INSTALLATION INSTRUCTIONS

POWER STEPS

22+ TOYOTA TUNDRA DOUBLE CAB & CREW MAX (INCL. HYBRID/HEV)

PART# HW-PB-TW297

INSTALLATION INSTRUCTIONS

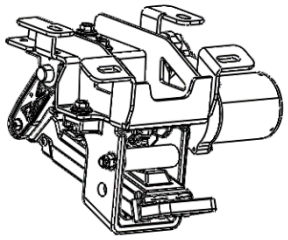
Mechanical PARTS LIST:

Qty	Item Description	Qty	Item Description
2	Running Boards	12	M8 x 30mm Hex Bolts
1	Driver/Left Front Bracket Assembly	12	M8 Lock Washers
1	Passenger/Right Front Bracket Assembly	12	M8 Flat Washers
1	Driver/Left Rear Bracket Assembly	15	Zip ties
1	Passenger/Right Rear Bracket Assembly		
1	Electronic Materials Package		
8	M6 Carriage Bolts		
8	M6 Flange Nuts		

Electronic Materials Package PARTS LIST:

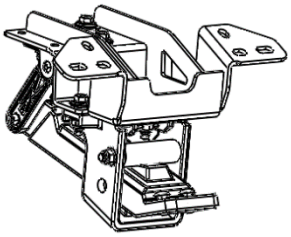
Qty	Item Description	Qty	Item Description
1	Main Harness	1	ECU
2	LED Y-Harness	4	LED lights
2	Wire Taps		

A



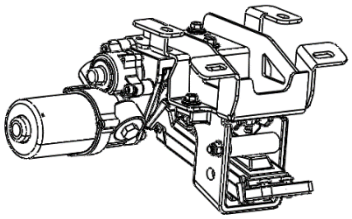
Driver Front Bracket Assembly

B



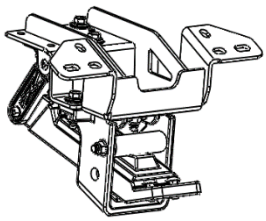
Driver Rear Bracket Assembly

C



Passenger Front Bracket Assembly

D



Passenger Rear Bracket Assembly

E

M6 Carriage Bolt

F

M6 Flange Nut

G

Flat Washer

H

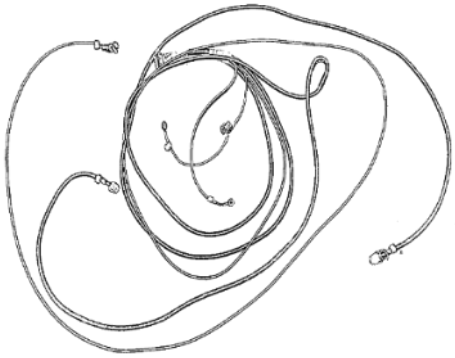
M8 Hex Bolt

I

Lock Washer

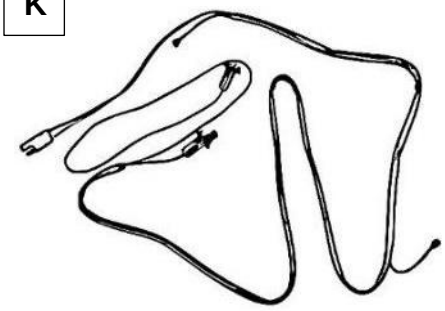
*__NOTE:__ Driver and Passenger Rear Bracket Assemblies are the same.

J



Main Harness

K



LED Y-Harness

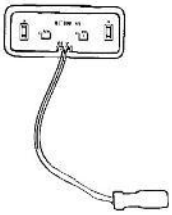
L

Wire Taps

M

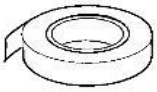
ECU

N

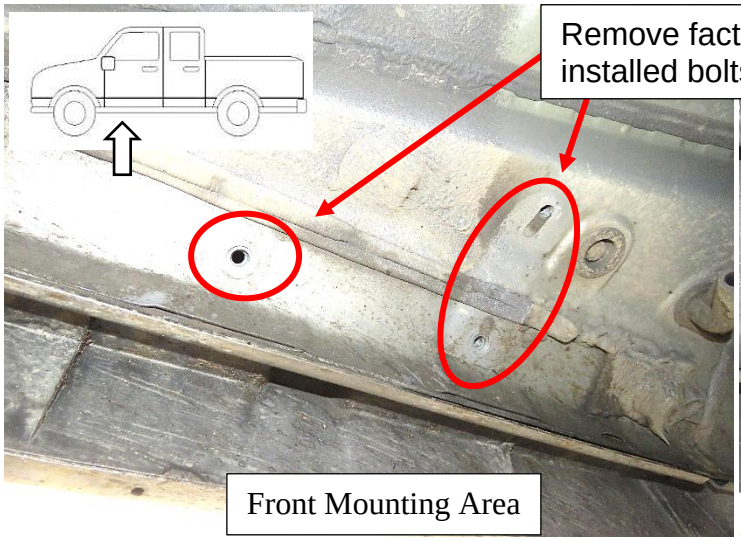


LED Lights

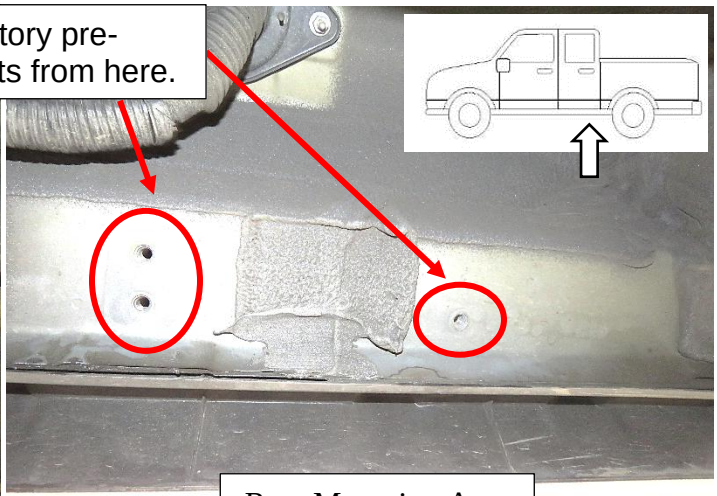
TOOLS REQUIRED

Rachet	8mm 10mm 13mm Socket	Extensions	Wrench	 Electrical Tape

1 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.



