RAVEK

POLARIS XPEDITION 2024+

PLUG & PLAY AUTO-CANCEL UTV TURN SIGNAL KIT

INSTRUCTION MANUAL

RAVEK

POLARIS XPEDITION 2024+

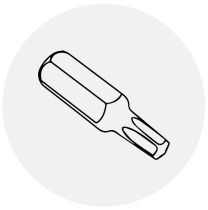
PLUG & PLAY AUTO-CANCEL UTV TURN SIGNAL KIT

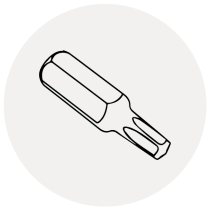
Part #: 64-901
Fitment: POLARIS XPEDITION 2024+

PARTS INCLUDED:

- Turn Signal Controller (1x)
- Switchback Apex Light (2x)
- Taillight Harness (2x)
- Power Harness (1x)
- Horn (1x)
- Turn Signal Rocker Switch (1x)
- Horn/Hazards Rocker Switch (1x)
- Turn Signal Rocker Switch Extension Harness (1x)
- Horn/Hazards Rocker Switch Extension Harness (1x)
- Right Taillight Extension Harness (1x)
- Left Taillight Extension Harness (1x)
- Right Turn Signal Extension Harness (1x)
- Left Turn Signal Extension Harness (1x)
- Right Dash Indicator Harness (1x)
- Left Dash Indicator Harness (1x)
- Dielectric Grease (1x)
- Heat Shrink (1x)
- Wire Loom (1x)
- Roll Bar Adapter (2x)
- Strap (2x)
- Zip Tie (20x)
- Double Sided Tape (2x)
- M6 Flat Washer (2x)
- M5 x 0.8 x 6mm Allen Screw (4x)
- M6 x 1.0 x 10mm Allen Cap Screw (2x)
- Adhesive Promoter Wipe (3x)
- Rubbing Alcohol Wipe (3x)

TOOLS NEEDED: *OPTIONAL


T-40 Torx


T-30 Torx


10mm Deep Well Socket


3mm Allen Wrench


4mm Allen Wrench


Push Pin Pliers

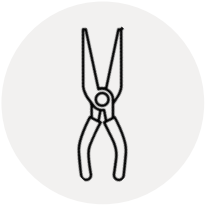

Pick


Small Flathead Screwdriver


Lighter/Heat Gun


Side Cutter Pliers


10mm Deep Well Socket


Needle Nose Pliers


Ratchet


Plastic Trim Removal Tool


1/4” drill bit*


11/32” drill bit*


Drill*


Wire Fish*

INSTALL VIDEO TUTORIAL

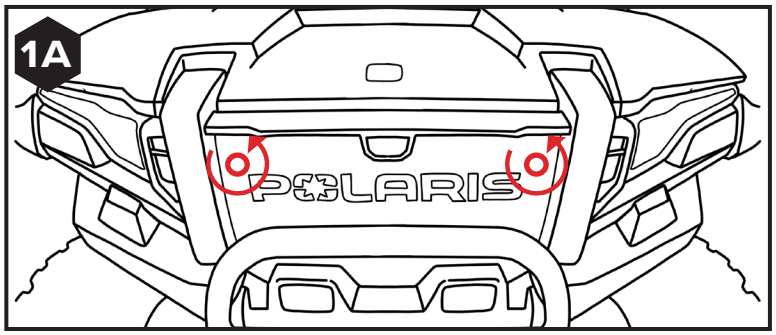
DON’T LIKE INSTRUCTIONS?

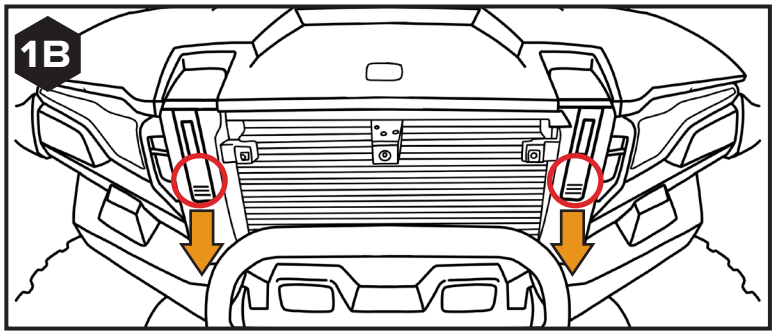
VISIT OUR WEBSITE TO ACCESS THE VIDEO TUTORIAL.

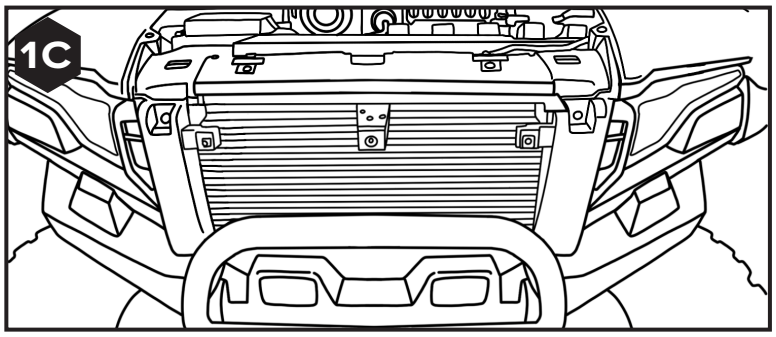
General Notes:

- *Throughout this process, be sure to keep track of any screws or fasteners you remove and reinstall them in the exact location.*
- *Dielectric grease is provided, and you may use it for added protection.*

1 PREP THE VEHICLE







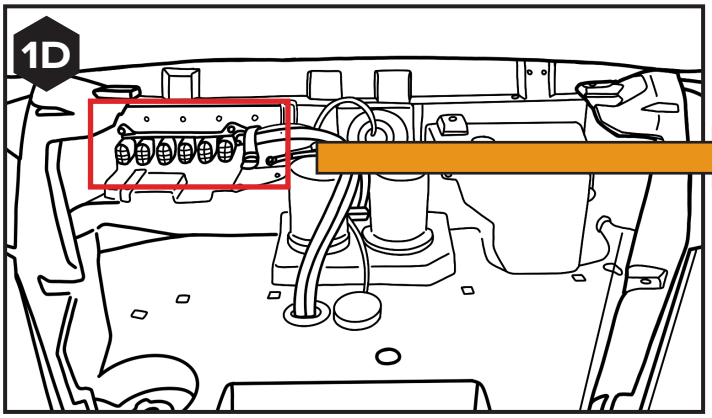
i

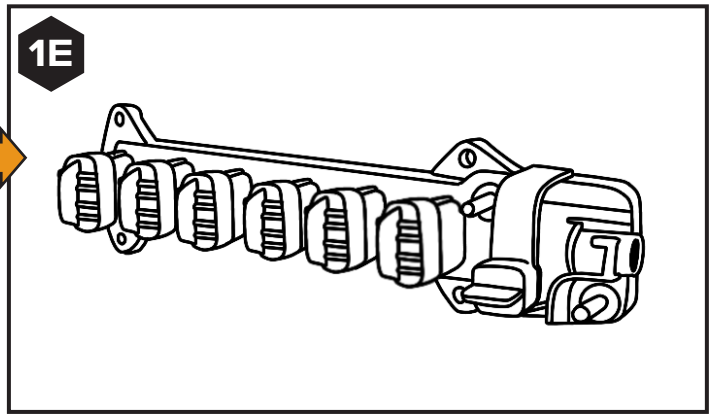
Remove the grille by turning the locks on the grille counterclockwise and lift it free. [SEE FIGURE 1A]

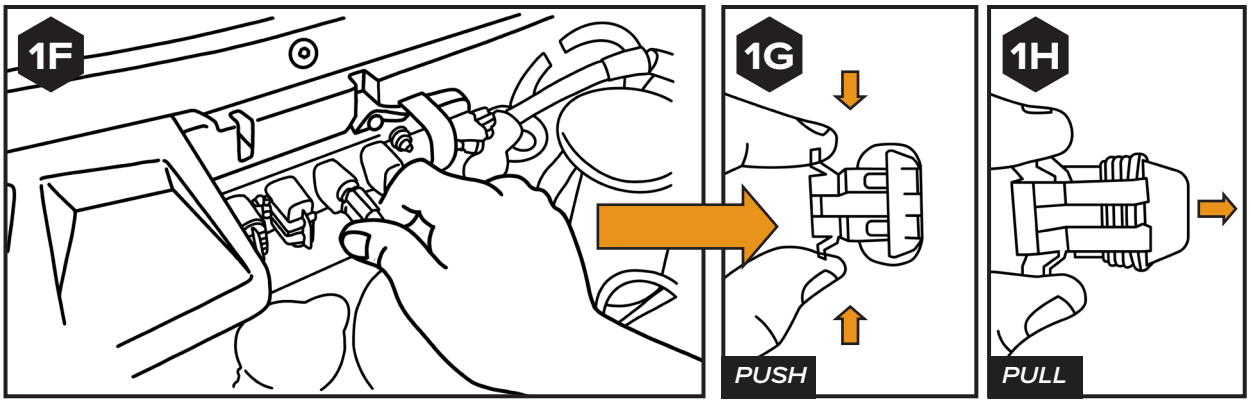
Next with the grille removed, pull down on the rubber locks exposed on the front end and lift the hood free. [SEE FIGURES 1B & 1C]

ii

Locate the Bus Bar underneath the panels removed in step 1. Remove the two dummy plugs on any of the available ports by releasing the retaining clips on the plugs then pulling them out. [SEE FIGURES 1D – 1H]

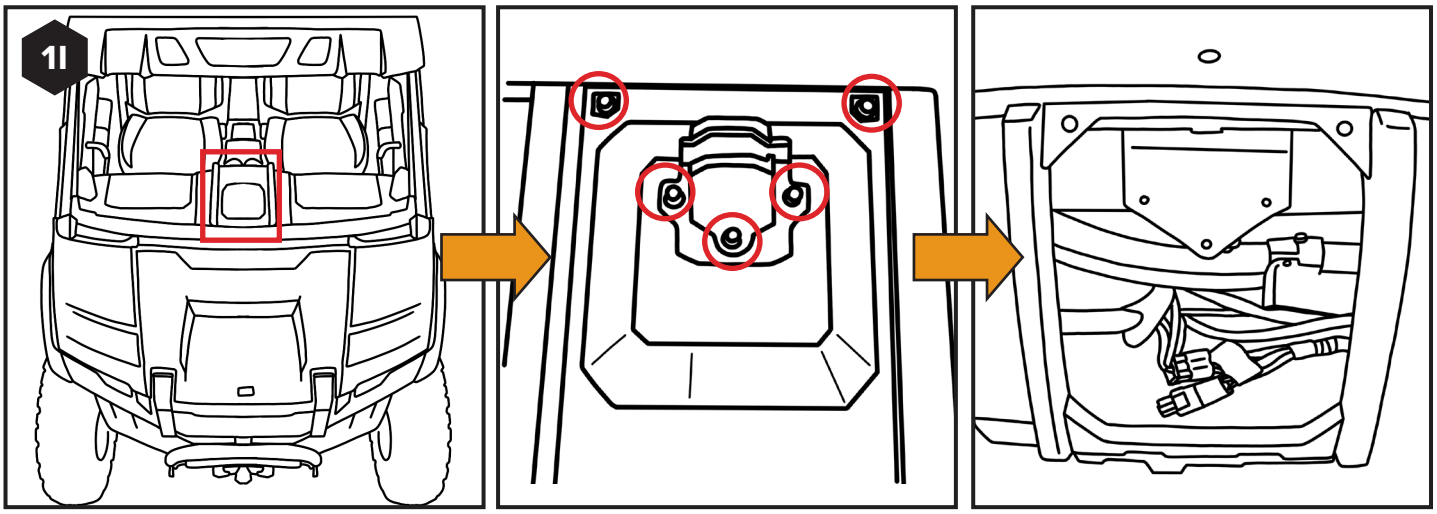






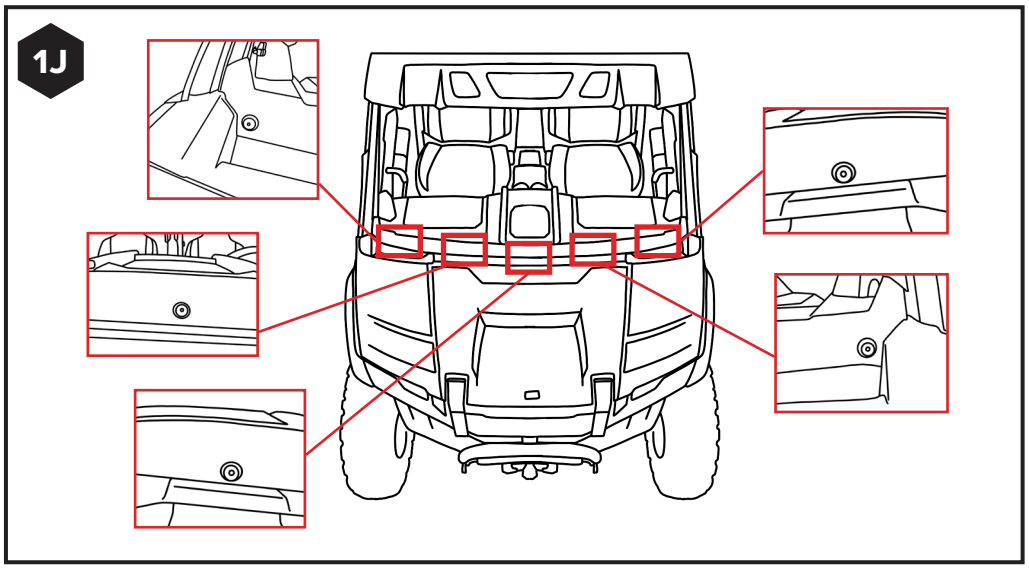
iii

Remove the tilt windshield lock (if equipped) by removing the two push pins and three 10mm bolts holding the panel, using PUSH PLIERS, RATCHET, and 10MM DEEP WELL SOCKET. Once fasteners have been removed, pull up to remove the cover. [SEE FIGURE 1I]



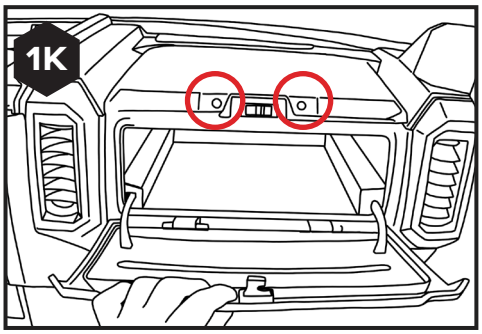
iv

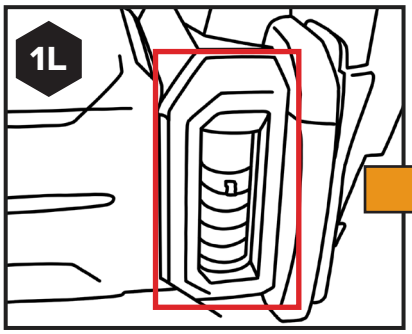
Remove the dash board screws by removing the five screws on the front end of the dash using a T-30 TORX.[SEE FIGURE 1J]

