



**RH-800-2**  
**INSTALL INSTRUCTIONS**  
**2008 MODEL**

# Tips for Installing Rhinogear Products

The recommended sequence for installing our Rhinogear line of products on your Rhino. This sequence will help with ease of installation and help save time by eliminating repetitive steps.

1. If an RH-404 heater is to be installed, Do it First.
2. The next item to be installed should be the RH-401 Tip Out Windshield or the RH-411 Fixed Glass Windshield. Also at this time if you are installing our RH-412 Doors the hinge plate for the doors should be installed at this time because they use the same connection point as the lower attachment area on either of our windshields.
  - a. Refer to the Windshield installation booklet or the installation booklet for either RH-800 or RH-801 top and back panel kit and go to the “Mounting Brackets” section.
  - b. For installing the RH-412 Door Mounting Bracket refer to items 1-4 of Door instruction booklet.
3. For If our RH-800 is being installed this would also be a good time to install the wiring harnesses as outlined in you instruction booklet.

**A full WPS (Weather Protection System) installation provides increased utilization, comfort level and added value to your Rhino, it also slightly increases the weight of the machine.**

**To retain the original ride and comfort level, the shock absorber pre-loaders can be adjusted to a stiffer setting.**

**NOTE: Any time you tighten a fastener in fiberglass, which has a cushioned headliner material like ours installed, there will be some Dimpling of the fiber glass surface around the head of the fastener. A slight dimple is normal, overtightening, to where the head of the fastener is pulled deep into the fiber glass surface, will damage the fiberglass and cause cracking. It is best to undertighten at first, then return and tighten as necessary. Our fiberglass products are rugged but some caution is required during the installation to assure a professional looking job.**

# RHINO TOP AND BACK PANEL INSTALLATION PROCESS! WPS 800-2

## WIRE HARNESS INSTALLATION

1. Remove both seats, center floor panel and engine cover center cowl.
2. **Mount relay bracket. Harness #00-1142**  
Remove the steel post that secures the drivers seat to the frame. Install the 3/8" flat washer on the threaded end of the post and insert back into the hole.

Place the Power/Relay panel, with connected harness, under the front seat frame, relays will be facing rear. With the threaded portion on the post through the elongated slot in the bracket, slide the power/relay panel tight against the tubular cross support and tighten in place. **Refer To Photo # 1**



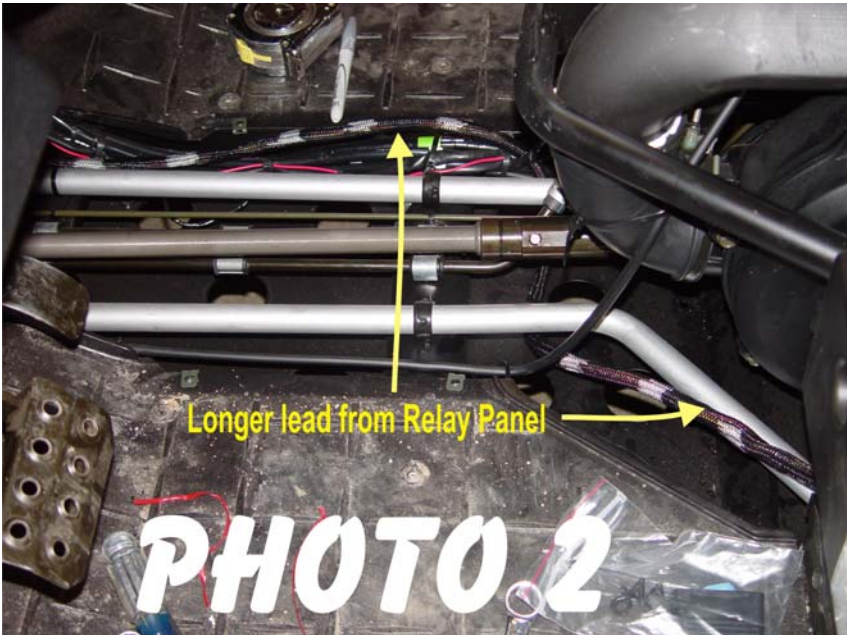
**NOTE: THE FLAT WASHER MUST BE INSTALLED UNDER THE POST FOR THE SEAT TO LOCK PROPERLY.**

3. Routing Main Harness #00-1142

The short lead, with the (2) male plug connectors, will remain in the area under the drivers seat.

