

Ranger*Ware*



WPS-500-2

INSTALLATION INSTRUCTIONS

SURREY INCLUDED

Hardware included for assembly

Hardware Bag #1

Bolt 1/4-20x3/4" Z 7
Flat Washer 1/4" Z 7
Nut 1/4-20 Flange Serrated Z 7

Hardware Bag #2

Bolt 1/4-20x7/8" Button Head SS .. 10
Nut Nylock 1/4-20 Z 10
Washer Bonded Sealing 1/4" SS .. 10
Flat Washer 1/4" Z 10
Steel Attach Tabs 2

Hardware Bag #3

Clamps Vinyl Large 2
Bolt 3/8-16x1.125" 2
Nut 3/8-16 Flange Top Lock 2
Edge Trim Lock 1

Electrical Panel w/Fuse Harness ... 1
00-1132A Rear Light Harness 1
00-1133A Flood Light Harness 1
00-1134 60 Amp Power Cable 1
MR-16 35W 12V Flood Lights 2

54-101-04 Top Install Bracket 1
Installation Instructions 1

TOOLS NEEDED FOR INSTALLATION:

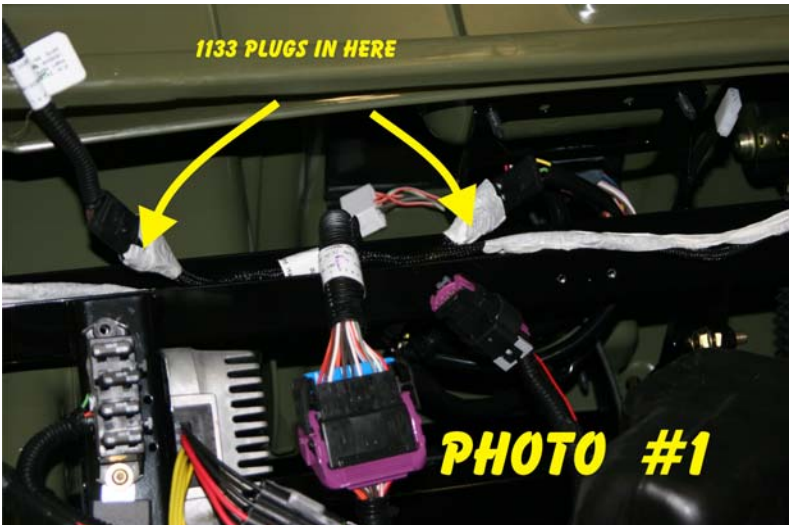
- 7/16" Wrench & Socket
- 9/16" Wrench & Socket
- 7/32" Allen Wrench or "T" Handle
- 5/32" Allen Wrench or "T" Handle
- Diagonal Side Cutters
- 5/16" Drill Bit
- Power Drill
- WD-40 or Silicon Spray

WEATHER PROTECTION SYSTEM INSTALLATION NEW WPS 500-2 (Electrical Panel)

- If our WPS 104 Series Heater is to be installed with this package, it is recommended that it be installed prior to the installation of the windshield and Weather Protection System.

INSTALLATION OF FRONT AND REAR WIRE HARNESSES & ELECTRIC PANEL

- A. *Front wire harness-lift the hood and on the passengers side.*
1. Follow the existing headlight harness on the passenger's side down to the 3 pin flat plug. (Yellow/Green/Brown wires.)
 2. Disconnect this plug and on each side connect the matching plug on harness number 00-1133. *PHOTO #1*



