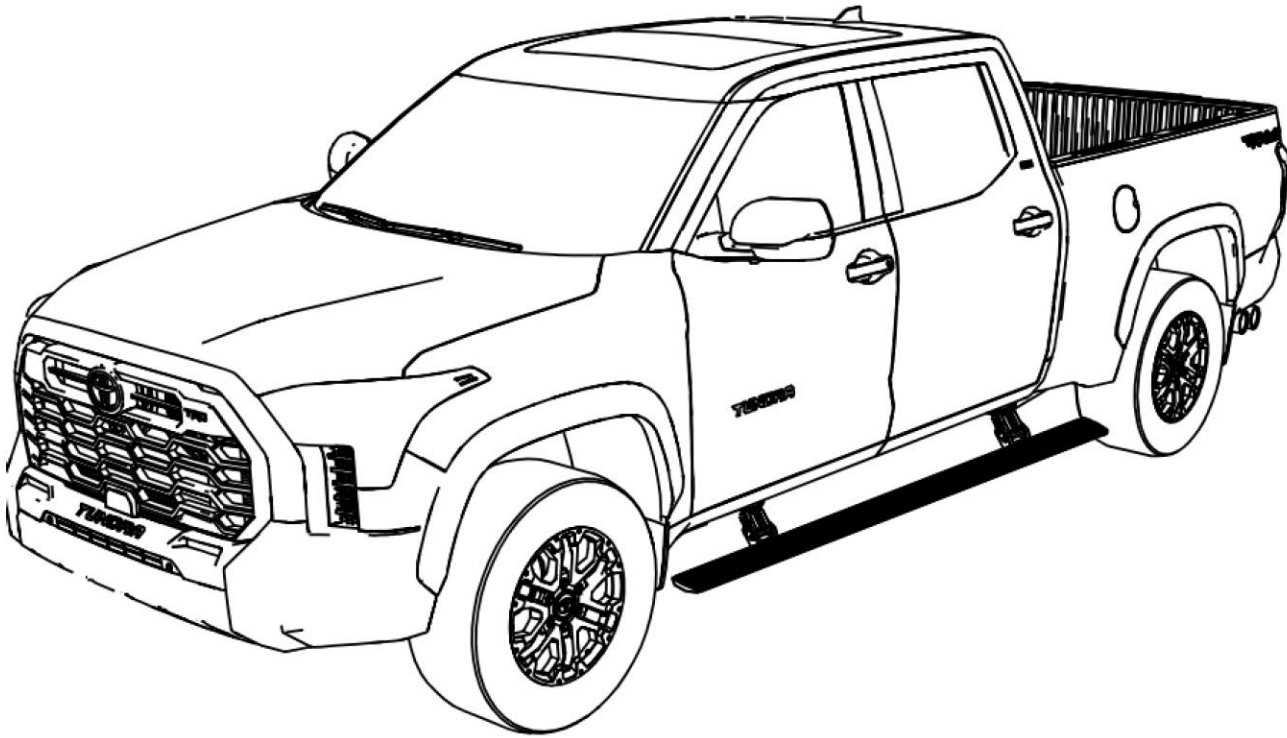


INSTALLATION INSTRUCTIONS

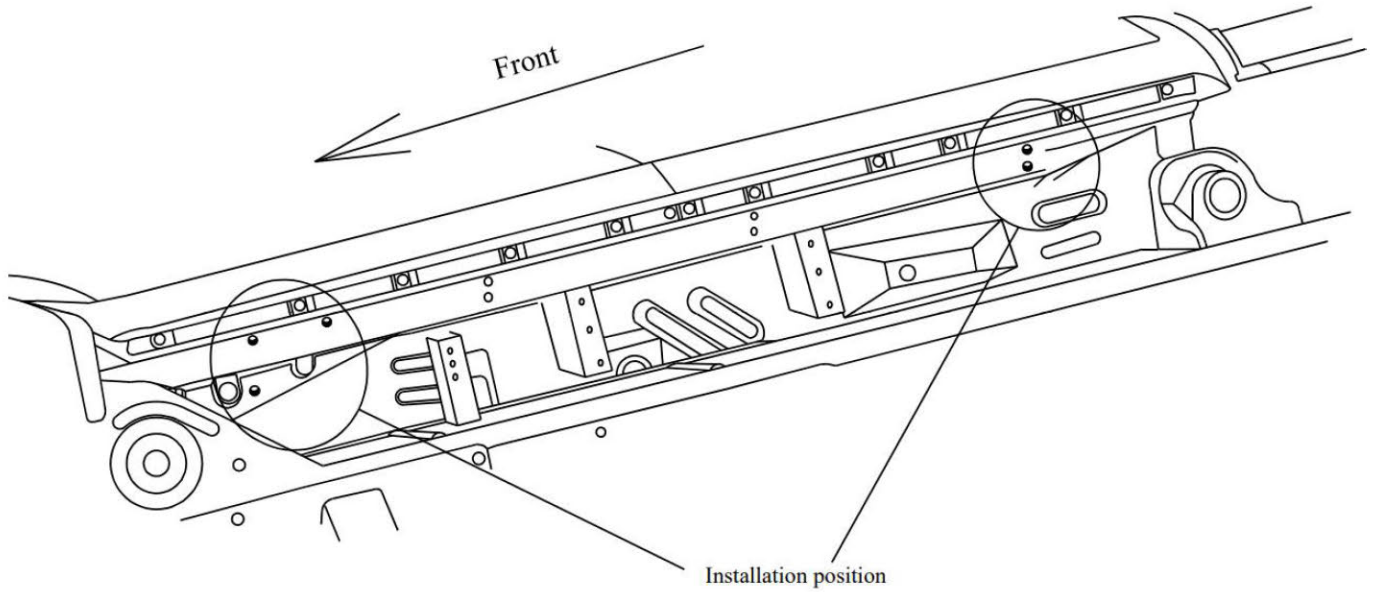
2022-2023 Toyota Tundra Power E-Steps PART#TN-4500

