

INSTALLATION INSTRUCTIONS

RETRACTABLE BOARD MOUNT KIT

24+ TOYOTA TACOMA (Double Cab), 25+ TOYOTA 4RUNNER

Patent No. US 11945405

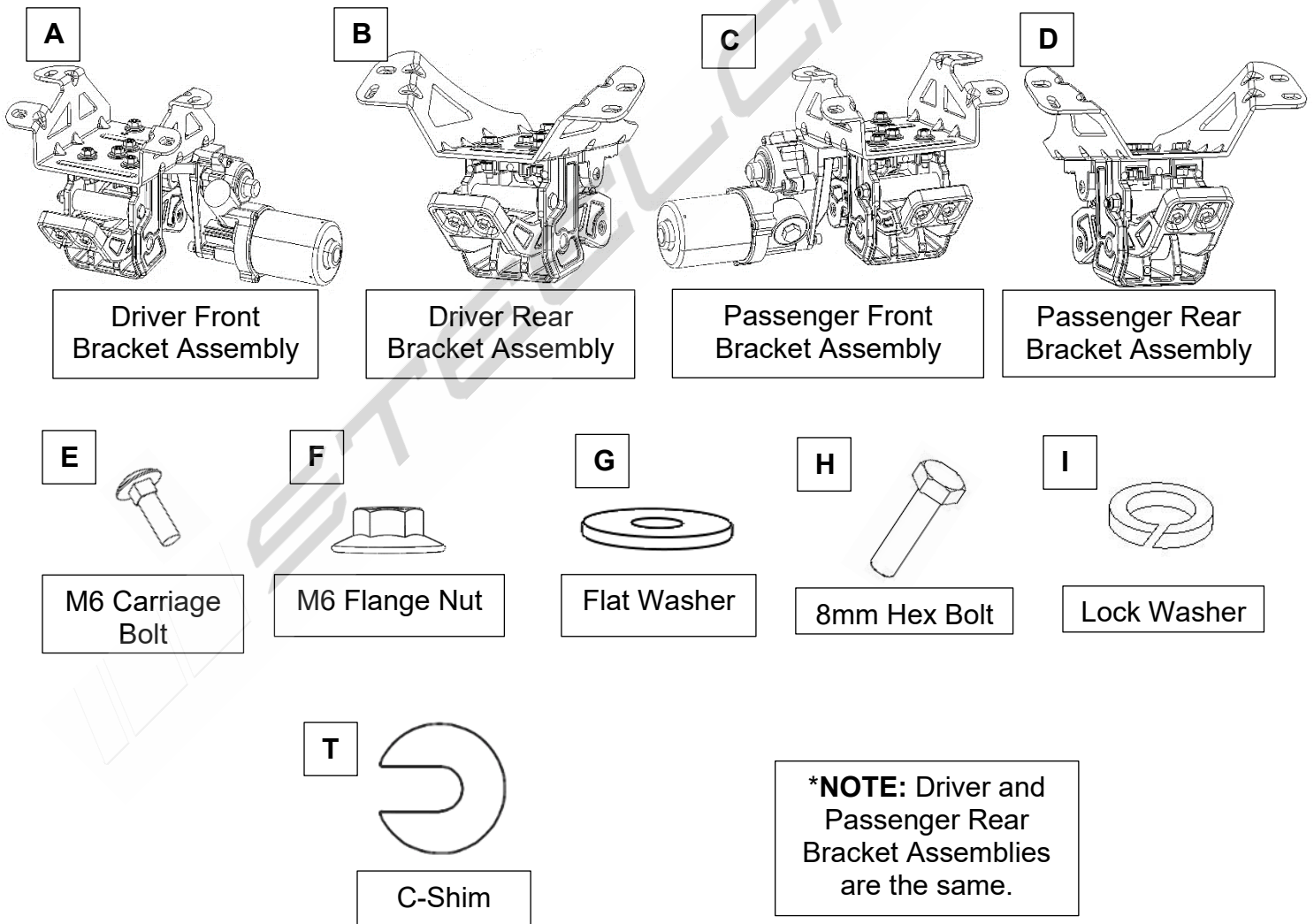
INSTALLATION INSTRUCTIONS

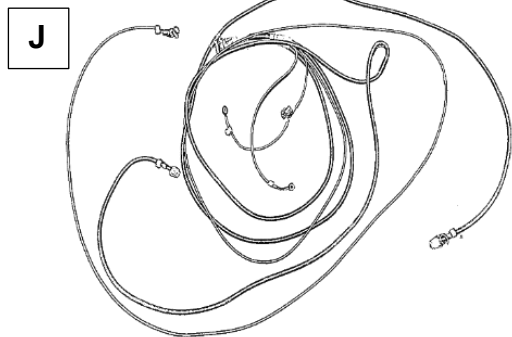
Mechanical PARTS LIST:

Qty	Item Description	Qty	Item Description
2	Running Boards	14	8-1.25mm x 30mm Hex Bolts
1	Driver/Left Front Bracket Assembly	14	8mm Lock Washers
1	Passenger/Right Front Bracket Assembly	14	8mm Flat Washers
1	Driver/Left Rear Bracket Assembly	15	Zip ties
1	Passenger/Right Rear Bracket Assembly	4	C-shims
1	Electronic Materials Package		
8	M6 Carriage Bolts		
8	M6 Flange Nuts		

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)





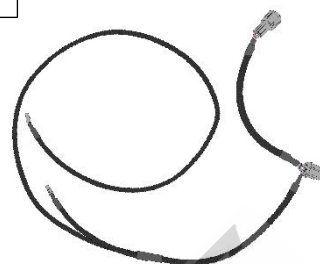
Main Harness

K1



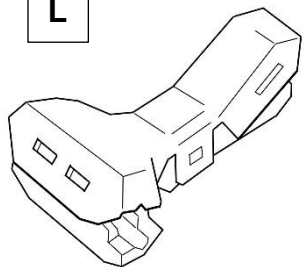
LED Y-Harness (Long)

K2



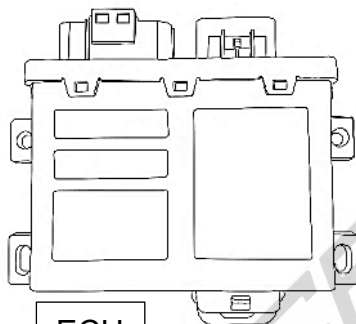
LED Y-Harness (Short)

L



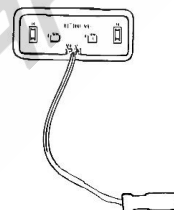
Wire Taps

M



ECU

N



LED Lights

TOOLS REQUIRED



Ratchet



8mm
10mm
13mm
Socket



Extensions



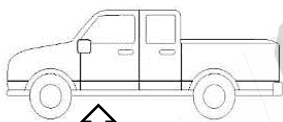
Wrench



Electrical Tape

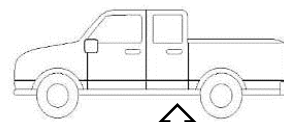
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Locate Driver Side front mounting points on the rocker panel under the front door. Remove the OE bolts before mounting the front bracket. Do the same for the rear mounting points.



