

# INSTALLATION GUIDE

# AMP RESEARCH Power Step

MADE IN USA

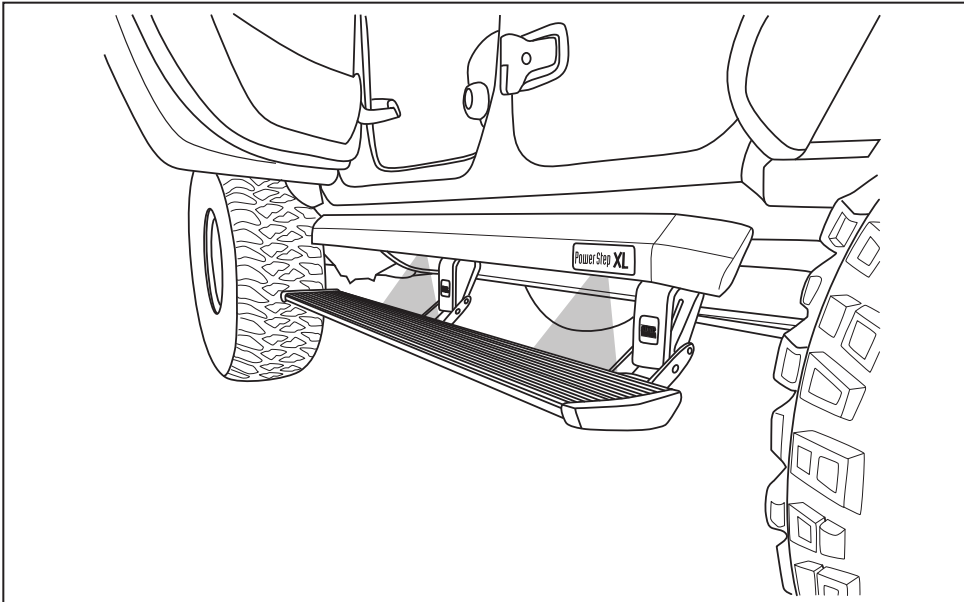
## APPLICATION

Jeep Wrangler JL 4Dr

2018 - 2019

## AMP Part #

77132-01A



## INSTALLATION TIME

**3-5 Hours**

Professional installation recommended

## SKILL LEVEL



4= Experienced

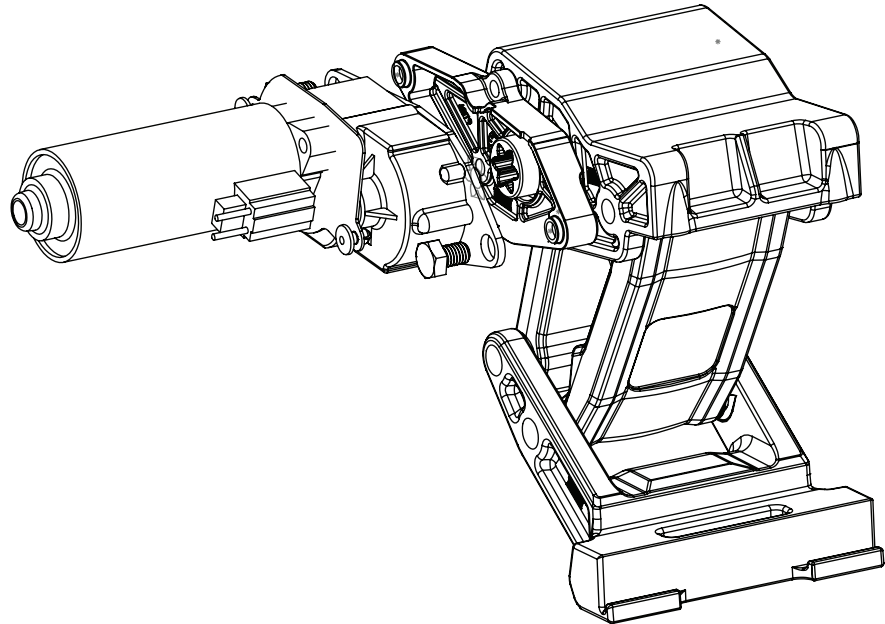
## TOOLS REQUIRED

- 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

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.**

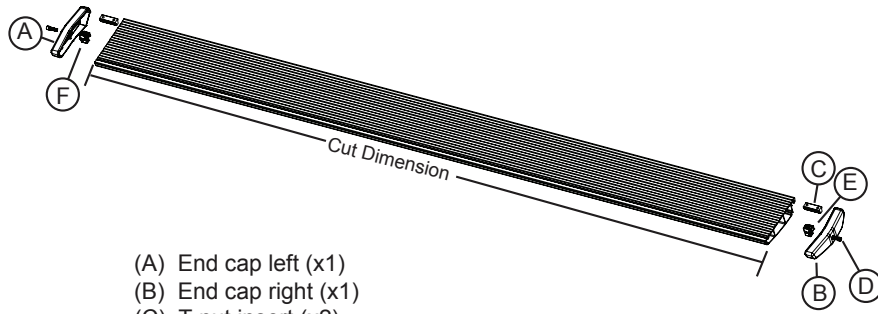
To ensure our customers receive all components with full integrity, we pack the motors separate from their linkage assemblies. This requires that the installer position and fasten the motor before continuing with the install. Please follow the instructions below and handle the assembly carefully.

