

# INSTALLATION GUIDE

# AMP RESEARCH Power Step

MADE IN USA

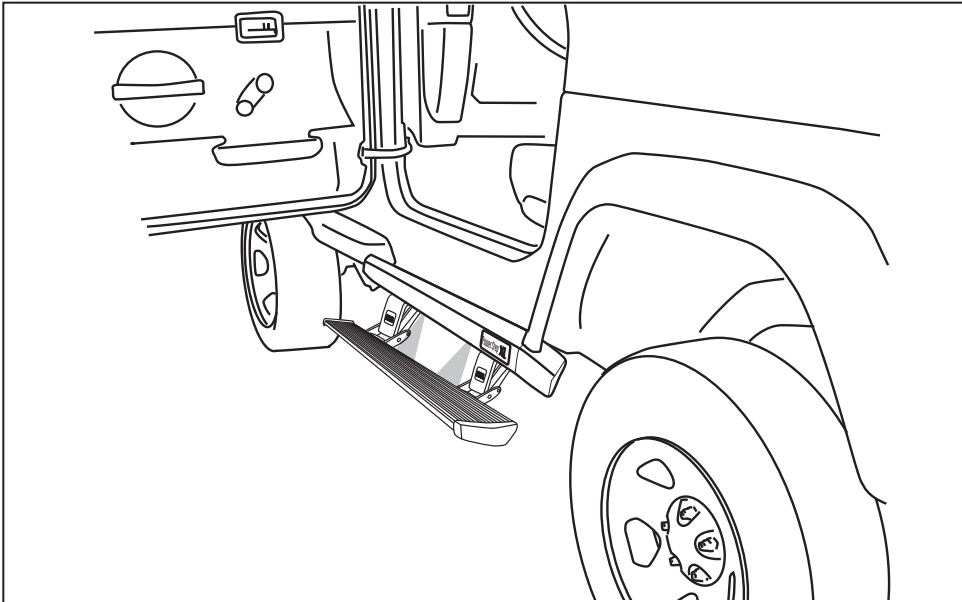
## APPLICATION

Jeep Wrangler JK 2Dr

2007-2018

## AMP Part #

77121-01A



## INSTALLATION TIME

**3-5 Hours**

Professional installation recommended

## SKILL LEVEL



4= Experienced

## TOOLS REQUIRED

- Safety goggles
- Measuring tape
- 10 mm socket
- 13 mm socket
- 1/2" socket
- Ratchet wrench and extension
- Wire crimpers
- Wire stripper / cutter
- 3/16" hex key wrench ( allen wrench )
- 4mm hex key wrench ( allen wrench )
- Electrical tape
- Weather proof caulking ( silicone sealer )
- Silicone spray

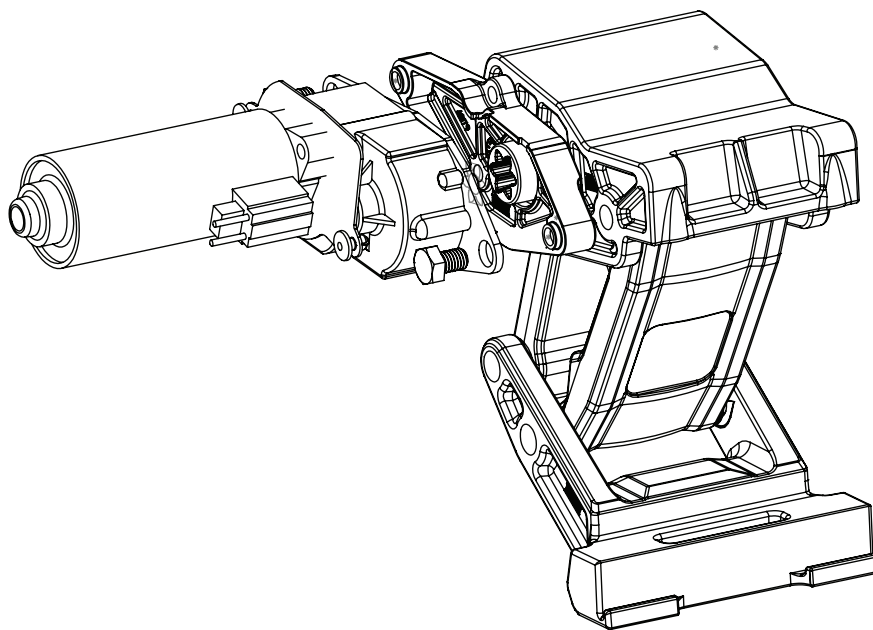
## WARRANTY

**5-Year Limited Warranty**

Invented, engineered and manufactured exclusively by AMP Research in the USA. May be covered by one of the following patents: 6,641,158; 6,830,257; 6,834,875; 6,938,909; 7,055,839; 7,380,807; 7,398,985; 7,584,975 ©2012 AMP Research. All rights reserved. Printed in USA.