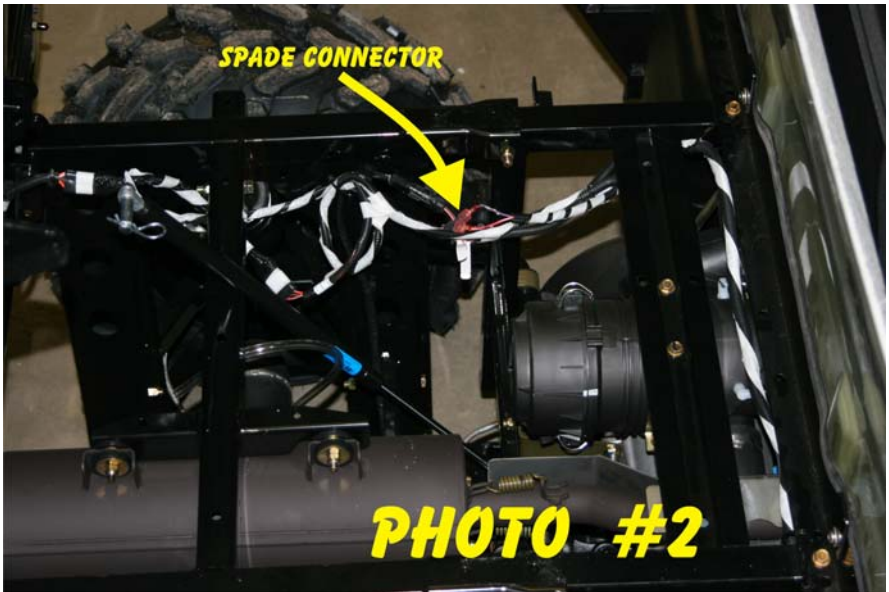
3. The shorter lead of the harness goes to the passenger's side, the longer lead goes to the driver's side. Route the leads along the dash panel cross brace, then through the opening between the roll tube and dash panel. Secure the harness with cable ties.
4. Route the leads, on the inside of the cab, up the front roll cage support tubes; for now, hang them through the hand holds on the roll tubes.

NOTE: Once the windshield is installed the harness will be secured with cable ties and tucked in between the roll tube and the windshield frame. The plug ends go over the top of the windshield frame and down to plug into the backs of the lights.

- B. *Rear wire harness, tip the dump box up and on the (drivers) side.***

All Models

1. Unplug the Tail Light wire harness connector. Red-White/Orange/Brown wires (on some installations the Brown wire may have been replaced with a Purple wire).
2. Plug in the two Rear Tail Light Harness connectors into our harness number 00-1132.
3. Route the harness along the frame, following the factory wiring path, forward to the cross frame that goes over the air filter, follow the cross frame over to the area just behind the fuel tank. Secure with cable ties. **PHOTO #2**
 - **Use caution when routing past the exhaust system, the wires must not make contact with the exhaust.**



C. *Connecting the two Male Spade connectors found on Harness 00-1132*

All Models

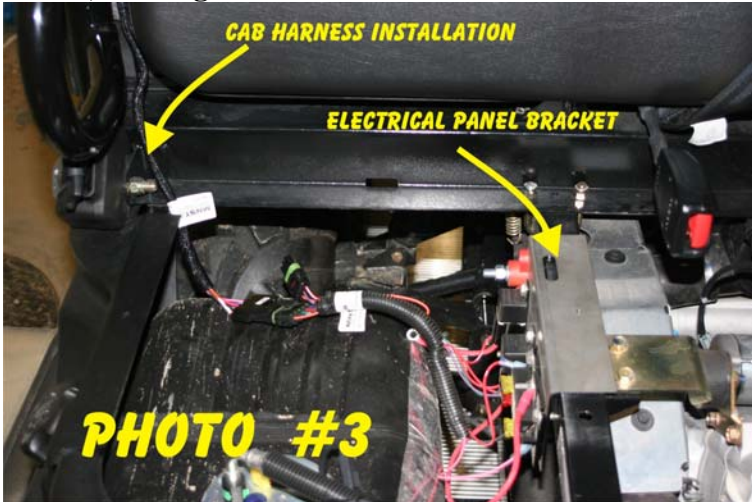
1. On the drivers side top frame rail is a factory installed wiring harness, just forward of the upper shock support bracket you will find a wire bundle tie wrapped to the frame. In the bundle are two wires, with Female Spade connectors, tagged as "ACC", one is Red/White, the other Purple. Match the wire color codes on the two Male connectors to the Female connectors and plug them in. *PHOTO #2*

NOTE: Make sure the connections are secure as this is what controls our electrical system and rear flood lights.

D. *Electrical Panel Installation*

All Ranger 500 &700 EFI Machines

1. Remove the seat bottom.
2. On the passengers side of center, install the electrical panel bracket over the frame rail, assure the relays and fuse block are facing the fuel tank. PHOTO #3
3. Install the bolt through the tab and bracket, the bolt head is on the engine side, install the lock washer and nut, then tighten.



E. ***Routing the Front Power Harness #00-1134***
All Ranger 500 & 700 EFI Machines

1. The fused end of Power Harness #00-1134 is attached to the terminal strip next to the factory battery. Red cable connected to the Positive Post and Black connected to the Negative Post.
2. Remove the center floor pan, the harness is routed down through the floor board area to the circuit panel with fuses and relays. Connect Red to Positive and Black to Negative. Secure the length of the power harness with plastic cable ties to prevent chaffing or rubbing, pay special attention around the drive shaft area.

