



**Firestorm Mid Sized Polaris Ranger Compact Cab Heater**  
HT\_CP-401

23001 Industrial Blvd  
Rogers, MN 55374  
866.527.7637

**MID SIZED POLARIS RANGER COMPACT CAB HEATER KIT INSTALLATION INSTRUCTIONS**

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

**Please note: These instructions are for a Mid-Size Ranger. For other models, please see second set of instructions. Templates are machine specific. Verify before use.**

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.

Qty	Description
1	Mid Sized Ranger Heater Unit
1	Standard Heater Mount Bracket
1	4' x 5/8" Heater Hose
13	12" Cable Ties
4	#16 Hose Clamps
4	#10 Hose Clamps
1	1 1/4" Hole Saw
1	36" Mid Size Ranger Wiring Loom
2	1" Y Fittings (Aluminum)
2	RH and LH Mounting Brackets
2	Heater Core Support Brackets
2	Rubber Grommets
1	1/4" - 20 x 1 1/2" Bolt & 1/4" - 20 Nylock Nut
2	1/4" - 20x 1 1/4" Serrated Flange Bolts

Qty	Description
2	1/4" - 20 x 3/4" Serrated Flange Bolts
4	U Nuts 1/4" x 20
2	1/4" ID x 1/2" OD Spacers
6	#10 x 5/8" Screws for Plastic
2	1/4" Fender Washer
1	Duct Elbow Mounting Bracket
1	90° Duct Elbow
1	8" x 2" Duct Hose (Compressed)
1	8" x 2.5" Duct Hose (Compressed)
2	2" Defrost Vents
1	2.5" Duct Y
2	Stepdowns
1	2" Hole Saw
1	3" Hole Saw
1	Pilot Bit (not shown)

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## Firestorm Cab Heater Important Note

### Technical Support:

- Customer Support Phone - 866.527.7637 (toll free), press #1 at menu prompt
- Technical Support Phone – 866.527.7637 (toll free), press #2 at menu prompt
- Email – MotolInfo@motoalliance.com

### Supplemental Instructions: Bleeding air from the coolant system:

Note: The inlet hose mentioned below refers to the line that sends coolant from the engine to the radiator.

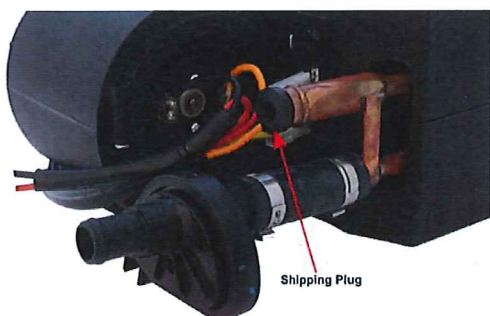
1. Follow the bleeding procedure included in your instructions. If after following the procedure listed in the instructions you still do not get hot air from your heater (at fast idle & engine is hot), perform the procedure below.
2. Ensure that all coolant levels are filled to the manufacturers recommended levels before starting.
3. Start your SxS and run the engine at fast idle (3000 rpm) until the engine is hot.
4. Locate the inlet hose to the radiator. Pinch off the inlet hose after the radiator Y so that the majority of the coolant is bypassed through the cab heater. You may need a shop rag to protect your fingers from the heat of the hose.
5. Do this until the radiator fan turns on. Let go of the hose until the fan turns off. Pinch the hose again and complete one more fan on/off cycle.
6. Turn the machine off and let the engine cool down completely (this can take several hours).
7. Check the fluid level in the radiator and the reservoir and fill accordingly.
8. Repeat steps #3-6 once more.

*The above is assuming that you followed the "garden hose" section of the instructions that came with your heater.*

### Black Shipping Plugs:

Please remove the black plugs that are found on the heater core lines (copper pipes on the back of the cab heater). These are used for keeping the core lines free of dust and debris during shipping.