The longer lead is routed forward under the floor and crosses over from the driver's side to the passenger's side and up to the area just inboard of the battery location.

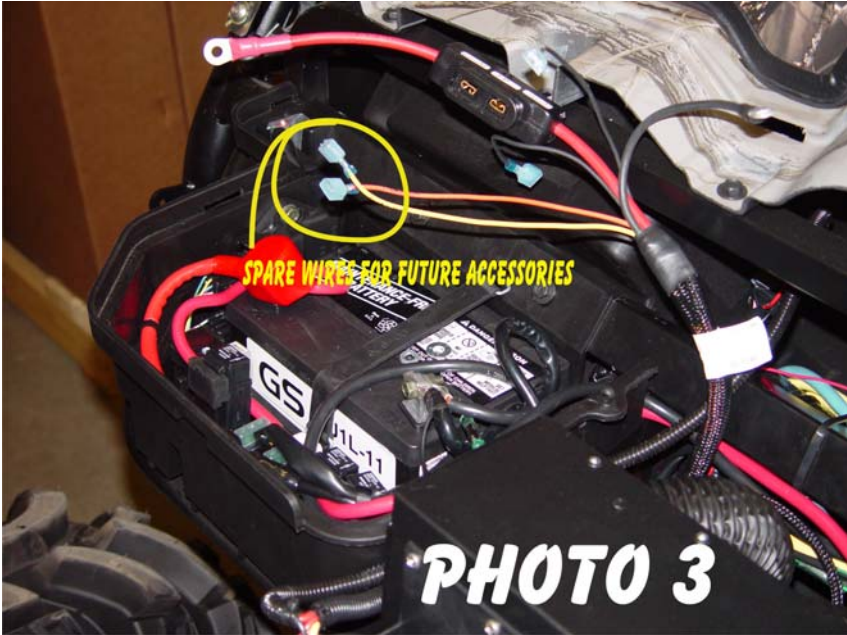
Refer to Photo # 2



The single “Pink” wire marked “KEY-ON-PWR” connects into the back side of the accessory plug mounted in the dash panel.

**NOTE: DO NOT CONNECT THE POSITIVE/NEGATIVE CABLES AT THIS TIME.**

**NOTE: THE ORANGE & YELLOW WIRES ARE SPARES FOR CONNECTING OUR ACCESSORIES, HEATER, WIPERS AND LIGHTS, TO A FUSED “KEY-OFF” CIRCUIT. A PROTECTION FEATURE OF OUR POWER PANEL. Refer To Photo # 3**



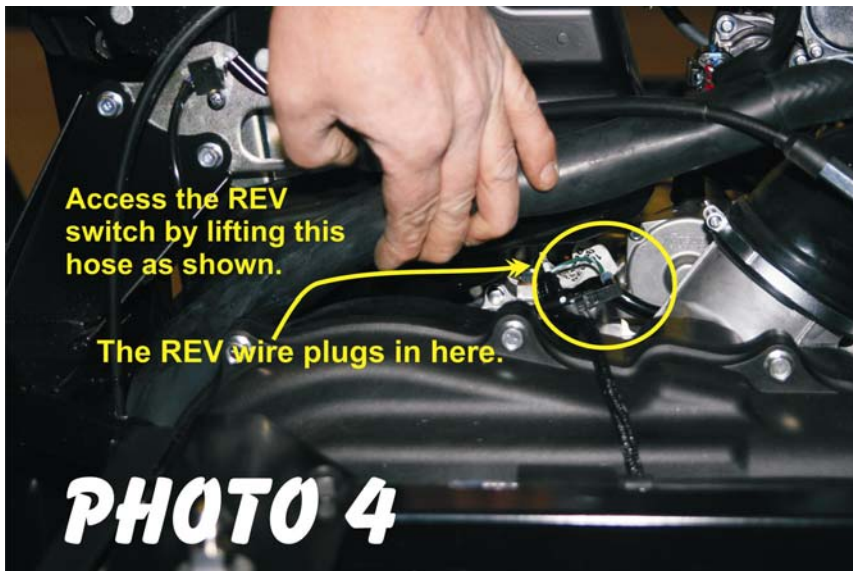
### Routing the Rear Harness #00-1143

The (4) pin flat plug stays in the area under the seat and plugs into the (4) pin plug on the main power harness.

The (2) wire lead, Green/White marked “REV-TRIP”, are routed over the top of the engine to the passenger side. Shown in Photo 4 is the reverse sensor, follow the Green/White wire to the Shifter. Trim off the insulation and use the bullet splice connector on the wire close to the shifter.

