

# **PAINLESS**<sup>®</sup>

## **PERFORMANCE PRODUCTS**



## **Trail Rocker Installation Instructions**

**2009-2018 Jeep Wrangler JK Overhead Trail Rocker (w/o Auto Dimming  
Mirror)**

**For Installing Painless Part Number: 57003  
Manual #90584**

**Painless Performance Products recommends you, the installer, read this installation  
manual from front to back before installing this harness.**





## **Painless Performance Products, LLC**

**2501 Ludelle Street**

**Fort Worth, TX 76105-1036**

**800-423-9696 phone – 817-244-4024 fax**

**Web Site: [www.painlessperformance.com](http://www.painlessperformance.com)**

**E-Mail: [painless@painlessperformance.com](mailto:painless@painlessperformance.com)**

If you have any questions concerning the installation of this product, feel free to call Painless Performance Products' tech line at 1-800-423-9696. Calls are answered from 8am to 5pm central time, Monday thru Thursday, 8am-4:30pm Friday, except holidays.

Here we have provided you with accurate instructions for the installation of this product. However, if you have comments/suggestions concerning these instructions, please call or email us (our contact information can be found at the top of this page or online at [www.painlessperformance.com](http://www.painlessperformance.com)). We sincerely appreciate your business.

**Painless Performance Products, LLC** shall in no event be liable in contract or tort (including negligence) for special, indirect, incidental, or consequential damages, such as but not limited to, loss of property, or any other damages, costs or expenses which might be claimed as the result of the use or failure of the goods sold hereby, except only the cost of repair or replacement.

**Should you damage or lose part of your manual, a full color copy of these instructions can be found online at [www.painlessperformance.com](http://www.painlessperformance.com)**

Installation Manual: **90584**

**3<sup>rd</sup> Edition: February, 2019**

**Copyright © 2017 by Perfect Performance Products, LLC**

# **TABLE OF CONTENTS**

<b><u>PAGE #</u></b>	<b><u>SECTION</u></b>
1	<b><u>CONTENTS OF THE PAINLESS KIT</u></b>
2	<b><u>TOOLS NEEDED</u></b>
3	<b><u>FUSE/RELAY CENTER INSTALLATION</u></b>
3	<b><u>2011 - 2016 JK</u></b>
9	<b><u>2009 - 2010 JK</u></b>
22	<b><u>w/ AUTOMATIC TRANSMISSION</u></b>
26	<b><u>w/ MANUAL TRANSMISSION</u></b>
30	<b><u>SWITCH PANEL INSTALLATION</u></b>
47	<b><u>SWITCH WIRING</u></b>
48	<b><u>DOUBLING SWITCH CONTROL WIRES</u></b>
51	<b><u>IGNITION SWITCH PIGTAIL INSTALLATION</u></b>
63	<b><u>RELAY OUTPUT WIRES</u></b>
67	<b><u>OPTIONAL: <a href="#">PAINLESS PART#: 57150</a> - WINCH CONTROL ADD-ON KIT</u></b>
71	<b><u>OPTIONAL: WINCH PIGTAIL</u></b>
72	<b><u>FINAL STEPS</u></b>
77	<b><u>FUSE REPLACEMENT</u></b>
79	<b><u>PAINLESS PERFORMANCE LIMITED WARRANTY AND RETURN</u></b>
	<b><u>POLICY</u></b>

# CONTENTS OF THE PAINLESS KIT

Refer to the **Contents Figure** (below) to take inventory. See that you have everything you're intended to have in this kit. If you find that anything is missing or damaged, please contact the dealer where you obtained the kit or Painless Performance at (800) 423-9696.

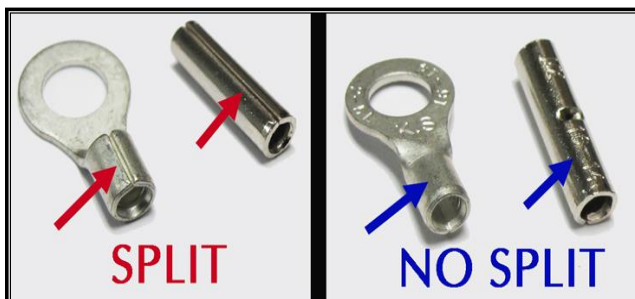
## The Painless Trail Rocker Kit 57003 should contain the following:

- Fuse/Relay Center pre-installed to powder coated bracket
- Overhead Switch Panel with mounting bracket and 6 pre-installed switches
- Ignition Switch pigtail w/ weather-pack connector, (1) rubber grommet, and zip-ties
- Winch Pigtail and winch installation kit
- **Parts Kits:** (2) 1" Adel clamps, (1) 3/4" Adel clamp, (3) 1/4"-20 x 3/4" stainless bolts, (3) 1/4" flat washers, (3) 1/4" nylon locking nuts, (10) un-insulated butt connectors, (12) pre-cut heat-shrink, (8) insulated wire caps, (2) 16-14 ga. flag terminals, (2) 22-18 ga. flag terminals, (4) 30 amp ATO fuses, (1) 200 amp MIDI fuse, (2) 20-18 ga. 1/4" spade terminals, (2) M5 x 20 cap-screws, (2) M5 lock washers, (2) M5 flat washers, (1) M6-1.0 nut, (1) M6 lock washer, (1) M6 flat washer, and 1/8" Allen wrench
- **Power and Ground Terminal Kit:** (1) pre-cut 1/4" black heat shrink, (4") pre-cut 1/2" red heat shrink, (1) 16-14 ga. non-insulated ring terminal, (1) 6 ga. 1/4" ring terminal, and (1) 6 ga. 5/16" ring terminal
- This manual (90584)



## SMALL PARTS

Included with the Painless harness are parts kits containing miscellaneous terminals, fuses, screws, and nuts. Many of the terminals are non-insulated and will require heat shrink to be applied after the terminal has been properly crimped. Heat shrink has been supplied. These non-insulated terminals allow you to keep a cleaner, more traditional look. When crimping these terminals, take notice to the split in the terminal. Make sure the smooth side of the jaw on the crimper goes towards this split.



## TOOLS NEEDED

This installation primarily requires only basic hand tools that may include, but are not limited to:

1. Wrench sets SAE and Metric
2. Ratchet sets SAE and Metric
  - a. 1/4" Drive w/ an extension is recommended for some tight areas of the install.
3. T20 Torx drive
4. Tape Measure
5. Allen Wrenches
  - a. 1/8" (included in the parts kit)
  - b. 3/32"
6. Screwdrivers:
  - a. (2) #2 Standard Length and Stubby Phillips Head
  - b. #2 Flat (slot) Head
  - c. #0 "Jewelers" Flat (slot) Head
7. Round Metal File
8. Inch/Pound Torque Wrench
9. Diagonal Pliers or "dikes"
10. Wire Cutter/ 18-10 ga. Stripper
11. Hand Crimpers
12. Cable Cutters
13. Cable Crimping Tool
14. Hammer



In addition to these basic hand tools, you may need the following:

### Volt/Ohm Meter:

A Volt/Ohm meter is always a good tool to have on hand when installing any type of electrical component into a vehicle. The most basic meters provide the two functions required to diagnose electrical issues commonly seen during a harness install. These two functions are the ability to read DC Voltage and electrical continuity or Ohms. They can be purchased from any home improvement store, local hardware store and electrical supply shop and online.



### Heat Gun:

Very useful to shrink the heat-shrink found in the parts kit.



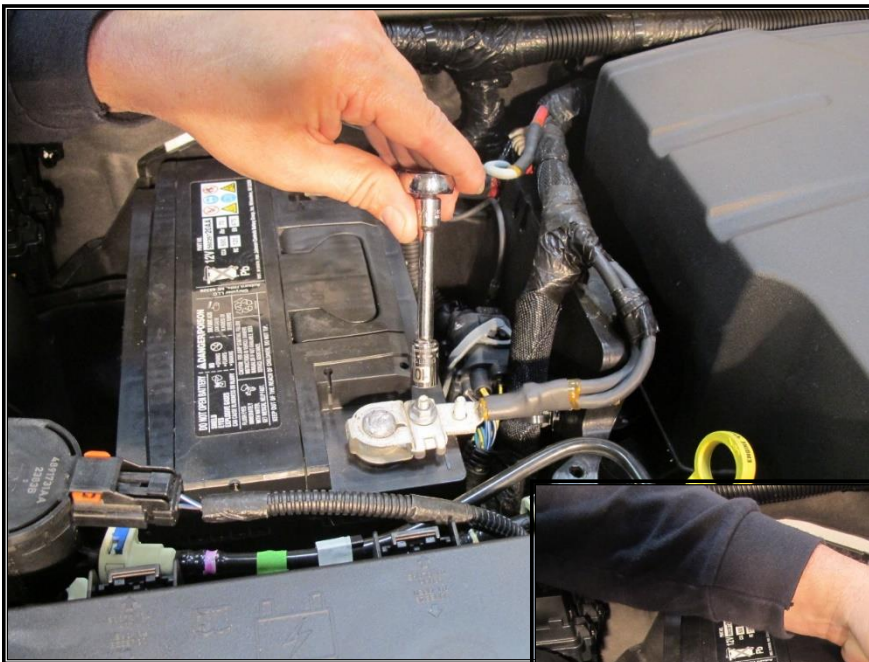
## FUSE/RELAY CENTER INSTALLATION

The following steps **MUST** be followed as they are printed. Do not move onto other parts of the installation out of sequence.

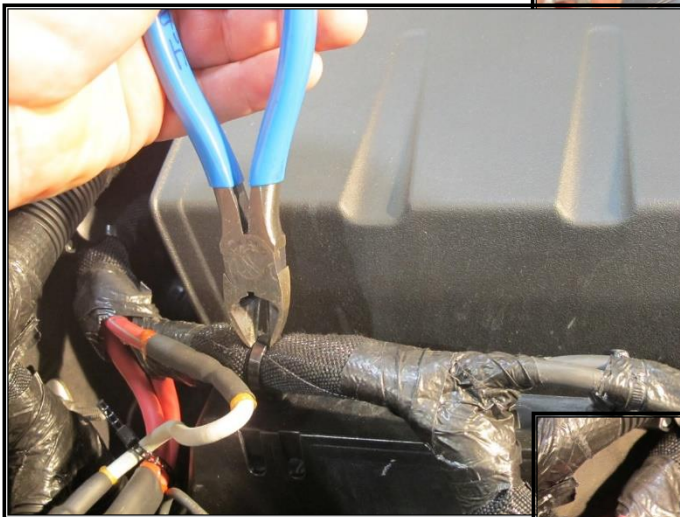
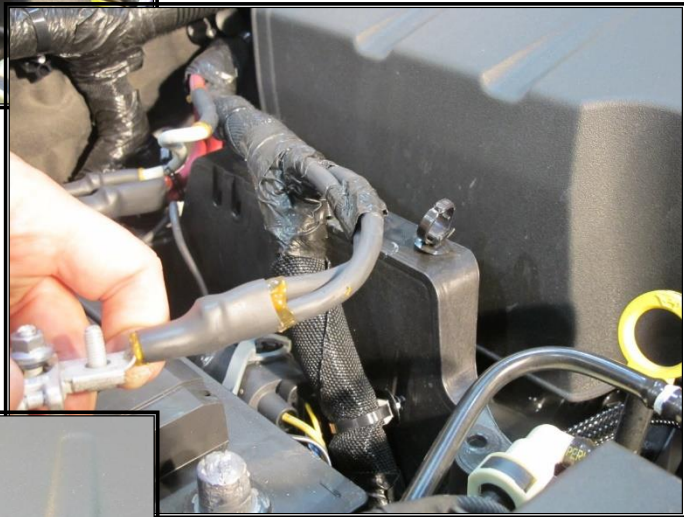
**CAUTION: BEFORE THE INSTALLATION OF THIS PRODUCT, DISCONNECT THE POWER FROM YOUR VEHICLE BY REMOVING THE BATTERY CABLES FROM THE BATTERY. THE BATTERY SHOULD NOT TO BE RECONNECTED UNTIL INSTRUCTED**

### 2011-2016 JK

**Step 1:** Use a **10mm socket** to remove the battery cables from the battery. For ease of installation, we also recommend removing the factory engine cover.

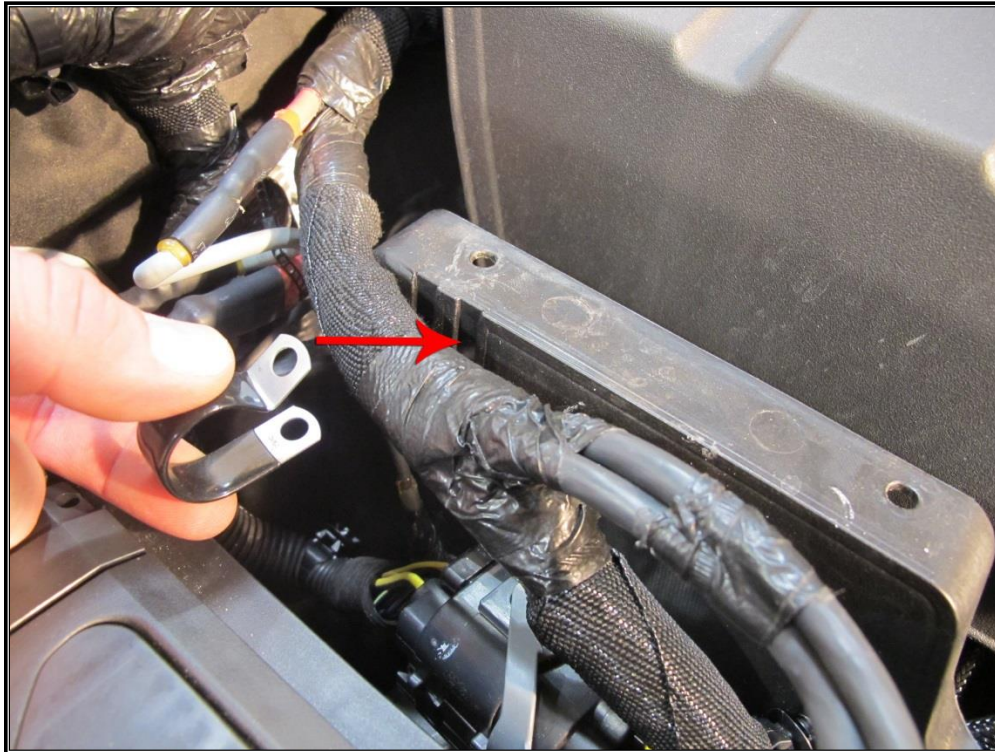


**Step 2:** Use **wire cutters** to cut the two “Umbrella Style” zip-ties on top of the battery tray that hold the factory wiring harness.

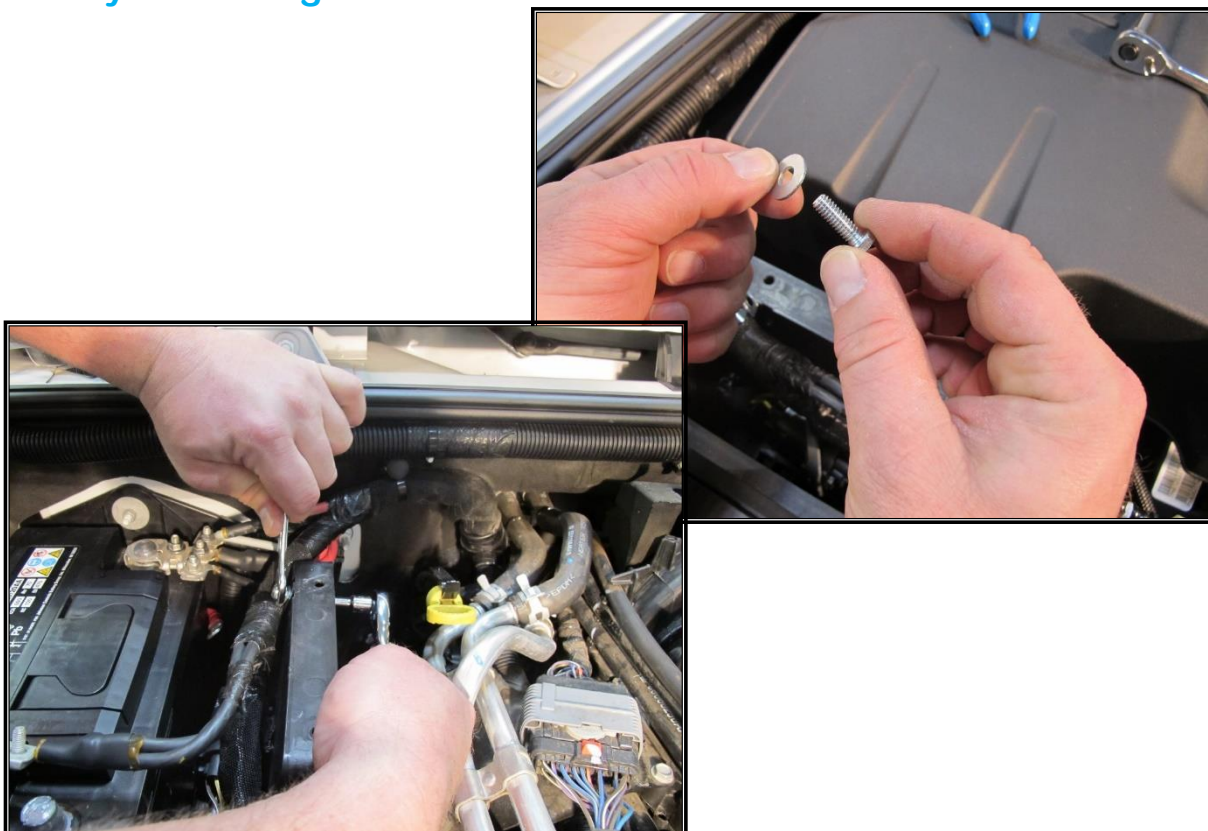




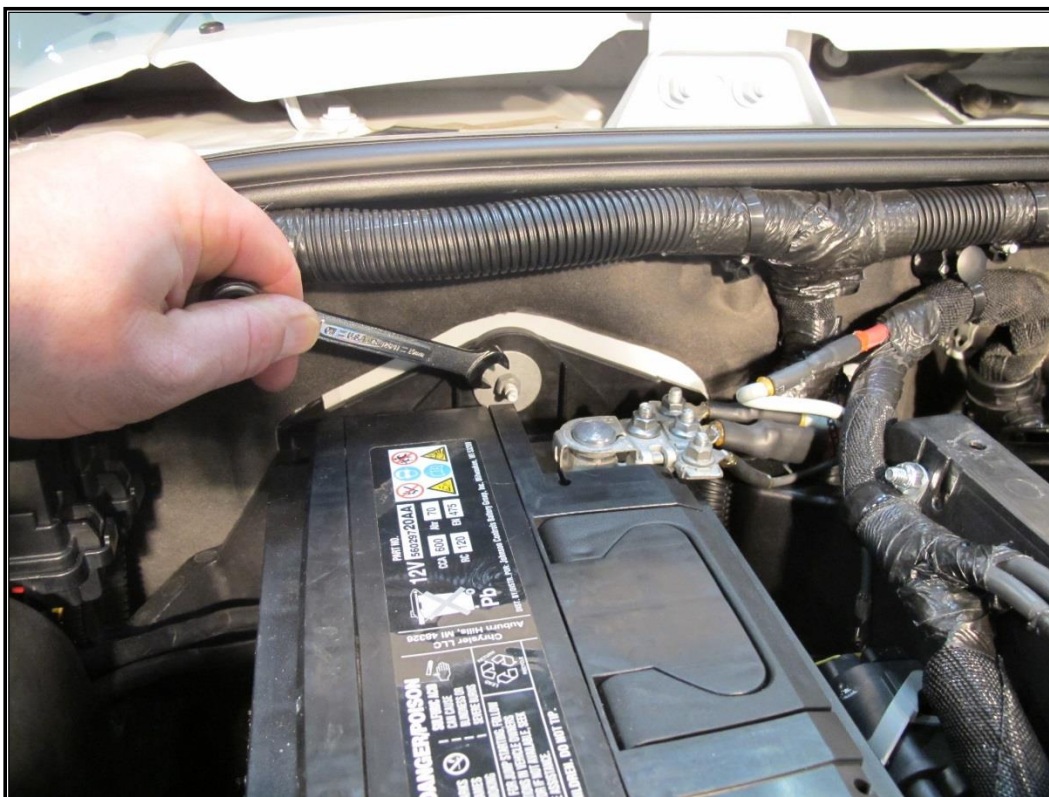
**Step 3:** Position (1) ¾" Adel clamp over the factory wiring harness.



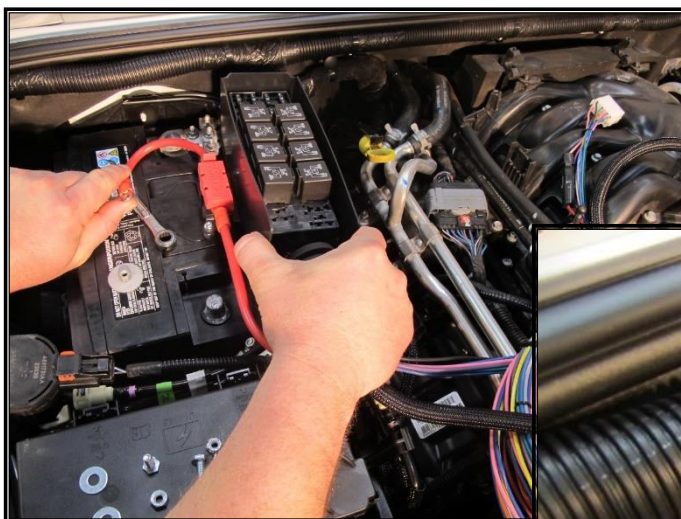
**Step 4:** Mount the Adel clamp to the inside wall of the factory battery tray using the supplied (1) ¼" - 20 Bolt, (1) flat washer, and (1) ¼" nylon locking nut.



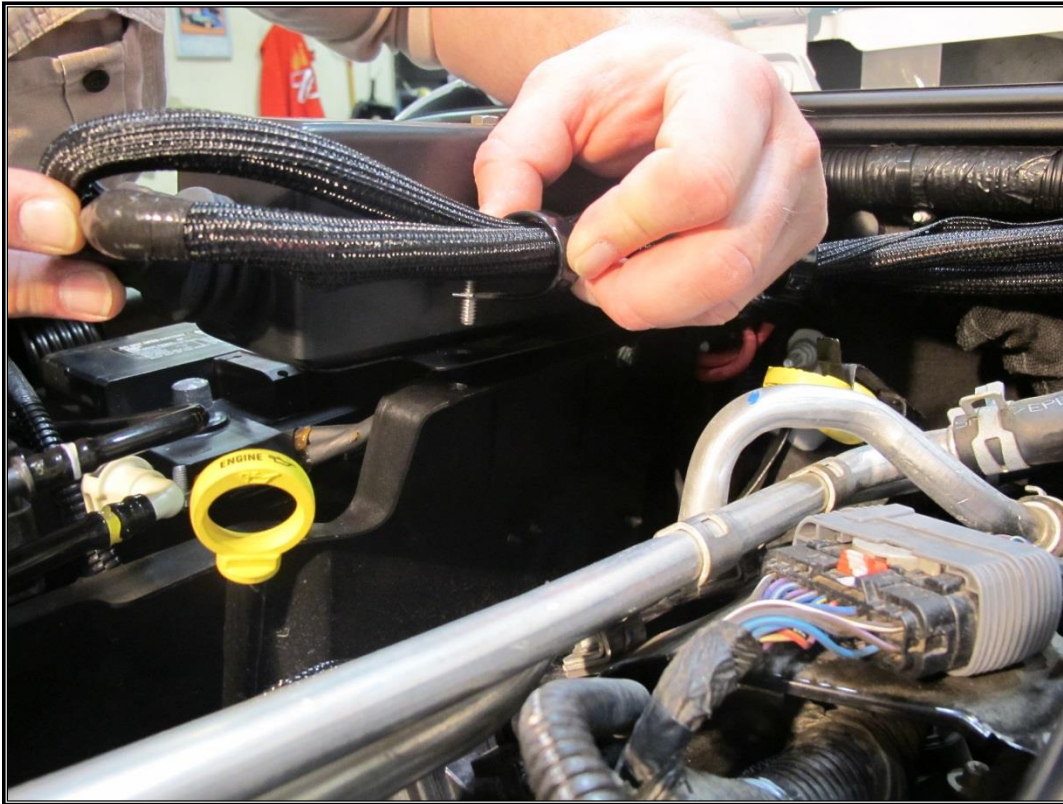
**Step 5:** Use a **10mm wrench** or **socket** to remove the **factory battery tray mounting nut** from the stud on the firewall.



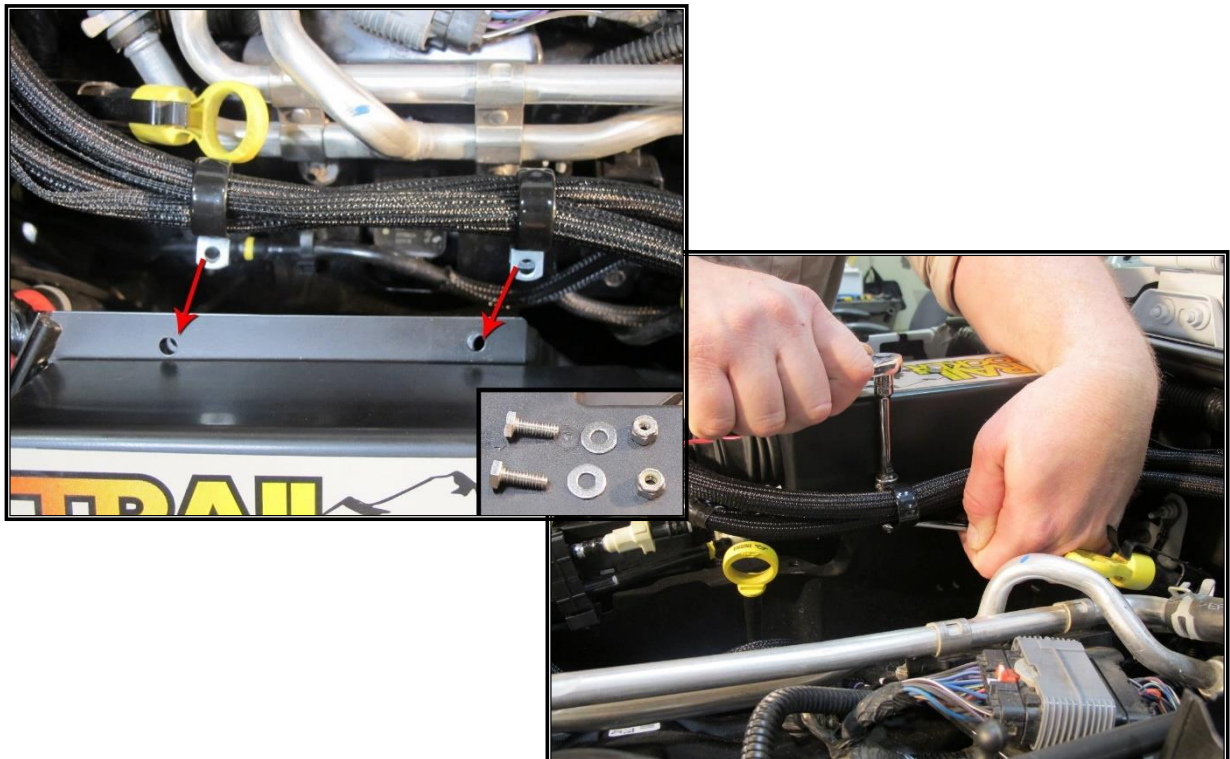
**Step 6:** Position the **Fuse/Relay Center mounting bracket** over the factory firewall mounted stud. Then, hand-tighten the **factory battery tray mounting nut** back onto the stud on the firewall.



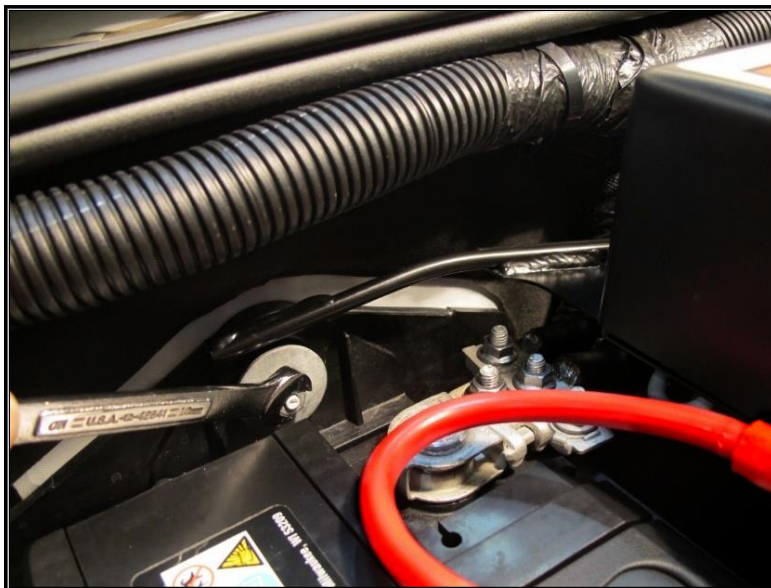
**Step 7: Position (2) 1" Adel clamps over the Trail Rocker control wires.**



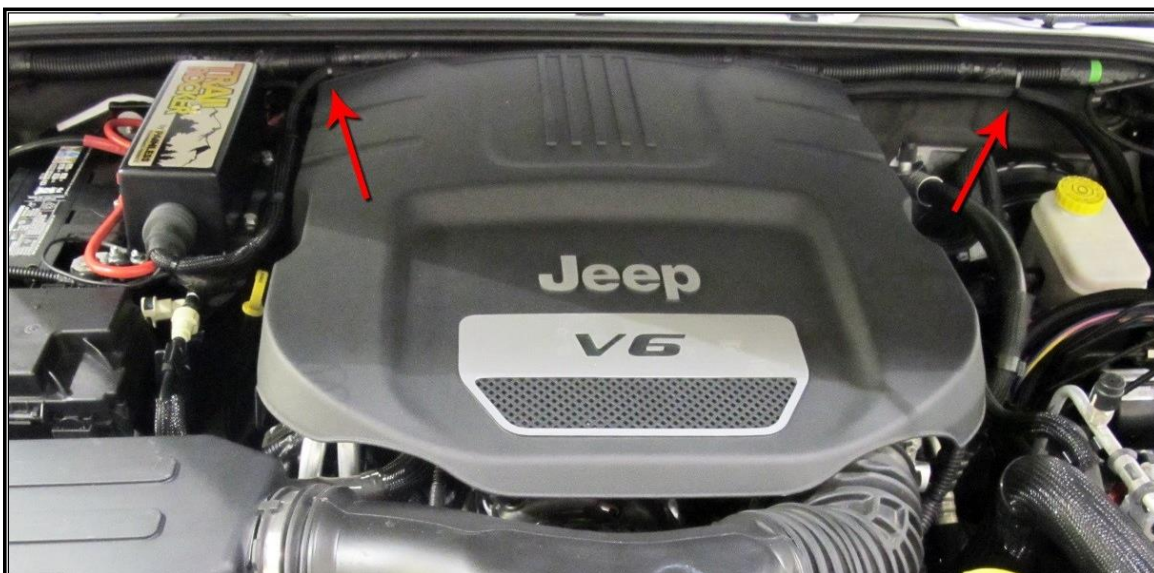
**Step 8: Use the provided (2) 1/4"-20 bolts, (2) flat washers, and (2) nylon locking nuts to mount the Adel clamps and the Fuse/Relay Center bracket to the factory battery tray as shown.**



**Step 9:** Use a **10mm wrench** or **socket** to tighten the factory battery tray nut to the stud on the firewall.



**Step 10:** Route the Fuse/Relay Center control wires across the firewall. Secure the control wires to the factory harness loom using **zip-ties** provided in the parts kit. You can now reinstall your engine cover.