**Firestorm Compact**



866.527.7637

**Firestorm Underhood**



3

**Firestorm Upright**

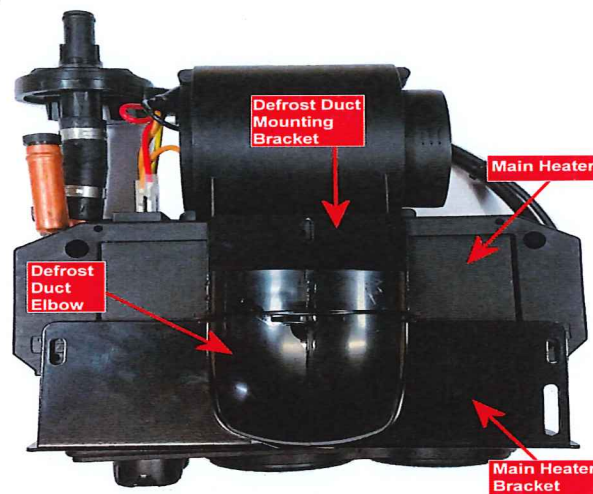


MotolInfo@motoalliance.com

## Cab Heater Installation

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

1. Cut out the Heater Hose Hole Template (Template 1) and place on the firewall.
2. Mark the hole saw centers as stated on the Template and remove the Template from the firewall.
3. Using the supplied 1 1/4" Hole Saw, carefully drill the heater hose holes.
4. Using the supplied 3" Hole Saw, carefully drill the defrost hose hole.
5. Place the supplied Rubber Grommets into the drilled heater hose holes.
6. Cut out the Heater Mounting Template (Template 2) and position it as stated on the template on the underside of dash panel.
7. Mark the hole centers and remove the Template 2.
8. Hold the Main Heater Mounting Bracket up under the dash.
9. Align the Bracket with the marked holes and check the mounting alignment; adjust the marked hole centers if needed.
10. Carefully drill the holes as stated on Template 2 using a 3/8" drill.
11. Assemble the Main Heater Mounting Bracket, Defrost Duct Mounting Bracket and Defrost Duct Elbow as shown in Figure 1:
  - The Defrost Duct Elbow end with the plastic tabs should face the opening of the Defrost Duct Mounting Bracket.
  - The Defrost Duct Elbow end without the plastic tabs should rest in the Main Heater Mounting Bracket's oval hole as seen in Figure 1.



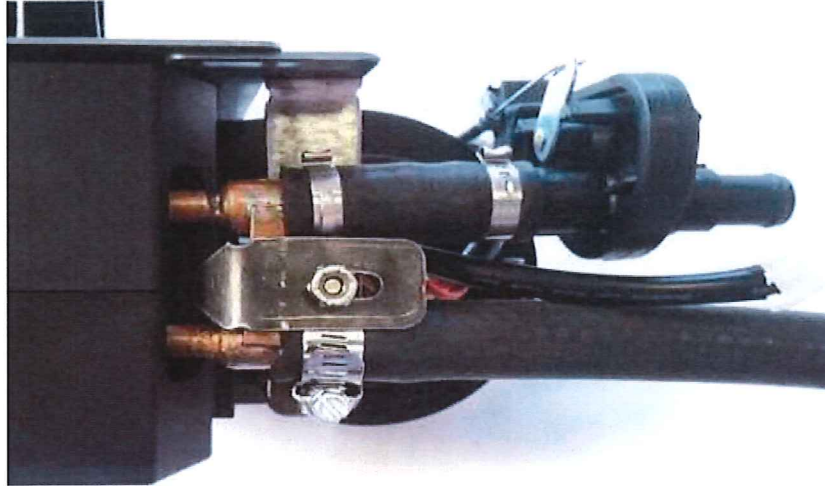
**Figure 1**

12. Secure the assembly using the (6) supplied Plastic Mounting Screws on the top and bottom sides of the Bracket.
13. Using the supplied 5/8" Heater Hose, pass each end through the Rubber Grommets in the firewall from the **radiator side** of the firewall. **Do not cut the hose to do this.**

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14. Attach the 5/8" Heater Hoses to the Heater Unit (*note the lower hose clamp placement as shown in Figure 2*):
- The top heater hose attaches to the temperature control valve
  - The lower heater hose attaches to the heater core, pushing the hose completely on the fitting
15. Install the Heater Core Support Bracket to the hoses as shown in Figure 2. **Do not over tighten.**