PARTS LIST:

2	Board Assembly	2	Fuses
1	Front Motor Linkage Right	1	Power board switch
1	Rear Motor Linkage Right	2	Wired magnetic induction module
1	Rear Motor Linkage Left	4	Magnet
1	Front Motor Linkage Left	2	Hex Flange Bolt M8x25mm
10	Hex flange bolt M8x30mm	1	Controller assembly
8	Socket Cap screw M10x35mm		
25	Wire ties		
4	LED Lamp		

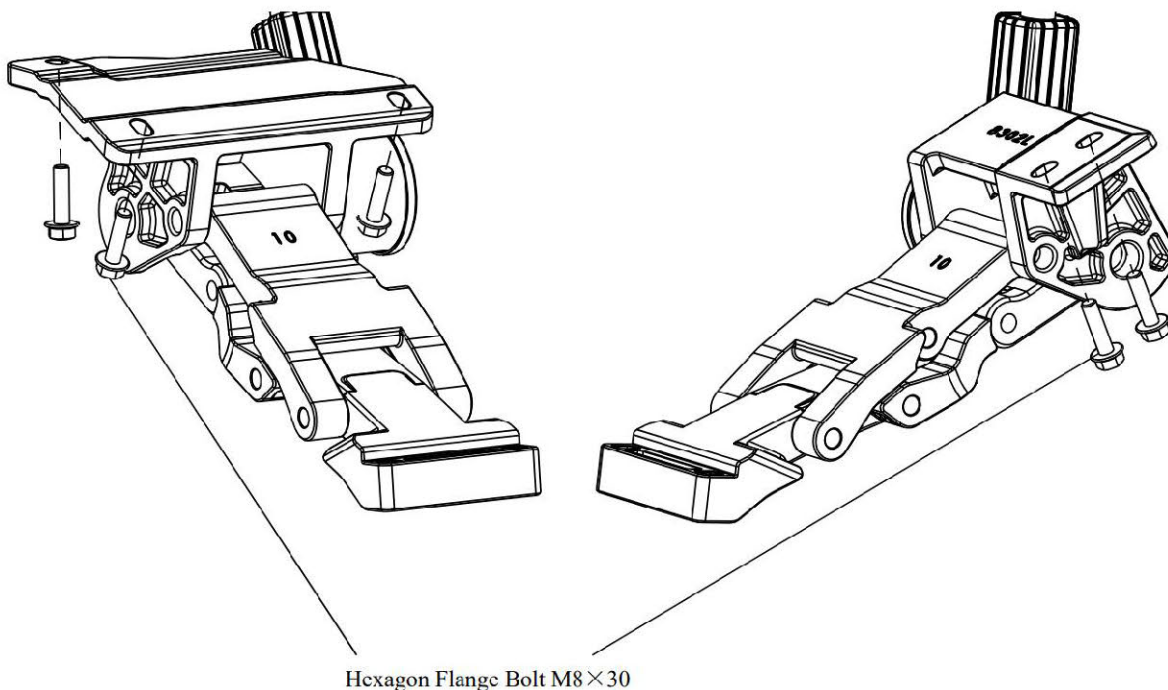


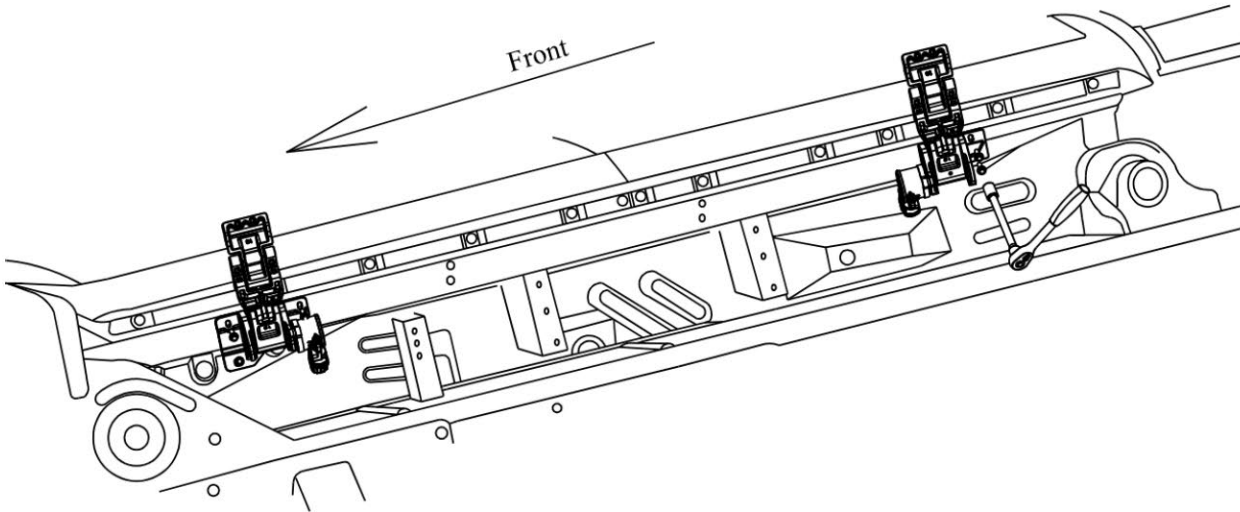
Mechanical Installation