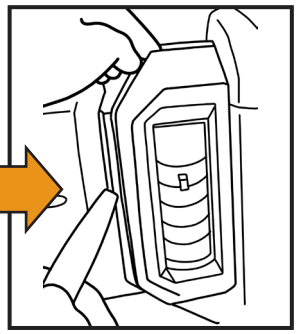


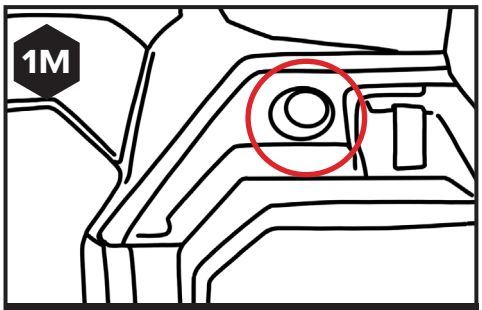
v

- Remove the vents and clips on the dash by opening your glove box and removing the two push pins on the top using PUSH PIN PLIERS.
- Next, remove the four vent covers by carefully prying the outside portion of them until they fully release.
- Once the vent covers are removed, remove the exposed push pins at the top of where each vent cover was. [SEE FIGURES 1K -1M]







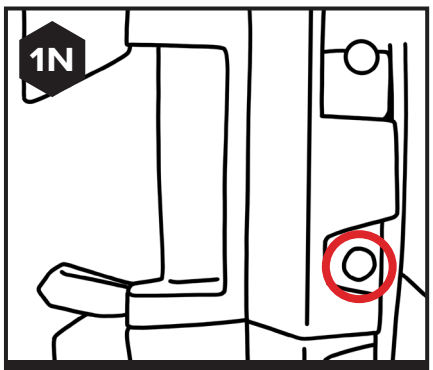


EXPOSED PUSH PIN AFTER VENT IS REMOVED

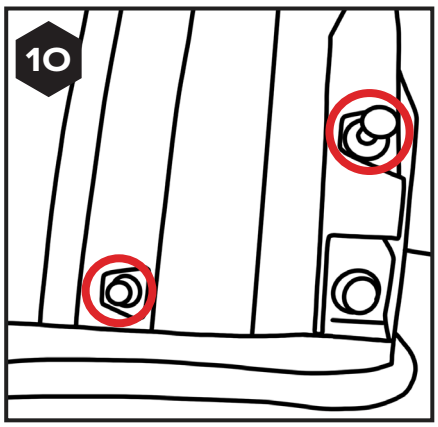
vi

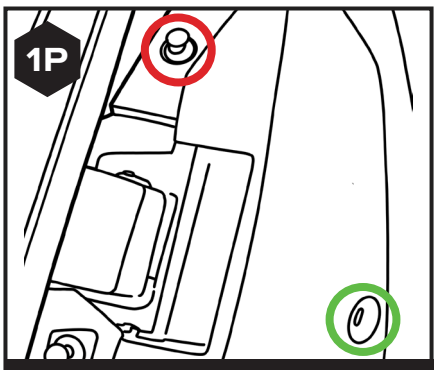
Remove the door jamb hardware; remove the three push pins by the lower door hinge and the two push pins and one torx screw by the upper door hinge, using PUSH PIN PLIERS and a T-30 TORX. [SEE FIGURES 1N – 1P]

Also, remove the hidden push pin on each side located underneath the upper portion of the door jamb panel using PUSH PIN PLIERS. [SEE FIGURES 1Q & 1R]

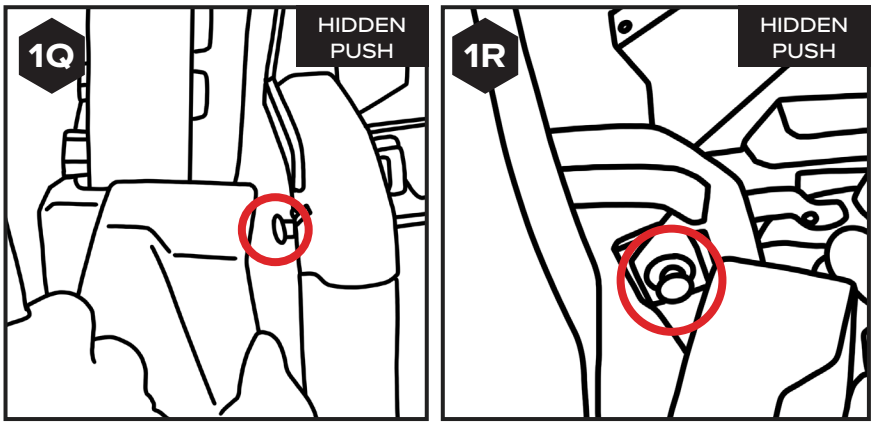


LOWER DOOR HINGE PUSH PIN





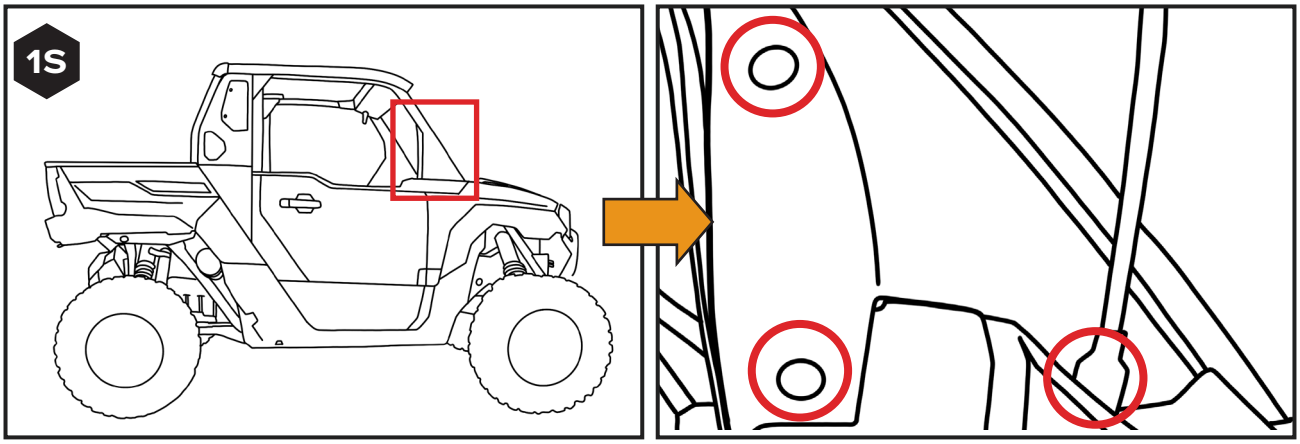
UPPER DOOR HINGE PUSH PIN AND SCREW



vii

Remove the A-pillar cover and windshield shocks (if equipped) by removing the two torx screws and releasing the windshield shock using a SMALL FLATHEAD SCREWDRIVER to release the windshield and T-30 TORX [SEE FIGURE 1S]

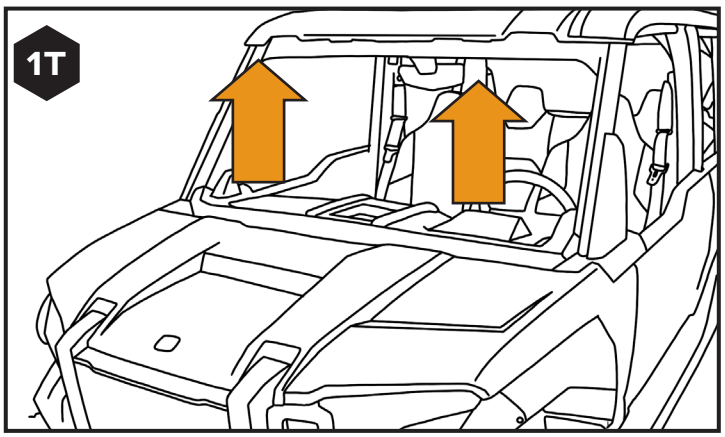
NOTE: Be sure to carefully release the windshield shocks and support the windshield to avoid it slamming you or someone else.



viii

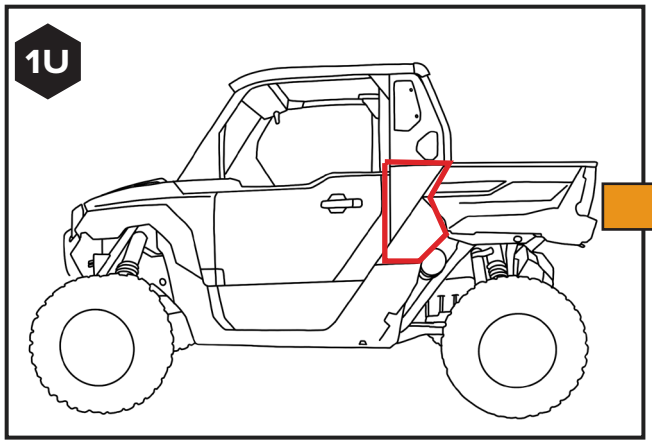
Carefully remove dash and unplug the wiring for the speakers while removing it. [SEE FIGURE 1T]

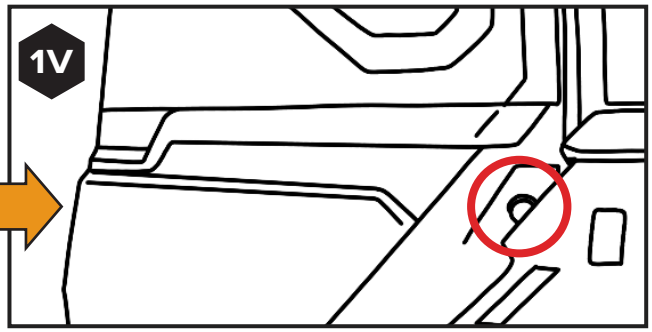
NOTE: You may want to call a buddy to help you with the removal of the dash.

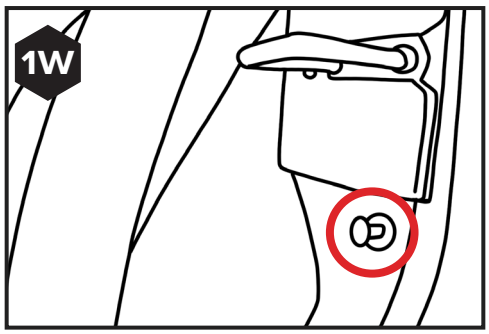


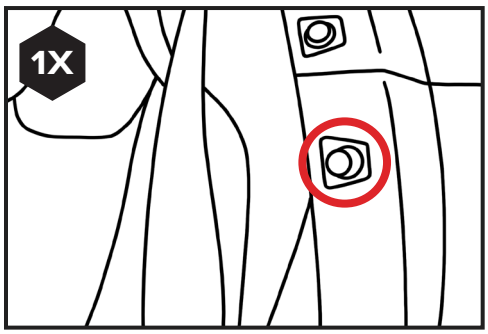
ix

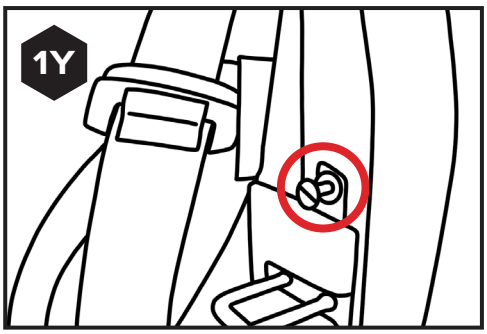
Remove the drivers rear door jam panel by removing the six push pins located in the highlighted area below using PUSH PIN PLIERS. Once all push pins have been removed, carefully slide the panel out. [SEE FIGURES 1U – 1BB]

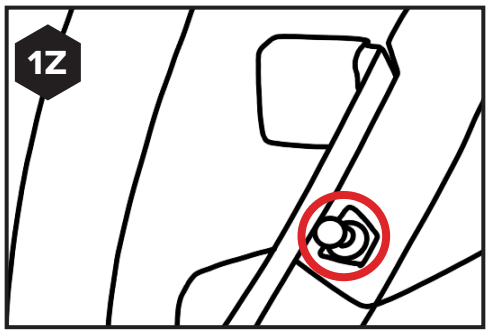


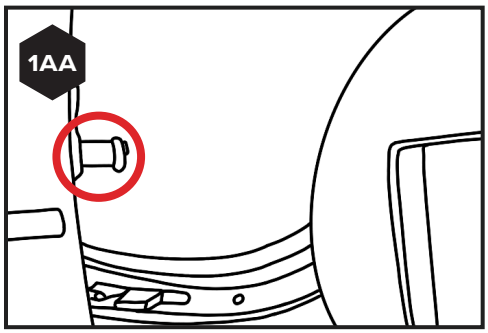


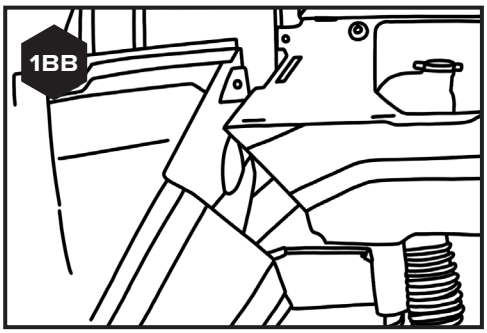






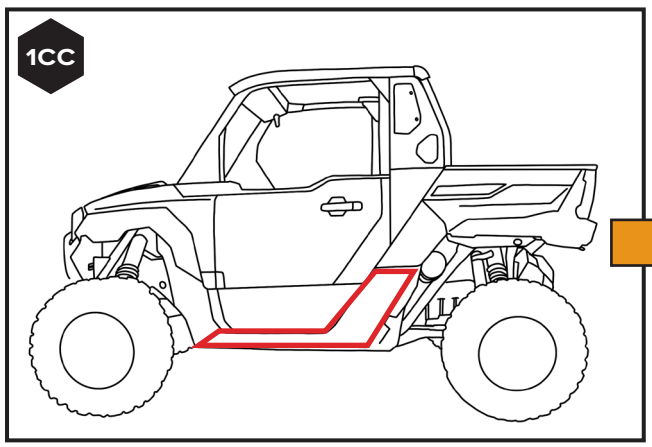


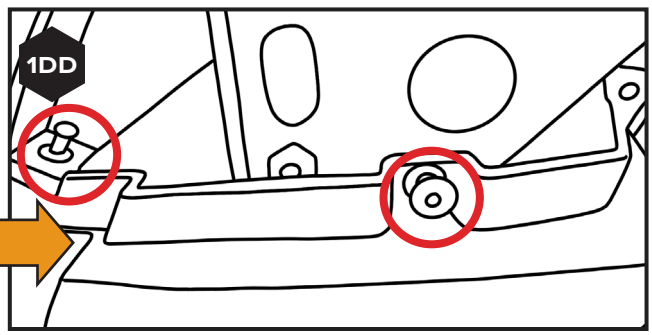


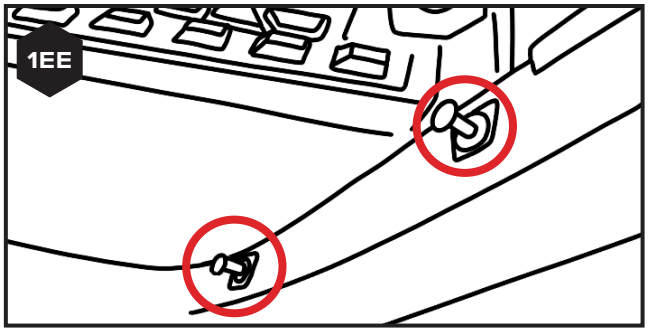


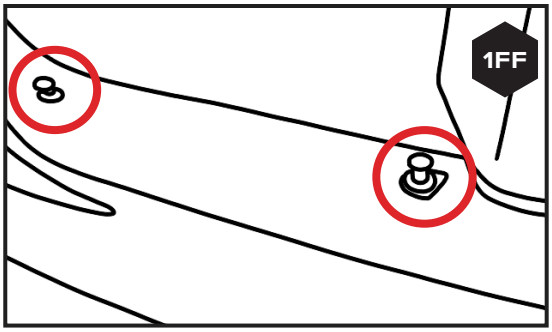
x

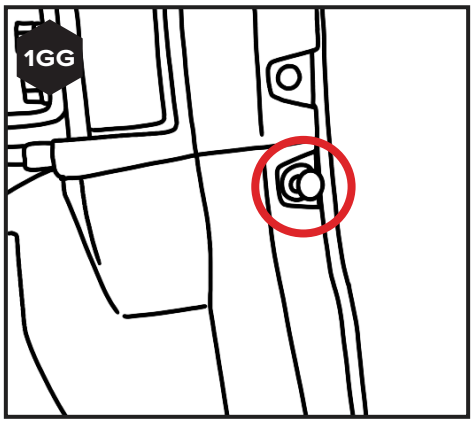
Remove the 6 push pins and 6 torx screws holding the driver's side rocker panel using T-40 TORX and PUSH PIN PLIERS. [SEE FIGURES 1CC – 1KK]