EXPLODED VIEW

- Motor
- Hex Head Bolt



**CAUTION: HANDLE WITH CARE.**

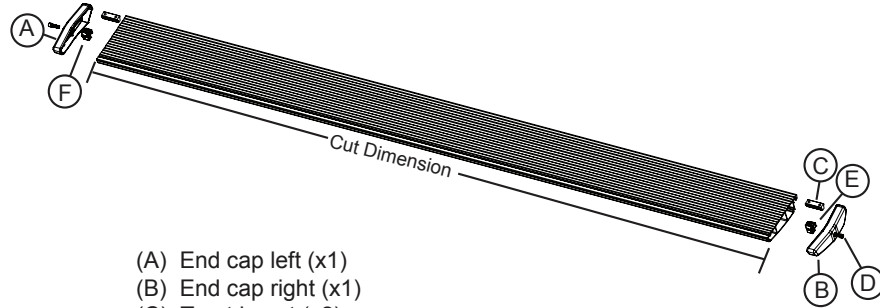
To ensure our customers receive all components with full integrity, we pack the motors separate from their linkage assemblies. This requires that the installer position and fasten the motor before continuing with the install. Please follow the instructions below and handle the assembly carefully.

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

Instructions:

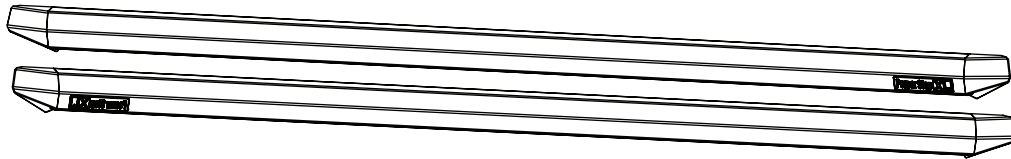
1. Position the gear cover in place as shown if not already in place.
2. Seat motor into position on the three mounting bosses. This may require an adjustment of the gear by moving the swing arms.
3. After seating into place, fasten the motor with the three motor mount screws with 4mm Hex Head. Tighten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

AMP RESEARCH POWERSTEP™ – Jeep Wrangler JK

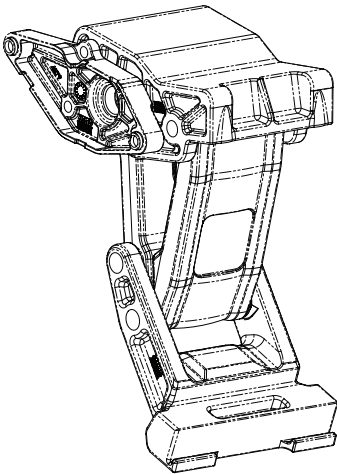


- (A) End cap left (x1)
- (B) End cap right (x1)
- (C) T-nut insert (x2)
- (D) Socket cap screw (x2)
- (E) End cap wedge right (x1)
- (F) End cap wedge left (x1)