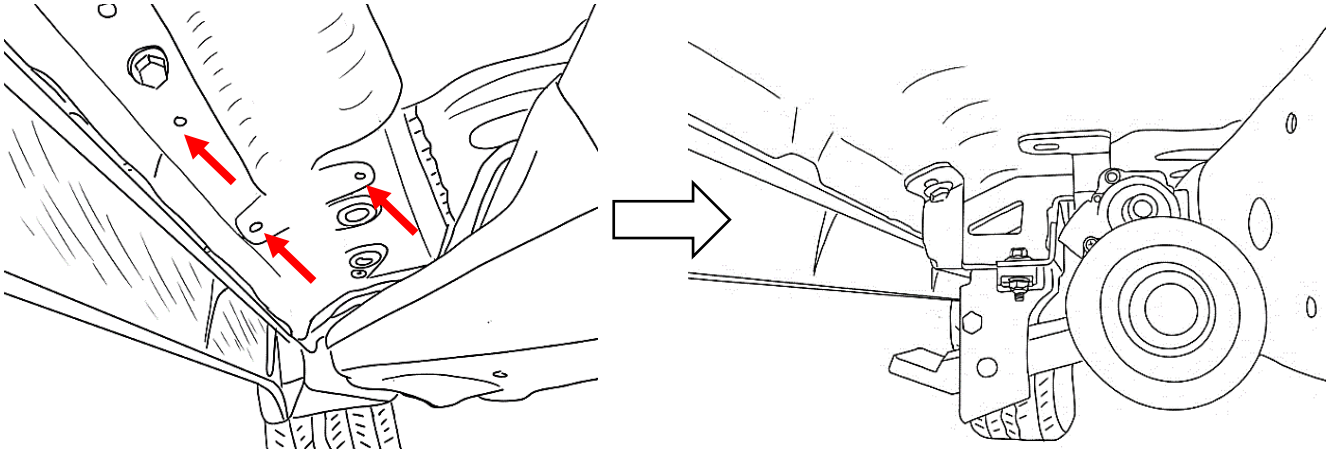
Front Mounting Area



Rear Mounting Area

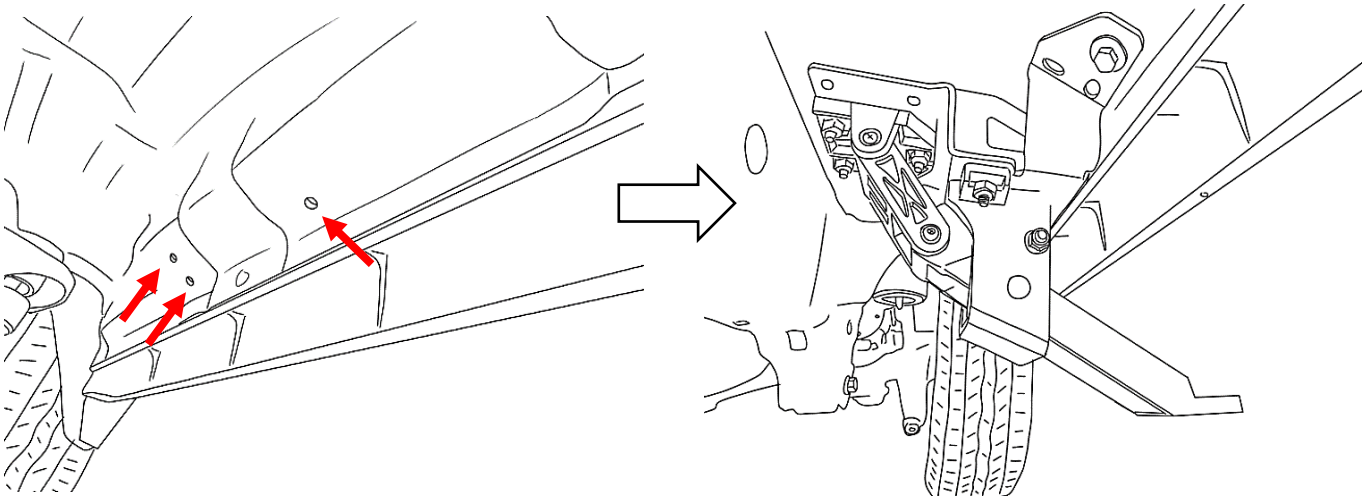
2

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.

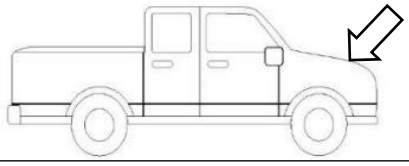


4

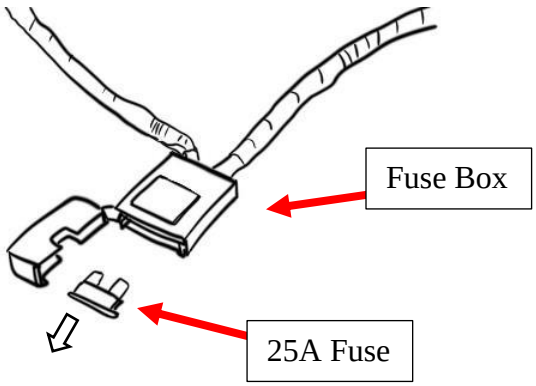
Repeat steps 1 – 3 for the Passenger Side.

