

# **INSTALLATION INSTRUCTIONS**

**RETRACTABLE BOARD MOUNT KIT**

**12-18 JEEP WRANGLER JK (4 Door)**

**Patent No. US 11945405**

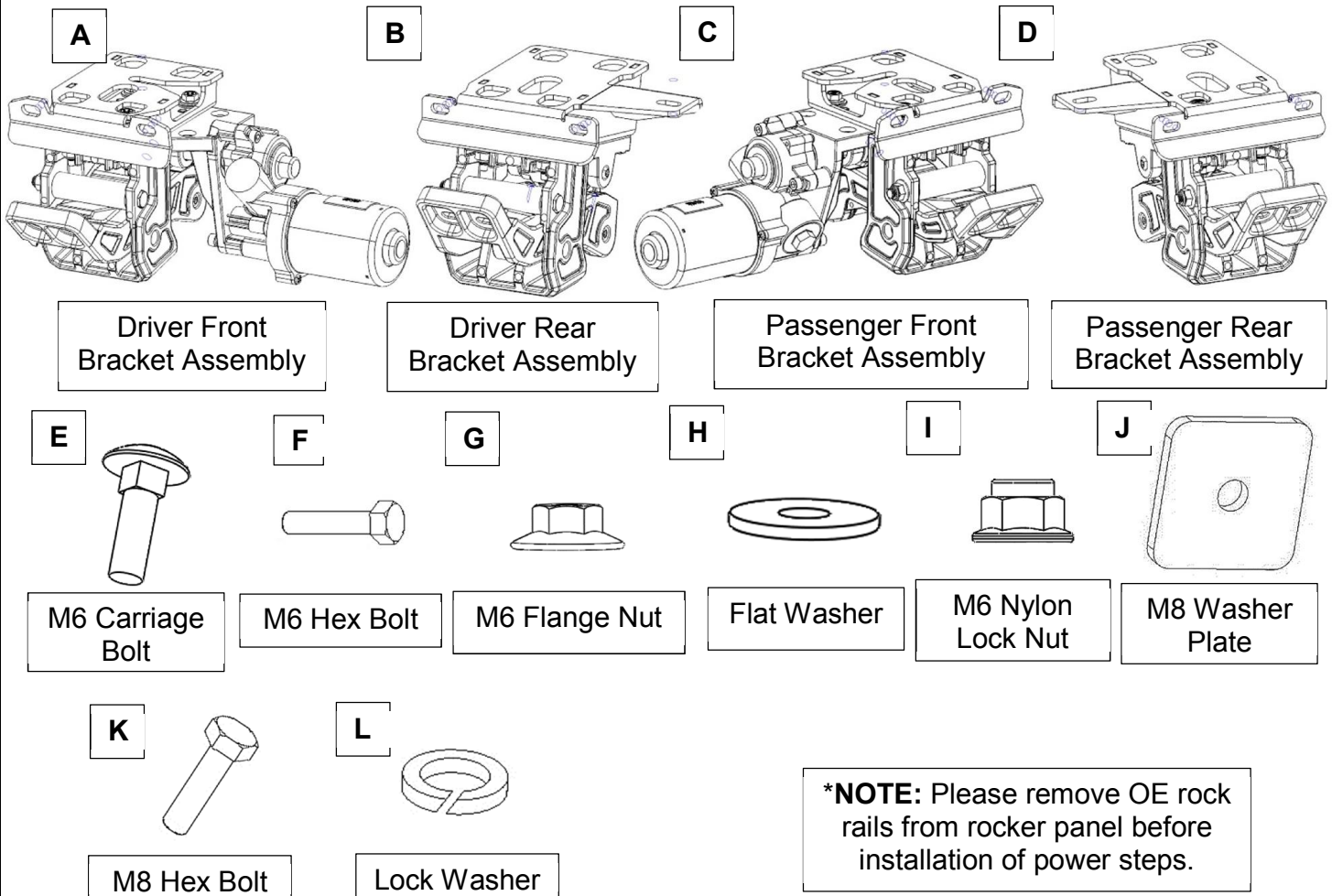
## INSTALLATION INSTRUCTIONS

### Mechanical PARTS LIST:

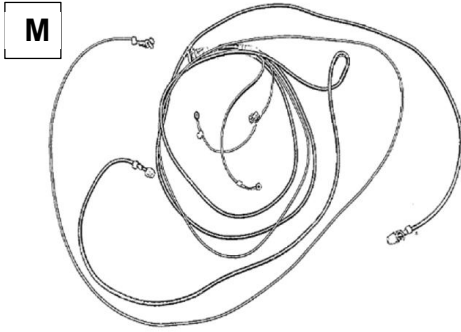
Qty	Item Description	Qty	Item Description
2	Running Boards (65in)	4	M8_30 Hex Bolts
1	Driver/Left Front Bracket Assembly	4	D8 Lock Washers
1	Passenger/Right Front Bracket Assembly	2	D8 Flat Washers (8x24x2mm)
1	Driver/Left Rear Bracket Assembly	8	M6_25 Hex Bolts
1	Passenger/Right Rear Bracket Assembly	16	D6 Flat Washers (6.4x18x1.6mm)
1	Electronic Materials Package	8	M6 Nylon Lock Nuts
4	M10 Nut Plates (66x19-17.5-3)	4	M10_30 Hex Bolts
2	M8 Square Washer Plate (33x33x $\phi$ 9x4mm)	4	D10 Lock Washers
15	Zip Ties	4	D10 Flat Washers (10.5x30x2.5mm)
8	M6 Flange Nuts	8	M6 Carriage Bolts

### Electronic Materials Package PARTS LIST:

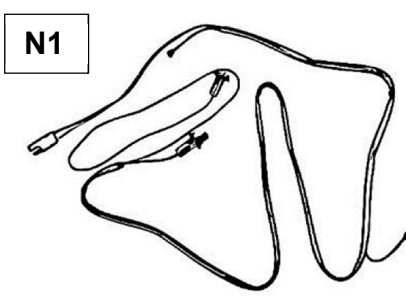
Qty	Item Description	Qty	Item Description
1	Main Harness	1	ECU
2	Wire Taps	4	LED lights
1	LED Y-Harness (Short 280mm)	1	LED Y-Harness (Long 1200mm)



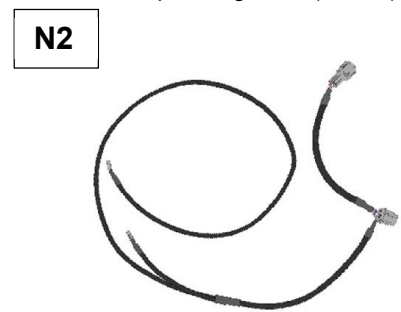
RETRACTABLE BOARD MOUNT KIT  
12-18 Jeep Wrangler JK (4 Door)



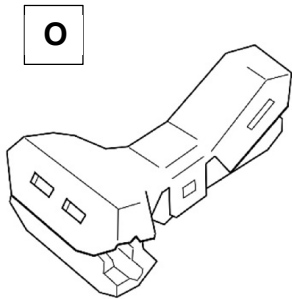
Main Harness



LED Y-Harness (Long)