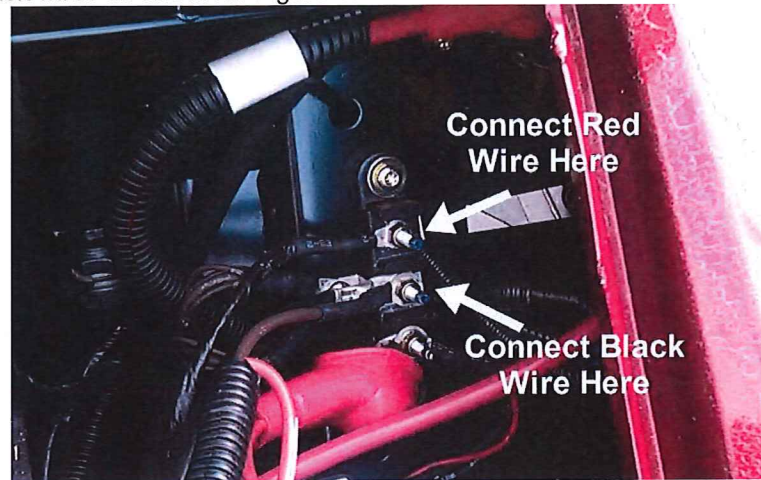
**Figure 2**

16. Connect the Wiring Loom to the Heater:
- Connect the red wire on the wiring loom to the red wire of the heater plug
  - Connect the black wire on the wiring loom to the black wire of the heater plug



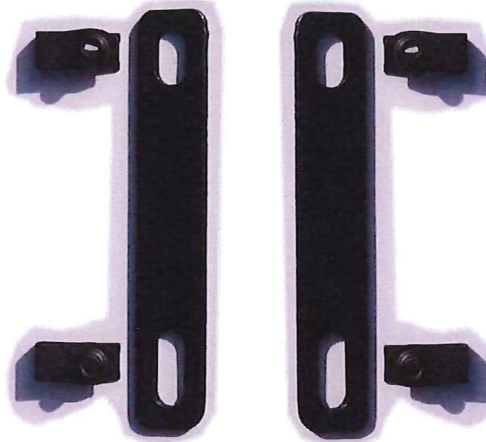
17. Run the Wiring Loom through the 3/8" hole drilled previously and up to the power connection block as shown in Figure 3.

18. Connect the red and black wires as shown in Figure 3.



**Figure 3**

19. Reconnect the battery and turn the key on to check the fan operation.  
20. Disconnect the battery.  
21. Use Cable Ties as necessary to secure the Wiring Loom.  
22. Install the U-nuts onto the Heater Support Brackets as shown in Figure 4.

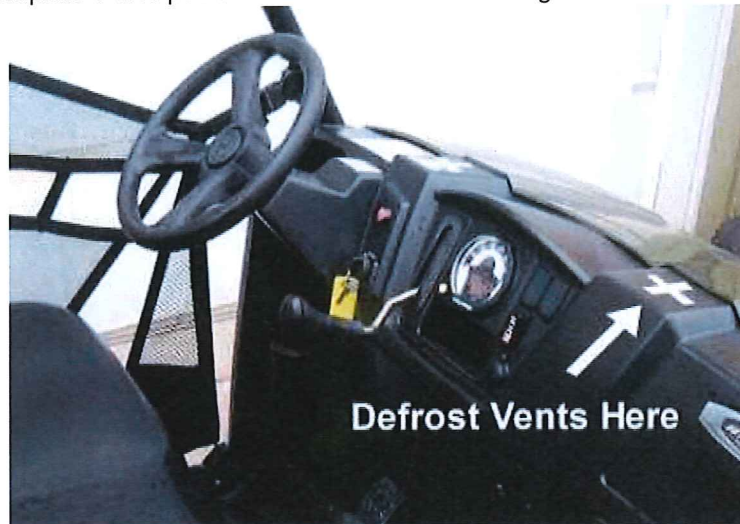


**Figure 4**

23. Have a helper hold the Heater Support Brackets behind the dash over the holes drilled in the dash panel.  
24. Lift the Heater up into position, pushing the heater hoses back through the rubber grommets.  
25. Fit the  $\frac{1}{4}$ " x  $\frac{3}{4}$ " mounting bolts through the two front (heater front) holes of the Main Heater Mounting Bracket, through the holes in the dash and into the Heater Support Brackets with U-nuts. **Do not tighten.**  
26. Fit the  $\frac{1}{4}$ " x  $1\frac{1}{4}$ " Mounting Bolts through the two rear mounting holes of the Heater Mounting Bracket, through the supplied  $\frac{1}{2}$ " Spacers and  $\frac{1}{4}$ " Fender Washers, up through the holes in the dash and into the Heater Support Brackets with the U-nuts. **Do not tighten at this time.**  
27. Adjust the heater position and tighten the mounting bolts.

