-CU-498-W1 Heater Enclosure	1
21	HT-CU-498-5 Air Filter Bracket	1
22	HT-CU-499-8 Frame Bracket	1
23	HT-CU-499-9 Switch Bracket	1
24	HT-CU-498-6 Front Cover	1
25	1/4" ID Grommet G3218-016000	1
26	M6-1.0 x 18mm Hex Head Bolt	4
27	M6 Flat Washer	4
28	#8 x 3/4" Self Drilling Screw	4
29	Insulation Displacement Crimp	1
30	Air Filter (491588 B+S)	1
31	HT-BP104 Thermostat Bypass Kit	1
32	3 Conductor Wiring Harness	1
33	Single Black Wire	1



**Please note:** Before drilling holes, check area behind the firewall panel to make sure no damage will occur by drilling holes.

## **Cab Heater Installation**

### **Preparation**

1. **Remove Front Hood.** Open the front hood and disconnect the headlight electrical connectors. Disconnect the wiring harness retention clips from the hood until the wiring harness is free from the hood. Remove the front hood and set it aside.
2. **Remove Center Tunnel Covers.** Using a Torx socket, remove the center tunnel cover plate and rear tunnel cover plate (if 4-seater), as shown in Figure 1.



**Figure 1 – Front Tunnel Cover Removed**

3. **Disconnect the Tilt Bed Piston.** Tilt the bed to the up position. Disconnect the piston from the back side of the tilt bed to gain maximum access to the engine compartment.
4. **Remove Window and Doors.** The front window must be removed to install defrost vents. Removal of the doors is optional as it enables improved accessibility to the interior of the vehicle.

## Templates and Switch Installation

5. Cut out the Templates from the back of the instruction manual. Position the templates as shown in Figures 2 & 3, and secure the templates with tape.

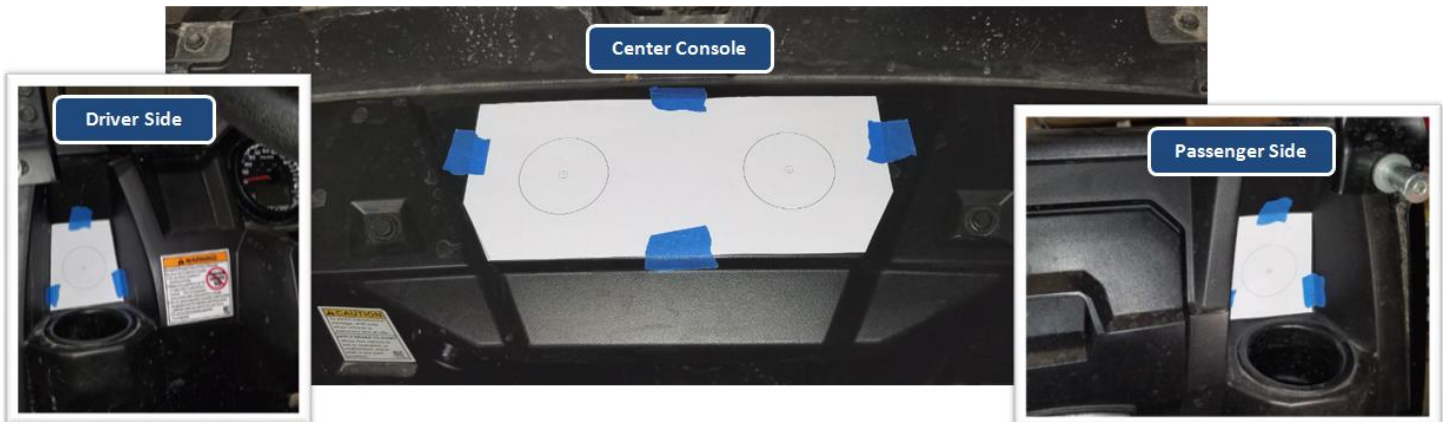


Figure 2 – Defrost and Side Vent Locations



Figure 3 – Switch Mounting Location

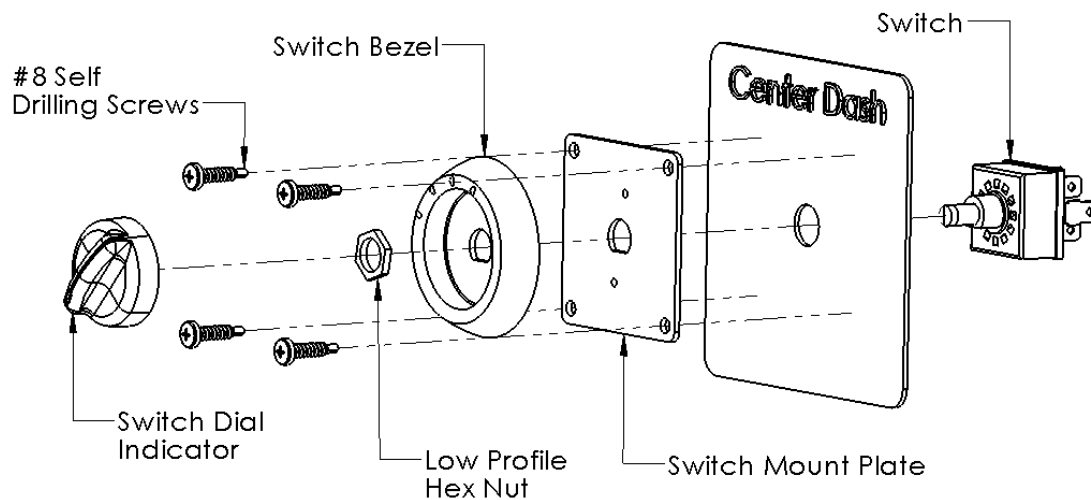
6. Using the included Pilot Bit and 2" Hole Saw, drill holes at the centers of each 2" circle on the templates.

**Installation Tip:** Transfer the hole centers from the template to the plastic dash using a sharp object. This will keep the drill bit from wandering off center.

- Using a 1/2" drill bit, drill a hole at the center of the switch template. It may be necessary to lightly clearance the hole for the switch to fit properly.
- Insert the Switch into the drilled hole from the backside of the center console. Position the Switch Mount Plate over the Switch. Place the Switch Bezel over the Switch Mount Plate and align the two plastic nubs on the back with the small holes in the Switch Mount Plate. The dial indicators (0, I, II, III) should face up when oriented correctly. Thread the low profile hex nut onto the threaded Switch, tighten snug but do not over tighten. Using the four self drilled and tapping screws, secure the Switch Mount Plate to the plastic center console. Do not over tighten these screws as the plastic threads will be stripped out.

**Installation Tip:** Use a drill to start the threads, but finish by hand with a screw driver to limit over torquing.

Place the switch dial indicator on the switch body shaft as shown in Figure 4.



**Figure 4 – Switch Assembly**

## Heater Box Assembly

- Locate the 5/8" ID Heater Hose. From one end, measure 38" and cut the hose to length.