Step 1. Starting on the driver side identify the mounting position for the linkages under the rocker panel of the vehicle

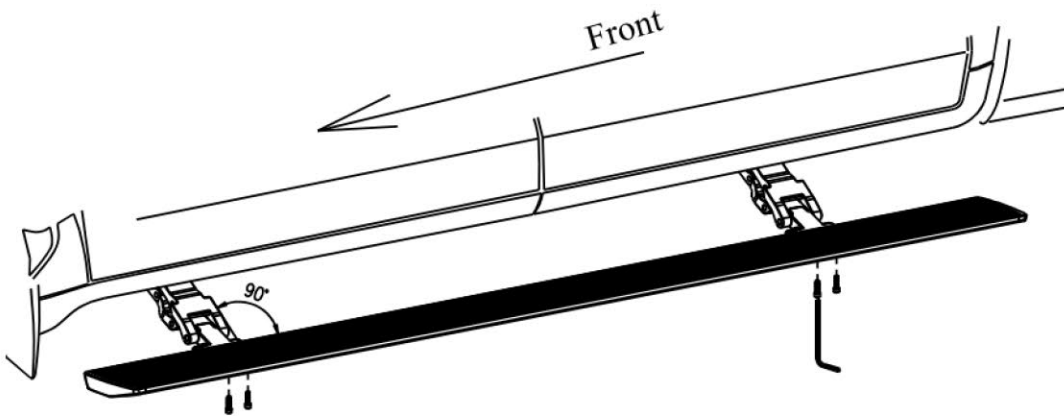
Step 2. Once you identify the linkages and hardware (M8x30mm) used on the linkages, proceed to install.



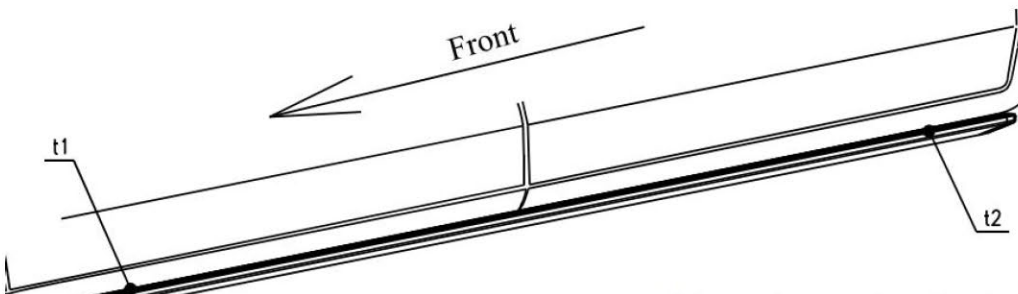


Once installed, do not tighten

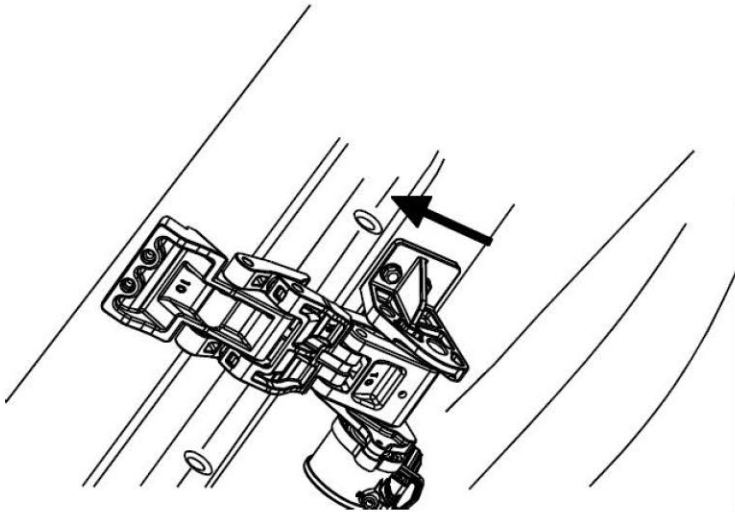
Step 3. Install the boards using the T-Nuts and 4 M6 Socket cap screw. Adjust the board from side to side to get the right fit before tightening down.