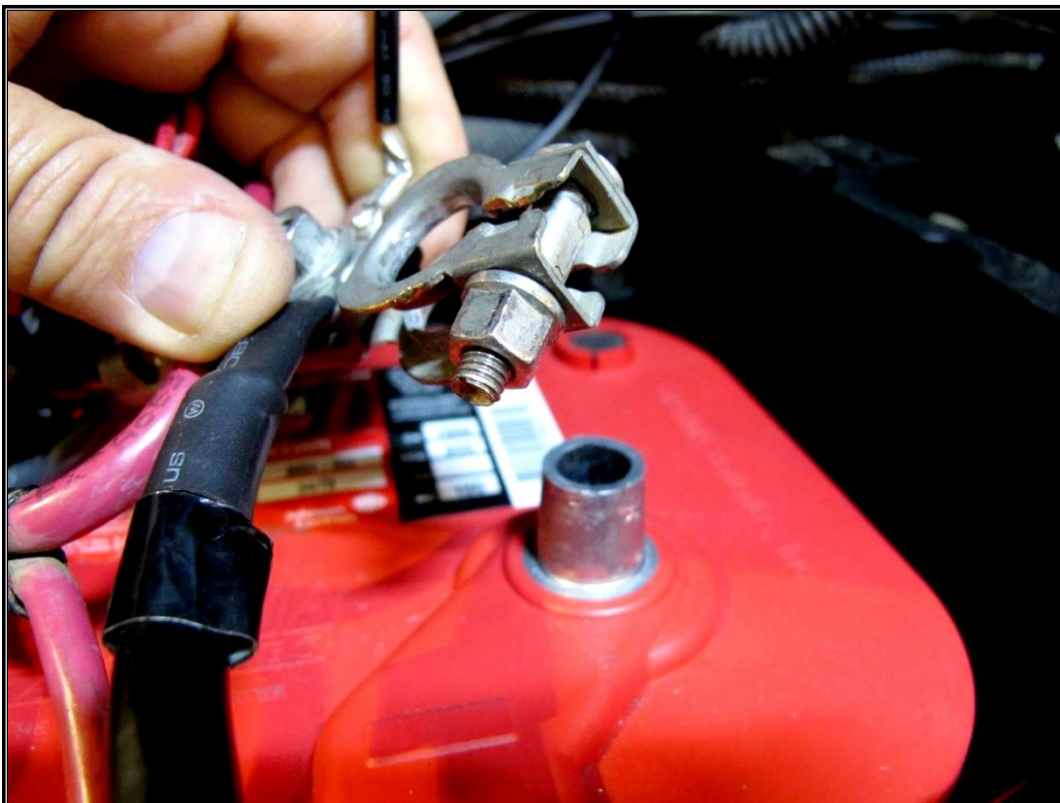
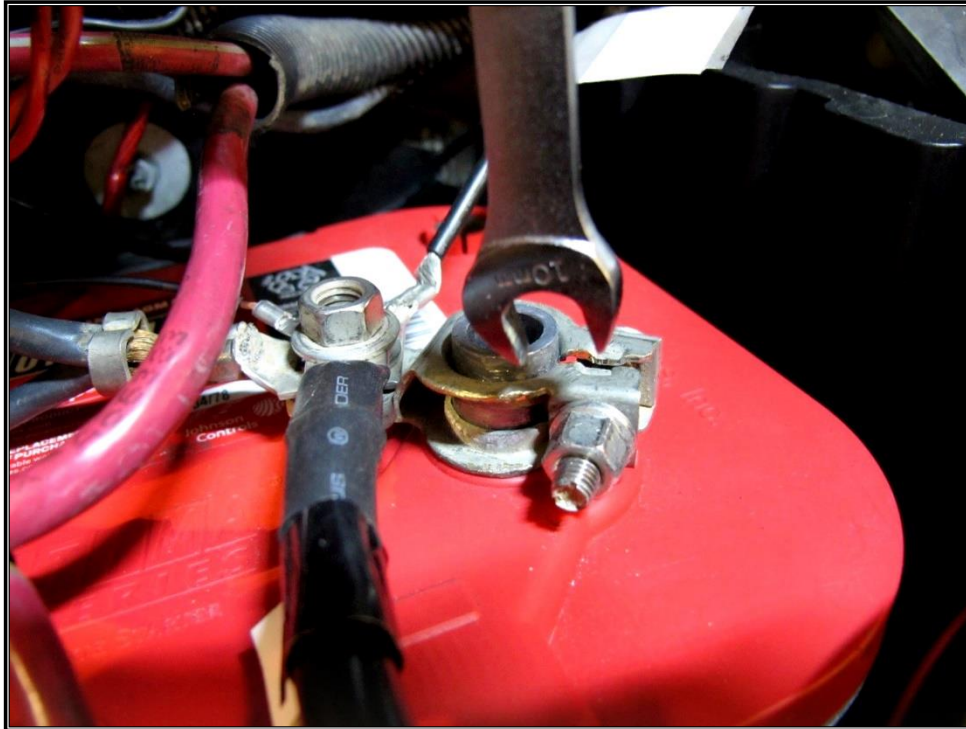


**IF YOUR JEEP HAS AN AUTOMATIC TRANSMISSION,  
FOLLOW STEPS 26 - 32 BEGINNING ON **PAGE 22****

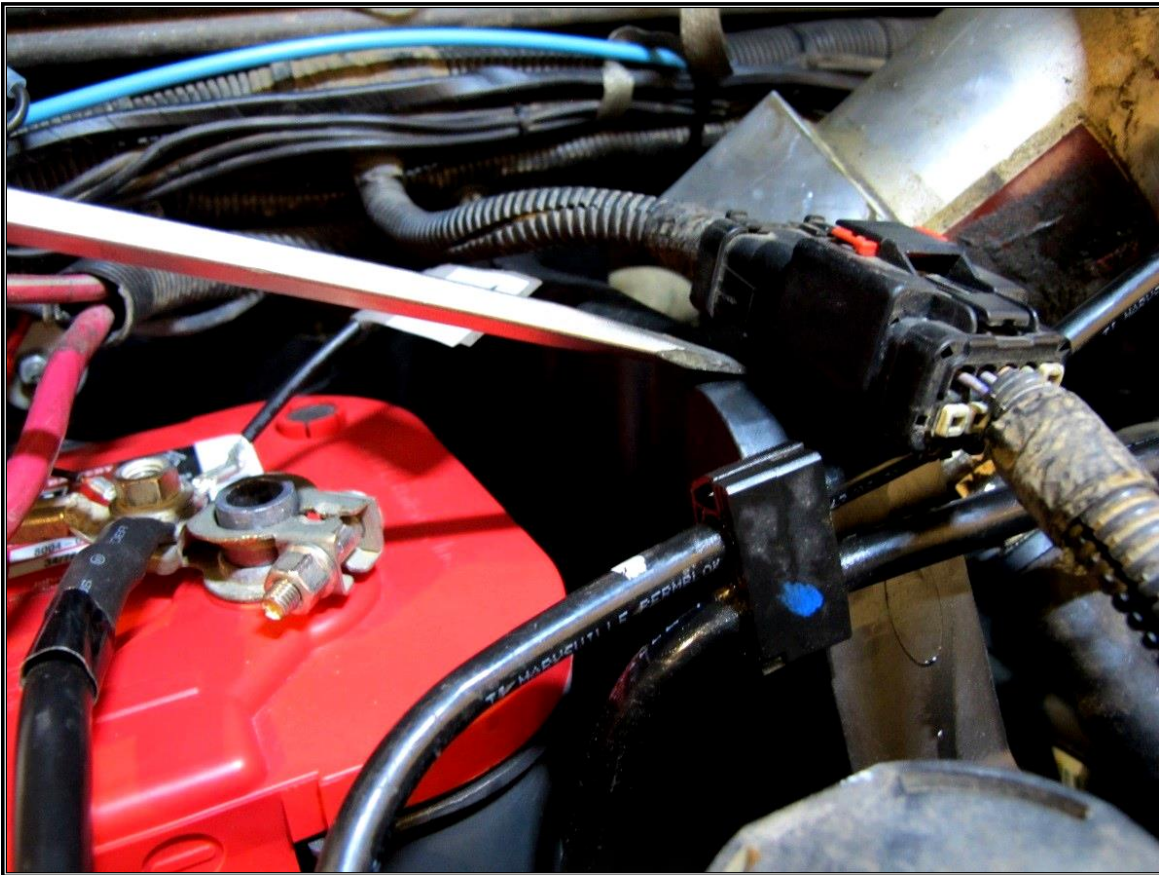
**IF YOUR JEEP HAS A MANUAL TRANSMISSION, FOLLOW  
STEPS 33 - 38 BEGINNING ON **PAGE 26.****

## 2009-2010 JK

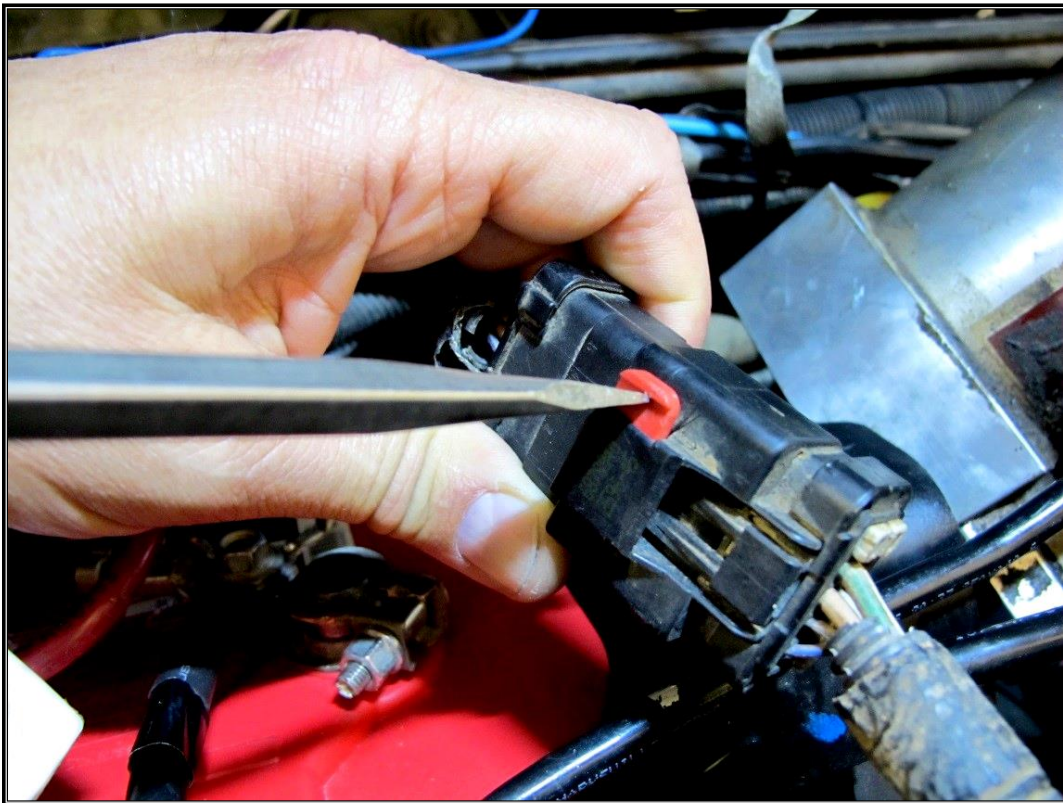
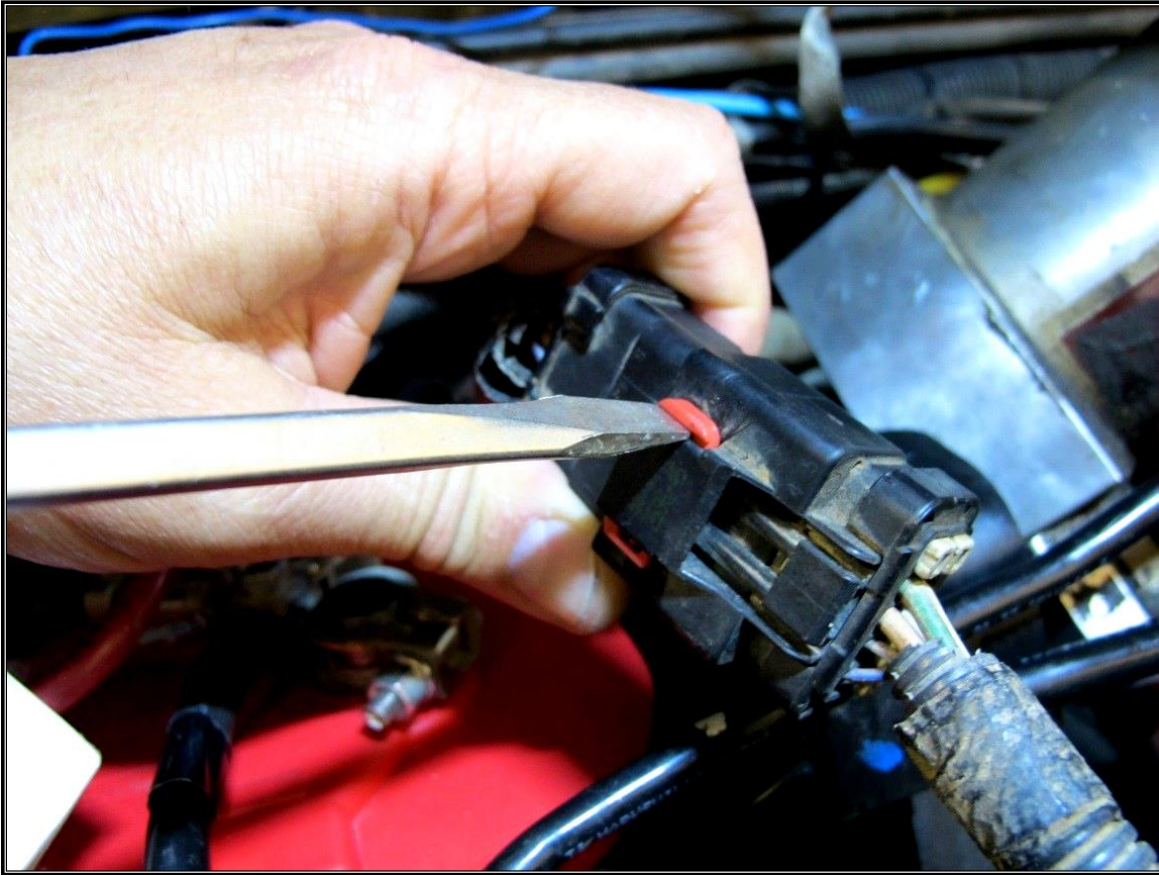
**Step 11:** Use a **10mm wrench** or **socket** to loosen and remove the battery cables from the battery. For ease of installation, we also recommend removing factory engine cover.



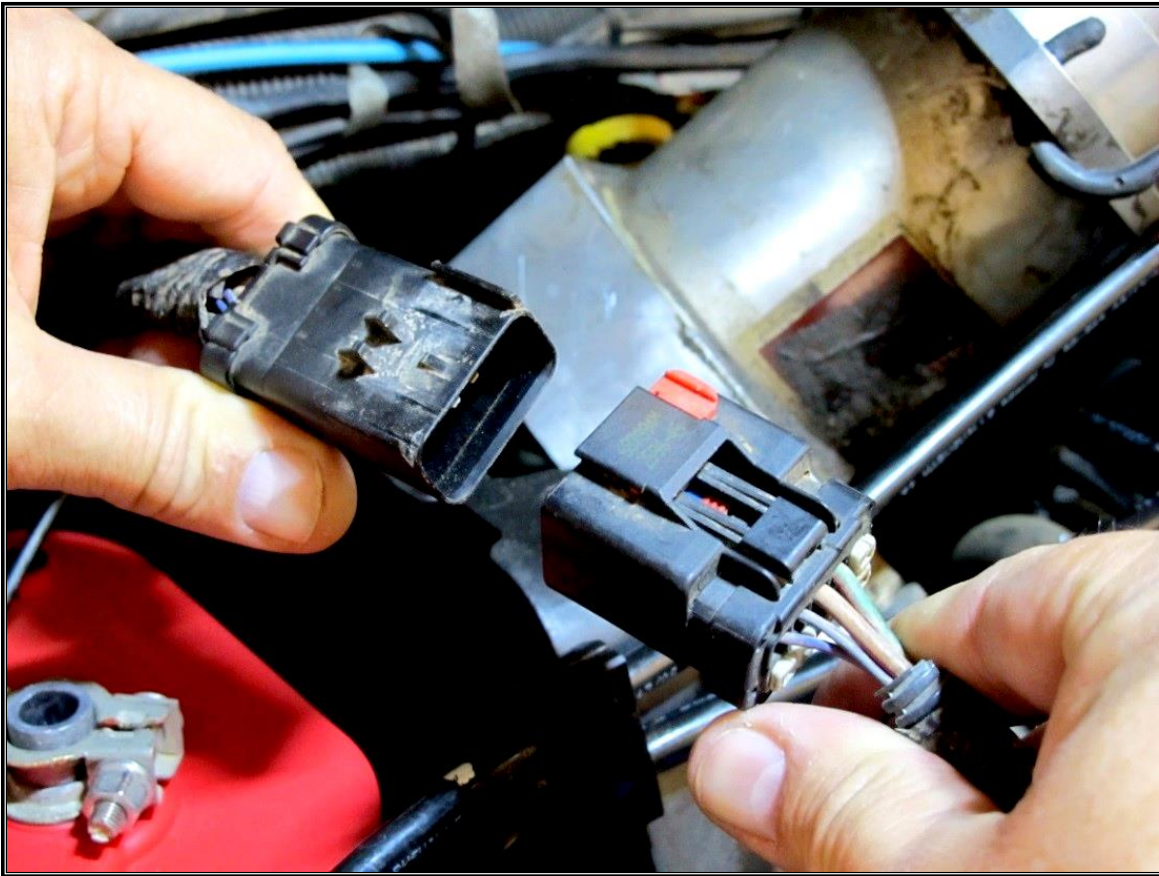
**Step 12:** Use a **flathead screwdriver** to lightly pry the factory wiring and connector from the right side of the battery box.



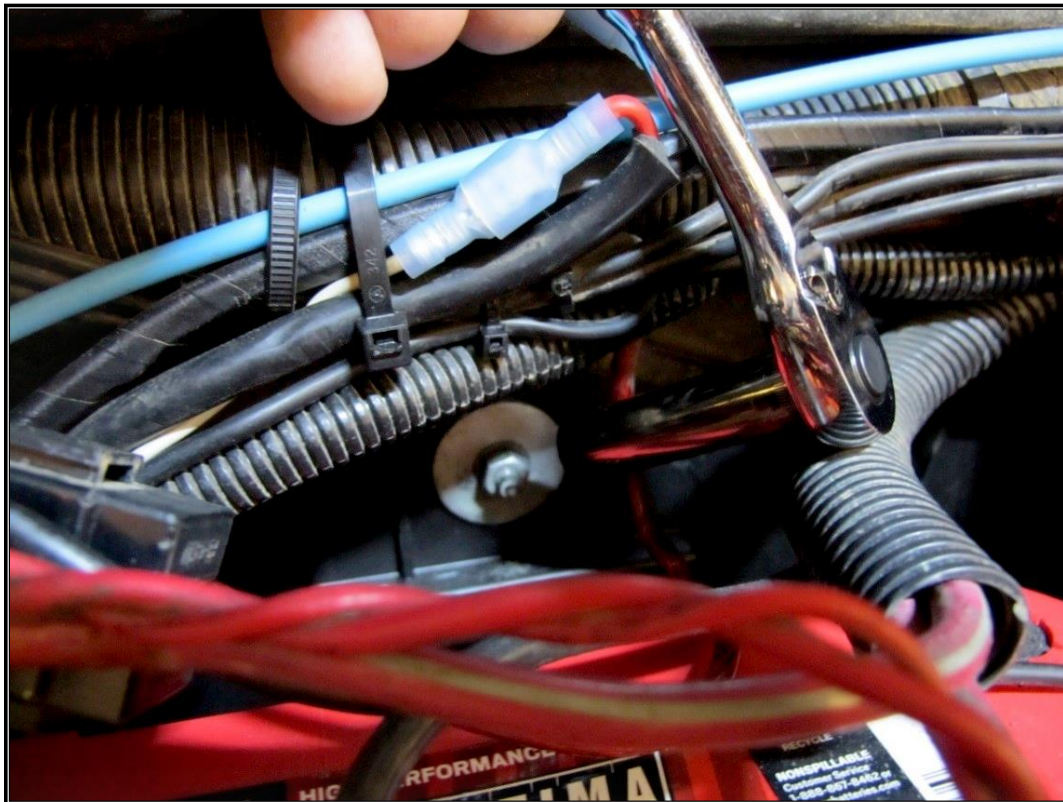
**Step 13:** After you remove the connector, “unlock” the red tab by using a **flathead screwdriver**.



**Step 14:** With the tab unlocked unplug the connector.

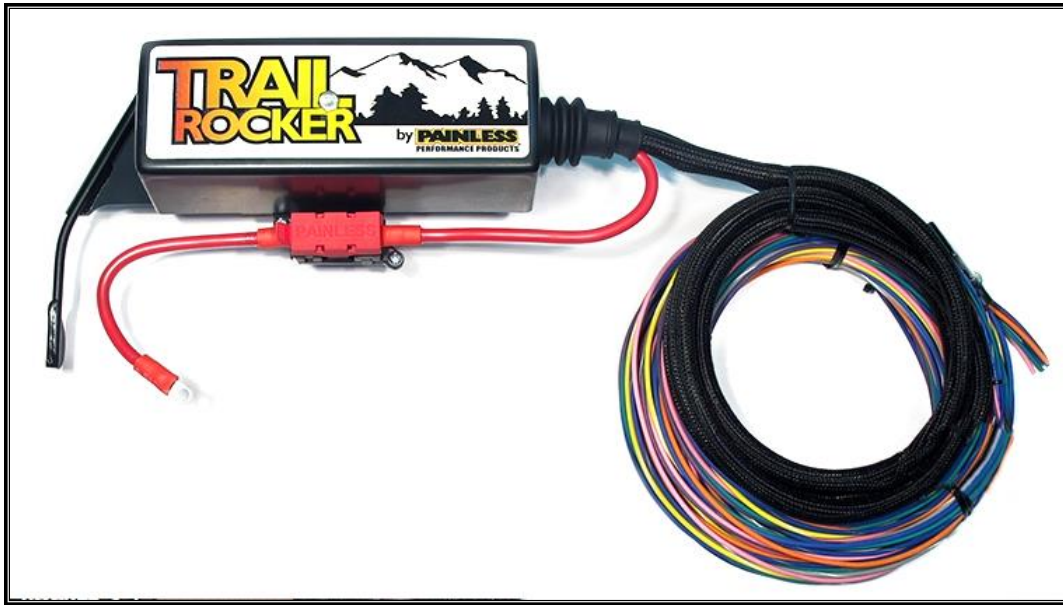


**Step 15:** Use a **10mm wrench** or **socket** to remove the battery tray mounting nut from the stud on the firewall.

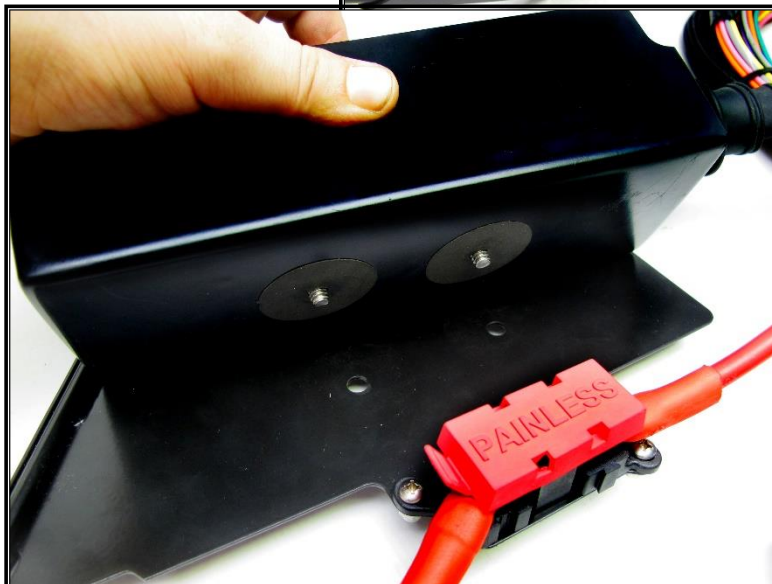
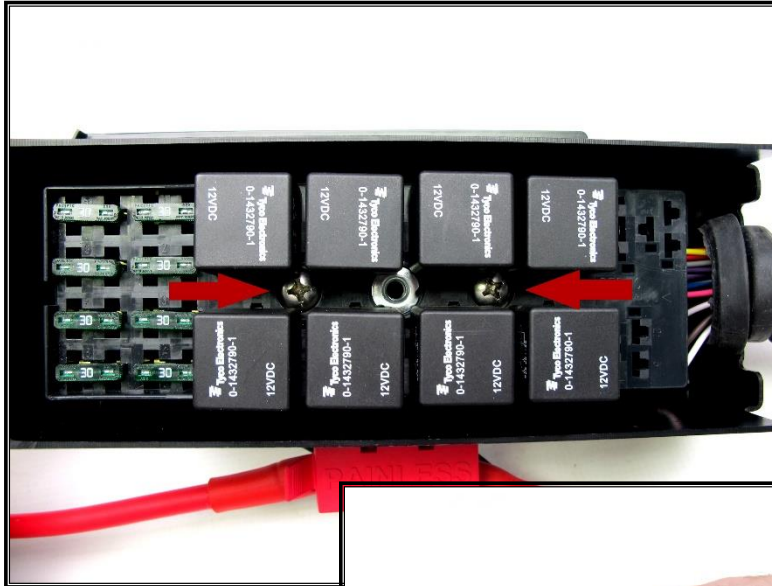




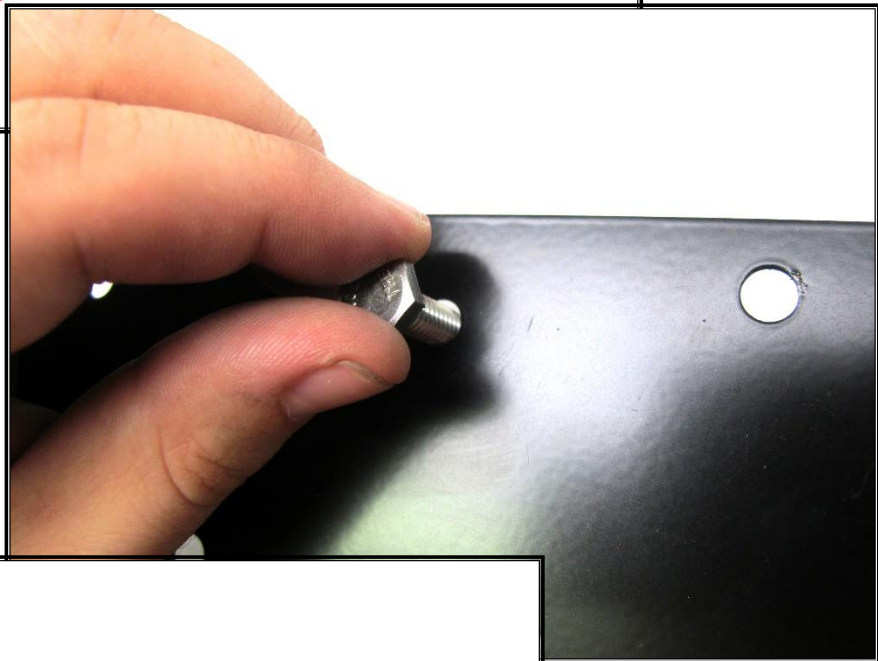
**Step 16:** Remove the Fuse/Relay Center from the bracket. To do this remove the lid from the Fuse/Relay Center using a  $\frac{1}{16}$ " wrench or socket.



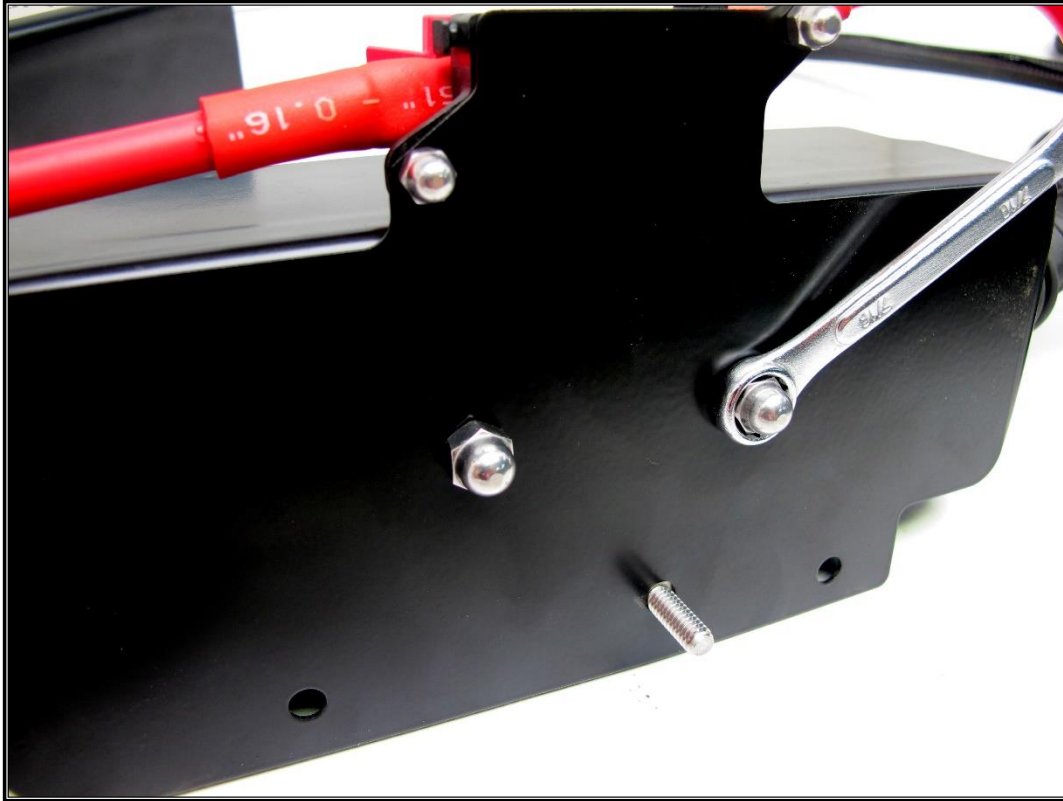
**Step 17:** Once the cover is removed, notice the mounting bolts located below the relays. Use a **#2 Stubby Philips-head screwdriver** to hold the bolts in place while you remove the **1/4" threaded, acorns nuts** on the bottom of the unit with a **7/16" wrench or socket**.