## Defrost Duct Installation

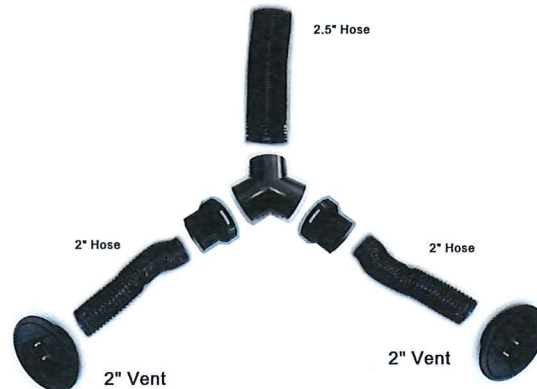
1. Cut out the Defrost Kit Template 3 and position on dash as shown in Figure 5 and as stated on the template.



**Figure 5**

2. Mark the hole centers and remove the Template 3.
3. Using the supplied 2" Hole Saw and Pilot Bit, drill the holes for the vents.  
**Note:** Before drilling any holes, check area behind the dash panels to make sure no damage will occur by drilling holes and that there is sufficient room for the vent and hose.
4. Attach the 2.5" Duct Hose to the Defrost Duct and secure with a Cable Tie.  
**Note:** Use a wire cutter to split the hose in half up to three rings on each side. This will give more flexibility to the install. Seal with electrical tape if necessary.
5. Stretch the 2.5" Duct Hose from the Heater through the firewall hole and up in behind the dash area.
6. Attach the Duct Y to the 2.5" Duct Hose and secure with a Cable Tie.
7. Attach the 2" Stepdown to 2.5" Duct Y to the 2.5".
8. Divide and cut the 2" Duct Hose in half.
9. Attach each piece of the 2" Duct Hose to the Duct Y and secure with a Cable Tie.

- Run each end of the 2" Duct Hose out to the vent hole and pass through the hole in the dash and attach to the vent inlet using Figure 6 as a guide.



**Figure 6**

- Secure with Cable Ties.
- Place the Vents into the holes and push down carefully until the Vents snap into place.  
**Important Tip:** *Cleaning any burrs from around hole with a knife will make installing the vent into place easier.*

## Coolant Setup

- Remove the front side wheel well panels.
- Drain the cooling system by removing the lower radiator hose.  
**Important Tip:** *Raise the front of vehicle on jack stands or ramps before draining the cooling system. This will help in preventing air locks and you won't have to drain the whole cooling system.*
- Locate radiator hose as shown in Figure 7a.
- Cut the radiator hoses as shown in Figure 7b and 7c.



**Figure 7a**



**Figure 7b**



**Figure 7c**

- Insert the Y Connectors in the radiator hoses exactly as shown in Figures 7b, 7c and 8 and secure with #16 Hose Clamps.  
**Note:** *Before cutting the radiator hoses, be sure that the placement of Y's will not interfere with any part of the vehicle. Be sure the hose connected to the temperature control valve of the heater is connected to the top radiator hose.*



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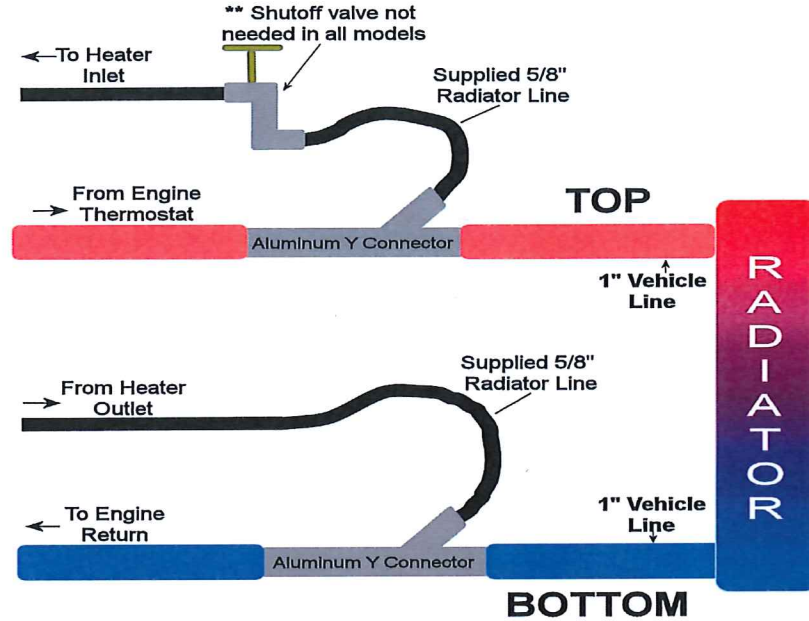