Plug the Male Bullet connector from the 1143 harness into the new bullet splice. **Refer to Photo # 4**

Note: the Female Bullet connector on the 1143 harness *will not* be used.



**NOTE: THIS IS THE REVERSE SENSE CIRCUIT THAT LIGHTS THE (2) REAR FLOOD LIGHTS WHEN THE SHIFT LEVER IS IN THE REVERSE POSITION.**

The longer (4) wire lead goes back, under the machine, following the factory installed wiring cable. The (2) Yellow wires marked “BRK-LT”, plug into the brake light circuit under the back end of the dump box. Unplug the connector and plug our harness in.

**NOTE: THE SPARE GREEN “BKUP-12V” AND BLACK GND WIRES ARE USED IF OUR RH402 LIGHTED REAR BUMPER IS GOING TO BE USED.**

**NOTE: THE (6) PIN FLAT PLUG WILL BE CONNECTED TO THE HARNESS COMING FROM THE LIGHT POD IN THE TOP PANEL.**

**NOTE: YOU CAN REINSTALL THE FLOOR SECTION AND CENTER CONSOLE AT THIS TIME. MAKE SURE TO SECURE THE HARNESSES WITH CABLE TIES, ESPECIALLY UNDER THE FLOOR SECTION AROUND THE COOLANT PIPES AND DRIVE SHAFT.**

## MOUNTING BRACKETS, WINDSHIELD & TOP

1. The two front windshield support brackets are located in the windshield box. Install the (2) top front windshield support brackets, there is a left and right bracket. Replace the bolts and snug up, do not tighten at this time. Refer To Photo # 6



2. Install the (2) top stand-off support brackets, there is a left and right bracket. Replace the bolts and snug up, do not tighten at this time. Refer To Photo # 7



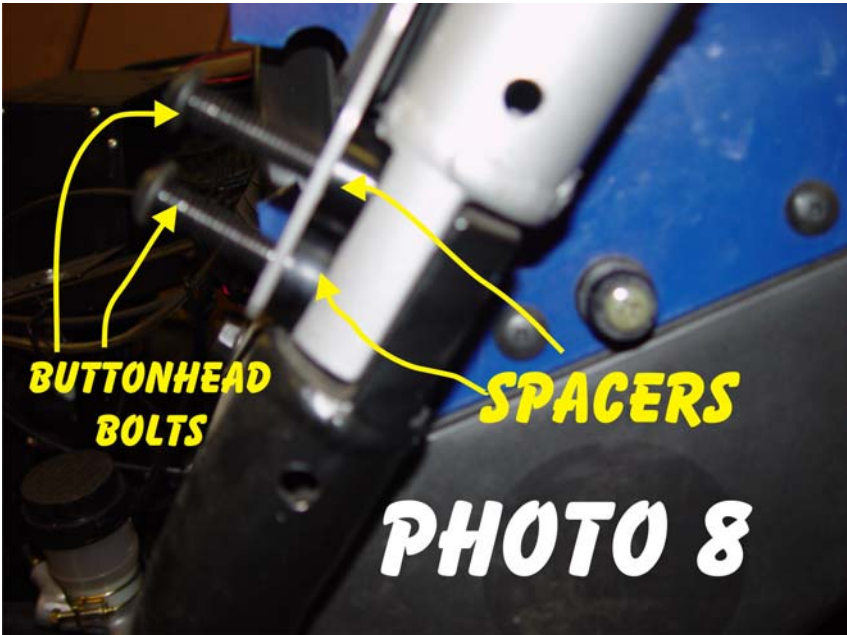
**NOTE: ALL BRACKETS WILL BE MARKED P-PASSENGER'S SIDE, D-DRIVER'S SIDE.**

**TIP: WHEN YOU REMOVE THE BOLTS FROM THE PASSENGERS SIDE OF THE CROSS ROLL TUBE AND DROP ONE, IT GOES UNDER THE FUEL TANK; EVERY TIME. YOU CAN RETRIEVE THE BOLT BY TIPPING THE RHINO OVER ON ITS SIDE, ABOUT 30 DEGREES, AND SHAKING IT A LITTLE. USE A MAGNET TO GO BETWEEN THE FUEL TANK AND THE SIDE FAIRING AND PULL THE BOLT OUT. IT WORKS. TIP PROVIDED BY BUTTERFINGERS.**