10. Use a needle nose pliers to remove the wiring harness from the heater unit as shown in Figure 5

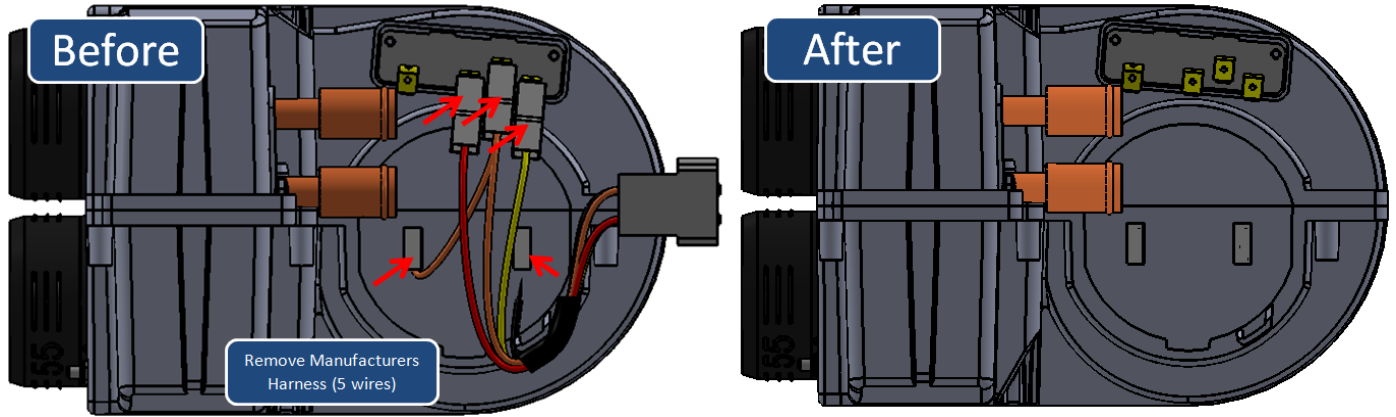


Figure 5

11. Using the Three Conductor Wiring Harness (Orange, Yellow, Red) and Single Black Wire included in the heater kit, install the Orange, Yellow, Red, and Black wires as shown in Figure 6.

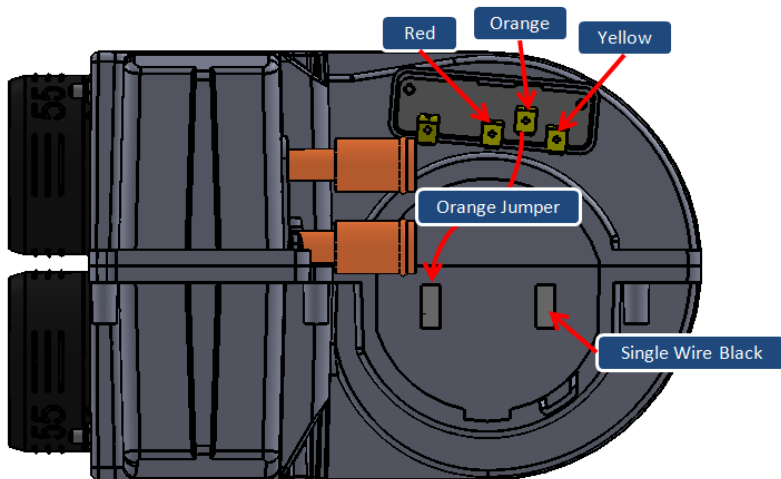
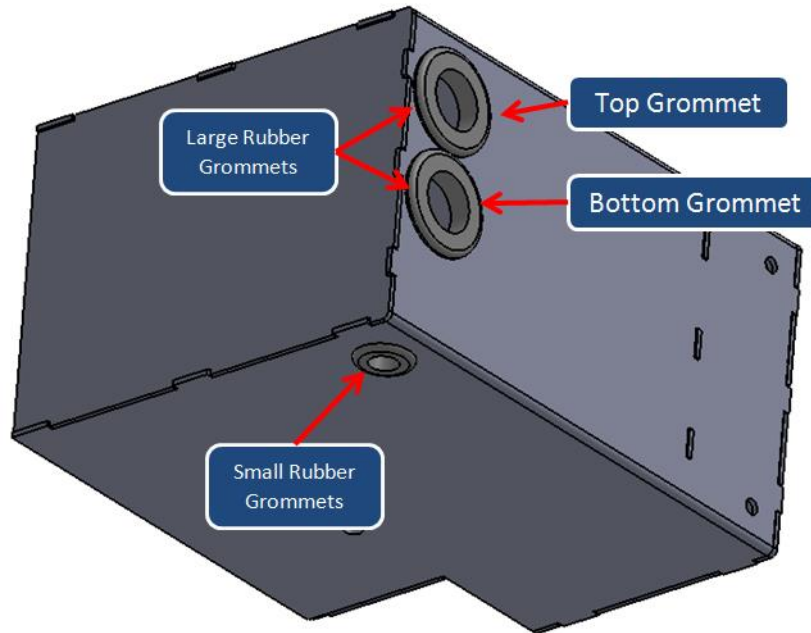


Figure 6 – Custom Wiring Harness



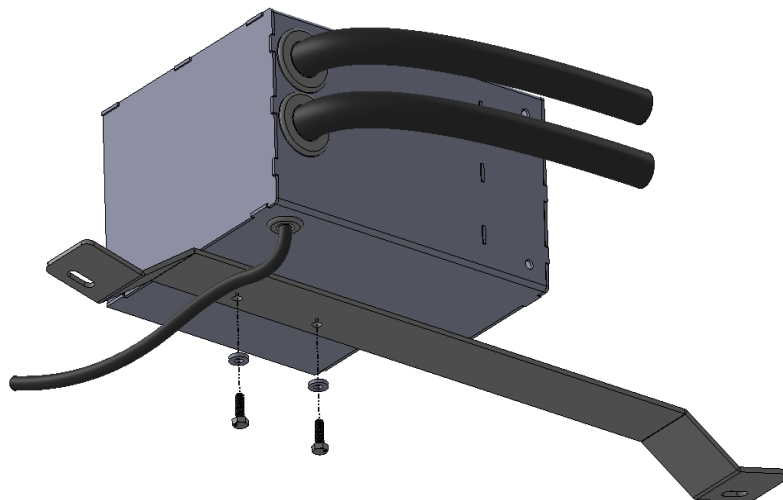
12. Install the two Larger Rubber Grommets into the openings at the back of the Heater Box. Install the remaining Small Rubber Grommet at the bottom opening as shown in Figure 7.



**Figure 7**

13. From the outside of the Heater Box push 12" of the 38" - 5/8" Heater Hose through the bottom hole and 12" of the remaining (approximately 13') 5/8" Heater Hose through the top hole.

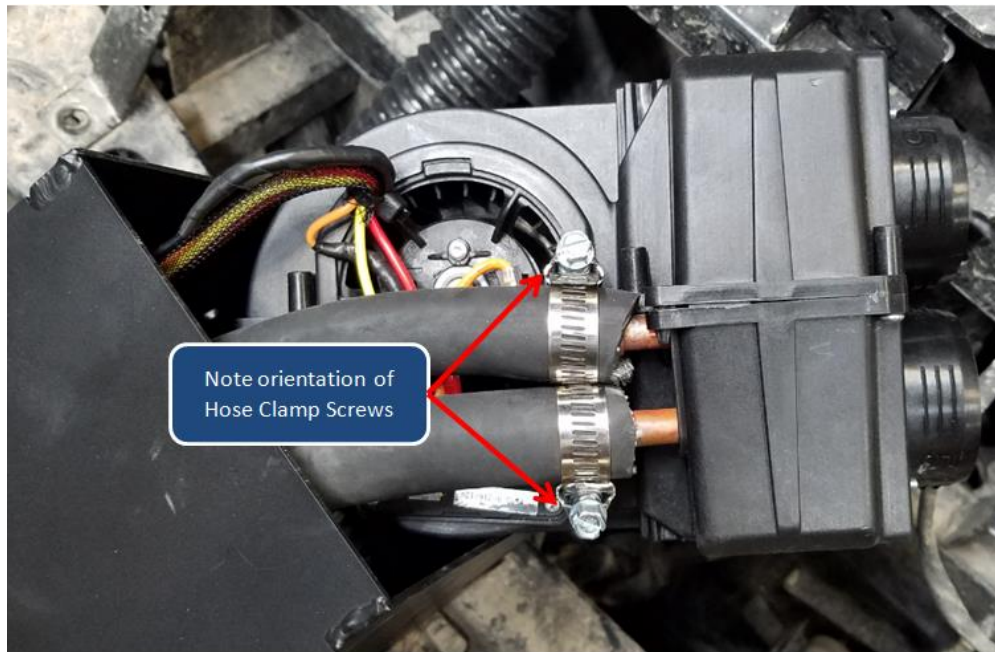
**Installation Tip:** Rotate the 5/8" Heater Hose so that the natural curvature of the hose goes to the right when viewed from the grommets, as shown in Figure 8.