Figure 8

- Run the 5/8" Heater Hose to the Y Connectors.  
**Note:** When running the heater hose, make large bends to avoid crimping the hose
- Cut the Heater Hoses to length.
- Before connecting the 5/8" Heater Hoses to the Y Connectors, use a garden hose to run water through the Heater Hose and Heater Assembly. **This step must be carried out** as it forces air bubbles out of the heater core. Filling the heater core without the pressure of the garden hose leaves the chance for air pockets inside the core. This will lead to no or limited heating during operation.
- Fit the Heater Hose to the Y Connectors and secure with #10 Hose Clamps. Make sure all hoses are as far away as possible from the driveshaft, steering shaft and sharp areas, etc.
- Secure with Cable Ties as necessary.

## 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.

- Move the vehicle to an area where it can be run. If possible, place the front end of the vehicle on ramps.
- Open the radiator cap and add as much 50/50 premix coolant as allowable.
- Turn on the machine and run the engine at 3,000-4,000 RPMS until the radiator fan turns on. 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.
- 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 reaches 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

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- cycles of the radiator fan. Depending on how much coolant was lost during installation, a third or fourth cycle may be necessary.
5. Close the radiator cap securely. Fill the coolant overflow reservoir to the full line.
  6. Again, rev the engine at 3,000-4,000 RPMs until three radiator fan ON/OFF cycles. Turn off the machine and let it completely cool down.
  7. In a few hours, check the reservoir level and fill accordingly. Verify that the engine is cold and then open the radiator cap. Fill as necessary. Close the radiator cap.
  8. Repeat Step #3 and Step #7 until you no longer see a drop in the coolant overflow reservoir and you feel good heat in the cab after the first radiator fan cycle.
  9. Verify there are no coolant leaks.
  10. For troubleshooting see the Supplemental Instructions Important Note at the beginning of your instructions.



**Installed View**

### **Before Your Next Ride:**

**Verify that no leaks have occurred and that the radiator fluid level is per the manufacturer's specifications.**

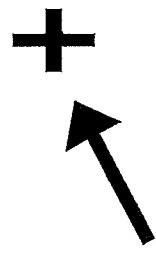
Caution: Steel Bar behind.  
Do not drill into!