**MOUNTING WINDSHIELD – EITHER OUR FIXED GLASS OR TIP-OUT**

- 1. Remove the (2) per side, lower front bolts from the roll cage tubes. These are next to the rubber straps that hold the hood in place.**
- 2. Set the windshield in place, install the steel spacers, one per side, between windshield mounting tabs and the recessed area on the roll tube. Align the slots in the**

windshield, (Bottom 2 slots are for 2006 & older models  
Upper 2 for 2007 models) spacers and roll tubes and  
install the 2 3/4" button head bolts supplied in the kit, do  
not tighten the nuts. **Refer To Photo # 8**







- Center the windshield frame on the two front roll tubes so they run parallel with the tubes. Snug the (4) bolts on the lower tab, they will be tightened later.

**NOTE: Due to differences in the roll cage system, they are not always square; the two bolts on one side may be all the way at the bottom of the adjustment slots in the tab, where the other side may be all the way to the top of the slots.**

- Pull the top of the windshield frame tight to the roll tube, it should be in the center of the tube and running parallel with the tube. Install the two carriage bolts, (head on top) and the Nylock nuts and then tighten till snug. You may need to move this slightly for alignment later. **Refer To Photo # 9**



### INSTALLING FRONT FLOOD LIGHT WIRING HARNESS #00-RH1144 AND SWITCH

- There are (4) leads on this harness, (2) long and (2) shorter. Under the hood, lay out the harness with (1) long lead and the short lead with the (2) wires Yellow “PWR” & Black going towards the battery box, the other end of the harness is routed to the driver’s side.

2. The Yellow/Black lead connects to power in the battery box. The end with the Yellow/Yellow wires and the (10) pin plug is for the separate light switch. There is enough length to place the switch anywhere on the driver's side of the dash. Our suggestion is beside the current light switch. [Refer To Photo # 10 & 11](#)



3. Cut the dash panel opening and install the switch assembly and connect the plug.

**NOTE: On the Tip-Out, there are channels on both sides to run the harness in.**

**NOTE: The leads for the flood lights should be centered between the first two bolt holes in the windshield frame.**

**As shown in Photo 9.**

4. The (2) long leads go to the outer edges of the dash and follow the front roll tubes up and over the top of the windshield frame. For now, allow about 12 inches to extend over the frame.
5. Install the plugs into the flood lights and bolt the light to the windshield frame, the light sits above the bracket. Pull any extra harness back and secure to the roll tubes with cable ties.

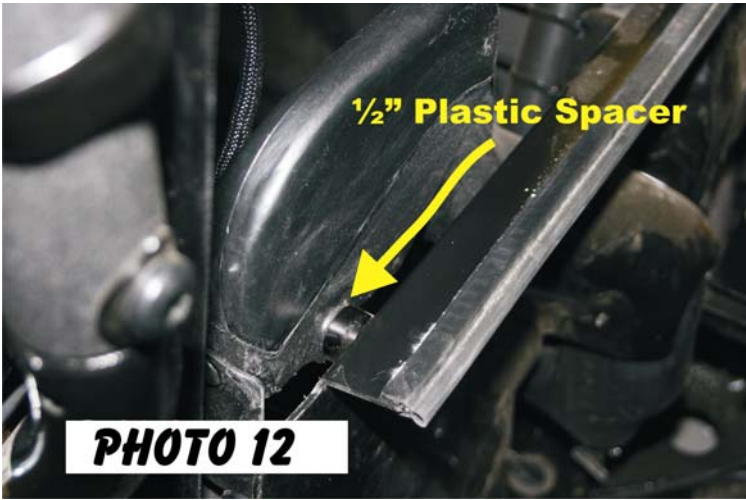
### MOUNTING TOP PANEL AND BACK PANEL

1. Set the top panel in position, place the (8) 1/4" buttonhead bolts with rubber backed washer through the top panel but do not install the nuts

**NOTE: Place one of the 1/4-3/4" Rubber Backed Stainless Steel washers under each of the buttonhead bolts.**

2. Open the dump box then, **((At this point do not close dump box until installation is completed))** There is a Plastic Rivet holding the air box (behind the driver seat) to the plastic shield located in front of the dump box. Remove this rivet and replace with a 1/4" x 20 x 1 1/2" button head and washers with Nylock nut with the 1/2" plastic spacer. The location of the spacer between the air box and plastic shield is shown in Photo 12. **Refer to**