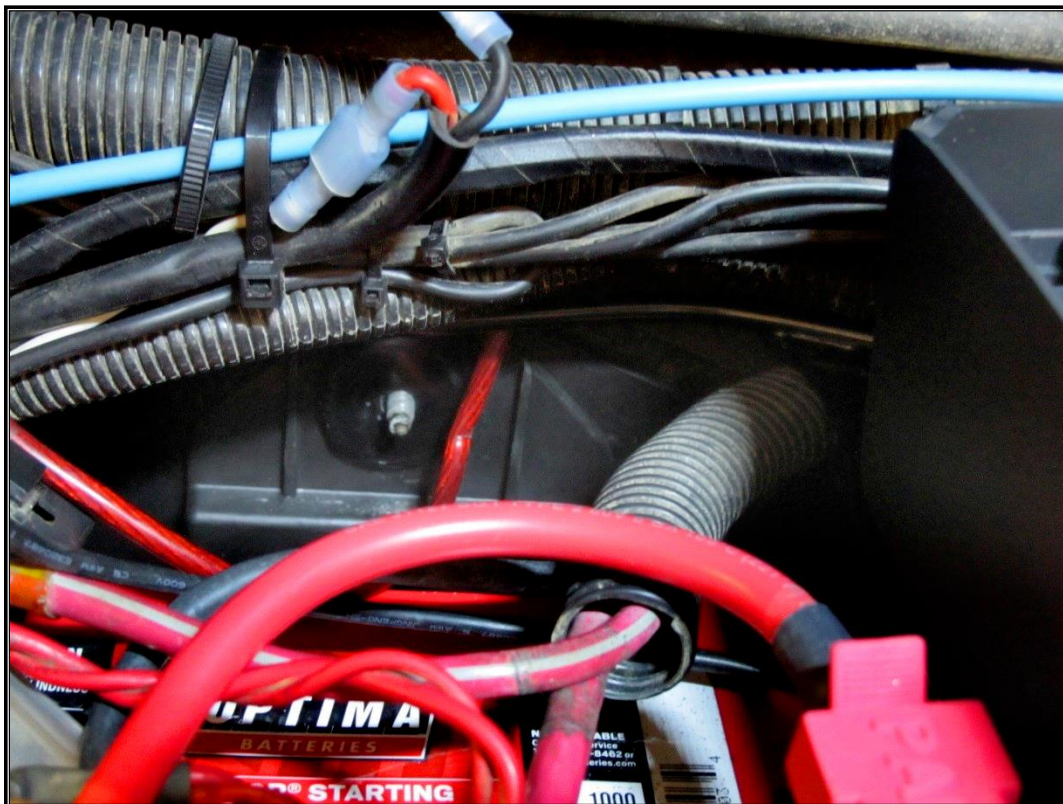
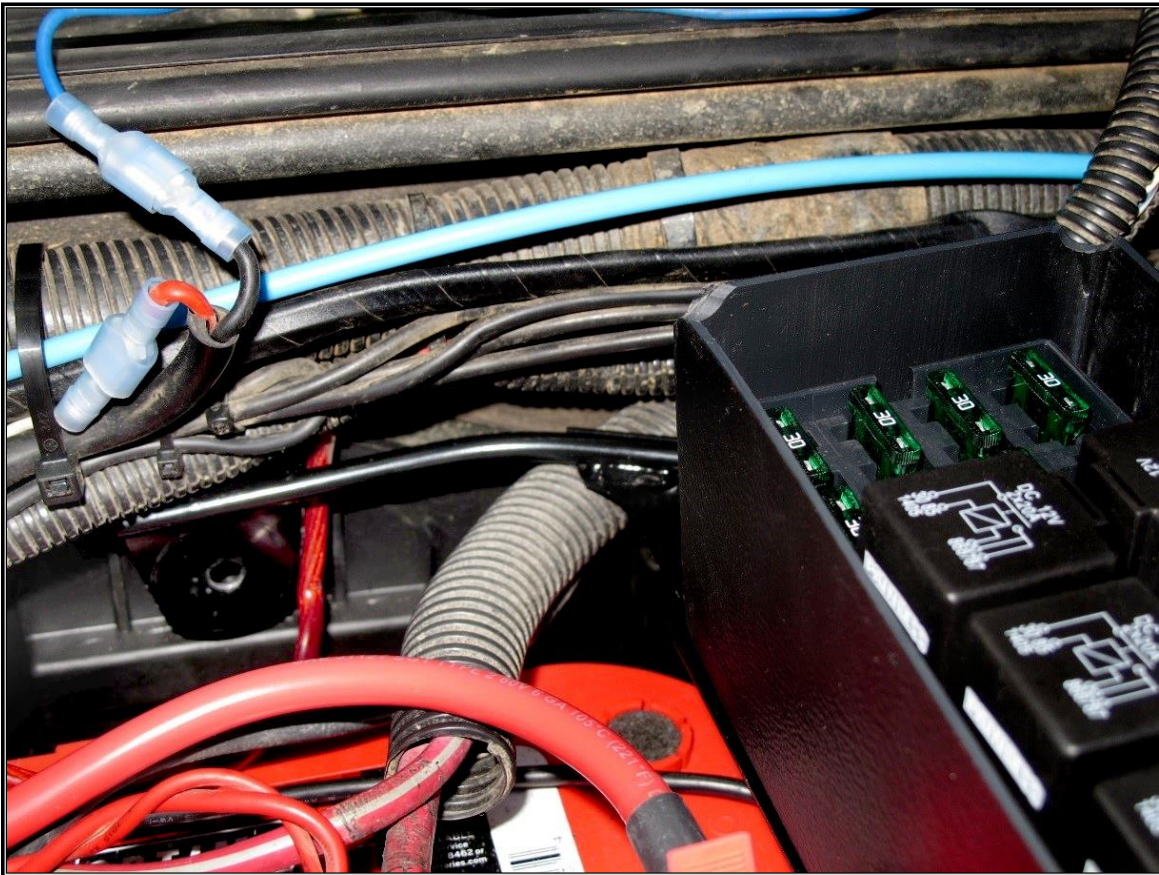
**Step 18:** With the Fuse/Relay Center removed locate the center hole on the bracket and a  $\frac{1}{4}$ "-20 stainless bolt. Insert the bolt into the center hole.



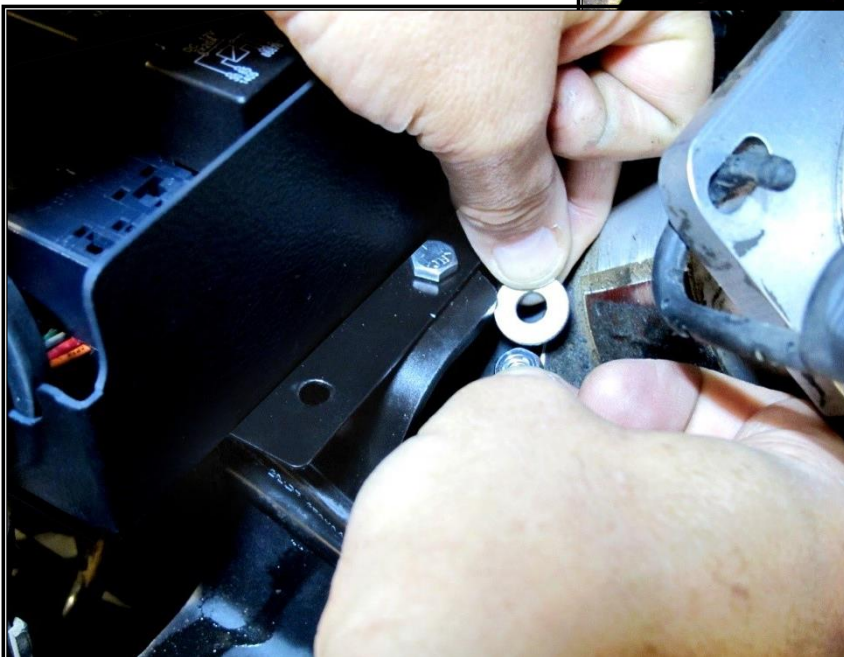
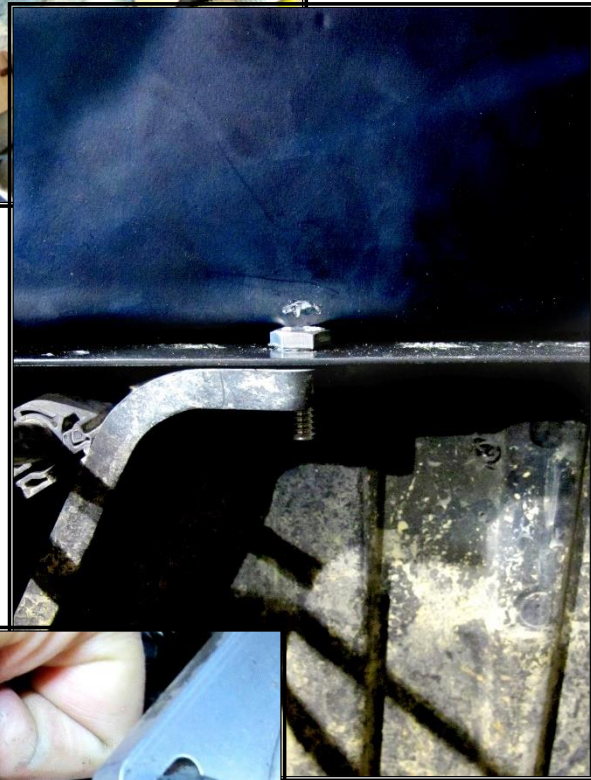
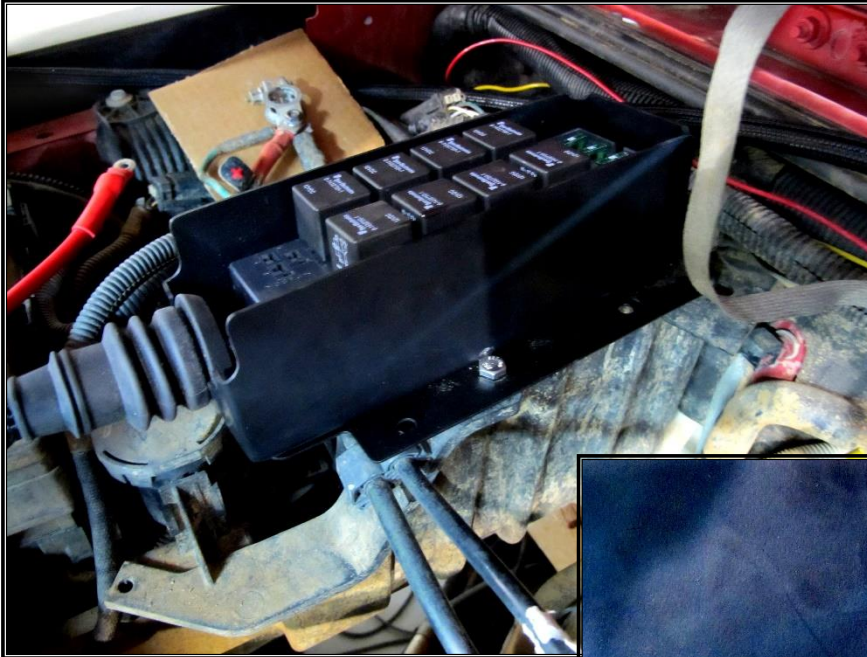
**Step 19:** Fasten the bracket to the Fuse/Relay Center using the  $\frac{1}{4}$ " threaded, acorns nuts you removed in Step 17.



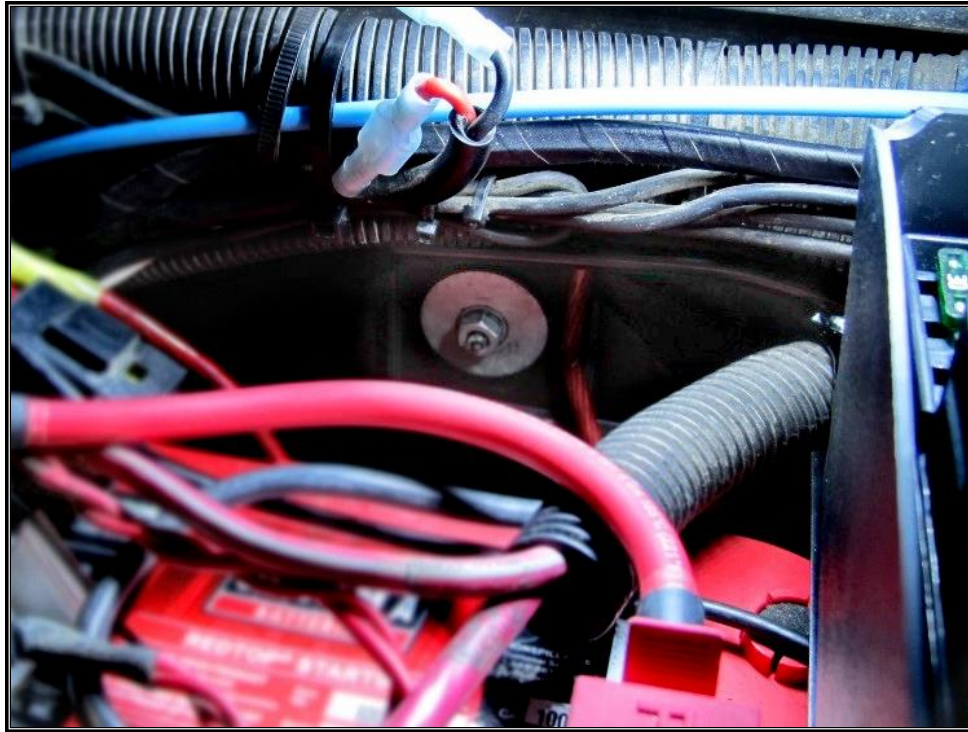
**Step 20: Position the Fuse/Relay Center mounting bracket over the factory firewall mounted stud, and hand-tighten the factory battery tray nut onto the firewall stud.**



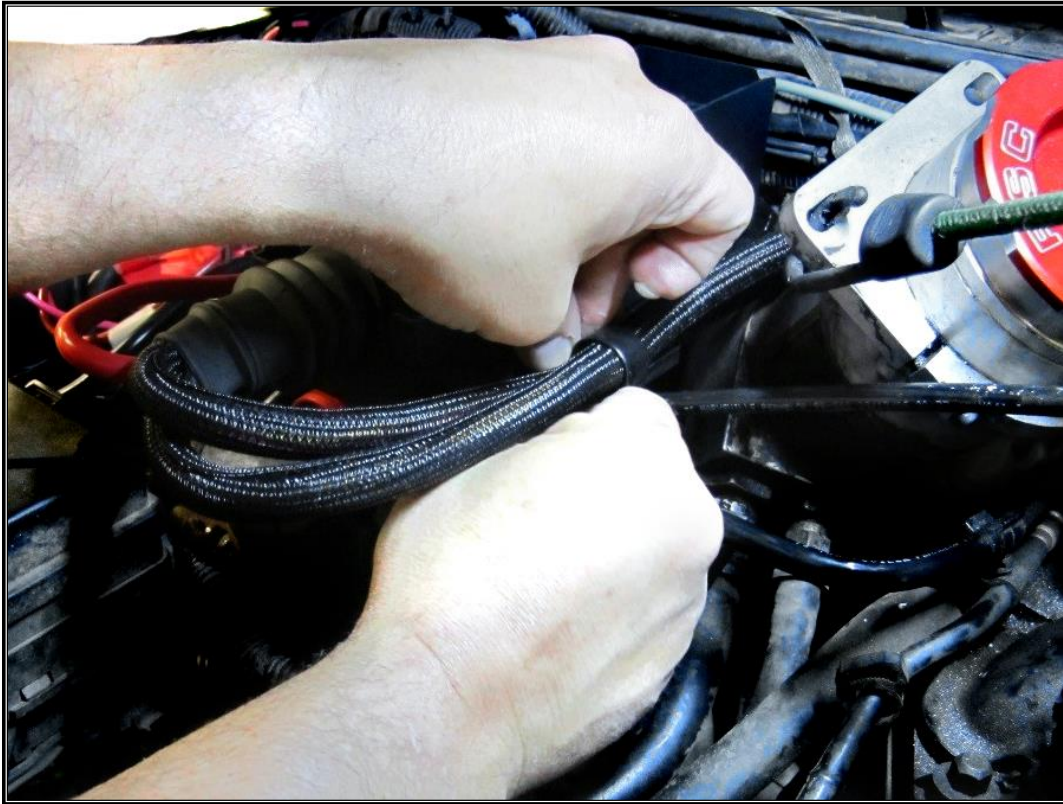
**Step 21:** Use the provided (1) ¼"-20 bolts, (1) flat washers, and (1) nylon locking nuts to mount the Fuse/Relay Center mounting bracket to the factory battery tray as shown.



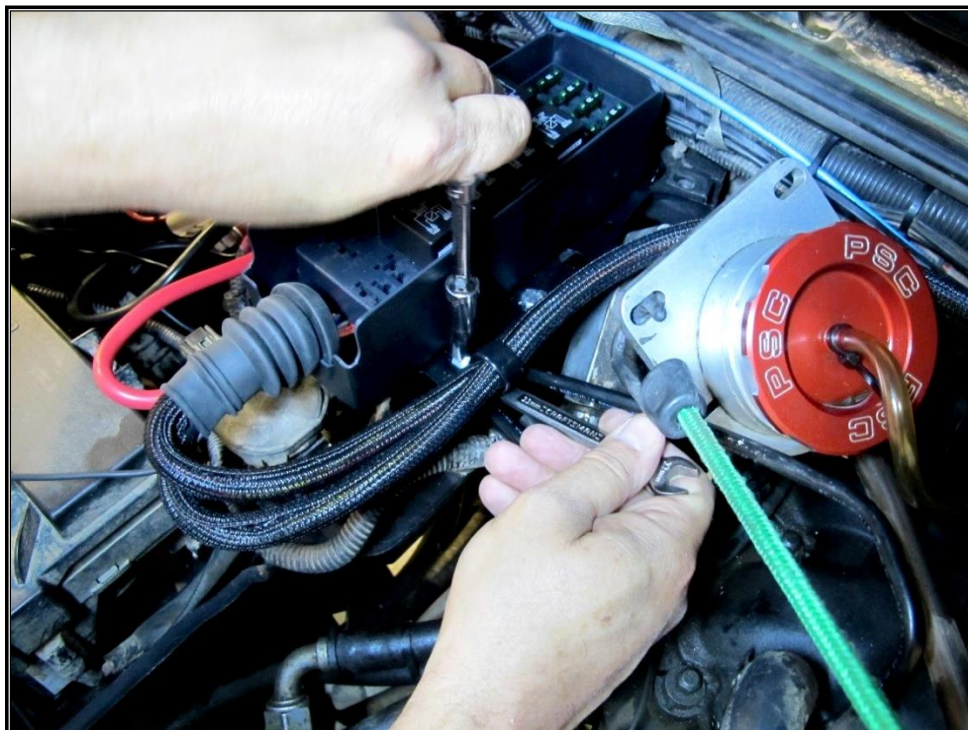
**Step 22:** Use a **10mm wrench** or **socket** to reinstall the factory battery tray nut to stud on the firewall, and secure the Fuse/Relay Center mounting bracket.



**Step 23:** Position a 1" Adel clamp over the Fuse/Relay Center control wires.



**Step 24:** Mount the Adel clamp to the hole on the Fuse/Relay Center bracket using a supplied (1) 1/4"-20 Bolt, (1) flat washer, and (1) 1/4" nylon locking nut.





**Step 25:** Route the Fuse/Relay Center control wires across the firewall. Secure the control wires to the factory harness loom using the provided [zip-ties](#). Remember, also, to reconnect the factory connector you unplugged in Steps 12-14.



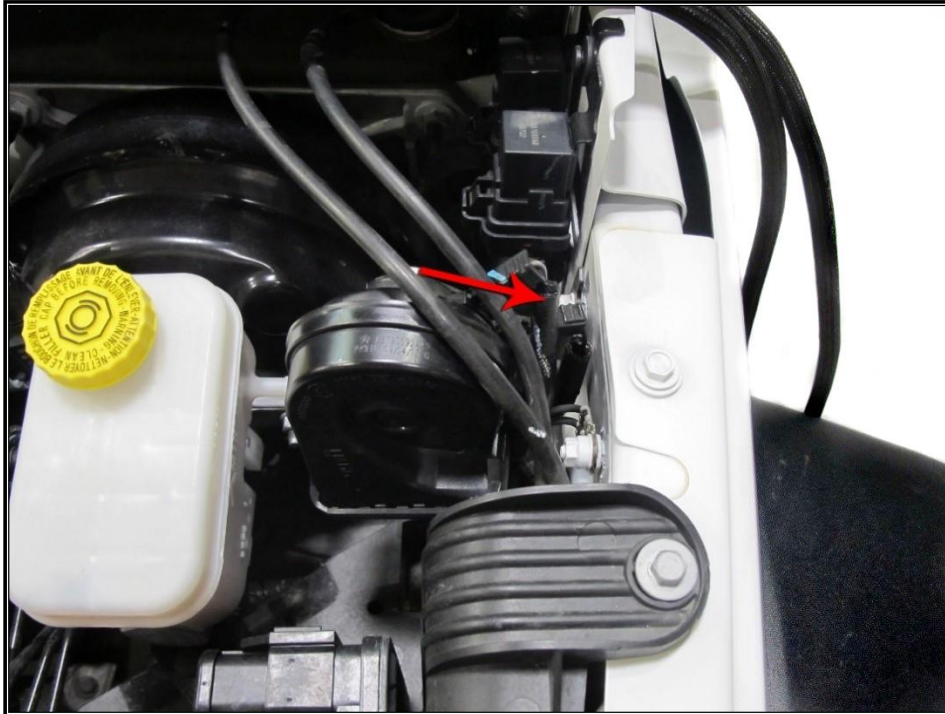
**IF YOUR JEEP HAS AN AUTOMATIC TRANSMISSION,  
FOLLOW STEPS 26 - 32 BEGINNING ON [PAGE 22](#)**

**IF YOUR JEEP HAS A MANUAL TRANSMISSION, FOLLOW  
STEPS 33 - 38 BEGINNING ON [PAGE 26](#).**

## **w/ AUTOMATIC TRANSMISSION**

The following steps are for an automatic transmission. If you have a manual transmission, please skip to **Step 33** on [page 26](#).

**Step 26:** On the driver side of the engine bay, locate the horn and remove it using a **10mm wrench** or **socket**.

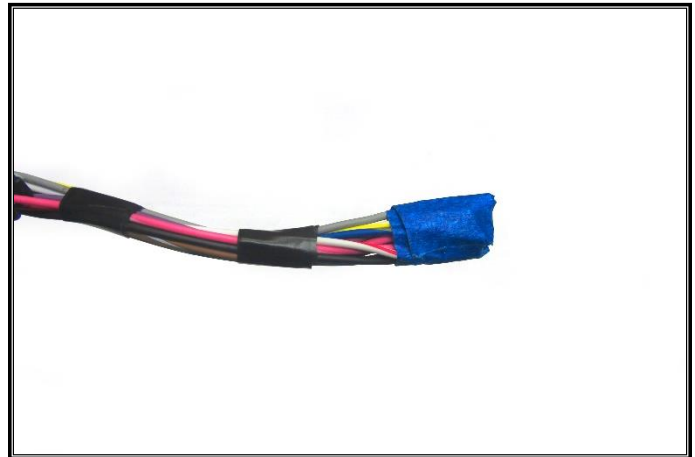
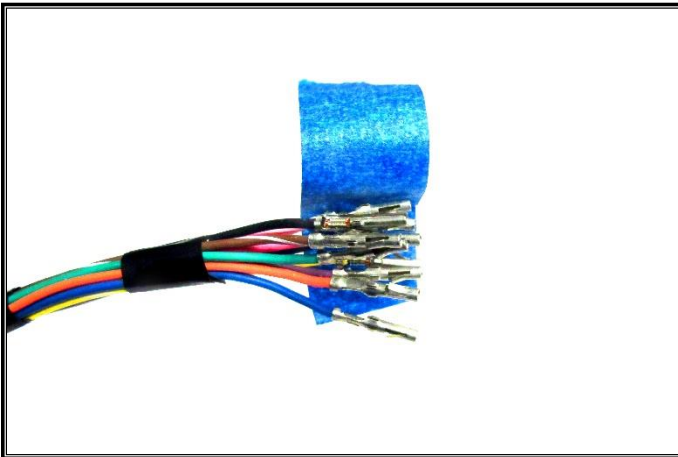


**Step 27:** With the horn removed, you can now access the pass-through on the firewall. This is your access point to route the **Switch Control wires** into the interior. **(Note: You may need to push open the factory carpet using your finger)**

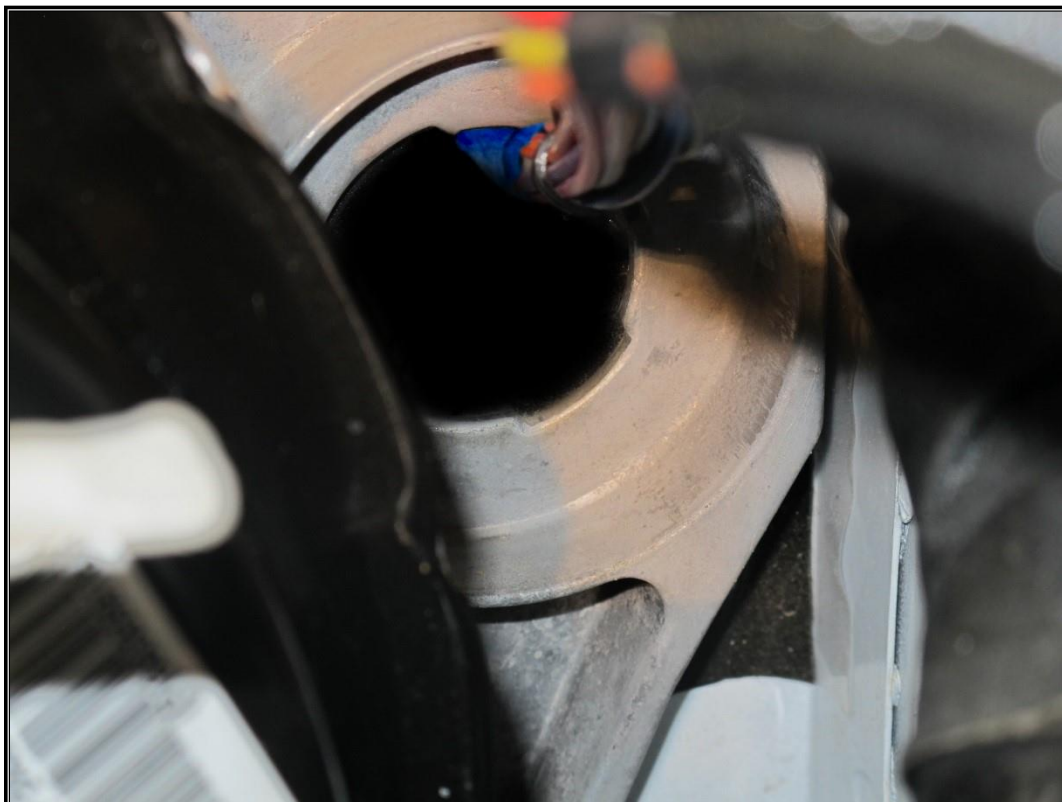


**Step 28:** Next, secure the loose ends of the **Switch Control wires** with a piece of **masking tape**. This step is necessary to insure ease when feeding the wire through the firewall on **Step 29**. Failing to tape the ends can cause the loose wires to catch on the internal structure of the dash.