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 (J).



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



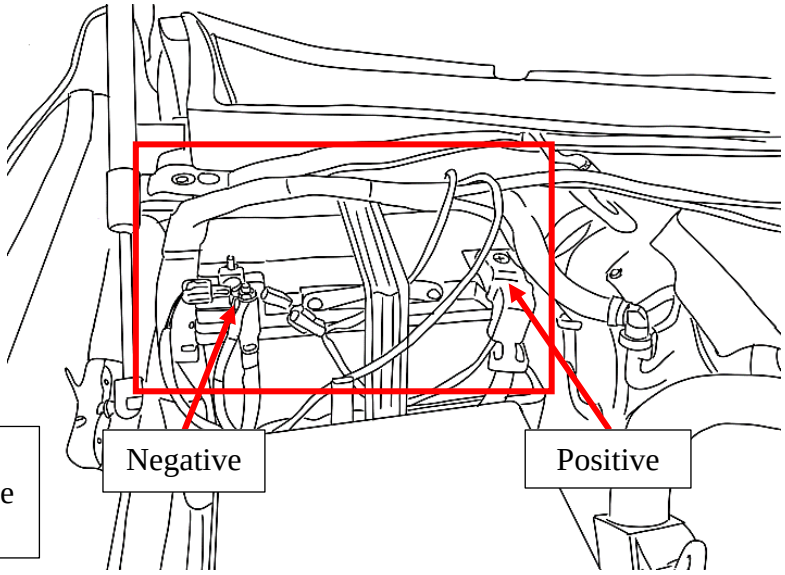
6

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.

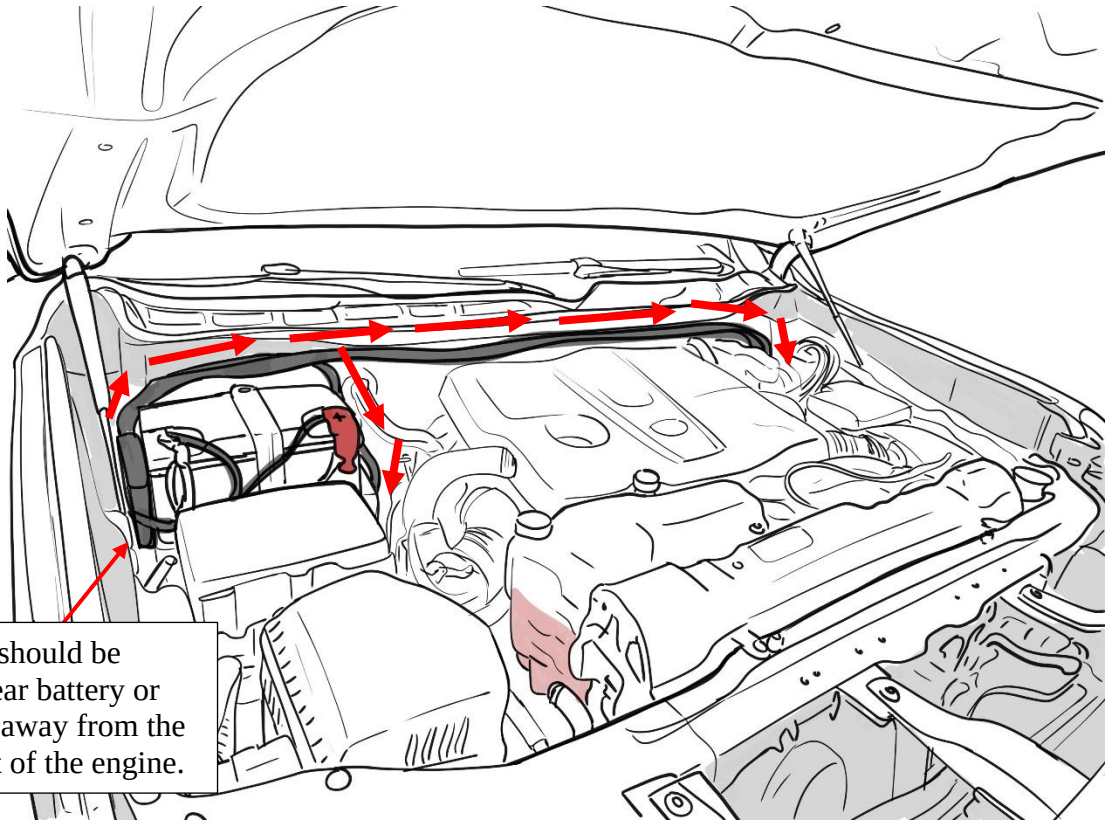
*NOTE: Battery is on Passenger Side of engine compartment.



If the vehicle is a non-Hybrid model, **follow Step 7A**. If the vehicle is a Hybrid/HEV model, **follow Step 7B instead (next page)**.