Front Mounting Area

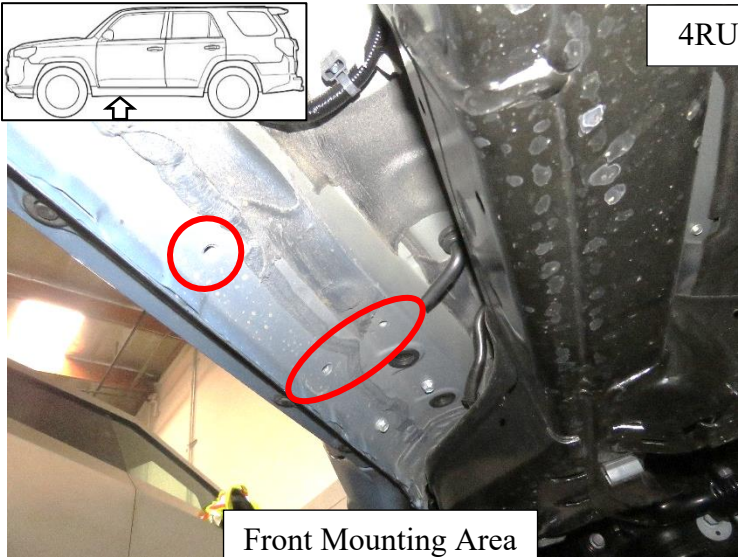
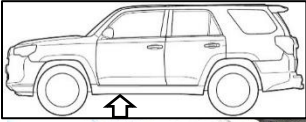
Remove factory pre-installed bolts from here.



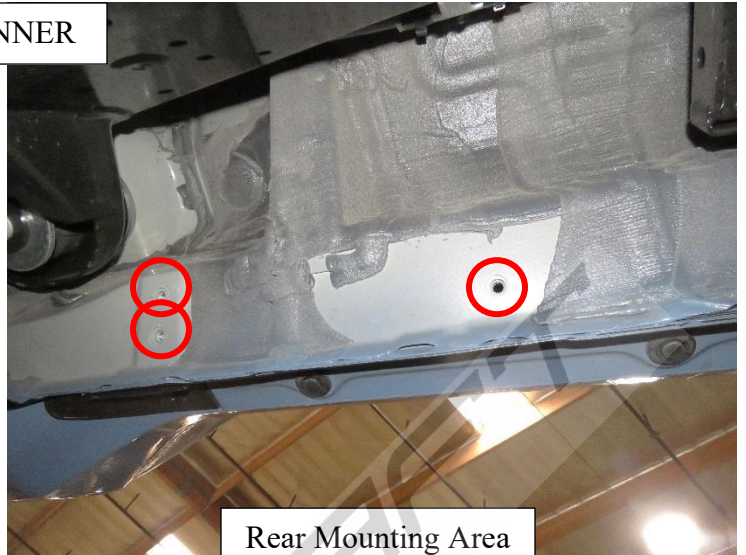
Rear Mounting Area

Please see next page for 4RUNNER details.

4RUNNER



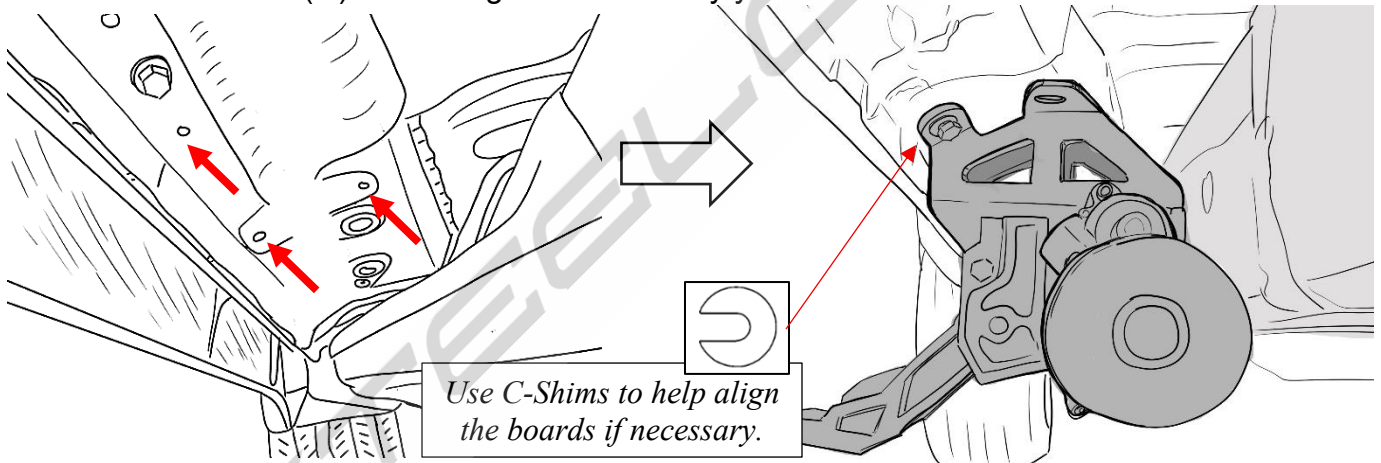
Front Mounting Area



Rear Mounting Area

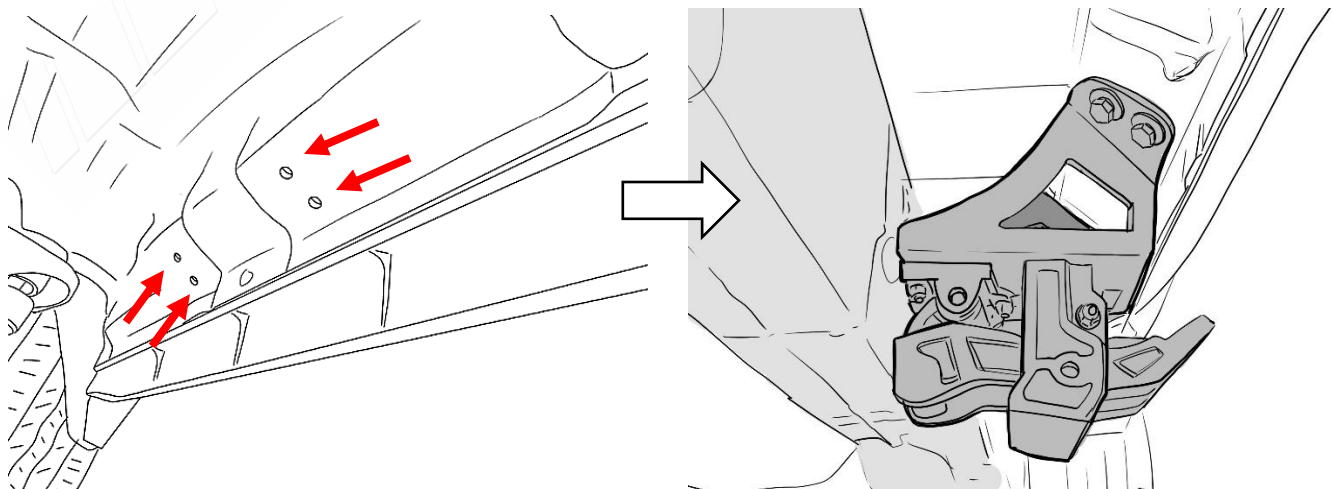
2

Next, line up front mounting bracket slots to the threaded inserts and place Driver Side/Left Front Bracket Assembly (A) onto rocker panel. Then fasten Hex Bolts (H), Lock Washers (I), and Flat washers (G). Do not tighten all the way yet.