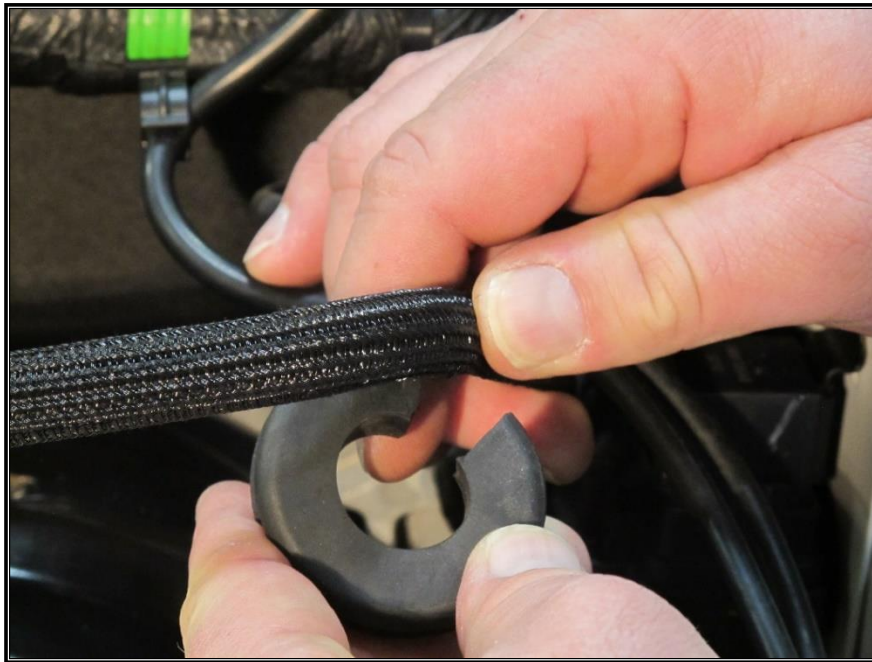
**WARNING: MAKE SURE YOUR SYSTEM IS NOT CONNECTED TO THE BATTERY! THESE WIRES ARE HOT WHEN THE TRAIL ROCKER HAS POWER AND WILL SHORT THE SYSTEM OUT IF THEY TOUCH AS SEEN IN THE IMAGES BELOW. AGAIN, DO NOT RECONNECT THE BATTERY UNTIL INSTRUCTED.**



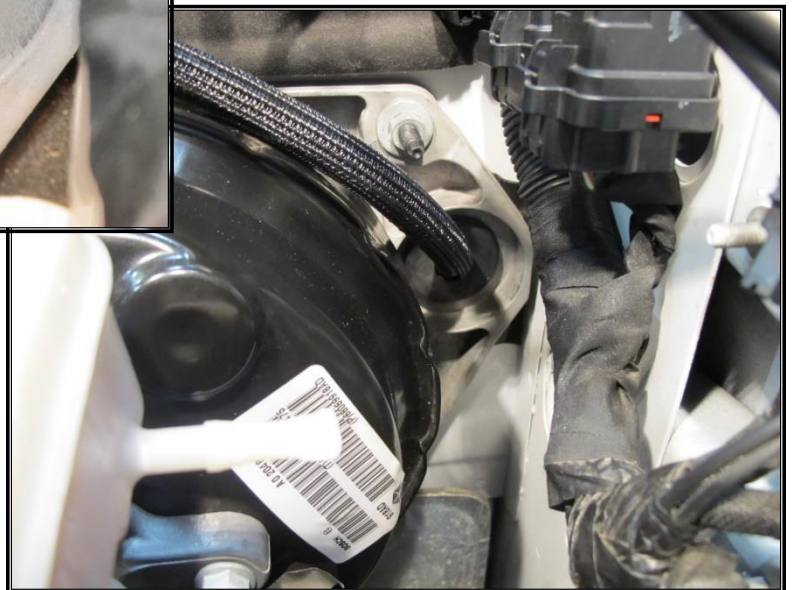
**Step 29:** Carefully route the **Switch Control wire connector** through the pass-through.



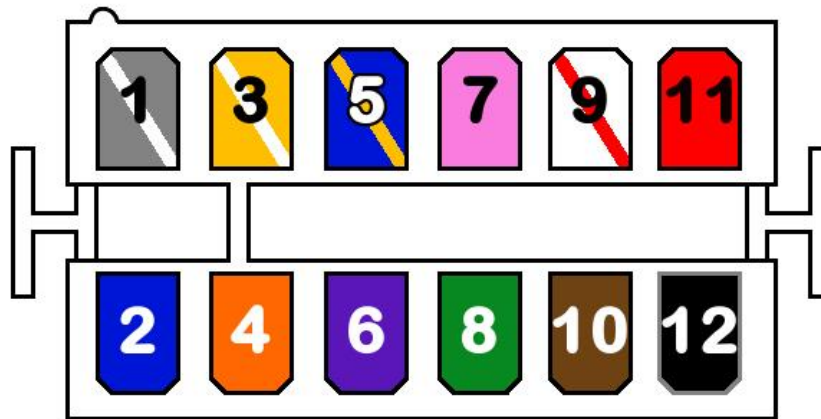
**Step 30:** Apply the provided **rubber grommet** over the **Switch Control wires** with the slit facing up.



**Step 31:** Push the **rubber grommet** into the firewall access hole as shown.



**Step 32:** On the interior, remove the tape and locate the **12-pin connector** shell in your parts kit. Then, connect the pinned wires from the **Fuse/Relay Center** using the diagram below. **NOTE:** The diagram below shows the connector from the wire side.



<b>WIRE</b>	<b>FUNCTION</b>
1 - Grey/White	Relay 1 Enable
2 - Blue	Relay 2 Enable
3 - Yellow/White	Relay 3 Enable
4 - Orange	Relay 4 Enable
5 - Blue/Yellow	Relay 5 Enable
6 - Purple	Relay 6 Enable
7 - Pink	Relay 7 Enable
8 - Green	Relay 8 Enable
9 - White/Red	Winch IN
10 - Brown/White	Winch OUT
11 - Red	Switch Power
12 - Black	Switch Ground

Now, move to **Step 39** on [page 30](#) for the **Switch Panel** installation.

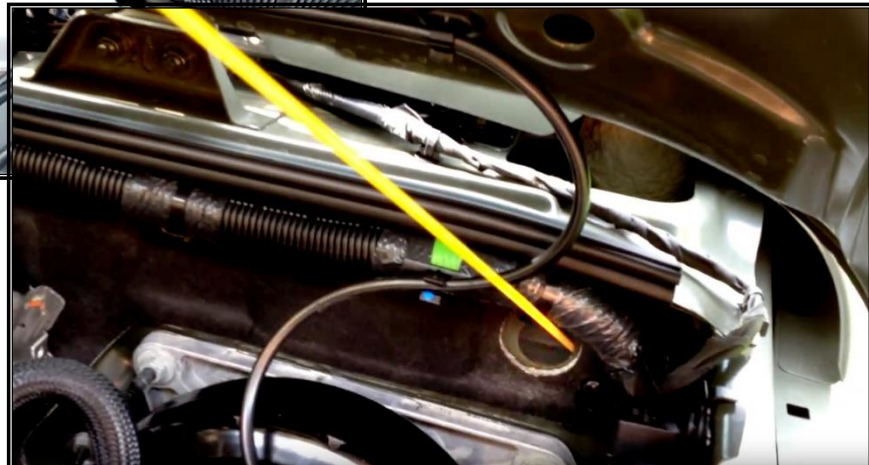
## w/ MANUAL TRANSMISSION

The following steps are for a manual transmission. If you have an automatic transmission, please go back to **Step 26** on [page 22](#).

**Step 33:** Locate the pass-through above the brake booster on the firewall and remove the factory grommet.

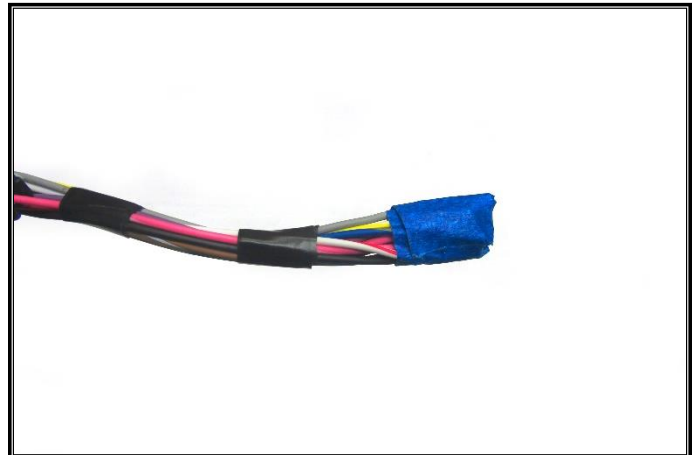
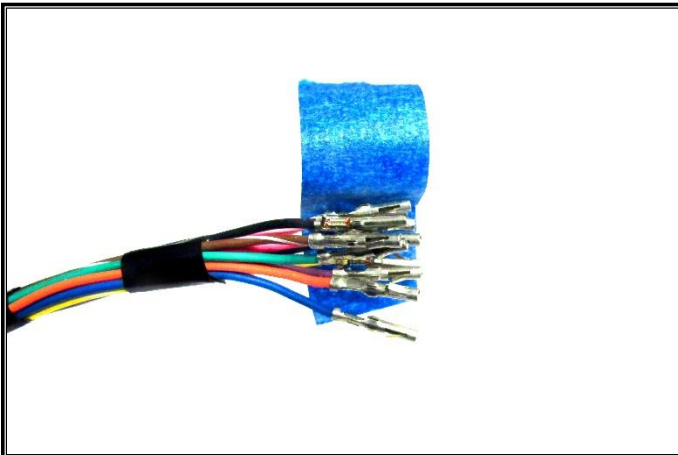


**Step 34:** Using something rigid, you will be able to tape and guide the Switch Control wires through the firewall.



**Step 35:** Next, secure the loose ends of the **Switch Control wires** with a piece of **masking tape**. This step is necessary to insure ease when feeding the wire through the firewall on **Step 36**. Failing to tape the ends can cause the loose wires to catch on the internal structure of the dash.

**WARNING: MAKE SURE YOUR SYSTEM IS NOT CONNECTED TO THE BATTERY! THESE WIRES ARE HOT WHEN THE TRAIL ROCKER HAS POWER AND WILL SHORT THE SYSTEM OUT IF THEY TOUCH AS SEEN IN THE IMAGES BELOW. AGAIN, DO NOT RECONNECT THE BATTERY UNTIL INSTRUCTED.**



**Step 36:** Carefully route the **Switch Control wire connector** through the pass-through.



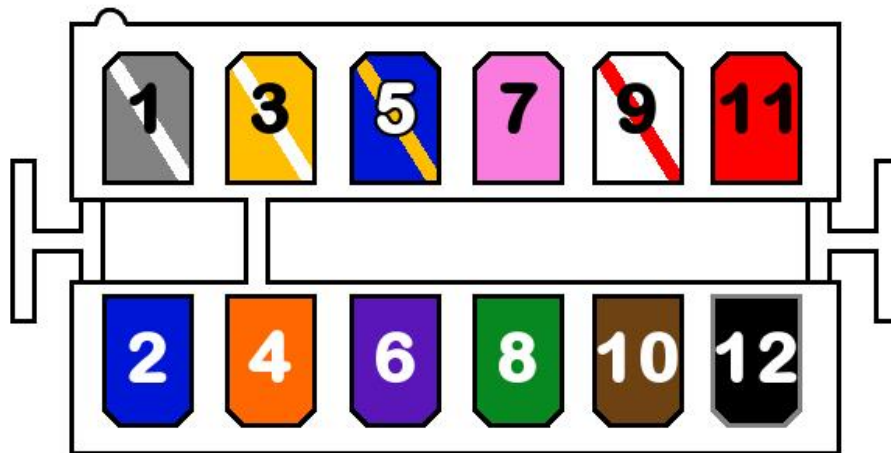
**Step 37:** Apply the provided **rubber grommet** over **Switch Control wires** with the slit facing up and press the **rubber grommet** into the hole on the firewall.



**Step 38:** On the interior, remove the tape and locate the **12-pin connector** shell in your parts kit. Then, connect the pinned wires from the **Fuse/Relay Center** using the diagram below. **NOTE:** The diagram below shows the connector from the wire side.







<b>WIRE</b>	<b>FUNCTION</b>
1 - Grey/White	Relay 1 Enable
2 - Blue	Relay 2 Enable
3 - Yellow/White	Relay 3 Enable
4 - Orange	Relay 4 Enable
5 - Blue/Yellow	Relay 5 Enable
6 - Purple	Relay 6 Enable
7 - Pink	Relay 7 Enable
8 - Green	Relay 8 Enable
9 - White/Red	Winch IN
10 - Brown/White	Winch OUT
11 - Red	Switch Power
12 - Black	Switch Ground

Now, move to **Step 39** on [page 30](#) for the **Switch Panel** installation.

## SWITCH PANEL INSTALLATION

**Step 39:** Now, move to the interior of the vehicle. In order to install the switch panel, you will need to remove a few pieces above the windshield. First, use a **T20 Torx driver** to remove the 2 bolts holding the driver side sun visor in place. Once loose, remove the sun visor and set it to the side.



**Step 40:** Use a **Phillips head screwdriver** to carefully remove the plastic screw/clip holding on the upper A-pillar cover.



**Step 41:** With the plastic clip removed, carefully grab the plastic panel as shown and pull down until it releases from the upper clips.





**Step 43:** Remove the windshield header trim panel by carefully grabbing onto the panel and pulling down until the clips release.



**Step 44:** Once the clips release, slide the panel toward the driver side and out from underneath the passenger side corner panel.



**Step 45:** With the windshield header trim panel out of the way, remove the Footman Loop. Use a **T20 Torx driver** to remove the 2 bolts holding the Footman Loop in place.



**Step 46:** Detach the Switch Panel from the Switch Panel bracket by removing the (3) stainless, button-head cap screws with the 1/8" Allen wrench supplied in the parts kit.





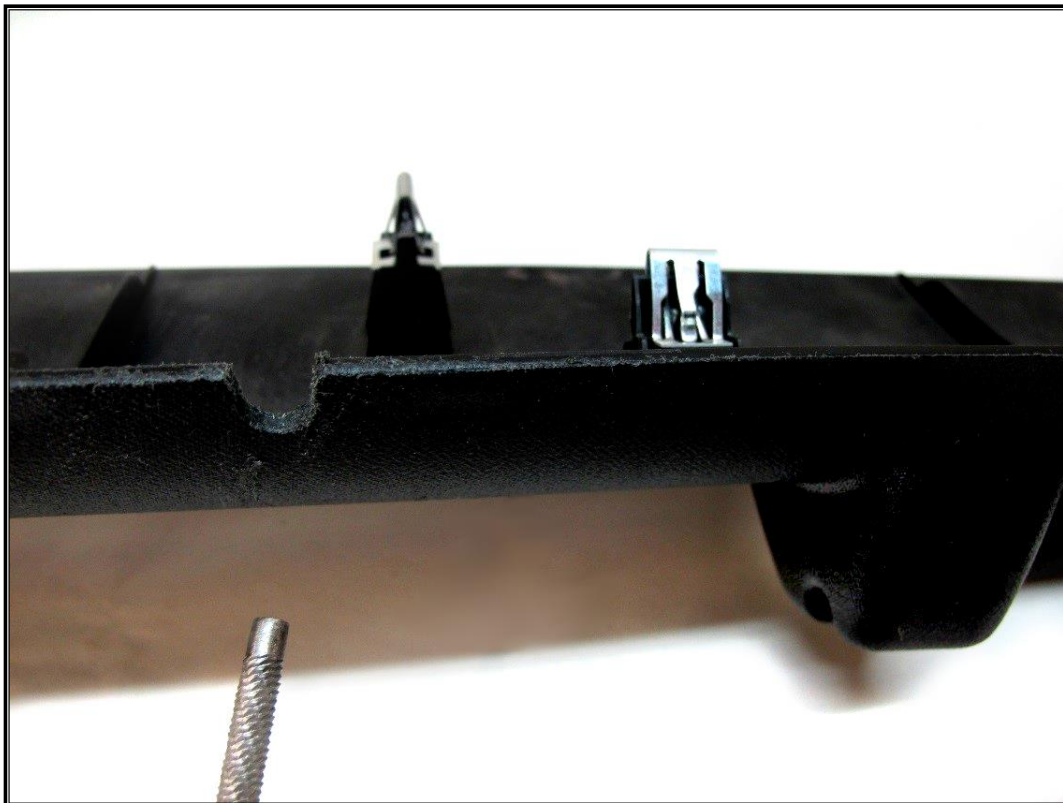
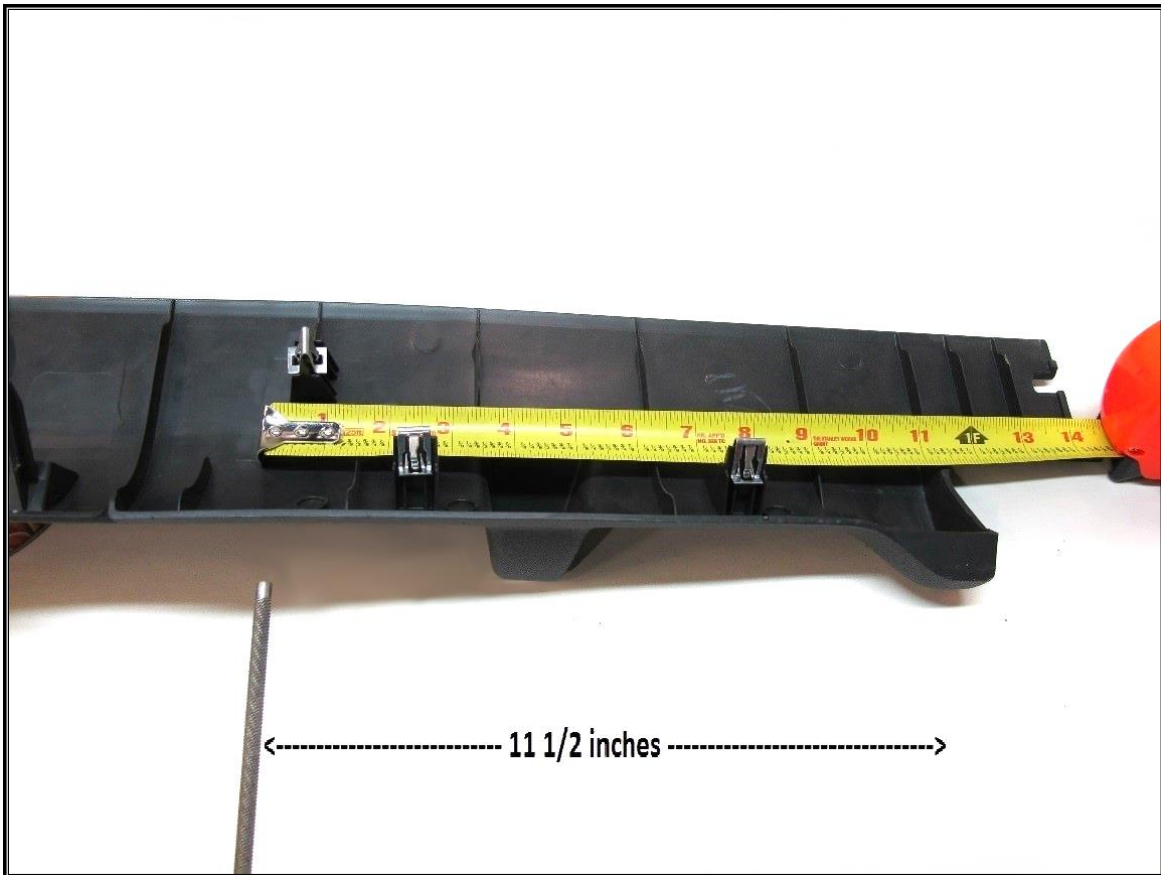
**Step 47:** With the Switch Panel bracket removed, line up the holes of the Footman Loop with those of the bracket and slide in (2) M5x20 bolts, (2) M5 flat washers, and (2) M5 lock washers.



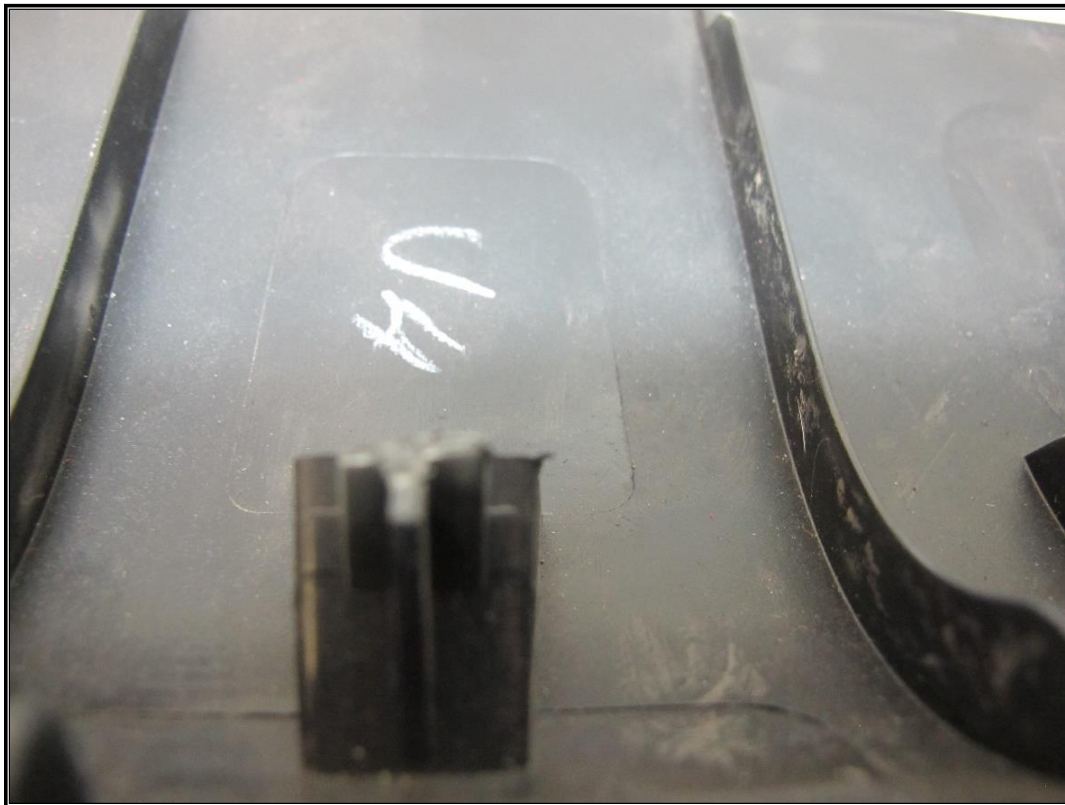
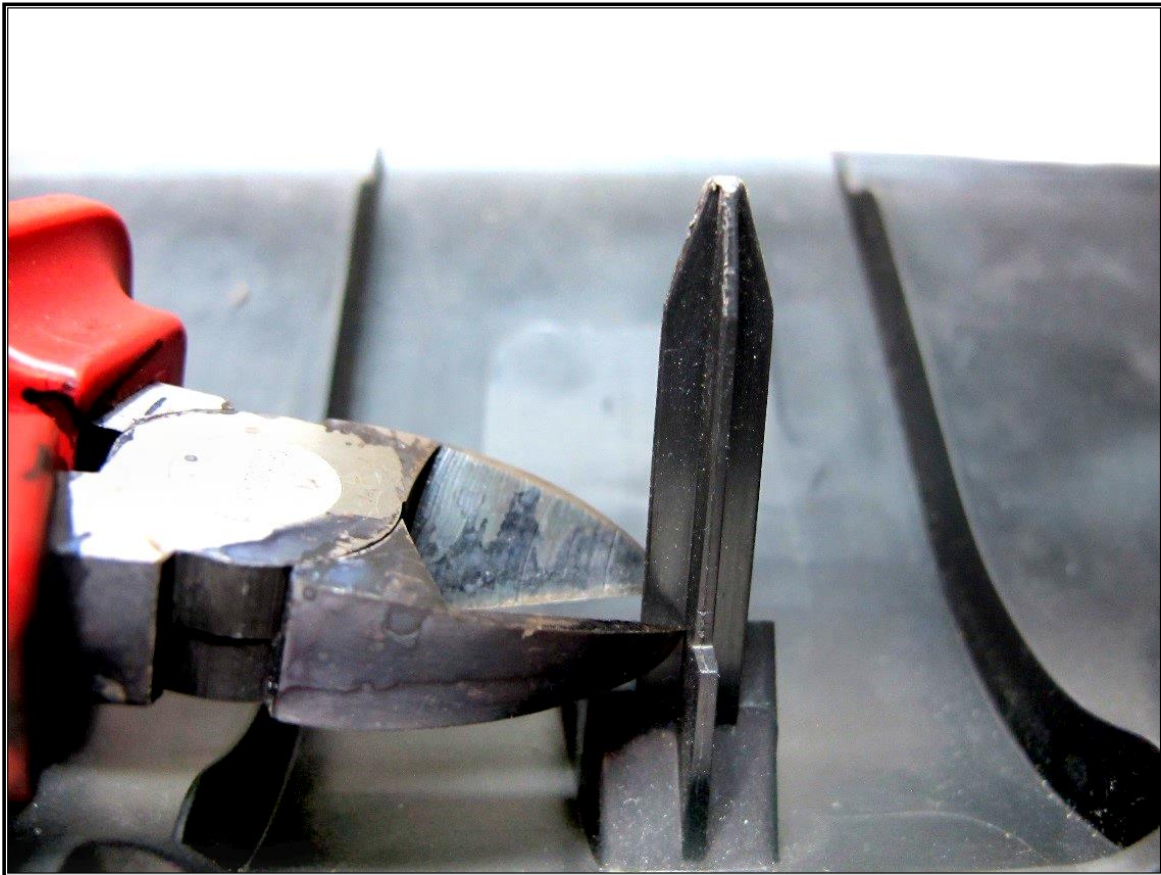
**Step 48:** Reinstall the Footman Loop with the Switch Panel bracket in place. Use a shallow **10mm socket** and **¼" drive ratchet w/ extension** to tighten the Footman Loop and Switch Panel bracket to windshield frame.



Step 49: Next, modify the windshield-header trim panel using a **round file**. Measure **11 1/2"** from the lower edge as shown.



**Step 50:** Trim the center-locating, plastic pin from windshield-header trim panel with a pair of **side cutter pliers**.



**Step 51:** Slide the windshield-header trim panel into the passenger side corner trim. Use the rearview mirror, or an assistant, to temporarily hold the panel in position.



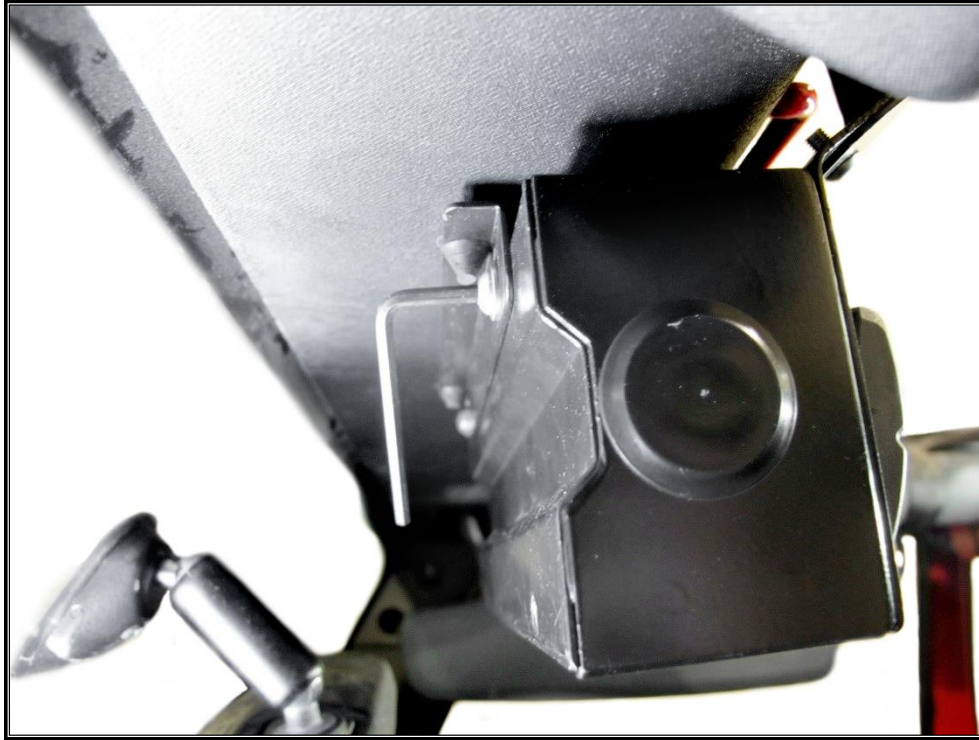
**Step 52:** Loosely position the **Switch Panel** and route the wiring through the trimmed portion of the windshield-header trim panel as shown.



**Step 53:** Reinstall the windshield-header trim panel while supporting the **Switch Panel**. Once clipped, use a  $\frac{1}{8}$ " **Allen wrench** to attach the **Switch Panel** using the **(3) stainless, button-head cap screws** you removed in **Step 46**.



**Step 54:** Use a  $\frac{1}{8}$ " Allen wrench to adjust the stability bracket on the rear of the Switch Panel until it lightly contact the windshield-header trim panel.



**Step 55:** Now, remove the access panel on the driver side of the dash by carefully prying the edge then pulling.

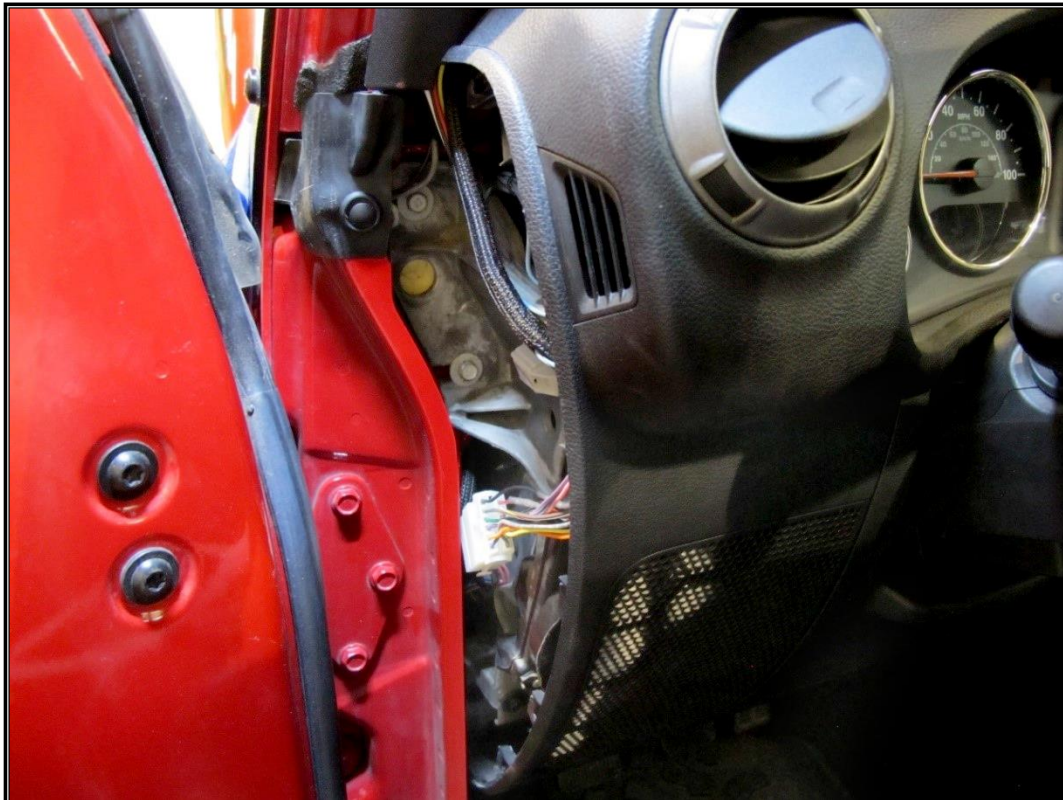


**Step 56:** Route wiring harness from the **Switch Panel** down the A-pillar. Make sure to leave room for the sun visor screws to attach without contacting the wiring harness.