INSTALLATION OF LIGHTS, TOP AND BACK PANELS

- Lubricate the vinyl coverings of all the clamps with either a silicon spray or WD-40, this will make adjustment of the clamps easier during the final alignment and tightening.

A. *Windshield or Front Attach Bracket*

1. Install and attach the windshield as per instructions, either a RangerWare unit or a steel framed unit sold by the manufacture. Leave the top two mounting bolts out.
2. Position the top panel attaching top mounting bracket over the top of the windshield frame, with the two outer slots evenly spaced over the top mounting holes in the windshield. Position the two clamps and install the bolts, tighten the nuts finger tight. *PHOTO #4*
NOTE: The other leg or angle of the attaching top mounting bracket will be pointing to the rear.



3. In the center two slots of the attaching stiffener, drill 5/16” hole through the windshield. Position the holes as close to the center of the slots as possible. Install the 1/4-20x7/8” button head bolts, bonded sealing washers, flat washers and Nylock nuts and finger tighten.

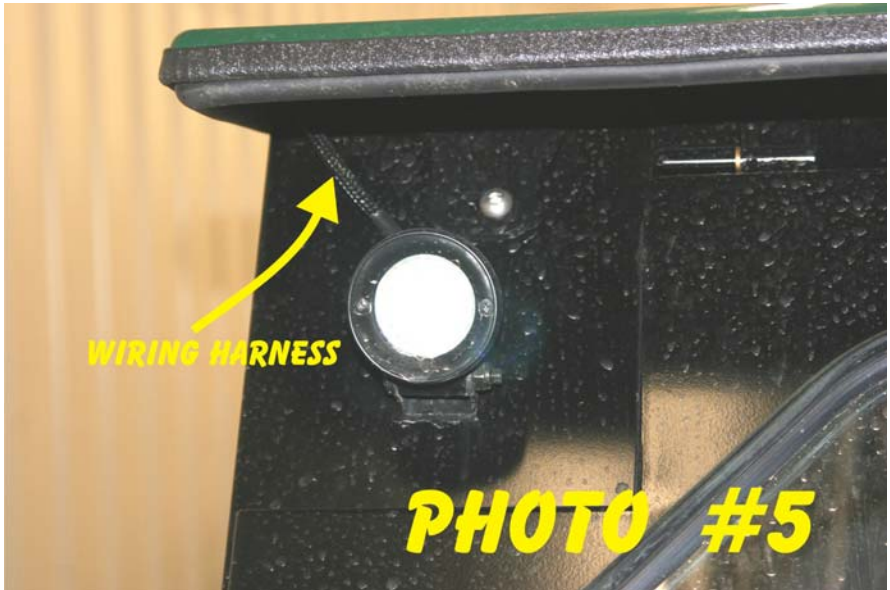
B. *Front Flood Light Installation*

- *The new smaller flood light is now mounted on the face of the windshield frame.*

1. **WPS 111 Fixed Glass Windshield Hole Location:**
Measure “IN” from the edges of the windshield frame 2 3/8” and “DOWN” from the top of the frame 4 5/8”, mark and drill a 5/16” hole.

NOTE: This hole location is critical, we suggest drilling a smaller pilot hole first and checking the clearance between the hole and the cross tube on the roll bar.

2. **WPS 101 Tip Out Windshield Hole Location:**
Measure “IN” from the edges of the windshield frame 3 3/4” and “DOWN” from the top of the frame 9”, mark and drill a 5/16” hole.
3. **WPS-101-05 Install Brace for Top without Windshield.**
Hole Location: Located the (5/16) hole at the bottom of the “V” that is formed by the outer roll cage tube and the diagonal brace. Allow just enough room for the nut to be tightened.
4. Mount the two lights on the windshield. *PHOTO #5*



5. As stated earlier in **A. 4. NOTE:** The two leads of the harness are secured with cable ties and tucked in-between the roll tube and the inside of the windshield frame. The plug ends go over the top outer edge of the windshield frame and down to plug into the backs of the lights.