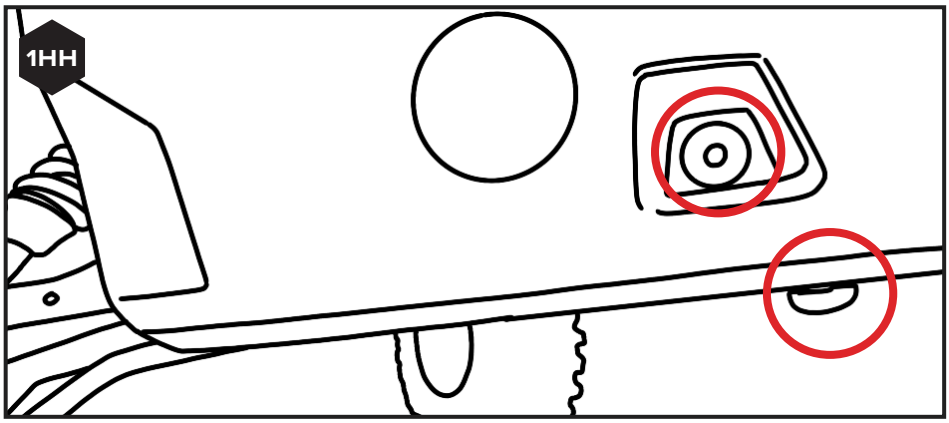


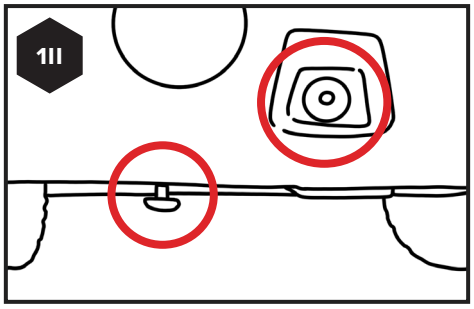


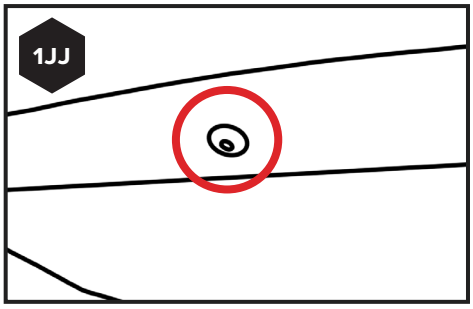


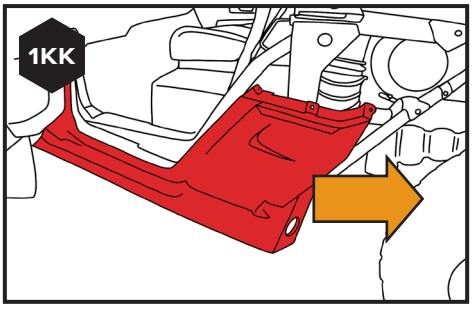






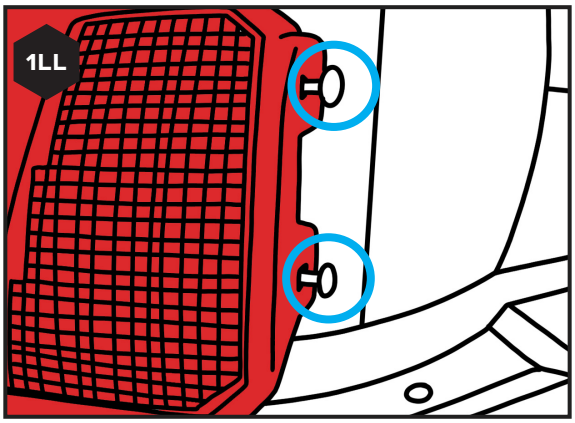






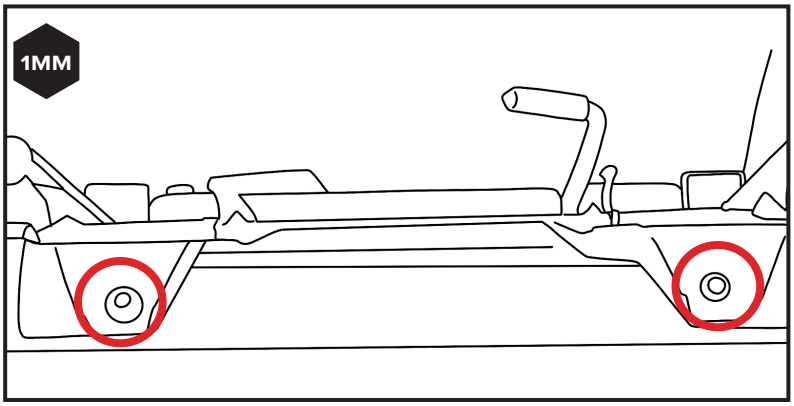
xi

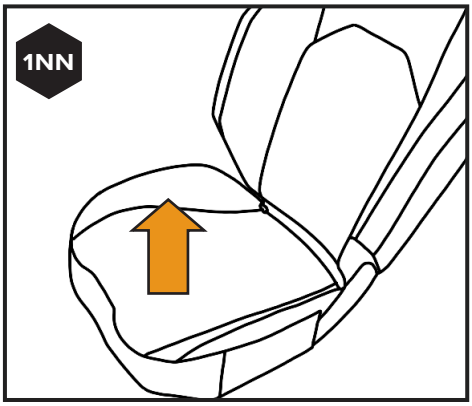
Remove the dead pedal panel by removing the two torx screw using a T-40 TORX. [SEE FIGURE 1LL]



xii

Remove the driver's seat using a T-40 TORX to remove the two front seat mount bracket fasteners. Then slide the seat to the forward-most position, tilt seat back, and pull up to fully remove the seat out. [SEE FIGURES 1MM & 1NN]



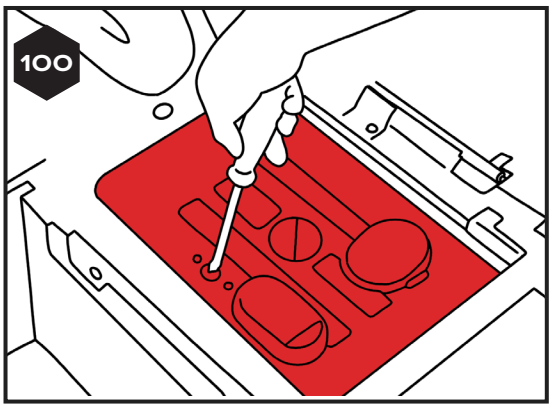


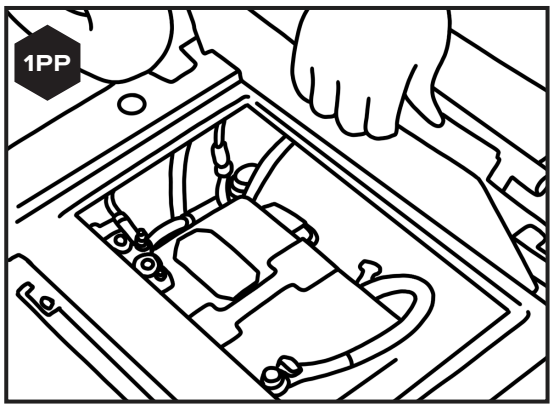
xiii

Once the seat is removed, remove the battery access panel by loosening the screw on top of the panel using a FLAT HEAD SCREW DRIVER. Then pivot the panel up and forward to remove. [SEE FIGURES 1OO & 1PP]

Disconnect your battery terminals using a 13MM DEEP WELL SOCKET and RATCHET.

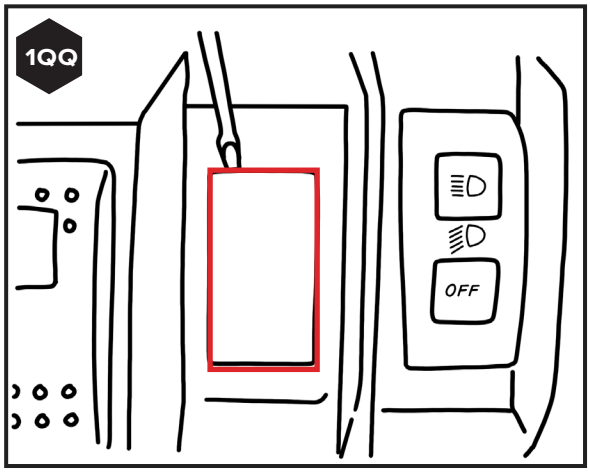
NOTE: Disconnect the negative battery terminal first to prevent arcing. Make sure cables don't touch each other or any metal surfaces when disconnected.

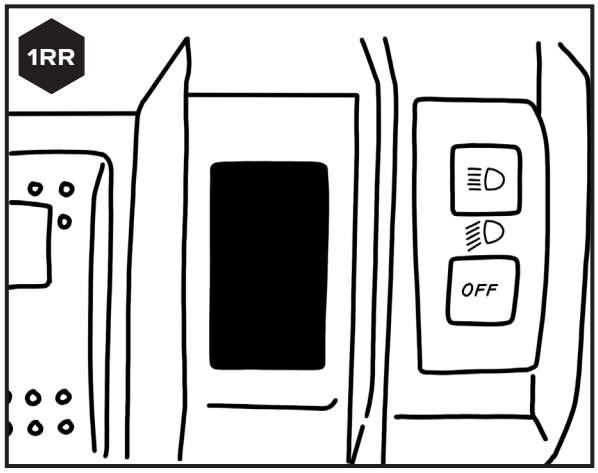




xiv

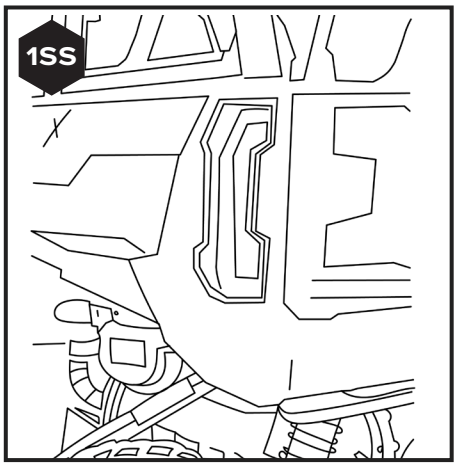
Remove one rocker switch knock out from the rocker switch panel by gently prying it off using a SMALL FLATHEAD SCREWDRIVER. You'll be installing the rocker switch provided in this slot in a future step [SEE FIGURES 1QQ & 1RR]

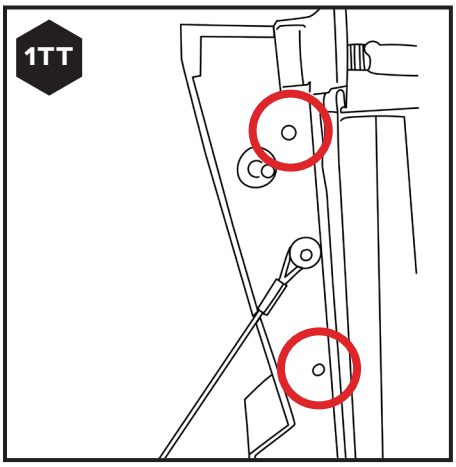


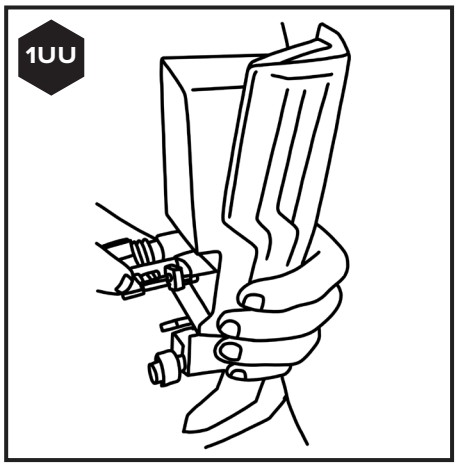


XV

Open the tailgate and remove the taillight using a T-20 TORX to remove the two screws seen below. Unplug the stock OEM connector from your XPEDITION taillight and remove the taillight. [SEE FIGURES 1SS – 1UU]





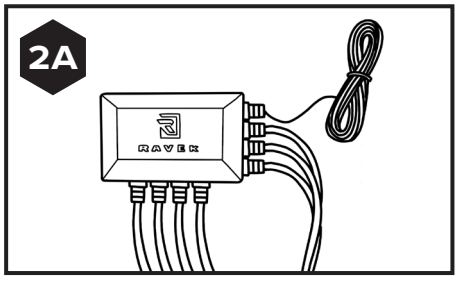


2 INSTALL THE WIRING TO THE TURN SIGNAL CONTROLLER

i

Grab your Turn Signal controller and set it where you'll permanently mount it in a future step. [SEE FIGURE 2A]

NOTE: We recommend mounting your controller under the hood panel removed in step 1i.



ii

Plug all of your extension harnesses except for Horn/Hazards and Turn Signal harness into the controller's corresponding connectors. Even though all the connectors we engineered are waterproof, we recommend using a small dab of dielectric grease to each connection point. [SEE DIAGRAM A FOR AN OVERVIEW OF YOUR CONNECTIONS]

NOTE: All your extension harnesses have labeled heat shrink, allowing you to determine where each extension harness plugs into. [SEE DIAGRAM A]

NOTE: The Brake Input red wire does not have an extension harness to be plugged; this will be routed directly to the driver's side taillight harness in an upcoming step.