7A

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.**

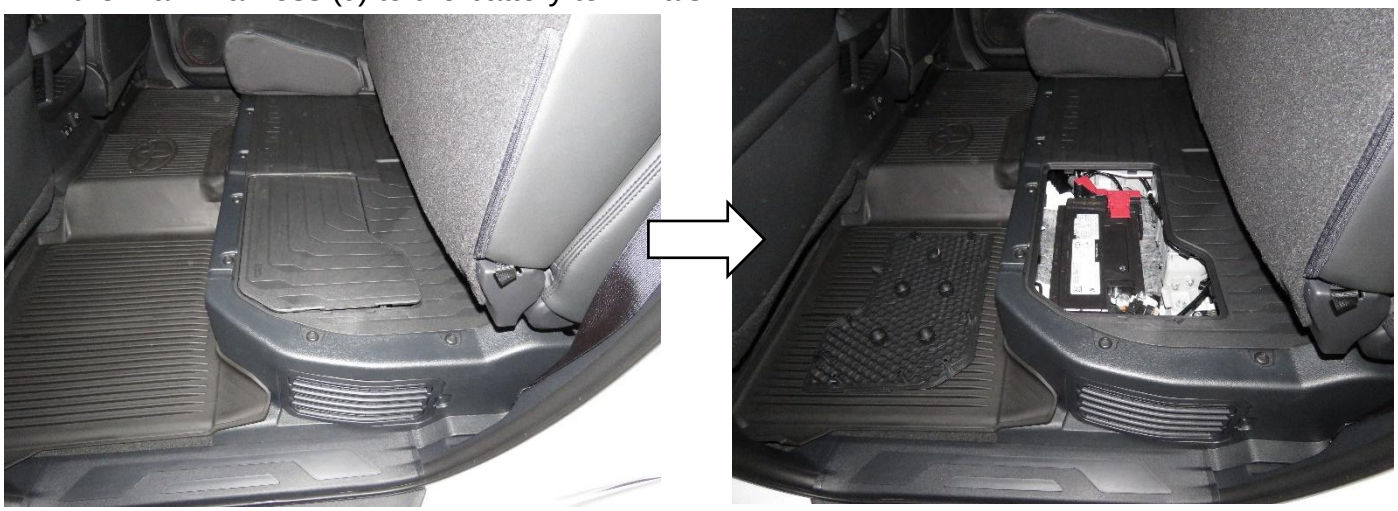


ECU (M) should be secured near battery or any space away from the direct heat of the engine.

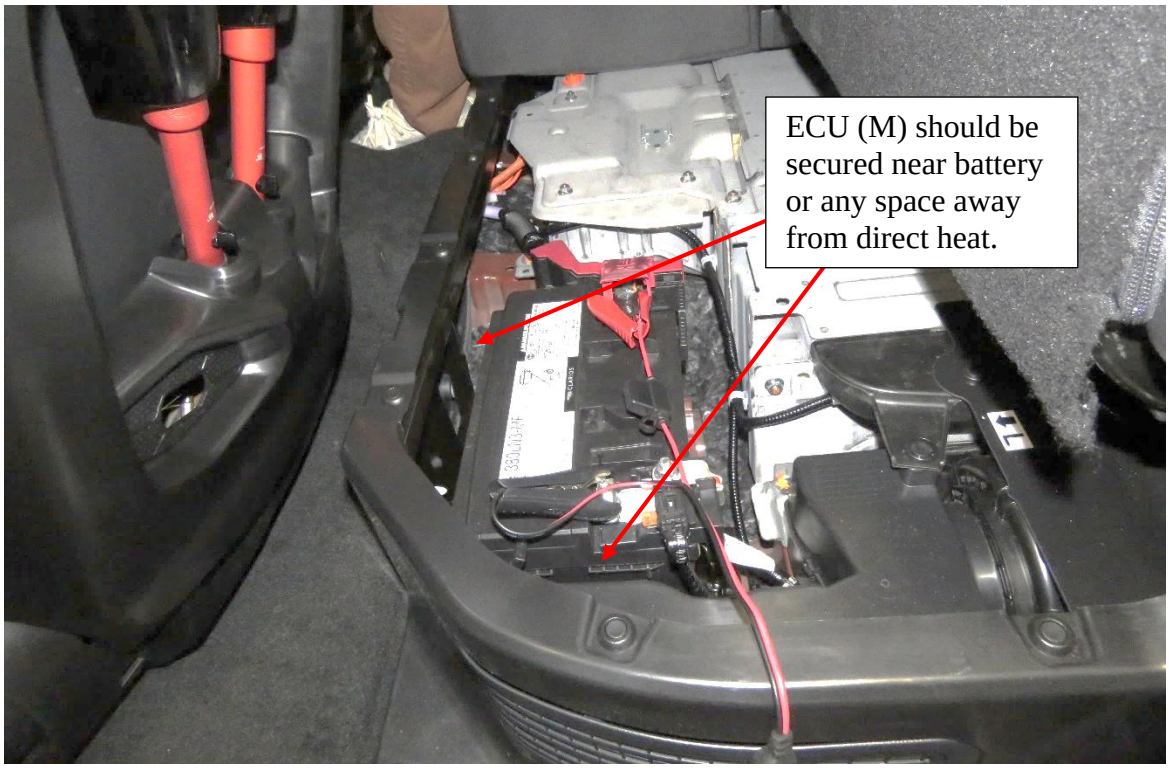
Route the shorter (marked “Passenger-side”) leg of the harness down the Passenger-side wheel well. **Be sure to avoid contact with any moving or hot engine components.** Attach and secure the main harness (J) with supplied cable ties. **Be sure the harness avoids contact with the suspension and steering column.**

7B

On Hybrid models, the battery is not located in the traditional location in the engine bay. Instead, locate the battery in 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 longer Driver-side branch of the main harness must route down to the outside of the cabin to the Driver-side motor, on the underside. **Be sure to avoid contact with the steering column and hot exhaust pipes.**