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

Instructions:

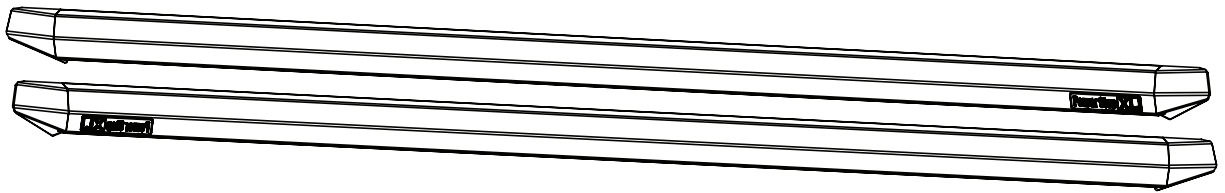
1. Position the gear cover in place as shown if not already in place.
2. Seat motor into position on the three mounting bosses. This may require an adjustment of the gear by moving the swing arms.
3. After seating into place, fasten the motor with the three motor mount screws with 4mm Hex Head. Tighten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

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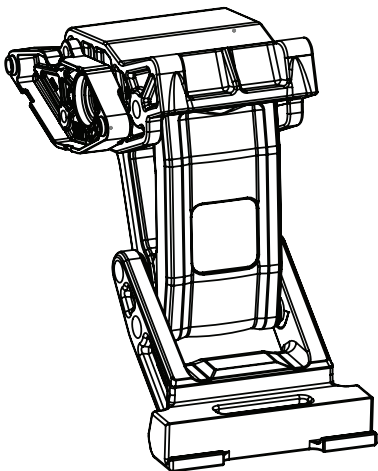


- (A) End cap left (x1)
- (B) End cap right (x1)
- (C) T-nut insert (x2)
- (D) Socket cap screw (x2)
- (E) End cap wedge right (x1)
- (F) End cap wedge left (x1)

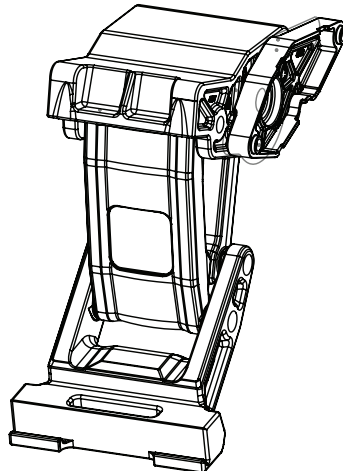
① x2  
Running board assembly



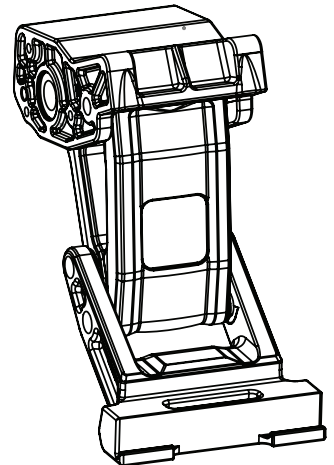
② x2  
Rail Assembly



③  
Motor Linkage assembly  
Driver

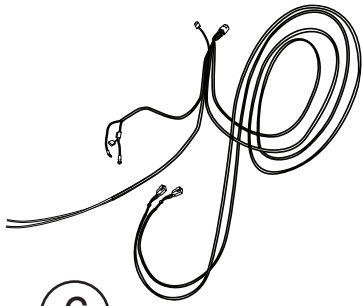


④  
Motor Linkage assembly  
Passenger



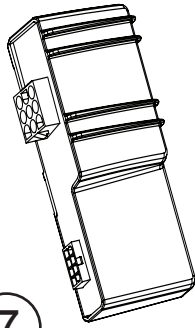
⑤ x2  
Idler Linkage assembly

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6

Wire harness

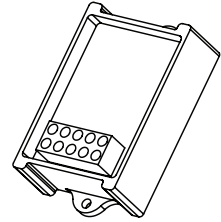


7

Controller STA

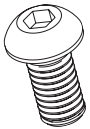


8 x4  
Posi Tap

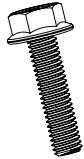


9

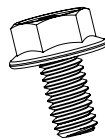
Door Trigger Module



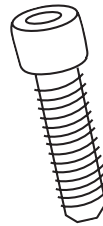
10 x10  
M8 Button  
Head Bolt



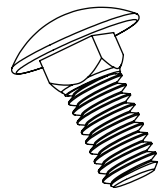
11 x4  
M6 Flange Bolt



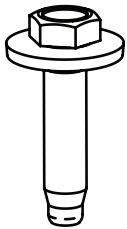
12 x4  
5/16 Flange Bolt



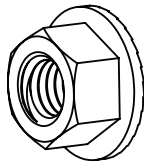
13 x8  
Socket Cap Screw



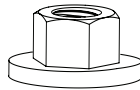
14 x10  
5/16-18  
Carriage Bolt



15 x12  
M8 Hex Bolt w  
Conical washer



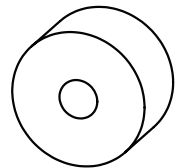
16 x14  
5/16-18  
Flange Nut



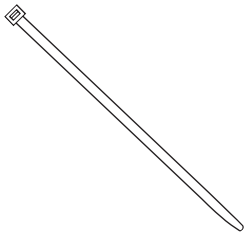
17 x10  
Nut with Conical  
Washer



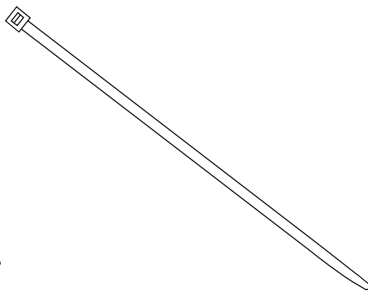
18 x14  
Washer



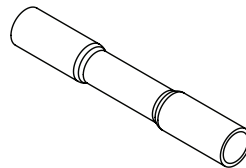
19 x4  
Upper Mount  
Spacer



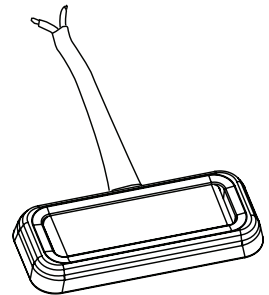
20 x20  
Cable tie (7'')