C. ***Top & Back Panel (See highlighted note on next page for Surrey Top)***

- **Before installing the top and back panels, assure that the bolts securing the back roll cage tubes to the machine are installed with the threaded end pointing towards the seat. The back panel will not fit properly otherwise.**

1. Install the two vinyl covered clamps on the roll cage tubes on each side of the seat.

PHOTO #6



2. Tip the dump box back. Locate the two holes in the lower roll cage support bracket that runs across the back of the cab. These are usually located between the two lock nuts on the “U” bolts mounted on the frame rail. Install the two steel attach tabs so they extend approximately 1/2” above the support bracket, using the 1/4-20x7/8” button head bolts, bonded sealing washers, flat washers and Nylock nuts. PHOTO

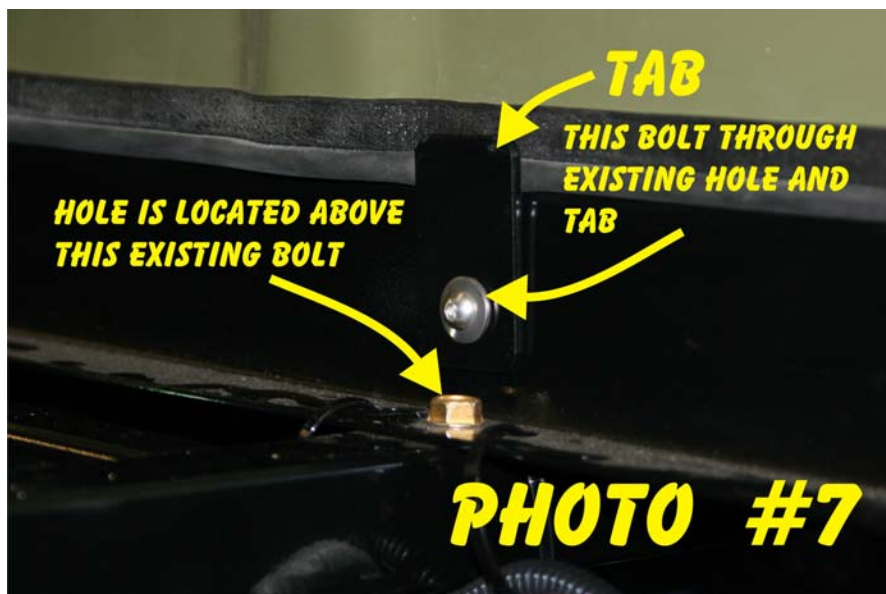
#7

Note for Surrey Top Installation:

1. Follow the instructions provided for either a WPS-500-2 or WPS-501-2 however disregard all instructions pertaining to the back panel.
2. With the top loosely fastened to the front attachment bracket, lift the rear corners and slide the rear brackets over the roll cage tubes and align the slot in the bracket with the hole in the top.
Loosely fasten the bracket to the top. ((A piece of 2 x 4 or any other 1 1/2” thick material may be used between the roll cage tube and the headliner in the rear corners of the top to hold the top in position.))

Adjust the top to provide uniform fit between the trim edge and roll cage and tighten all fasteners,

- 3. Using the 2 3/4" bolts, washers and nuts, clamp the rear brackets to the roll cage tubes. Use only enough pressure to keep the bracket from sliding on the tubes.*



NOTE: If your support bracket does not have the holes already drilled, you will need two 5/16" holes centered on the frame, down 1 3/8" from the top of the support bracket

- 3. Install the back panel so it rests on the shelf of the support bracket behind the seat and in front of the two tabs. Center the back panel on the roll cage tubes; the tabs should hold the bottom edge of the back panel in place. Position the two clamps to align with the holes in the back panel, install the bolts and tighten finger tight.**
- 4. Position the top panel on the roll cage, align the (7) bolt holes in the top and back panel covers. Secure with 1/4-20x3/4" bolts, washers and flange nuts provided in the**

kit; *place the washers under the head of the bolt*, tighten snugly. Install the strip of 3/8" Trim-Lok edge protector.

NOTE: *If you have adequate support, the top and back panels can be assembled off the machine. Using two people, lift the assembly into position, do not allow the unit to twist or bend as this may cause cracking.*

5. Lift the front of the top panel up slightly and slide the panel forward until the front edge of the headliner material, about 1/2", rests on the top of the attaching stiffener. Measuring from the front face of the top panel and back panel seam, there should be approximately 1 1/8" between this edge and the roll cage tubes. This measurement is approximate and may vary slightly between installations, but it is a starting point to achieve a uniform looking fit between the roll cage tube and the panels trim edge when viewed from the side. A small piece of duct tape may be used to hold the panels to the roll cage tubes while aligning.
6. With the panels in position on the roll cage tubes, check the alignment of the slots in the attachment stiffener with the holes in the top panel. If necessary, loosen the top windshield bolts to line up the holes and slots. Tighten all four bolts securing the attachment stiffener to the windshield. Next fasten the top panel to the attachment stiffener using the 1/4-20x7/8" button head bolts, bonded sealing washers, Nylock nuts and flat washers provided in the kit. The bonded washers go under the head of the bolt rubber side on the fiberglass.
NOTE: *Tighten the nut until the bolt head puts a slight dimple in the fiberglass top and the top panel is tight to the attachment stiffener. Do not over tighten.*
7. Holding the bottom corners of the back panel firmly against the roll cage, making sure the bottom edge of