**Figure 8**

14. Push the hoses over the copper fittings on the heater, secure them with two of the #10 Stainless Steel Hose Clamps and tighten firmly.

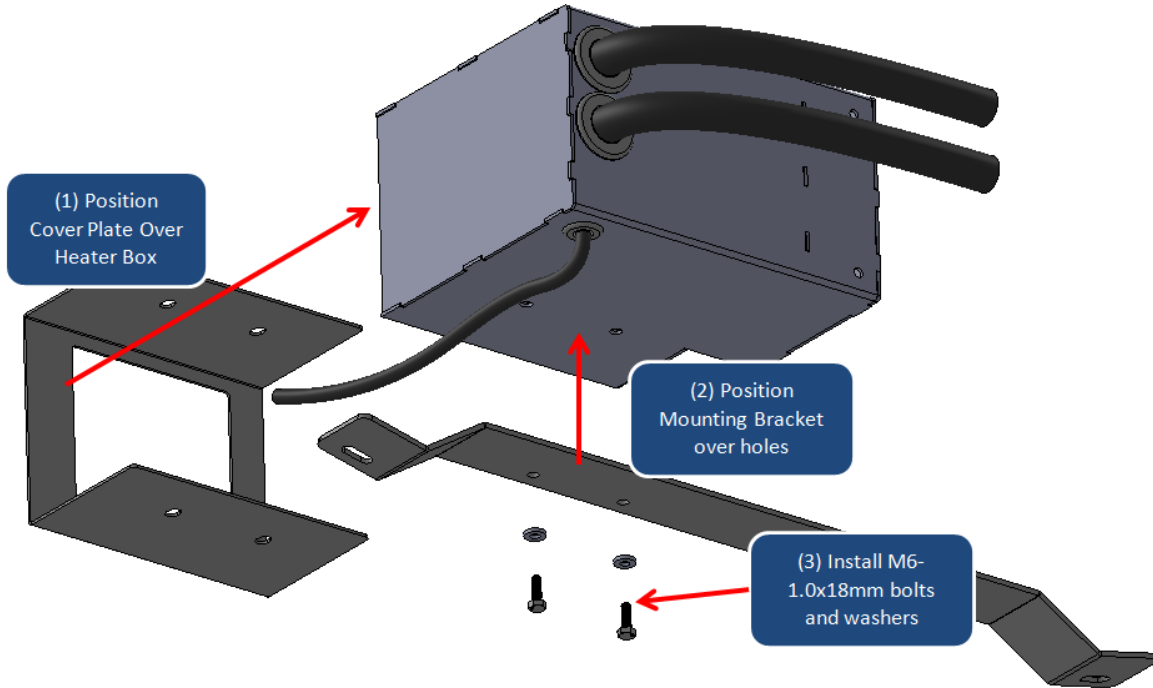
**Installation Tip:** Install the #10 Hose Clamps in the orientation shown in Figure 9.



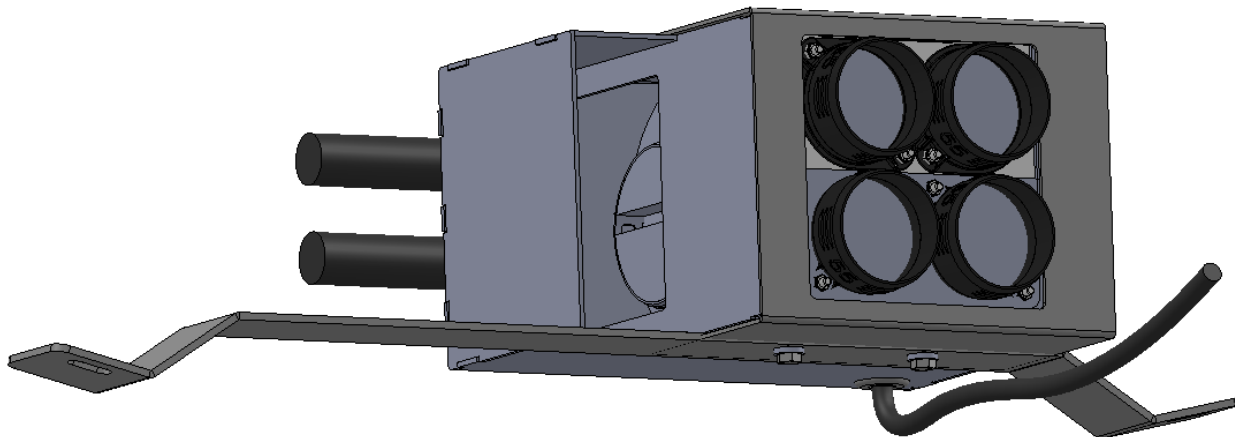
**Figure 9**

15. Run the ends of the wiring harnesses through the Small Rubber Grommet (Red, Orange, Yellow and Black wires). It is necessary to push one terminal through at a time. Slowly work the heater back into the box by pulling gently on the 5/8" hose in an alternating fashion. Ensure the excess wiring harness is also pulled through the grommet.
16. When the Heater Unit is fully pressed into the Heater Box, position the Front Cover Plate over the front of the Heater Box and then sit the Heater Box on top of the Frame Mount Bracket as shown in Figure 10. Insert two of the M6-1.00 x 18mm Hex Bolts and washers from the bottom of the Frame Mount Bracket and into the brass threads of the heater unit. It may be necessary to use a screw driver to position all the holes. **Do not completely tighten.** Insert the remaining M6 x 18mm Hex Bolts and washers from the top of the Front Cover Plate and snug all bolts. See Figure 10 and 11.