21 x2  
Cable tie (11'')



22 x11  
Butt Connector



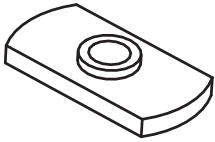
23 x4  
LED Lamp

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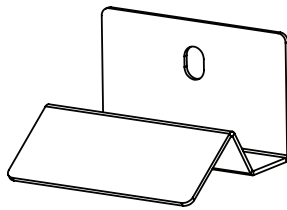
24 x4

Button Head Bolt



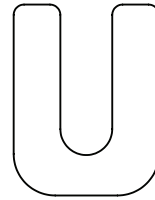
25 x4

Nut Plates



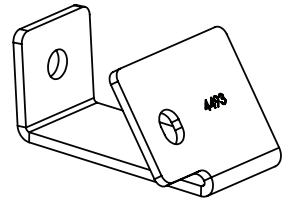
26 x4

LED Light Bracket



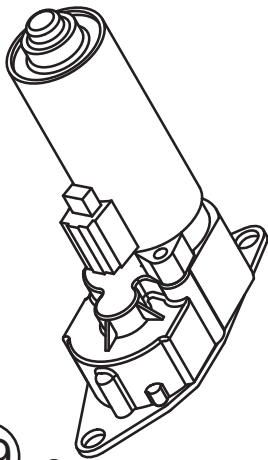
27 x2

Shim Spacer



28 x2

Rail Support Bracket



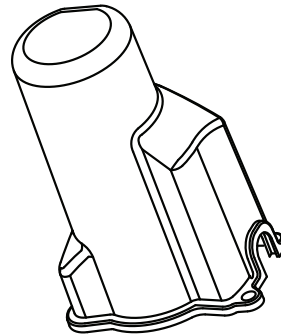
29 x2

CRH Motor



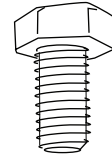
30 x6

Cinch Fastener



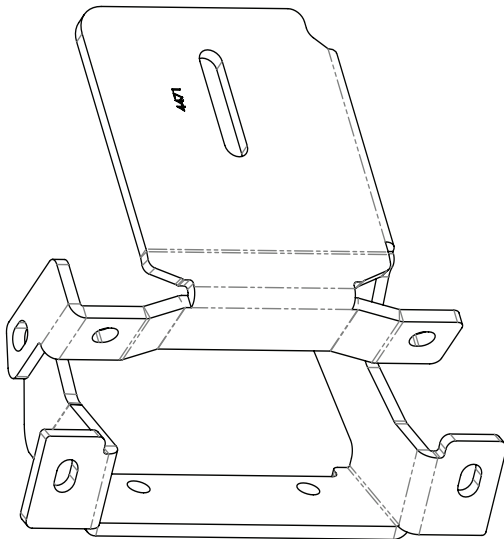
31 x2

Motor Cover



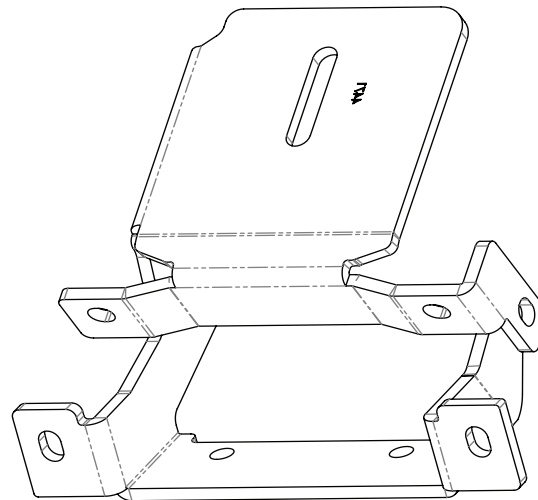
32 x4

M8 Head Hex Bolt



33 x2

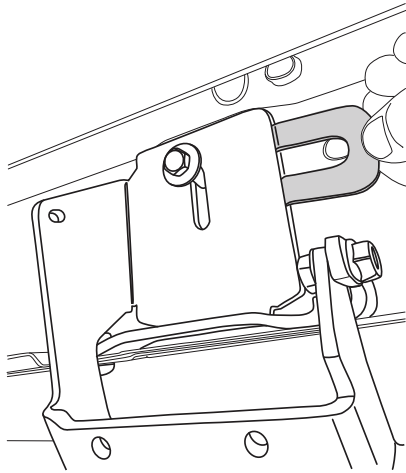
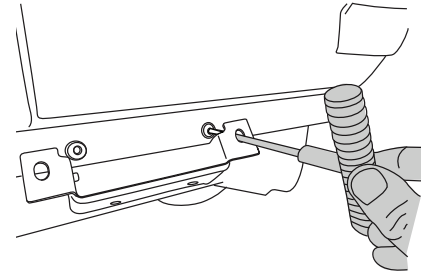
Linkage mounting Bracket (Right)