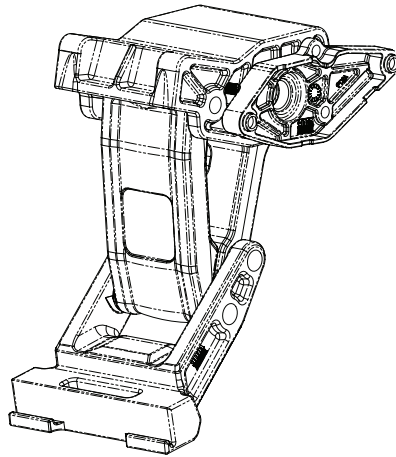
① x2  
Running board assembly



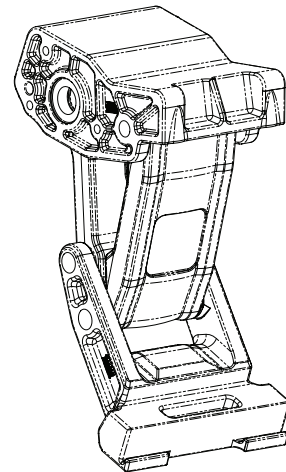
② x2  
Rail Assembly



③  
Motor Linkage assembly  
Driver

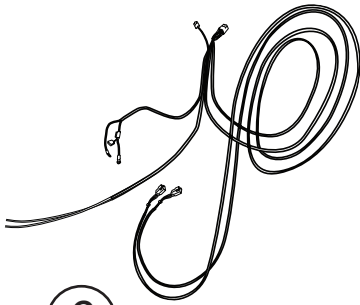


④  
Motor Linkage assembly  
Passenger



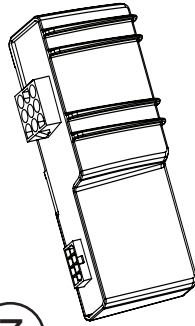
⑤ x2  
Idler Linkage assembly

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6

Wire harness

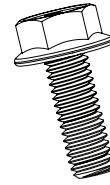


7

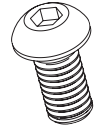
Controller STA



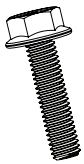
8 x2  
Posi Tap



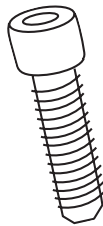
9 x12  
5/16 Flange Bolt



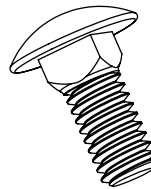
10 x8  
5/16 Button Head Bolt



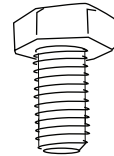
11 x4  
M6 Flange Bolt



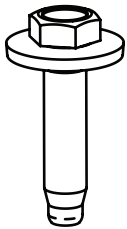
12 x8  
Socket Cap Screw



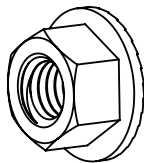
13 x8  
5/16-18 Carriage Bolt



14 x4  
M8 Head Hex Bolt



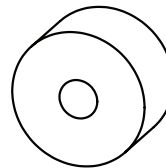
15 x12  
M8 Hex Bolt w Conical washer



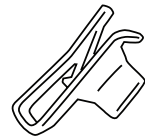
16 x28  
5/16-18 Flange Nut



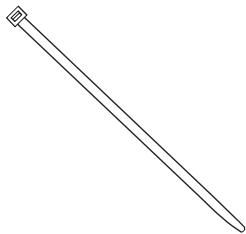
17 x8  
Washer



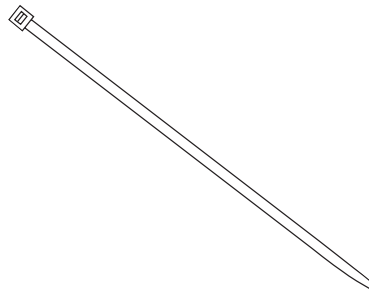
18 x4  
Upper Mount Spacer



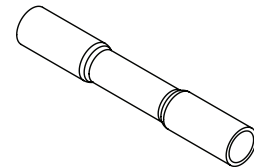
19 x4  
U nut



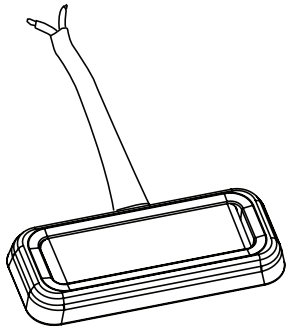
20 x20  
Cable tie (7'')



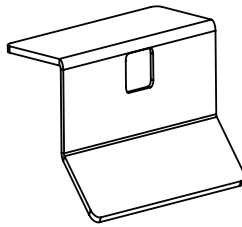
21 x2  
Cable tie (11'')



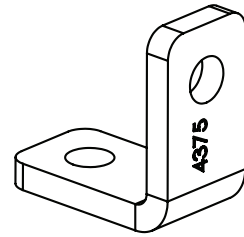
22 x8  
Butt Connector



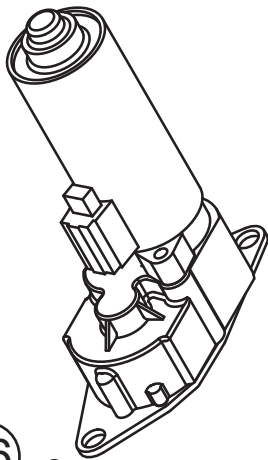
23 x4  
LED Lamp



24 x4  
LED Light Bracket



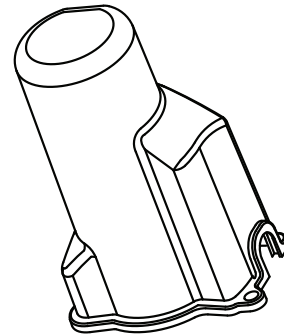
25 x4  
Support Tab



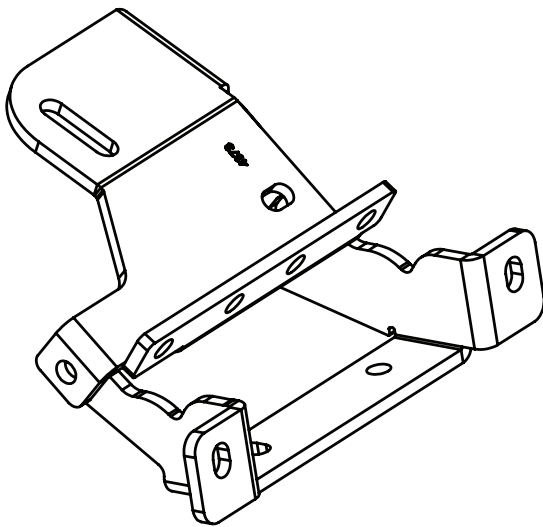
26 x2  
CRH Motor



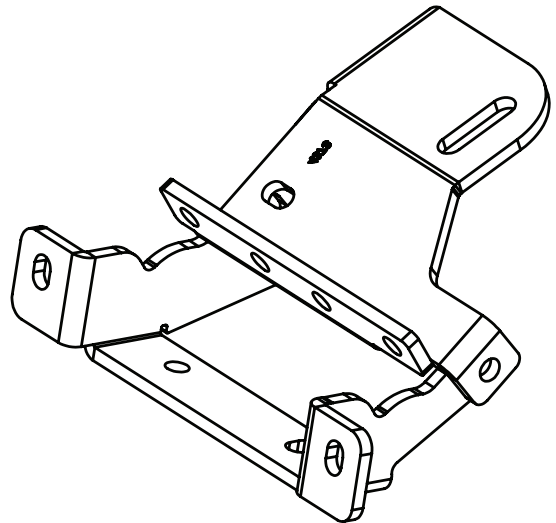
27 x6  
Cinch Fastener



28 x2  
Motor Cover

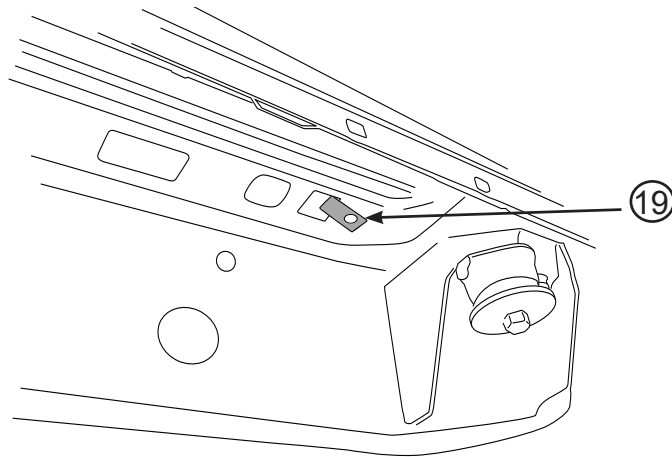


29 x2  
Linkage mounting  
Bracket (Driver Side)