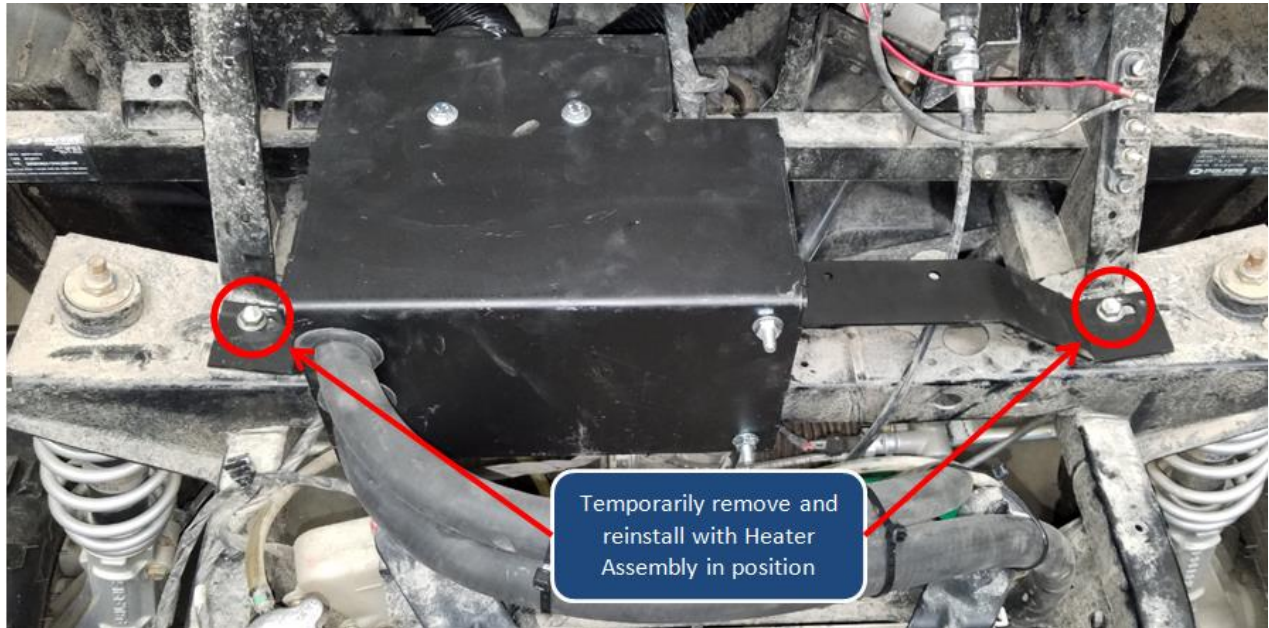


**Figure 10**



**Figure 11**

17. Remove the two bolts shown in Figure 12 and position the Heater Box Assembly over the bolt holes. Reinstall the frame bolts.



**Figure 12**

### **Vent and Electrical Installation**

18. Press all four 2" Defrost Vents into the holes drilled in Step 6. **Do not press on the center of the 2" Vents.**
19. Use a wire cutter to slit the first three metal ribs of each 2" Duct Hose. This will allow for easiest installation over the 2" Vents and the 55mm heater ports. See Figure 13.



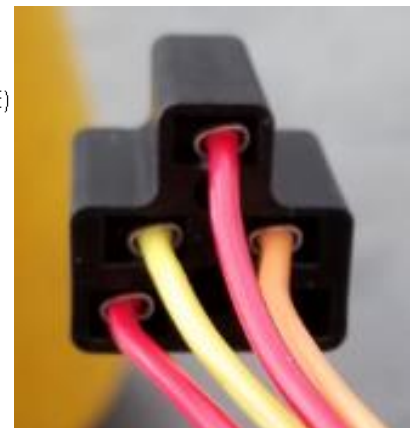
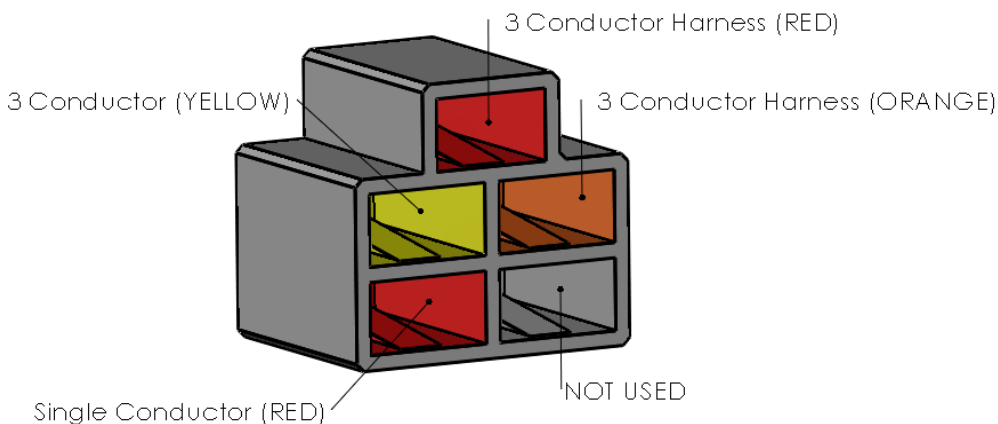
**Figure 13**

20. Use the 10" piece of compressed 2" hose and attach it to the Driver Side 2" Vent. Secure the hose using a Zip Tie. Attach the 7" piece of compressed 2" hose to the Passenger Side 2" Vent. Secure with a Zip Tie.
21. Remove the 1/4" push clips from the front dash as seen in Figure 14.



**Figure 14**

22. Tip the front dash toward the steering wheel to gain access to the two 2" Defrost Vents in the center of the dash. Attach the 5" pieces of 2" hose to the two 2" Defrost vents too and secure using Zip Ties.
23. With the front dash free to move, route the Three Conductor Wiring Harness (Red, Orange, Yellow) to the switch and connect the terminals as shown in Figure 15. Connect the Single Conductor Red wire as shown in Figure 15.
24. Locate the Three Conductor wiring harness and insert the Yellow, Red, and Orange wires into the Black, Five Pin Connector. If installed properly the terminal will snap into place. If the terminal does not snap, flip it 180 degrees and try again.
25. Locate the Single Conductor Red wire and insert it in the lower left corner of the Black, Five Pin Connector.
26. Connect the assembled connector into the switch housing



**Figure 15**



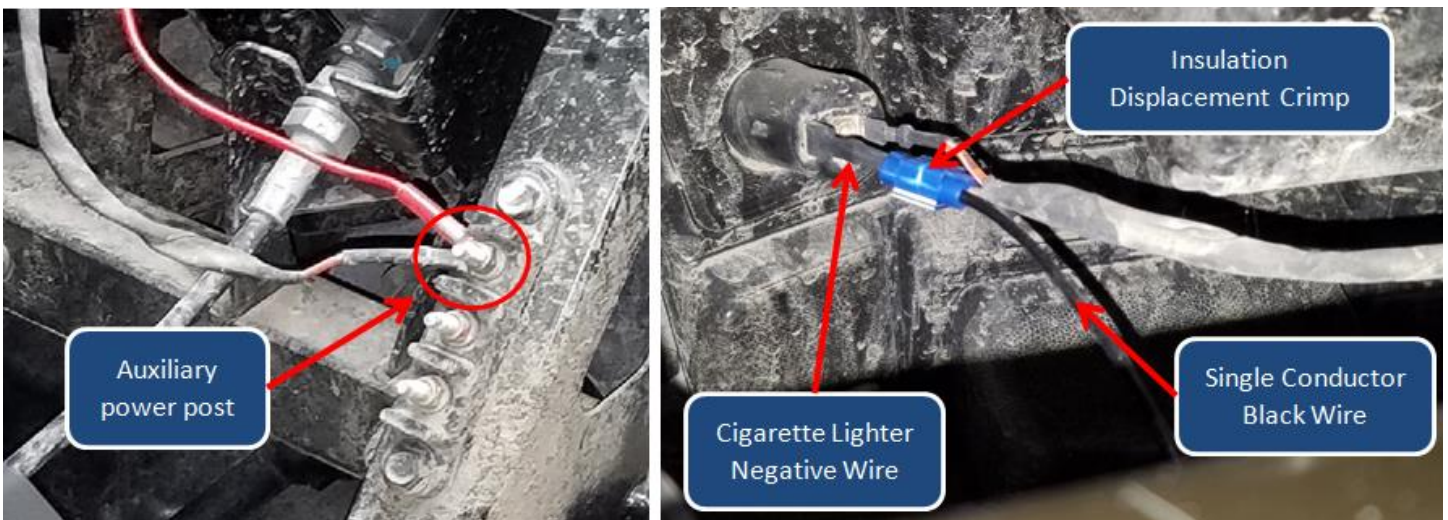
27. Reposition the front dash and reinstall the push clips.
28. Route the 2" Hoses as shown in Figure 16 and secure each hose to the 55mm ports on the Heater Unit using Zip Ties.

