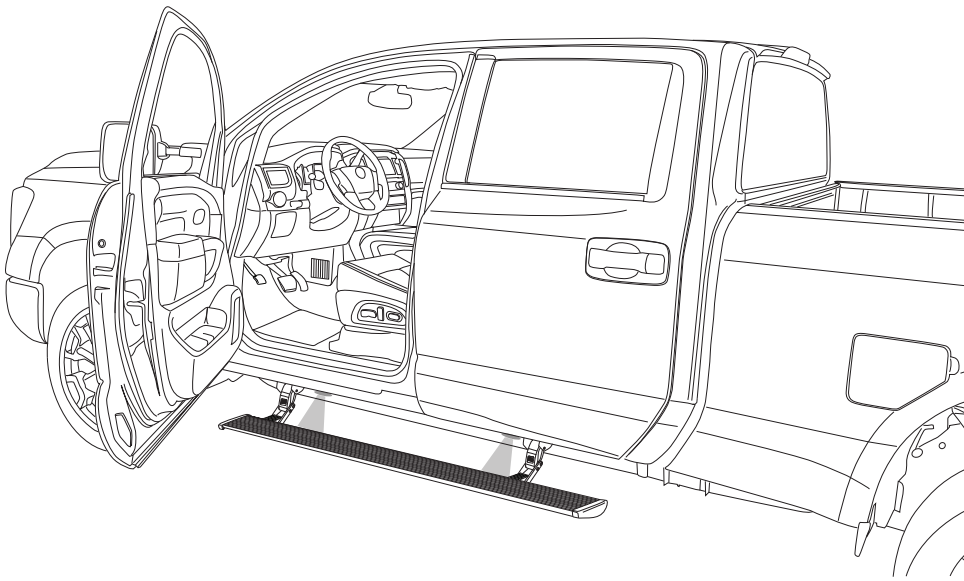


# AMP RESEARCH Power Step

MADE IN USA

APPLICATION	LENGTH	MODEL YR	PART #
Nissan Titan / Titan XD - Crew Cab	72"	2016-2018	76120-01A
Nissan Titan / Titan XD - King Cab	62"	2017-2018	76120-01A
Nissan Titan / Titan XD - Single Cab	43"	2017-2018	76120-01A



**INSTALLATION TIME**  
**3-5 Hours**  
 Professional installation recommended

**SKILL LEVEL**

① ② ③ ④

4= Experienced

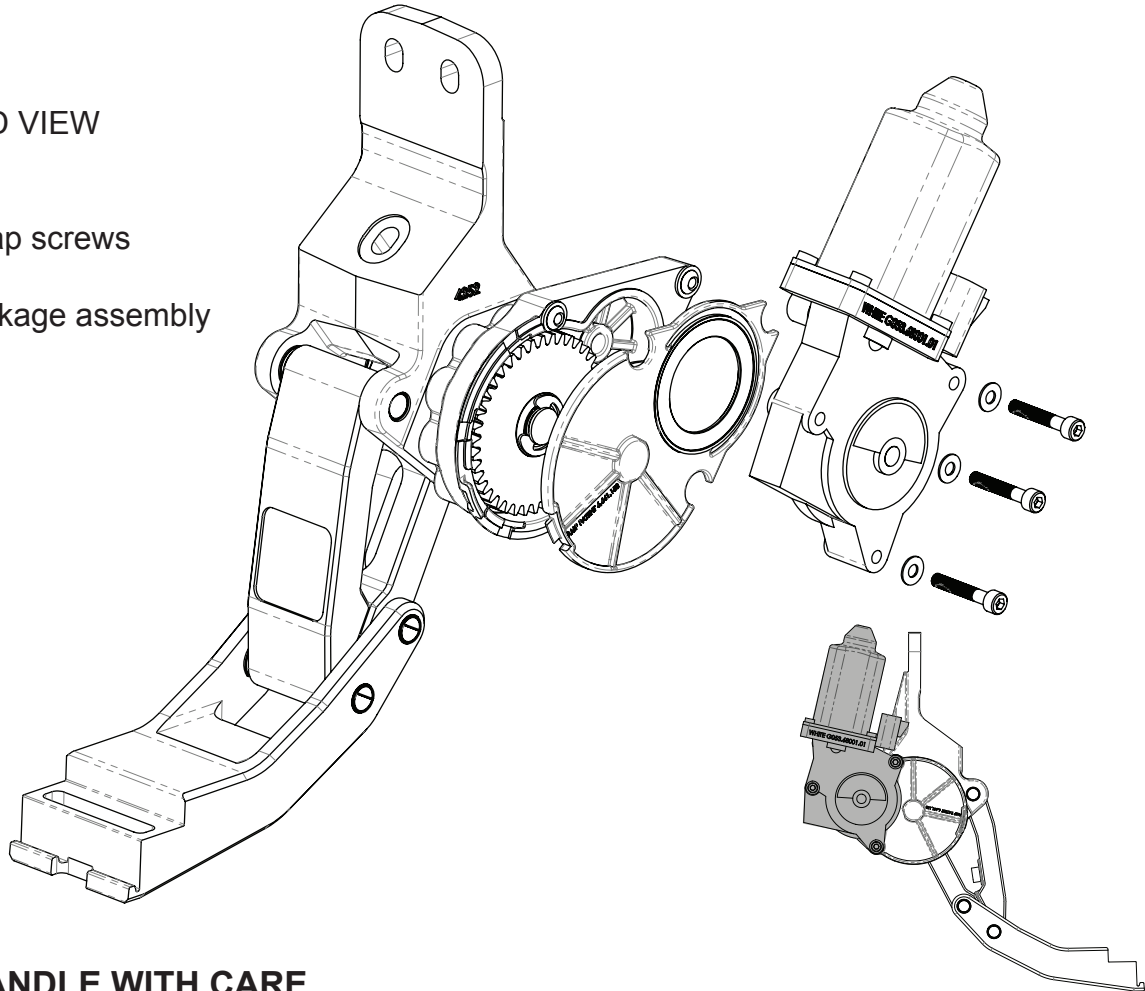
- TOOLS REQUIRED**
- Safety goggles
  - Measuring tape
  - 1/8", 19/64", 17/32" Drill bits
  - 10 mm socket
  - 13 mm socket
  - 13 mm ratchet wrench
  - 9/16 Wrench
  - Ratchet wrench and extension
  - Wire crimpers
  - Wire stripper / cutter
  - 3/16" hex key wrench (allen wrench)
  - 4mm allen wrench
  - Electrical tape
  - Weather proof caulking (silicone sealer)
  - Drill
  - Heat Gun

## Attaching motor to Linkage assembly

The motors must be attached to the front Linkages before installation. The Drivers side motor mounts on the opposite side of the linkage as the Passenger side motor does.

### EXPLODED VIEW

- Motor
- Socket cap screws
- Washers
- Motor Linkage assembly



### CAUTION: HANDLE WITH CARE.

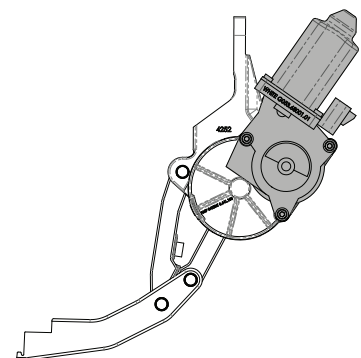
To ensure our customers receive all components with full integrity, we pack the motors separate from their Linkage assemblies. This requires that the installer position and fasten the motor before continuing with the install. Please follow the instructions below and handle the assembly carefully.

CAUTION: Dropping the assembly or any excessive impact MAY cause damage to the motor.

#### Instructions:

1. Position the gear cover in place as shown if not already in place.
2. Seat motor into position on the three mounting bosses. This may require an adjustment of the gear by moving the swing arms.
3. After seating into place, fasten the motor with the three motor mount screws with 4mm Hex Head. Tighten screws to 36 in-lbs (4N-m). **Do not over torque.**

Driver's Motor Install Orientation

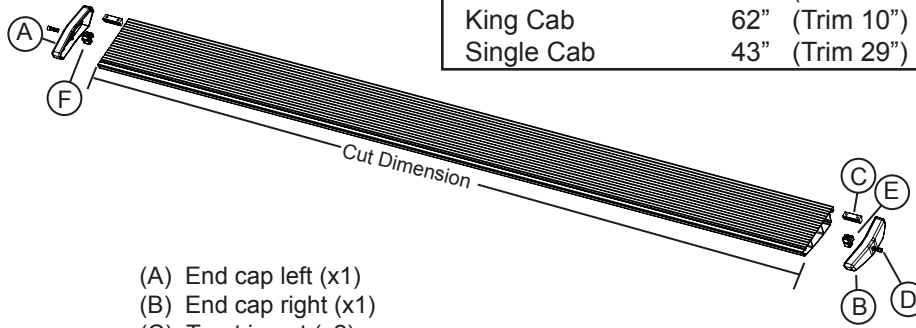


Passenger's Motor Install Orientation

PARTS LIST AND HARDWARE IDENTIFICATION

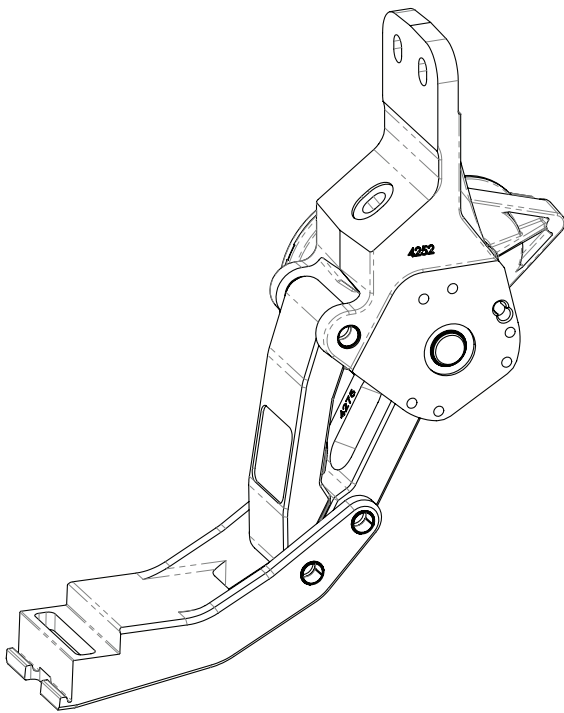
**Note: Some Applications require modification.**