TOP



1 1/4" Hole Saw Center

### Polaris Ranger Mid Size Hose Hole Template



3" Hole Saw Center

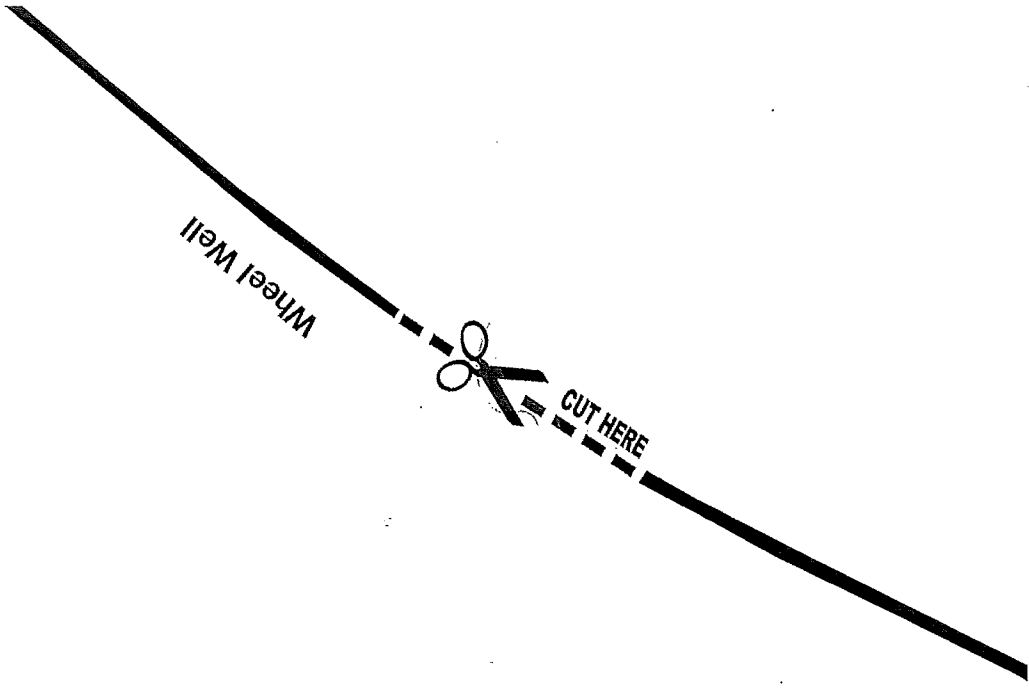
Cut out template. Tape to inside of firewall just beside and above RH front wheel well. Mark hole centers on firewall. Remove template. Using 1 1/4" hole saw, drill heater hose holes in firewall. Caution: Do not drill into steel bar behind plastic firewall panel. Using 3" hole saw, drill duct hose hole in firewall. Please Note: Before you drill please check the other side of firewall for anything that may interfere with the placement of the holes. We will not be held responsible for holes being drilled in the incorrect place.  
[www.utypartsandaccessories.com](http://www.utypartsandaccessories.com)  
1 800 596 0785

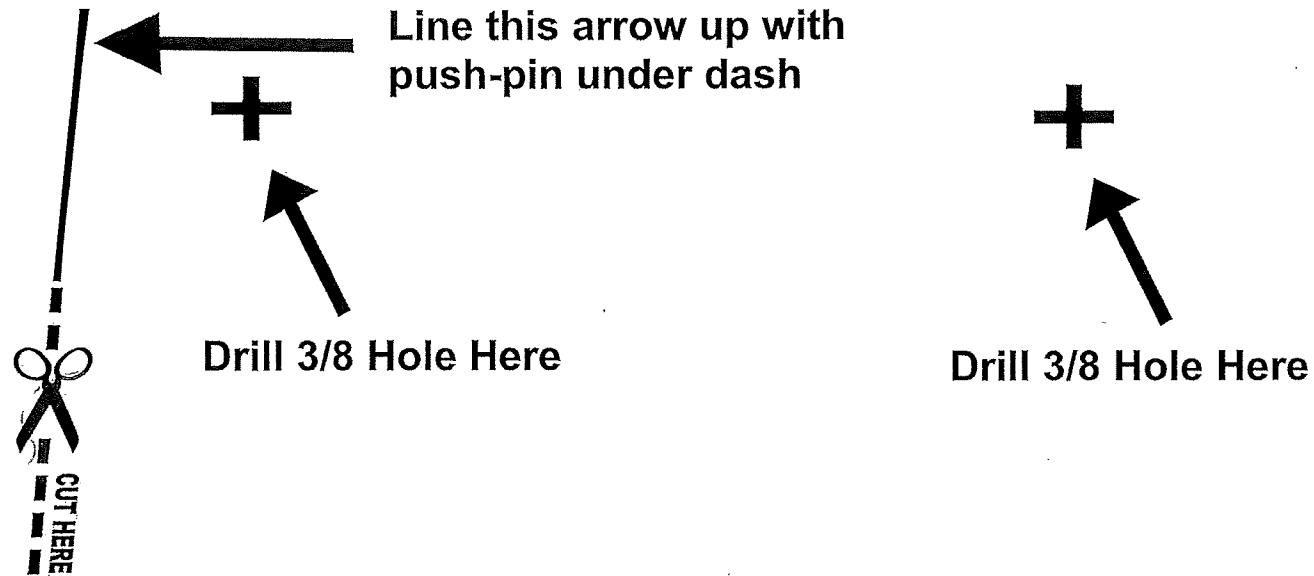
Template

Wheel Well



CUT HERE





## Polaris Ranger Mid Size Firestorm Heater Mounting Template

Cut out template. Place on under side of dash panel under storage cubby with this side of template facing down toward the floor. Align arrow with Push-Pin on RH side of dash and the cut edge of template where fascia front panel meets the under dash panel. Mark hole centers on panel. Remove template. Check placement of heater. Using 3/8" drill bit, drill mounting holes and wiring loom hole.