30 x2  
Linkage mounting Bracket  
(Passenger Side)

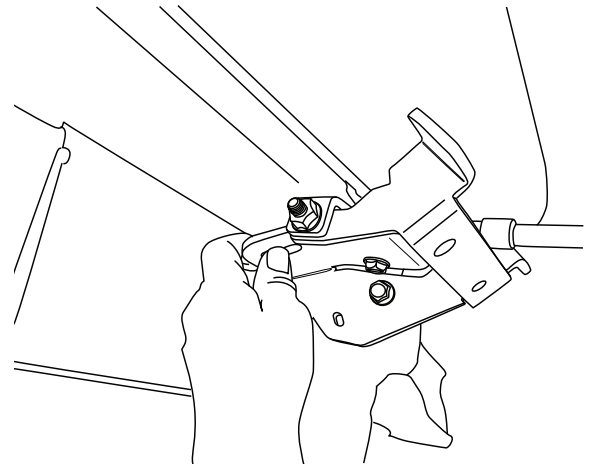
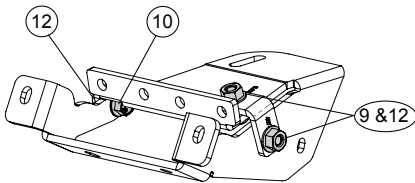
Insert U nut into position for front Idler Linkage mounting position.



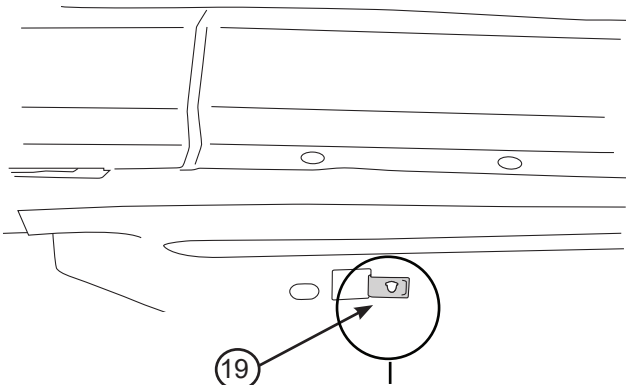
1

Assemble Support tab(25) to Linkage mounting bracket with supplied bolts(9) and nuts(16). Torque to 16ft-lbs. Next using flange bolt(9) and nut(16) thru support tab in bracket and tighten to 16ft-lbs.

Set bracket in place. Start with Button head bolts(10) thru pinch weld with flange nuts(16). Snug into position, start rear mounting bolt in u-nut using captive washer bolt(15). Note: Use right facing brackets on driver side. Mirror for passenger side.



2

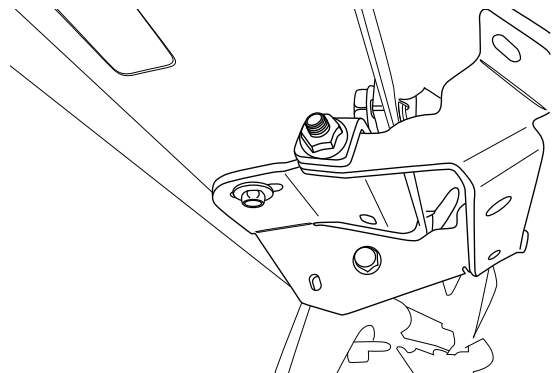


Install U nut under vehicle, middle of rear door for front motor linkage as shown. (Some vehicles with factory steps may already include this u-nut).

3

Front of vehicle passenger side →

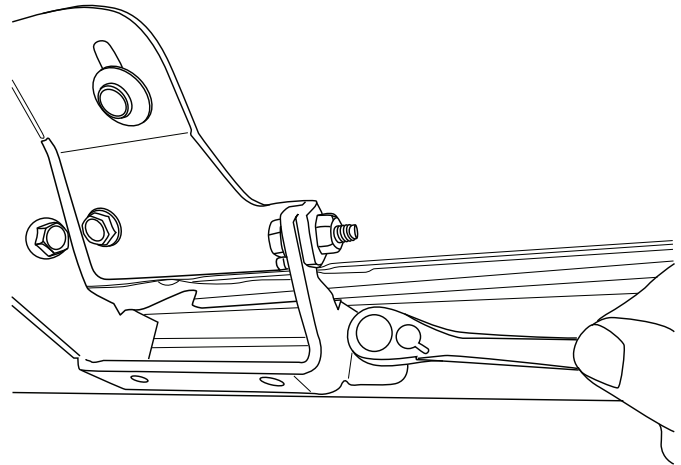
Set Rear Linkage mounting bracket into position. Follow same mounting steps as step 3.