Application	Cut Length
Crew Cab	72" (No Modification Required)
King Cab	62" (Trim 10")
Single Cab	43" (Trim 29")

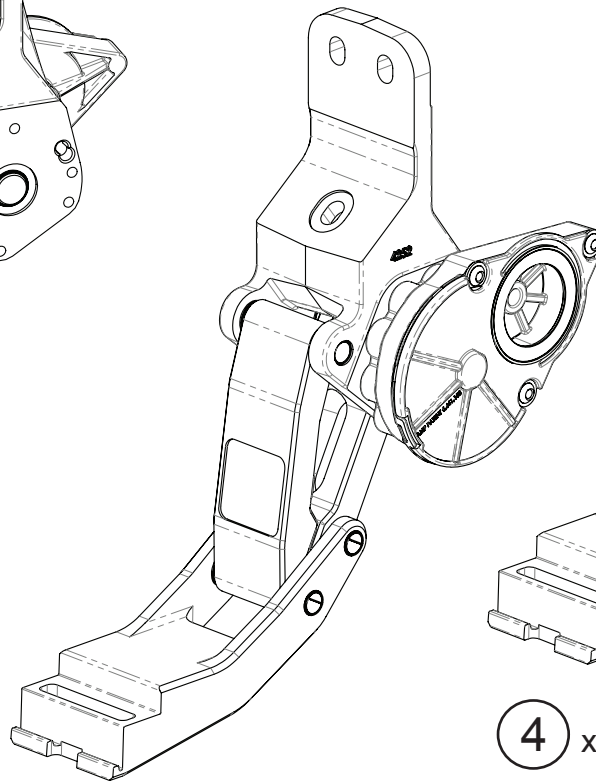


- (A) End cap left (x1)
- (B) End cap right (x1)
- (C) T-nut insert (x2)
- (D) Socket cap screw (x2)
- (E) End cap wedge right (x1)
- (F) End cap wedge left (x1)

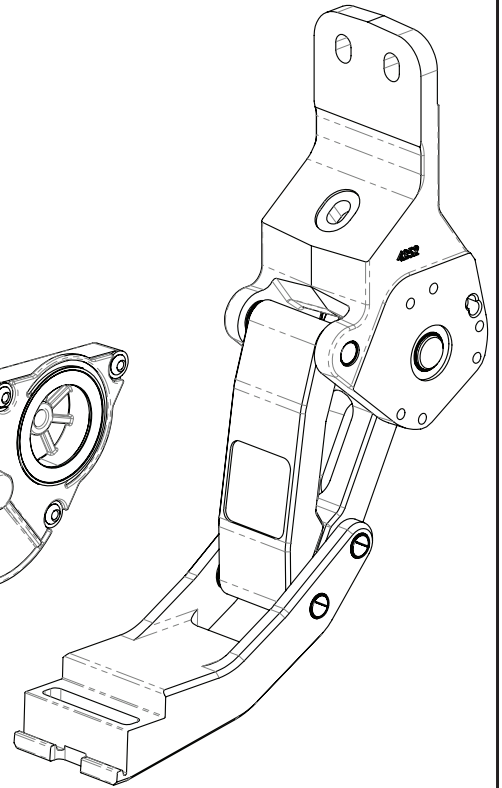
1 x2



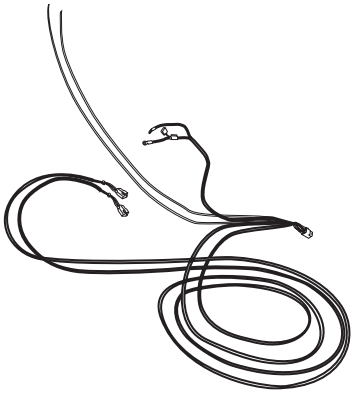
2 Driver Motor Linkage Assembly



3 Passenger Motor Linkage Assembly

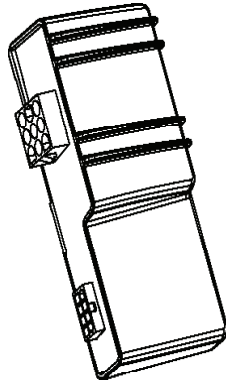


4 x2 Rear Idler Linkage Assembly



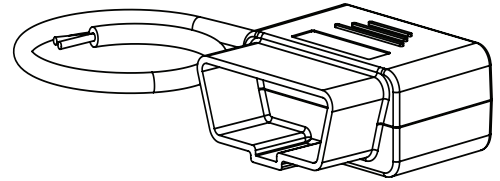
5

Wire Harness



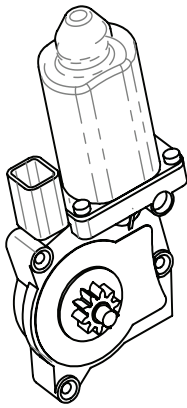
6

Controller STA



7

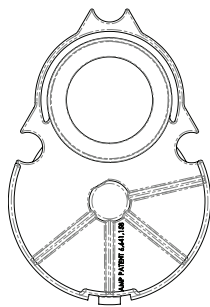
OBD II Plug



8

x2

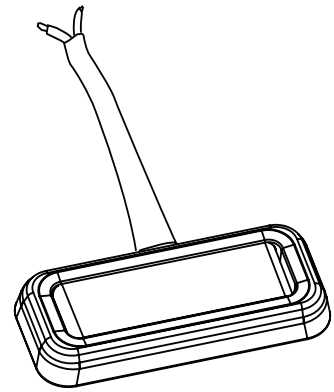
Motor



9

x2

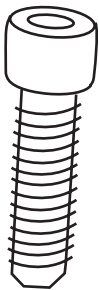
Motor Cover



10

x4

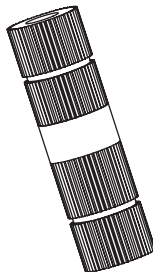
LED Lamp



11

x8

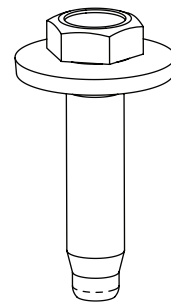
Socket Cap Screw



12

x2

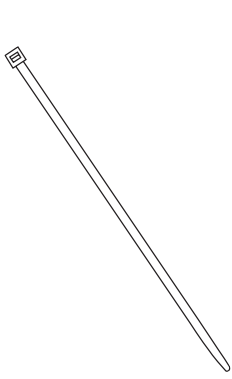
Posi-Lock Connector



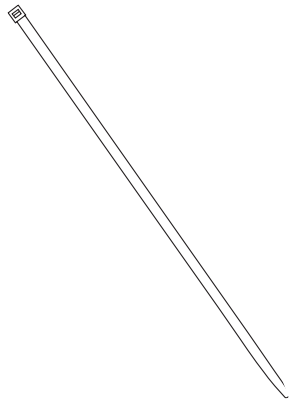
13

x8

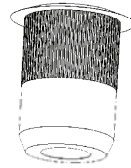
Conical Washer Bolt



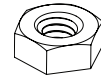
14 x20  
Cable Tie 7"



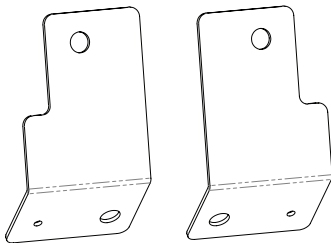
15 x2  
Cable Tie 11"



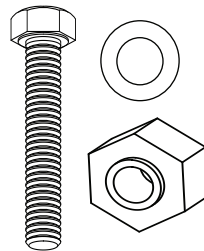
16 x2  
Rivet Nut



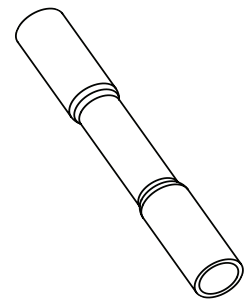
17  
Nut



18 x2  
Drill Template



19  
Rivet Nut Tool Kit



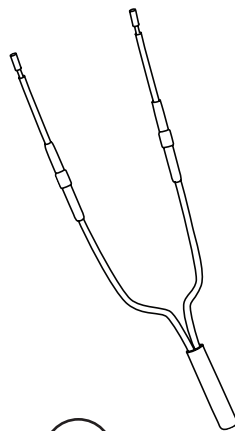
20 x8  
Butt Connector



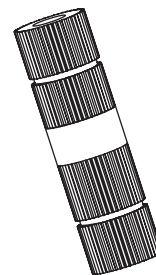
21 x4  
Grommet



22 x2  
Washer



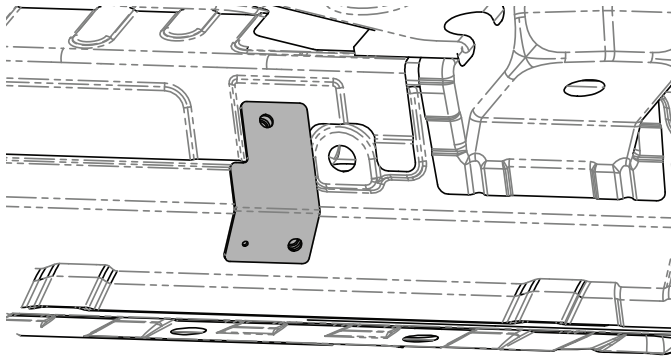
23 x2  
Double-diode  
(2018 Applications Only)



24 x4  
Posi-Tap  
Pink & Gray

## Installing Linkages (Driver Side)

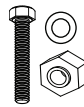
### Front Linkage (Motor Linkage)