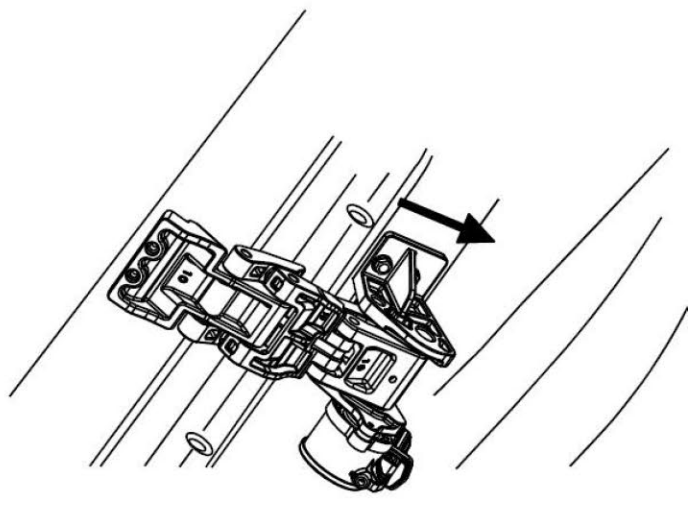
Note- if the gap between the board and body is larger on one side. Linkages must be adjusted. Reference locations T1, and T2



t1>t2



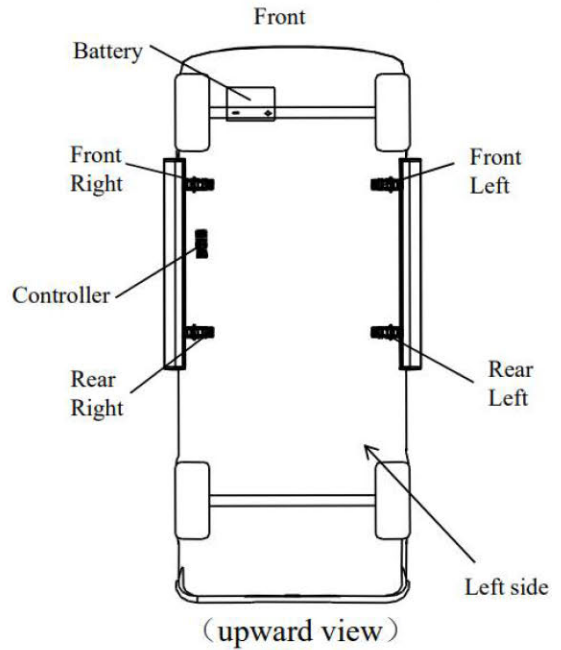
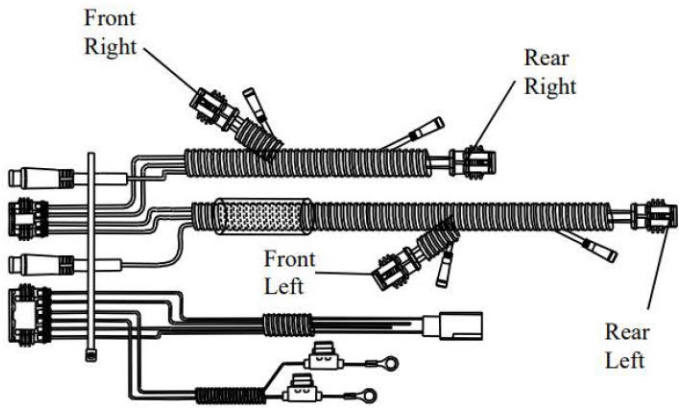
t1<t2



T1>T2- First, loosen two bolts located at the hinge mount. Move the T1 motor linkage to the furthest out position in the direction of the arrow in the picture and retighten the bolts. Tighten the 10 bolts of the installation motor linkage after the gap is consistent.

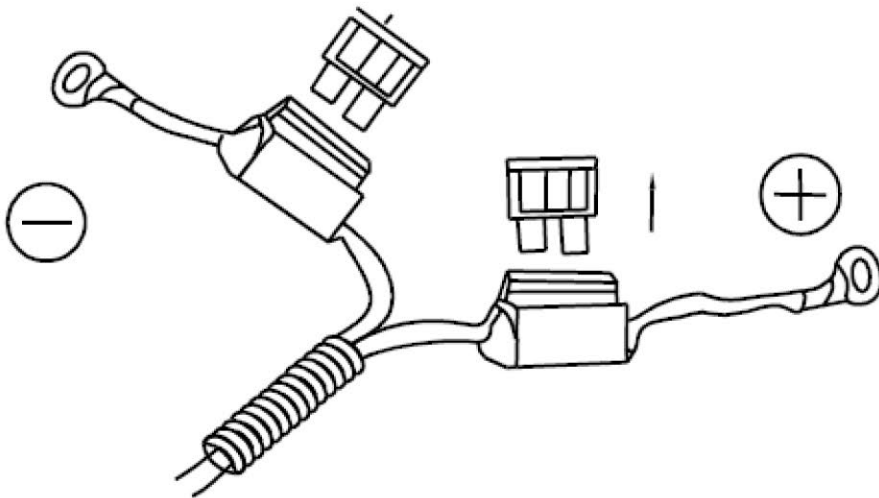
T1<T2- First, loosen two bolts located at the hinge mount. Move the T1 motor linkage to the furthest inward position in the direction of the arrow in the picture and retighten the bolts. Tighten the 10 bolts of the installation motor linkage after the gap is consistent.