**Installation Tip:** Install to driver side and passenger side Vents first at the bottom of the Heater Uox and then install the two upper hoses.



**Figure 16**

29. Attach the Single Conductor Red Wire to the auxiliary power post. Using the Blue Insulation Displacement Crimp connect the Single Conductor Black Wire from the Heater Box to the negative wire that connects to the cigarette lighter as shown in Figure 17.



**Figure 17**

30. Turn the vehicle ignition to the Auxiliary state and use the 3-position switch to test the operation of the fan.

**Radiator Hose Routing and Hookup (NON Ranger ETX Only). ETX Version skip ahead.**

31. Route the short piece of 5/8" ID Heater Hose to the rear of the radiator and down to the bottom 1" outlet hose of the radiator. Leave for future use.
32. Route the long piece of 5/8" ID Heater Hose to the driver side of the radiator and follow the upper 1" factory radiator line toward the center tunnel as shown in Figure 18 and 19. The yellow arrow indicates the path of the 5/8" ID Heater Hose.

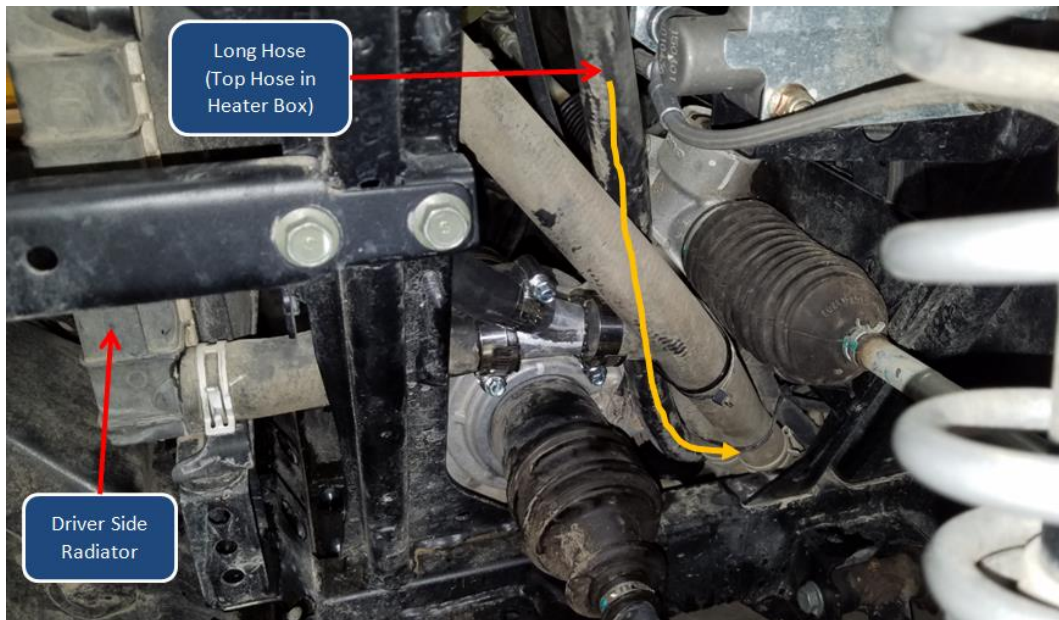


Figure 18

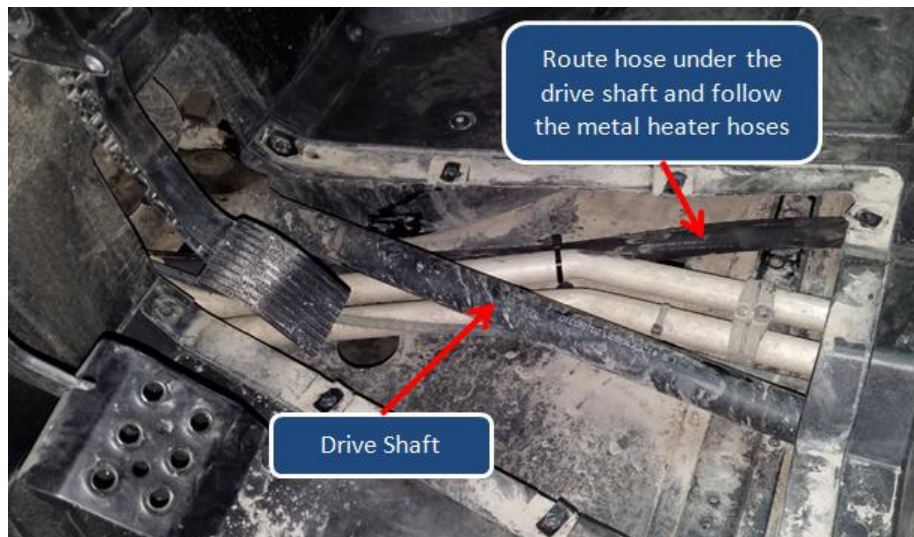
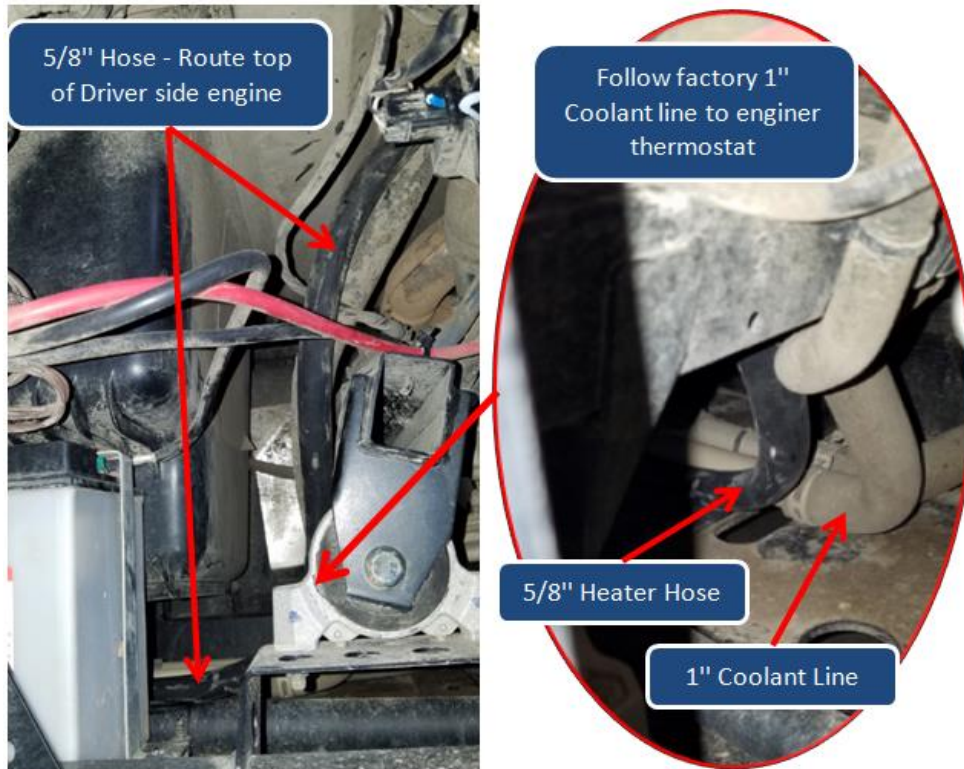


Figure 19



33. Route the long 5/8" Heater Hose to the top driver side of the engine, continuing to follow the factory 1" Heater Hose as shown in Figure 20.