3

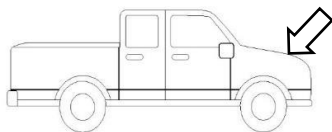
Locate rear mounting points. Next, line up rear mounting bracket slots to the threaded inserts and place Driver Side/Left Rear Bracket Assembly (B) onto rocker panel. Then fasten Hex Bolts (H), Lock Washers (I), and Flat washers (G). Do not tighten all the way yet.



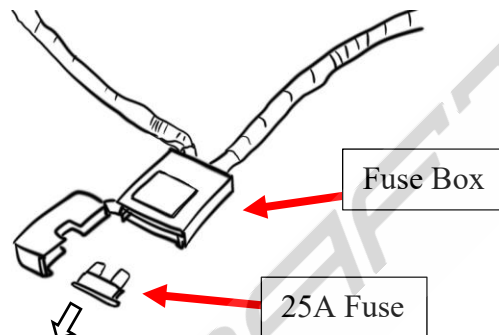
Repeat steps 1 – 3 for the Passenger Side.

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 (J).



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

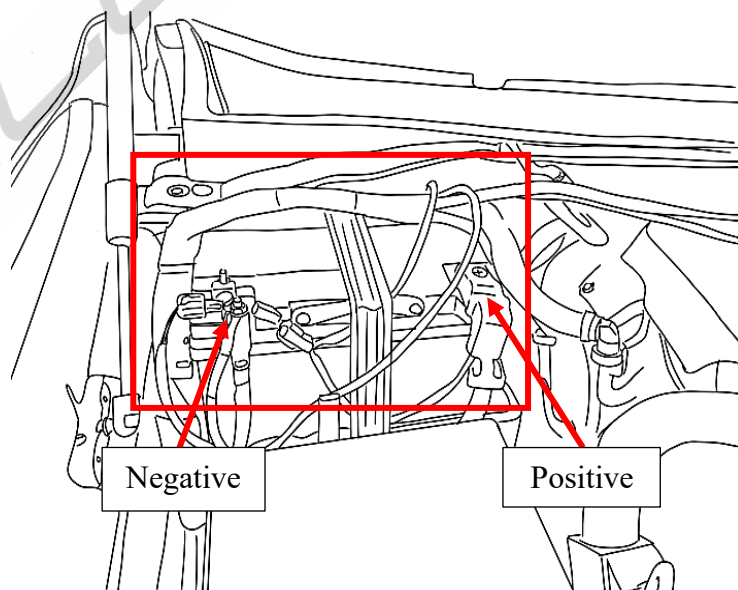


6

Connect the positive power lead on the main harness (J) to the positive battery terminal. Connect the negative lead to the negative battery terminal. Make sure both power leads are fully secured. Connect the ECU (M) to the main harness.

Connect the Long LED Y-Harness (K1) to the Driver-side branch of the main harness.

Connect the Short LED Y-Harness (K2) to the Passenger-side branch of the main harness.



Follow the guide in the [Black Box](#) below.

Proceed to the appropriate step based on the model of vehicle. If the vehicle is:

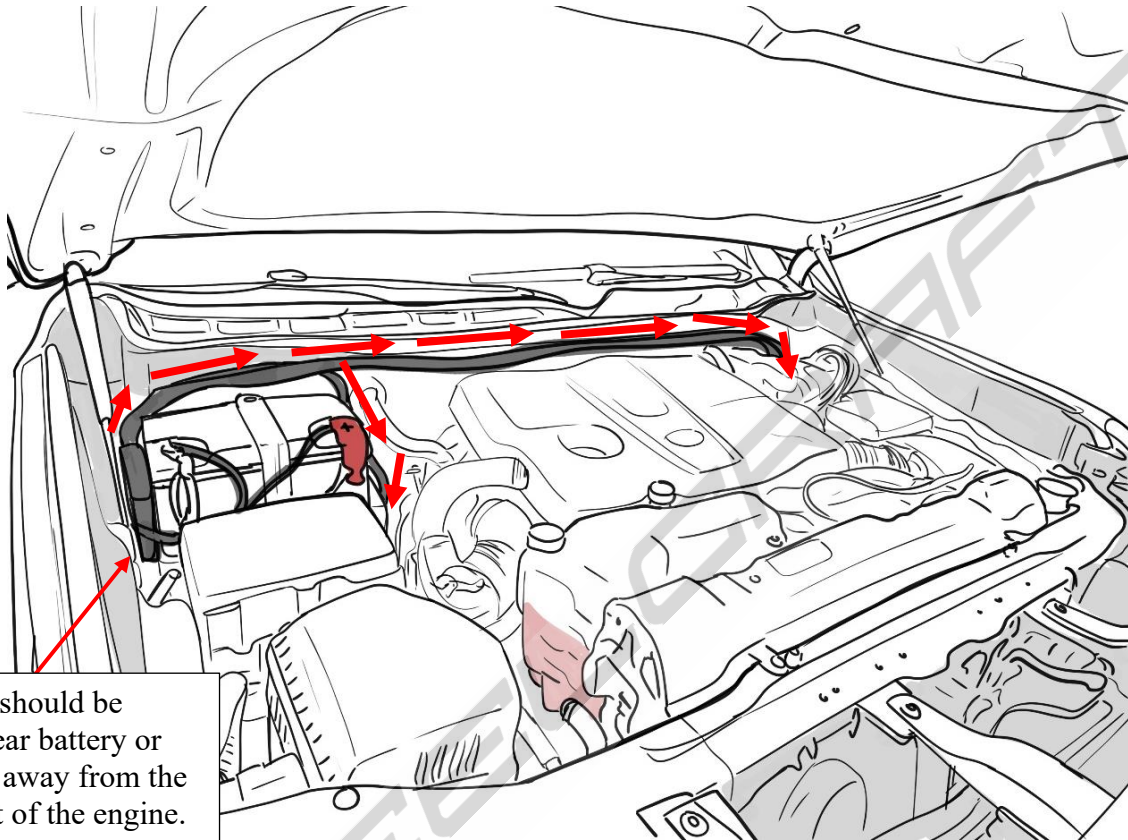
24+ Tacoma Gas Non-Hybrid model, **follow [Step 7A](#).**

24+ Tacoma Hybrid (HEV) model, **follow [Step 7B](#) instead.**

25+ 4Runner Gas Non-Hybrid model, **follow [Step 7A](#).**

25+ 4Runner Hybrid (HEV) model, **follow [Step 7C](#) instead.**

Route the main harness (J) around the battery, up along the rear of the engine compartment. The longer Driver-side branch of the main harness must route down the backside, against the fire wall, and down past the steering column towards the vehicle frame. **Be sure to avoid contact with the steering column.**



ECU (M) should be secured near battery or any space away from the direct heat of the engine.

Route the shorter (marked "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 (J) with supplied cable ties.

Be sure the harness avoids contact with the suspension and steering column.