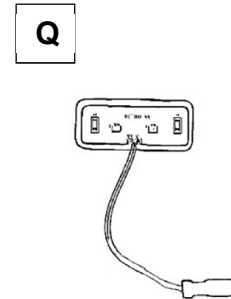
LED Y-Harness (Short)



Wire Taps



ECU

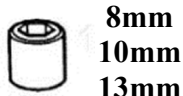


LED Lights

TOOLS REQUIRED



Ratchet



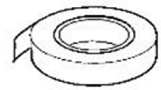
Socket



Extensions

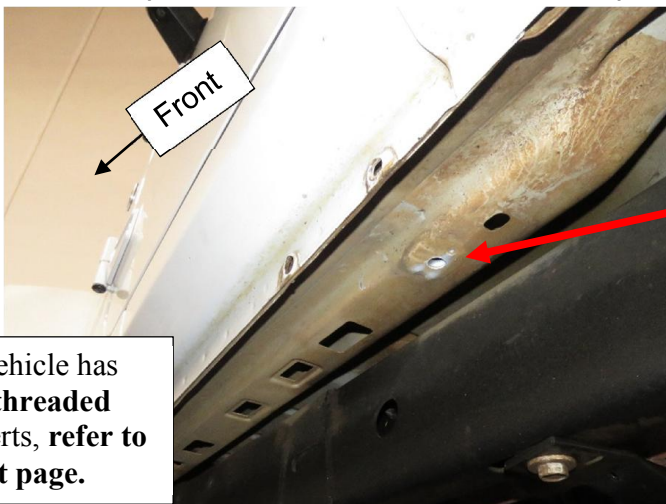


Wrenches

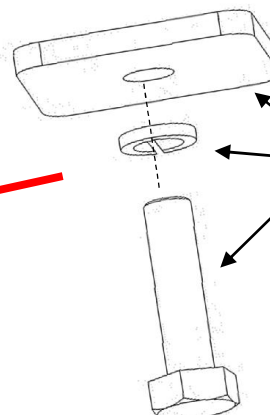


Electrical Tape

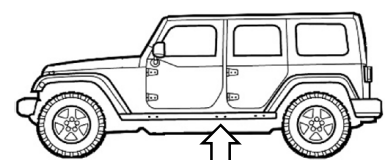
- 1 Locate the Driver Side center mounting points on the rocker panel under the B-Pillar (between front door and rear door). Loosely screw in the M8 Hex Bolt (K), M8 Lock Washer, and Washer Plate (J) into the upper threaded insert. Do **not** screw in all the way yet. The bracket will slide into the space between the bolt and rocker panel and will be tightened later.



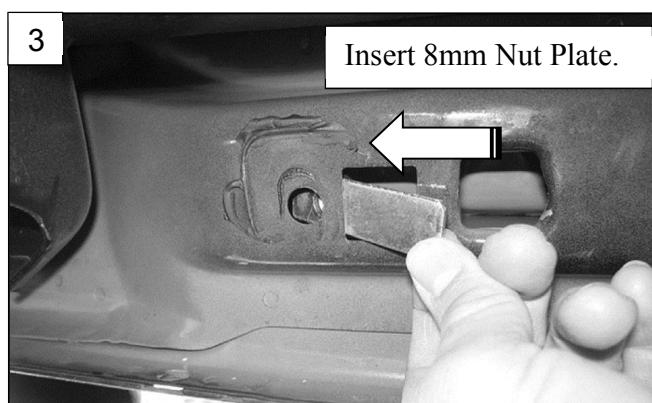
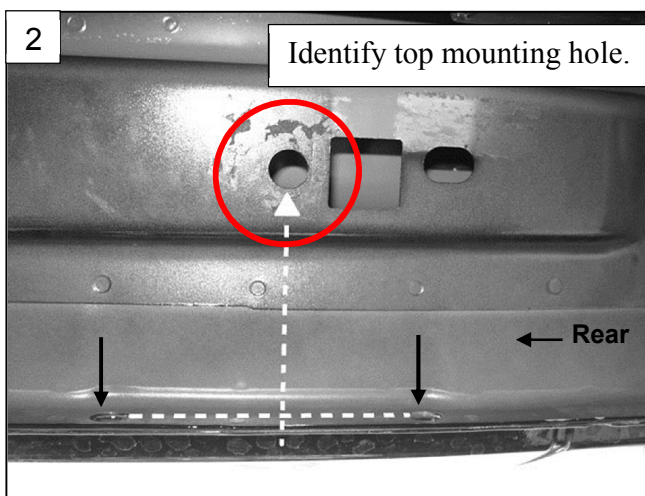
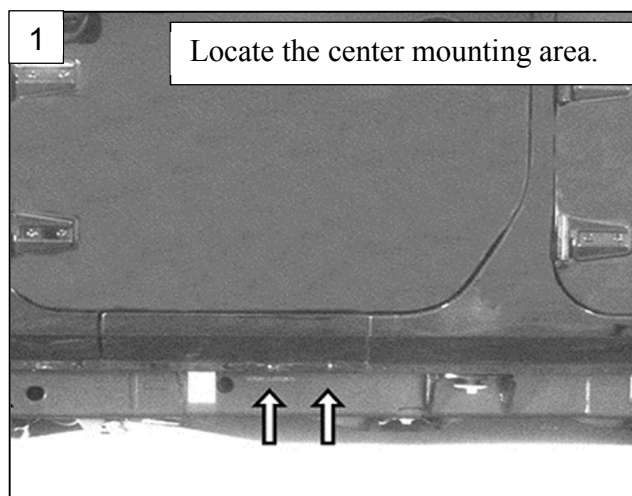
If vehicle has  
**no threaded**  
inserts, refer to  
next page.



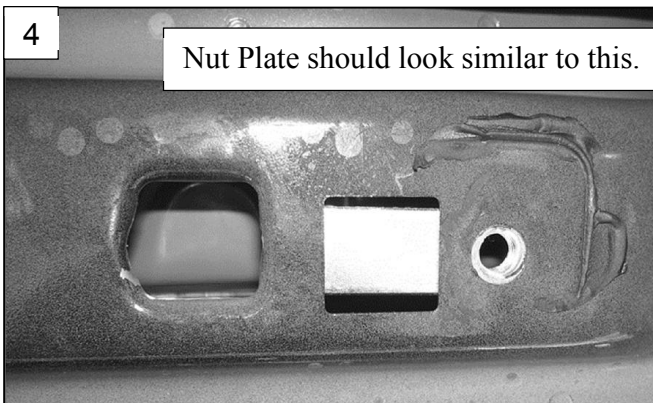
M8 Washer Plate  
+  
M8 Lock Washer  
+  
M8 Hex Bolt



If your vehicle does not have threaded inserts, locate the holes in the pinch weld first to determine the correct mounting hole. The 8mm Nut Plates provided will be used for the top mounting point in the rocker panel.