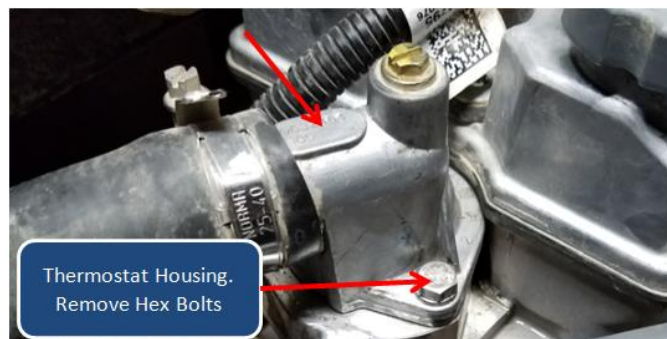


**Figure 20**

34. Pull the extra hose through the top of the engine compartment and set aside.

**Perform the next steps only when the vehicles engine temperature is cold**

35. Place a collection pan for coolant under the vehicles thermostat. Remove the two hex bolts that secure the thermostat as shown in Figure 21 and allow excess coolant to drain into the pan.



**Figure 21**

36. Position the Thermostat Bypass Valve BP104 as shown in Figure 22. The Green O-ring should face down and touch the engine. Position the thermostat on top of the Thermostat Bypass Valve in the same orientation that it came out of the Thermostat housing. Reposition the Thermostat housing on top of the Bypass Valve and align to the mounting holes. Install the M6 bolts and M6 lock washers included with the Thermostat Bypass Valve.

**Installation Tip:** The Thermostat is not symmetrical and it may be necessary to rotate the Thermostat incrementally until the Thermostat Housing fits over top and allows the bolt holes to line up.

Tighten the bolts by hand and then snug them to the engine block. **DO NOT overtighten them.**

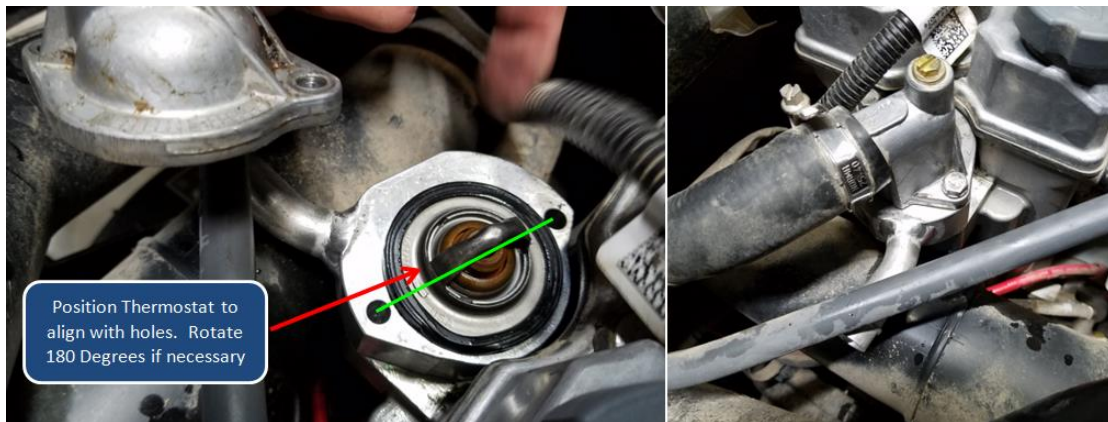


Figure 22

37. If the RZR is a four-seater vehicle, hold the hose up to the 5/8" port on the Thermostat Bypass, ensure there are no kinks or sharp angles in the hose and cut any excess hose off. The supplied amount of hose should be very close to the correct length for a four-seater RZR. If installing on a two-seater, again verify that there are no sharp angles in the hose and cut the hose to length.
38. Slide the stainless steel Unicoil over the end of the 5/8" hose. The beginning few inches are challenging, twist the Unicoil as it is pressed onto the hose. Once the end of the hose comes through the Unicoil, grab it with a pliers and the Unicoil can be pulled into position more easily. Position the Unicoil as shown in Figure 23. Bend the unicoil to allow the 5/8" hose to angle back toward the front of the machine.

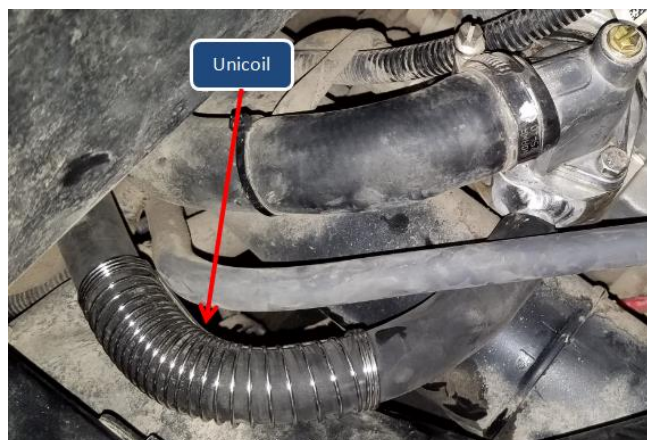


Figure 23

39. Leave the long 5/8" Hose off of the 5/8" Thermostat port for future use.

## Ranger ETX Machines

40. Ranger ETX machines do not use the thermostat bypass stated earlier. Instead, route the long 5/8" coolant hose to the Upper 1" radiator hose. Use the remaining 1" Aluminum Y to attach to the 1" upper radiator hose. Position the aluminum Y so that it faces the radiator and secure it using the #16 hose clamps. Cut the 5/8" Coolant to length and attach it to the aluminum Y outlet port. Secure using a #10 hose clamp.
41. Move the drain pan to the front of the vehicle and position it under the area shown in Figure 24. Position the 1" Aluminum Y as shown in Figure 24, mark a 1" section of hose and cut that section of the 1" hose. Discard the 1" section. **Insert the Aluminum Y with the 5/8" port of the Aluminum Y facing the radiator.** Secure the two ends with the #16 Hose Clamps. Leave the short 5/8" Heater hose disconnected for future use.