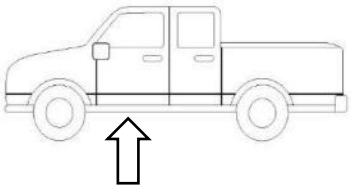


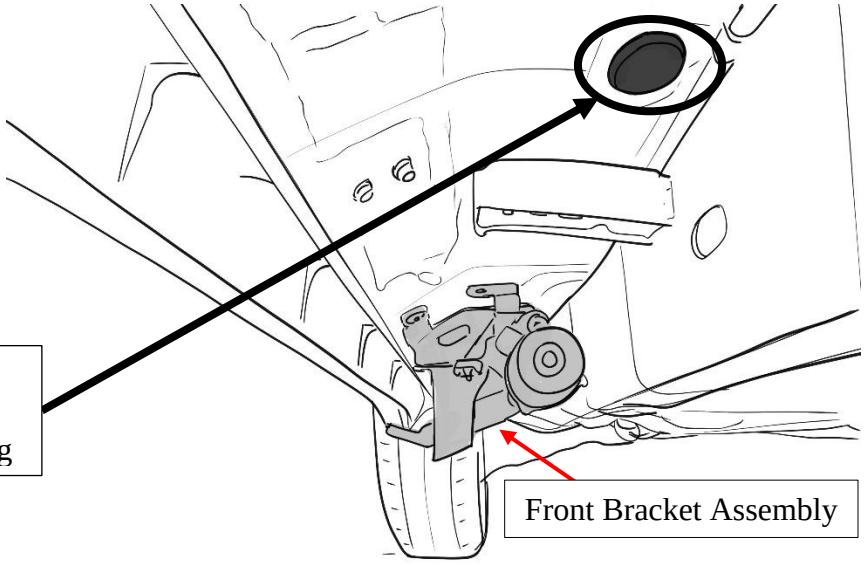
Route the shorter (marked “Passenger-side”) leg of the harness to the Passenger Side underside. **Be sure to avoid contact with any moving or hot engine components.** *It may be advisable to route along the inside of the cabin, under the carpet.* Attach and secure the main harness (J) with supplied cable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

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

8

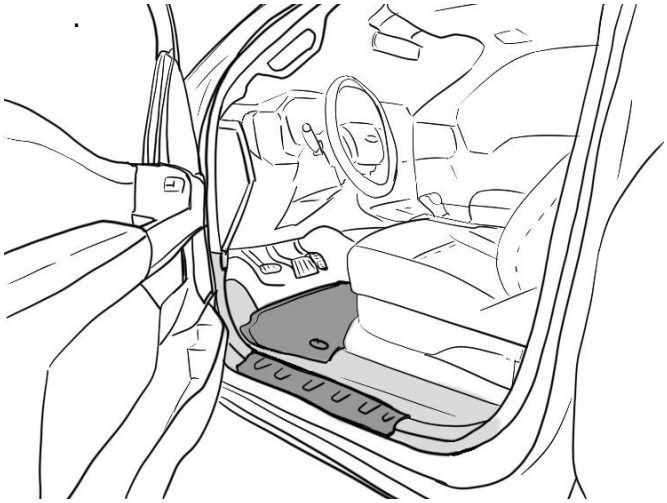
On the underside of the driver side, locate and remove the floor grommet in the floor panel behind the front wheel well. The grommet will be close to the front linkage arm. Poke a hole through the grommet and thread the two signal wires through and up into the vehicle cabin.

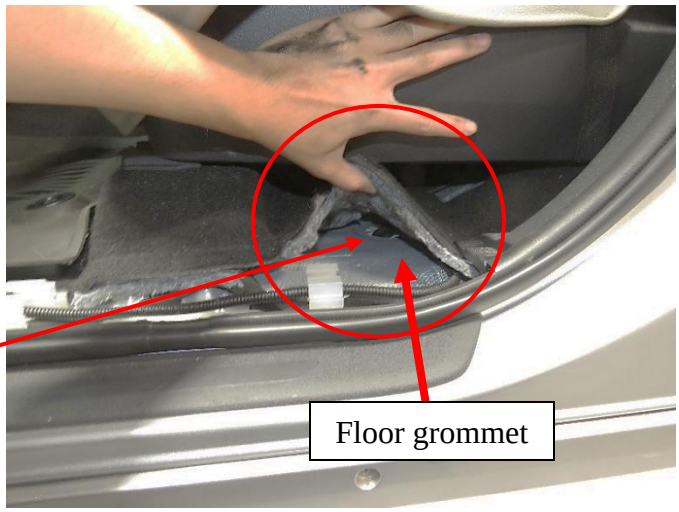




9

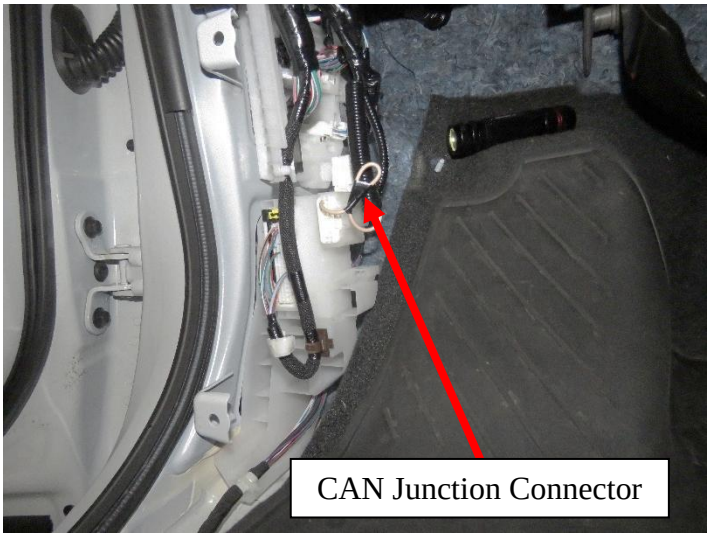
Inside the vehicle cabin, remove the driver-side front kick panel and bottom door sill plate. Peel back the carpet to access the hole where the grommet was removed. Feed the wires through.

