



V4214B - 20,000 BTU HEATER KIT for RTV 900 and RTV 1140 INSTALLATION & OWNER'S MANUAL

The contents of this envelope are the property of the owner.
Be sure to leave with the owner when installation is complete.

HEATER INSTALLATION

BEFORE YOU START

HELPFUL REMINDERS:

- A. Read and understand all instructions before beginning.
 - B. If wiring to overhead console V4238, finish wiring this and any other accessories before bolting roof in place.
- NOTE: do not dimple metal roof by over tightening bolts.

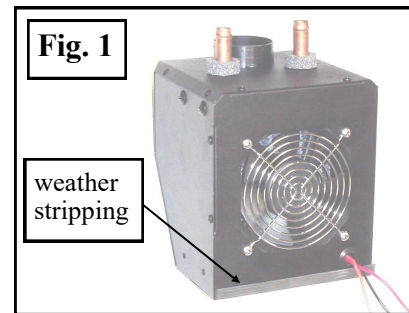
APPROXIMATE INSTALLATION TIME: 2-3 HOURS

TOOLS REQUIRED:

SCREWDRIVER (PHILLIPS AND REGULAR)
 DRILL-SCREW GUN
 3/8" & 7/16" DRILL BIT
 ADJUSTABLE WRENCH (MEDIUM)
 3/16" ALLEN DRIVER
 3/8" DRIVE RATCHET
 12 MM 3/8" DRIVE SOCKET
 KNIFE SHEARS (FOR CUTTING HOSES)
 WIRE CRIMPER
 SHEARS
 FUNNEL
 DRAIN PAN
 TEFLON TAPE

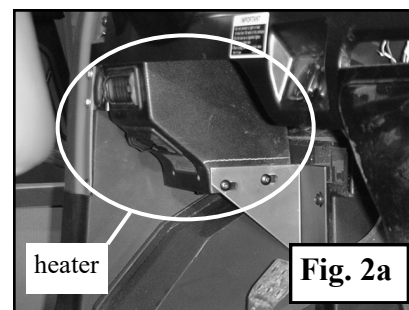
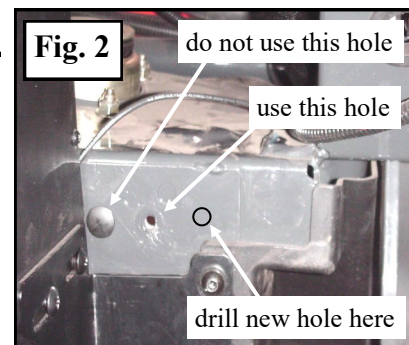
1. PREPARATION

- 1.1 Place a drain pan under the radiator and drain the coolant from the vehicle.
- 1.2 If equipped, remove the plugs from the copper tubes on the top of the heater. Install the supplied weather stripping (7" long) along the lower back side of the heater (see figure 1). NOTE: adhesive backed weather stripping should be applied to a clean, dry surface at room temperature. Lastly, remove and retain the two Phillips head screws from the bottom right side of the heater.
- 1.3 Remove the driver's side rubber cup holder from the vehicle dashboard by grasping the lip and pulling up.
- 1.4 Remove the two Allen head screws from the driver's side of the plastic foot well that sits in front of the dash board.



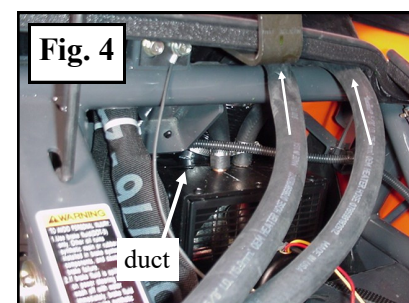
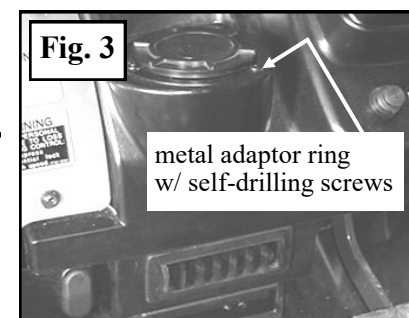
2. INSTALLING THE HEATER