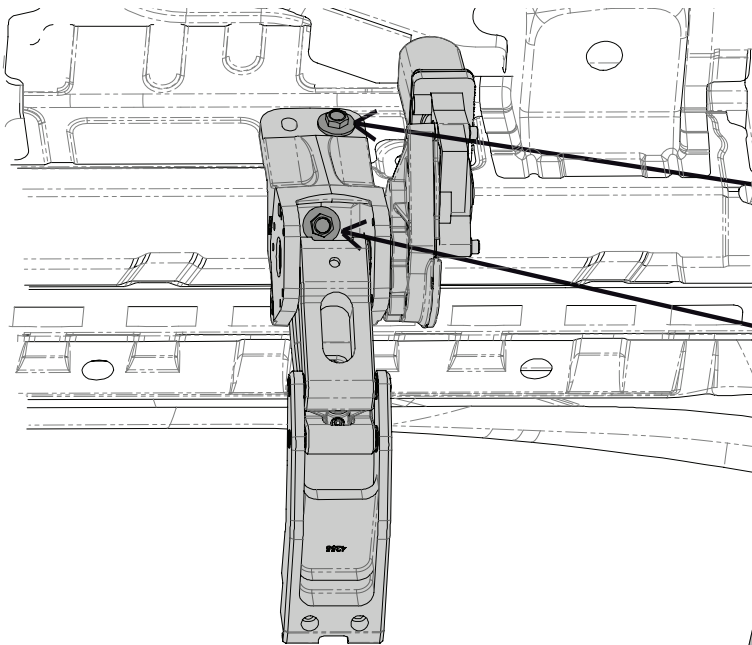
Driver Side Shown

Install the Motor linkage in the the **First mount position at the front of the truck**, install the Drill Template(18) for the specific side you are on, Passenger or Driver, using the bolts supplied (13). Drill the pilot hole with the **1/8"** drill bit. Remove drill template and drill the hole using a **3/8"** drill bit and then finally a **17/32"** drill bit. Install a Rivnut using the Rivet Nut Tool (19.)

Rivet Nut tool kit



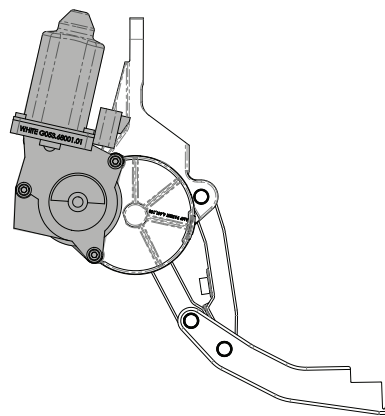
1



Assemble the motor to the linkage like the diagram below before installation. Position the motor so the linkage is in the most extended position.

Next install the motor linkage with the Washer(22) behind the upper mount on the bolt.

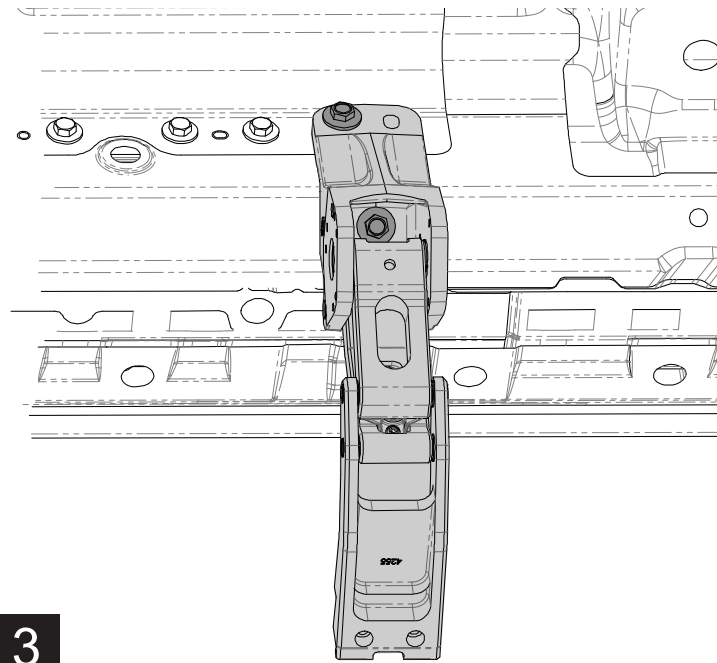
To install the lower bolt, put the bolt in a socket on an extension to guide it into position. Keep the linkage held up to the angled surface and the vertical surface. **Torque fasteners to 16 ft-lbs. (22 N m).**



Driver's Motor Install Orientation

2

## Rear Linkage (Idler Linkage)



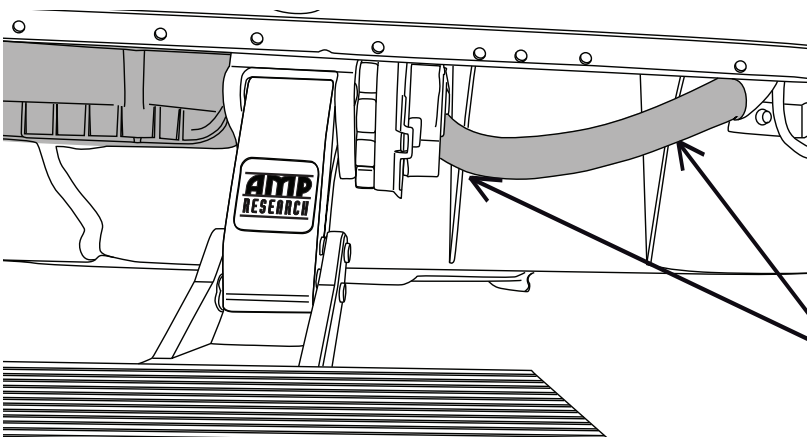
Next, install the Idler linkage in the **Third mount position from the front of the truck. Install the upper bolt in the rearward hole.** To install the lower bolt, put the bolt in a socket on an extension to guide it into position. Keep the linkage held up to the angled surface and vertical surfaces while tightening the bolts. **Torque fasteners to 16 ft-lbs. (22 N m).**

**Note: Repeat on the Passenger side.**

3

## Installing Linkages (Passenger Side)

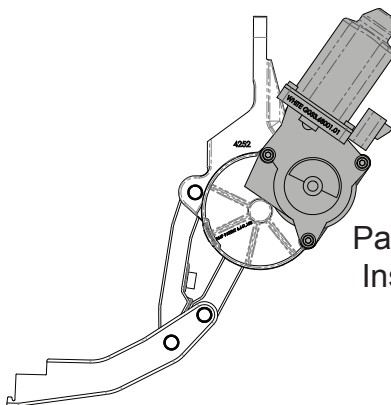
### Front Linkage (Motor Linkage)



Assemble the motor to the linkage like the diagram below before installation. Position the motor so the linkage is in the most extended position.

**Next, repeat steps 1 & 2,** using the passenger template install and drill for the rivnut as above. The washer is also placed behind the mount on the upper bolt.

**Note: On the Passenger side of the Titan XD, it will be helpful to remove the electrical connector cover and the bolts that hold the bracket to the frame. The connector should be left connected. On the Titan & Titan XD the two zipties that secure the harness to the body mount should be pulled from the frame as well. After the linkage is installed, reinstall the connector bracket. Use cable ties to secure the factory harness to the holes in the frame up and out of the way as shown.**

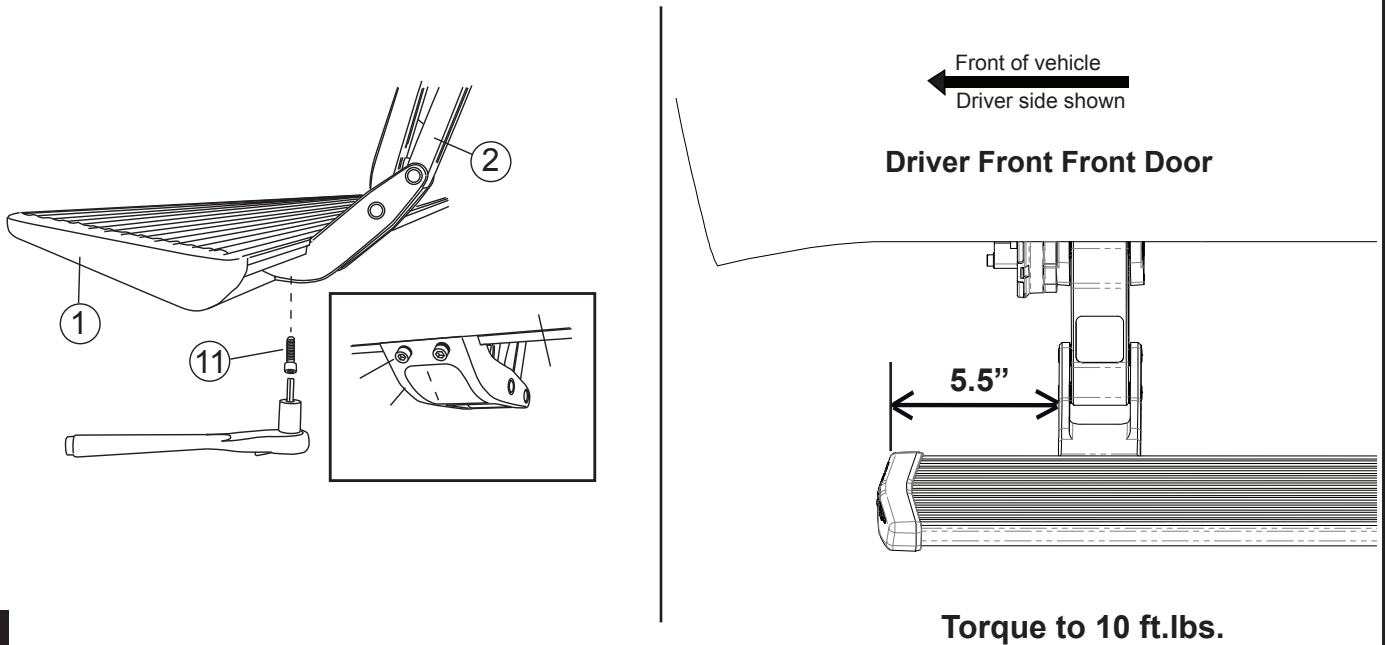


Passenger's Motor  
Install Orientation

4

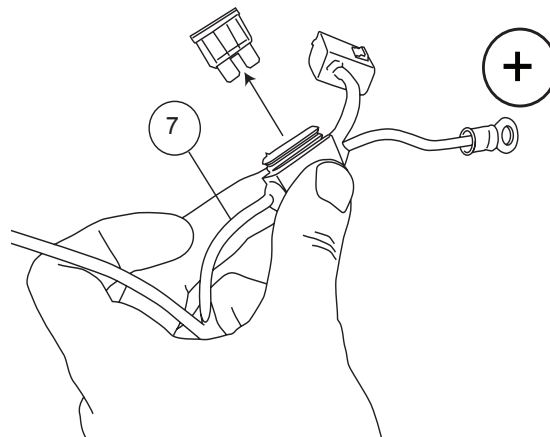
## Installing Step Extrusion

Slide the front mounting T-nut into position, place the board(1) about 5.5 inches from the front edge of the front door. Use fasteners(11) to attach boards, finger tighten only. Align the rear T-nut and bolt it to the rear linkage. Then tighten all 4 fasteners to 10 ft-lbs.