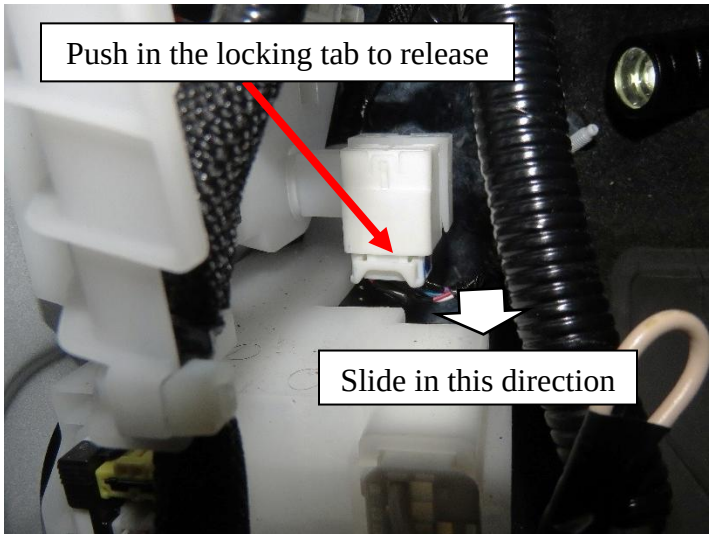




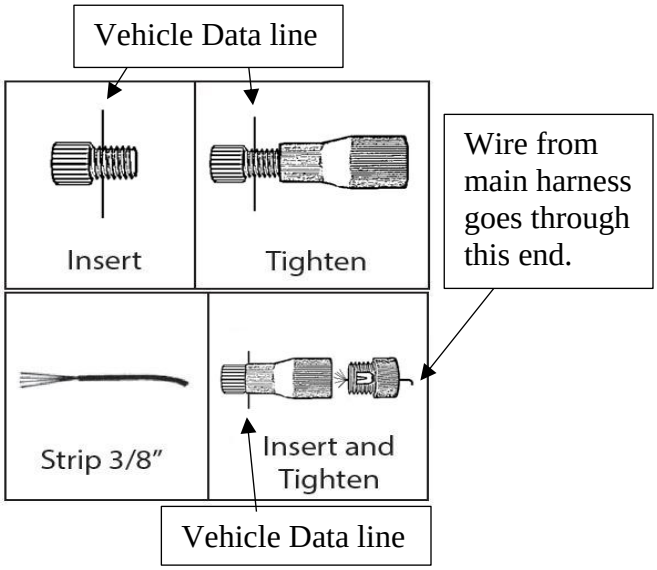
10

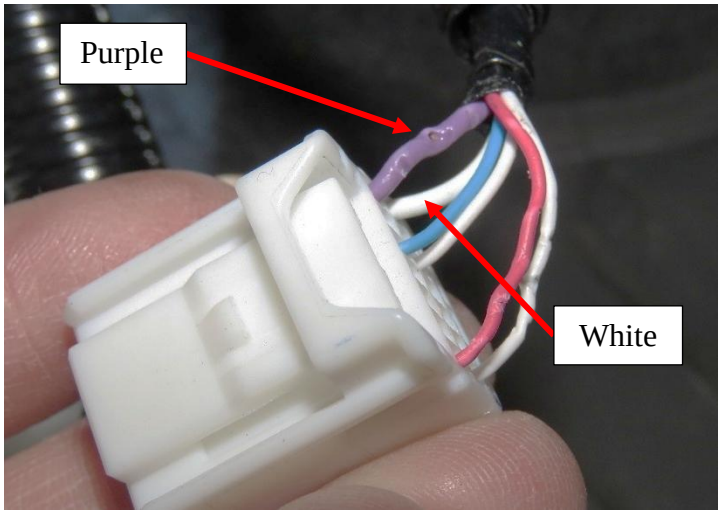
Locate the white OEM CAN Junction connector under the steering wheel, behind the kick panel. Be sure vehicle is not powered on. Slide the connector out of the holding junction by pushing the locking tab in the center and pulling downwards for easier access to wires.

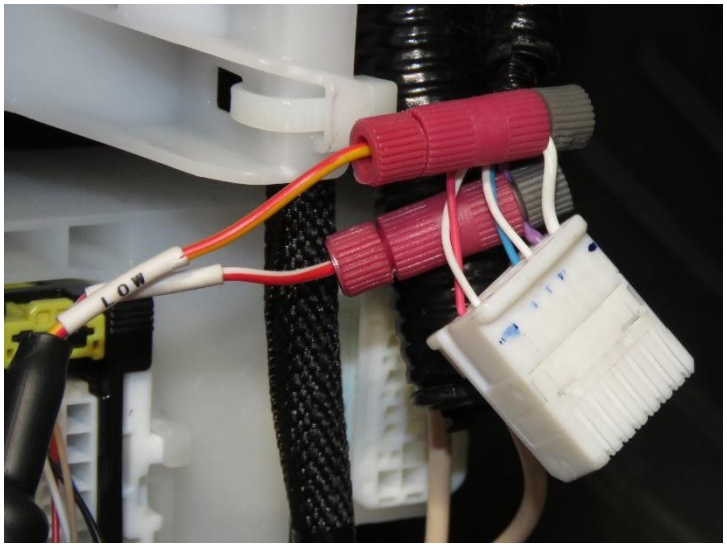




On the white connector, identify the purple and white wires. Connect the High and Low wires from the main harness (J) using the supplied wire taps (L). After successfully connecting the wires, return the connector back into its place and check that it is secure.