- 2.1 If a winch is currently installed, remove the winch switch bracket and relocate it to the right using the existing right mounting hole on the fender and the left mounting hole on the bracket. Fasten the bracket with one original M8 X 1.25 X 15 hex bolt. (See Figure 2).
- 2.2 Use the right side mount hole on the bracket as a template and drill one new 3/8" diameter hole through the fender. Use the new M8 X 1.25 X 25 hex bolt and M8 flanged hex locknut supplied with this heater kit to fasten the switch bracket.
- 2.3 (See figure 2a). Loosely install the heater mounting bracket to the vehicle with the Allen head screws removed in step 1.4. Position the heater under the dashboard on the driver's side. **NOTE: It may be necessary to pull the bottom of the dashboard out to clear while positioning the heater.** Install the heater with Phillips head screws removed in step 1.2. With heater positioned so that the top front vent clears the bottom of the dashboard, tighten all hardware.
- 2.4 (See figure 3). Insert the flexible duct provided, through the hole in the dash where the cup holder was removed. Working from under the hood, connect the flexible duct to the duct adaptor on the heater with the large hose clamp provided. Trim the flexible duct so that no more than 2" protrudes from the cup holder hole in the dash. Next, disassemble the round louvered vent provided by depressing one of the four plastic tabs on the inside of the vent with a flat screwdriver and removing the rotating interior part of the vent. Install the vent base to the metal adaptor ring by snapping it into place and then reassemble the vent. Install the vent assembly to the other end of the flexible duct with the remaining large clamp. Install the vent assembly to the dashboard with three self-drilling screws provided.



3. PLUMBING

- 3.1 **All vehicles except 2011 and newer RTV900XT models** (See figures 4 on this page, and figures 5 and 6 on the next page) route one end of the supplied heater hose over the round frame tube next to the hood hinge and install to one of the copper tubes on the top of the heater using one of the supplied 1" hose clamps. Route the hose to the underside of the vehicle and along the driver's side frame rail following the existing wiring harness as shown.



3. PLUMBING (continued)

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- 3.2 On 2011 and newer RTV900XT models route one end of the supplied heater hose over the round frame tube next to the hood hinge and install to one of the copper tubes on the top of the heater using one of the supplied 1" hose clamps (figure 4 previous page). Route the hose to the underside of the vehicle and along the driver's side frame rail. Per figure 7 and 8, at the back of the floor pan continue to follow the frame rail to the outside of the radiator and up towards the battery compartment. Per figure 9, go up and over the frame rail and back down to the lower radiator hose.
- 3.3 Per figure 10, cut lower radiator hose as shown and install tee fitting provided with 1-1/2" hose clamps. Cut heater hose to length and install to 5/8" outlet of tee with 1" hose clamp provided.
- 3.4 (See figures 4 on the previous page, and figures 5 and 11 on this page). Attach one end of the remaining piece of hose to the other copper tube on the top of the heater and route in the same manner as the hose in step 3.1 or 3.2. Continue this hose up the front of the engine as shown.
- 3.5 (See figure 12). Remove the plug from the thermostat housing. Install supplied nipple with Teflon tape (not provided). Cut heater hose to length and install to nipple with 1" hose clamp.
- 3.6 (See Figure 13). Cut into the hose routed to the thermostat housing and install the supplied in-line shut-off valve with 1" hose clamps as shown. Confirm valve is open. Tie off hoses to clear all moving parts, including dump bed.



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9

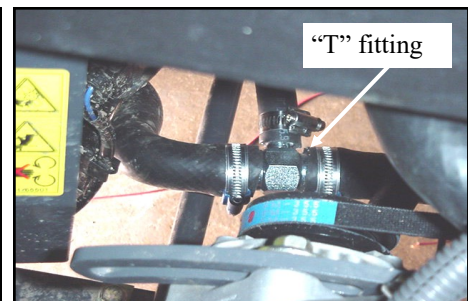


Figure 10 ("T" fitting)



Figure 11

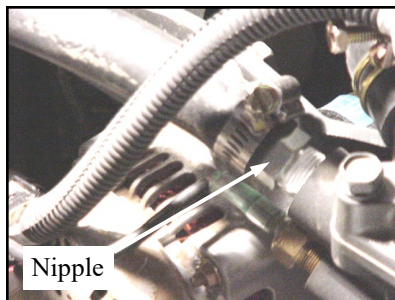


Figure 12

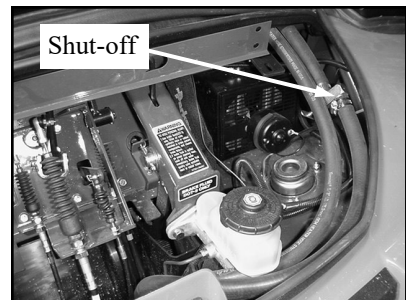


Figure 13

ROUTE AND CONNECT WIRING (RTV-900 - WITH OVERHEAD CONSOLE)

1. Connect black wire from wiring kit to black wire on heater. Route the other end of the black wire over to the ground connection on the passenger side under the hood. (See figure 14).
2. Connect 8 foot wire harness to orange and red leads on the back of the heater. Route harness along driver's side frame rail following the same path as the heater hoses. Run the wiring over to the driver's side rear cab bar.
3. Connect seven foot section of wire harness to eight foot section and route up the rear driver's side corner of the cab with the wiring from the overhead console.
4. Connect the wires to the leads labeled "heater" on the back side of the overhead console. The orange wire connects to the "heater high" wire and the red connects to the "heater low" wire. There is a designated two speed switch and circuit breaker in the console for the heater.