4

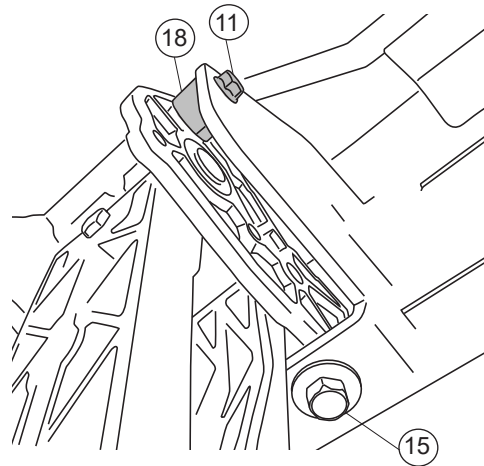
## AMP RESEARCH POWERSTEP™ – Jeep Wrangler JK

Slide 4 carriage bolts(13) into rail pocket of driver side rail. Adjust bolts and slide over brackets. Use supplied flange nuts and attach rail to brackets. Center rail between body rocker and torque 4 flange nuts to 16 ft-lbs. Assemble Flange bolt(9) with nut(16) thru support tab on bracket as shown. Torque to 16ft-lbs.



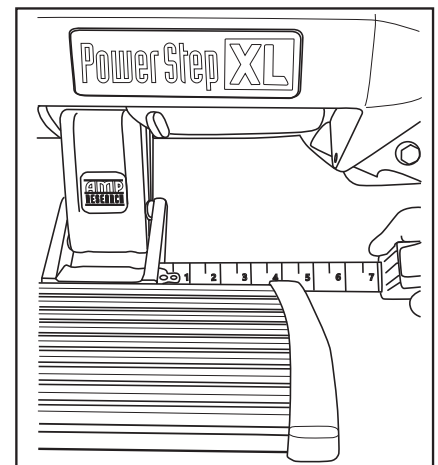
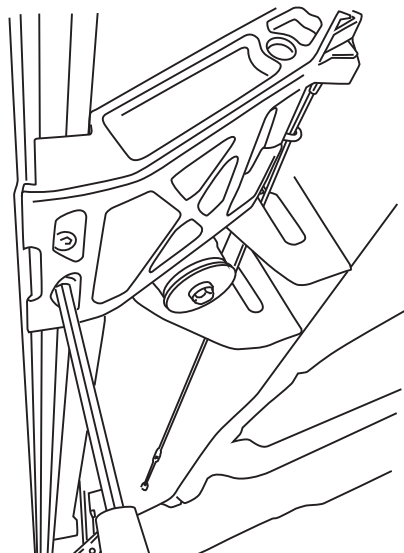
5

Install provided spacer (18) and M6 bolt (11) into upper mount as shown on both the drive and idler linkages. Do not tighten.



6

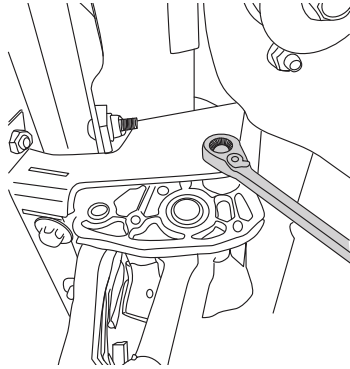
Slide mounting T-nut into position. Center board in rail pocket. Tighten fasteners to 10 ft-lb



7

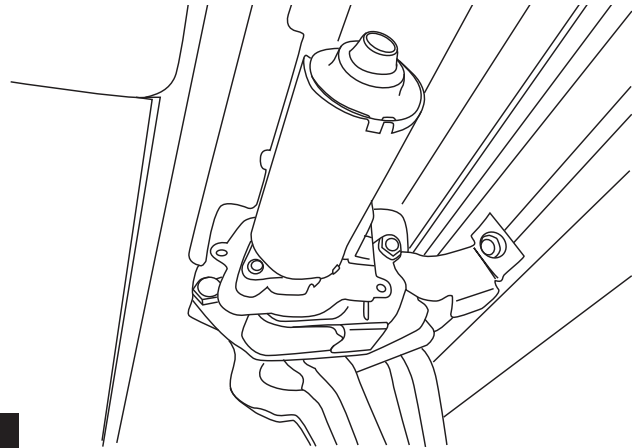
**AMP RESEARCH POWERSTEP™ – Jeep Wrangler JK**

Using a 13mm socket Torque linkage bolts 4x (15) from step 3 to 16 ft-lbs. Next use a 10mm socket, torque linkage spacer bolt 2x (11) from step 6 to 8 ft-lbs. Once linkages are tight cycle board to verify steps deploy under own weight.



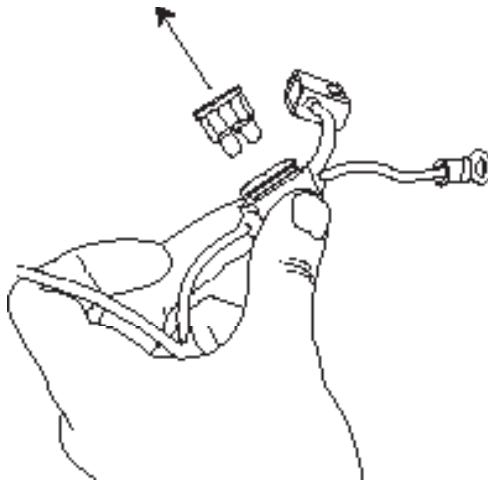
**8**

Attach motor to linkage. Using a 13mm wrench Torque to 36 in-Lbs.