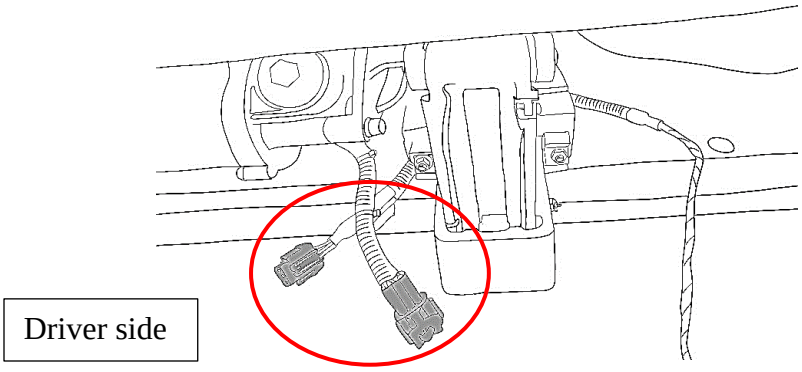


Factory CAN Wire/ Data Line	Power Step Main Harness Wire Color
Purple (High)	White (CAN-H)
White (Low)	Yellow (CAN-L)

*NOTE: On some vehicle trims, the colors of the wires may be different. In these cases, tap any one of the paired wires. White wire is "CAN Low", and the Colored wire is "CAN HIGH".

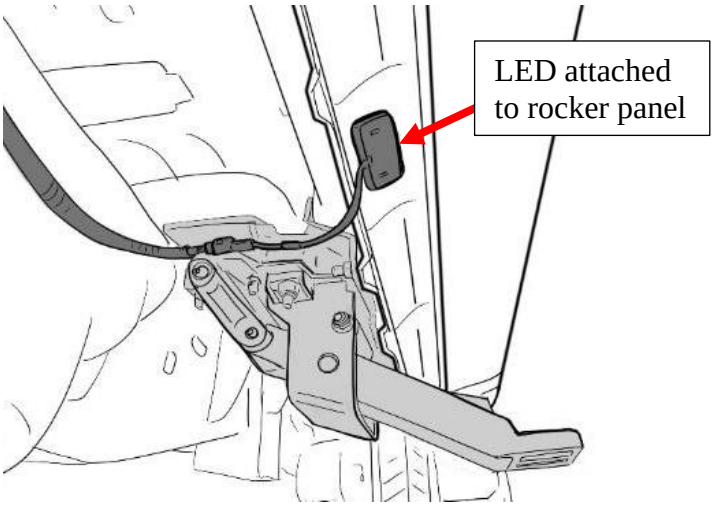
11

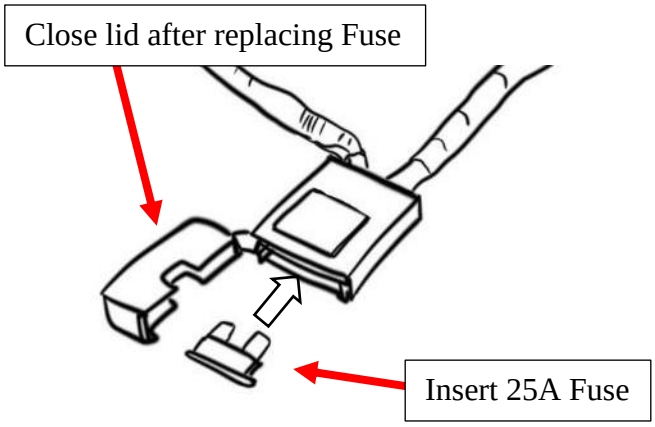
Attach the main harness (J) to one LED Y-Harness (K). Then attach the LED Y-Harness (K) to the motor on the Driver Side. Repeat for Passenger Side.



12

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.

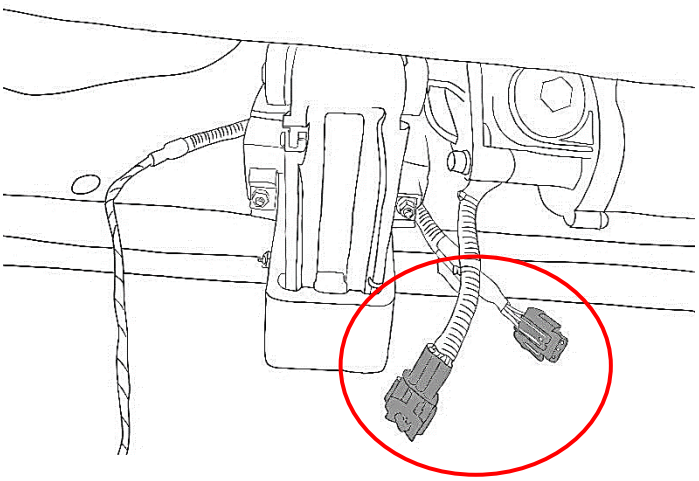




13

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.

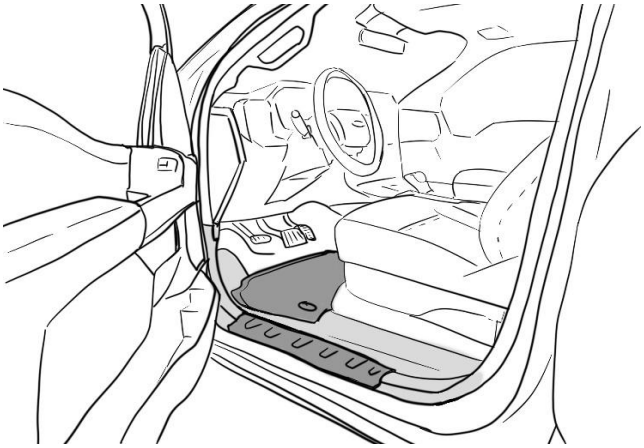


14

Seal the rubber boot with RTV Silicone Sealant if needed.