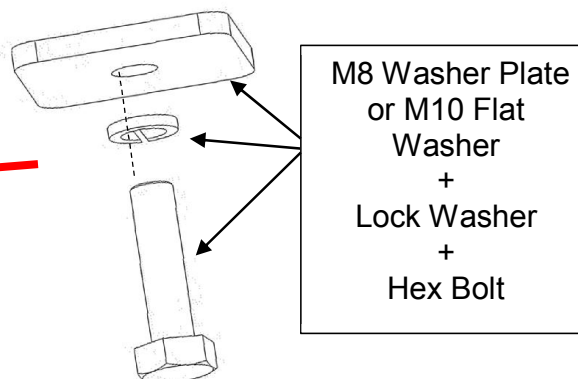
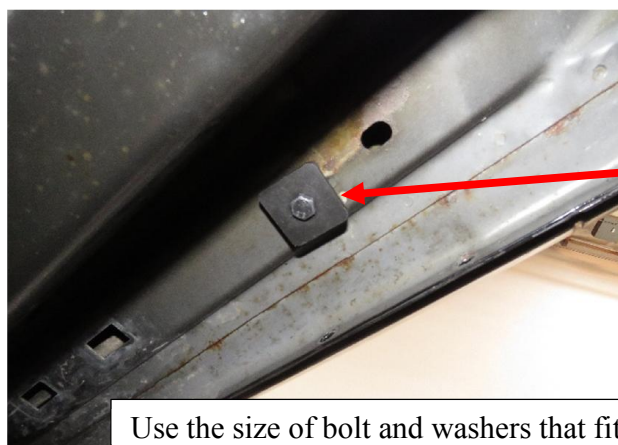


Note: Hole shapes may differ from model to model. It is important to always identify the correct mounting point based on the holes in the pinch weld.



Note: **If you need to use the 10mm Nut Plates, then use the provided M10 hardware instead of the M8 hardware in the below steps.**

Once the Nut Plate is correctly inserted. Loosely screw in the M10 Hex Bolt, M10 Lock Washer, and M10 Flat Washer into the upper threaded insert. Do **not** screw in all the way yet. The bracket will slide into the space between the bolt and rocker panel and will be tightened later.

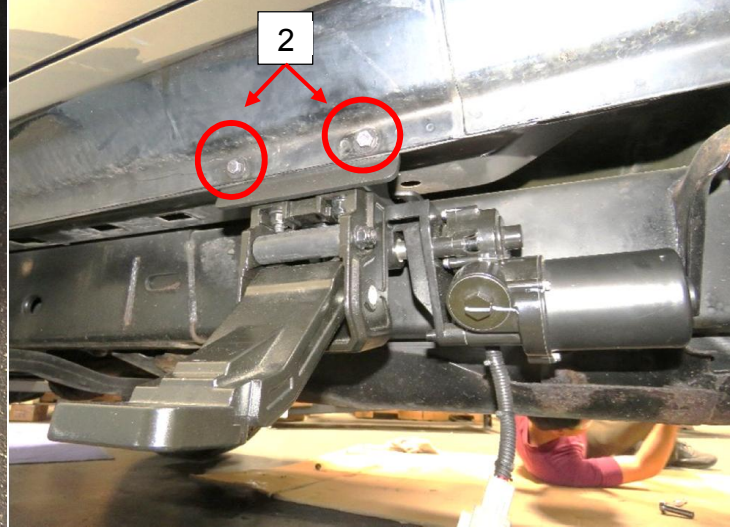
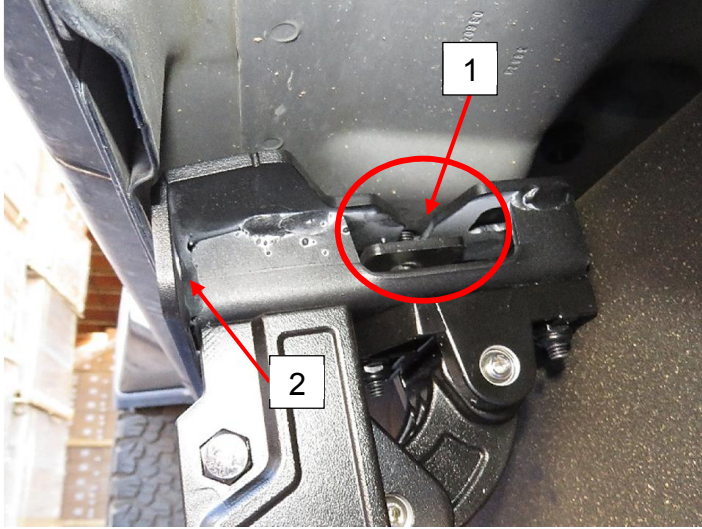


Use the size of bolt and washers that fit either the 10mm Nut Plates or the OE 8mm inserts.



2

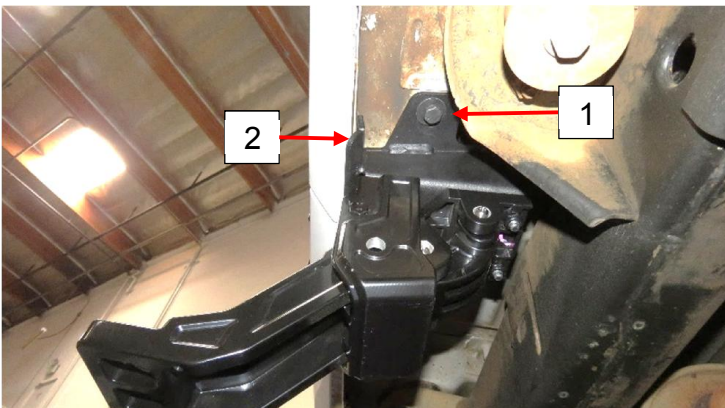
Next, line up front mounting bracket slots to the holes on the pinch weld and the M8 Hex Bolt (K), and then place Driver Side/Left Front Bracket Assembly (A) onto rocker panel. Then fasten the M6 Bolts (F), Nylon Lock Nuts (I), washers (H), and the M8 Bolt (K). Do not tighten all the way yet.



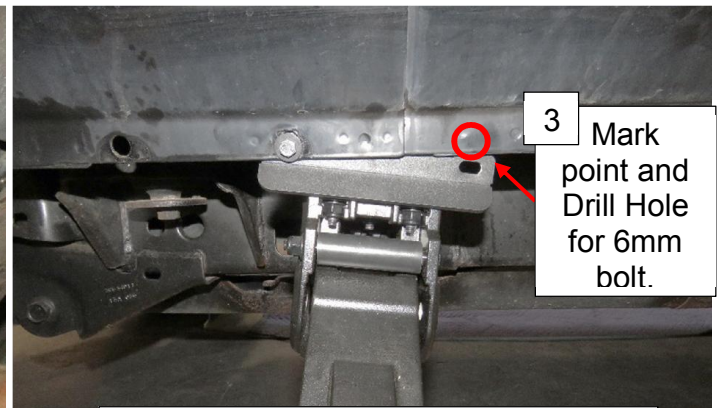
3

Locate rear mounting points. Repeat step 1 for the rear mounting point using a provided nut plate if the vehicle does not have threaded inserts already. Next, line up rear mounting bracket slots to the holes and M8 Hex Bolt (K), and then thread the hardware for the Driver Side/Left Rear Bracket Assembly (B) into place. The forward-most pinch weld hole should not line up with any hole; it will need a drilled hole.