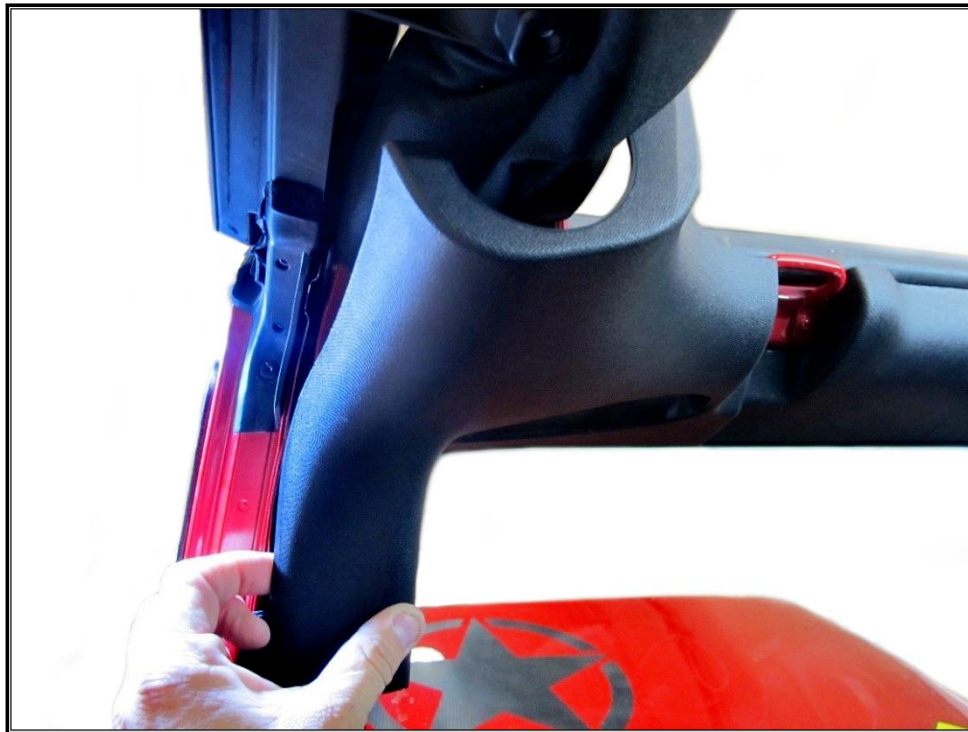




**Step 57:** Route the plug through side panel and connect the male plug from the **Switch Panel** to the female plug from the **Switch Control wires** you passed through the firewall in the previous section. Neatly stow wiring harness.

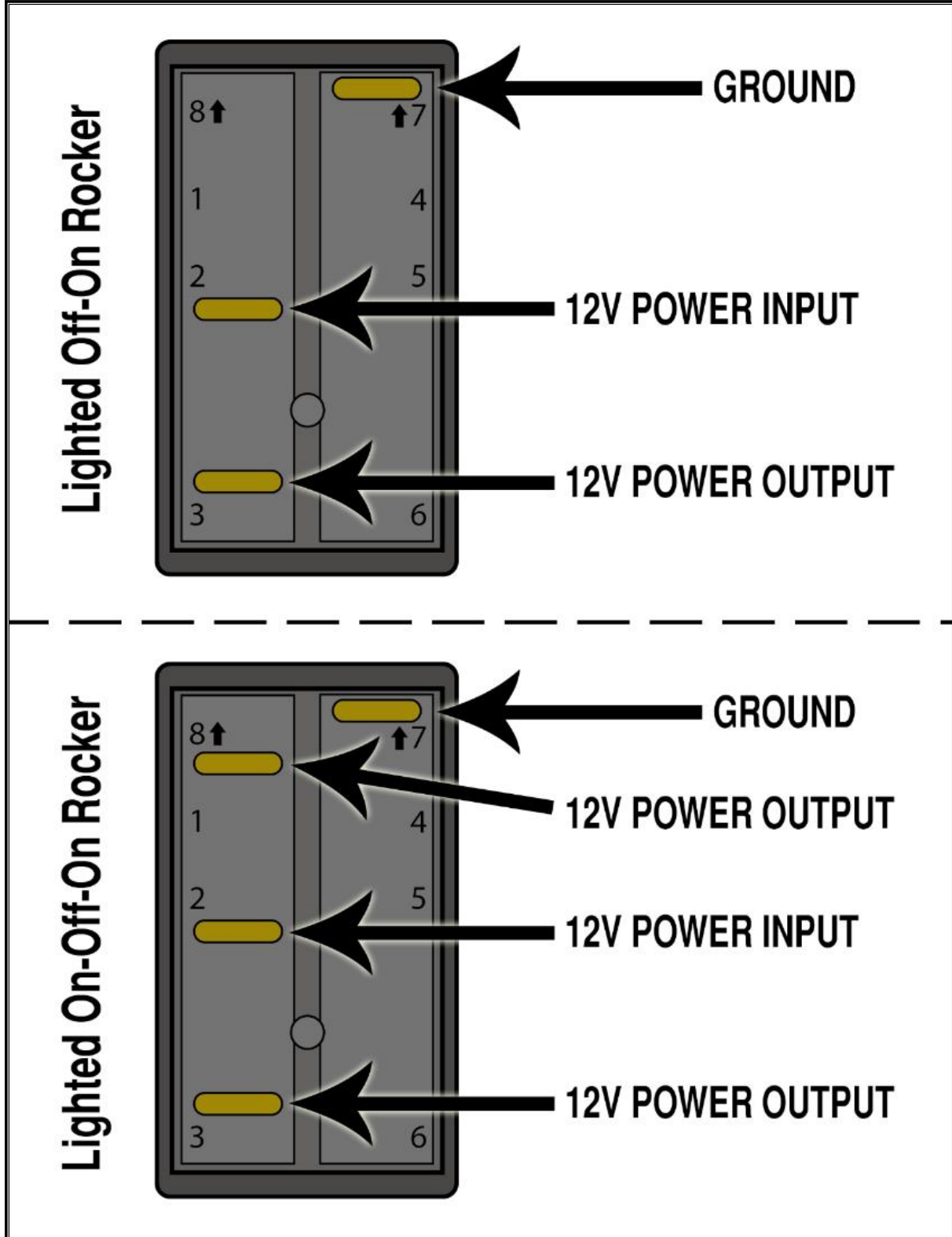


**Step 58:** Reattach the driver side access panel to side of dash. Reinstall the A-pillar, upper corner trim panel and sun visor.



## SWITCH WIRING

The lighted rocker switches included in your kit are wired as shown in the diagram below.

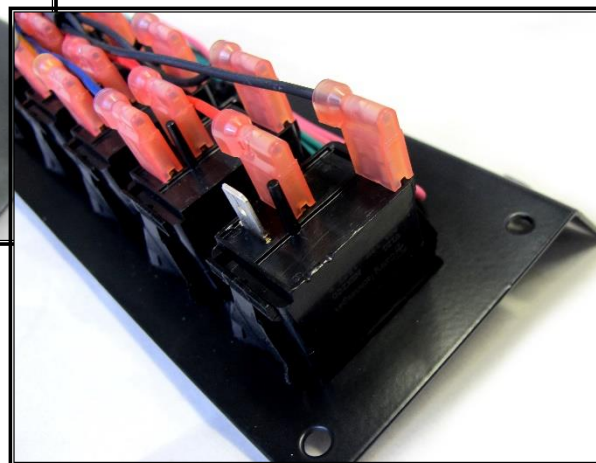
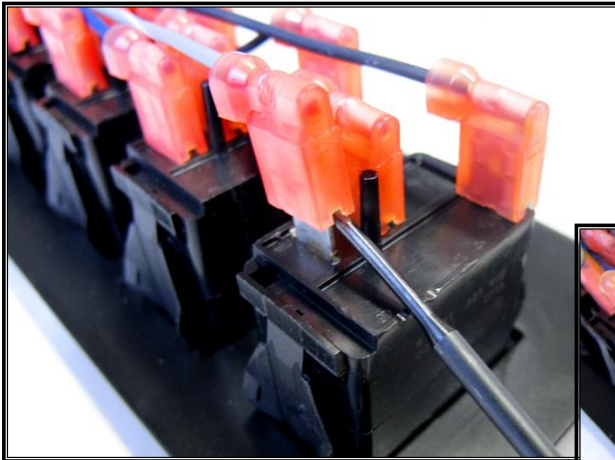


## DOUBLING SWITCH CONTROL WIRES

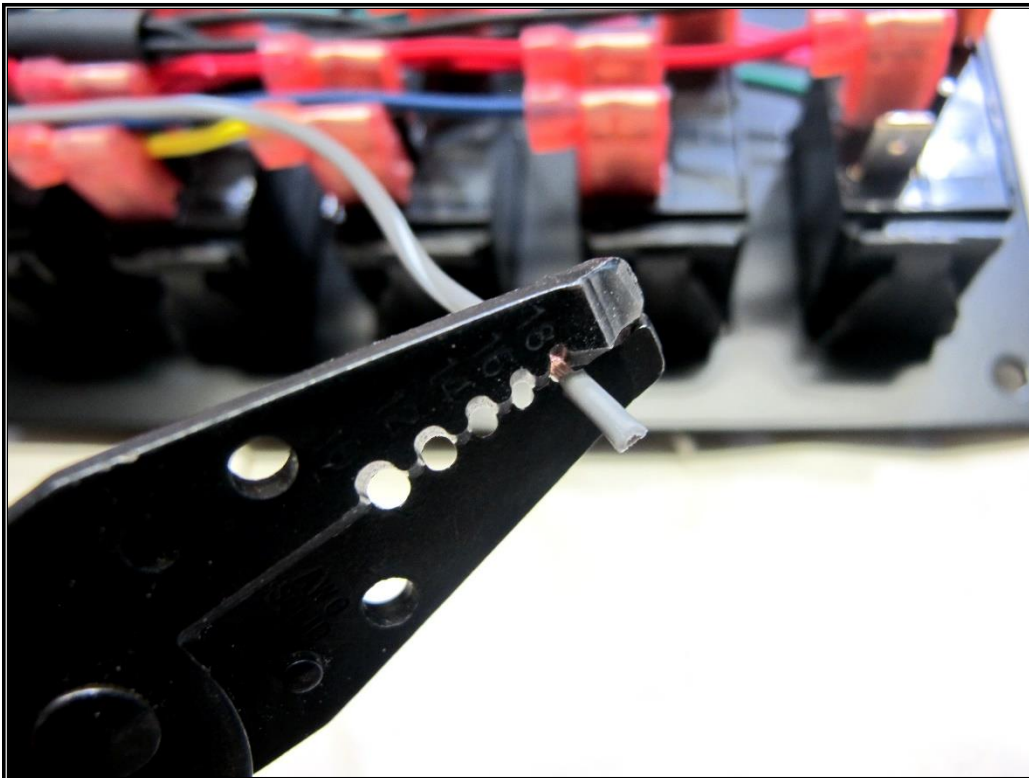
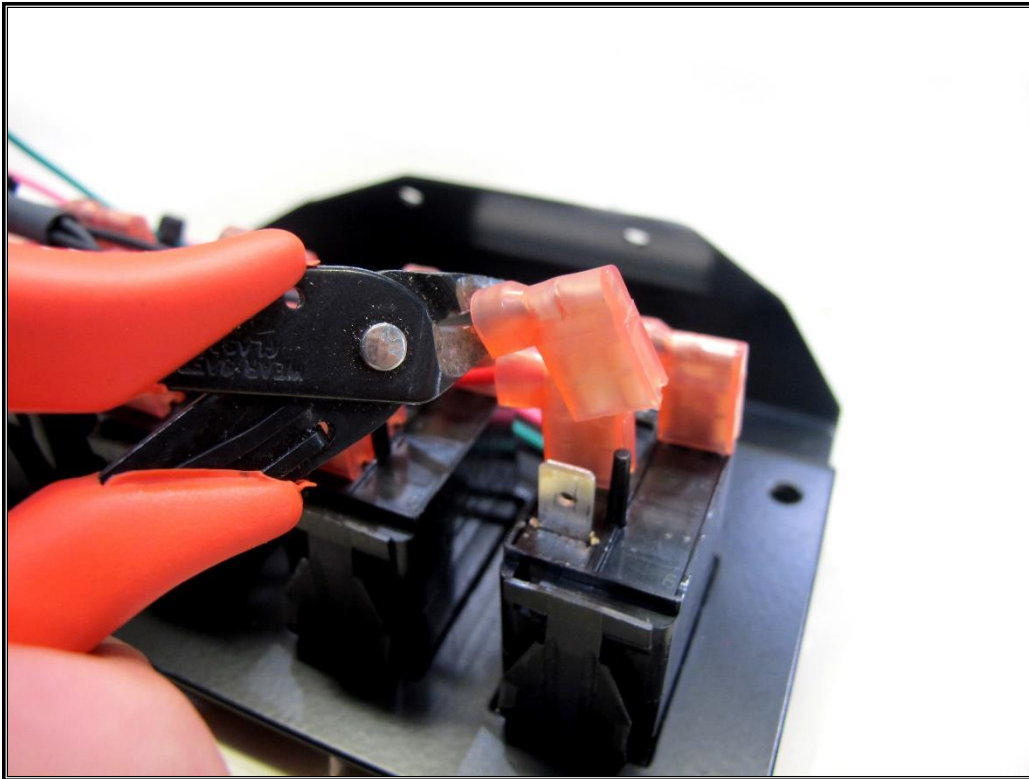
**Steps 59 - 62 are optional and only for those who wish to control multiple functions for one switch.** Provided in the kit are some **16ga. – 14ga. terminals**, similar to those shown below.



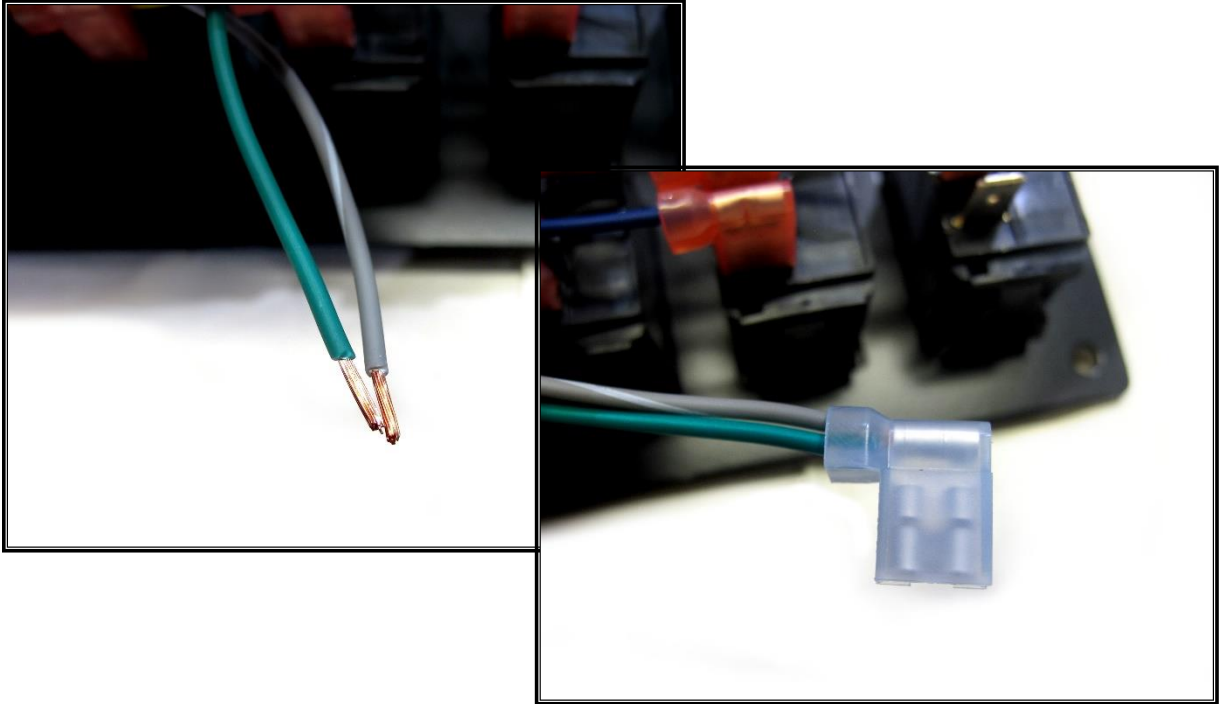
**Step 59:** Choose which switch you want to control multiple functions with, and disconnect the existing **switch control wire** from the terminal on the bottom of the switch (**terminal #3**).



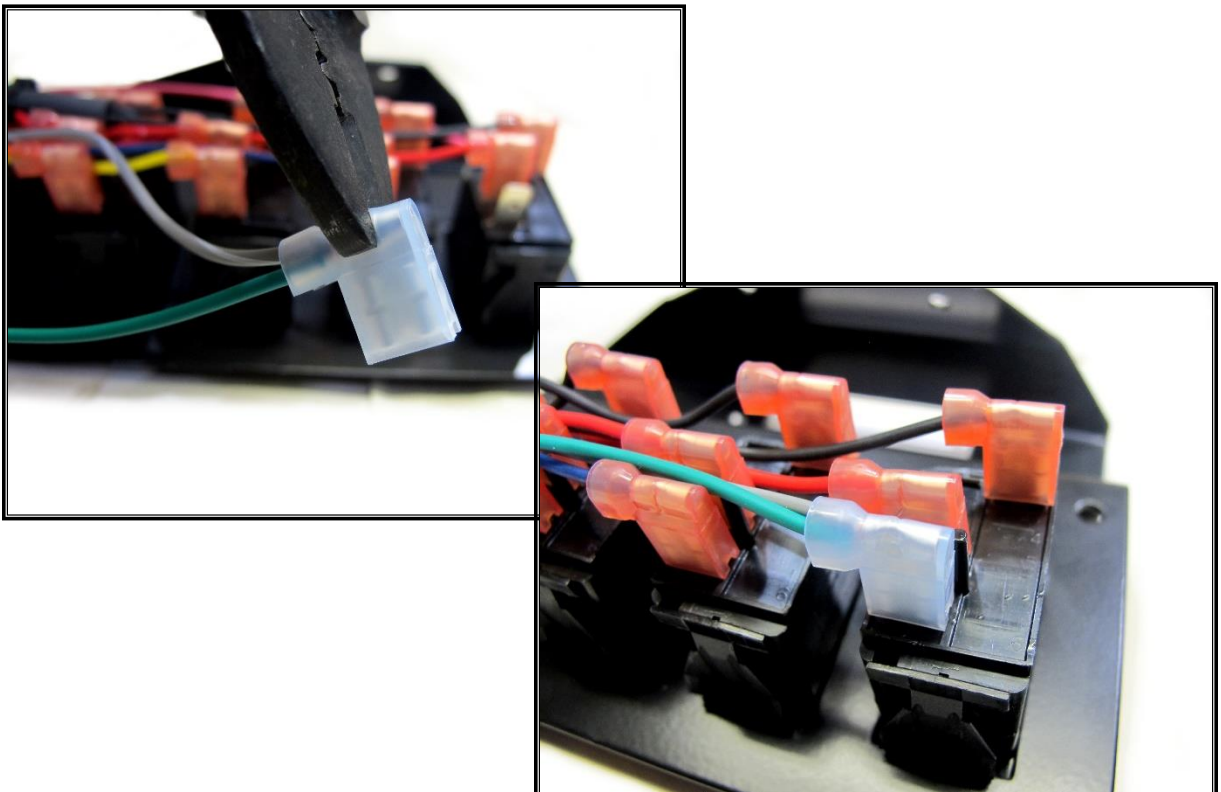
**Step 60:** With the switch control wire removed from the switch, cut off the terminal, and strip the switch control wire  $\frac{1}{4}$ ".



**Step 61:** Take the switch control wire you just stripped and one of the additional switch control wires; then slide them together into a **16-14 ga. terminal** provided in the included parts kit.



**Step 62:** With both wires inside, crimp the terminal, and reconnect the doubled switch control wires to the switch.



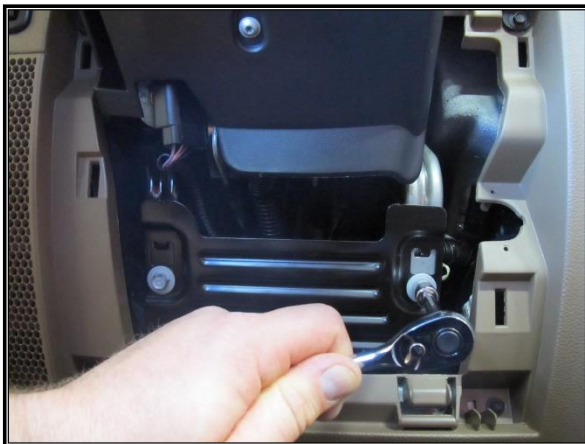
## IGNITION SWITCH PIGTAIL INSTALLATION

**THESE STEPS ILLUSTRATE HOW TO HOOK UP YOUR TRAIL ROCKER TO IGNITION SWITCHED POWER AND ARE COMPLETELY OPTIONAL. IF YOU WANT TO OPERATE YOUR SWITCHES WITH A CONSTANT POWER (AS SHIPPED), SKIP STEPS 63 – 80 AND MOVE ON TO THE RELAY OUTPUT WIRES SECTION ON PAGE 63.**

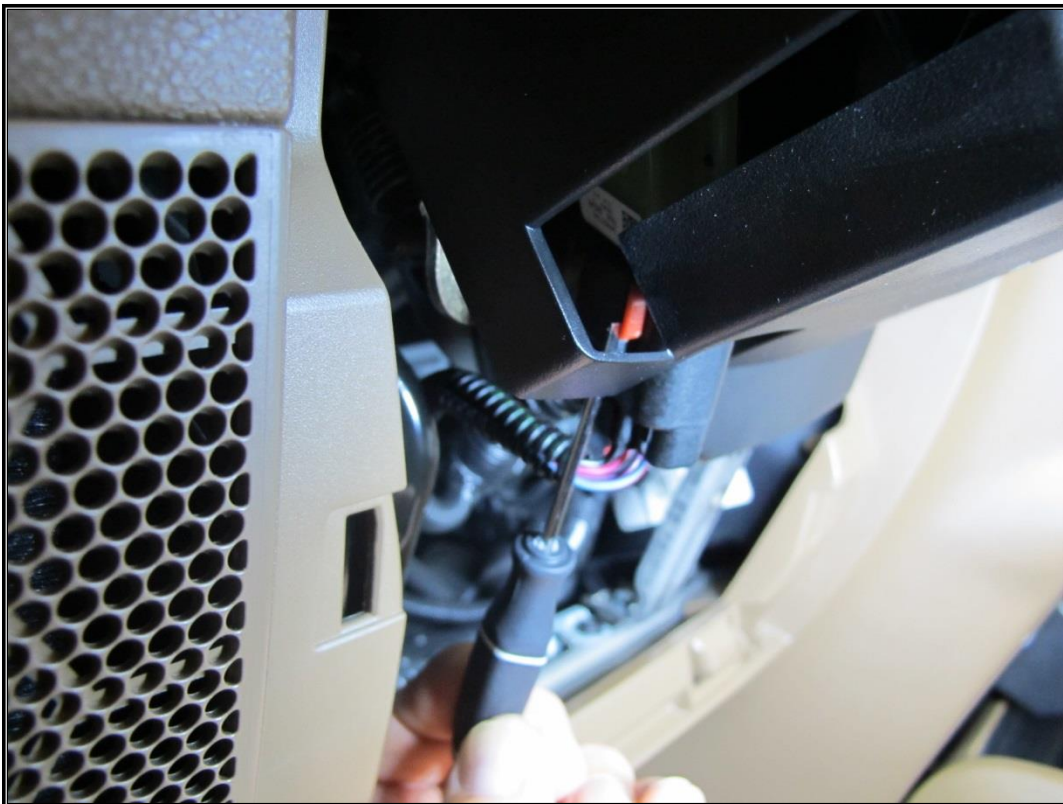
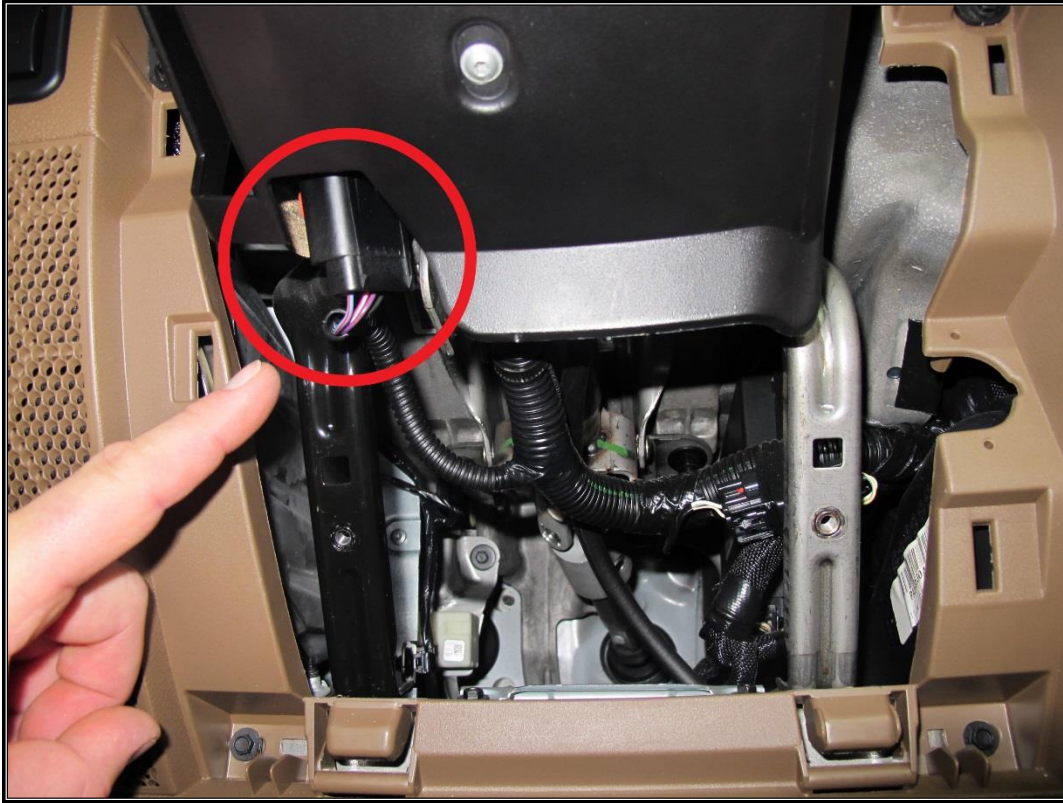
**Step 63:** Remove the panel below the steering column by carefully pulling from the top first.



**Step 64:** With the plastic panel out of the way, use a **10mm socket or wrench** to remove the 2 bolts holding the metal bracket in place.



**Step 65:** Locate the ignition switch connector and remove it. To do this, use a **small flathead screwdriver** to unlock the orange clip on the side of the connector.





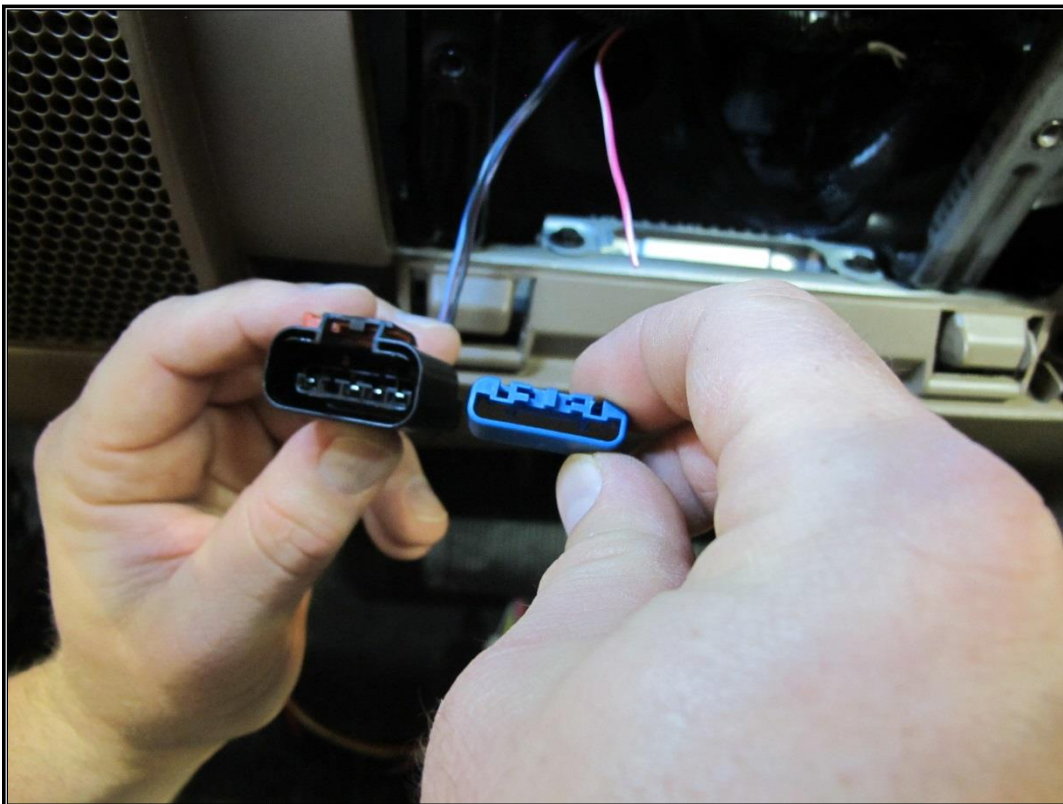
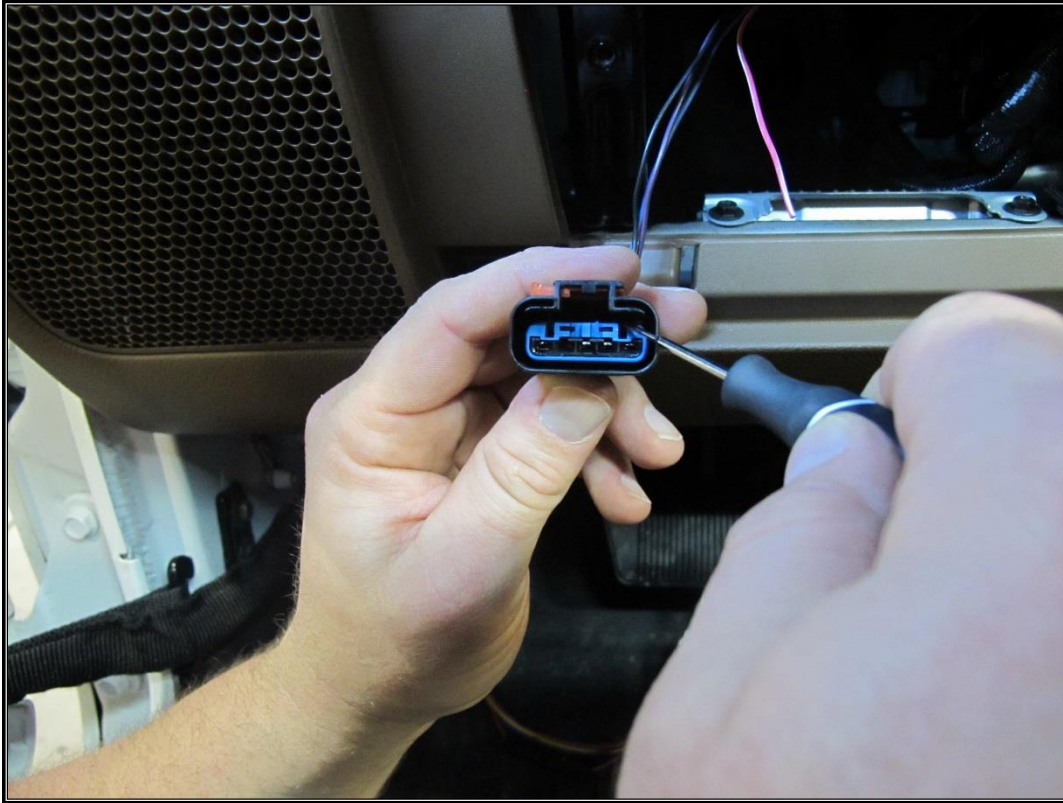
**Step 66:** With the orange clip unlocked, squeeze the bottom of the connector and disconnect it.