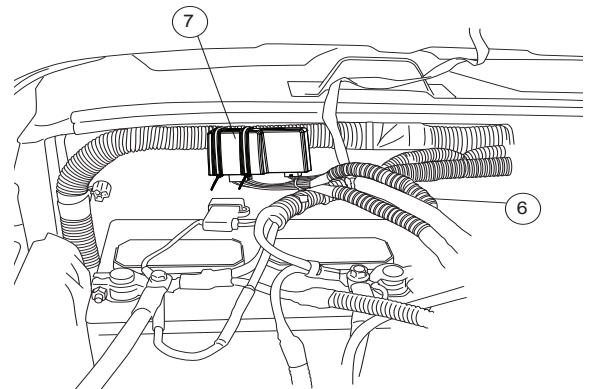
**9**

**Remove fuses from Power Step Wire Harness.**



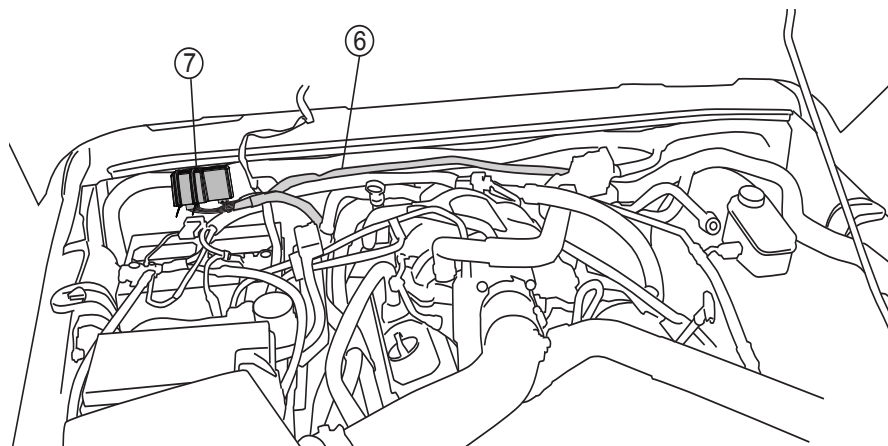
**10**

Install controller on passenger side at firewall. Secure with 11" cable ties. Connect Red wire to positive battery terminal and Black wire to negative battery terminal.



**11**

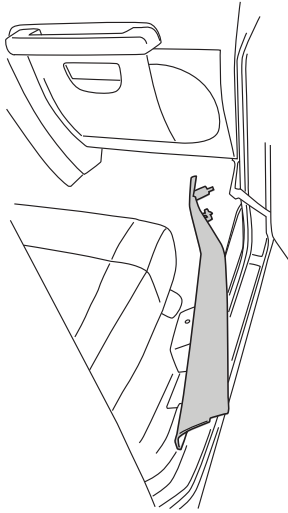
Route longest leg of wire harness across fire wall to driver side and under vehicle outside of frame rail. Route shortest leg of wire harness down fire wall and outside of frame rail on passenger side.



**12**

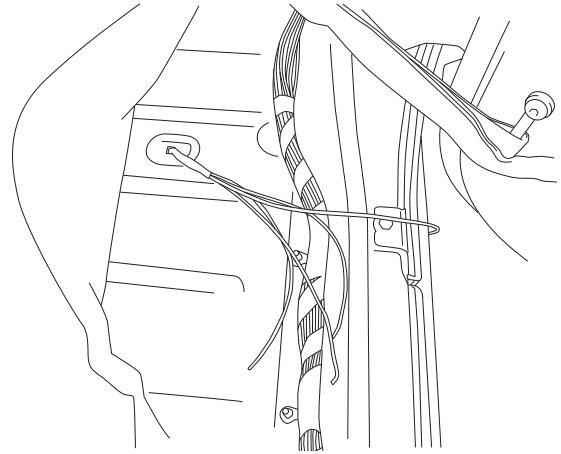


Remove passenger side front door sill.



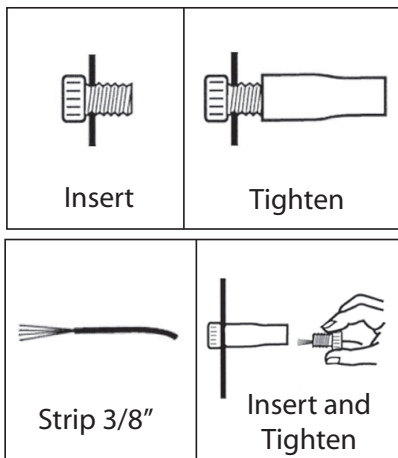
13

Lift carpet. Slit rubber grommet and pass trigger wires through grommet in floor into passenger compartment.