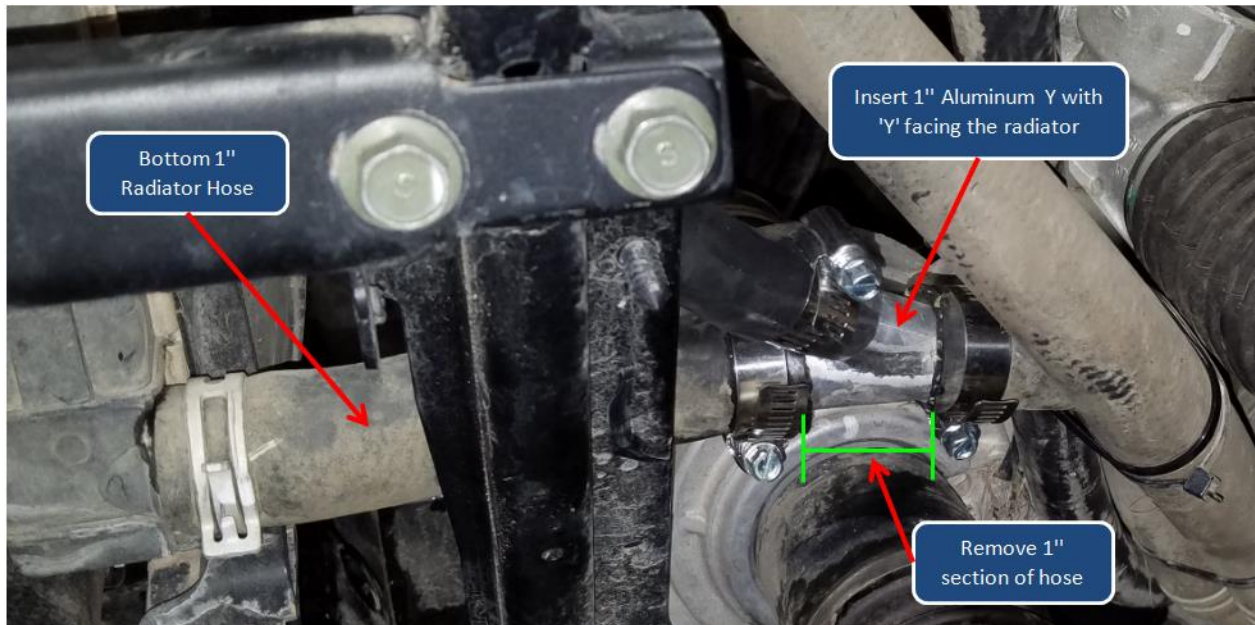
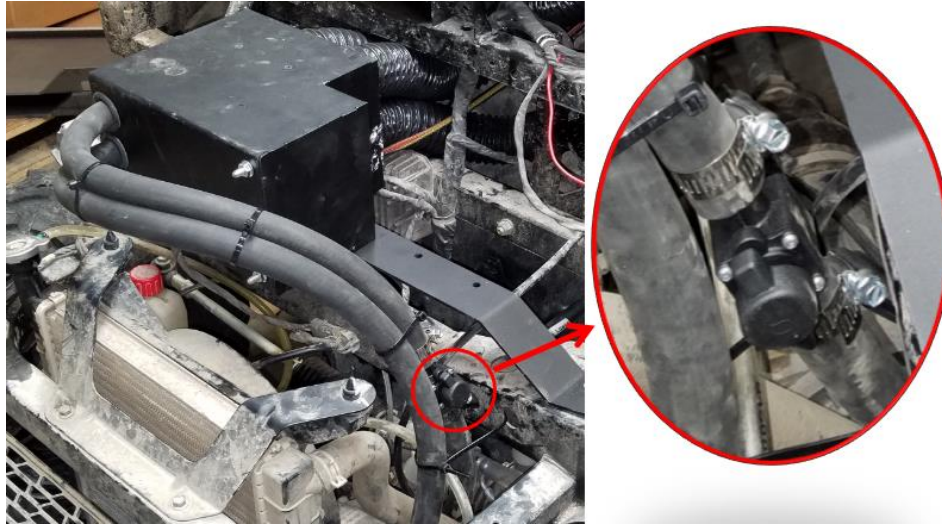


Figure 24

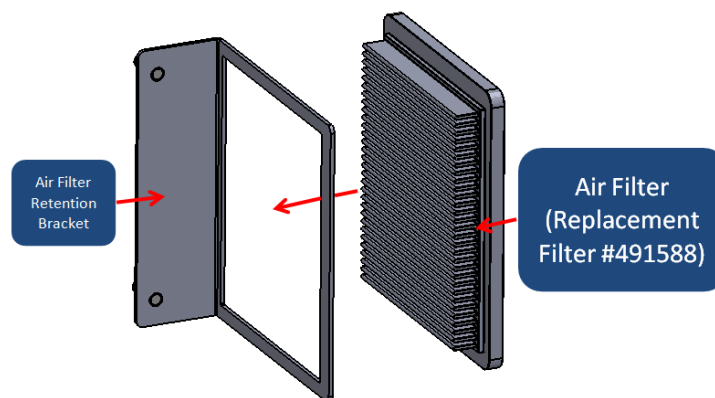


42. Install the Plastic Shutoff Valve in the long piece of 5/8" Heater Hose by cutting the hose and inserting the Plastic Shutoff Valve as shown in Figure 25. Secure using two of the #10 Hose Clamps.



**Figure 25**

43. Zip tie the two 5/8" Hoses together as shown in Figure 25. Loosely zip tie the hoses to the frame that the Heater Box is mounted to. This will keep the hoses from rubbing against the radiator.
44. Insert the Air Filter (Replacement Filter #491588) into the Air Filter Retention Bracket as shown in Figure 26. Insert the assembly into the Heater Box and secure it with the two 1/4" Serrated Flange Nuts. Change the filter annually or as needed.



**Figure 26**

## Garden Hose Flush

45. Attach the supplied Garden Hose Adapter to a working garden hose.
46. Remove the yellow cover plates (2 screws) from the Garden Hose Adapter. Insert the barbed end of the Garden Hose Adapter into the 5/8" Hose nearest the engine.

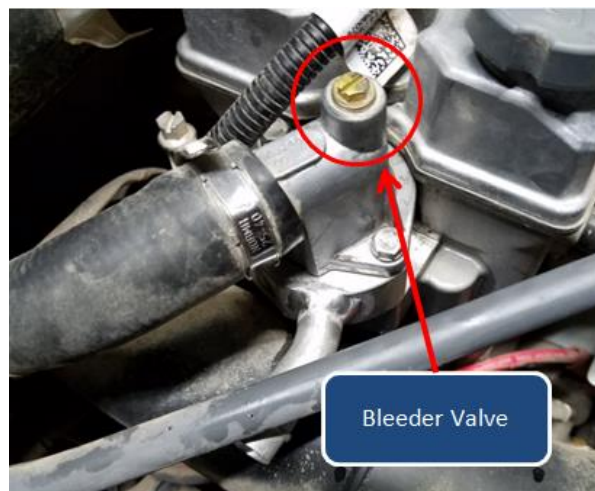
47. Place a bucket under the short piece of 5/8" Hose. Verify that the 5/8" shutoff valve installed earlier is in the open position.
48. Fully turn on the garden hose and run water through the cab heater system for 1 minute. Verify no leaks are present at any connections points. Empty the bucket as necessary. Let excess water drain out into the bucket after removing the garden hose. It is not necessary to remove all the water.
49. Attach the two 5/8" Heater Hoses to their respective ports and secure with the remaining #10 Hose Clamps. Ensure all Hose Clamps are tight before proceeding.

### **Bleeding the Coolant System – Read entire section before proceeding**

**IMPORTANT NOTE:** Some amount of air will have made its way into the coolant system. The following bleeding procedure must be performed to eliminate the air and obtain heat.