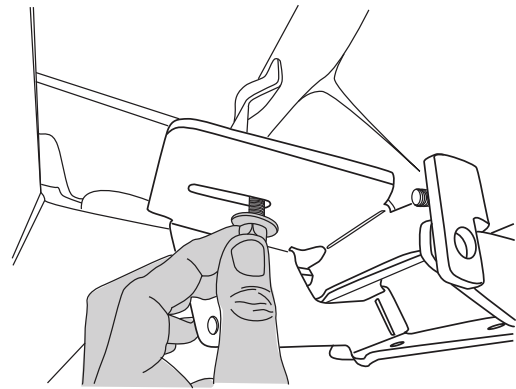
34 x2

Linkage mounting Bracket (Left)

Assemble brackets onto vehicle. Use provided button head bolts (10) and washers (18) at pinch weld with captive washer nuts (17) at pinch weld. Assemble hardware loosely. Next use provided captive washer bolts (15) to attach bracket to underside of body. On front mount assemble shim (27) between floor mount and bracket as shown. Use Right facing brackets on driver side. Mirror for passenger side.

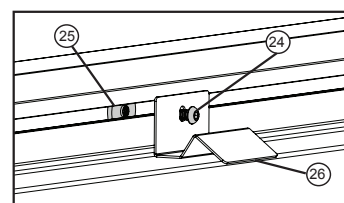
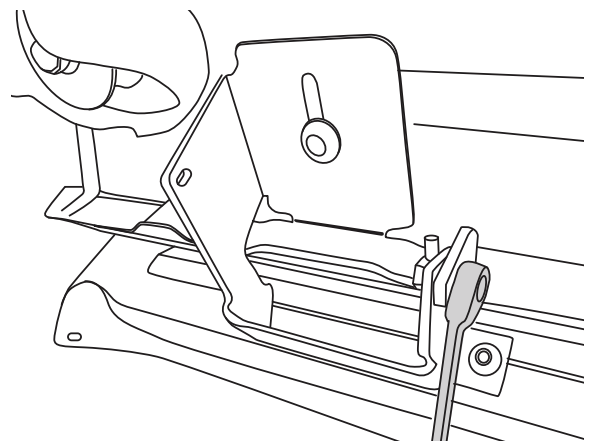
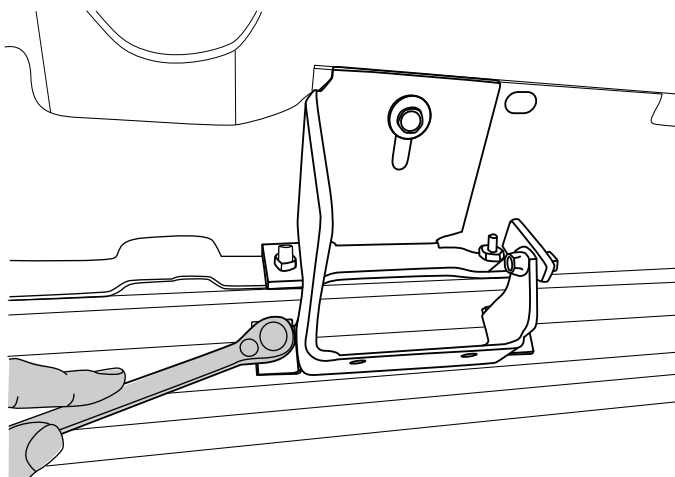


**1** Front Mounting Bracket



Rear Mounting Bracket

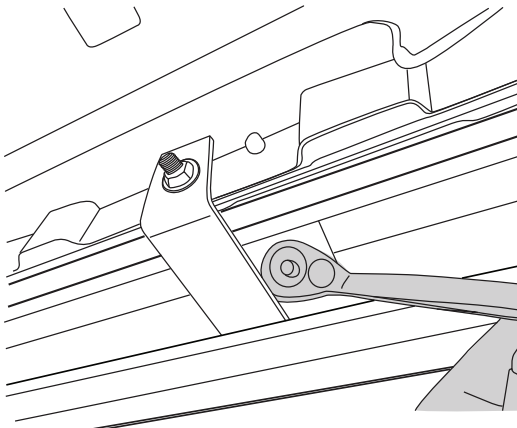
Slide 4 carriage bolts (14) into rail pocket of driver side rail. Adjust bolts and slide over brackets. Use supplied flange nuts and attach rail to brackets. Center rail between body rocker and torque 4 flange nuts to 16 ft-lbs. Assemble Flange bolt (12) with nut (16) thru support tab on bracket as shown. Torque to 16ft-lbs. Insert Threaded nut plate onto rail pocket. Light brackets will need to go rearward of Front linkage bracket and forward of Rear linkage bracket. Leave loose to allow for adjustment.



**2**

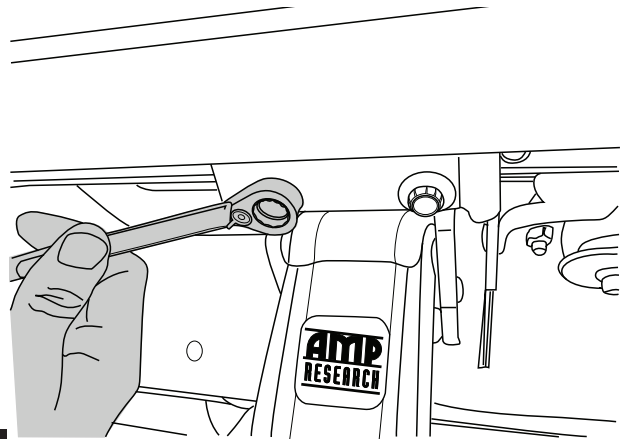
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Attach front support bracket (28) by inserting carriage bolt (14) into rail and using supplied button head bolt (10), washer (18) and captive washer nut (17) to pinch weld. Torque bolts to 16ft-lbs.