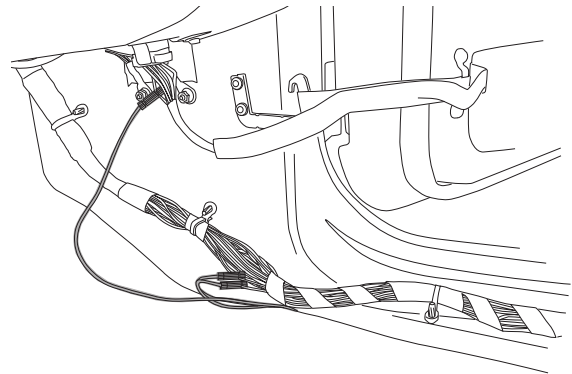
14

Posi-Tap™ instructions



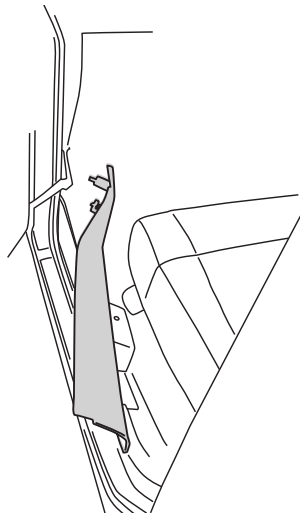
15

Use Posi-Tap connectors to connect Power Step trigger wires to like colored wires in the factory system as shown: Violet/White wire in loom coming from front door, Violet/Yellow and Violet/Grey are not used tape off ends. **Note: For door removal attach posi tap on chassis side of door harness.**



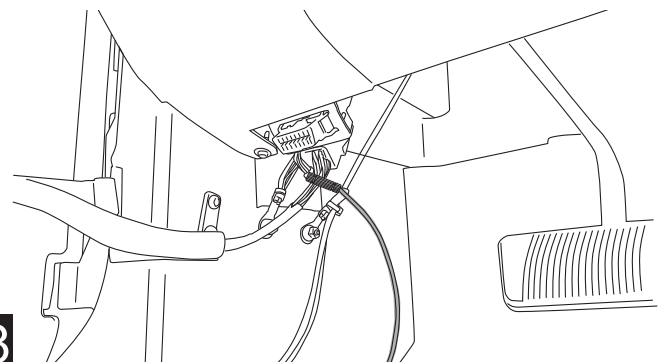
16

Remove driver side door sill and pull up carpet.



17

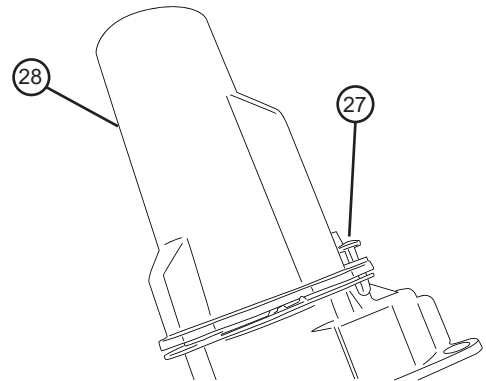
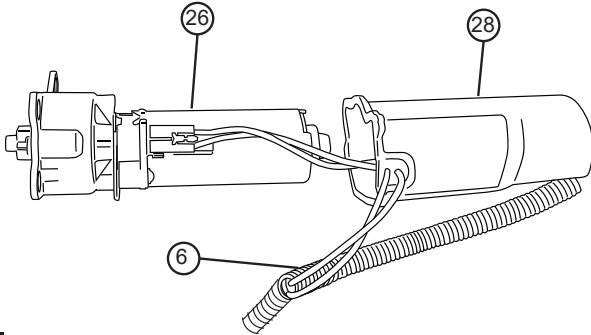
Route Violet wire under carpet to driver side door sill and connect to violet wire coming from door as shown. **Note: For door removal attach posi tap on chassis side of door harness.**



18

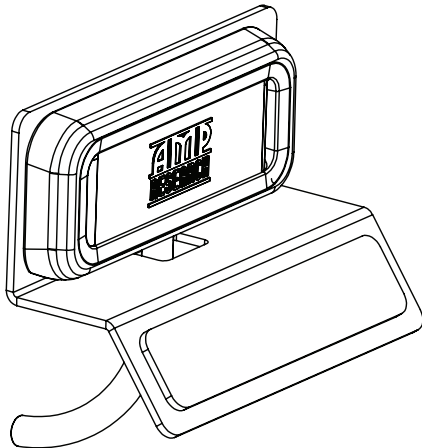
## AMP RESEARCH POWERSTEP™ – Jeep Wrangler JK

On driver side, run Wire Harness leg down and along underside of the vehicle floor and frame to front Drive Linkage. Connect harness to motor and secure harness with tie wraps. Route remainder of wire harness towards rear linkage assembly for LED lights. Repeat step on passenger side.

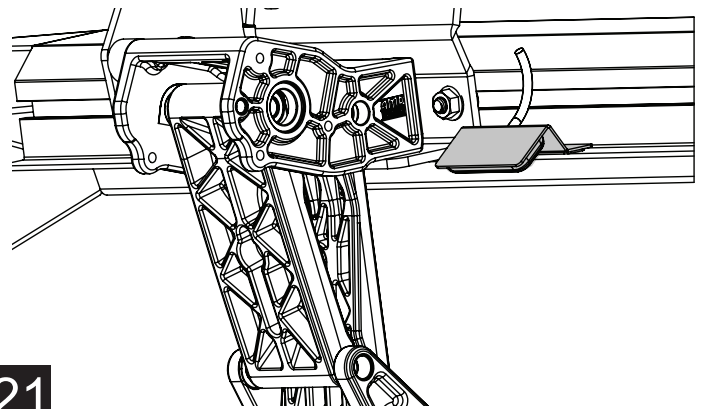


19

Affix LED lamp (23) to LED Bracket (24) as shown.