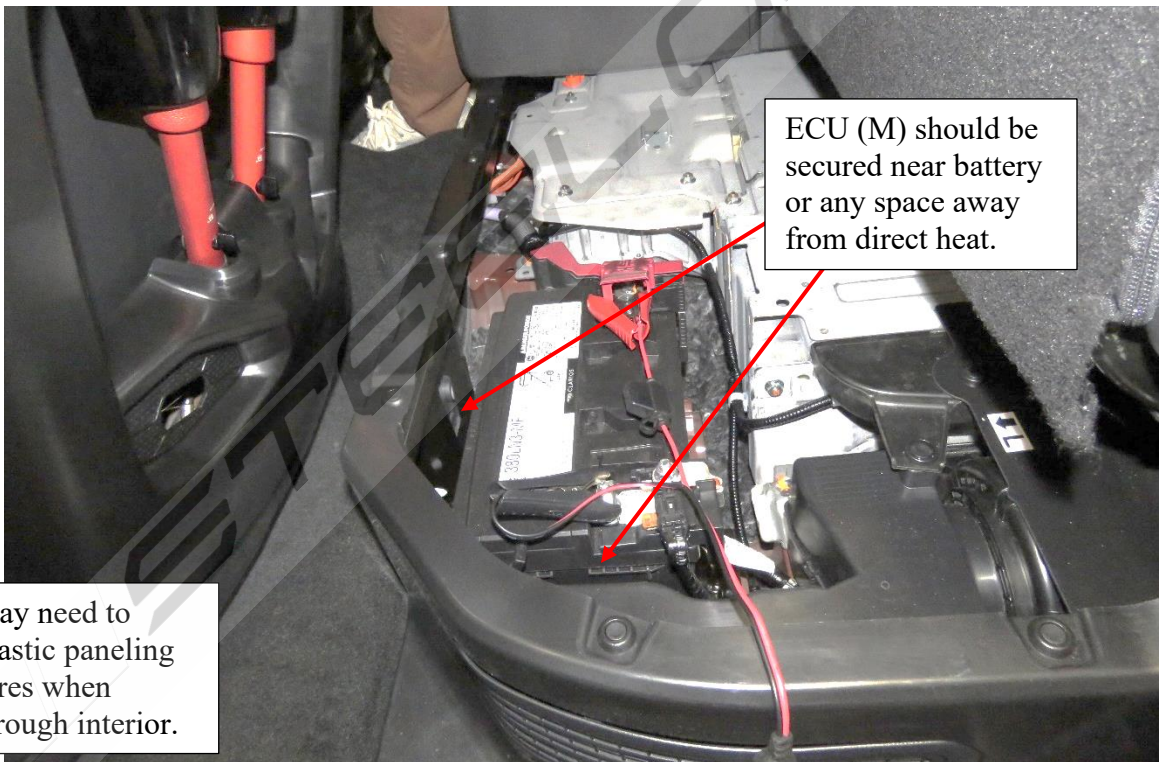
On Hybrid models, the battery is not located in the traditional location in the engine bay. Instead, locate the battery under the Driver Side Rear Seat.

Lift the rear seat to unveil the enclosed battery space and find the positive and negative battery terminals.

Connect the power leads on the Main Harness (J) to the battery terminals.



Route the main harness (J) around the battery and along the inside of the cabin. Find a good spot to hide the ECU. The Driver-side branch of the main harness must route down to the outside of the cabin to the Driver-side motor, on the underside. Connect the Short LED Y-harness too. **Be sure to avoid contact with the steering column and hot exhaust pipes.**

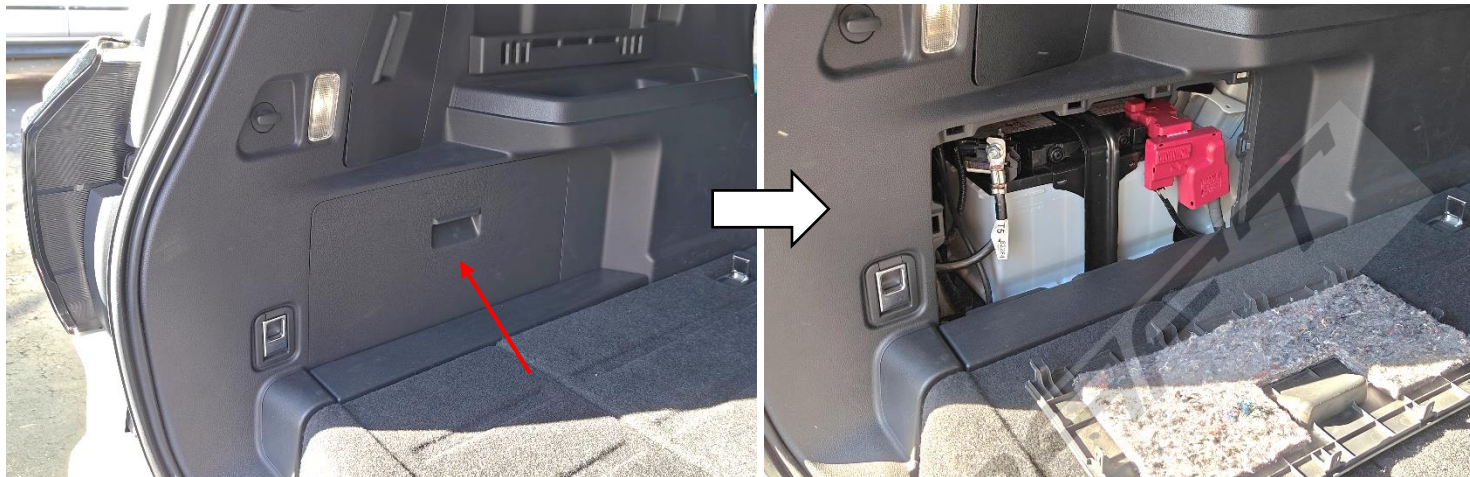


NOTE: May need to remove plastic paneling to hide wires when routing through interior.

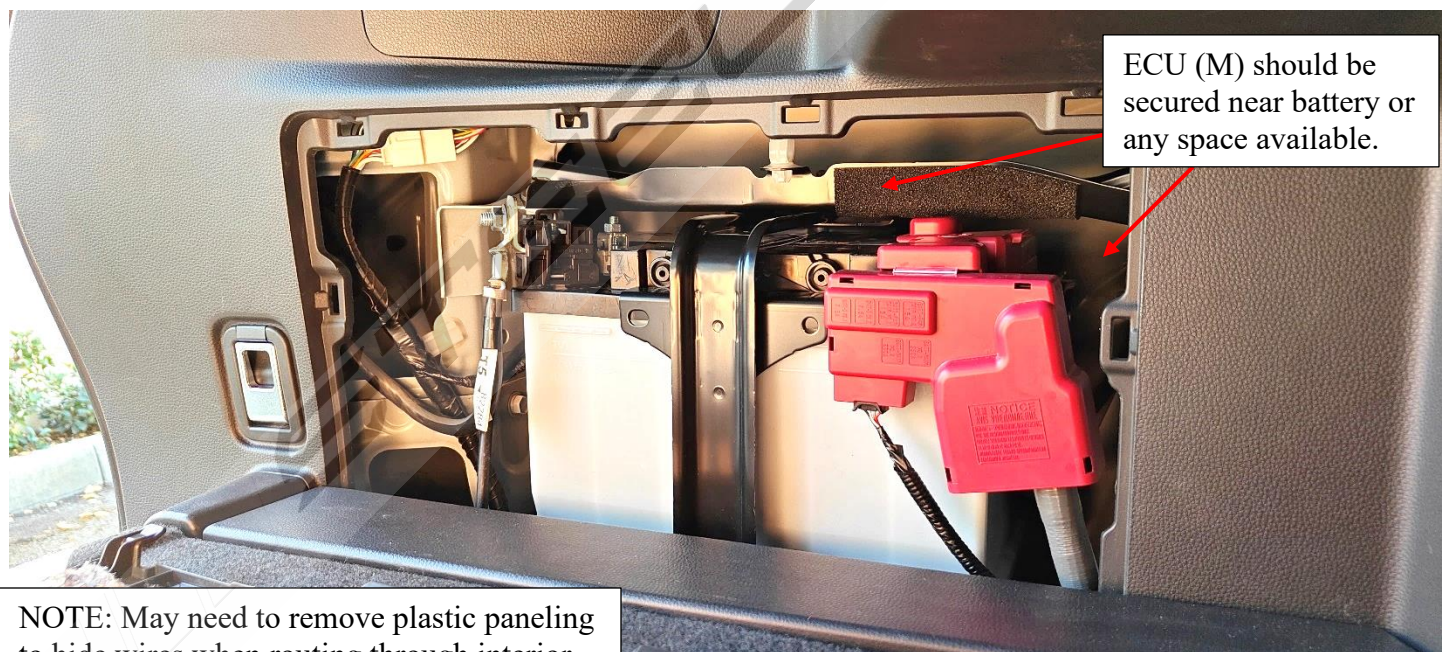
Connect the Long LED Y-harness and route the branch marked "Passenger-side" of the harness to the Passenger Side underside. **Be sure to avoid contact with any moving or hot engine components.** *It may be advisable to route along the inside of the cabin, under the carpet.* Attach and secure the main harness (J) with supplied cable ties.