Mark the position of the forward-most pinch weld mounting hole. Once sure of the alignment, drill a hole in the pinch weld about 6-8mm diameter or 1/4in diameter (diameter of hole must be smaller than the size of the washer).

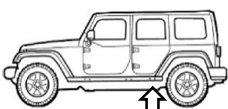


Mount rear bracket assembly to line up mounting points.



Note: remove bracket before drilling hole

Once the hole is drilled and processed, mount the rear bracket assembly. Fasten the M6 Bolts (F), Nylon Lock Nuts (I), washers (H), and the M8 Bolt (K). It is suggested to tighten the M8 bolt first, then the M6 bolts.



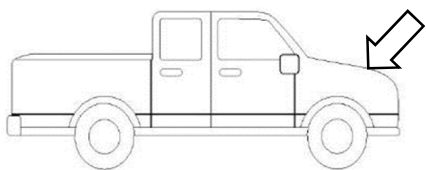
\*Note: The body of the vehicle is not totally straight but instead bends slightly. Be sure to push the bracket assembly fully against the pinch weld.

4

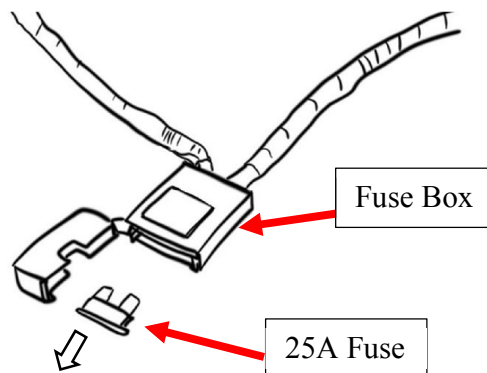
Repeat steps 1 – 3 for the Passenger Side.

5

Start from the engine compartment by opening the front hood of the vehicle. Locate the Battery and its terminals (positive/negative). Remove the 25A fuse from the fuse box that comes with the main harness (M).



**\*WARNING:** Keeping the fuse connected to the fuse box may result in electrical sparks and risk of shorting when working with the battery.



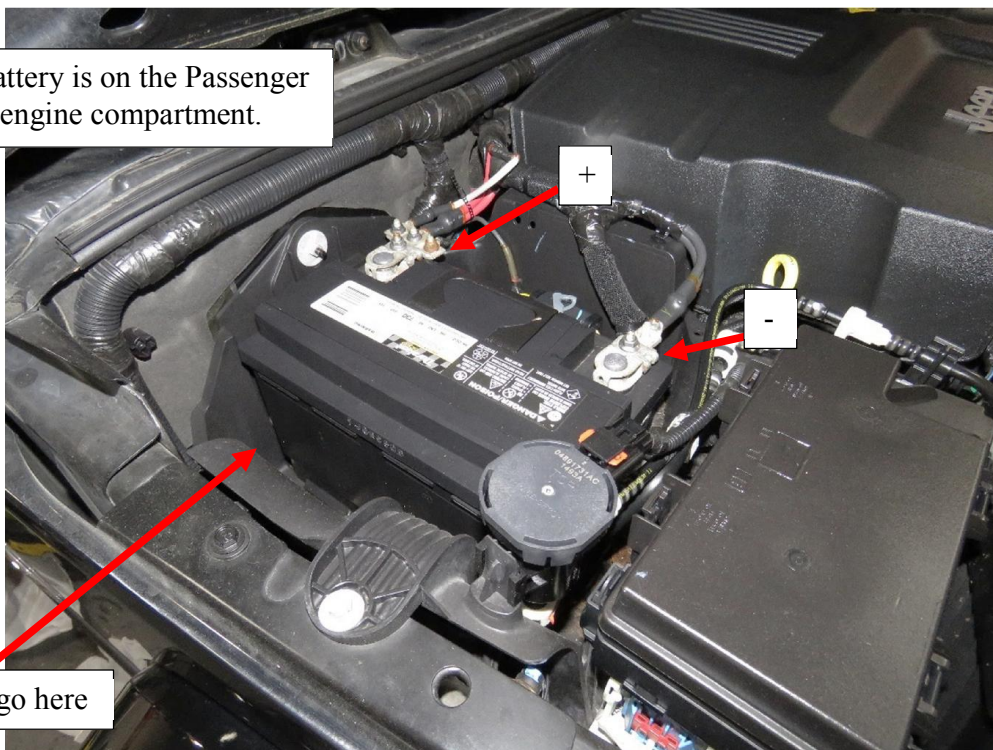
6

Connect the positive power lead on the main harness (M) to the positive battery terminal. Connect the negative lead to the negative battery terminal.

Make sure both power leads are fully secured. Then Connect the ECU (P) to the main harness and locate a space to place and secure to ECU.

Connect the Long LED Y-Harness (N1) to the Driver-side branch of the main harness. Connect the Short LED Y-Harness (N2) to the Passenger-side branch of the main harness.

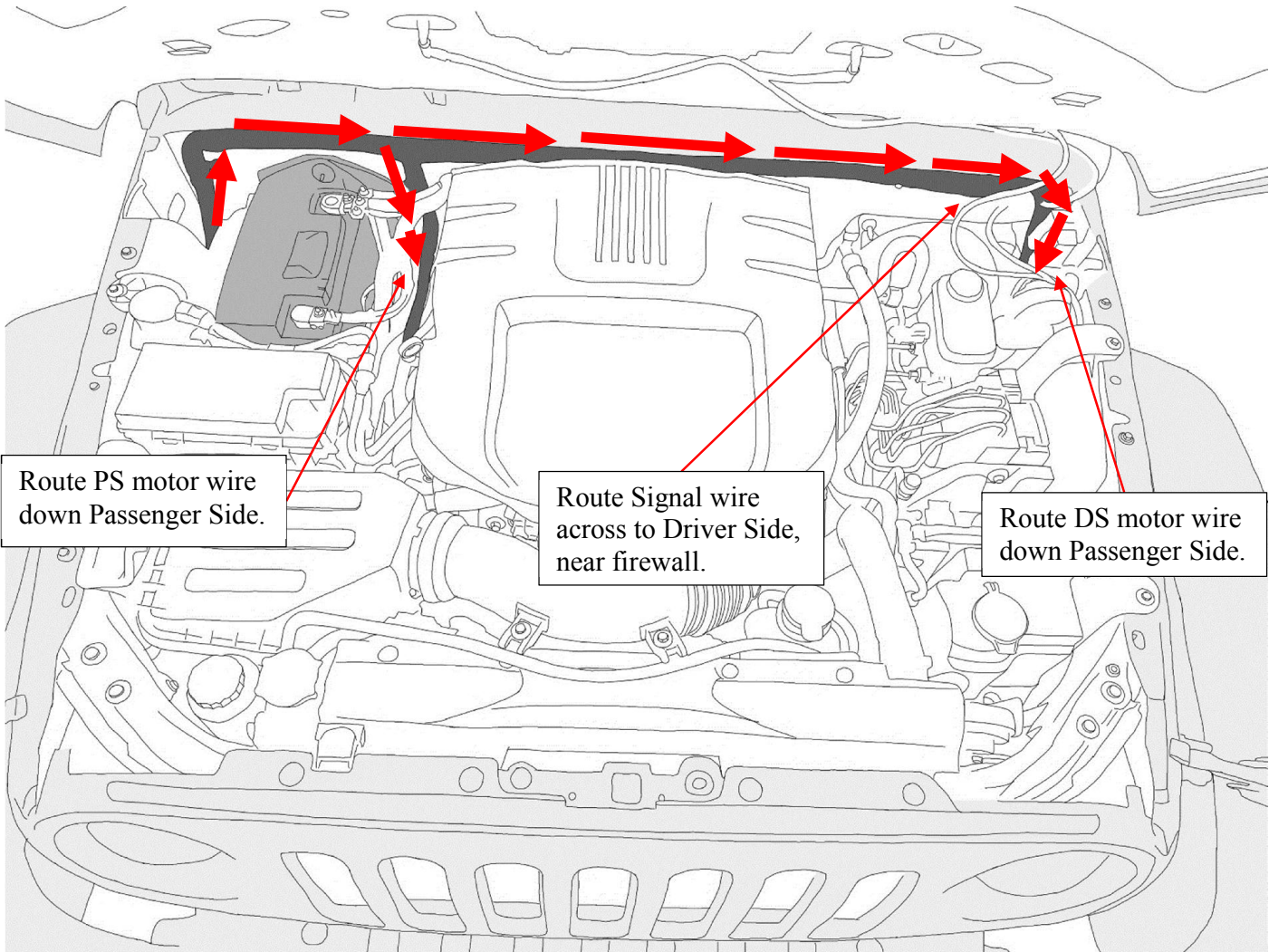
**\*NOTE:** Battery is on the Passenger Side of the engine compartment.