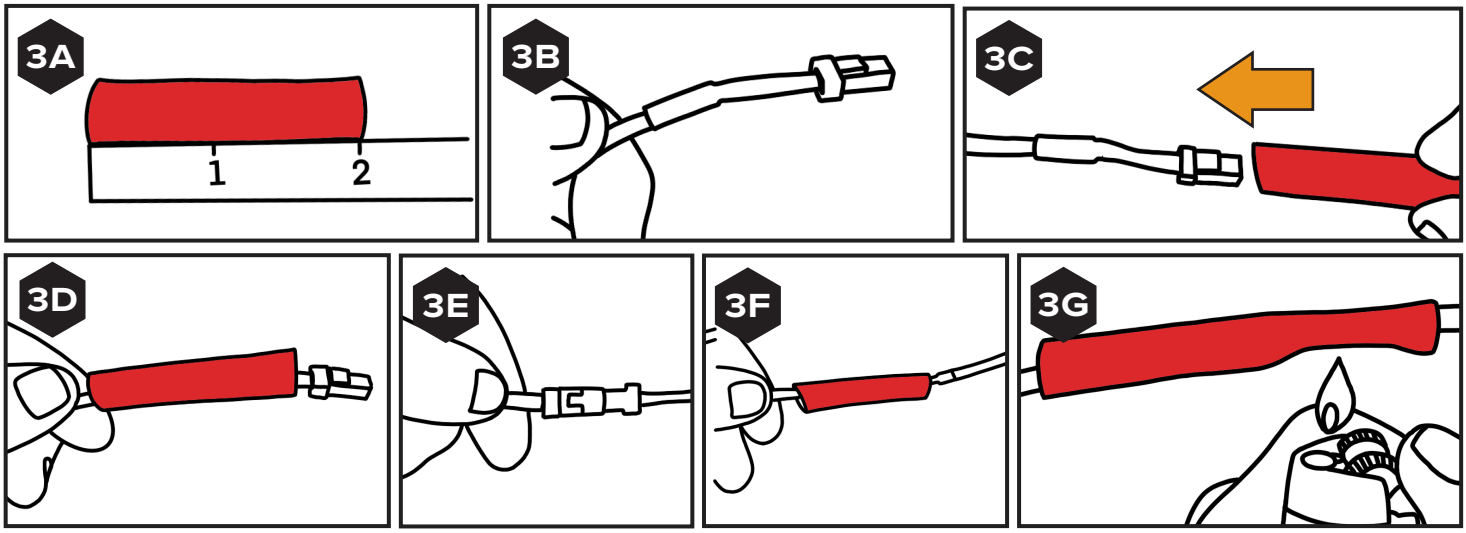
3 HEAT SHRINK YOUR CONNECTIONS

i

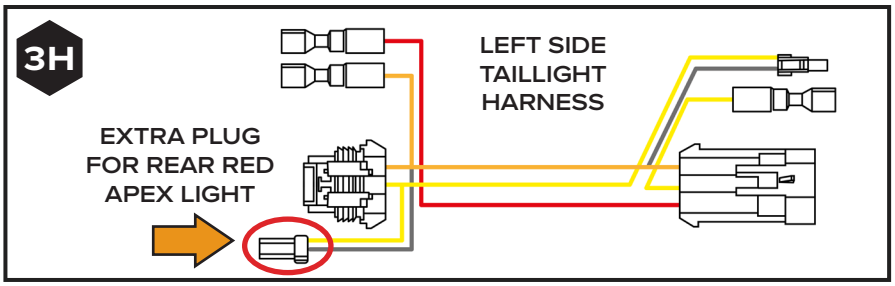
As you make plug & play connections, use the heat shrink tubing, provided to protect your connections from dirt on the trails.

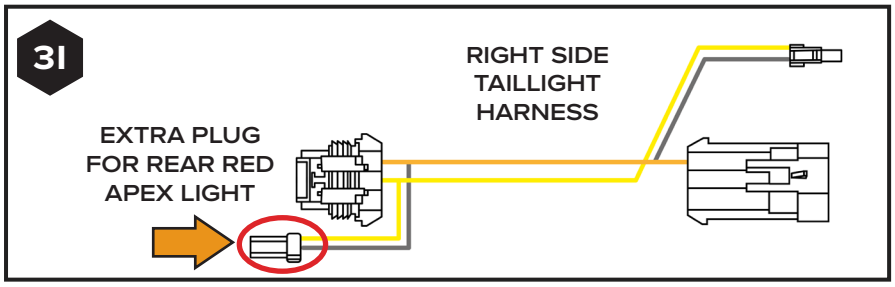
Go over the connection points you make and cut 2" of heat shrink for each. Use a lighter or heat gun to shrink the tubing. [SEE FIGURES 3A – 3G]

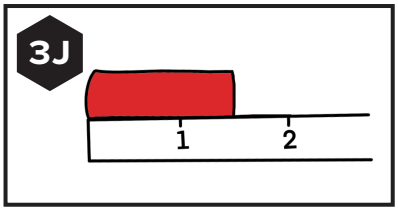
HEAT SHRINK CONNECTIONS

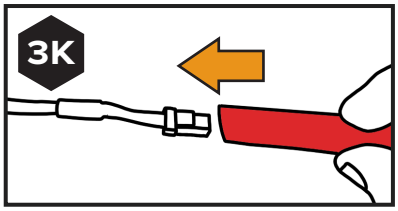


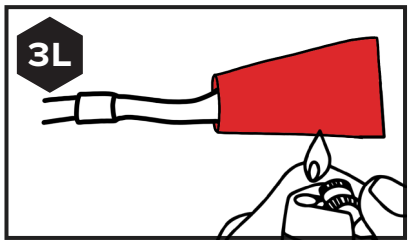
If you won't use the extra Taillight Harness connectors (mentioned in step 5) cut 1.5" piece of heat shrink tubing, slide it over the connector and heat shrink it using a lighter or heat gun. Use needle nose pliers to pinch the end of the extra heat shrink. This will act as a cap to protect the connectors from getting dirt inside. [SEE FIGURES 3H – 3M]

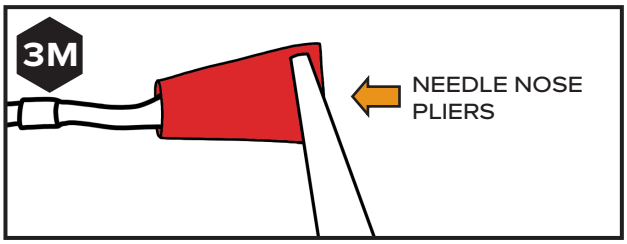










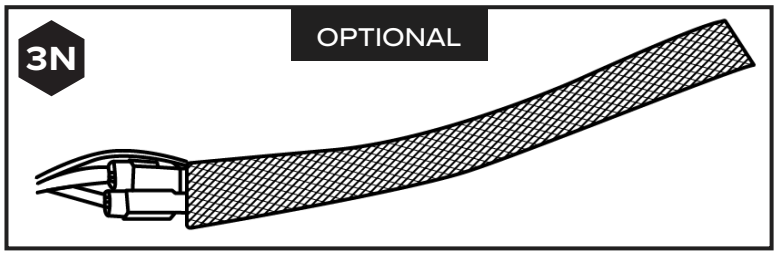


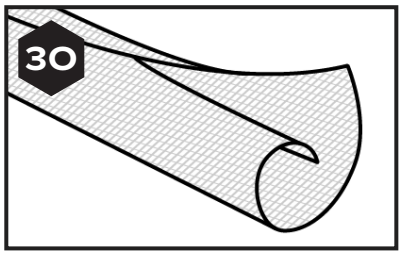
ii

This step is optional as this will help with maintaining a clean OEM look. Not required for protection of the wiring.

Grab your Brake Input wire and route it through the wire loom (supplied with the kit).

[SEE FIGURE 3N & 3O]





4 ROUTE THE REAR LIGHT WIRING

i

Grab your Rear Left extension, Rear Right extension, and Brake Input wire.

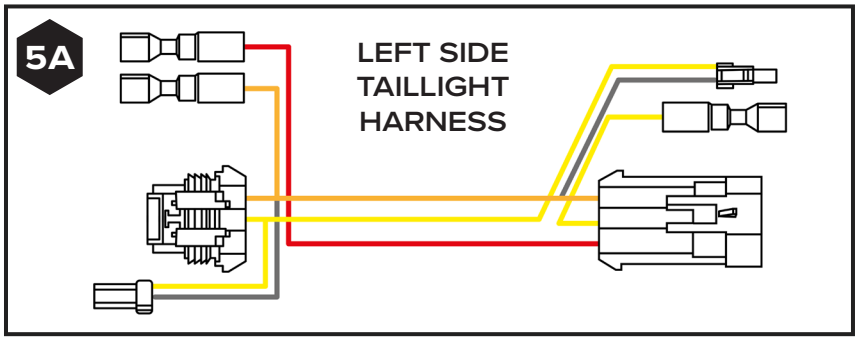
Route your LEFT REAR and Brake Input wires to the left taillight area. Route your RIGHT REAR wire alongside the LEFT REAR and Brake Input wires but split to the right taillight. [SEE DIAGRAM B]

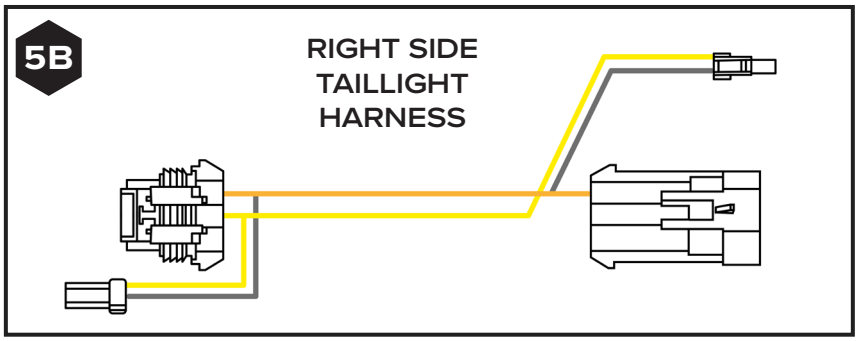
5 PLUG IN YOUR REAR LIGHTS WIRING

i

With the rear wiring coming out of the controller and routed up to the taillights, you are ready to install your taillight harnesses, included with the kit. [SEE FIGURES 5A & 5B]

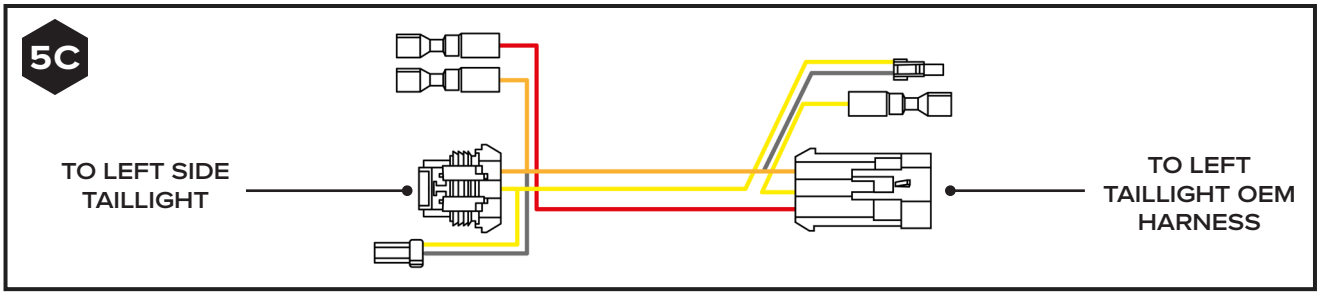
NOTE: The left side Taillight Harness is easily identifiable as the Taillight harness with the most connectors coming from it.





ii

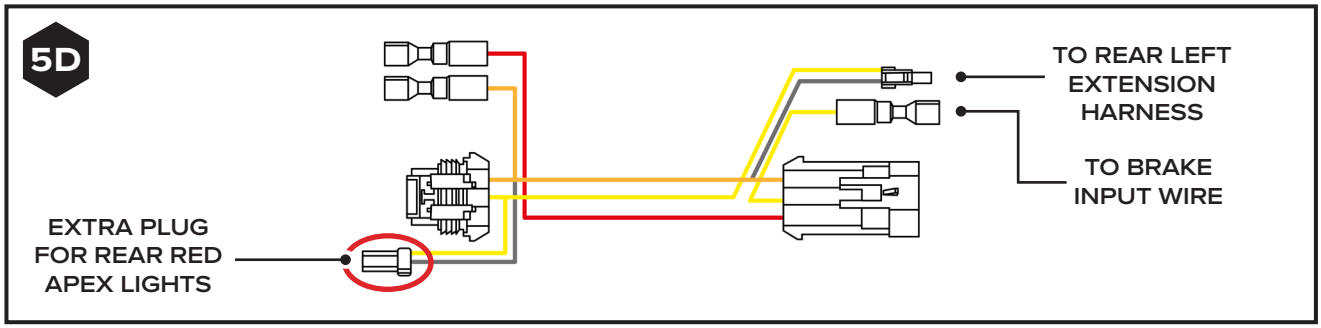
Plug in the left side Taillight Harness to the left side taillight and to the unplugged OEM left side taillight harness from step 1vii. [SEE FIGURE 5C]



iii

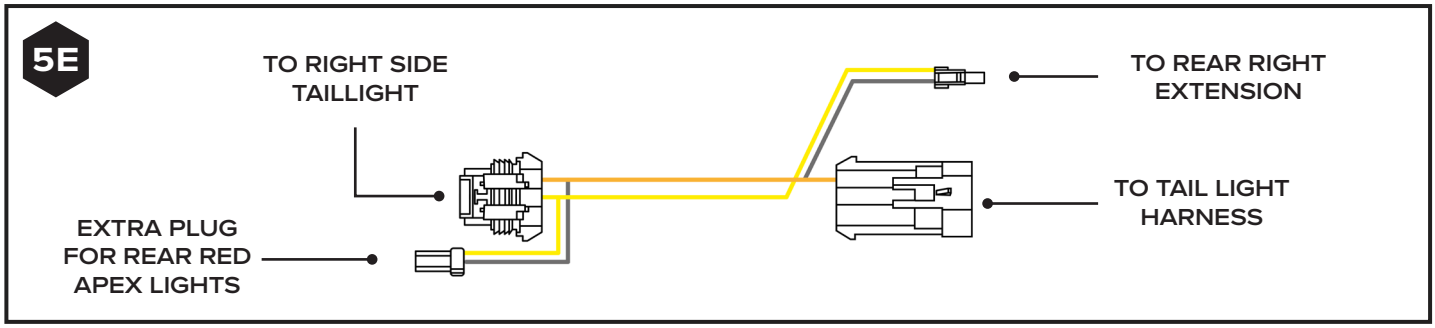
Plug your REAR LEFT extension harness into the corresponding labeled connector from the left Taillight harness, and plug your Brake Input wire to the connector labeled on the left Taillight connector. [SEE FIGURE 5D]

OTE: Extra plug on taillight harness provided to easily add RAVEK Rear Running & Brake Apex Lights to your Xpedition (RAVEK Part #64-903) , these will add running light, brake light, and turn signal functionality to your machine.