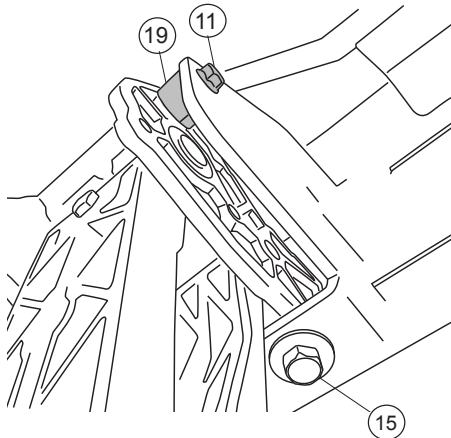
3

Mount front drive linkage onto driver side. Thread supplied bolts (15) into front drive linkage. Repeat step for Rear idler linkage. Do not tighten.



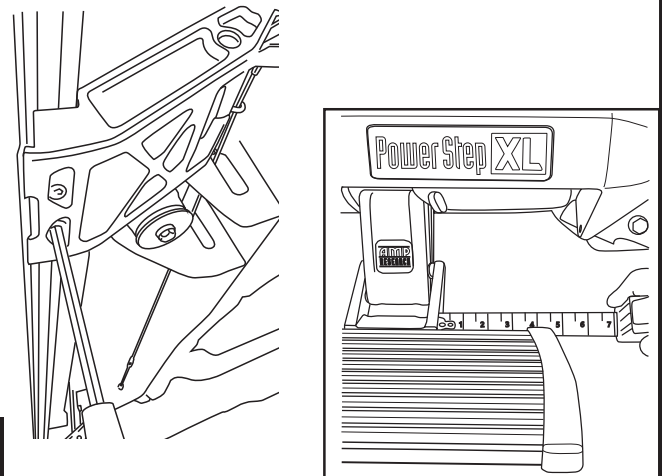
4

Install provided spacer (19) and M6 bolt (11) into upper mount as shown on both the drive and idler linkages. Do not tighten.



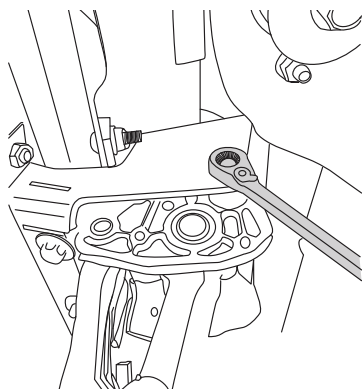
5

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



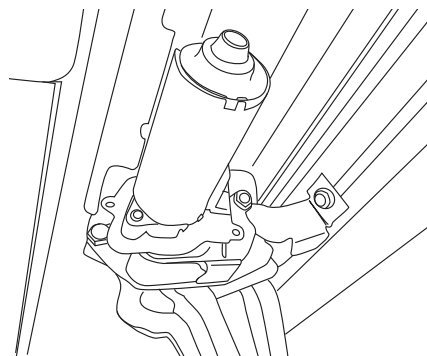
6

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.



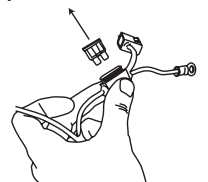
7

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



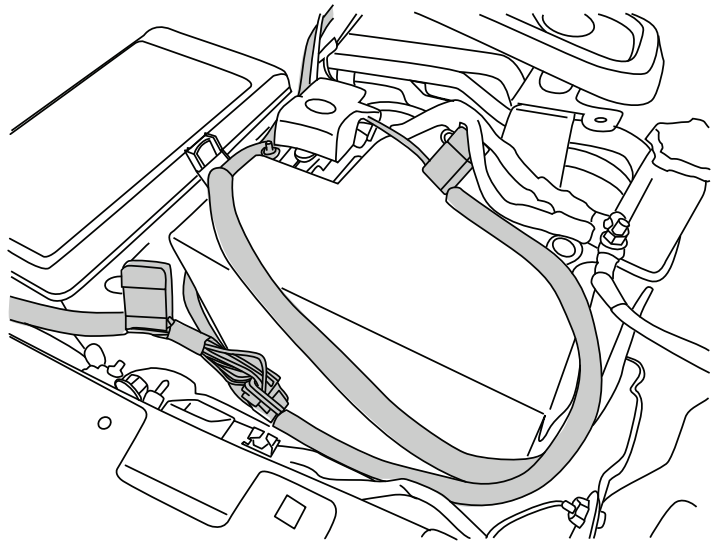
8

Remove fuses from Power Step Wire Harness.