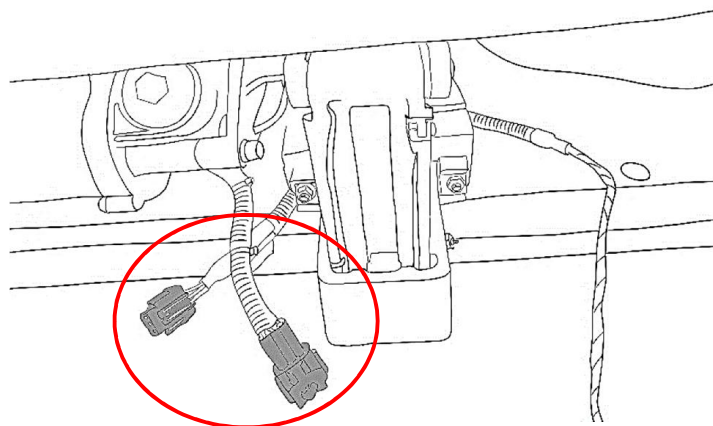
7

Route the main harness (M) around the battery, up along the rear of the engine compartment, and the Driver Side leg down the Driver-side frame. Route the Passenger Side leg of the harness down the Passenger-side wheel well. **Be sure to avoid contact with any moving or hot engine components.** Attach and secure the main harness (M) with supplied cable ties.

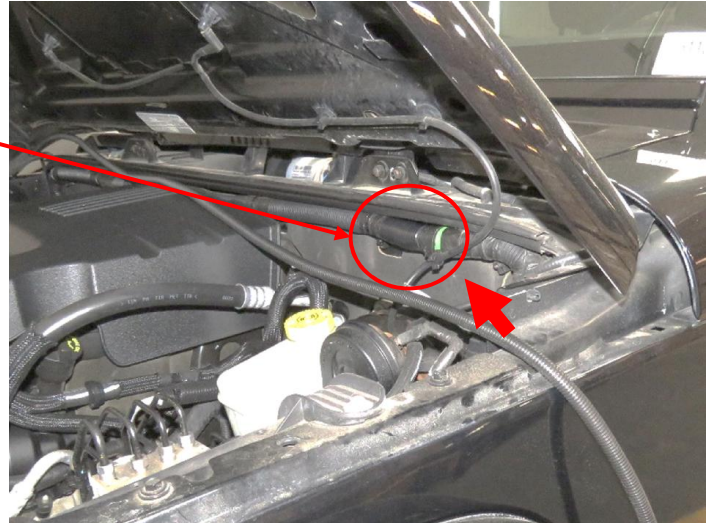
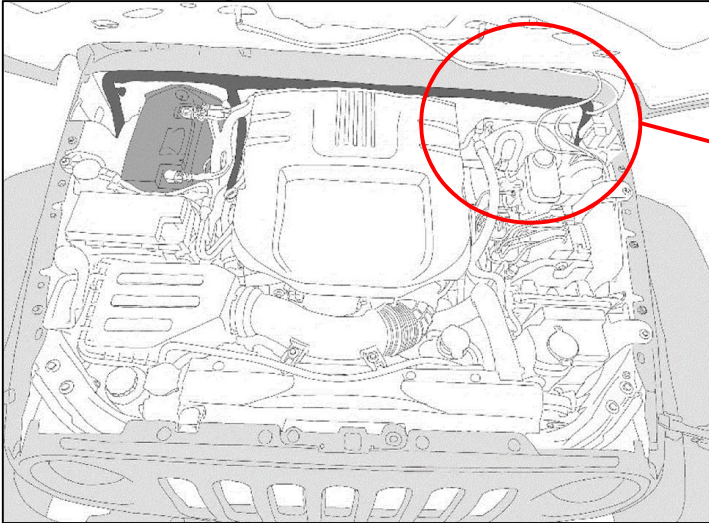


9

Attach the main harness (M) to one LED Y-Harness (N). Then attach the LED Y-Harness (N) to the motor on the Driver Side. Repeat for Passenger Side.



Locate the OE Main Wiring Bundle on the Driver Side in the engine compartment. Confirm that the vehicle power is off. Undo the electrical tape and open up the plastic outer conduit to reveal the wiring inside.

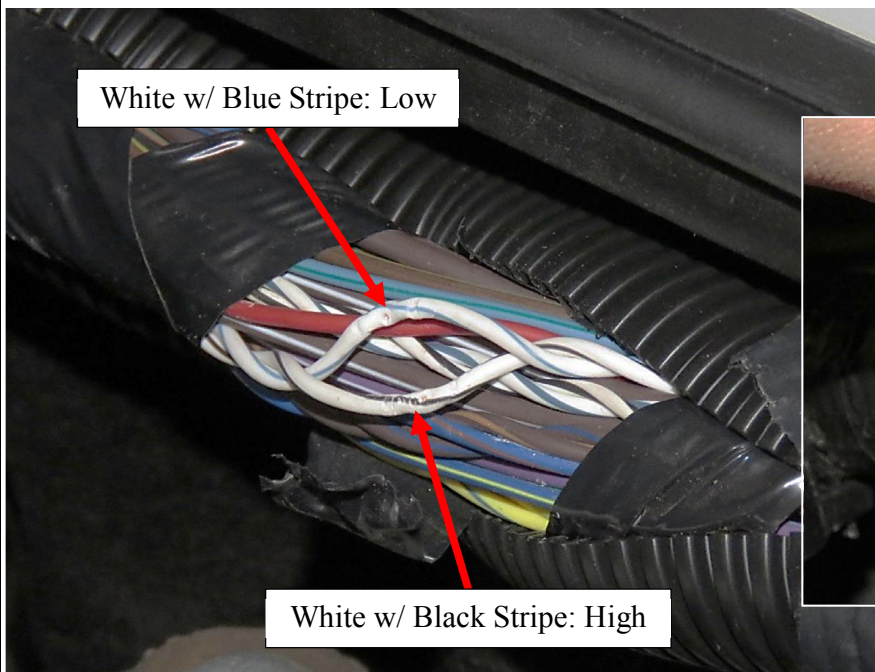


Amongst the wires, identify the twisted pair of wires. The twisted pair should be colored as **White with Blue stripe** and **White with Black/Brown Stripe**. Once identified, connect the High and Low wires from the main harness (M) using the supplied wire taps (O). Be sure the signal wire routing is safely stowed away and secured once finished. Remember to protect the new connection with electrical tape after the installation is finished.