5

Remove the fuse from the Powerstep wire harness.

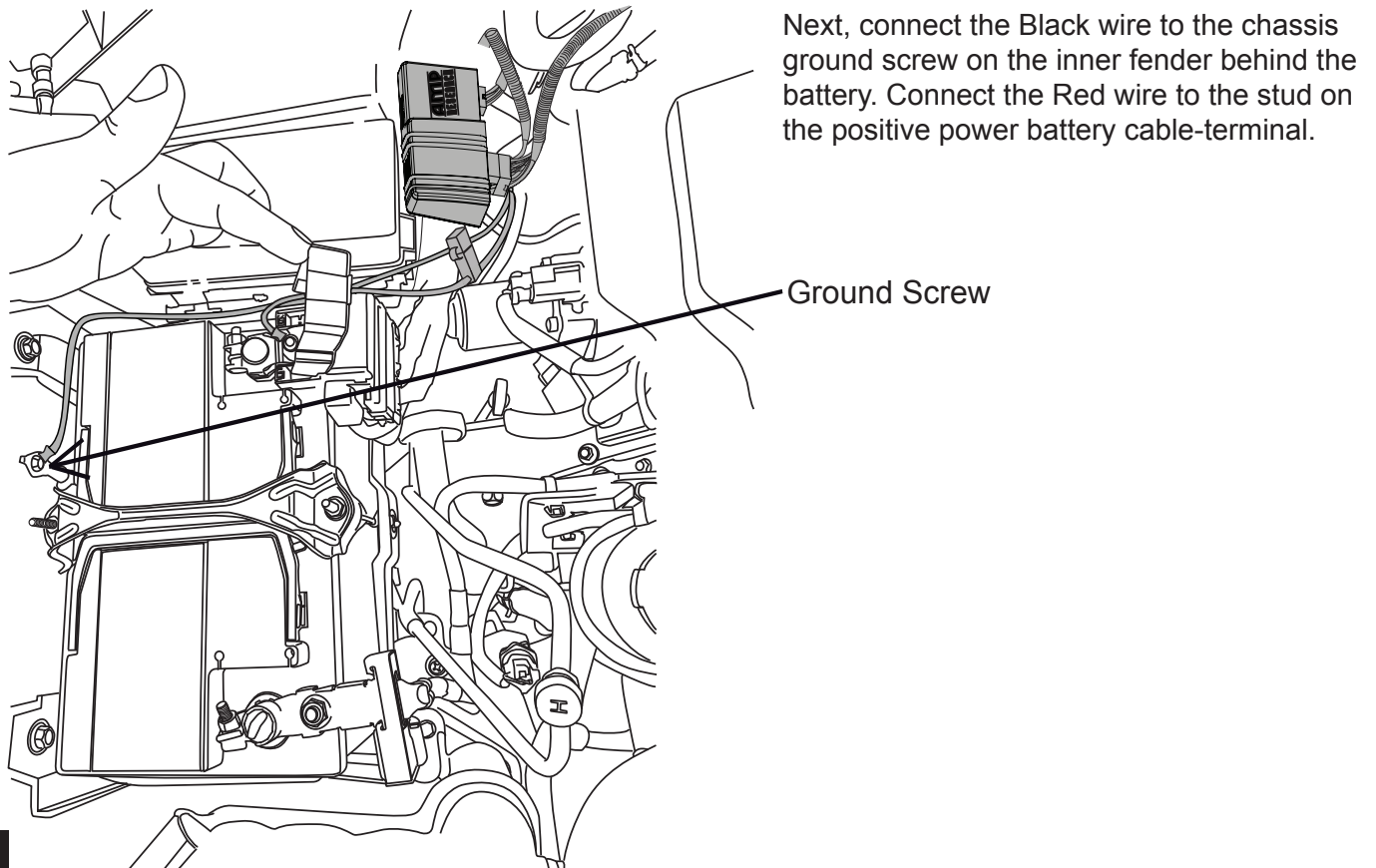
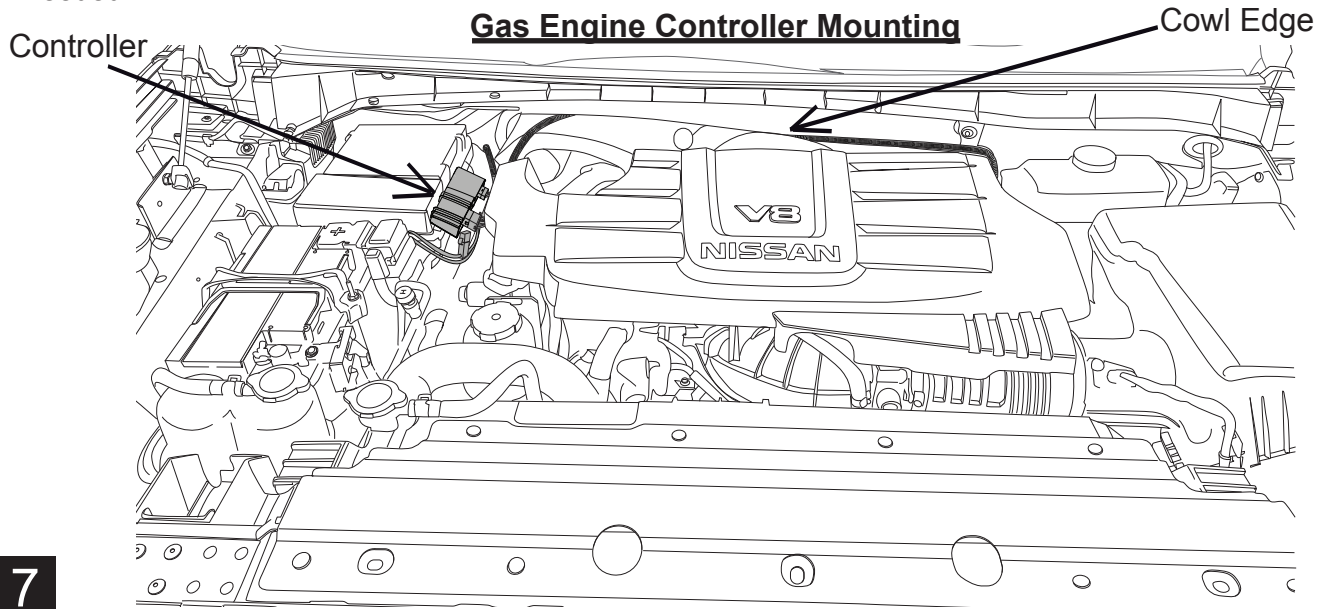