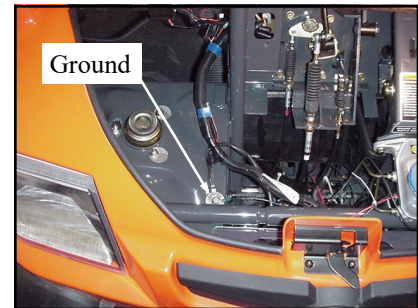


Figure 14

ROUTE AND CONNECT WIRING (WITHOUT OVERHEAD CONSOLE)

1. Drill 7/16" diameter hole in dashboard and mount switch as shown. (See figure 14). **CAUTION: check clearance behind dash before drilling to avoid damage.**
2. Connect black wire from wiring kit to black wire on heater. Route the other end of the black wire over to the ground connection on the passenger side under the hood. (See figure 14).
3. Connect 6 inch harness to orange and red leads on the heater. Connect orange lead to terminal labeled "H" on switch. Connect red wire to terminal labeled "L" on switch.
4. Connect red wire from 8 foot harness to terminal labeled "B" on switch. The orange wire will not be used for this installation.

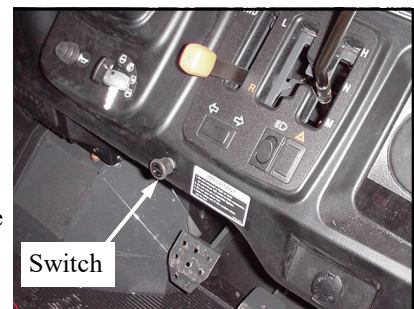


Figure 15

RTV-900 Route 8 ft harnesses along driver's side frame rail following the same path as the heater hoses. Run the harness over to the driver's side rear cab bar area and connect the red wire to the fuse holder from the wiring harness kit. Connect opposite end of fuse holder to battery positive terminal.

RTV-1140 Route 8 ft harnesses under the vehicle, toward the battery which is under the rear seat on the passenger side. Attach red wire from 7 ft. harness, which already has a female bullet connector installed, to male bullet on eight foot harness. Route other end of the seven ft. harness to battery compartment area. Per fig. 16, locate the female bullet connector on the red wire with green stripe on the vehicle harness. (The wire is located above the battery and under the fuses.) Cut red wire (7' harness) to length and install a male bullet connector on the end. Attach to female bullet connector on the red wire with green stripe. **NOTE: If installing wiper kits, crimp all wires into the male bullet connector and then attach.**

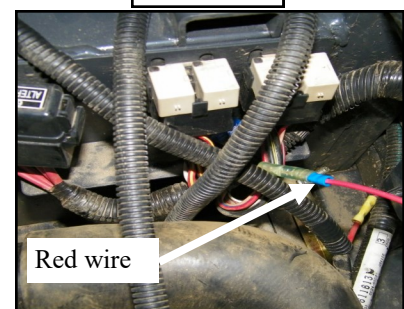


Figure 16

ANTI-DRAFT BARRIER

1. Install anti-draft barrier by working around hoses and cables (see figure 17). Note that the slots for the heater hoses (not shown) will need to be cut and folded down around the heater hoses. Install one of the wire ties provided through the grommet holes in the panel and wrap around shift cables to help hold anti-draft panel in place.
2. **RTV-900 ONLY:** Loosen the orange, front cowl of the vehicle by removing the four button head allen bolts (2 each side) from the dashboard area and the two hex head bolts underneath the headlights. The cowl does not need to be completely removed, just lift up the front to install the foam seal provided by adhering it as shown. (See figure 18). NOTE: the self-adhesive foam seal will adhere best if applied to a clean, dry surface at room temperature.