Electrical Installation

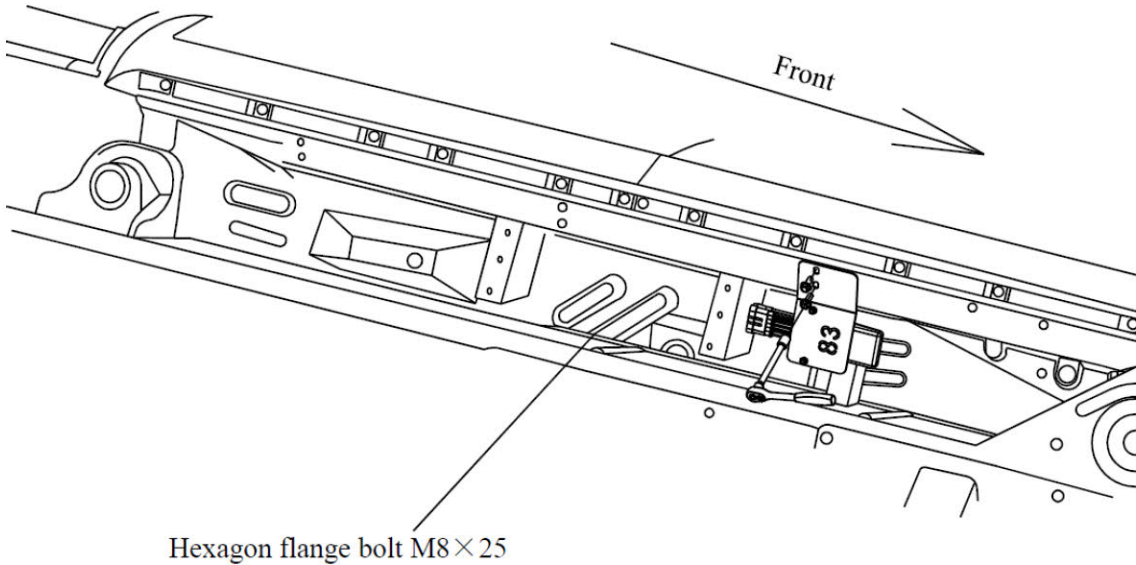


Step 1. Remove the fuses from the control input wires and connect the positive and negative to the vehicles battery.

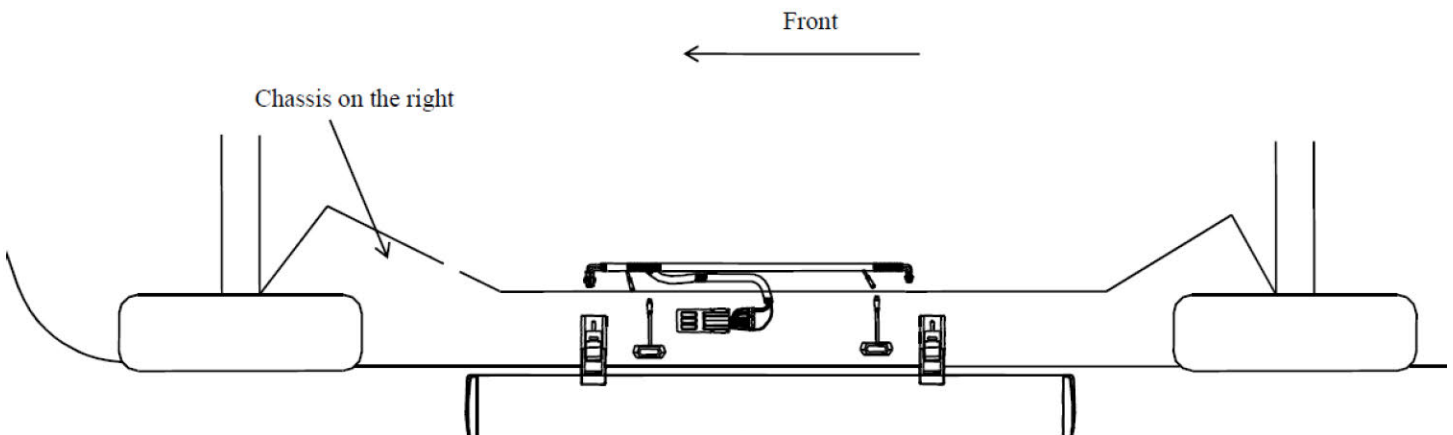
NOTE- DO NOT TAMPER WITH THE CONTROL WIRE OR THE HARNESS. DOING SO VOIDS ALL WARRANTY