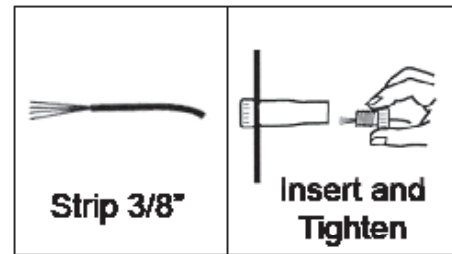
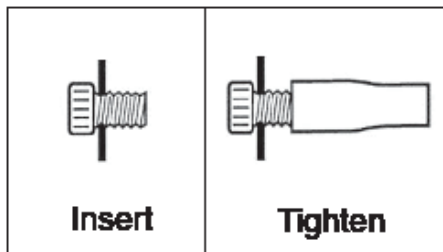


Prepare large tie-wraps for mounting Power Step Controller. Loosely loop tie-wraps around large bundle of wires behind battery in engine compartment. Insert controller into tie-wrap loops and cinch down securely. The tie-wraps should cinch down into channels on controller surface. Connect power leads from Controller, Red to positive battery terminal and Black to the vehicle body ground as shown.



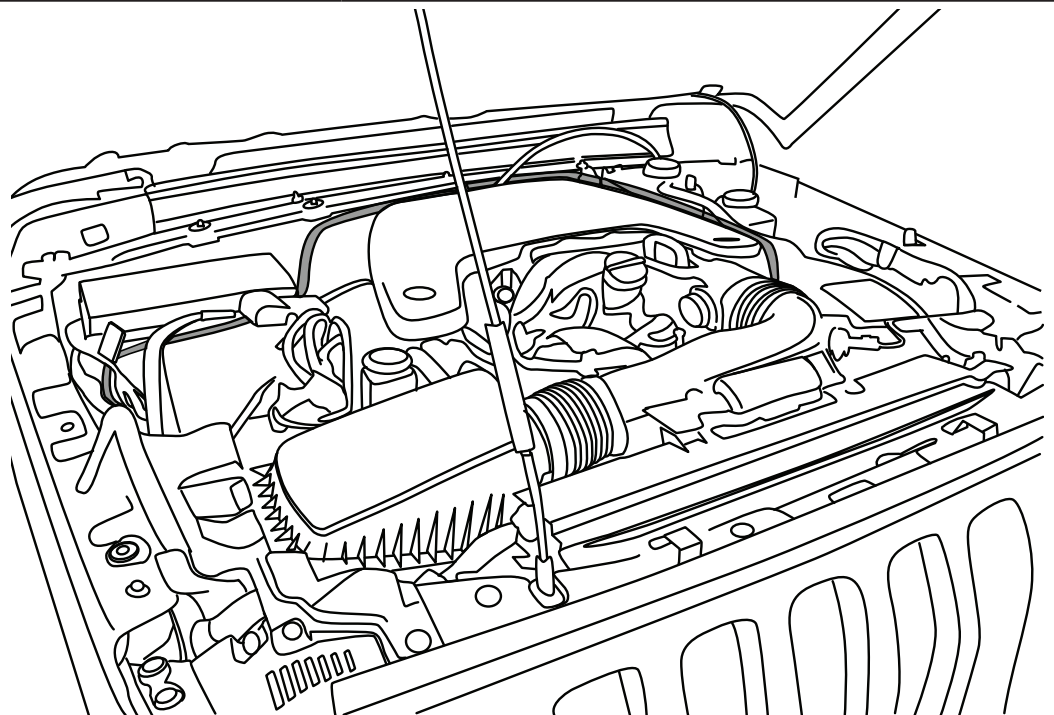
9

Splice Power Step trigger wires into the Door Ajar wires with provided Posi-Tap™ splicers. The Power Step trigger wires color coordinate with the factory Door Ajar wires. Follow the steps below to correctly splice wires.



10

Route the two Wire Harness legs down over the wheel wells toward Motor Linkages, long leg across to the driver side. Secure harness with tie wraps.

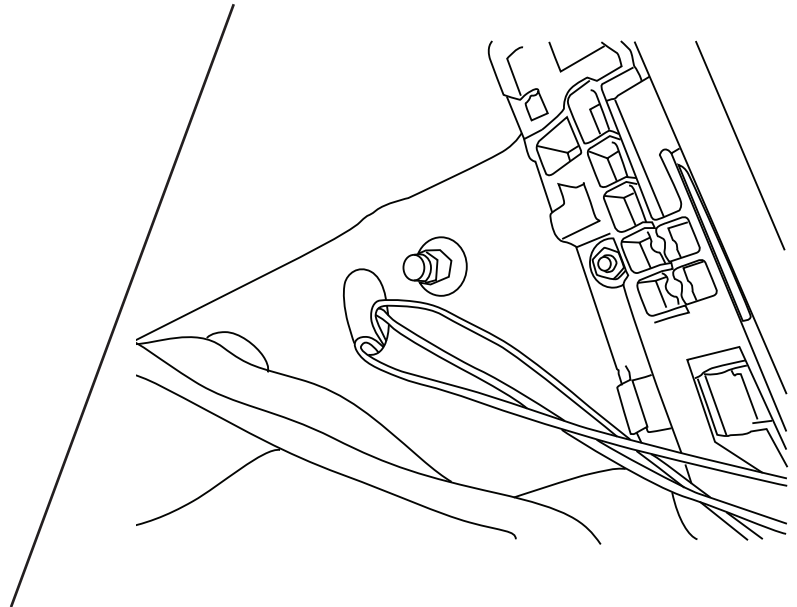
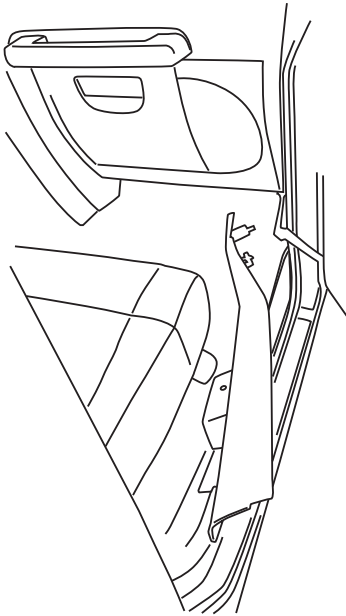