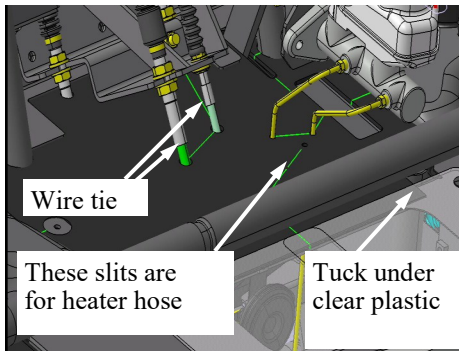


Figure 17

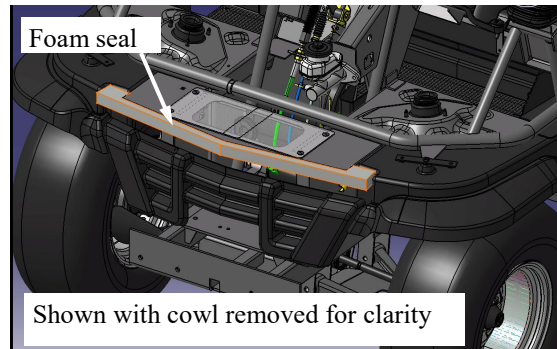


Figure 18

FINISHING TOUCHES

1. Secure hoses and wires under the vehicle with large wire ties provided. Make sure the hoses and wires are clear and secured away from moving parts such as the drive shaft.
2. Use the trim rubber provided to protect the hoses from sharp edges that they may rub against. For example, the reinforcing angles on the underside of the RTV-900 vehicle floor. NOTE: The trim rubber can be cut to length with shears so that it can be used in several places.



Wear hand and eye protection due to possible contact with hot fluid and/or steam.

3. Refill cooling system. Start engine and check system for leaks. Run the engine at full throttle with the heater on and the radiator cap off. Allow engine to warm up until thermostat opens (the upper radiator hose will get hot). The heater and heater hoses should already be warm at this point. If one of the heater hoses is cooler than the other, then there is still air trapped in the heater. In this case, put the radiator cap back on and temporarily place clamp on left radiator hose to force coolant through the heater. Remove clamp once hoses reach the same temperature. Allow engine to cool, remove radiator cap and top off the radiator.

V4214B HEATER KIT - 20,000 BTU **SERVICE PARTS**

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REF. NO.	KUBOTA P/N	CODE NO.	QTY.	DESCRIPTION
1	70000-01163	V4214P1A	1	20,000 BTU MEGA BURNER HEATER UNIT ONLY - WITH TOP HOSE PORTS
2	70000-01167	9HR-L	1	VENT/LOUVER RECTANGLE - 20,000 BTU
3	N.S.S.	N.S.S.	1	HEATER REPLACEMENT CORE - 20,000 BTU
4	70000-01165	9PH20-2	1	HEATER REPLACEMENT FAN/MOTOR - 20,000 BTU
5	70000-01166	9PH20-4	1	FAN GUARD - 20,000 BTU
-	70000-01137	V4214P2	1	HEATER BRACKET (CUSTOM)
-	70000-01026	9HR0044	1	IN-LINE SHUT-OFF VALVE
-	70000-01027	9HR0045	1	3/8" NPT NIPPLE
-	70000-01025	9HR0042	1	1" x 1" x 5/8" TEE
-	70000-01034	9HR0061	2	16' HEATER HOSE
-	70000-01032	9HR0060-1.0	6	1" HOSE CLAMPS
-	70000-01033	9HR0060-1.5	2	1-1/2" HOSE CLAMPS
-	70000-01028	9HR0046	1	ROTARY HEATER SWITCH (WITHOUT PLASTIC KNOB)
-	77700-01475	9HR0046-A	1	HEATER KNOB - PLASTIC
-	70000-01080	AC1018A	1	CUSTOM WIRE KIT FOR KUBOTA RTV 900 AND 1140
-	70000-01049	9PRO1-12	1	TRIM RUBBER (12")
-	70000-01138	V4214P3	1	ANTI-DRAFT BARRIER - SHEET RUBBER
-	70000-01140	V4214P5	1	FOAM SEAL WITH ADHESIVE
-	70000-01142	V4214P7	1	KUBOTA RTV 900 HEATER ADAPTOR KIT (CONTENTS: PLASTIC LOUVER, FLEX HOSE, AND TWO 3" HOSE CLAMPS)
-	70000-01143	V4214P8	1	KUBOTA RTV 900 LOUVER ADAPTOR (CONTENTS: METAL RING PLATE WITH THREE BOLT HOLES, AND THREE SELF-DRILLING SCREWS)
-	N/A	9PR20-7	1	1/2" WEATHER SEAL RUBBER (7") (ONE PER KIT)
-	70000-01162	V4214P6A	1	INSTALLATION INSTRUCTIONS, HEATER KIT - 20,000 BTU
-	O.L.	N.S.S.	1	M8 x 1.25 x 25mm HEX HEAD BOLT
-	O.L.	N.S.S.	1	M8 x 1.25 HEX NUT
-	O.L.	N.S.S.	1	M8 LOCK WASHER

N/A = not available

O.L. = obtain locally

N.S.S. = not sold separately