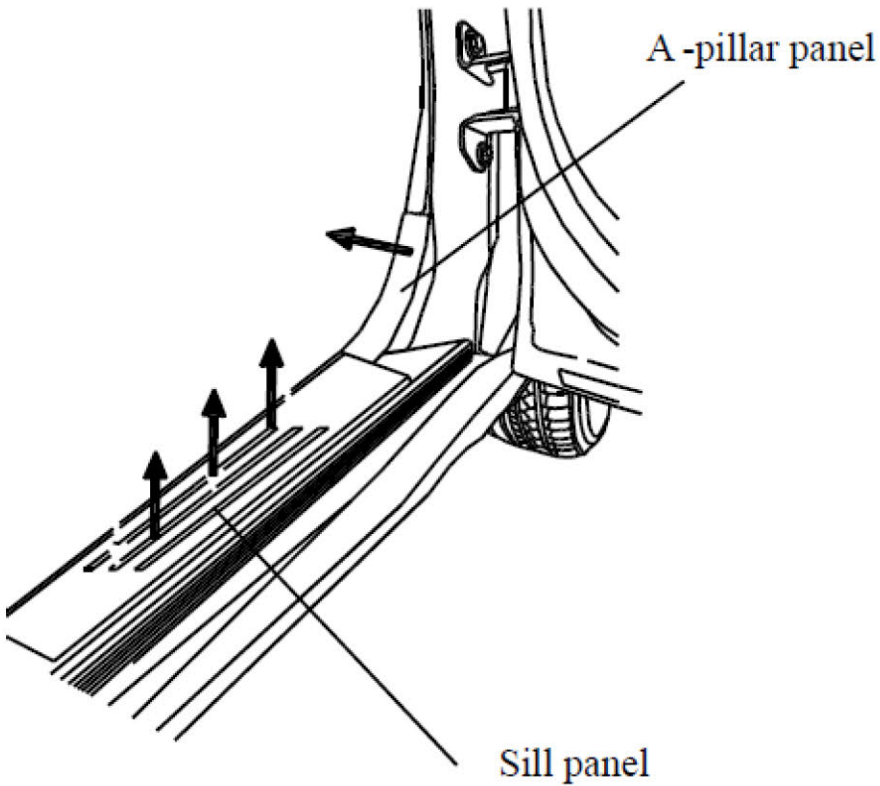
Step 2. Install the controller as shown in the figure below. Be sure to tighten the mounting hardware accordingly.



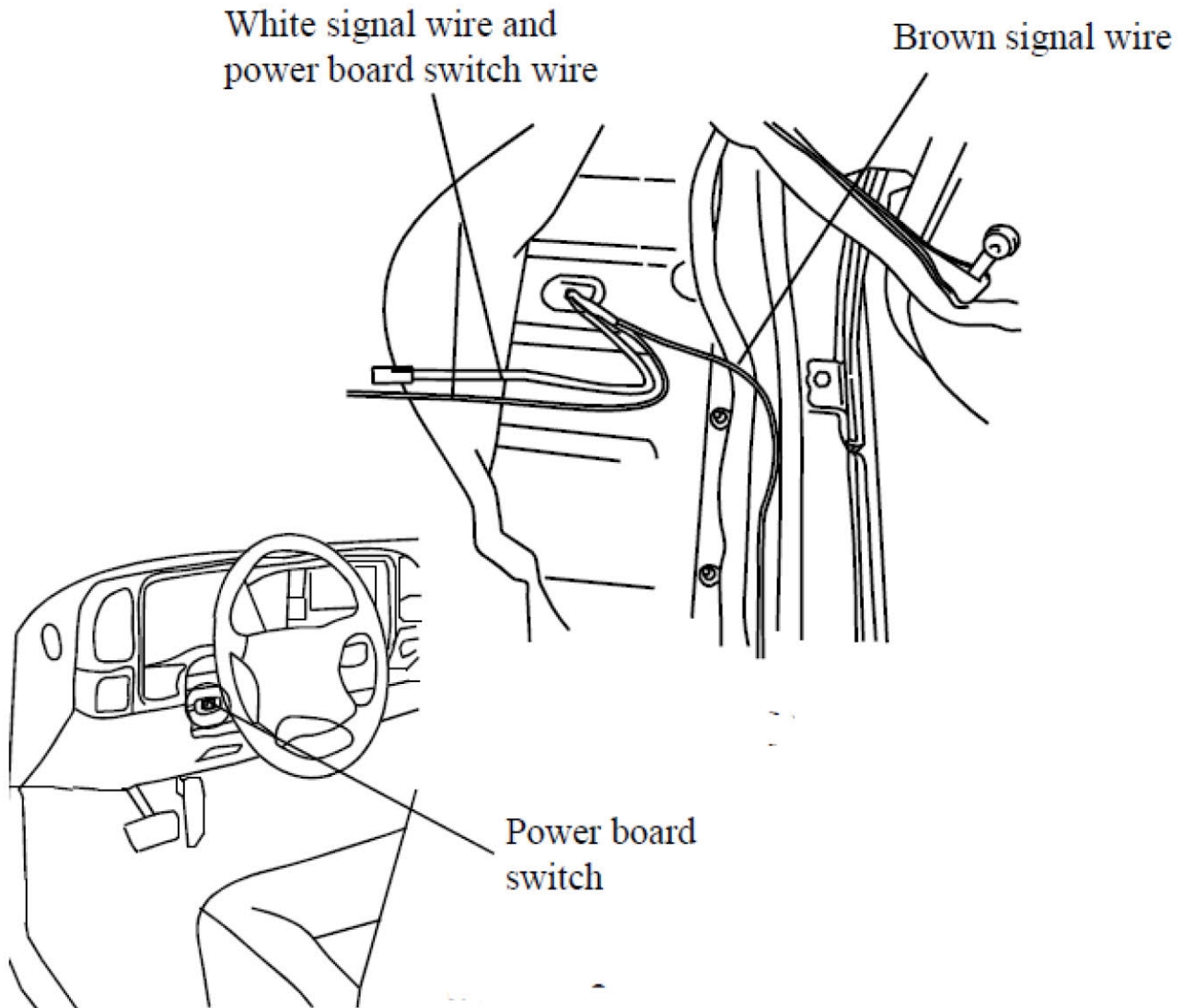
Step 3. Neatly assort the harness along the inside of the chassis. Be sure to leave enough slack to install the harness to their respective linkages. Refer to figure below.