Be sure the harness avoids contact with the suspension and steering column.

On Hybrid models, the battery is not located in the traditional location in the engine bay. Instead, locate the battery under the trunk, hidden in the DS rear interior quarter panel. Connect the power leads on the Main Harness (J) to the battery terminals.



Route the main harness (J) around the battery and along the inside of the cabin. Find a good spot to hide the ECU. The Driver-side branch of the main harness must route down to the outside of the cabin to the Driver-side motor, on the underside. Connect the appropriate length LED Y-harness too. **Be sure to avoid contact with moving parts and to not block access to the emergency jack.**



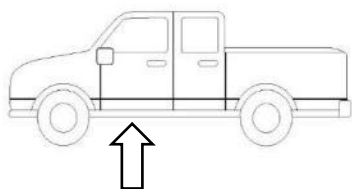
NOTE: May need to remove plastic paneling to hide wires when routing through interior.

ECU (M) should be secured near battery or any space available.

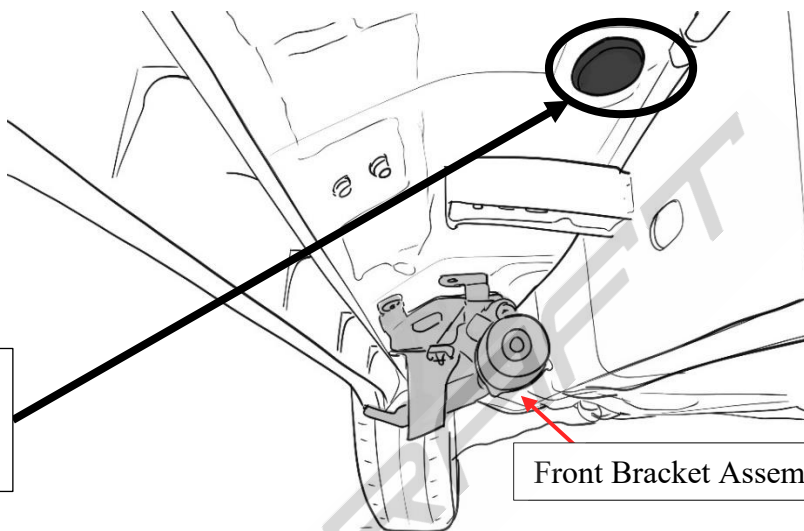
Connect the other LED Y-harness and route the branch marked "Passenger-side" of the harness to the Passenger Side underside. *It may be advisable to route along the inside of the cabin, under the carpet.* Attach and secure the main harness (J) with supplied cable ties.

Be sure the harness avoids contact with moveable or moving parts.

On the underside of the driver side, locate and remove the floor grommet in the floor panel behind the front wheel well. The grommet will be close to the front linkage arm. Poke a hole through the grommet and thread the two signal wires through and up into the vehicle cabin.

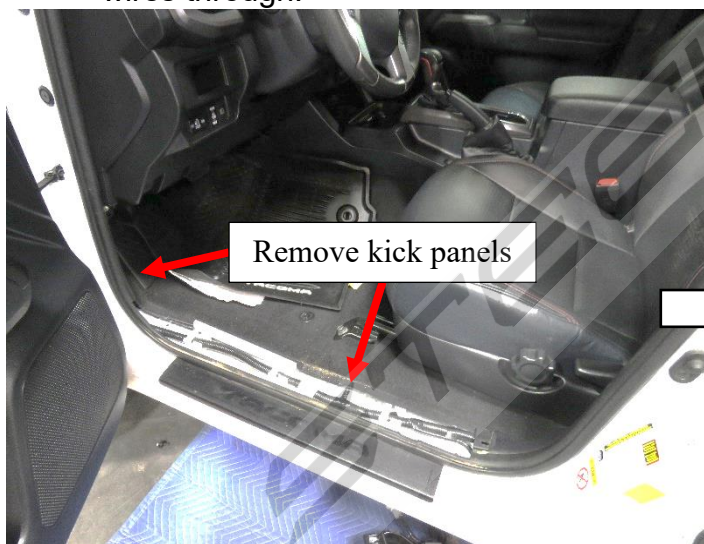


Carefully put wiring through rubber floor plug

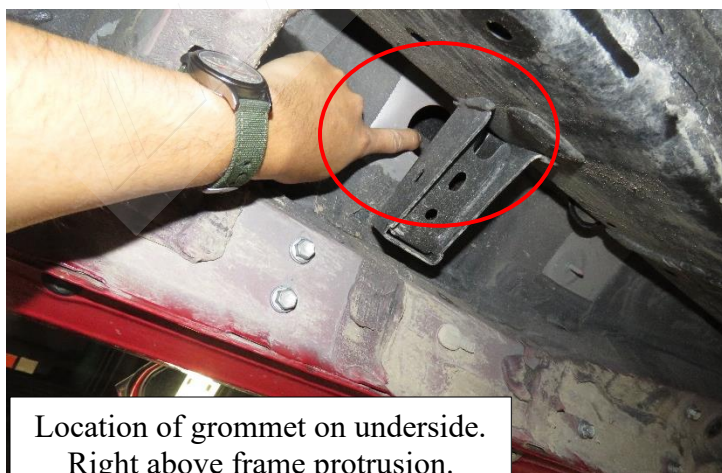


Front Bracket Assembly

Inside the vehicle cabin, remove the bottom door sill plate and then the driver-side kick panel. Peel back the carpet to access the hole where a floor grommet can be removed. Feed the wires through.