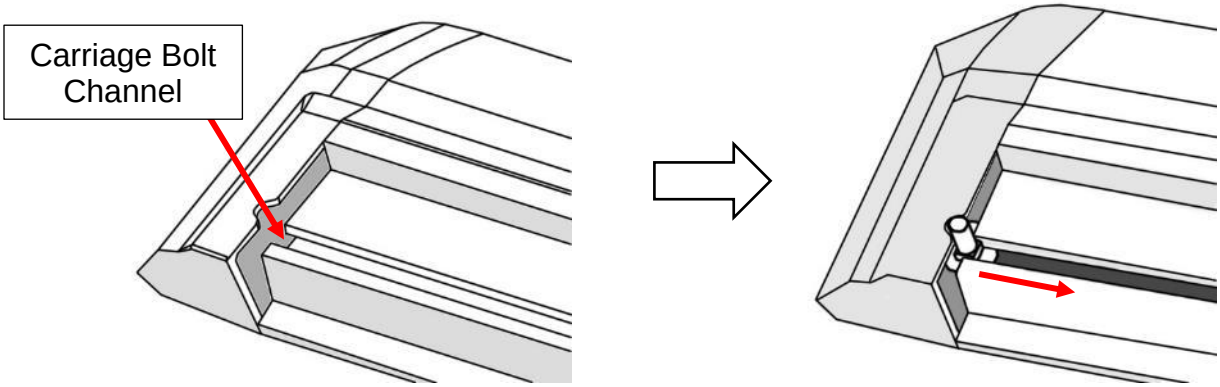
Hide wires and reattach the kick panel with the carpet fully unfurled in its original position. Reattach the door sill panels and check to make sure there are no obstructions or potential snag points around the brake pedal area.

Be sure to reattach plastic kick panel nut.

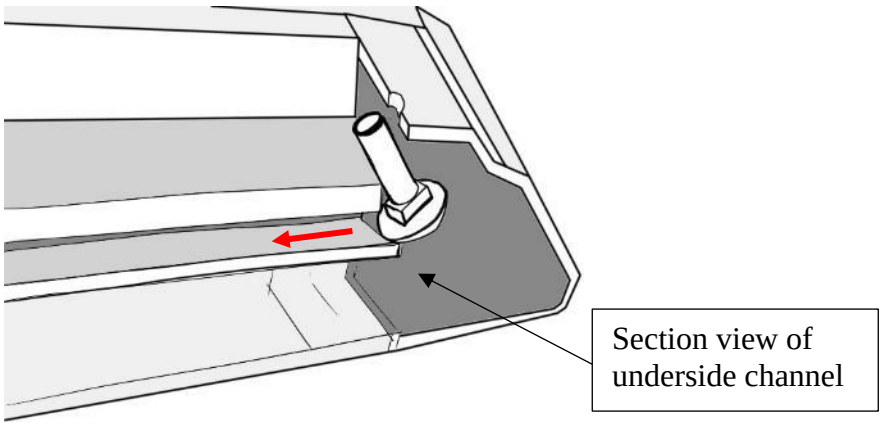


15

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) for each board.



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

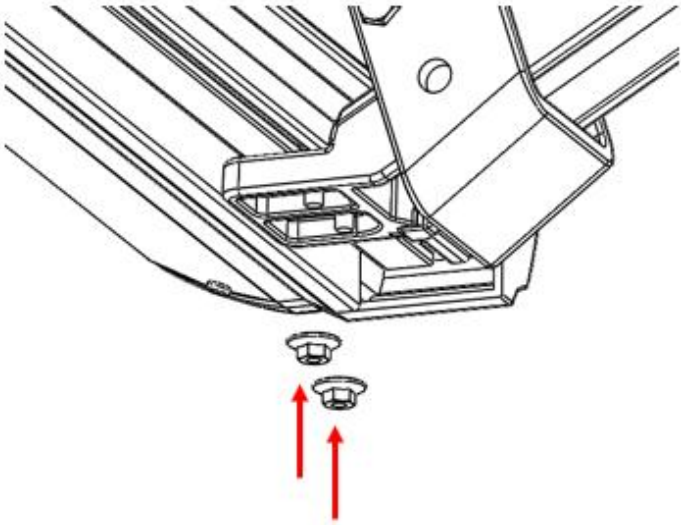


16

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 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.

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.

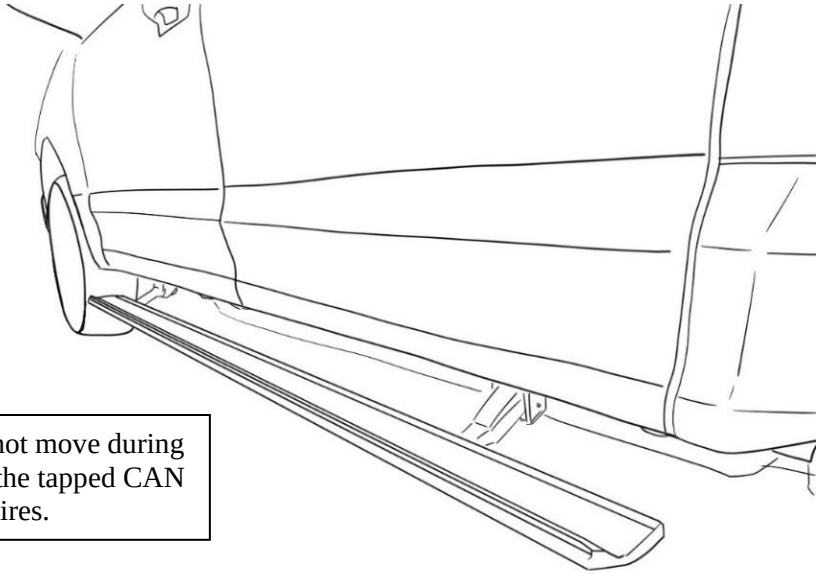
c) Open and close door several times for board to settle into position.

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.

18 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 tapped CAN Signal High and Low wires.

*NOTE: On some vehicles, excessive or sudden force applied to the brake pedal can accidentally activate the door ajar signal on the digital dash display while the vehicle is turned off. This is a **normal** phenomenon that may sometimes trigger the power steps to cycle through a single deploy and retract cycle.