Factory CAN Wire	Main Harness wire color
White with Blue Stripe (CAN-L)	Yellow (Low)
White with Black Stripe (CAN-H)	White (High)

NOTE: Wire taps supplied with kit.  
Please see next page for guide.

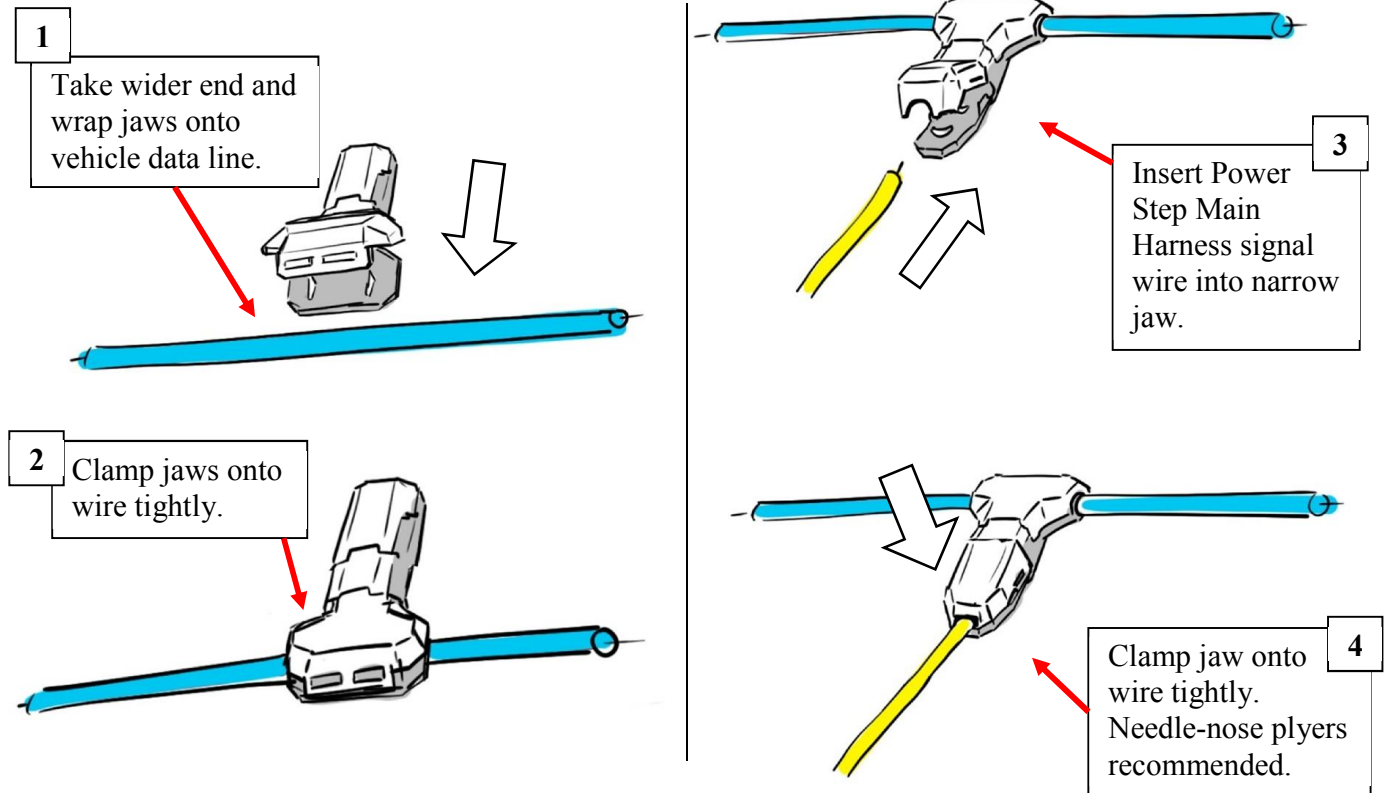
\*NOTE: Some colors may differ from vehicle to vehicle. However, White with Blue Stripe or Light Blue Stripe will always be "CAN Low".



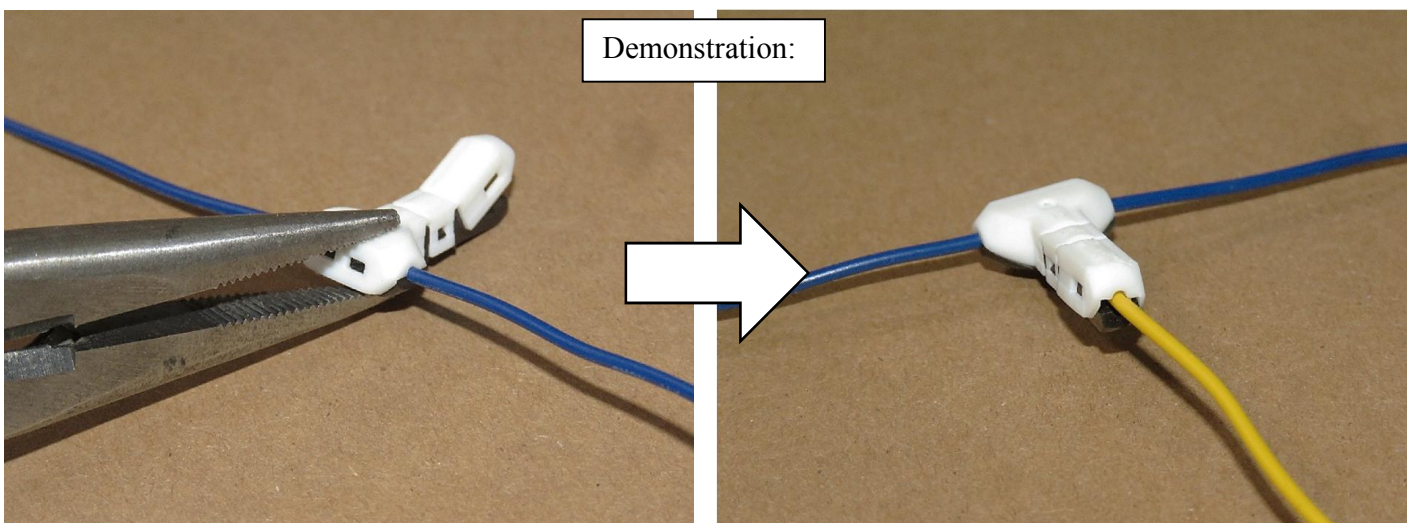
NOTE: There may be more than 1 twisted pair. Either is ok as long as the colors match the chart.