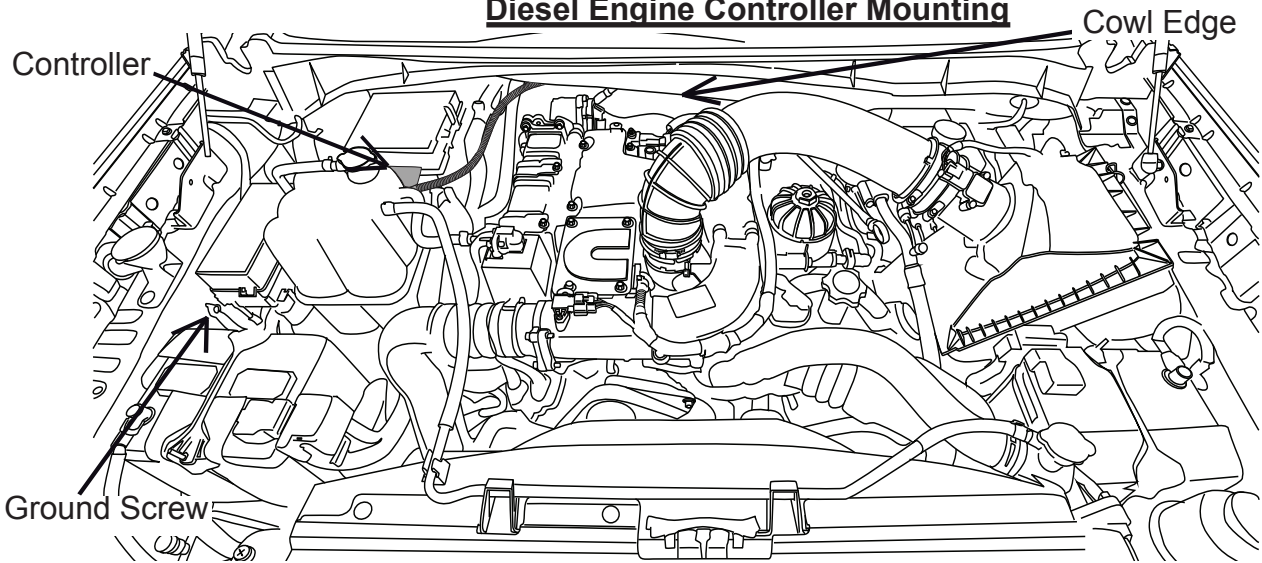
6



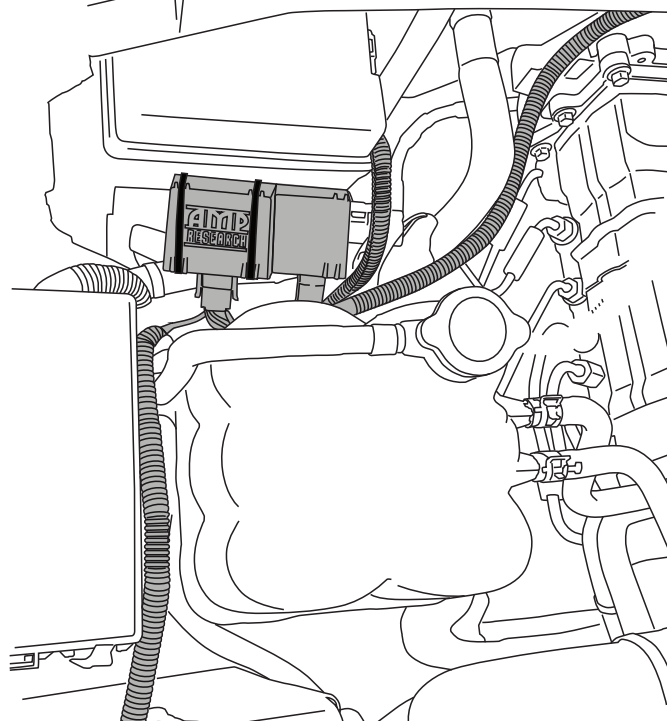
## Installing Electrical Components

Plug in the main connectors(5) to the controller(6), then attach the controller to the passenger side wire harness bundle next to the fuse boxes. Secure with 11" cable ties(15). Route the long wire harness leg along the truck wire harness under the edge of the cowl and then over the AC line bracket and cable tie(14) it in place. Then pass the harness down away from the steering shaft and exhaust to the outside of the frame. The other leg shall go down immediately away from the exhaust and to the frame area. Cable tie as needed.



**Diesel Engine Controller Mounting**

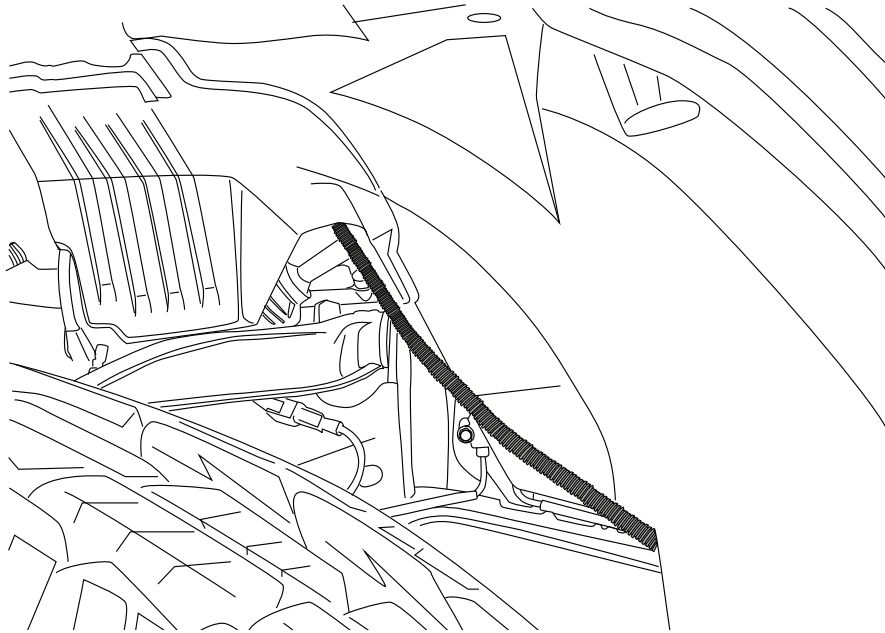
Plug in the main connectors to the controller, then attach the controller to the passenger side wire harness bundle between the fuse boxes and overflow tank as shown below. Secure with 11" cable ties(15). Route the long wire harness leg along the truck wire harness under the edge of the cowl and then over the AC line bracket and cable-tie(14) it in place. Then pass the harness down away from the steering shaft and exhaust to the outside of the frame. The other leg shall go down immediately away from the exhaust and to the frame area. Cable tie as needed.

**9**

Next, connect the Black wire to the ground screw on the inner fender in diagram at top of page. Connect the Red wire to the stud on the positive power battery cable terminal.

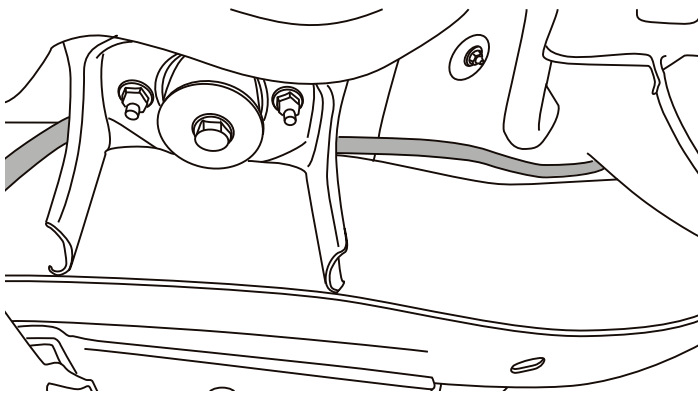
**10**

Route the two wire harness legs down to the top of the frame rails on each side and keep clear of hot and moving parts. Secure harness behind wheel liners, secure with supplied cable ties.



11

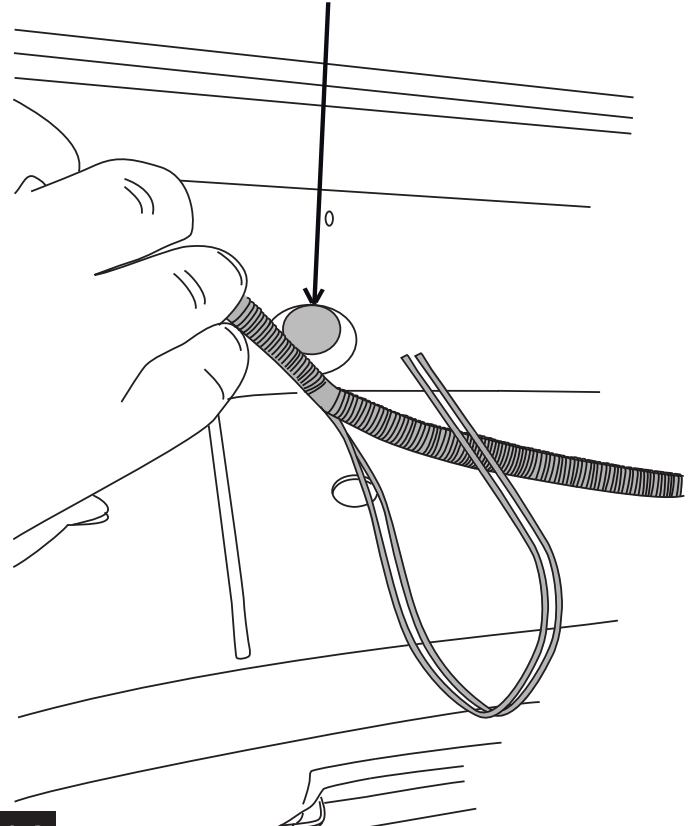
Route the two wire harness legs towards the rear of the vehicle above the body mounts, to the motor and the light locations. The shorter leg will run to the passenger side of vehicle. Secure harness with supplied tie wraps.



**On the Driver side, Do Not Ziptire the Wire Harness to the Brake Lines.**

Route the Driver side wire harness leg towards the rear of the vehicle above the body mount and to the large holes on the side of the frame. Secure with supplied tie wraps

Route the two trigger wires towards the rear of the vehicle above the body mounts and up to the first access hole in the floor on the driver side. Secure harness with supplied cable ties.

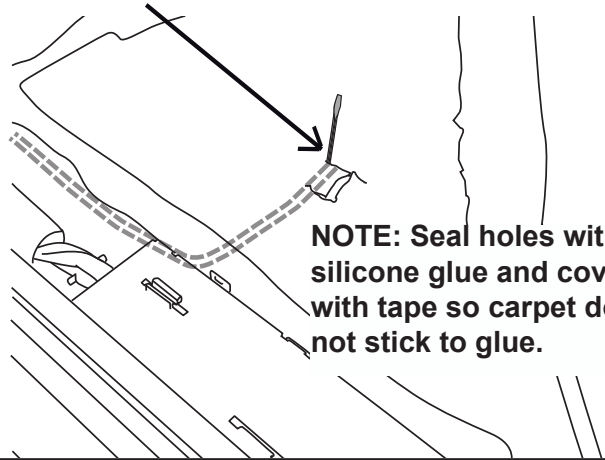
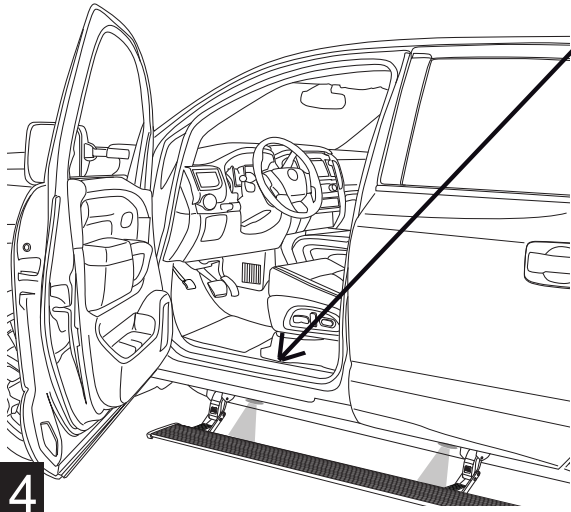