Please Note: Before you drill please check the other side of panel for anything that may interfere with the placement of the holes. We will not be held responsible for holes being drilled in the incorrect place.

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Template

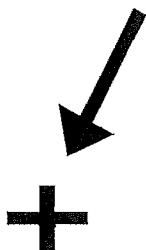
2

Wiring Loom Hole

Drill 3/8 Hole Here

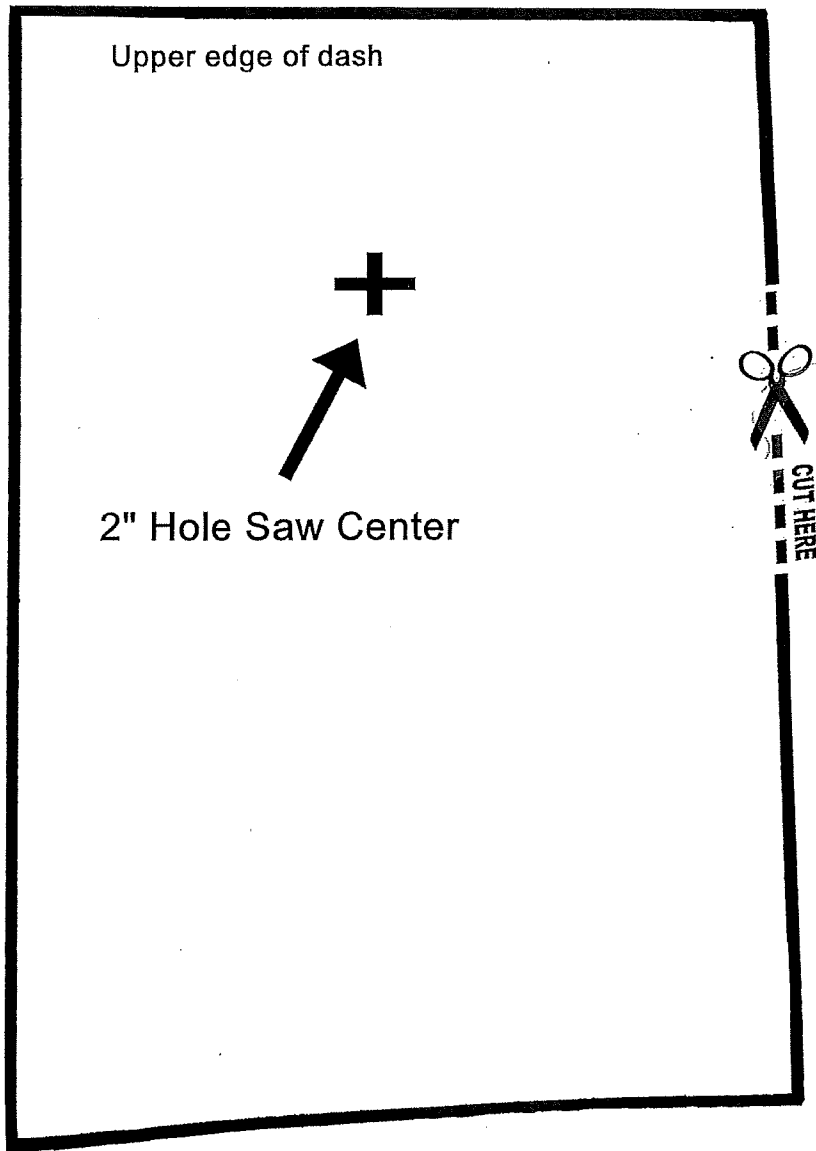


Drill 3/8 Hole Here



Drill 3/8 Hole Here





Polaris Ranger Mid Size Defrost Kit Template Left and Right Side.

Cut out template, place on upper dash panel and align with the contours of the dash. Mark center hole on dash. Remove template. Using 2" hole saw, drill vent hole in dash. Please Note: Before you drill please check the under side of dash directly below template for anything that may interfere with the placement of the vent. We will not be held responsible for vent holes being drilled in the incorrect place.

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Template