iv

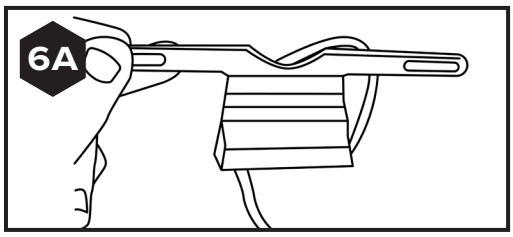
Repeat the previous two steps on the right Taillight with the right- side harness provided (excluding the Brake Input information). [SEE FIGURE 5E]



6 PLUG IN YOUR LICENSE PLATE ILLUMINATOR (OPTIONAL)

i

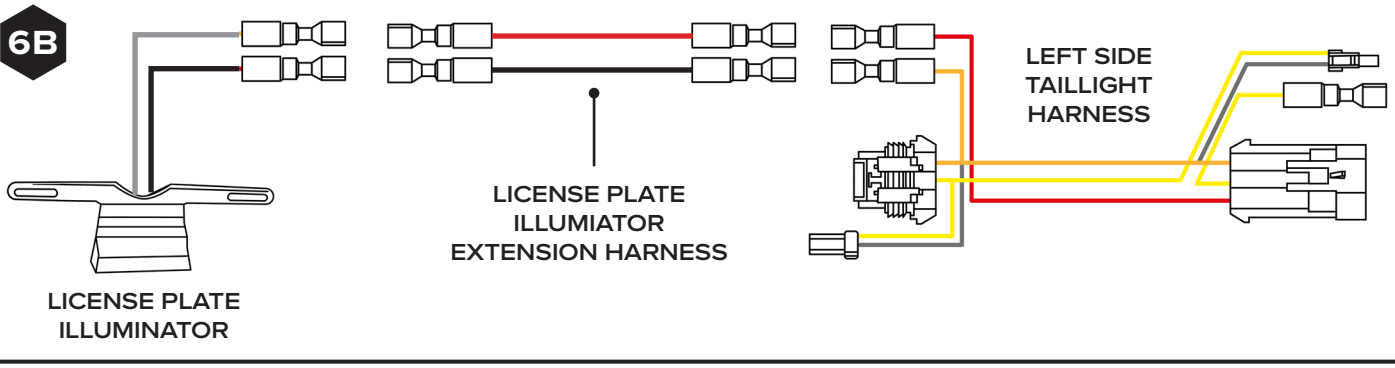
Locate the License Plate Illuminator provided with your kit. [SEE FIGURE 6A]



ii

Plug the connectors from the License Plate Illuminator (White = Power)(Black = Ground) to the License Plate Illuminator Extension Harness. Plug the extension harness to the left Taillight Harness labeled accordingly. [SEE FIGURE 6B]

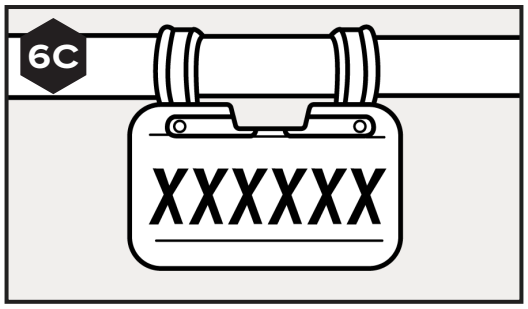
6B



iii

Affix the License Plate Illuminator to your license plate, reusing the hardware from your license plate. [SEE FIGURE 6C]

6C



NOTE: Before driving your UTV on public roads, check your local laws. This includes verifying if a license plate illuminator is required.

7 ROUTE FRONT LEFT & RIGHT TURN WIRING

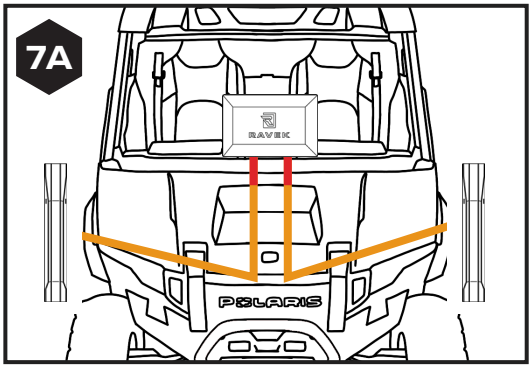
i

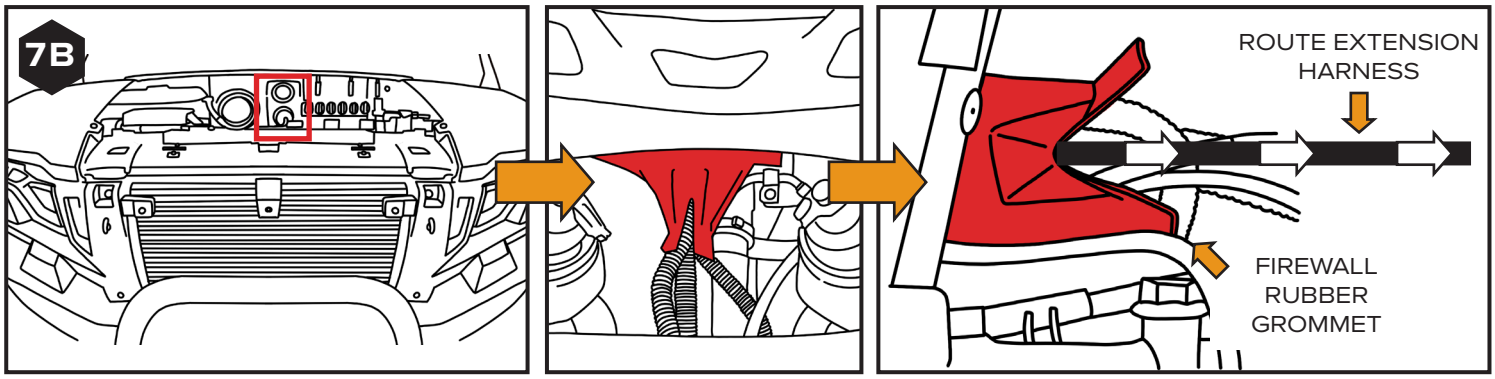
With all your rear wiring routed (but not yet secured), go to where you placed your Turn Signal Controller and grab your FRONT LEFT and FRONT RIGHT wires.

ii

Route your FRONT LEFT and FRONT 7A RIGHT extension harnesses to the front end of the Xpedition, where you went to mount your Apex Turn Signal Lights permanently (jump to the next step to see all the mounting options for your lights). [SEE FIGURES 7A & 7B]

7A





8 SELECT LOCATIONS FOR APEX LIGHTS

Your options include:

- **Exterior Body Panel**
  Any exterior panel with 8” of flat surface for mounting
- **Roof Mounting**
- **Roll Bar/Bumper Mounting**

Check out the video to the right (see QR code) for a 50 second walkthrough of the different Apex light mounting options.

9 READY TO MOUNT APEX LIGHT

If you have chosen to mount your Apex Lights to a roll bar or bumper, you will follow the Roll Bar mounting steps detailed in step 9A.

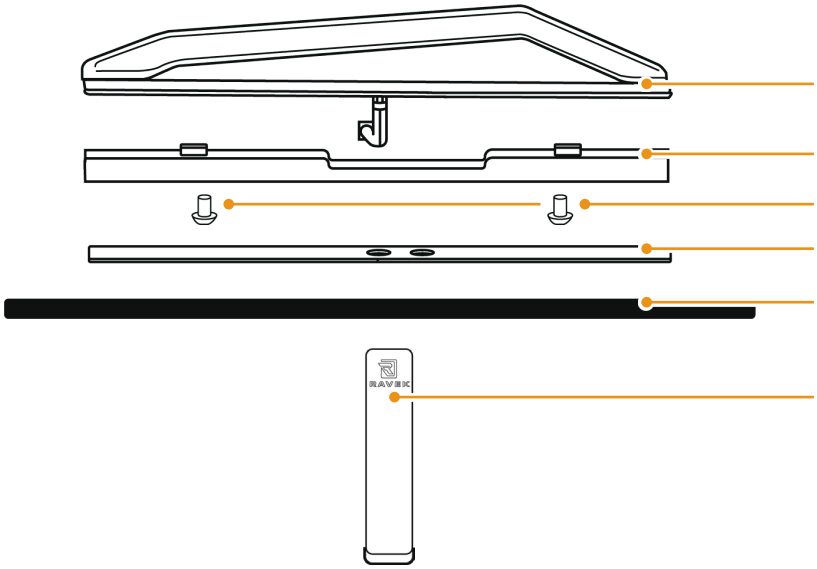
If you have decided to mount your Apex lights to either an exterior panel or to your roof, you now have to decide whether you want to mount your Apex lights via:

a) **Adhesive mount (i.e. no drill) → follow step 9B**

b) **Drill-mount for increased security → follow step 9C**

9A OPTION A - ROLL BAR MOUNTING:

OPTION A DIAGRAM - ROLL BAR MOUNTING

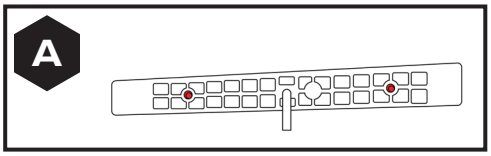


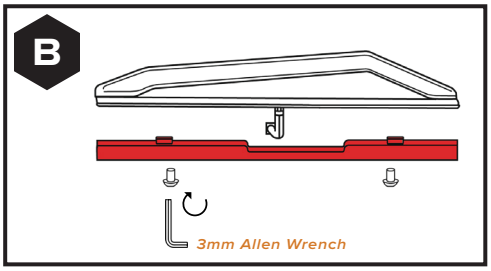
i

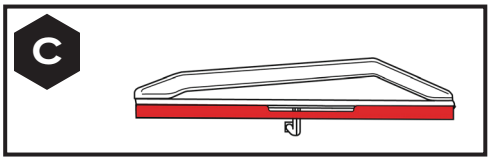
INSTALL ROLL BAR ADAPTOR

Install the roll bar adapter to the base of the light by using two of the M5 x 0.8 x 6mm Allen Screws with a 3MM ALLEN WRENCH. [SEE FIGURES A – C]

NOTE: Choose which side you would like your wire to exit the light that allows you to best hide your wires.



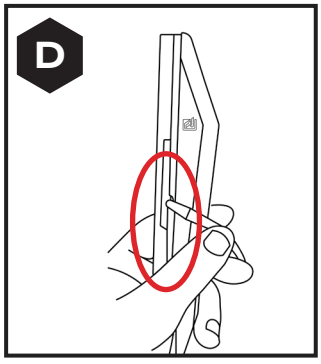


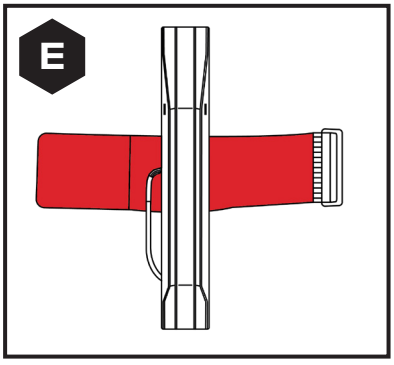


ii

INSTALL STRAP

Once the roll bar adapter is securely attached to the light, install the strap provided through the opening between the light base and the roll bar adapter. [SEE FIGURES D & E]

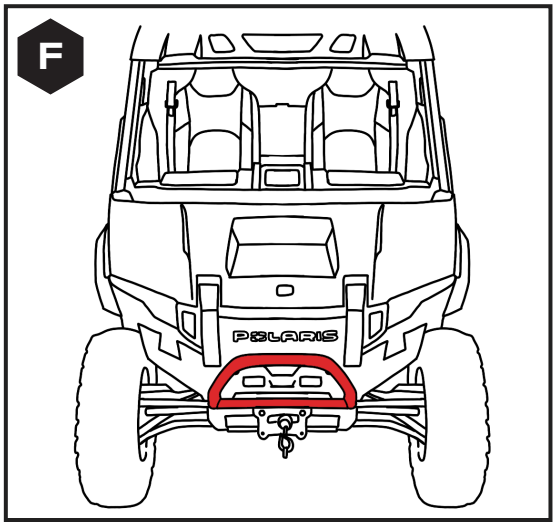


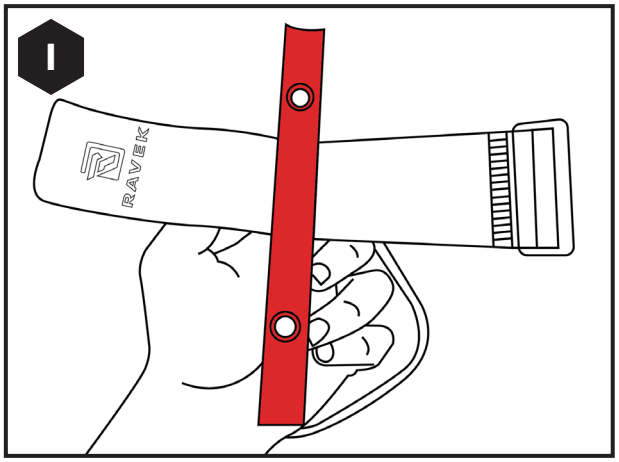


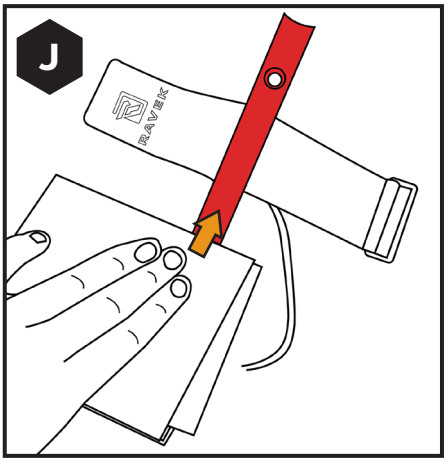
iii WIPE WITH RUBBING ALCOHOL

Before you permanently install your Apex Light to the UTV's roll bar you've chosen, wipe down the roll bar and the base of the light with the rubbing alcohol wipe provided and let dry.