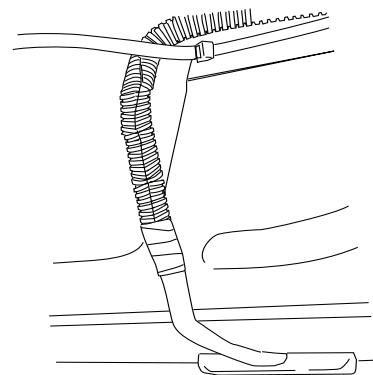
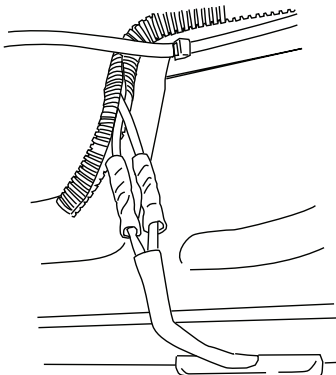
Affix LED light bracket assembly to rail. Mount front light rearward of front linkage and mount rear light just forward of rear linkage.



20

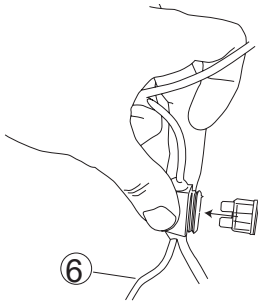
21

Using supplied butt connectors(22), connect the lamp wires. Red to Red, Black to Black. Once Crimped use heat gun to shrink tube. Close and wrap conduit with electrical tape. Secure all loose wires with cable ties. Pull lamp wires upward to avoid any wire snagging.



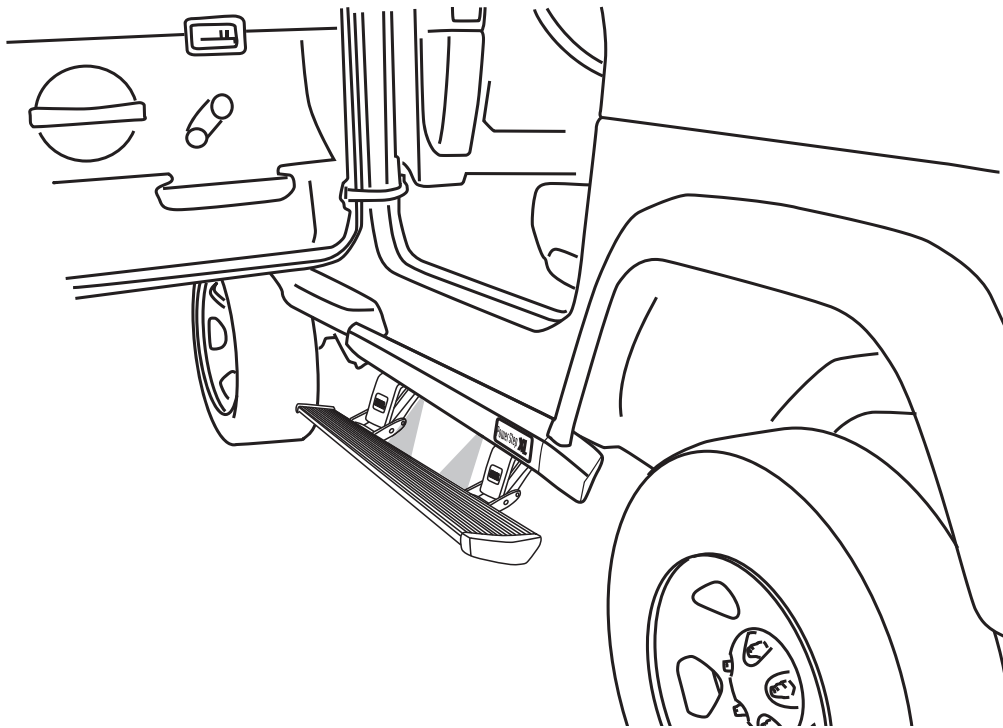
22

Reinstall Fuses from Powerstep Wire Harness.



23

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



#### 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.

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# PowerStep™

**Congratulations on your purchase of the genuine AMP Research PowerStep! Here's what you should know...**

**POWER-DEPLOYABLE RUNNING BOARDS OPERATION:** AMP Research PowerStep running boards automatically move when the doors are opened to assist entering and exiting the vehicle.



**Automatic power deploy:**

The running boards will extend down and out when the doors are opened.

**Automatic power stow:**

The running boards will return to the stowed position when the doors are closed. There will be a 2-second delay before the running boards move to the stowed position.

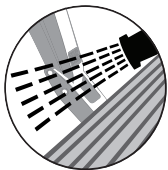
**Automatic stop:**

If an object is in the way of the moving running board, the running board will automatically stop. To reset, clear any obstruction, then simply open and close the door to resume normal operation.



**Manually set in the deployed (OUT) position for access to the roof:**

The running boards can be manually set in the deployed position by firmly holding the step down with your foot while at the same time closing the door. To resume normal operation, open and close the door.



**Maintenance:** In adverse conditions, debris such as mud, dirt, and salt may become trapped in the running board mechanism, possibly leading to unwanted noise. If this occurs, manually set the running boards to the deployed position and flush the front and rear hinge arms with a high-pressure car wash wand.

Avoid spraying the motors directly. After washing, apply silicone spray lubricant to the hinge pivot pins. Do not apply silicone, wax or protectants like Armor All® to the running board stepping surface.

**Caution!** Keep hands away when the running board is in motion.