**The following procedure is most easily accomplished with the help of a partner.**

1. Move the vehicle to an area where it can be run. If possible, place the front end of the vehicle on ramps.
2. Open the radiator cap and add as much 50/50 premix coolant as allowable.
3. Turn on the vehicle and run the engine at 3,000-4,000 RPMS until the radiator fan turns on or the vehicle temperature reaches 200 degrees. During this time, continue to add coolant to the radiator as needed. It is normal for coolant to overflow at times as bubbles move through the system. Place a pan under the radiator cap to collect excess coolant.
4. With the vehicle running, use a socket to crack open the bleeder valve (See Figure 27) on top of the thermostat housing. Air/steam will rush out of the thermostat housing. All this to happen until only liquid is coming out, then snug the bleeder valve down again. **Do not over tighten.**



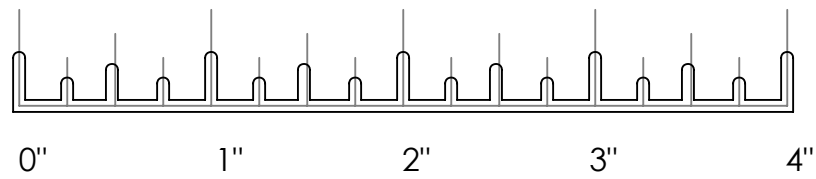
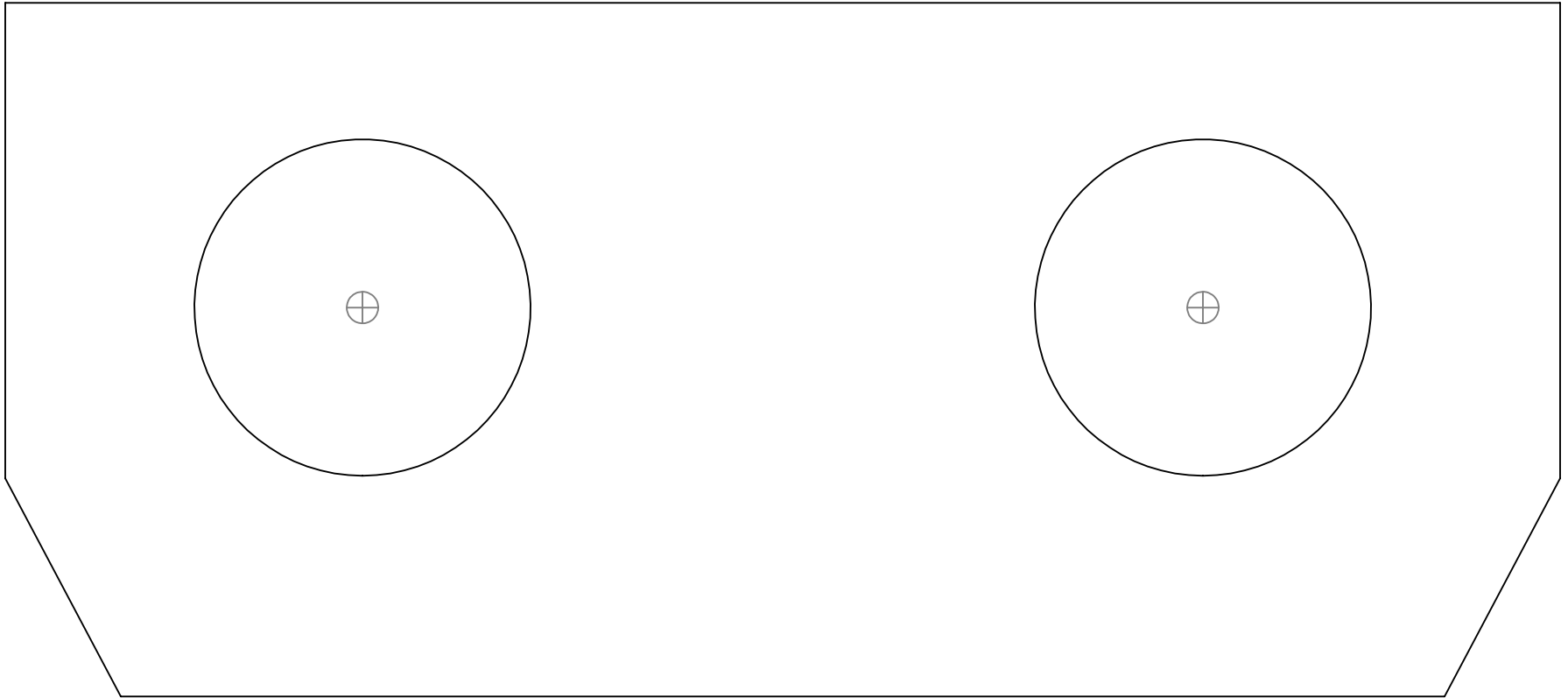
**Figure 27**



5. When the radiator fan turns off, release the accelerator. **If the temperature reaches 205 degrees, turn off the engine and allow the system to cool down.** Once the engine temp cools to approximately 180 degrees, perform steps 3 & 4 again. As air moves out of the system the vehicle's ability to cool itself improves to the point where the radiator fan is able to mitigate the heat generated by the engine. Perform this step for two cycles of the radiator fan. Depending on how much coolant was lost during installation a third or fourth cycle may be necessary.
6. Close the radiator cap securely. Fill the coolant overflow reservoir to the full line.
7. Again, rev the engine at 3,000-4,000 RPMs for one radiator fan ON/OFF cycles. Turn off the machine and let it completely cool down.
8. In a few hours, check the reservoir level, fill accordingly. Verify that the engine is cold and then open the radiator cap. Fill as necessary. Close the radiator cap.
9. Repeat Step #3 and Step #7 until there is no longer a drop in the coolant overflow reservoir and sufficient heat is reached in the cab.
10. Verify there are no coolant leaks.
11. For troubleshooting see the **Supplemental Instructions Important Note** at the beginning of your instructions.

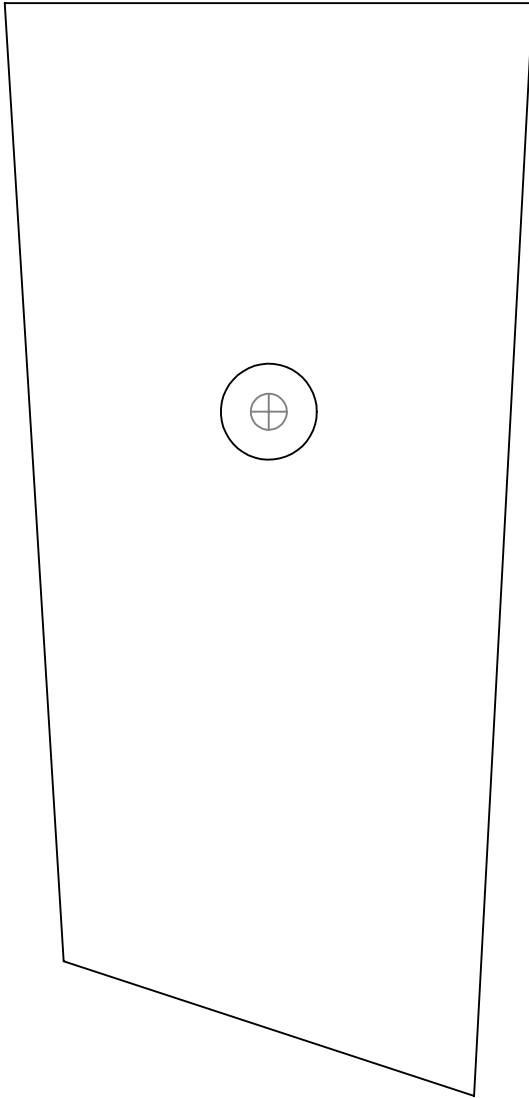


# Defrost Template





# Switch Template



# Louver Templates