Next wipe down the roll bar and light base with the adhesion promoter wipe provided. Let dry. [SEE FIGURES F – J]

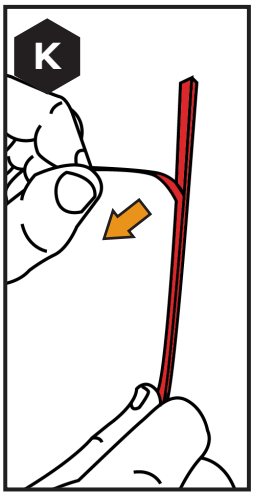


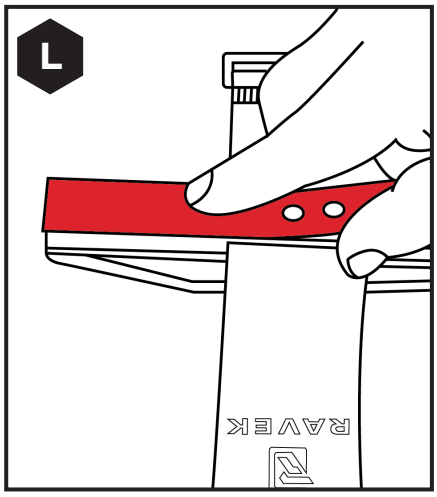


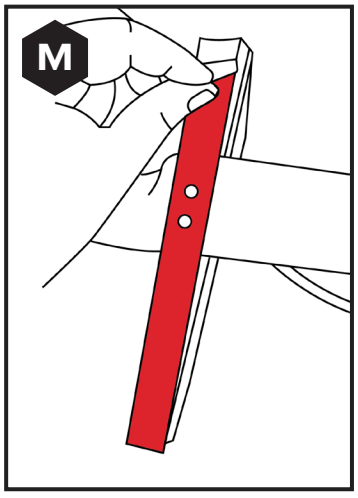


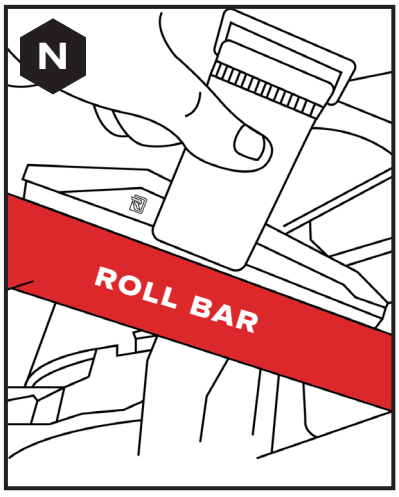
iv APPLY TAPE

Apply the double-sided tape to the dry Apex Light's roll bar adapter, and attach the light to the surface you cleaned and prepared in the prior step. [SEE FIGURES K – N]







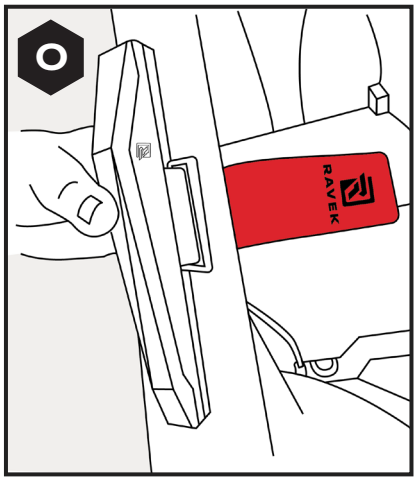


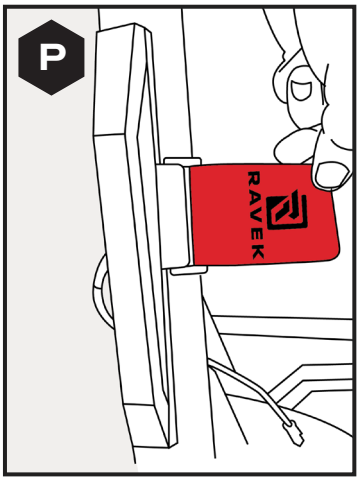
v

TIGHTEN STRAP

Tighten straps onto base and roll bar. [SEE FIGURES O & P]

NOTE: If you have excess length of strap you can rotate the buckle away from the slack to reduce the slack in the strap.



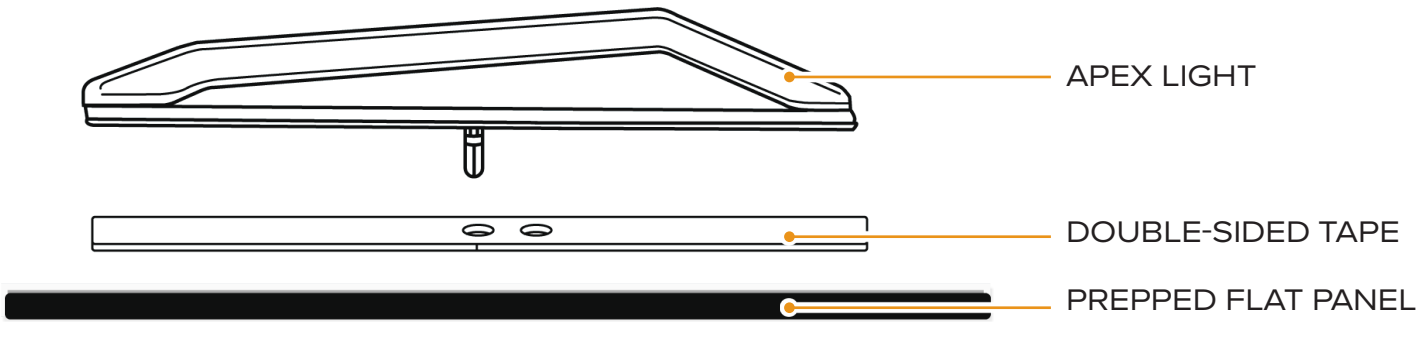


JUMP TO STEPS 10-15 TO FINISH INSTALL

9B

OPTION B - ADHESIVE ONLY MOUNTING:

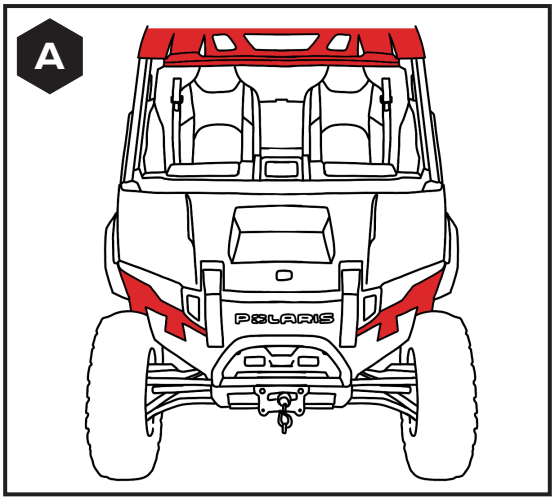
OPTION B DIAGRAM - ADHESIVE ONLY MOUNTING



i LOCATE A SURFACE TO MOUNT TO

Locate an exterior panel with 8” of flat surface for mounting. [SEE FIGURE A]

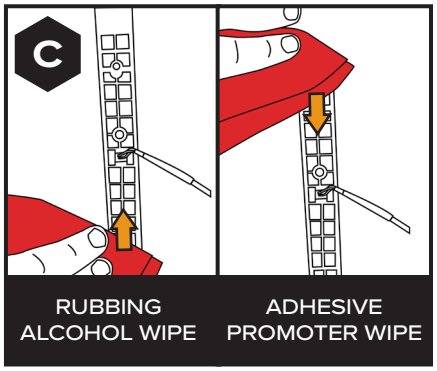
NOTE: If you’re adhesive mounting the Apex Lights to the roof, we recommend drilling a hole to feed the wires through. The Apex Light adhesive creates a water-tight seal.



ii WIPE DOWN SURFACES

Before you permanently install your Apex Light to the UTV’s flat panel you’ve chosen, wipe down the panel and the base of the light with the rubbing alcohol wipe provided and let dry.

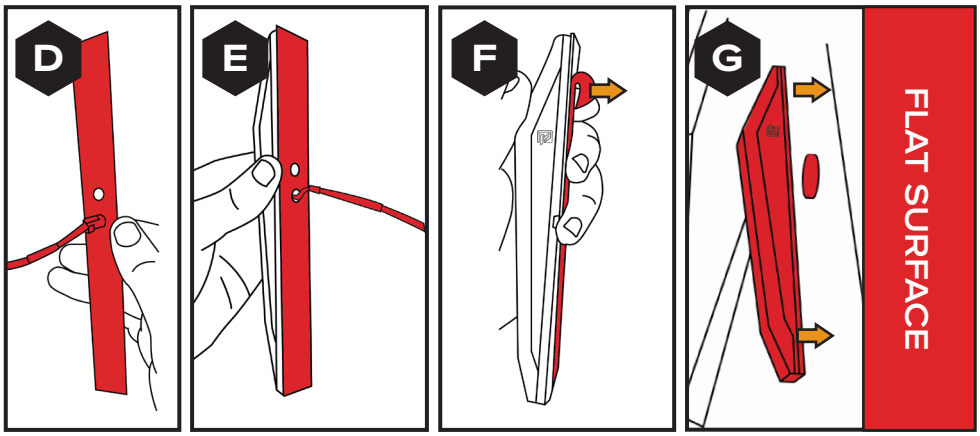
Next wipe down the panel and light base with the adhesion promoter wipe provided. Let dry. [SEE FIGURES B & C]



iii APPLY TAPE

Apply the double-sided tape to the Apex Light’s base and affix the light to the prepped surface. [SEE FIGURES D – G]

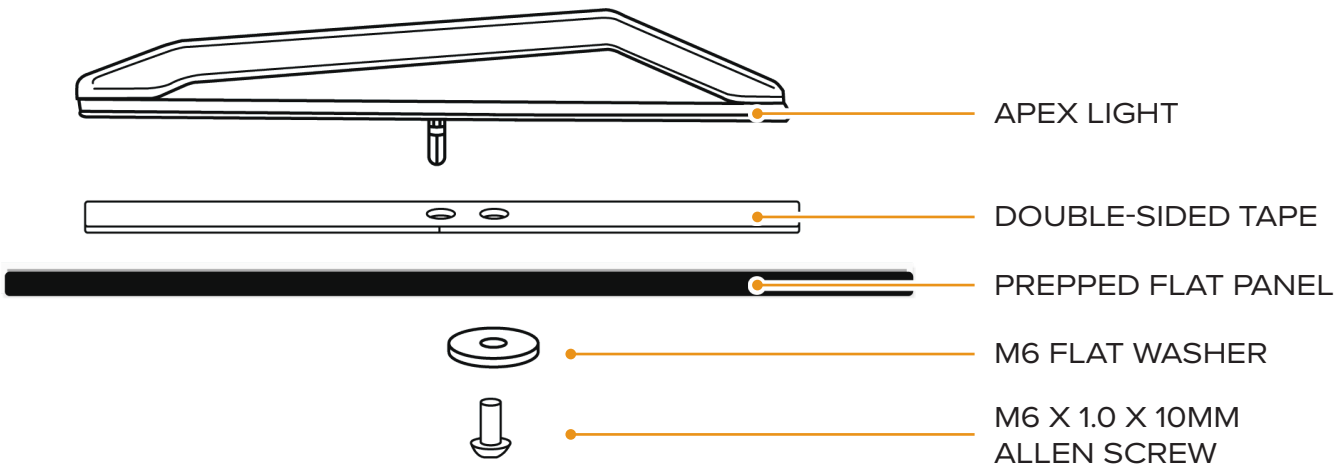
NOTE: Be sure the whole light’s base is in contact with the surface of the UTV to ensure the light will hold up permanently.



JUMP TO STEPS 10-15 TO FINISH INSTALL

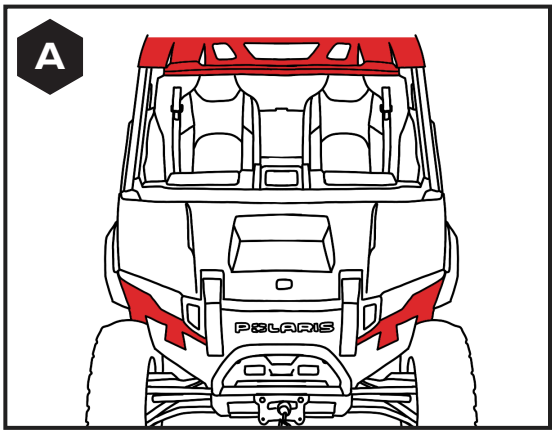
9C OPTION C - DRILLED AND ADHESIVE MOUNTING:

OPTION C DIAGRAM - DRILLED AND ADHESIVE MOUNTING



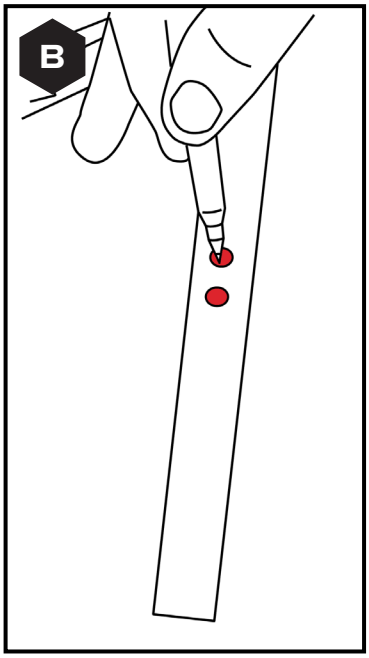
i LOCATE A SURFACE TO MOUNT TO

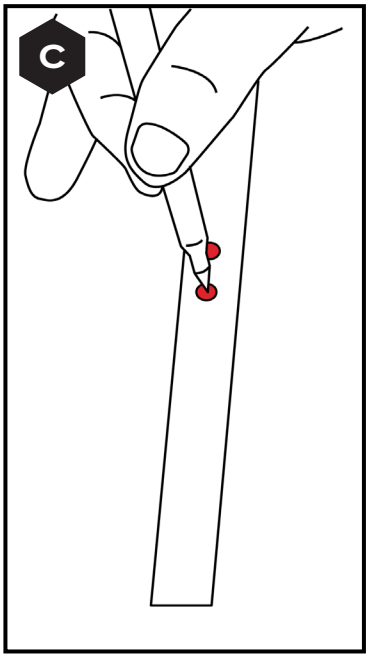
Locate an exterior panel with 8” of flat surface for mounting. [SEE FIGURE A]

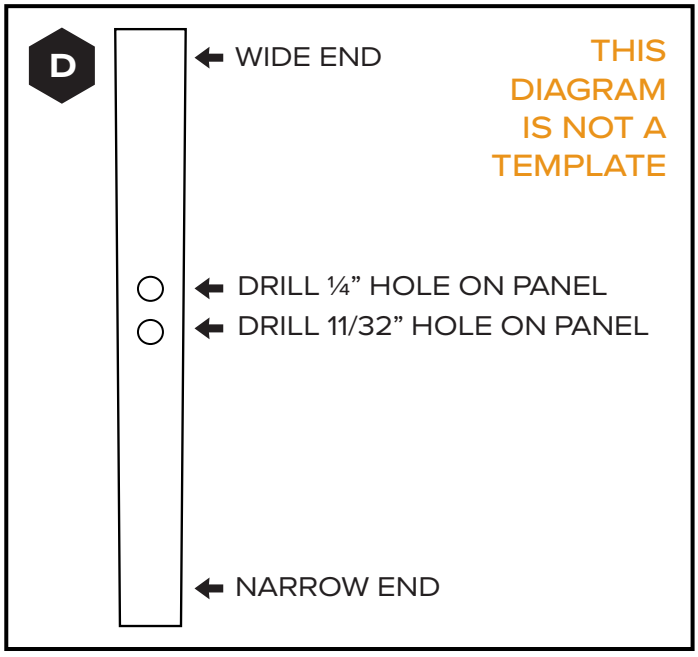


ii MARK HOLES TO DRILL

Use the double-sided tape holes as a template for the drilling locations. Confirm you can access the inside of the panel that you'll need to be able to access this area with your flat washer. [SEE FIGURES B - D]







iii DRILL ¼" HOLE

Once you have your holes marked, drill a ¼" hole that will be used to feed the screw through.

NOTE: We recommend using a brad point drill bit to avoid damaging your panel.