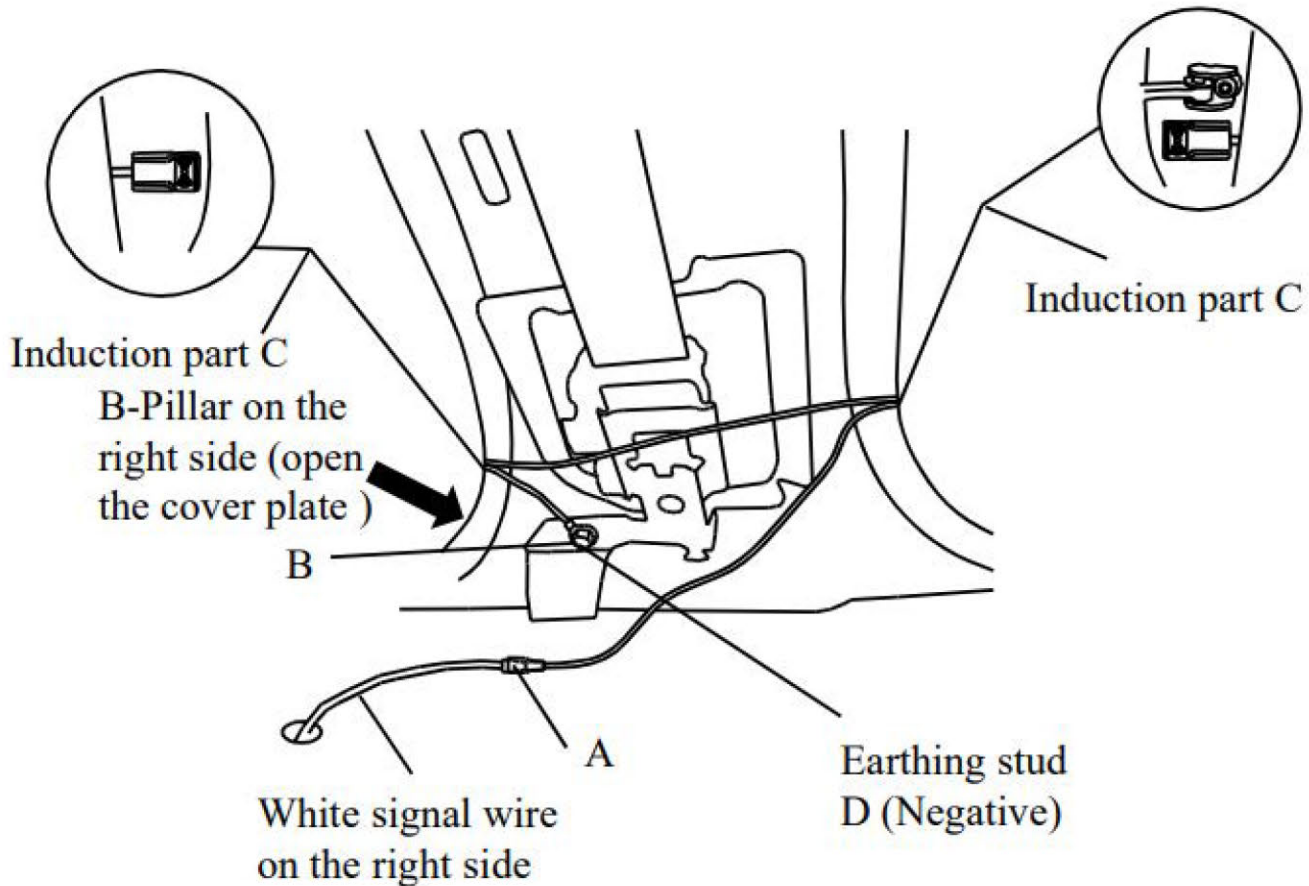
Step 4. Remove the sill panel and A-pillar panel.

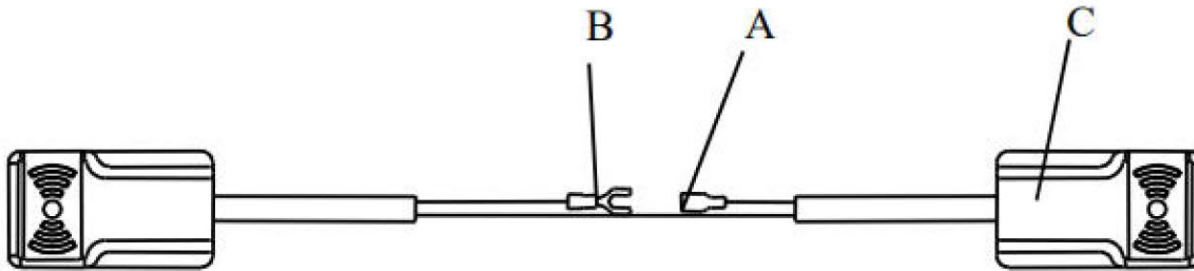


Step 5. Feed the brown signal wire into the vehicle through the rubber grommet on the floorboard on the passenger side of the vehicle. Feed the brown wire under where the sill panel would be. Take the white signal wire and the switch wire, feed it to the driver side of the vehicle under the carpet. Install the switch next to the steering column.