Lift carpet to locate grommet

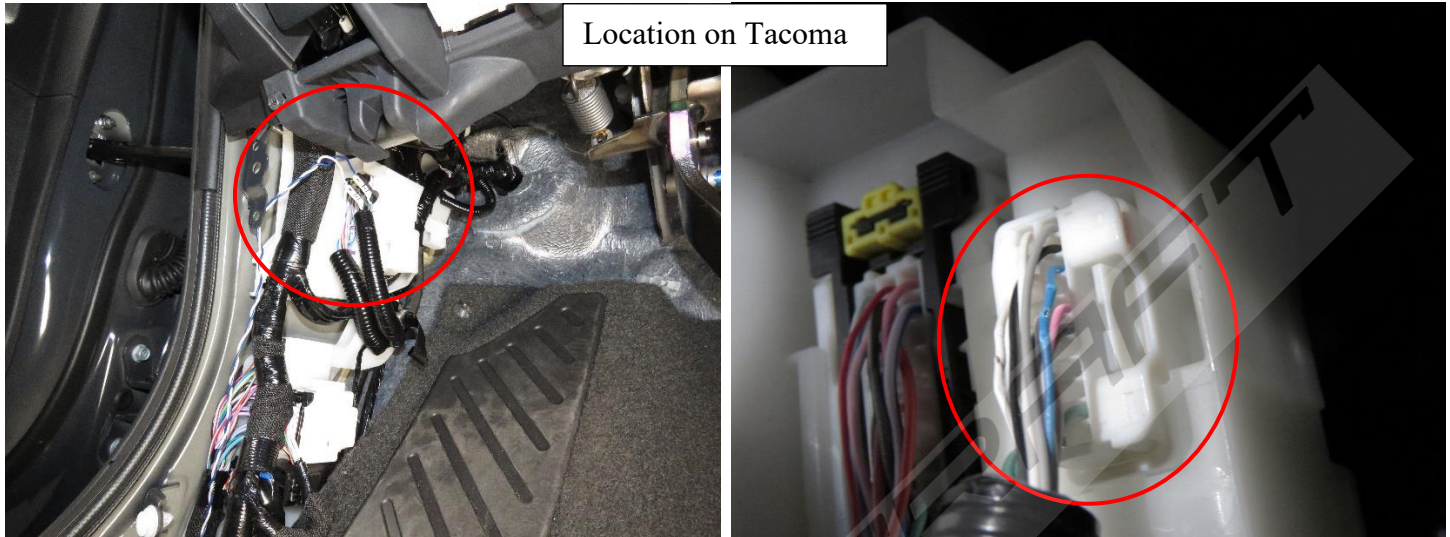


Location of grommet on underside.
Right above frame protrusion.



On some 4Runners, look for these plugs instead.

Locate the white OEM CAN Junction connector under the steering wheel, behind the kick panel. Be sure vehicle is not powered on. Slide the connector out of the holding junction by pushing the locking tab in the center and pulling downwards for easier access to wires.



On the white connector, identify the Blue and White wires for Tacoma (Green and White Wires on the 4Runner).

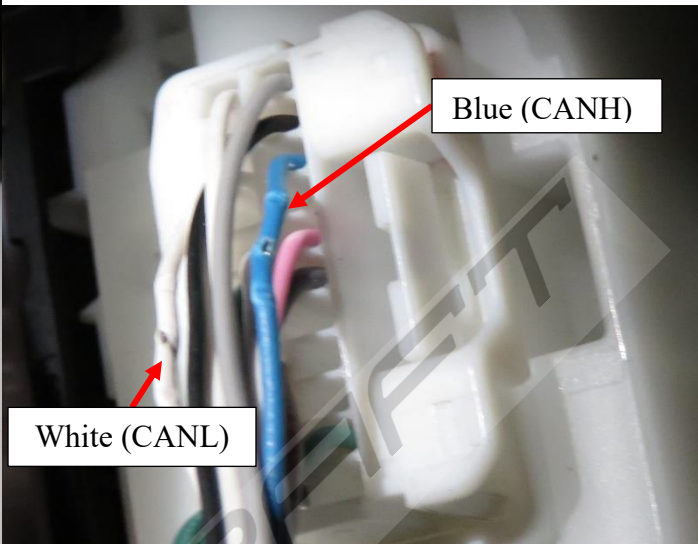
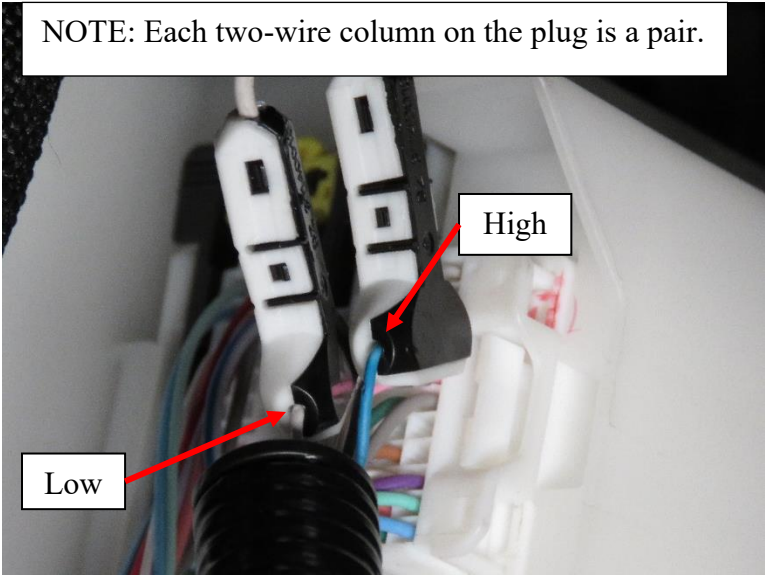
Connect the High and Low wires from the main harness (J) using the supplied wire taps (L).

After successfully connecting the wires, return the connector back into its place and check that it is secure.

See next page for details

24+ TACOMA:

NOTE: Each two-wire column on the plug is a pair.

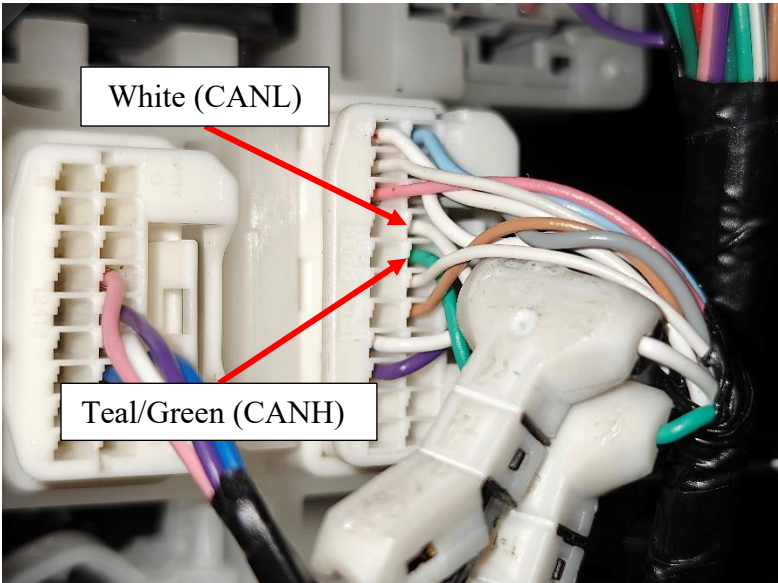
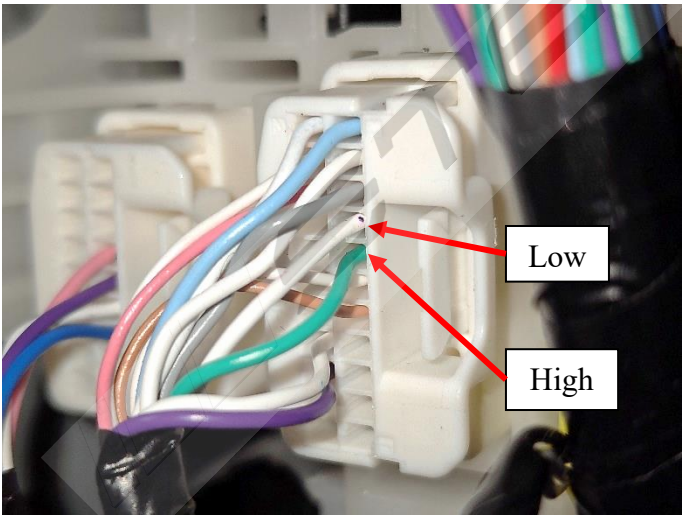


Factory CAN Wire/ Data Line	Power Step Main Harness Wire Color
Blue (High)	White (CAN-H)
White (Low)	Yellow (CAN-L)

*NOTE: On some vehicle trims, the colors of the wires may be different. In these cases, **white wires** away from the locking tab, **are** “CAN Low”.