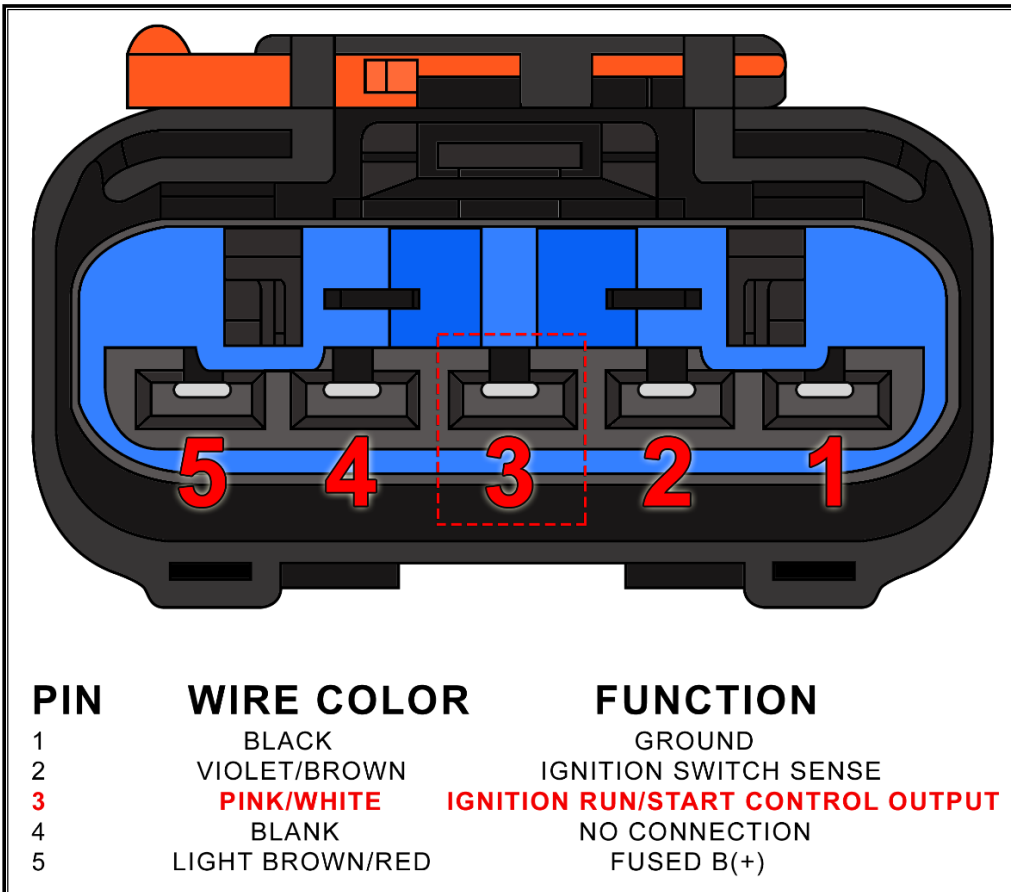
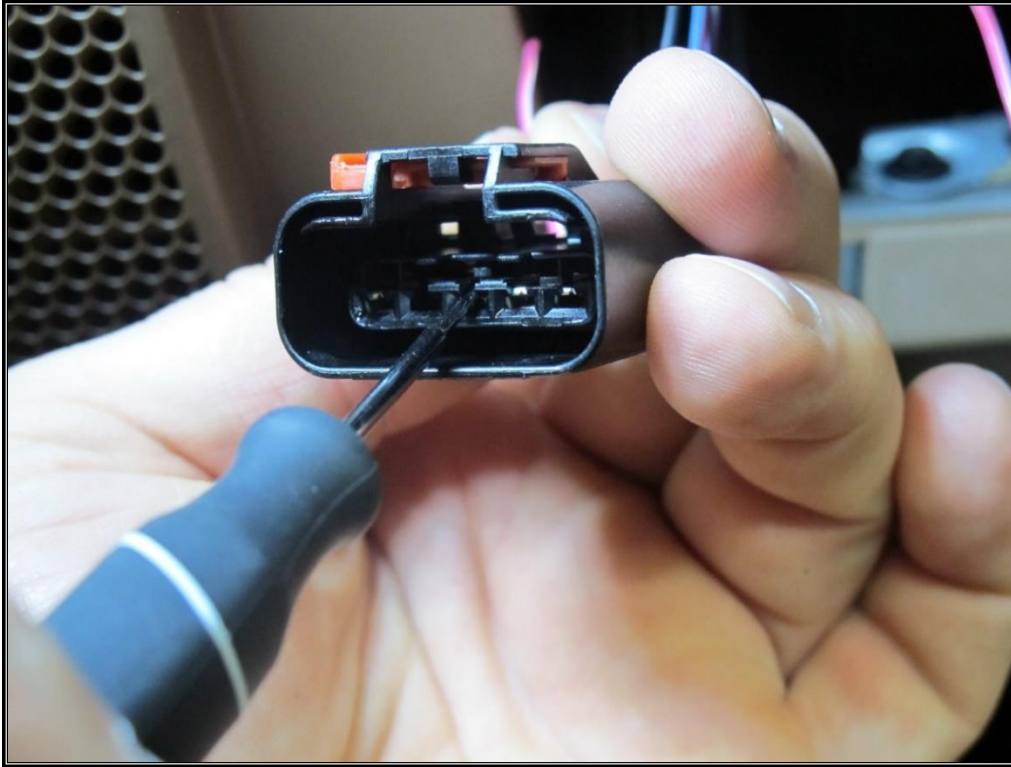
**Step 67:** Now, peel back the convoluted tubing covering the wires running to the ignition switch connector. Then, cut the **Pink/White**, 12V ignition wire about **2"** from the connector.



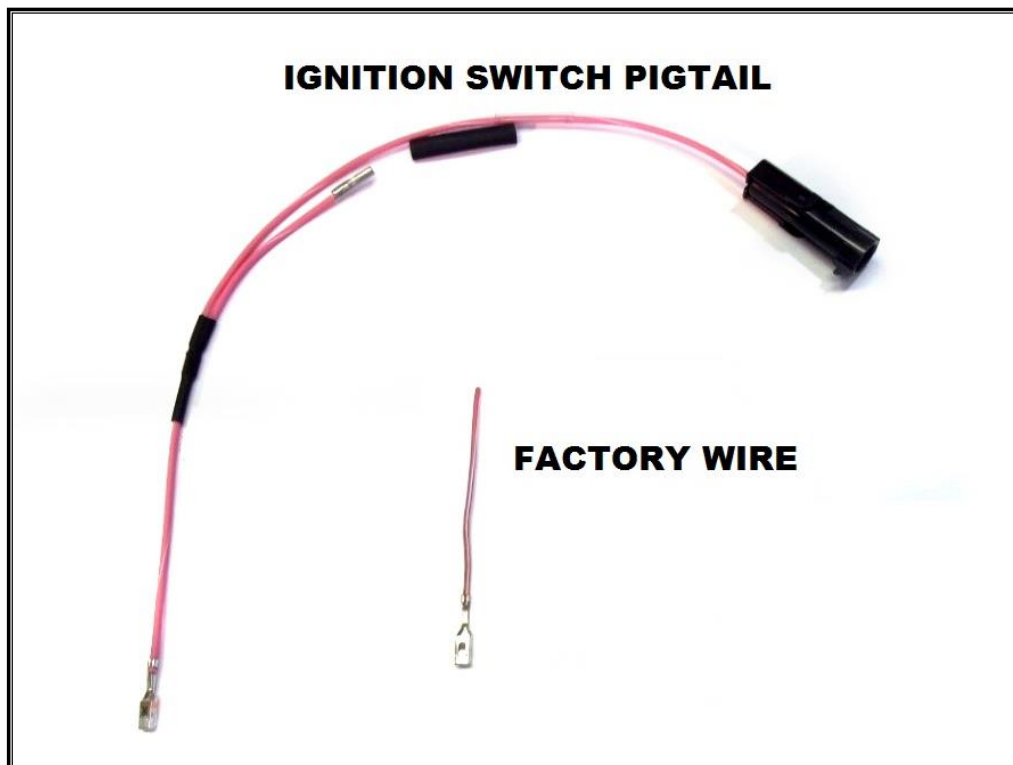
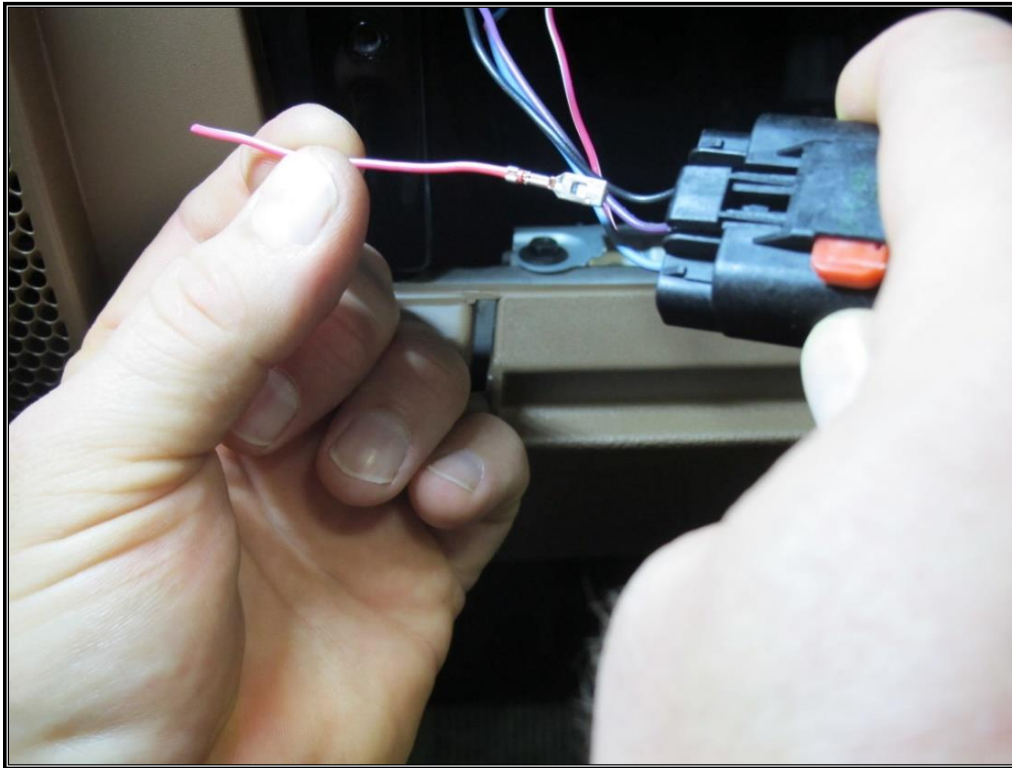
**Step 68:** Unpin the factory ignition switched 12V wire. To do this, first, use a **small screwdriver** or **pick** to remove the blue locking mechanism.



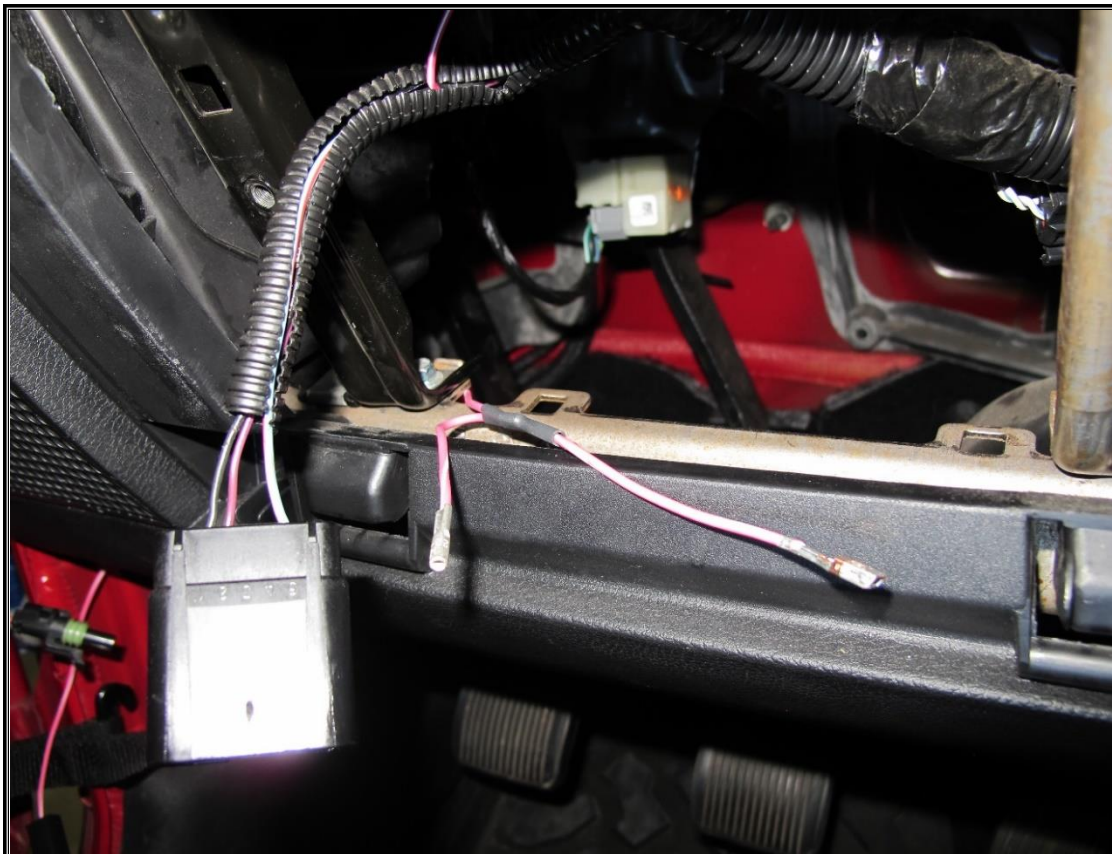
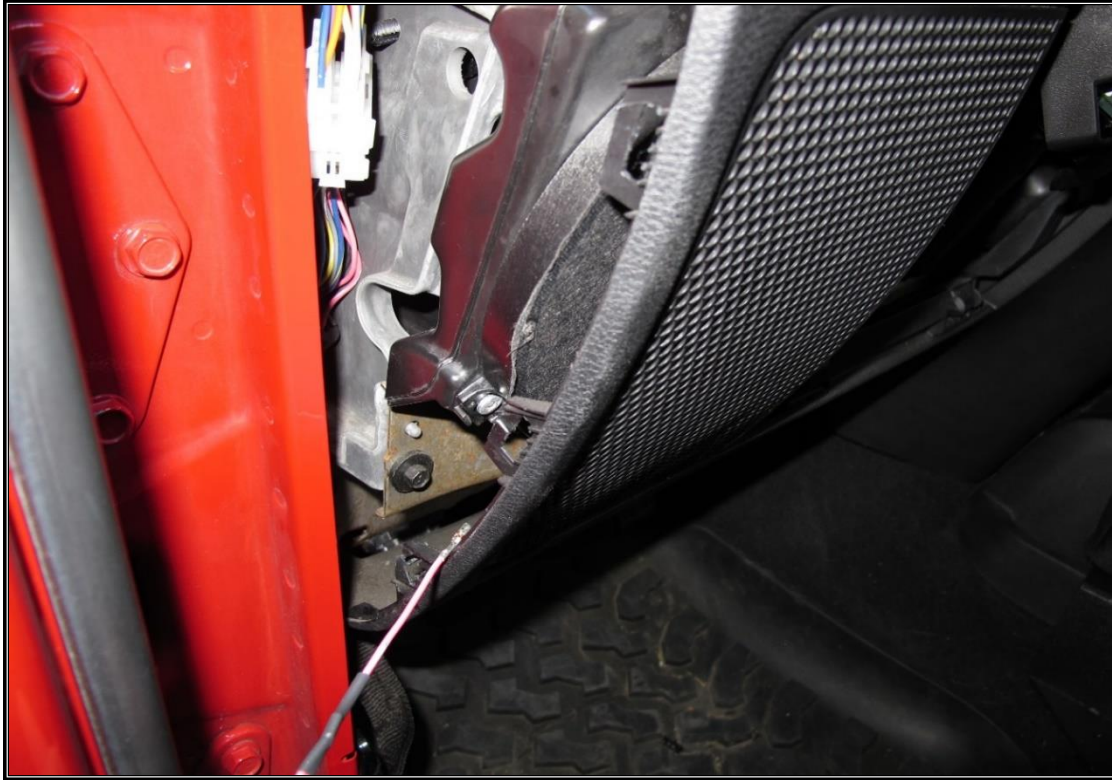
**Step 69:** With the blue lock removed, use a **small screwdriver** or **pick** to depress the lock underneath the middle terminal. (**Pin 3 = Ignition Switched 12V**)



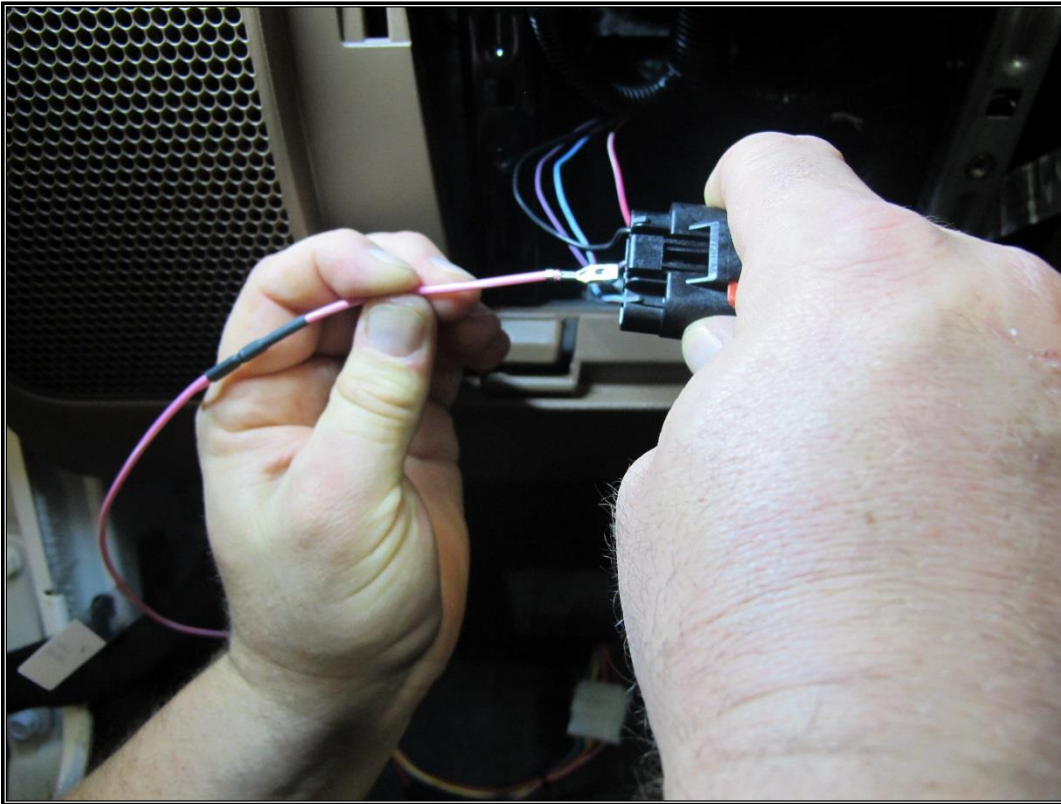
**Step 70:** With the terminal unlocked, pull the terminal out of the connector. Provided in your parts kit is a replacement **ignition pigtail** that will provide your Trail Rocker with ignition switched power while allowing you to terminate into the factory ignition switched 12V wire.



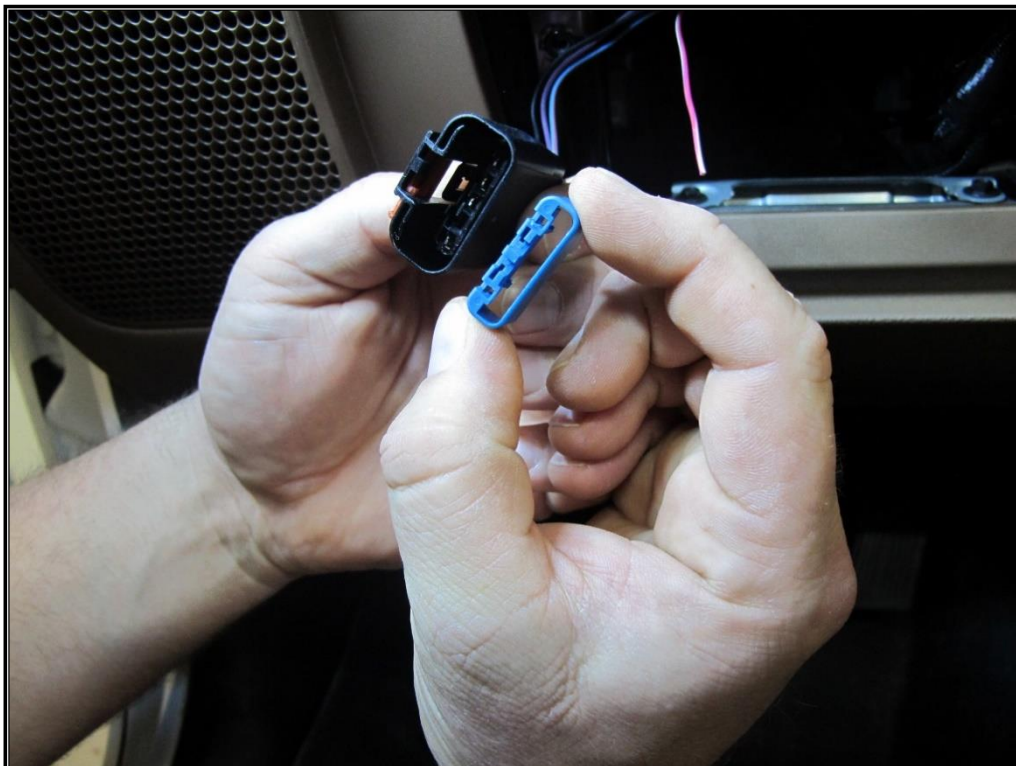
**Step 71:** Remove the driver side dash access panel and insert the new **ignition pigtail** thru the channel, to the center access, and route the **ignition pigtail** towards the factory ignition switch connector.



**Step 72:** Now, re-pin the factory ignition switch connector (**Pin #3**) with the new **ignition pigtail**.



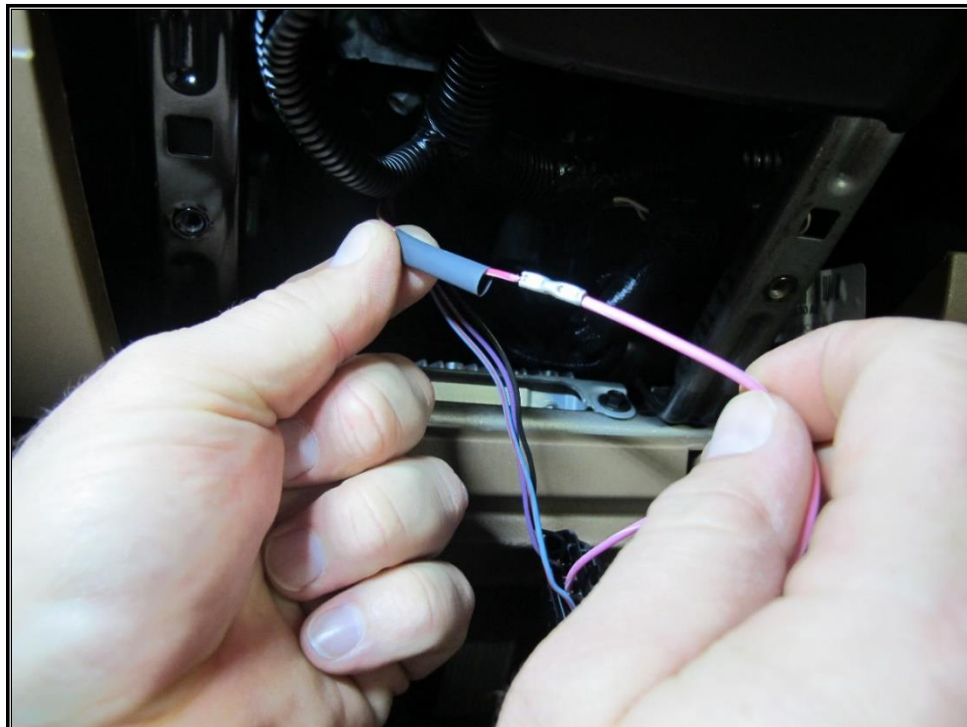
**Step 73:** With the **ignition pigtail** fastened, reinstall the blue locking mechanism.



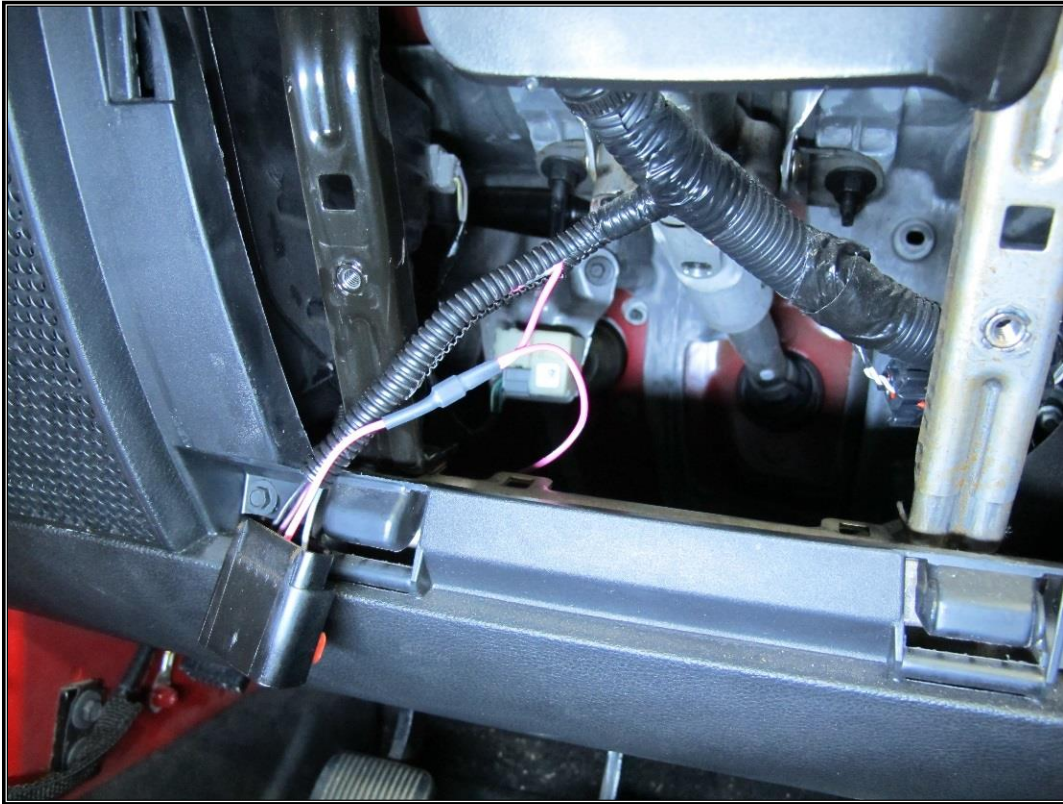
**Step 74:** Now, strip the factory pink/white, 22-gauge wire  $\frac{3}{8}$ ". Once stripped, fold the copper wire in half to ensure a tight connection to the butt connector. Then, slide a piece of heat shrink over the factory wire and crimp it into the open end of the butt connector on the ignition pigtail. (NOTE: make sure the heat shrink is installed before crimping).



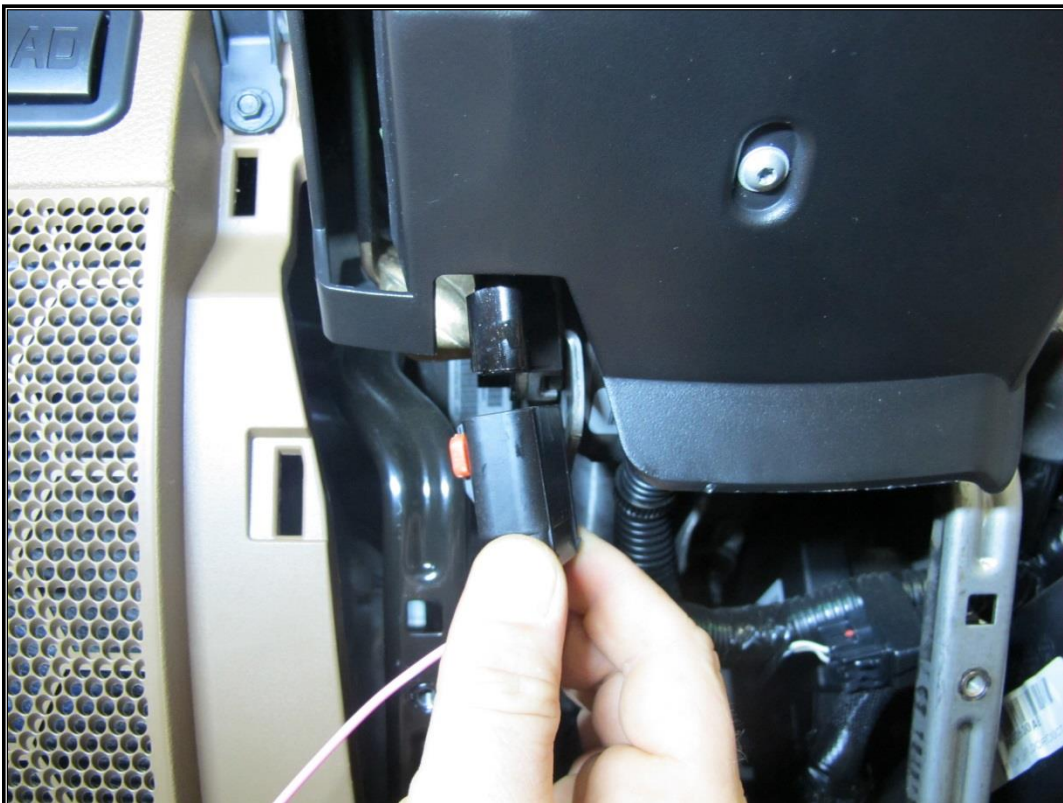
**Step 75:** After crimping, slide the heat shrink over the connection. Using a heat source, heat the heat shrink ensuring a tight wrap around the connector.