The kit comes supplied with wire taps called “shark taps”. Follow the guide below to tap the wire using the “shark tap”:



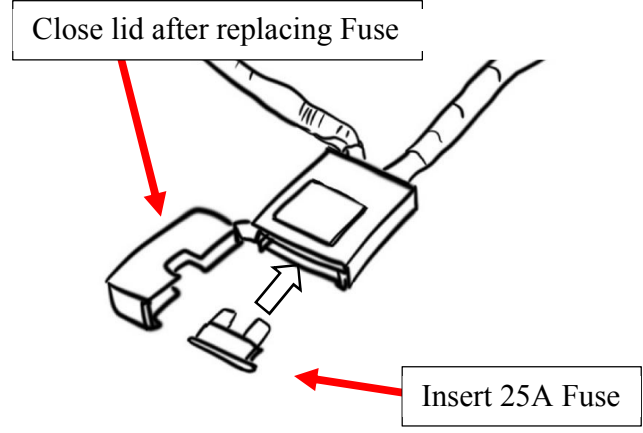
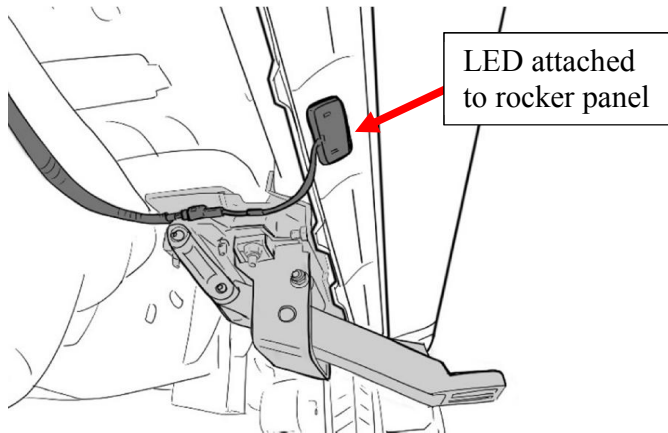
NOTE: Make sure wire is seated properly in the jaws before clamping. The wire being tapped must be centered on the “teeth” to make a proper tap.



# 11

RETRACTABLE BOARD MOUNT KIT  
12-18 Jeep Wrangler JK (4 Door)

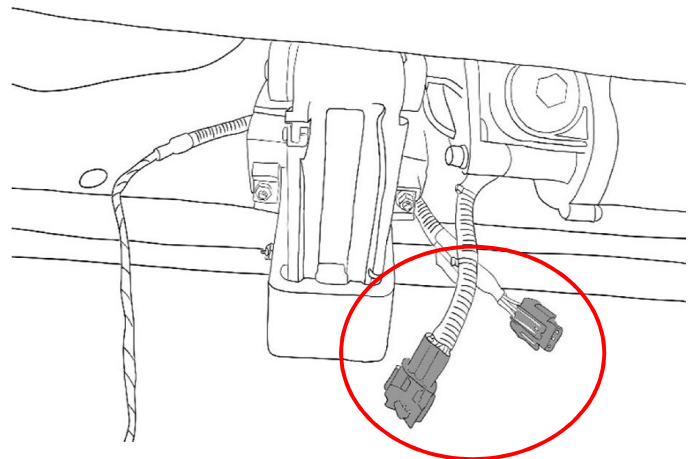
Plug in LED lights (Q) into LED Y-Harness (N) and attach them to the bottom of the rocker panel. Use provided 3M double sided adhesive tape on back of LED light (Q). Replace Fuse into Fuse Box.



# 12

Check to make sure the harnesses on the Driver Side/Left Front Bracket Assembly (A) and Passenger Side Front Bracket Assembly (C) are connected to the main harness (M) via the LED-Y harnesses (N).

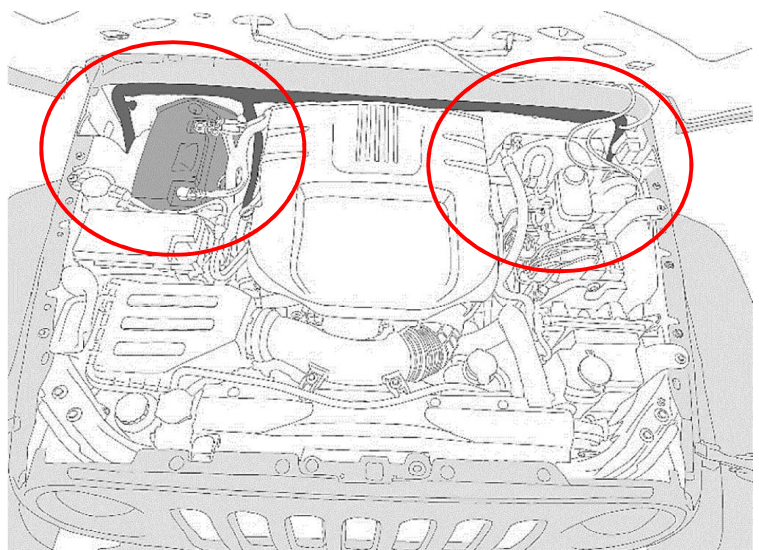
**\*NOTE:** The linkage arms on the front bracket assemblies will not move unless both motors are connected.



# 13

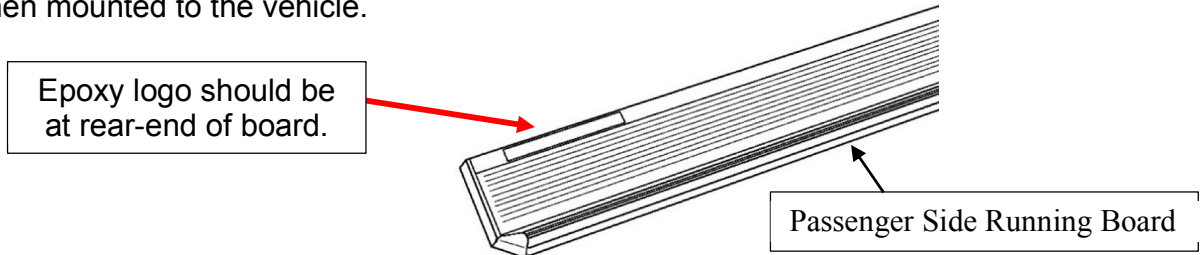
Hide wires and reattach any panels That may have been removed during installation.

Check and secure the excess wiring to make sure there are no obstructions or potential snag points around moving parts of the vehicle (including steering column and engine).