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

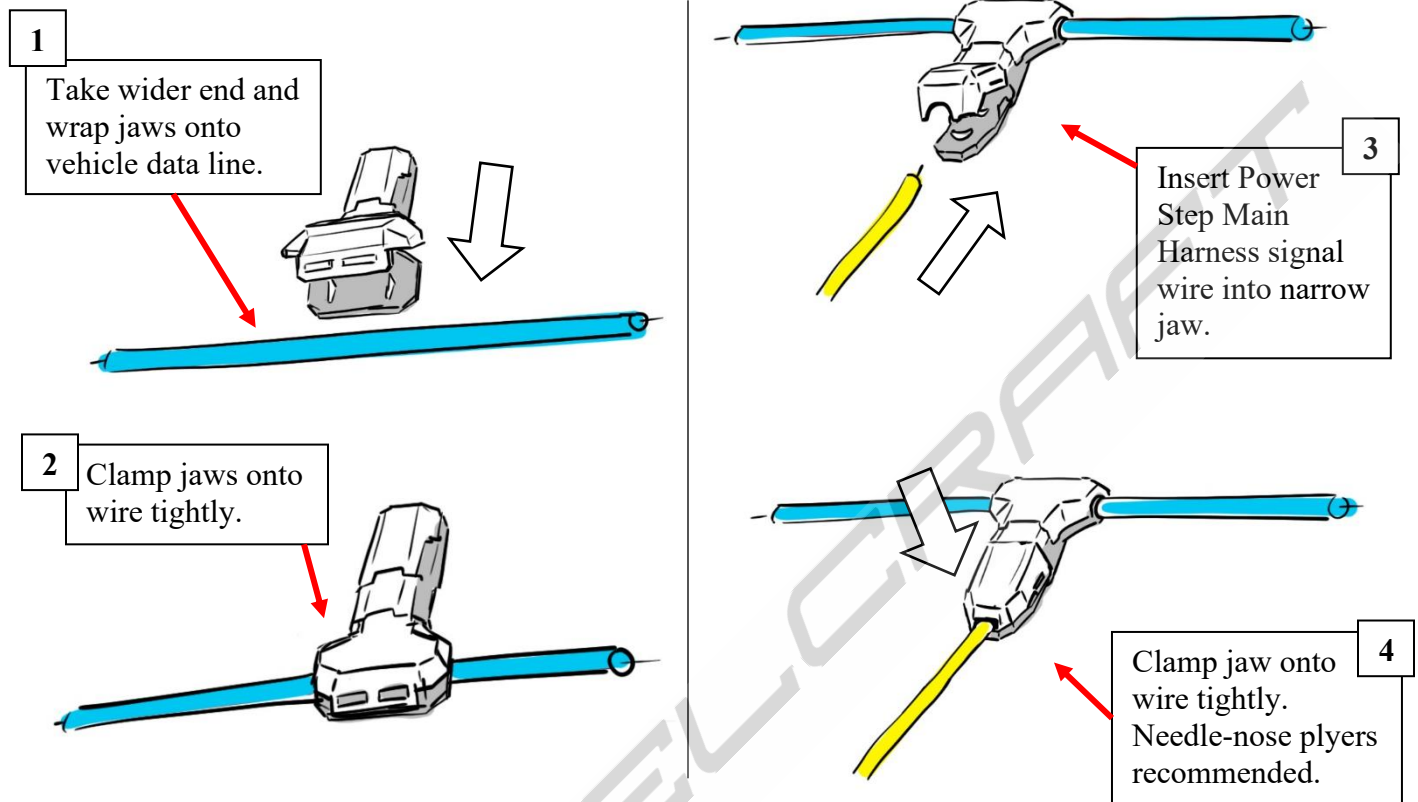
25+ 4RUNNER:



Factory CAN Wire/ Data Line	Power Step Main Harness Wire Color
Teal/Green (High)	White (CAN-H)
White (Low)	Yellow (CAN-L)

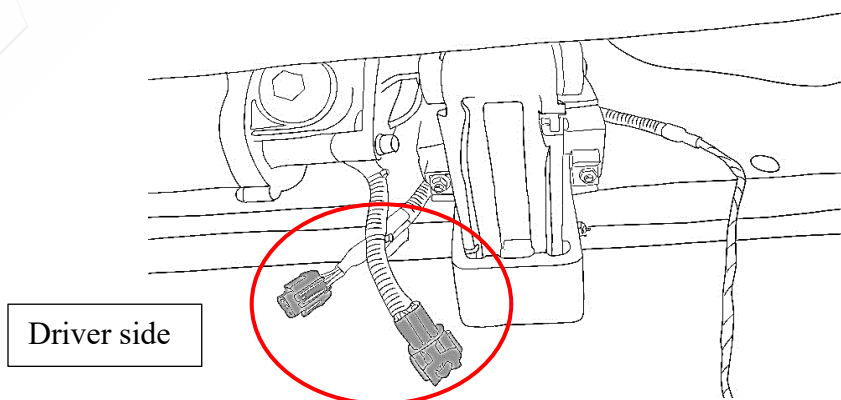
*NOTE: On some vehicle trims, the colors of the wires may be different. In these cases, look for a “pair” of twisted wires, one of which will be a **white wire (CAN Low)**.

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

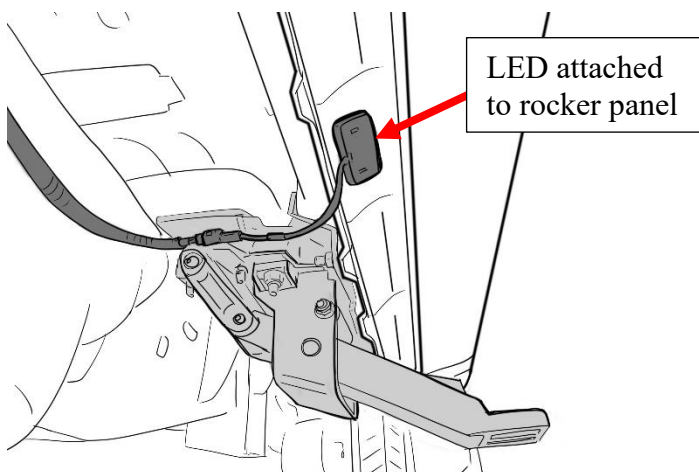


NOTE: Make sure wire is seated properly in the jaws before clamping. The wire being tapped must be centered on the “teeth” to make a proper tap.