**Step 76:** Reinstall the factory convoluted tubing over the factory wire.

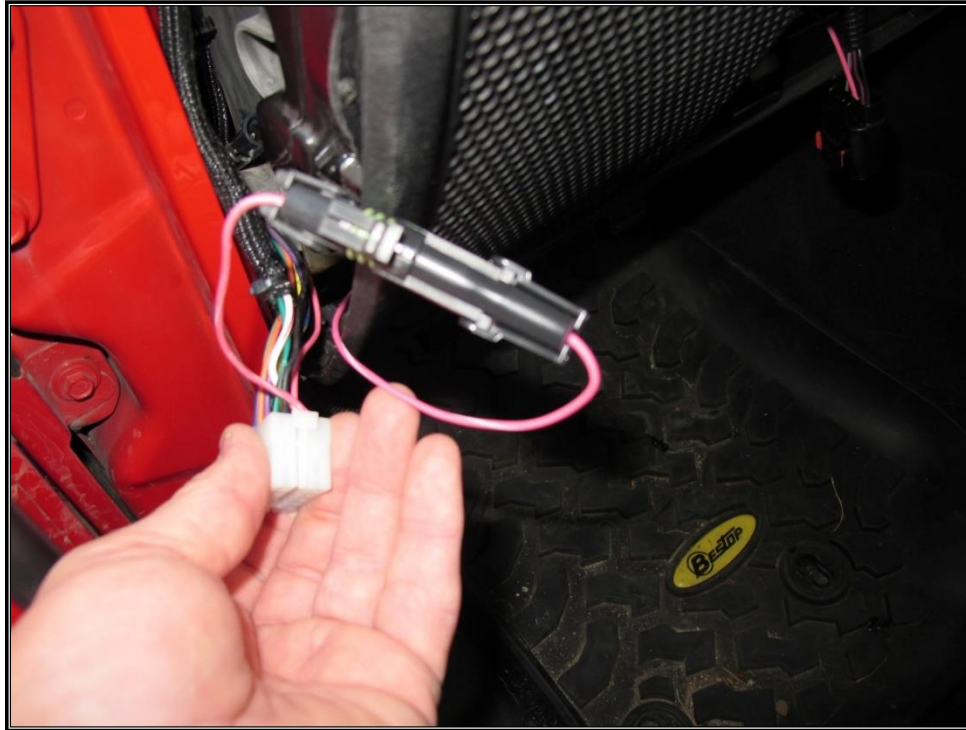


**Step 77:** Reinstall the factory ignition switch connector, and lock it into place.

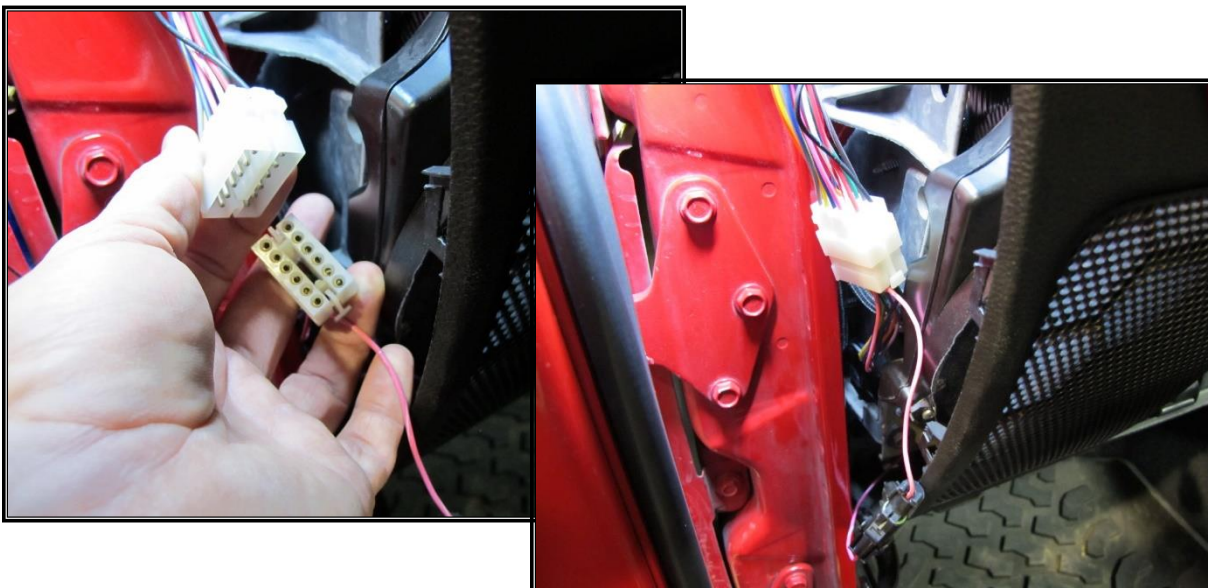




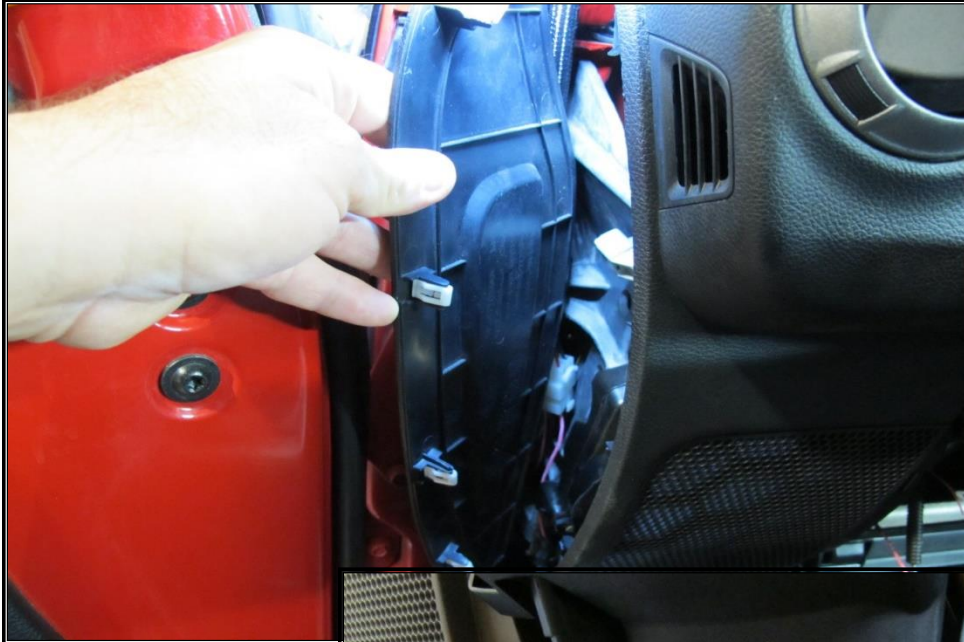
**Step 78:** Now, connect the weather pack connector from the **ignition pigtail** to the weather pack connector on the switch control wires coming from the **Fuse/Relay Center**. (Note: for ease of installation you may want to unplug the **Fuse/Relay Center's** switch control wire connector from the **Switch Control Panel**.)



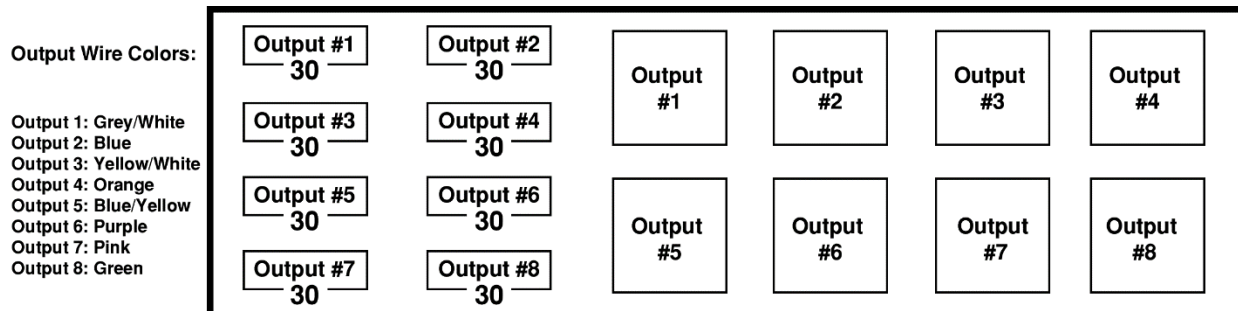
**Step 79:** If you do disconnect the **Switch Control Panel** from the **Fuse/Relay Center's** switch control wire connector, reconnect them now. Stow the wiring harness neatly away, and secure with a zip-ties if needed.



**Step 80:** Reinstall the driver side access panel and then replace the metal bracket and plastic access panel beneath steering column.



## RELAY OUTPUT WIRES



Route these wires to the location of your components. Ensure to route them safely, and avoid high heat areas, moving parts, and sharp edges. Painless recommends using grommets for any wires passing through metal to avoid wearing through the wire insulation and causing arcing. Make sure any accessories and/or components you install are properly grounded.

See **Steps 81 - 85** starting on [page 64](#) for a common example on connecting the relay output wires to most accessories.

### Relay Output Wire Color Diagram:

- Switch #1: Grey/White
- Switch #2: Blue
- Switch #3: Yellow/White
- Switch #4: Orange
- Switch #5: Blue/Yellow
- Switch #6: Purple

### Extra Relay Output wires:

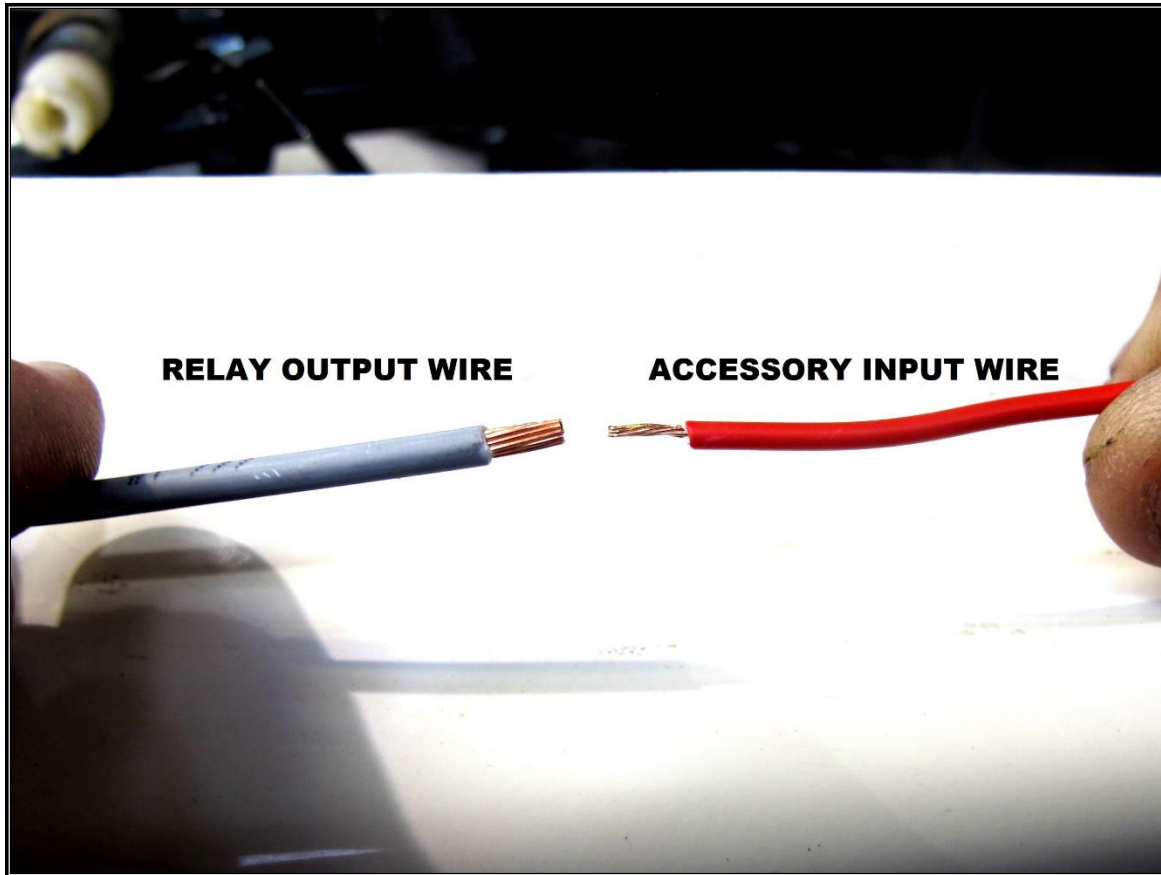
- Wire #7: Pink
- Wire #8: Green

### Winch Control wires:

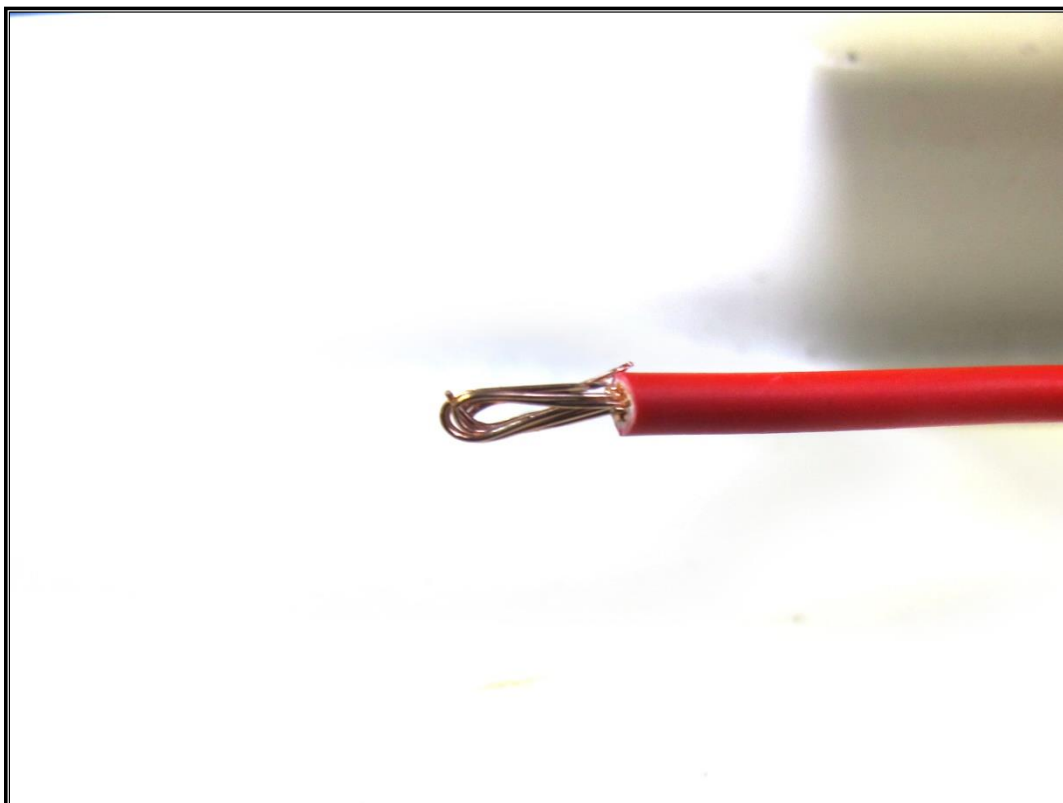
- Winch Control In: White/Red
- Winch Control Out: Brown/White

**OPTIONAL:** If you wish to use the two extra wires (#7 Pink and #8 Green), they will need to be wired into an additional switch. If you wish to double the switch control wires on a single switch, thus allowing you to control 2 accessories with 1 switch, then see [pages 48 - 50](#) for a step-by-step tutorial on achieving this. For winch switch installation, see [page 67](#).

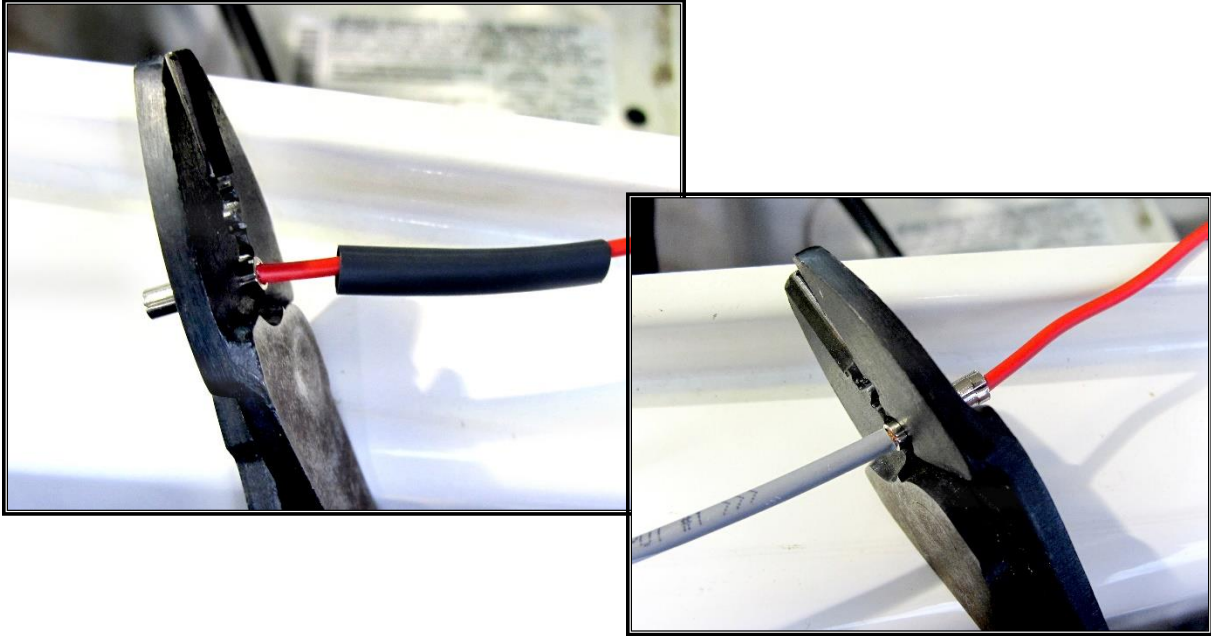
**Step 81:** Locate the relay output wire from the Fuse/Relay Center you wish to use. Then, locate the input wire on the accessory you are installing.



**Step 82:** Double up the accessory's input wire if necessary.



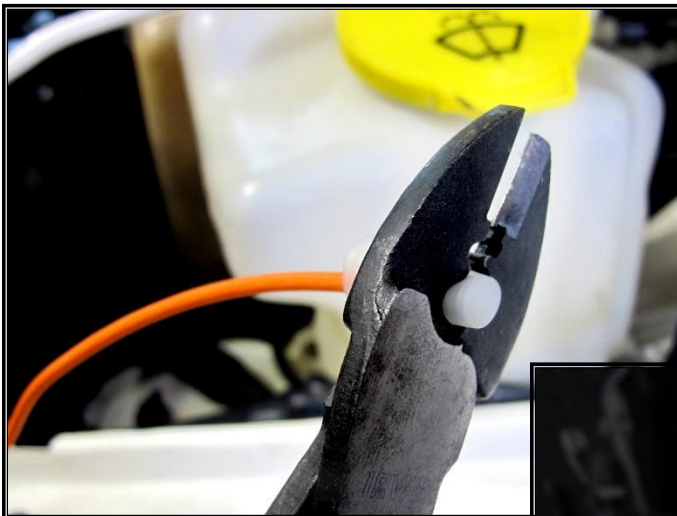
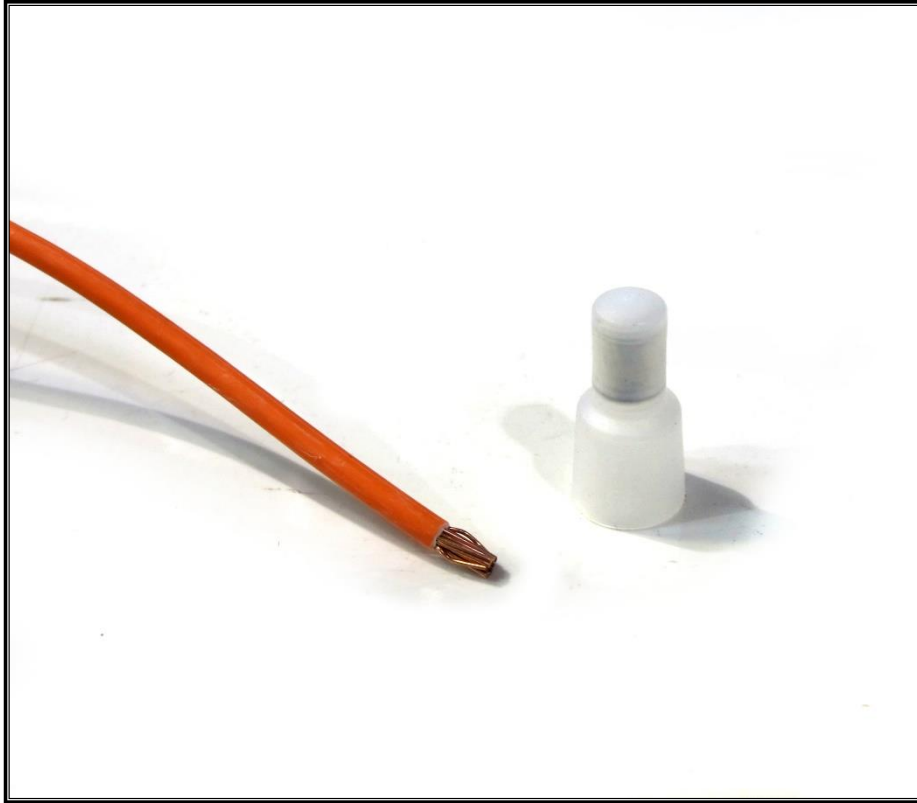
**Step 83:** Slide a piece of heat shrink from the included parts kit over the accessory wire. Then, use an un-insulated butt connector to crimp together the accessory wire with the relay output wire.



**Step 84:** Secure the heat-shrink over the connection.



**Step 85:** Cap all unused relay output wires by crimping on the provided insulated wire caps. Then store the extra wires out of the way in the most convenient way possible.



## **OPTIONAL: PAINLESS PART#: 57150 - WINCH**

### **CONTROL ADD-ON KIT**

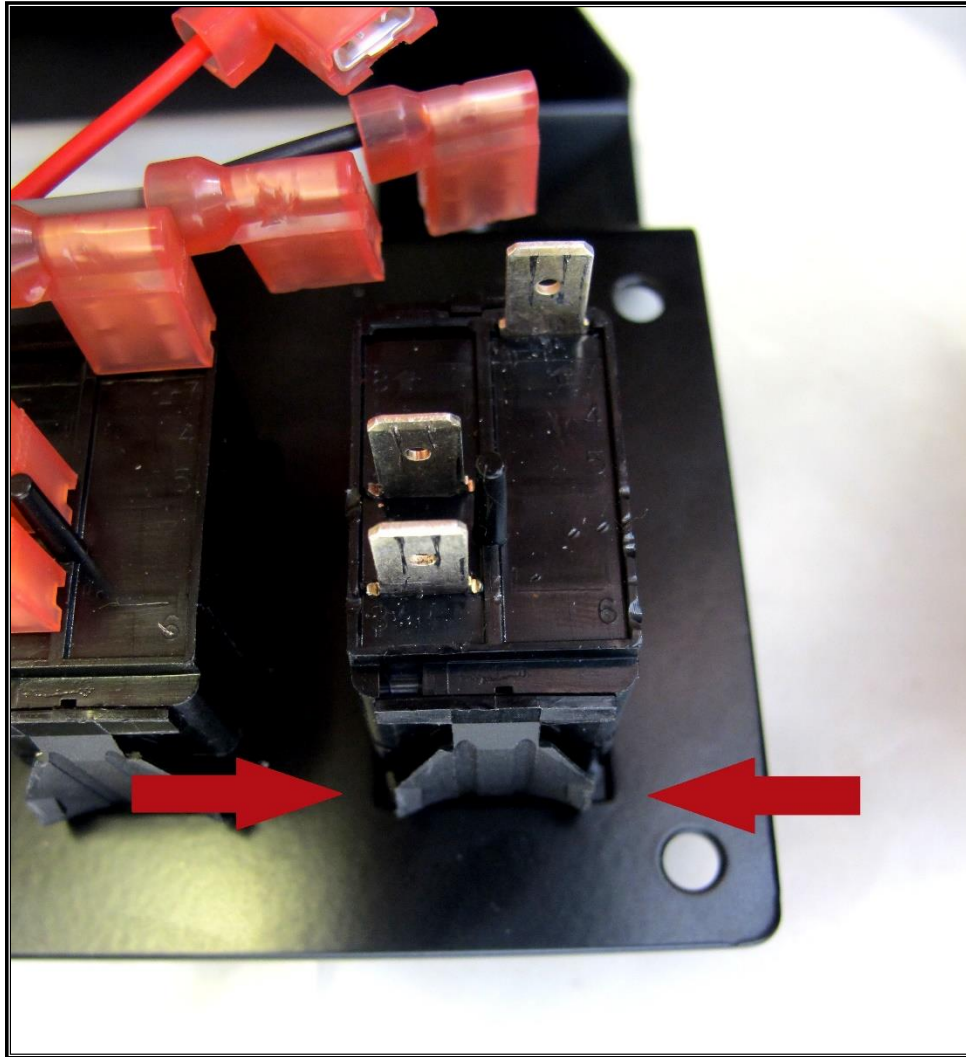
As part of your Trail Rocker Switch Panel wiring harness, there are 2 optional winch control wires: a **WHITE/RED** (IN) and a **BROWN/WHITE** (OUT). These wires control the in and out functions of a winch when it is installed.



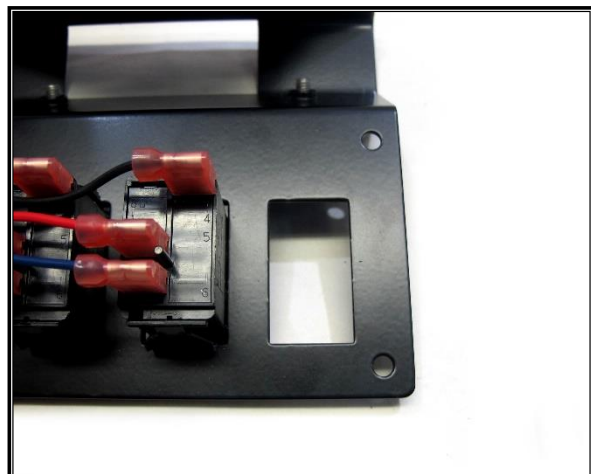
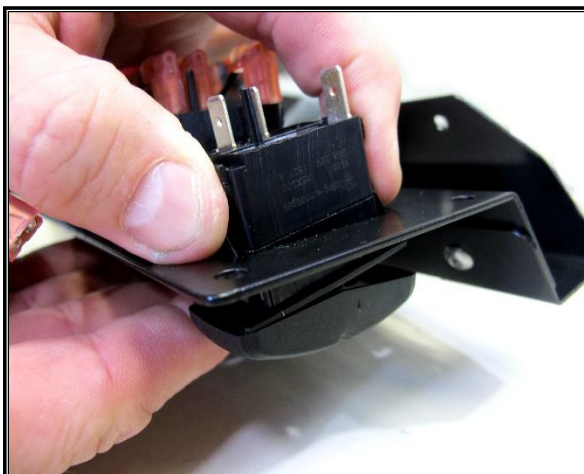
These control wires can be connected to a winch switch (not provided in the kit). If you do not have a winch switch, Painless offers a **Winch Control Add-on Kit** ([Painless Part #: 57150](http://www.painlessperformance.com), available online at [www.painlessperformance.com](http://www.painlessperformance.com)). **Steps 86 – 90** show you how to install a **Winch Control Add-on Kit** to your **Trail Rocker Switch Panel** and connect the control wires to the switch.



**Step 86:** Remove the switch control, power, and ground wires from the switch you are replacing with the **Winch Control Add-on Kit**. Then, locate the tabs located at the top and bottom of the switch.

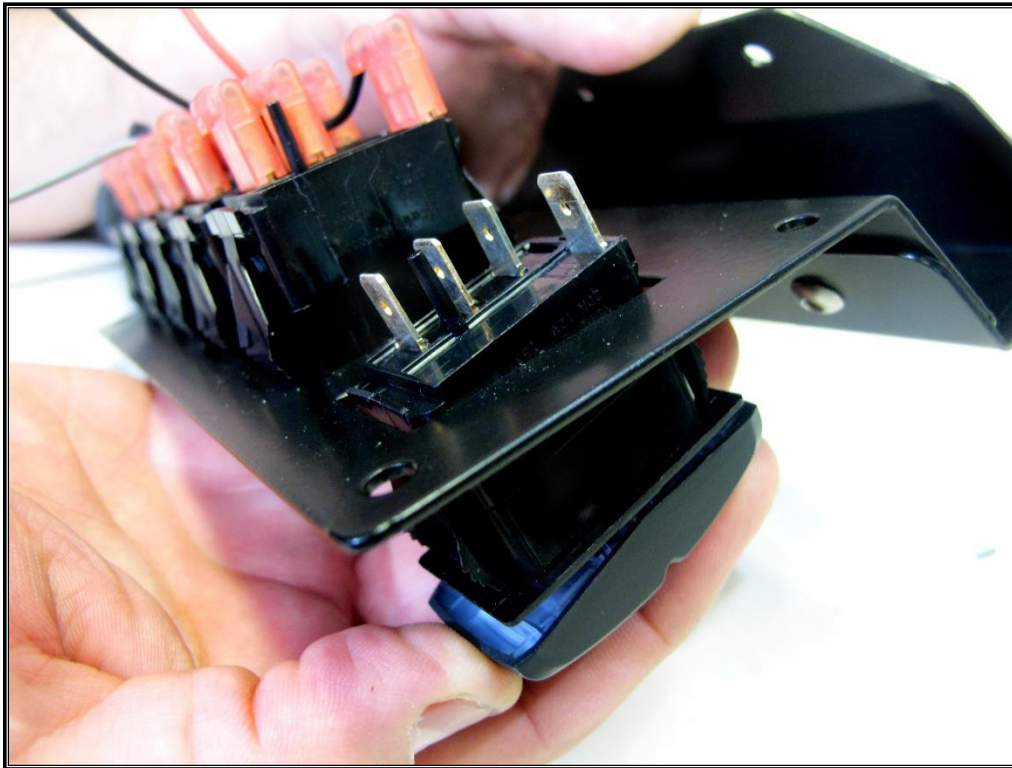


**Step 87:** These tabs lock the switch in place. To remove the switch, squeeze the tabs in and slide it out of the bracket.