13

12

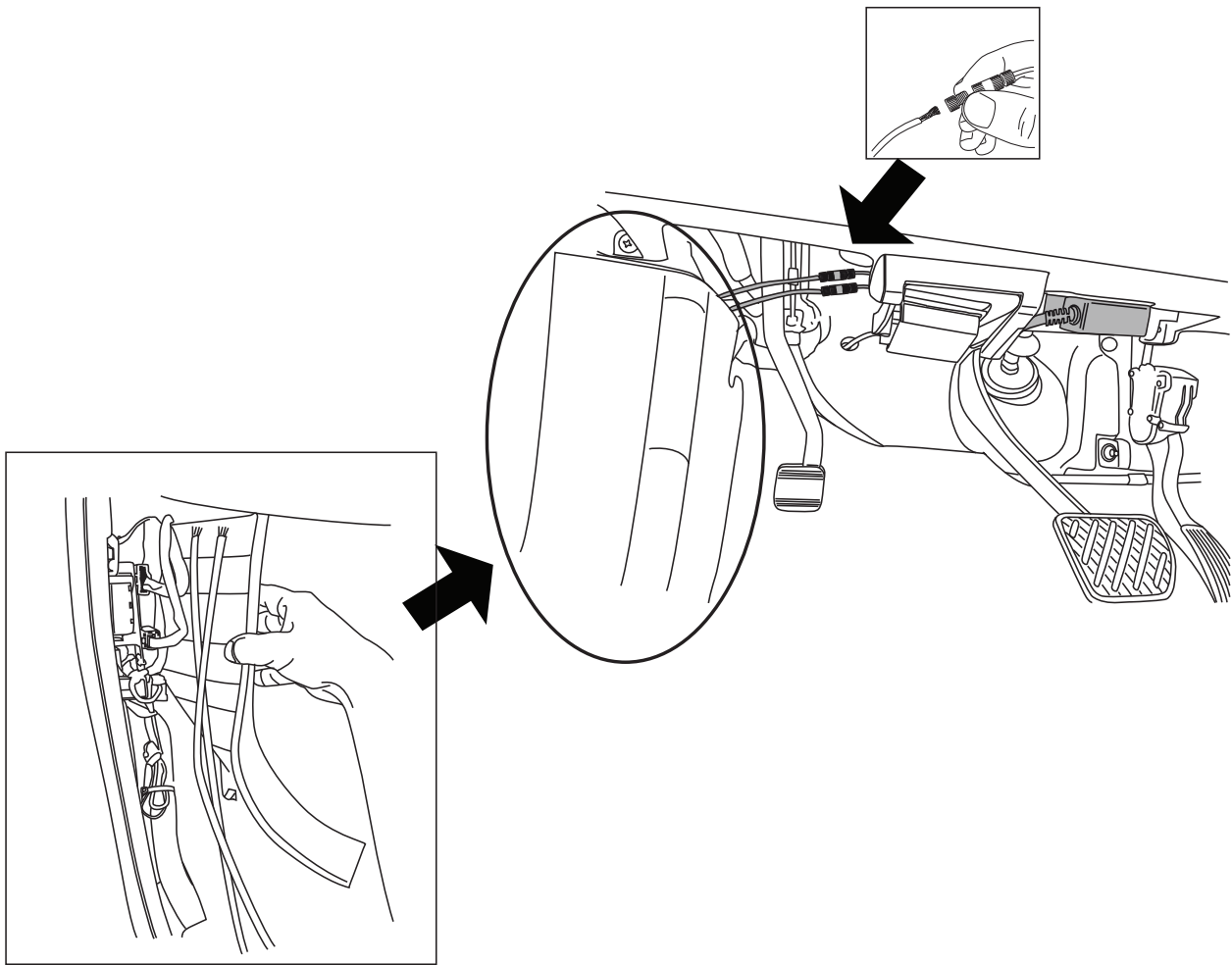
**FOR 2016 & 2017 MODEL YEARS**

Remove the driver side door sill trim and and kick panel carefully. Pull up the carpet, and poke a small screwdriver through the rubber insulation material. Run the trigger wires through and over to the door sill, as shown in dashed lines.



**NOTE: Seal holes with silicone glue and cover with tape so carpet does not stick to glue.**

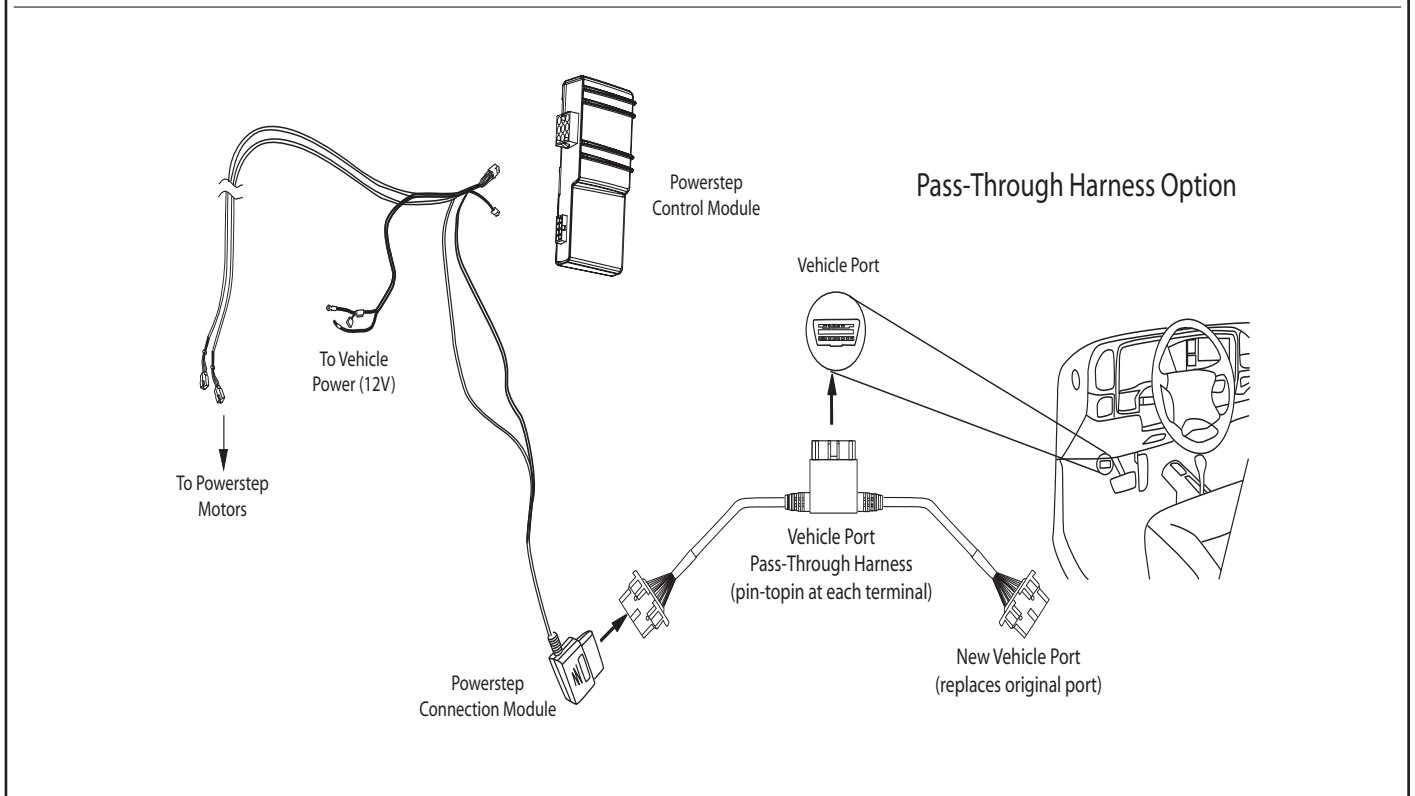
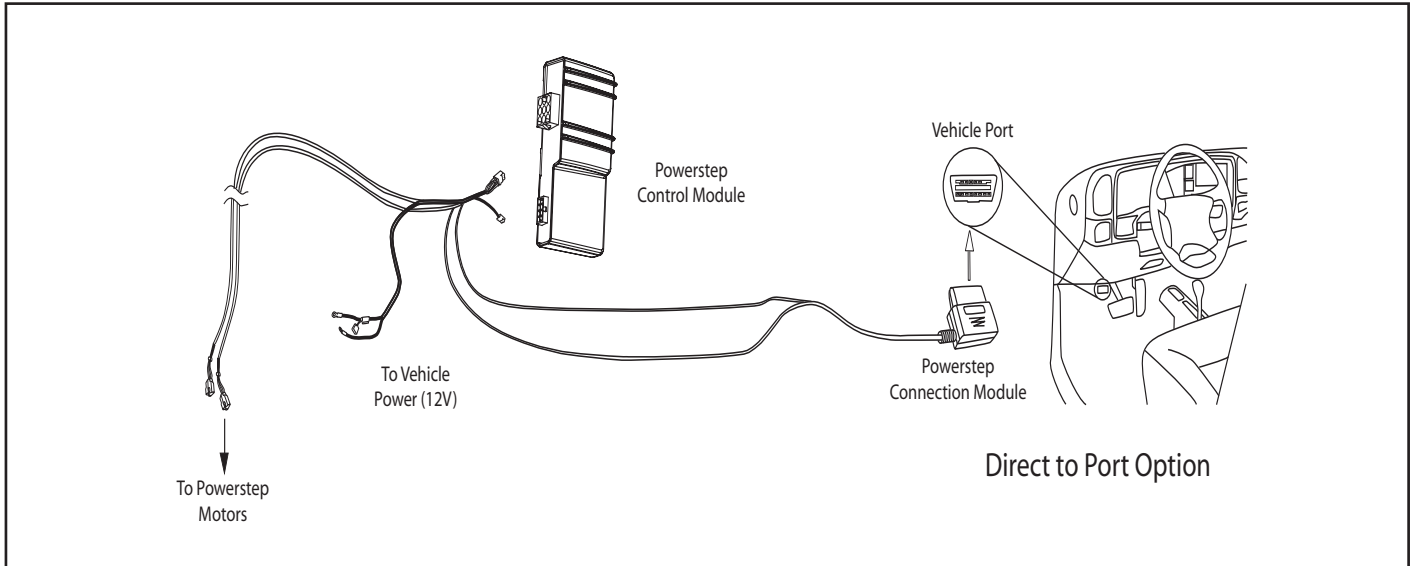
**14**



Use the Posi Locks(11) to make the connection to the plug and play module. Next plug in the Plug and Play(7) module under the dash as shown and route the wires behind the hood latch to the left. Make sure the wires are clear of the E-brake mechanism when it is on and off. The wires from below can be tucked under the carpet and covered with the trim reinstated. Then reinstall the trim.