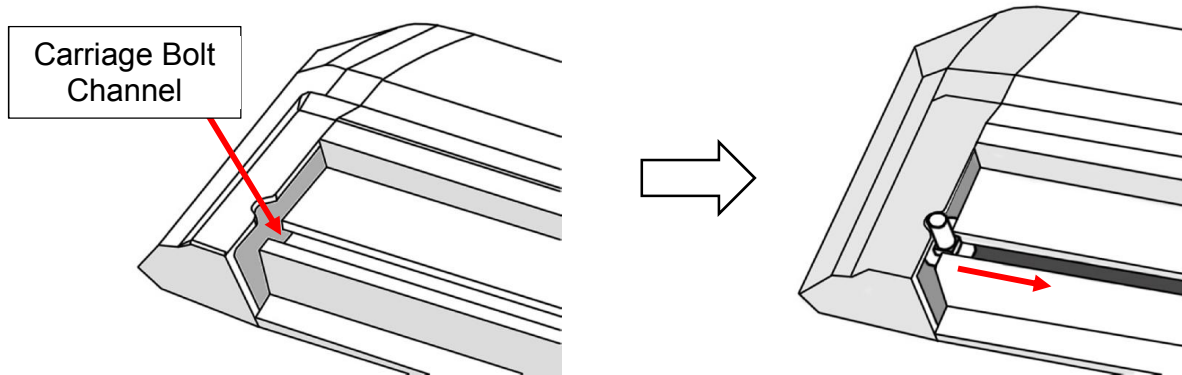




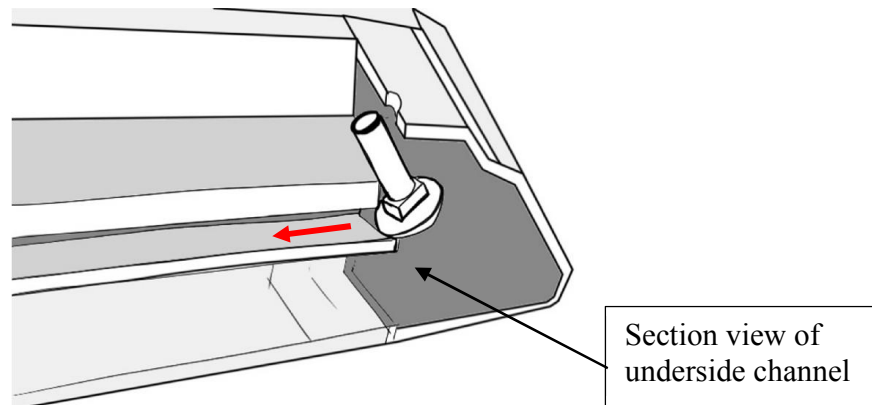
Locate the power step boards. Distinguish the Driver Side from the Passenger Side by the location of the epoxy logo on the running board. The logo should line up with the rear of the cab when mounted to the vehicle.



15 Prepare the power step boards. Locate the end of the boards and slide the M6 Carriage Bolts (E) into the channel on the underside of the board. Insert a total of 4 carriage bolts (E).



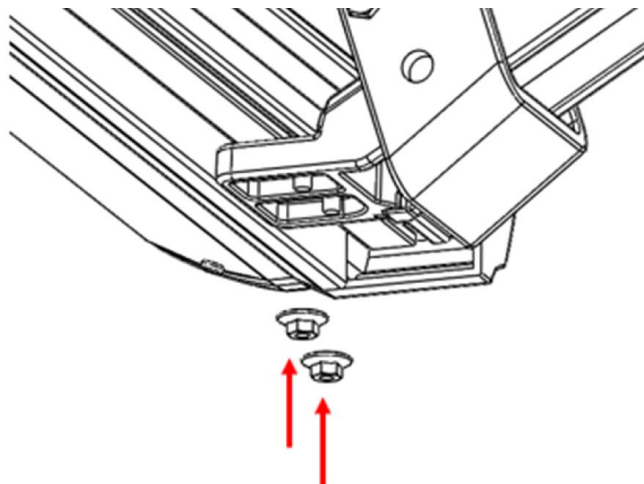
Use the notch in the board's end caps to feed the bolts into the channel.



16 Perform a function check by closing the driver side front door and opening it again. The front bracket assembly (A) motor should activate the linkage arm and move it into the down or "deployed" position.

After deploying linkage arms, unplug main harness connector, while front door is open, to hold deployed position for running board installation.

Line up the carriage bolts (E), under the power step boards, with the slots on the linkage arms (A & B). Insert the 4 carriage bolts (E) into the slots on front and rear linkage arms. Adjust board to desired position. Moderately hand tighten the flange nuts (G) onto the carriage bolts.



Once the board is adjusted, plug in main harness (M) connector to return power to the linkage arms. Open and close doors several times to deploy and retract the steps to settle the steps into their natural alignment. After cycling the step, tighten all hardware on the board and brackets.

Some further adjustment may be required for desired step position. Repeat for passenger side.

**17** Perform system check and troubleshooting. If board is making irregular movements or noise, readjust the boards as follows:

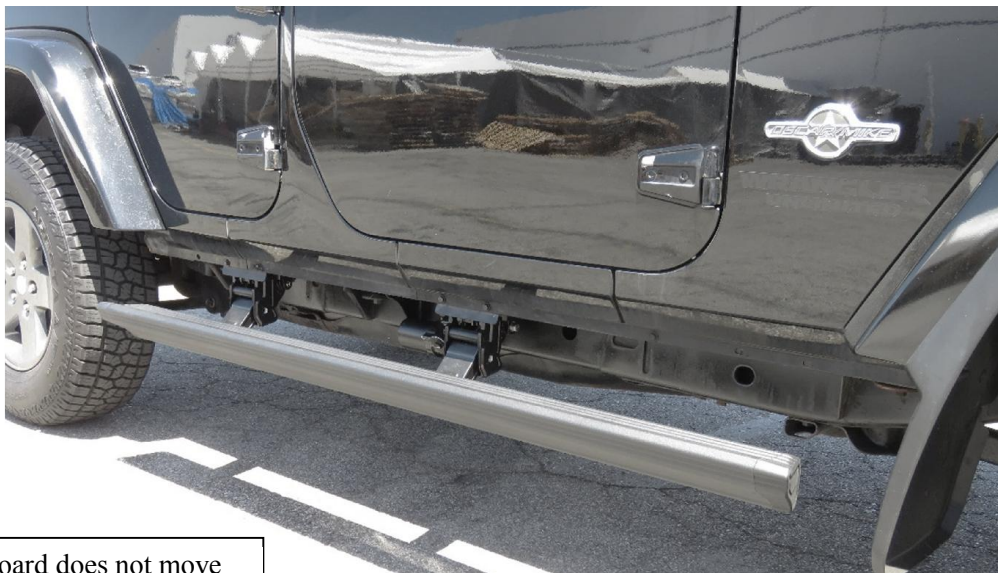
- a) With board deployed loosen 6mm flange nuts under board.
- b) Leave the flange nuts slightly less than snug.
- c) Open and close door several times for board to settle into position.
- d) With the step in the deployed position, gradually tighten flange nuts while alternating between each. Do not over tighten.

If board is making abnormal noise or the motion is binding, repeat steps “a” through “d”.

Note: If the above method does not resolve the issue, the brackets mounting to the vehicle may not be aligned properly with the vehicle. In this case, remove the board and realign brackets before attempting steps “a” to “d” once again.



Reinstall any remaining trim panels if necessary. Check and make sure all hardware is fully tightened. Perform a final system check. Finish.



\*NOTE: If board does not move during troubleshooting, check the CAN Signal High and Low wire tap connections or flip them.