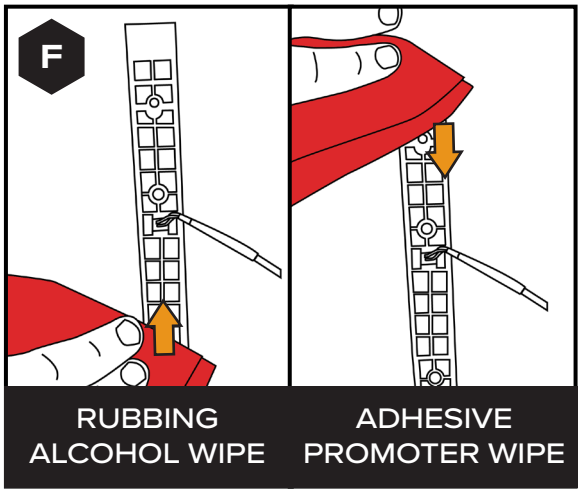
iv DRILL 11/32" HOLE

Drill a 11/32" hole that you will feed the Apex light's wire connector through.

v WIPE SURFACE WITH RUBBING ALCOHOL

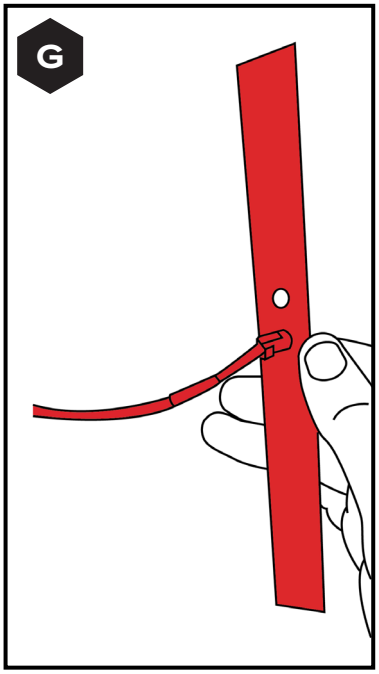
Before you permanently install your Apex light to the UTV's flat panel you've chosen, wipe down the panel and the base of the light with the rubbing alcohol wipe provided and let dry.

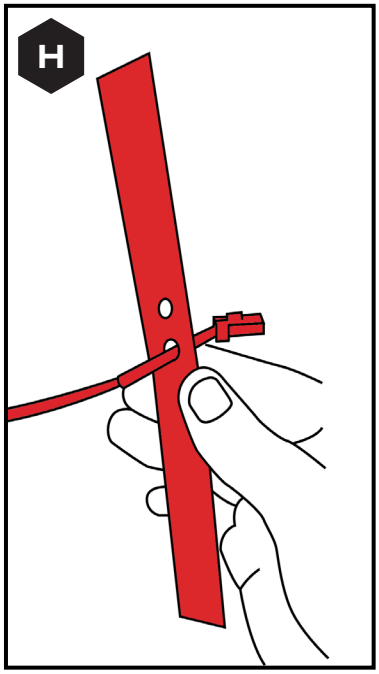
Next wipe down the panel and light base with the adhesion promoter wipe provided. Let dry. [SEE FIGURES E & F]

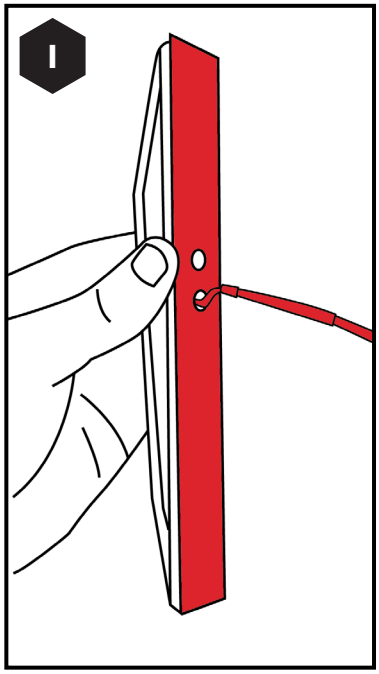


vi APPLY TAPE

Apply the double-sided tape to the Apex light's base. [SEE FIGURES G - I]

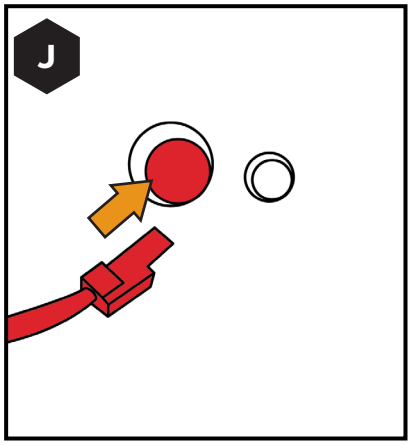


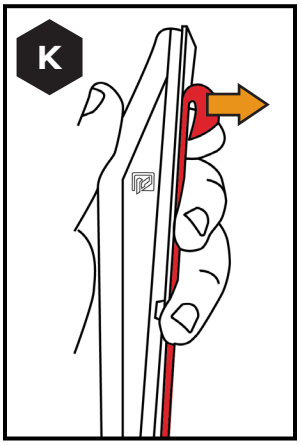


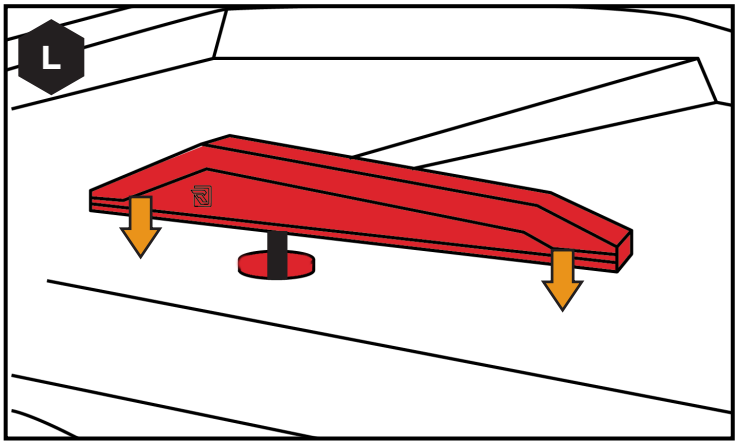


vii ADHERE LIGHT TO PREPPED SURFACE

Feed your light's wiring through the 11/32" hole. Peel away the double-sided tape cover, and stick the Apex light to the prepped surface. [SEE FIGURES J - L]







viii

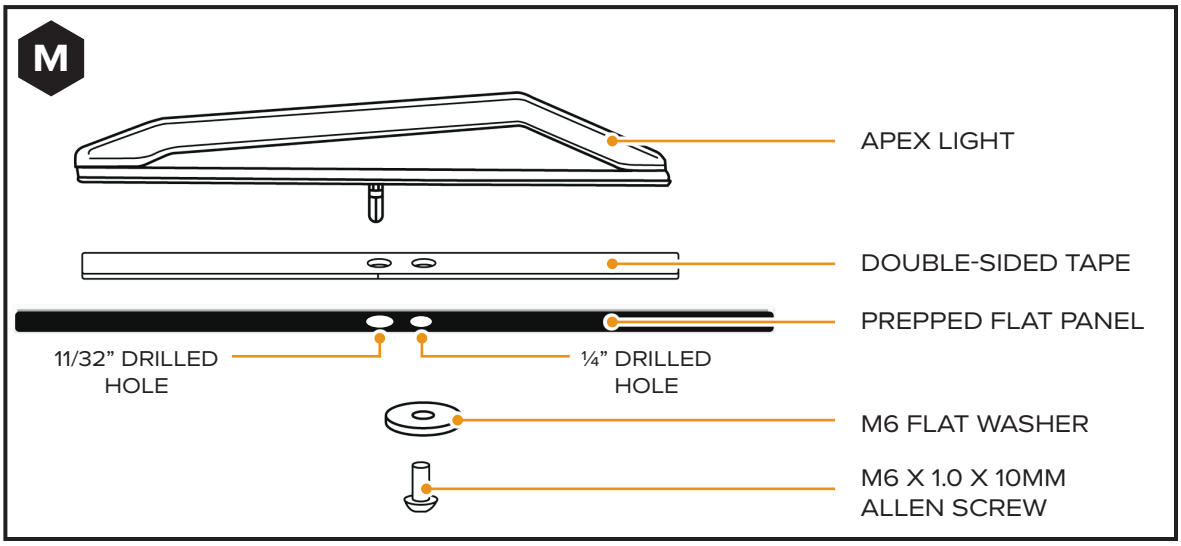
THREAD IN SCREW

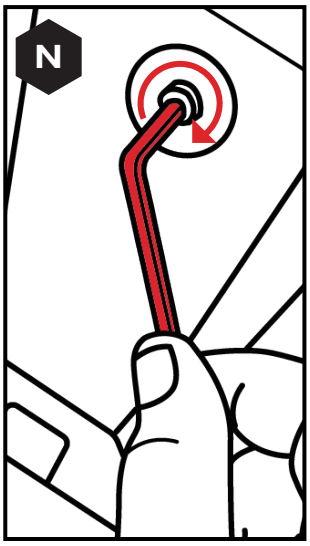
Thread your M6 x 1.0 x 10mm Socket Allen Screw with an M6 Flat Washer through the backside of the panel into the light's base using a 4MM ALLEN WRENCH. [SEE FIGURES M, N, & OPTION C DIAGRAM]

NOTE: If a longer screw is required, you have two options:

1. Give us a call or email, and we will express mail you a screw of the length you need.

2. Go to your local hardware store and purchase a M6 x 1.0 x (your desired length).





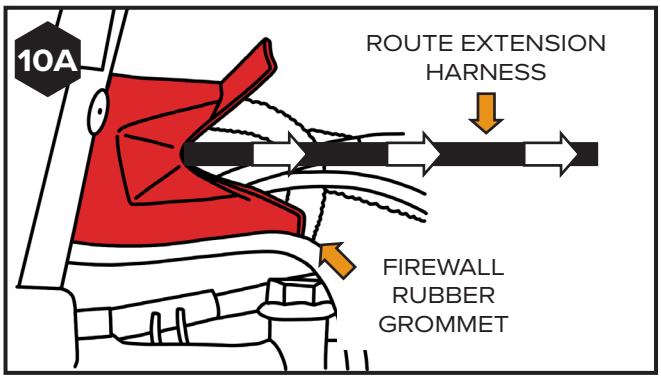
JUMP TO STEPS 10-15 TO FINISH INSTALL

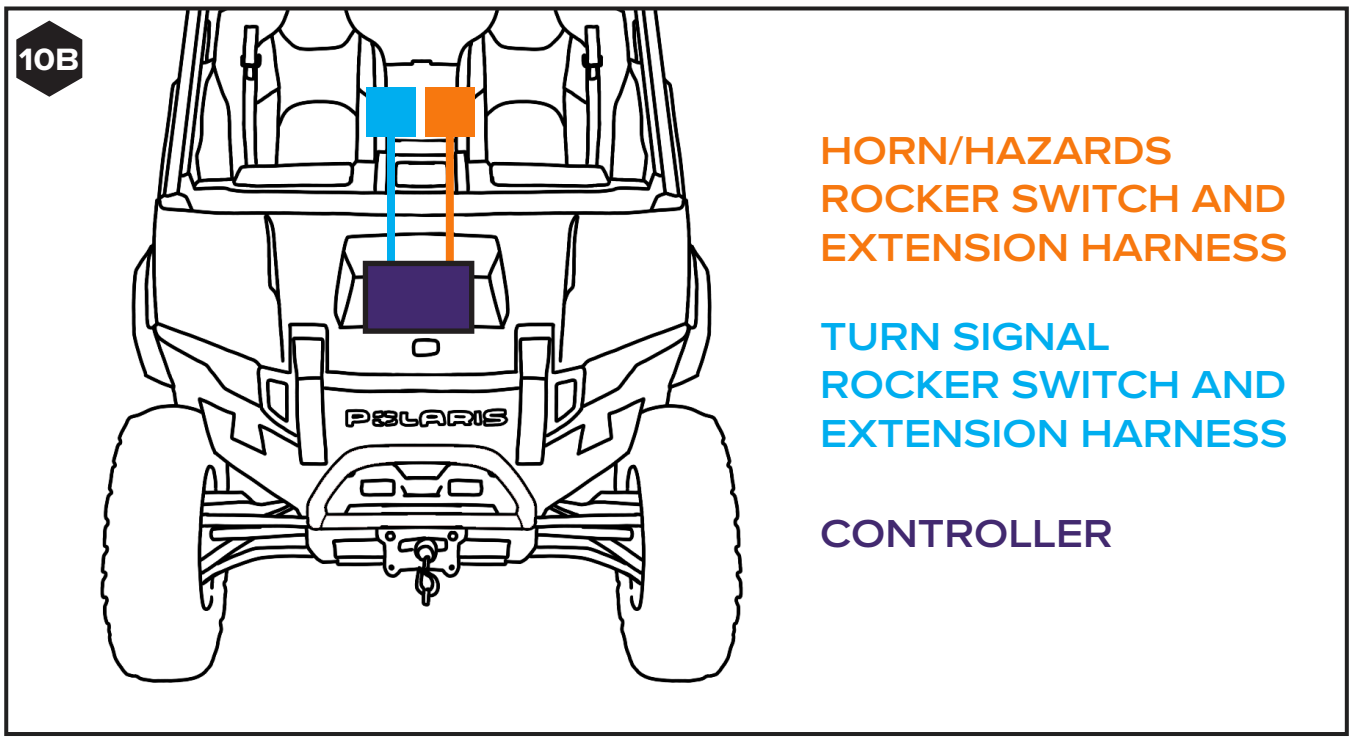
10 INSTALL YOUR ROCKER SWITCHES

- Grab your Turn Signal rocker switch and extension wire. Feed the extension wire through the front of the rocker switch adapter.
- Feed the extension wire through your chosen open slot in your switch panel.
- Route the small plug on the extension wire through the firewall grommet and connect it to the controller. [SEE FIGURES 10A & 10B]

NOTE: The easiest way to route the extension wire is through the adapter, then the rocker switch open slot, and finally through the firewall grommet to reach the controller, as described above.

NOTE: Repeat this process with the Horn/Hazard Switch extension wire.

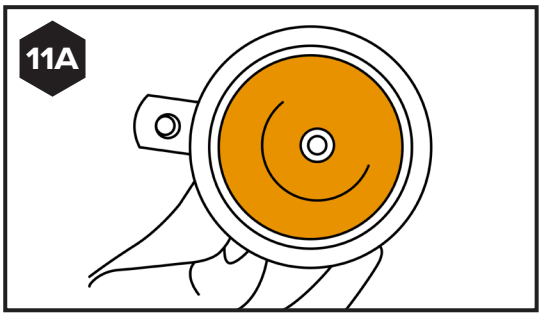




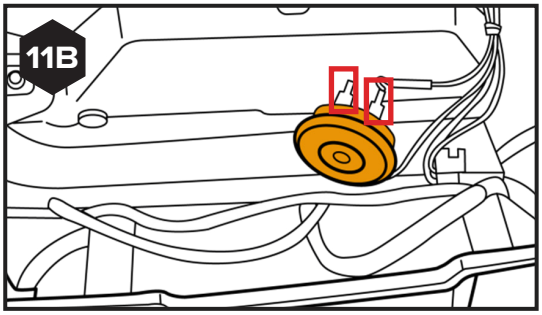
11 INSTALLING YOUR HORN

i. Return to the Turn Signal Controller and route the Horn Extension harness to the front of the Xpedition, where you will permanently mount the Horn reusing an OEM bolt that you select.