Photo # 12

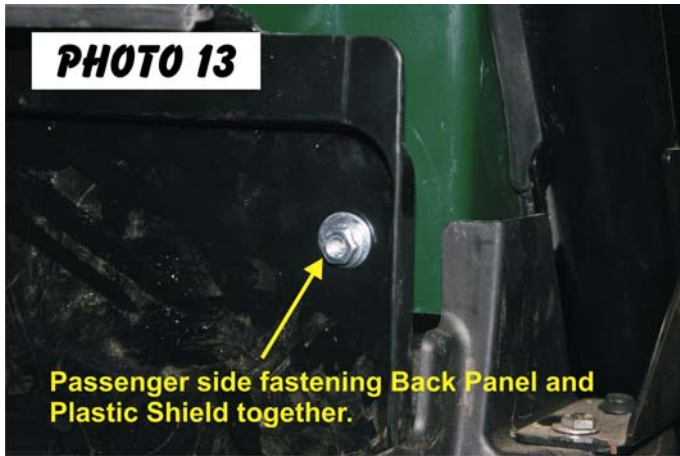


3. Set the rear panel in place, the bottom edge of Back Panel rest on the top of the shelf formed by the plastic shield in front of the dump box. The two bottom corners must be just inside the roll tubes and the plastic shield, align the top and back panels and clamp together. Refer to Photo 12A



4. Using the (7) 1/4" hex bolts, nuts and washers, bolt the top and back panel together. When tightened, install the

3/8" piece of trim-lock over the exposed edges. Refer to Photo # 13



**NOTE:** Place the washer under the head of the BOLT; the nut has a built in serrated flange. Tip: It helps if you have the rear sliding window open.

5. Position the top and back panel assembly on the upper brackets, checking the fit and alignment with the top and back roll cage tubes. Install a 1/4" flat washer and Nylock nut, on the bolts through the stand off bracket and tighten.
6. Install the 1/4" flat washers and Nylock nuts on the (6) bolts going through the top panel and windshield frame, tighten to snug.
7. Make sure the windshield frame is still tight against the front roll tubes, then tighten the (2) carriage bolts and the (4) bolts holding the windshield brackets in place. If it's not tight to the roll tubes, adjust it, then tighten.
8. Tighten all (6) bolts going through the top and windshield frame.
9. Insert a 1 3/4" vinyl covered clamp, long flat side facing outward, between the vertical roll tube and the back

panel. There is enough give in the rubber bulb seal around the panel to slip the clamp in place. One clamp goes on each side. Refer to Photo # 14

**NOTE:** To keep both sides the same, you can either measure up from the bottom corner of bulb seal 3 1/2" and align the bottom edge of the clamp or



using the top edge of the clamp, sight along the top edge of the seat back.

10. We need to draw the back panel tight against the roll tube. Using a ratcheting strap, place the strap around the back panel and the roll tubes, just below the rear sliding window. Tighten the strap, pulling the bulb seal tight against the roll tubes. Refer to Photo # 15



11. Using a 9/32" bit, drill a hole through the back panel centered on the hole in the clamp. Use the rubber backed washer under the head of the 1/4-20 x 1 1/2" button head bolt and the zinc washer under the nylock nut on the clamp side. Install the bolt and tighten.

**NOTE: When installing the RH-412 door system install the striker bolt assembly before the next step.**

12. On the passenger side, fasten the Plastic Shield to the Back Panel. Above the seat belt recoil drill a 9/32" hole thru the Back Panel and Plastic Shield. Use 1/4" x 20 x 1 1/2" button head, 2 washers, Nylock nut (on the outside to secure the 2 parts. **\*\*Do not over tighten\*\*** Refer to

**Photo 16**



13. Fasten the back panel to the bracket that holds the roll cage supports together between the seats. (Photo 17) Drill a 9/32" hole thru the bottom of the bracket and thru the back panel. You will have to drill at an upward angle to be sure to hit the Back Panel. Use a 1/4" x 20 x 1 3/4" button head, 2 washers and a nylock nut to secure. **\*\*Do not over tighten\*\***



Route the wire harness #00-1131, coming from the light pod mounted in the top panel, along the top of the seam where the two panels meet, over to the drivers side, then down behind the roll tube to the area under the seat. Push the harness down between the bolt heads and the headliner foam. The harness will tuck in-between the back panel and the roll tube. It will then connect into the flat (6) pin plug that is part of the main harness.

Your Installation should now be completed, go back through and make sure you tightened everything back up and then .....go for a ride.



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