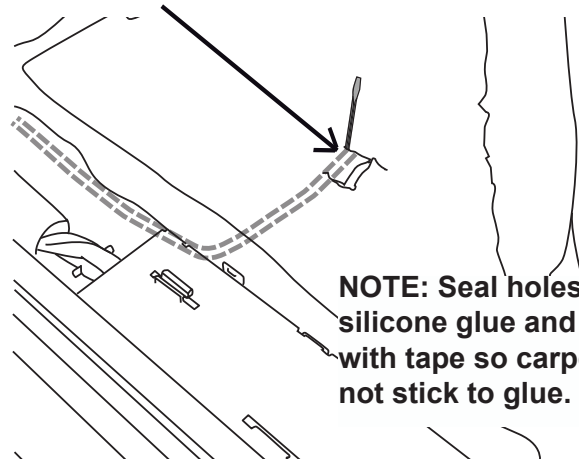
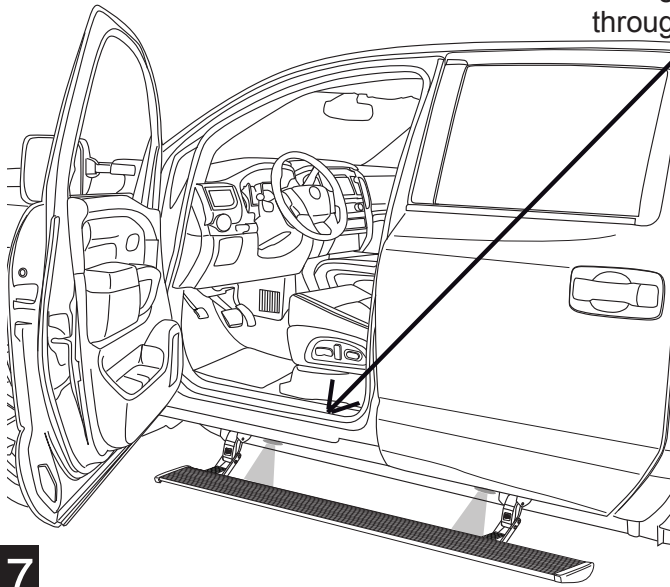
**15**

**OBD II install:** Use Supplied Posi Twist connectors to attach the Plug and Play Module to the Harness. Attach matching colors on the harness to the wires on the module. Plug in module to OBD II port on the vehicle. Secure harness with supplied tie wraps. *Note: If the OBD II pass thru harness (76405-01A) was purchased see install sheet supplied in packaging. The pass through harness allows for an open port for other accessories. See below for a brief description.*



**FOR 2018 MODEL YEAR**

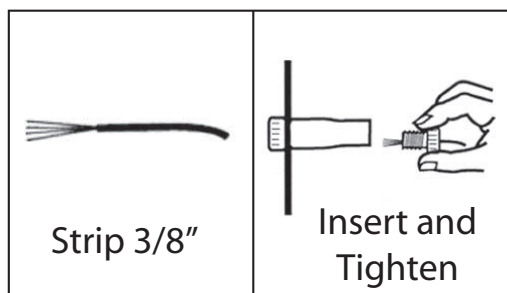
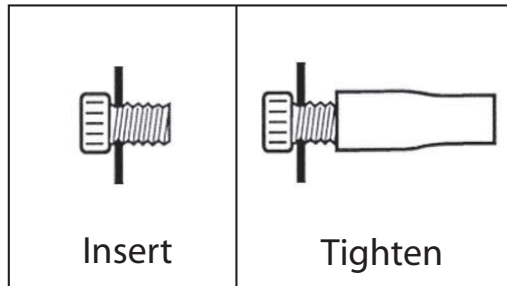
Remove the driver side door sill trim and and kick panel carefully. Pull up the carpet, and poke a small screwdriver through the rubber insulation material. Run the trigger wires through and over to the door sill, as shown in dashed lines.

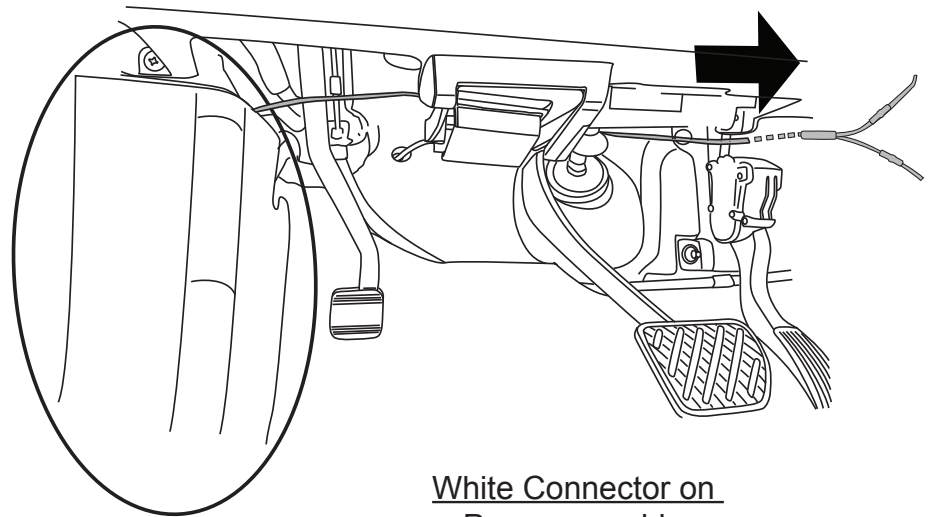
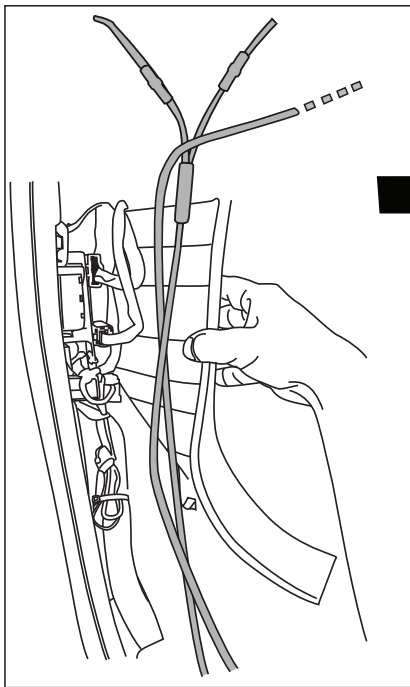


**NOTE:** Seal holes with silicone glue and cover with tape so carpet does not stick to glue.

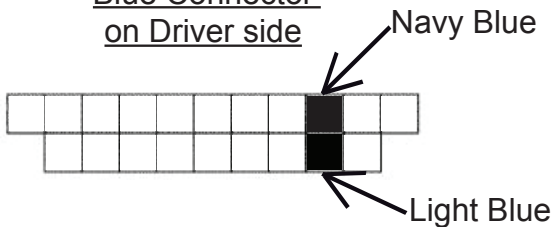
17

Posi-Tap™ instructions

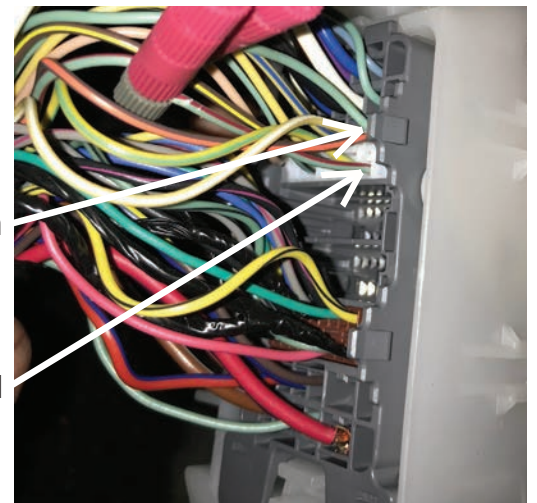




Blue Connector on Driver side



White Connector on Passenger side



Light Green

Light Grn/Red Stripe

**Driver Side:**

The short Trigger wire (purple with black stripe) needs to have a double diode crimped on as shown at left. Remove the connector block with 2 screws, the back side of it has a BLUE connector with both trigger wires in it. Connect one diode to the navy blue wire and one to the light blue wire (shown in diagram above) with Posi Taps(item 24). Re-install the connector block and trim piece, keeping the wire tucked away.