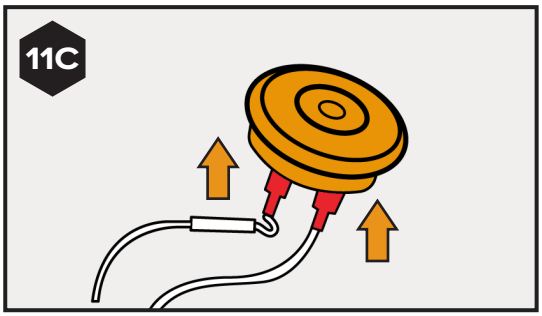
ii. Grab your horn from the kit once your wiring is fed to the front area. [SEE FIGURE 11A]



iii. Install the horn in an open area that is out of the way of suspension or moving parts of the Xpedition, reusing a bolt location you choose on the front of the Xpedition. [SEE FIGURE 11B]

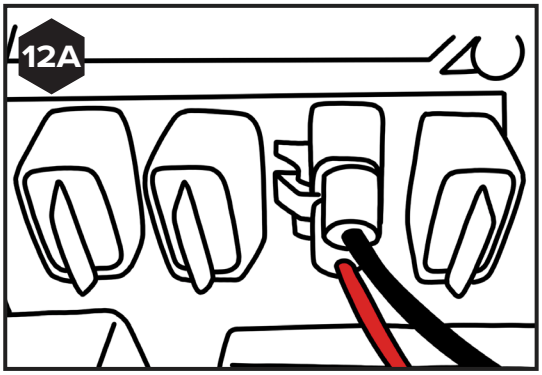


iv. Plug both spade connectors from the extension harness to the connectors on the backside of the horn (no specific connector to plug into). [SEE FIGURE 11C]



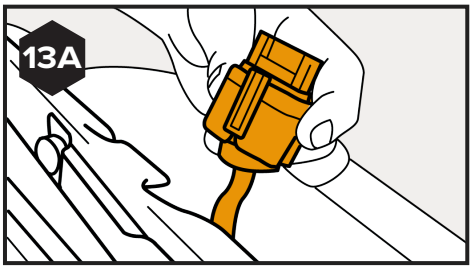
12 PLUG IN YOUR TURN SIGNAL CONTROLLER TO POWER

i. Return to the Turn Signal Controller and plug in the connector from the Power Harness to the open port on the bus bar mentioned during step 1. {SEE FIGURE 12A]

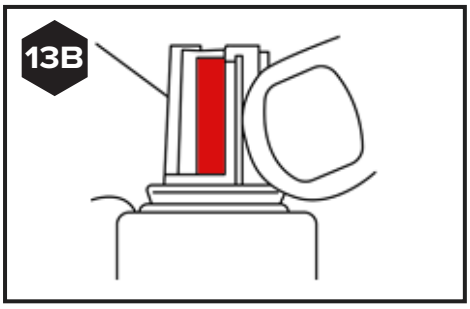


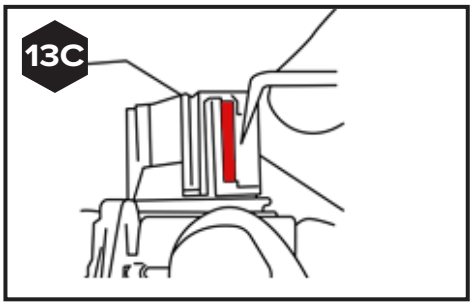
13 INSTALL DASH INDICATORS

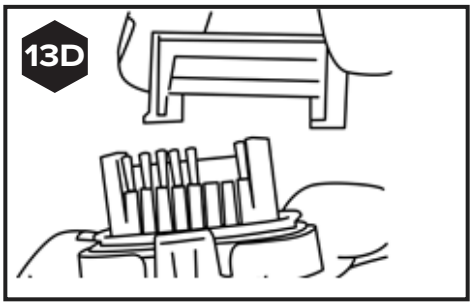
i. Remove gauge cluster and Unplug the connector in the backside [SEE FIGURE 13A]



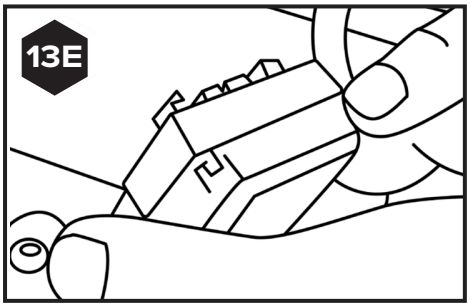
ii. Remove the clear gray cover on the connector by depressing the white tabs at each end and sliding it up [SEE FIGURES 13B - 13D]

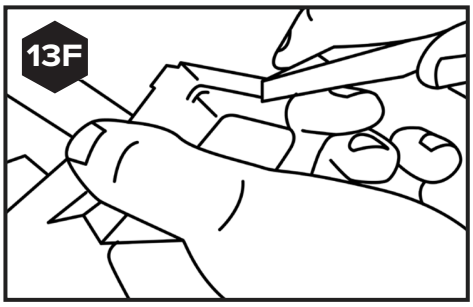


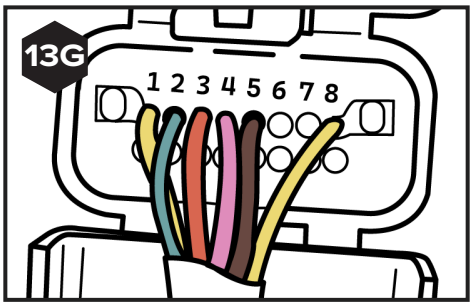




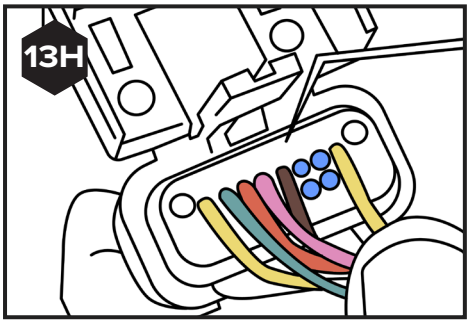
iii. Once the connector is unplugged, access the pins through the backside using a small flathead screwdriver to open the connector housing carefully [SEE FIGURES 13E – 13G]

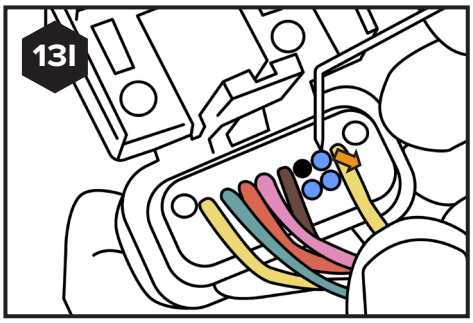






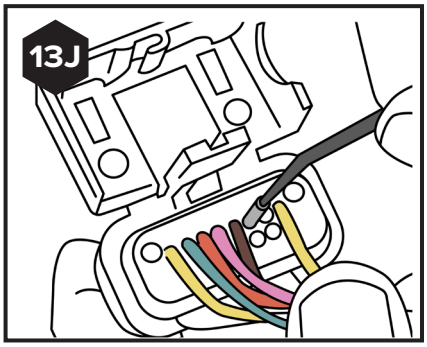
iv. Remove the plastic pin inserts on terminals 6 and 7 by pulling them outward. These pins are numbered on the wire side of the plug [SEE FIGURES 13H & 13I]

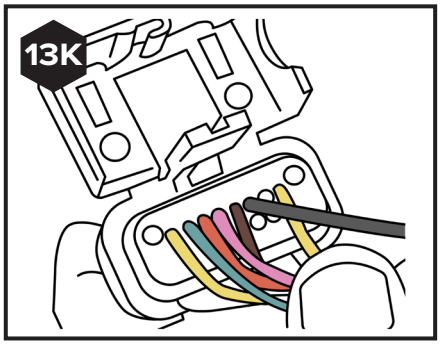




v

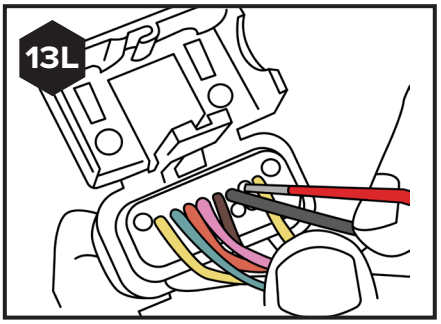
Grab your RIGHT DI wire, insert the pin from the wire into terminal 6, and verify it lines up evenly with the other pins. [SEE FIGURE 13J & 13K]





vi

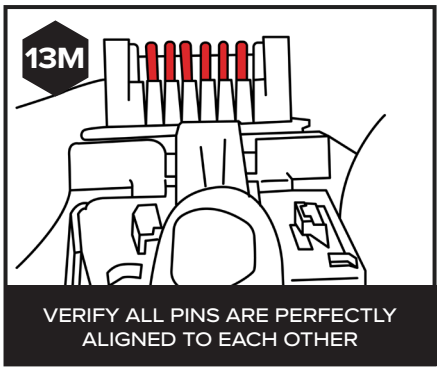
Repeat the previous step with the LEFT DI wire on terminal 7. [SEE FIGURE 13L]

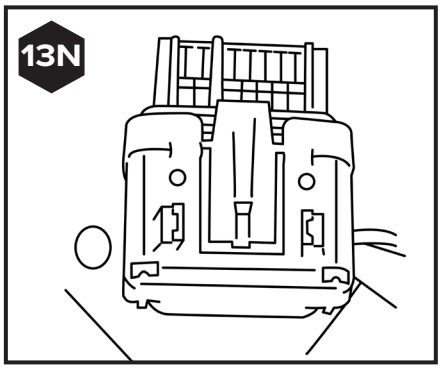


vii

Once pins are precisely inserted and aligned into their respective terminals, reinstall the tinted cover onto the plug (cover removed in step 13.ii).

Next, snap the grey cover closed and plug the connector to the gauge cluster. [SEE FIGURES 13M & 13N]





14 VERIFY THE FUNCTION OF THE KIT

i

Now it's time to confirm the kit is working as designed, but before reconnect your battery by reversing step 1.xiii.

With your battery connected turn your Xpedition's Power on, and test all the kit's features:

- **Running brake lights**
- **Running white lights**
- **Brake light w/ pulse effect**
- **Left turn signal → 15 second auto cancel**
- **Left turn signal dash indicator (in gauge cluster)**
- **Right turn signal → 15 second auto cancel**
- **Right turn signal dash indicator (in gauge cluster)**
- **Hazards**
- **Horn (plug your ears)**

15 TIDY UP YOUR MACHINE

i

Once the function of the kit is verified and everything is working appropriately, go over all your connection points and heat shrink them (if you have not done so already) as mentioned in step 3.

ii

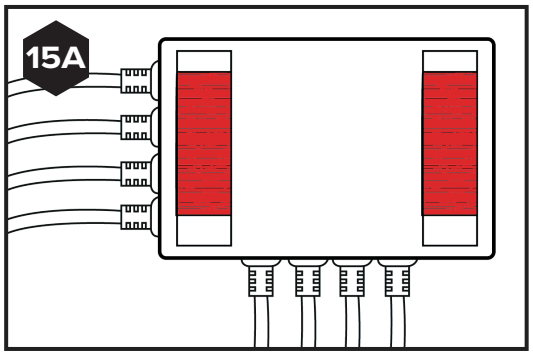
Use the zip ties supplied in the kit, secure all of your wiring to frame tubes or roll bars (away from hot or moving components).

iii

Once all of your wiring is secured with the help of the zip ties, cut all the excess zip ties using side cutter pliers.

iv

Place the two strips of double-sided tape provided in the kit on the backside cavities on the controller. [SEE FIGURE 15A]



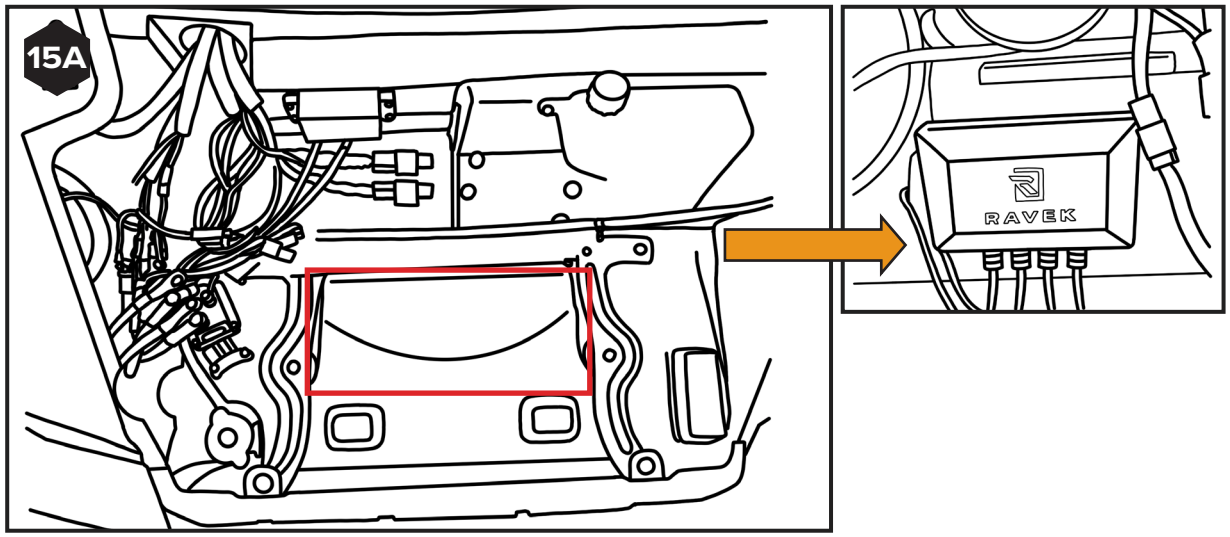
v

Locate a nice flat surface to stick the controller to. Clean the surface with the Rubbing Alcohol Wipe and Adhesive Promoter Wipe provided in the kit, and let dry before continuing.

v

Once the surface is clean and dry, stick your controller to your chosen location and let the tape cure for 24 hours before riding. [SEE FIGURE 15B]

RAVEK RECOMMENDED SPOT IS UNDERNEATH HOOD PANEL REMOVED IN STEP 1.i



vi

Reverse steps 1i-1xv to reinstall all your Xpedition's body panels and parts that were previously removed.

RAVEK

BUILT FOR MORE

WHY RAVEK

Stock UTVs don't come with enough storage, lighting, comfort, and protection. That's why we started RAVEK.

We live to design, manufacture, and test innovative SxS upgrades that elevate the riding experience. Here's what you can expect from us:

- Durable products built to last (100% lifetime guarantee)
- UTV upgrades thoughtfully designed & tested by riders
- Outstanding installation support (videos & USA customer service)
- Constant flow of epic riding content (check out our social media)

We're confident your RAVEK product will earn its place on your machine. Please call or e-mail us if we can help.

- Harry & Ricky (Brothers & Owners)

MESSAGE FROM THE DESIGNER

All UTVs come without turn signals, and even though you can ride them on the road, people need to make hand signals to indicate to other riders that you are making a turn! Not only is it tiring, but not safe!

That is why I created this kit: you can easily install a turn signal kit to your UTV, add some personality to your ride, and make your ride safe at any time of the day.