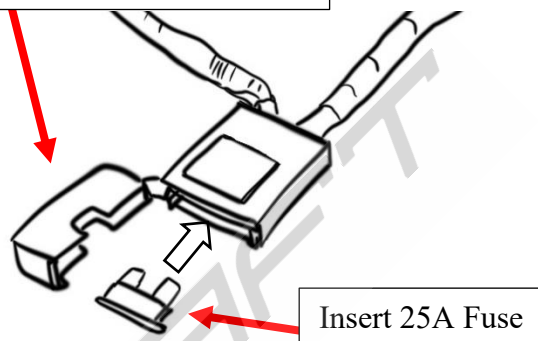
- 11** Be sure the main harness (J) is connected to the appropriate length LED Y-Harness (K). Then attach the LED Y-Harness (K) to the motor on the Driver Side. Repeat for Passenger Side.



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

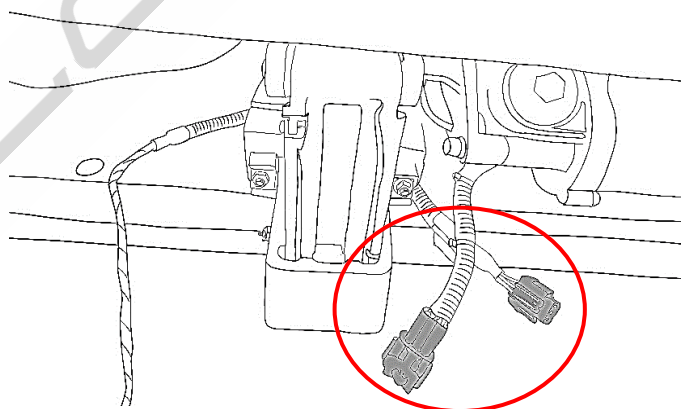


Close lid after replacing Fuse



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 (J) via the LED-Y harnesses (K).

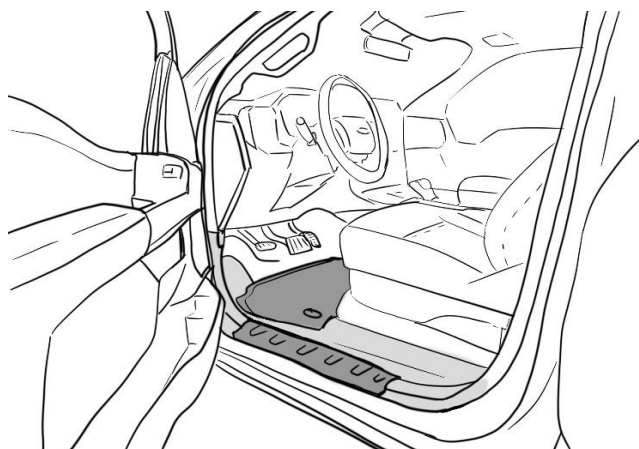
***NOTE:** The linkage arms on the front bracket assemblies will not move unless both motors are connected.



Seal the rubber boot with RTV Silicone Sealant if needed.

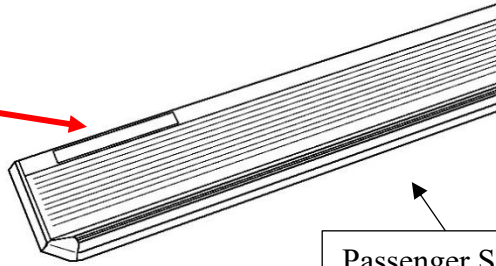
Hide wires and reattach the kick panel with the carpet fully unfurled in its original position. Reattach the door sill panels and check to make sure there are no obstructions or potential snag points around the brake pedal area.

Be sure to reattach plastic kick panel nut.



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.

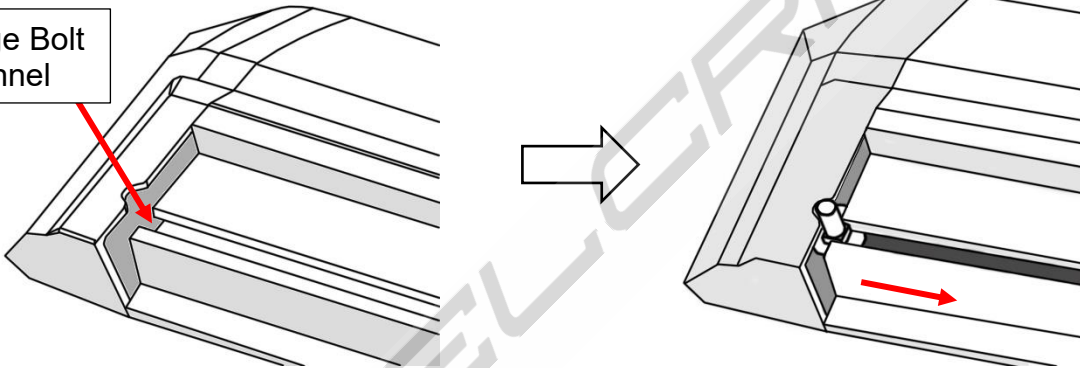
Epoxy logo should be at rear-end of board.



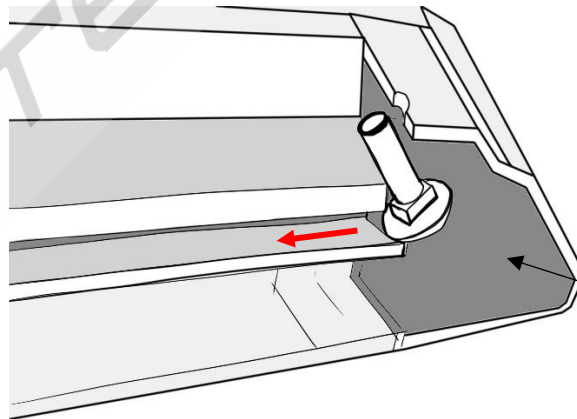
Passenger Side Running Board

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).

Carriage Bolt Channel



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

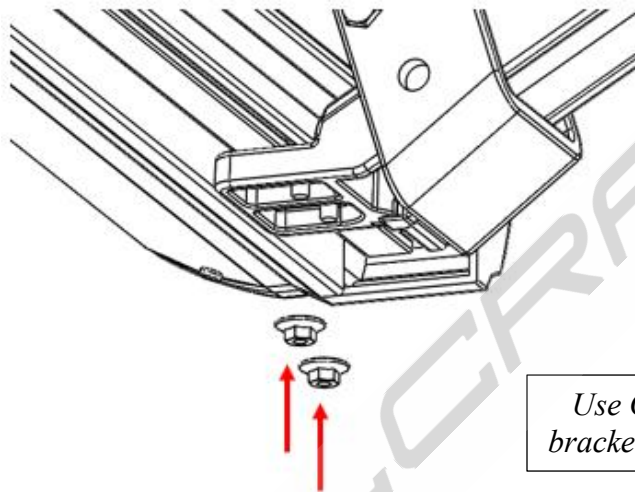


Section view of underside channel

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 the board in the 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 (J) 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.

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

- With board deployed loosen 6mm flange nuts under board.
- Leave the flange nuts slightly less than snug.
- Open and close door several times for board to settle into position.
- 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.

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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, flip the CAN Signal High and Low wires.