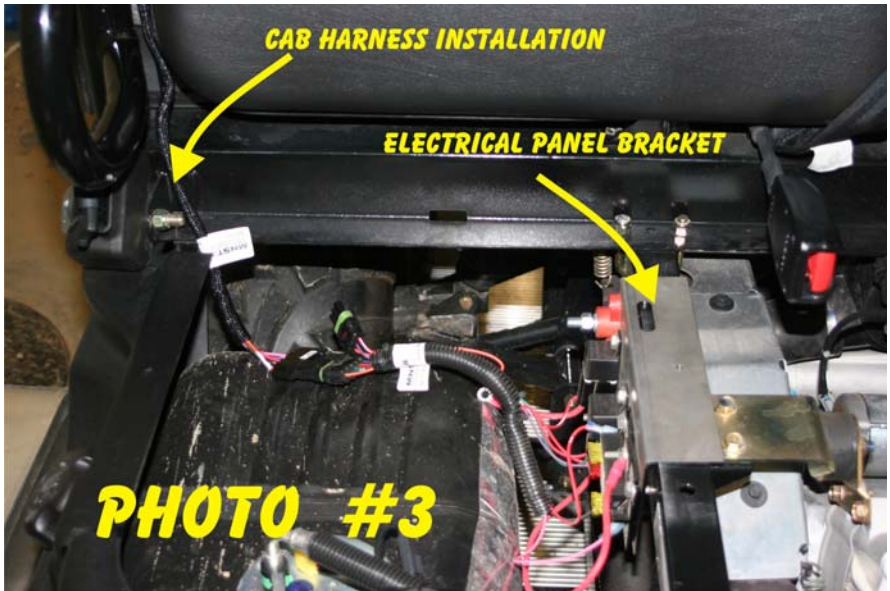
the back panel is resting on the shelf behind the seat, then tighten the bolts going through the clamps attaching the back to the roll cage.

NOTE: What you are looking for is a smooth tight fit of the cab to the roll cage tubes, with the same amount of tube showing along the top and back panels. PHOTO #8



D. *Cab Harness Installation* **Ranger 500 Series & 700 EFI Machines**

1. Route the wire harness, 00-1131, coming from the cab light pod, on top of the seam where the top and back panels are bolted together, down along the passenger's side roll cage tubing, going between the seat back brackets and the back panel, tucking it behind the tube and back panel. The harness passes over the lower seat frame in the back corner, going between the plastic side faring and the steel tube frame place a cable tie to secure the harness to the frame. PHOTO #3



SYSTEM TESTING

All Ranger Models

1. Coming from the electrical panel, connect the (2) plugs, from the rear harness and light pod, into their respective connectors. Check the (3) fuses in the electrical panel, make sure there is a fuse in the holder where the (Pink) wire is connected.
2. Turn the ignition key to “ON”; put the shift lever in “Reverse”. The two rear cargo lights will be lit.
NOTE: If the lights are not lit, check the two spade connectors on the driver’s side frame rail. Poor connection or wires reversed.

3. Ignition key “ON”, shift lever in “Neutral”, turn on the Override switch for the rear cargo lights located on the light pod in the cab overhead. Lights will be lit.
4. Ignition key “ON”, shift lever in “Neutral”, turn on the Head Light switch. Low position will be factory Lo Beam only; High position will be factory Hi Beam and the (2) Flood lights mounted on the windshield.
5. That completes the installation of the Weather Protection System. Almost any problem encountered with an electrical component can be traced back to a faulty connection. On the chance it seems to be more serious, please call Wide Open and we will assist you with the trouble shooting process.



WPS-120 Under Dash Panel



WPS-140 Pre Loader

Wide Open Company, Inc.

**19006 River Road
Grand Rapids, MN 55744
218-327-9722
Toll Free 888-927-9722
Fax 218-327-9658
www.wideopenco.com**