11



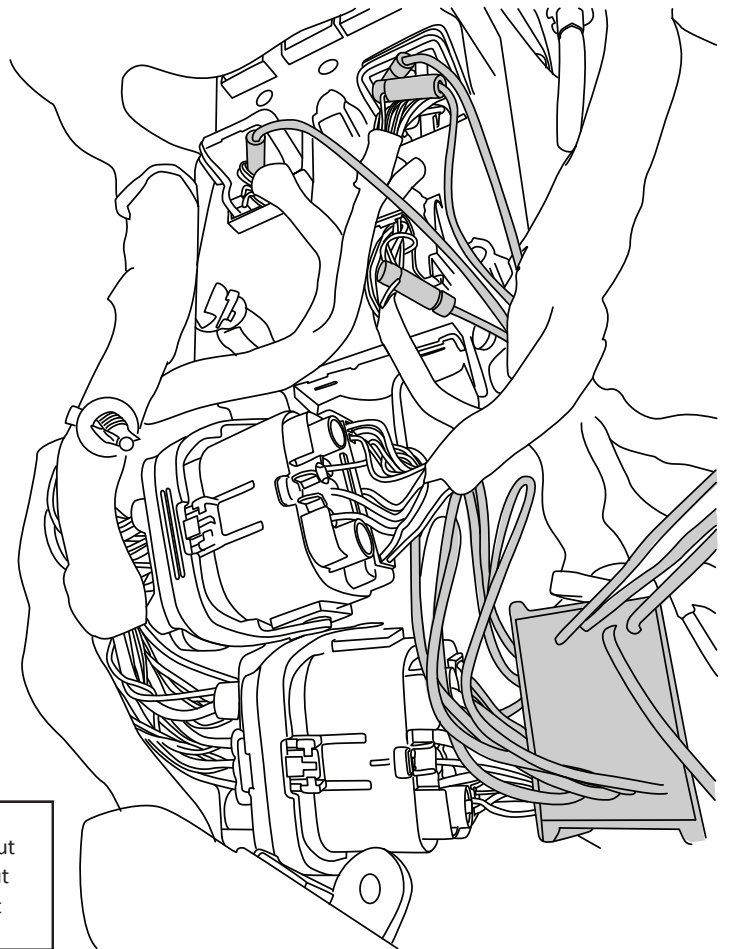
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Remove sill plate cover. Remove grommet under floor and route trigger wires and power wire thru grommet.



**12**

Mount door trigger module to wire harness in kick panel area. Using a 10mm socket remove ground lug and connect ground to body. Using supplied butt connectors connect red wire on harness to red wire (Pin1) on module. Next connect Purple with black stripe wire on harness to purple with black stripe from module (pin 6). Lastly connect Purple from harness to purple on module (Pin 7). See next step for trigger wire assembly.



Description	Wire Color	Pin locations		Wire Color	Description
Positive Supply	Red	1	6	PRP/BLK	Driver Side Output
Ground	BLK	2	7	PRP	Passenger Side Output
Driver Front Input	PRP	3	8	WHT	Passenger Front Input
Driver Rear Input	GRY	4	9	YEL	Passenger Rear Input
Not Used	-	5	10	-	Not Used

**13**

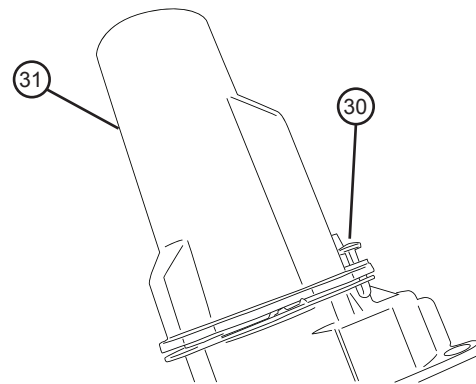
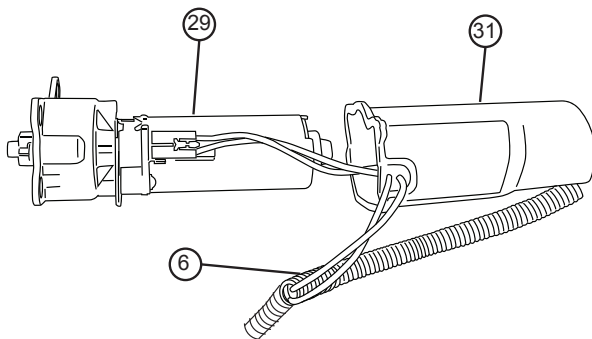
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Locate the white connector panel against passenger side kick panel area. Locate three connectors as shown below and connect powerstep trigger wires as indicated in the chart. Match pin locations called out in previous step.