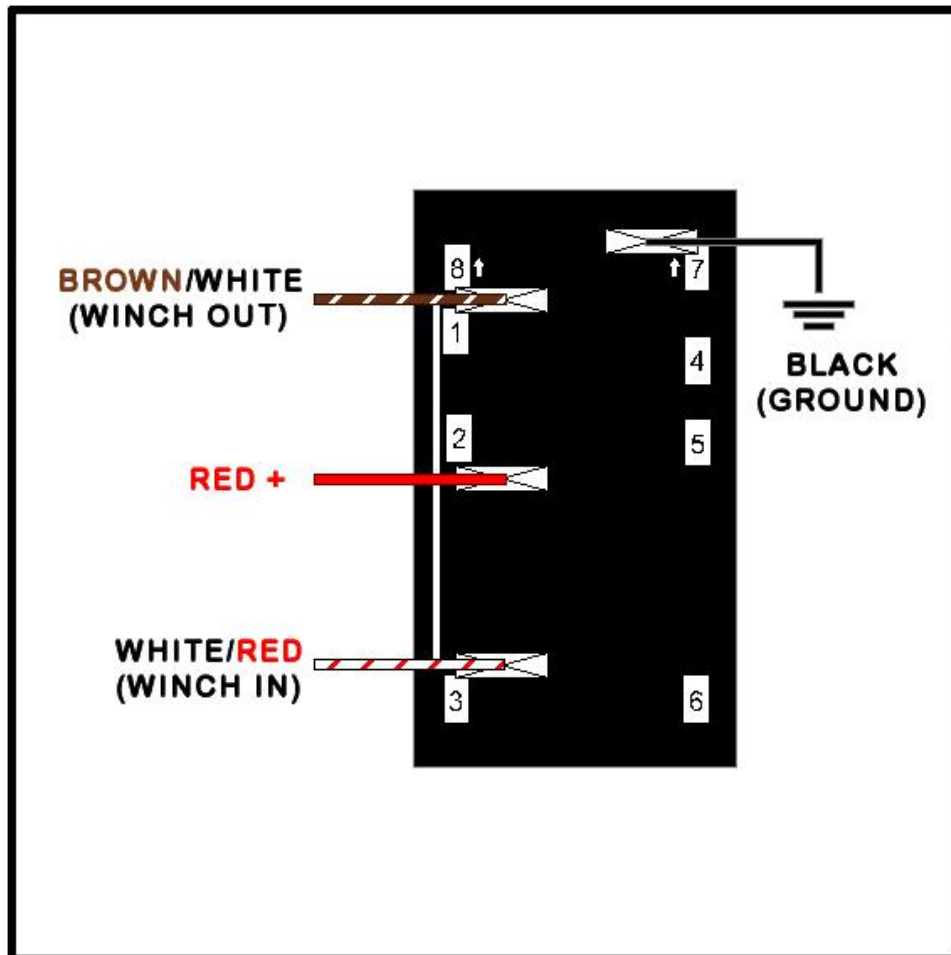




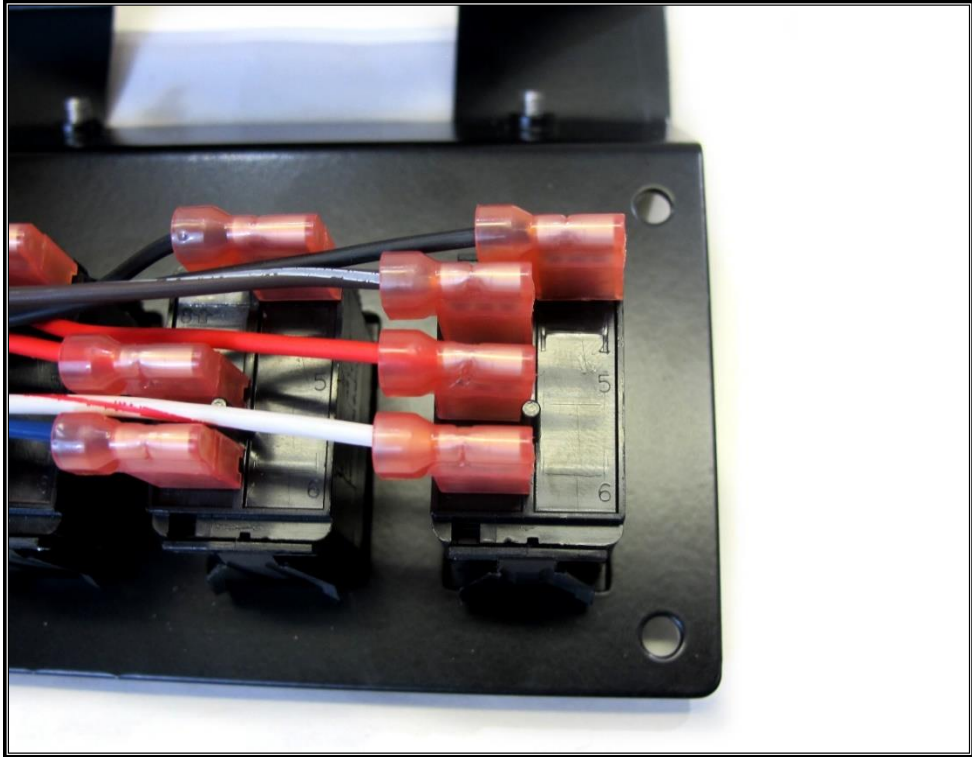
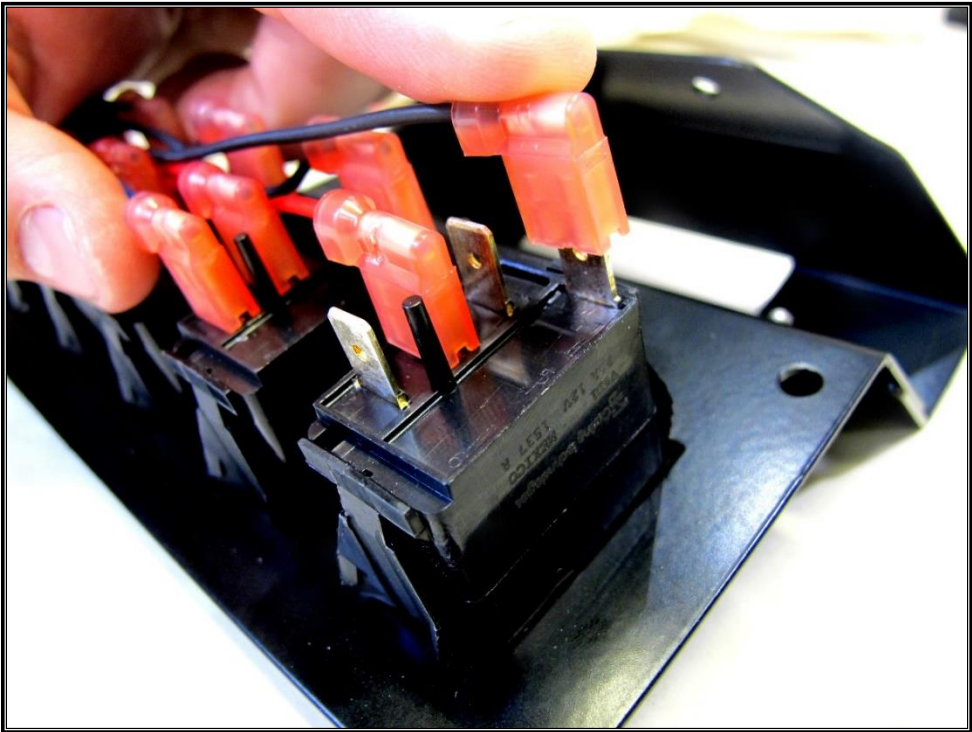
**Step 88:** Insert the **Winch Control Add-on Kit** into the empty socket of the bracket.



**Step 89:** Before connecting the wires to the Winch Control Add-on Kit, take time to familiarize yourself with the wiring diagram below.



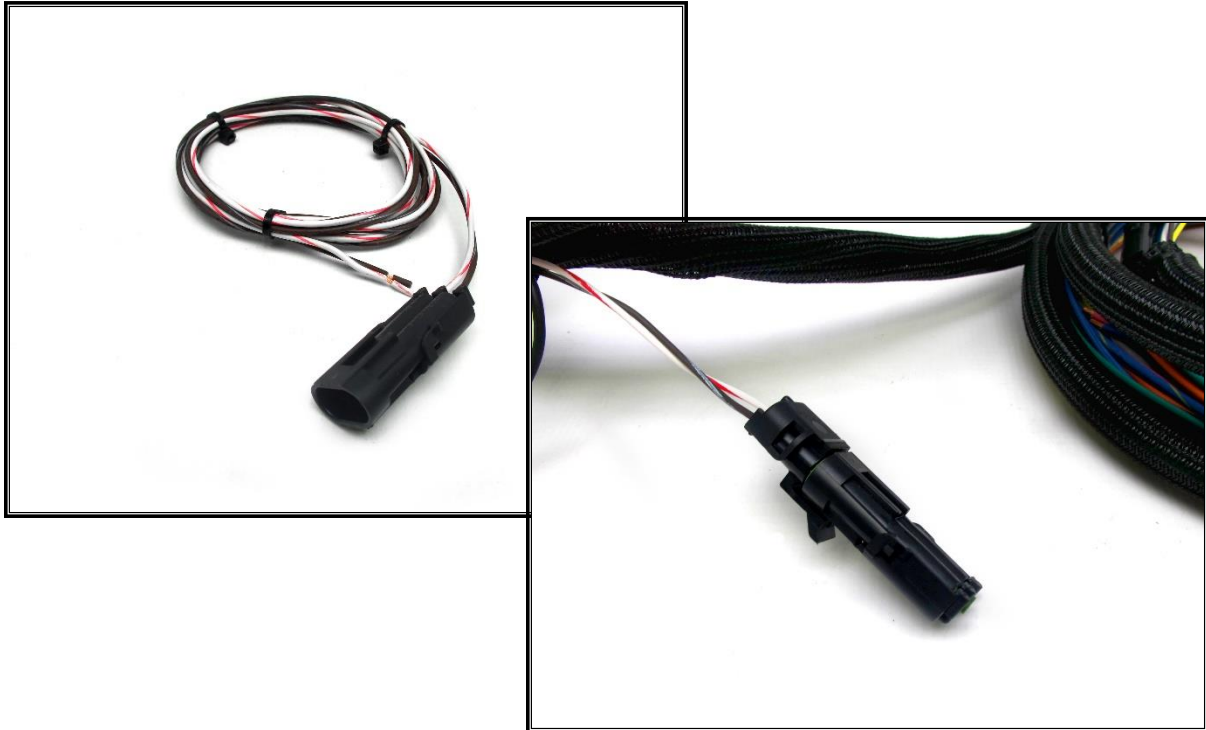
**Step 90: Reconnect the power, ground, and control wires to the Winch Control Add-on Kit as seen below.**



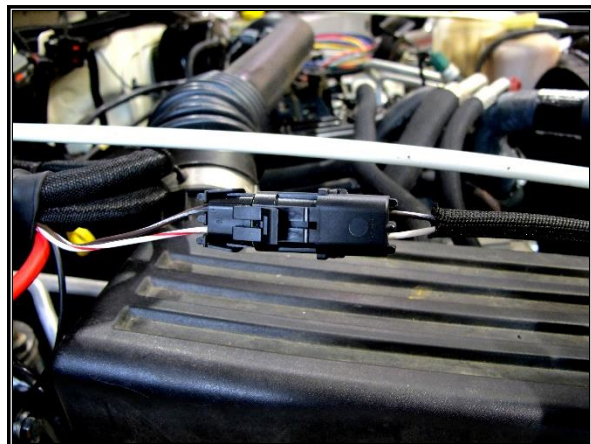
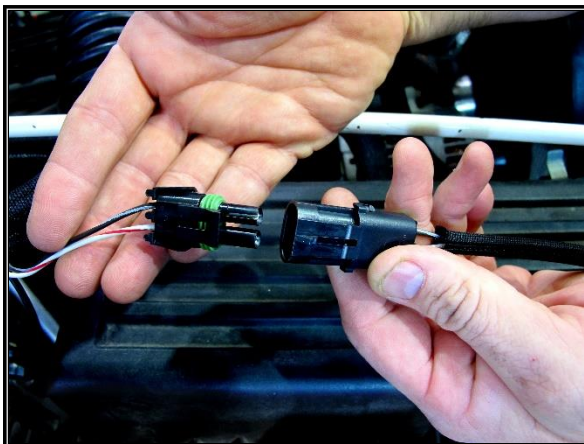
## **OPTIONAL: WINCH PIGTAIL**

If you are hooking up your winch to your Trail Rocker System, read the following steps for attaching the included winch pigtail.

**Step 91:** Locate the **winch pigtail** included in your parts kit. Then locate the winch connector on your Fuse/Relay Center.



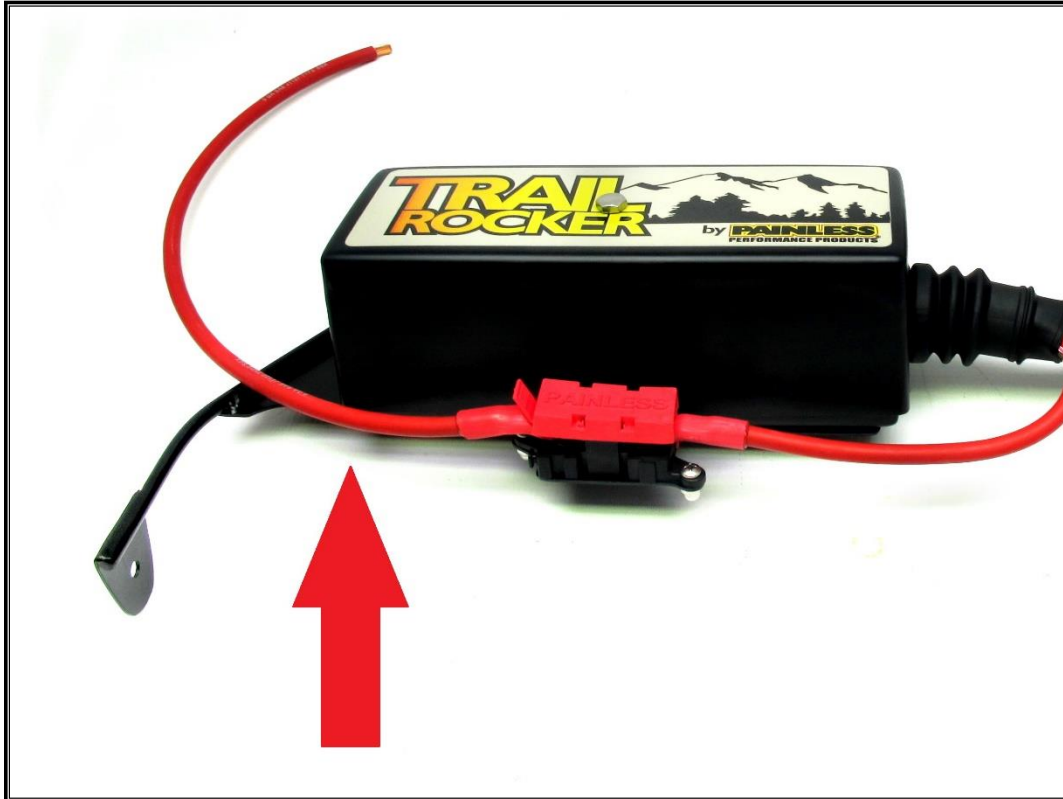
**Step 92:** Remove the cap from the winch connector on the Fuse/Relay Center. Then plug in the **winch pigtail** and route the wires safely to your winch.



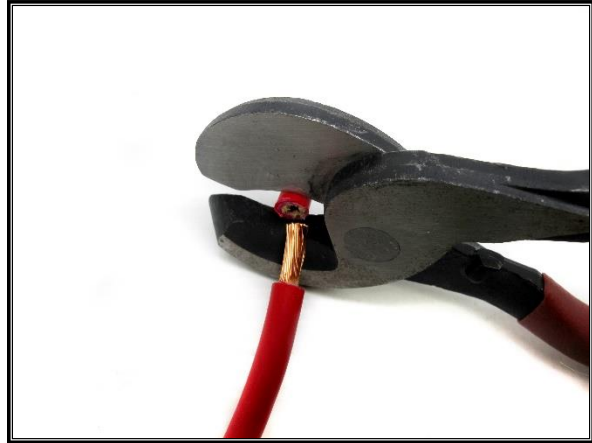
Wiring diagrams for specific winch set-ups can be found at <http://www.painlessperformance.com/schematics> under the Trail Rocker section.

## FINAL STEPS

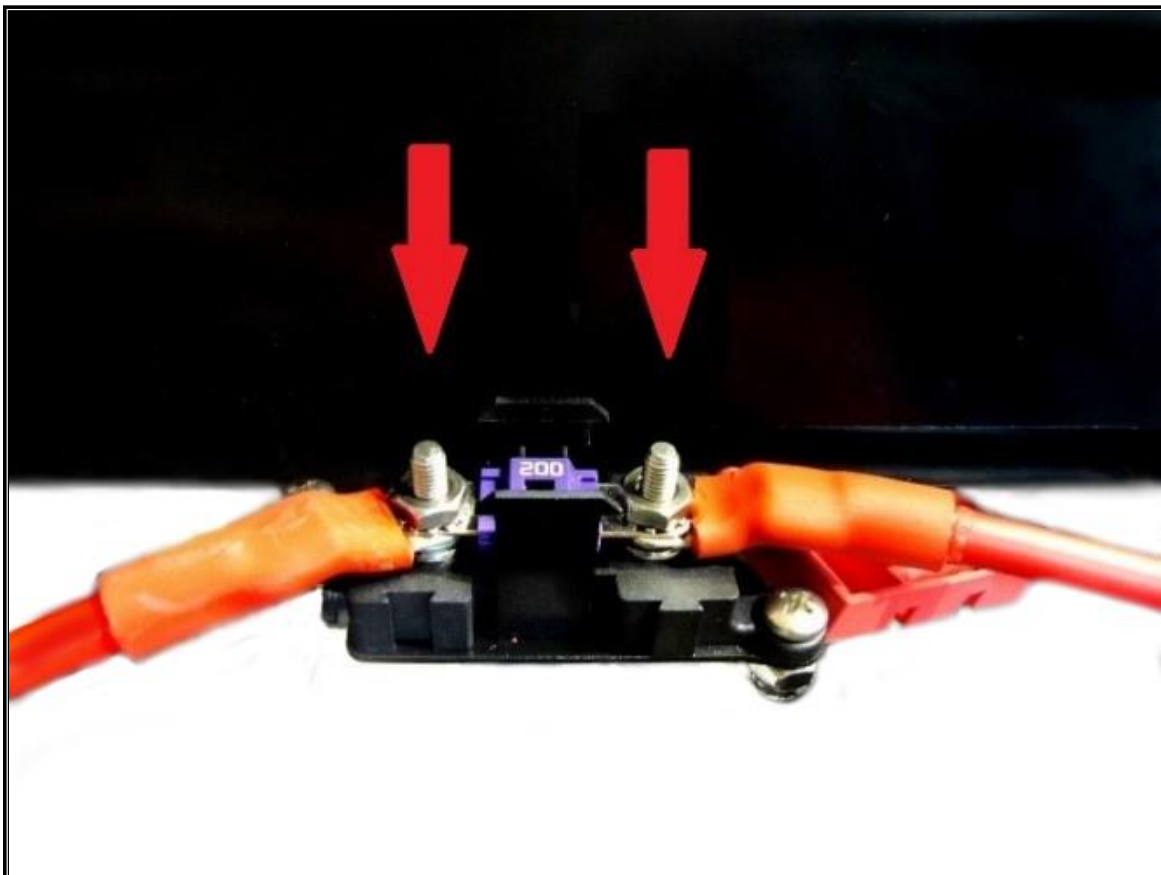
**Step 93:** After completing the previous installation steps, you may now reconnect your battery terminals. Locate the **6-gauge, unterminated, red cable** coming from the **Fuse/Relay Center**, **heat shrink**, and the appropriate sized (for your particular application) **non-insulated ring terminal**.



**Step 94:** Notice that the **6-gauge red cable** does not have an eyelet on one end. This is so you can cut the cable to the length you need for your specific application. Mark the length you need to route the cable to the positive terminal. Cut and strip the wire about **1/2"**.



**Step 95:** Once the cable is stripped, remove it from the **Fuse/Relay Center** in order to crimp on the included **ring terminal** from your parts kit. To remove the cable lift up the fuse cover on the **Fuse/Relay Center bracket**. Then, remove the **2 nuts** and **200-amp MIDI fuse** holding the cable in place.



**Step 96:** These **ring terminals** can be difficult to crimp. It can be done with a chisel and hammer or with a crimping tool like the one below. These crimping tools can be found at your local parts store or online. Once the terminal is crimped, secure it with about **1" of heat shrink**.



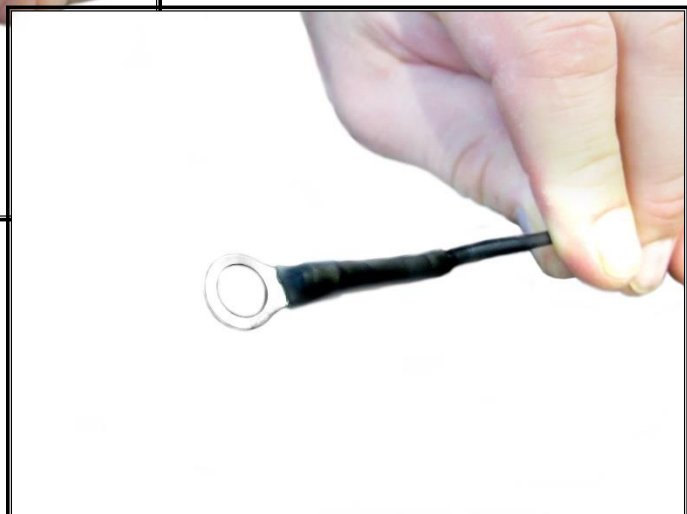
**Step 97:** Next, re-install the cable and **200-amp MIDI fuse** to the **Fuse/Relay Center** and connect it to the positive battery terminal. Then, route the ground wire coming from the **Fuse/Relay Center** to the negative battery terminal.



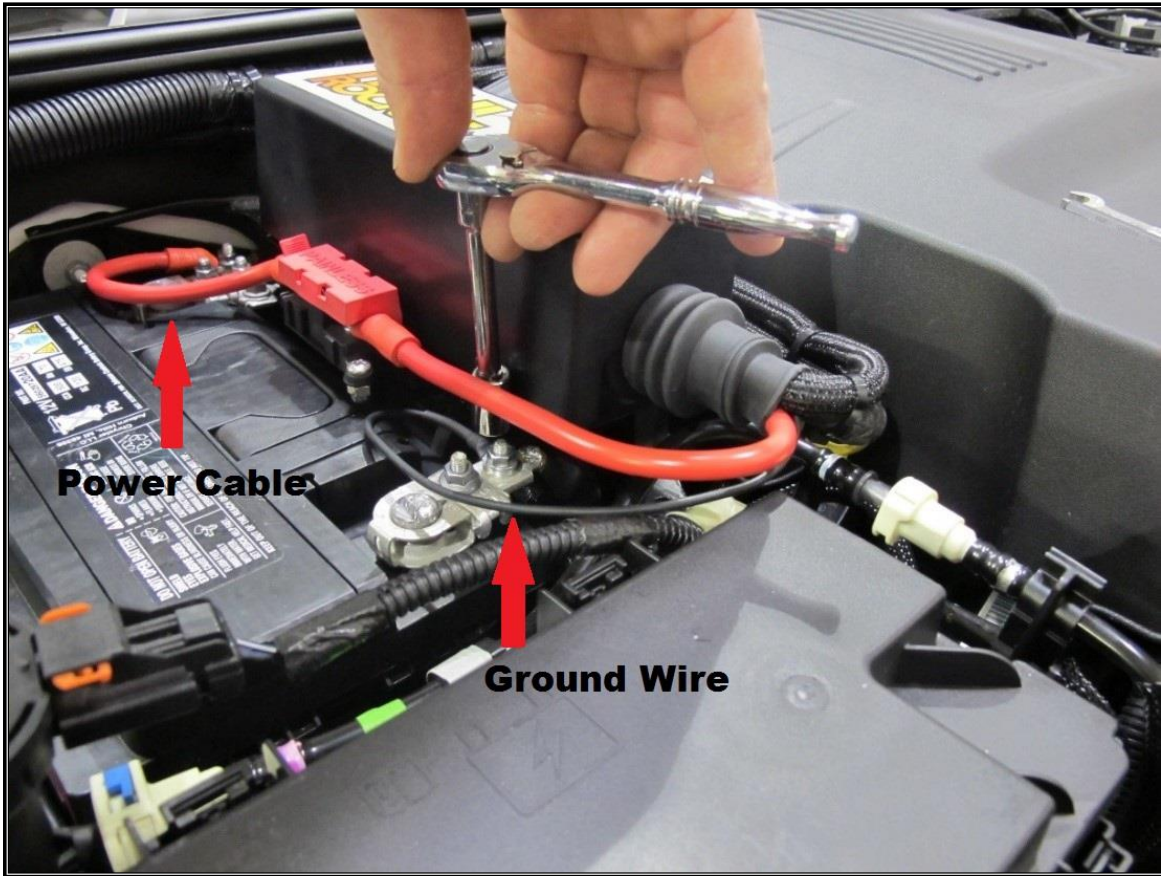
**Step 98:** Locate (1) ¼” black heat shrink and (1) 16-14 ga. non-insulated ring terminal. Strip the wire about ¼” and slide the heat shrink over it.



**Step 99:** Crimp on the ring terminal and secure it with the heat shrink.



**Step 100:** Hook the terminals back up to your battery. Connect the red cable to the positive terminal and the ground wire to the negative terminal.



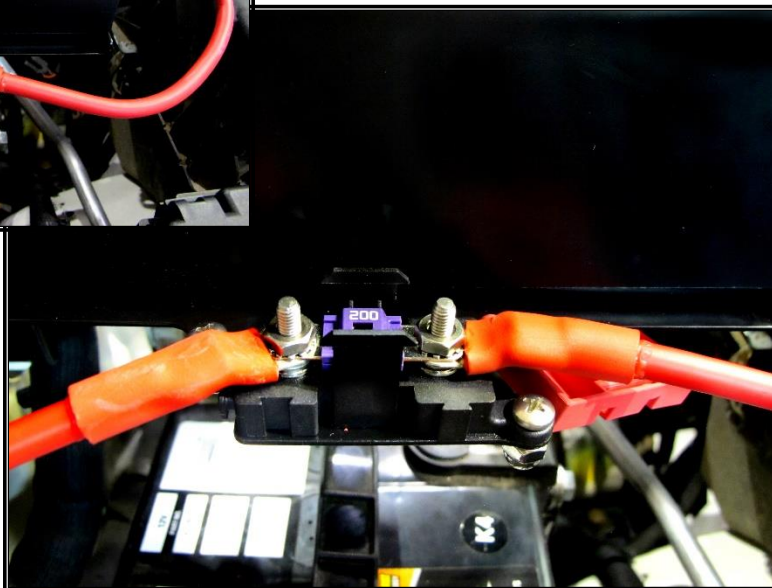
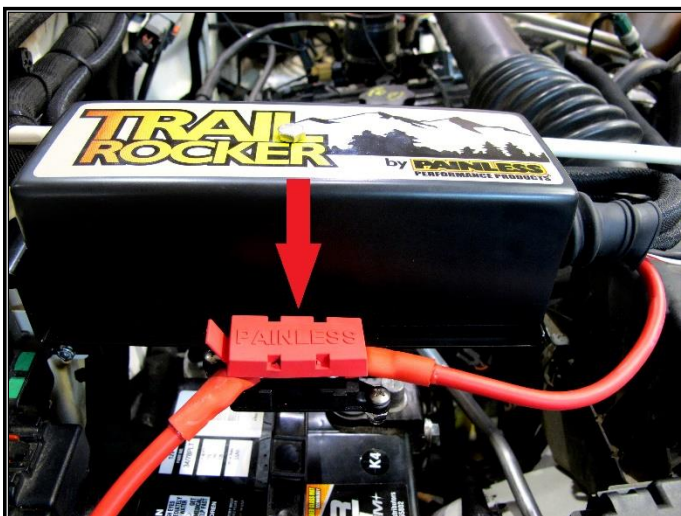
**Step 101:** With the battery connected, you can now test out and enjoy your new Trail Rocker!





## FUSE PLACEMENT

The 200 amp midi fuse is located on the fuse block on the side of the Fuse/Relay Center mounting bracket.



The Fuse/Relay Center contains eight 30 amp ATO fuses, and can be accessed by removing the lid from the Fuse/Relay Center.



Trail Rucker Fuse Centers are equipped with 8 Indicator Fuses. These fuses are equipped with an LED light that will turn on when the fuse is blown, thus indicating when the fuse needs to be replaced.



## **Painless Performance Limited Warranty** **and Return Policy**

Chassis harnesses, fuel injection harnesses, and Trail Rocker units are covered under a lifetime warranty.

All other products manufactured and/or sold by Painless Performance are warranted to the original purchaser to be free from defects in material and workmanship under normal use. Painless Performance will repair or replace defective products without charge during the first 12 months from the purchase date. No products will be considered for warranty without a copy of the purchase receipt showing the sellers name, address and date of purchase. You must return the product to the dealer you purchased it from to initiate warranty procedures.

**Painless Performance Products LLC**  
**2501 Ludelle Street**  
**Fort Worth, TX 76105**  
**Phone (817) 244-6212**