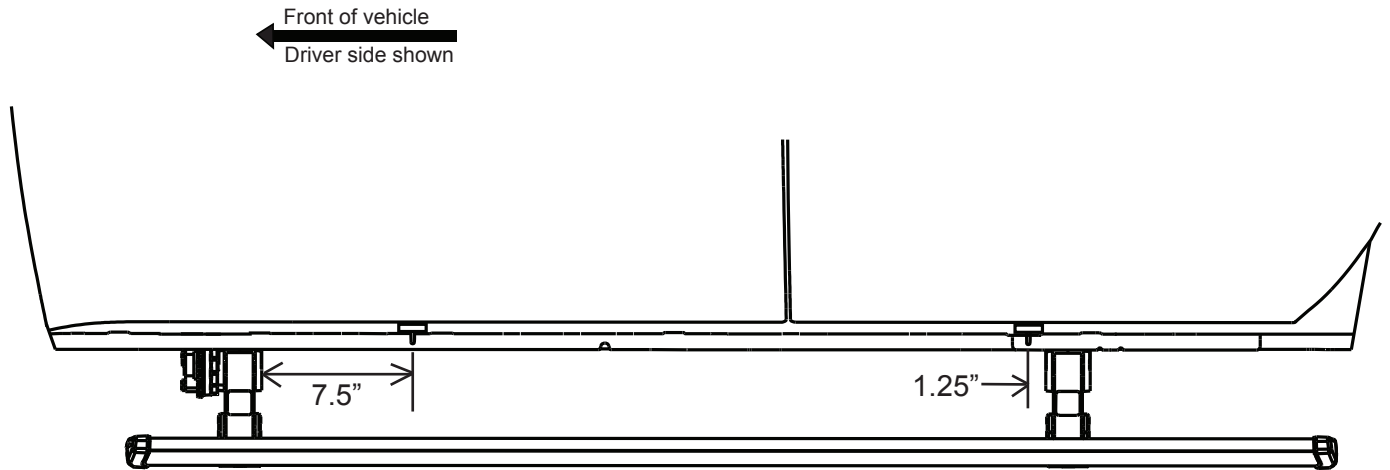
Next, route the long purple wire behind the hood latch and through the center console to the passenger side kick panel. The console side panels may need to be popped off to pass the wire through. Make sure

**Passenger Side:**

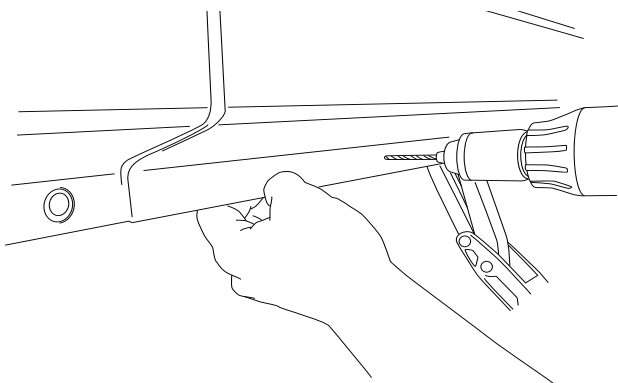
Remove, the passenger kick panel and the connector block with 2 screws. On the back of the connector block the small white connector (in the Grey Block), has a light green with red stripe wire and solid light green wire that need to be tapped into with each end of the double diode. The coupler should be crimped onto the end of the purple wire. Re-install the connector block and trim piece, keeping the wire tucked away. Re-install the console panels as well, keeping the wire tucked out of harms way.

## RESEARCH POWERSTEP™ – TITAN/TITAN XD

On each side of the vehicle measure from the rear edge of the front linkage on the pinch weld 7.5" back and mark. Measure 1.25" from the front edge of the rear linkage and mark. **Note: for King Cab, mount the rear light 8" in front**



19

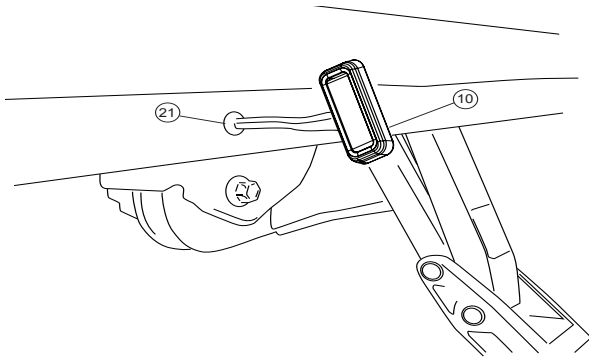


Center punch and drill a 1/8" pilot hole then drill a 19/64" hole through the pinch weld at marked locations. Deburr all holes. After drilling apply paint to holes to prevent rusting.



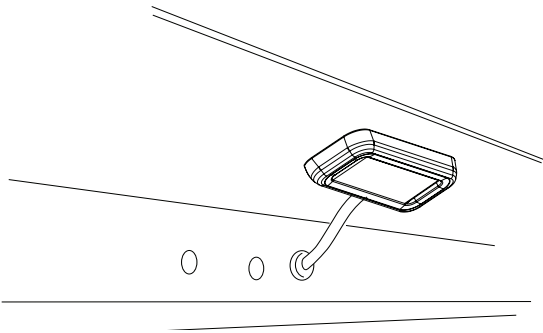
20





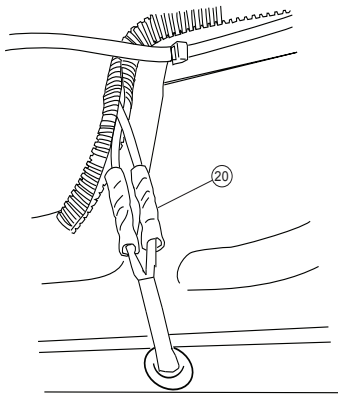
Insert grommet(21) into drilled holes. Insert lamp(10) wires through the grommets. (Silicon lube will help wires slip through grommets.)

21



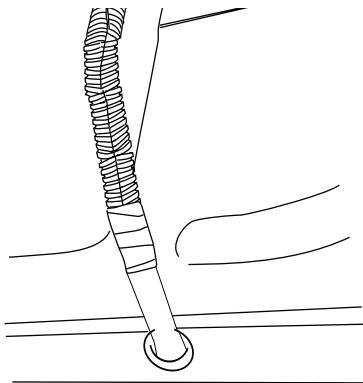
Affix lamp to rocker panel surface. Make sure lamp is affixed to a flat, clean surface.

22



Using supplied butt connectors, connect the lamp wires. Red to Red, Black to Black. Once Crimped use heat gun to shrink tube.

23

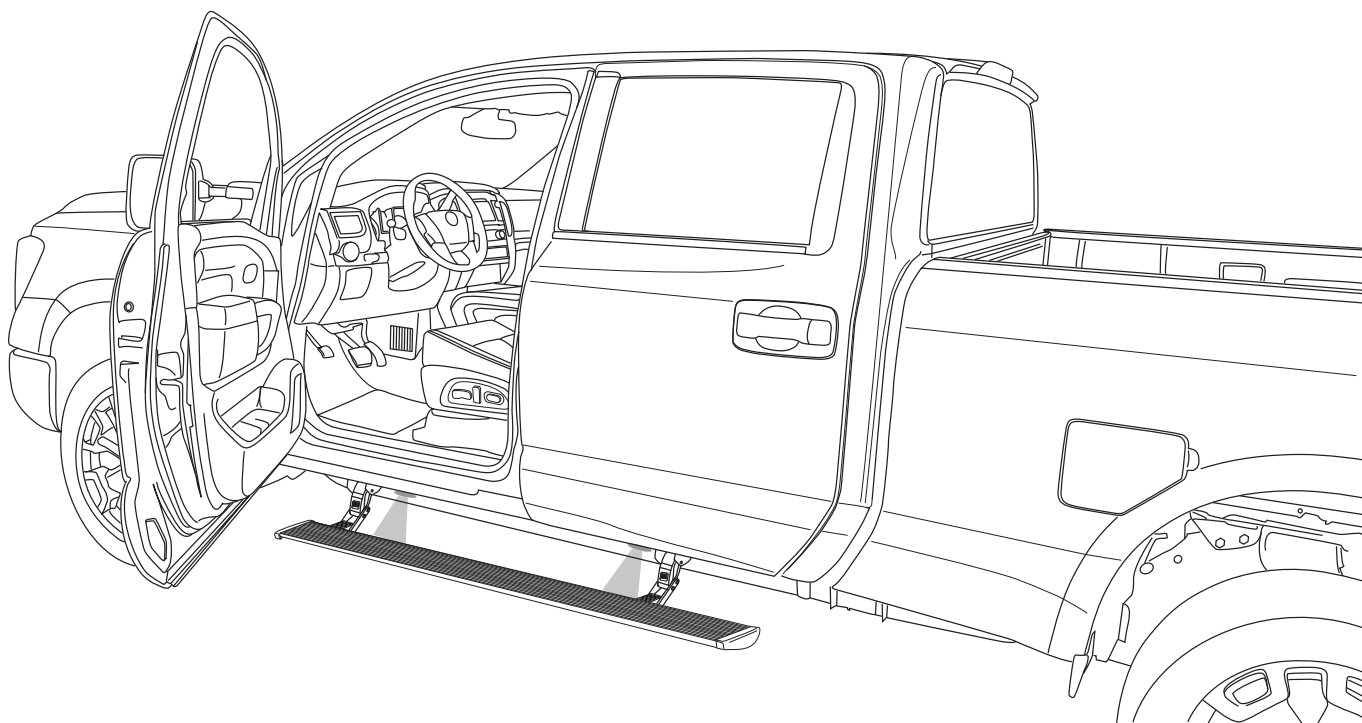
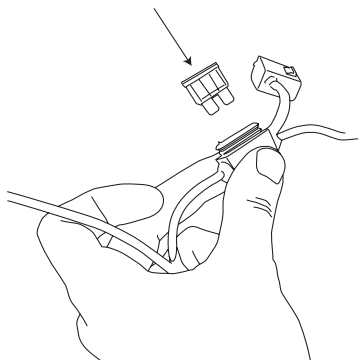


Close and wrap with conduit and electrical tape. Secure all loose wires with cable ties, with lamp wires pulled upward to avoid any wire snagging.

24

Check that all doors activate the Power Step and the LED Lights work when doors open and close. Reinstall any remaining trim panels.

**Reinstall fuse.**



**FINAL SYSTEM CHECK**

Check that all doors activate the PowerStep and the LED lights work when doors open and close.

**NORMAL OPERATION:** When the doors open, PowerStep automatically deploys from under the vehicle. When the doors are closed, PowerStep will automatically return to the stowed/retracted position. **Note that there is a 2-second delay before the PowerStep returns to the stowed/retracted position.**

**CORRECT OPERATION OF LIGHTS:** All four lamps will illuminate upon opening any door of vehicle. Lamps will stay on until restowing of both Power Steps or until 5 minutes has expired with the doors open. When the lights timeout after 5 minutes, they can be reilluminated by closing and opening any door of vehicle.