Door Ajar Wire	Vehicle Wire Color/ Stripe Color	Pin location on Door Trigger Module	Connector color
Driver Front	Violet	3	White
Pass. Front	Violet/White	8	Blue
Driver Rear	Violet/Grey	4	White
Pass. Rear	Violet/Yellow	9	Black

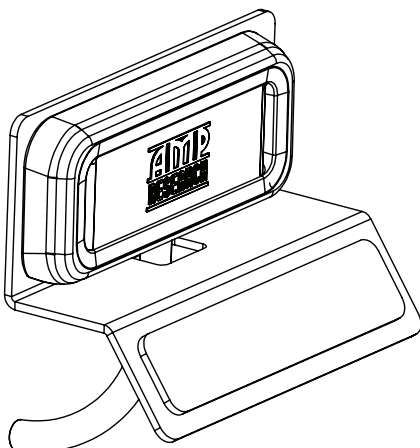
**14** *Note: Plug reassembly is critical. Lever Arm of plug must be rotated completely locked in the open position to engage properly!*

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.

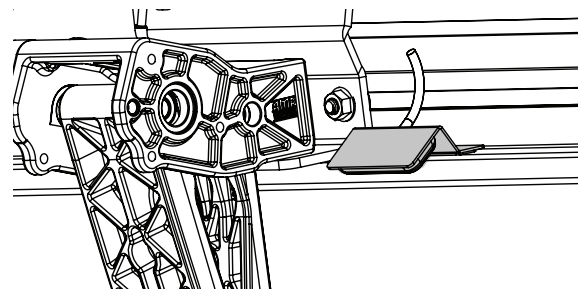


**15**

Affix LED lamp (23) to LED Bracket (26) 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.

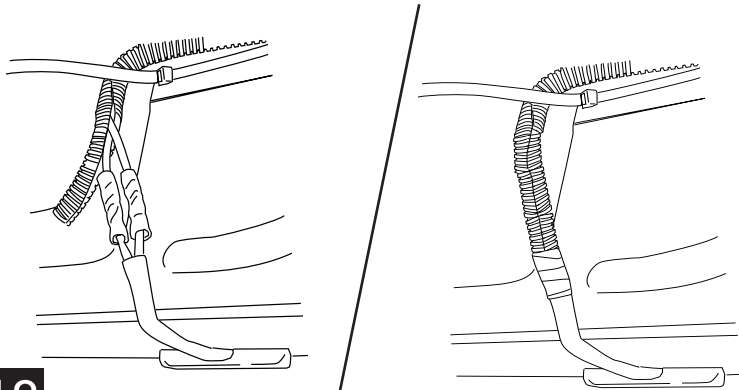


**16**

**17**

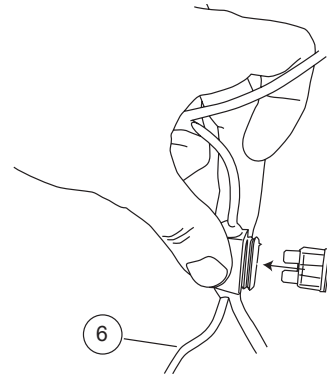
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Using supplied butt connectors, connect the lamp wires. Red to Red, Black to Black. Once Crimped use heat gun to shrink tube. Close and wrap conduit with electrical tape. Secure all loose wires with cable ties. Pull lamp wires upward to avoid any wire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



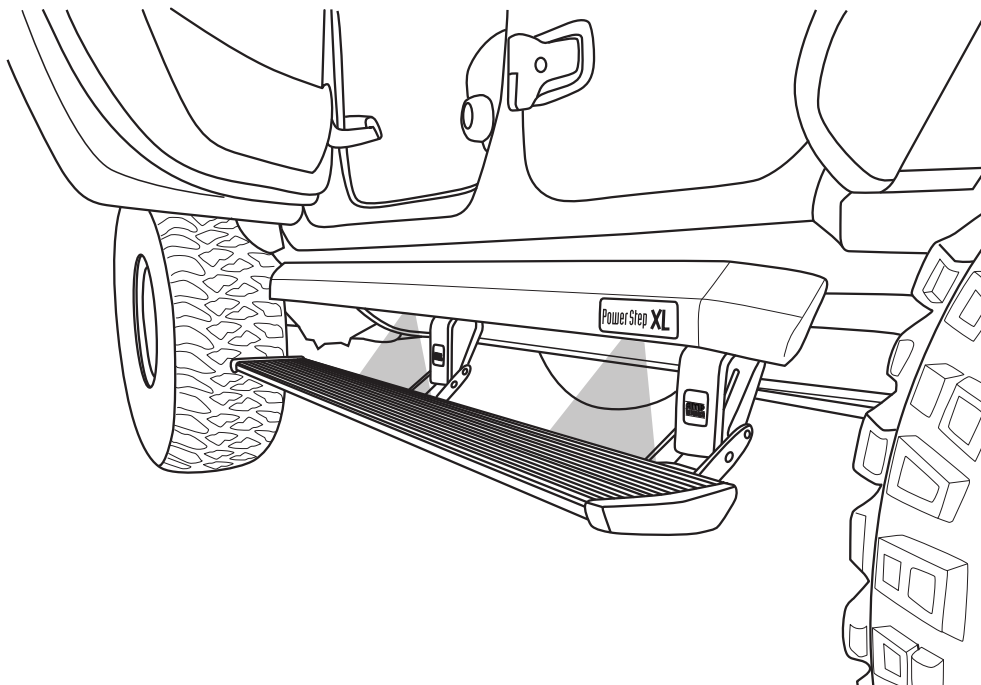
18

Reinstall Fuses from Powerstep Wire Harness.



19

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.

20

**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.

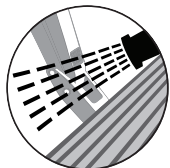
**Automatic stop:**

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.