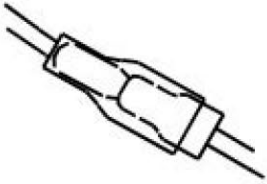
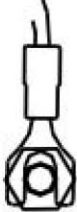
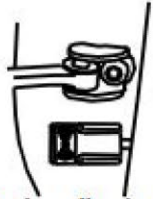
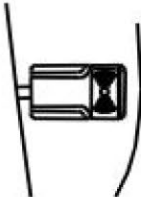



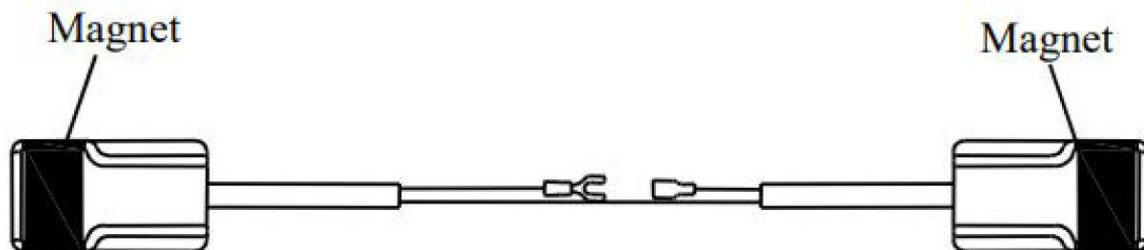
Step 6. Open the cover plate on the B-Pillar where the Seat belt retraction system is by the floor board of the vehicle on the passenger side. Connect the white signal wire to terminal A of the magnetic inductor. Loosen the stud (D) and connect the fork type B terminal to the stud (D). Tighten the stud down with the fork connector connected. Stick the C inductor to both sides of the B-pillar, then stick the magnet on the inside of the vehicle door on the matching sides to its respective conductor. Proceed to do the same to the driver side.





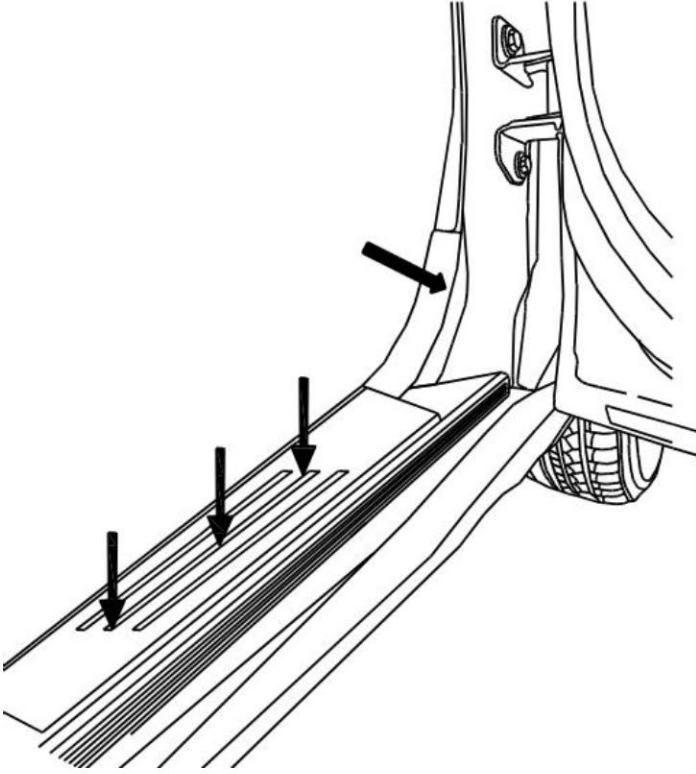
Wire Harness Magnetic Inductor

 <p>Insert the door signal wire into A</p>	 <p>Tighten the nut connecting B and ground terminal of door pillars</p>	 <p>Remove the adhesive tape at the back of C, and stick one end on one side of the door pillars</p>
 <p>Stick the other end to the other side of vehicle door pillars.</p>	 <p>Stick the magnets to the inner side of the vehicle door and keep their positions corresponding to C.</p>	



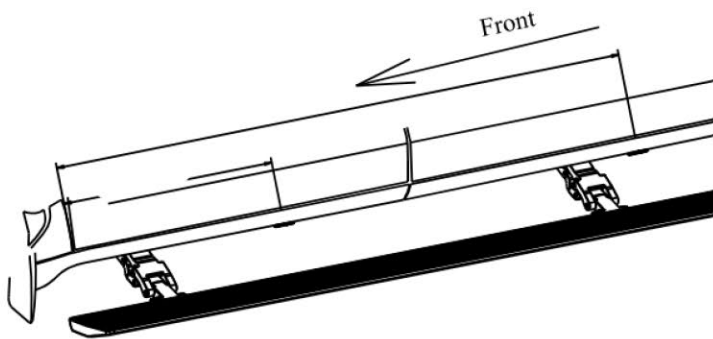
Instruction: The magnet position after closing the door is shown as above picture.

Step 7. Organize and neatly sort the wires, then reinstall the panels.

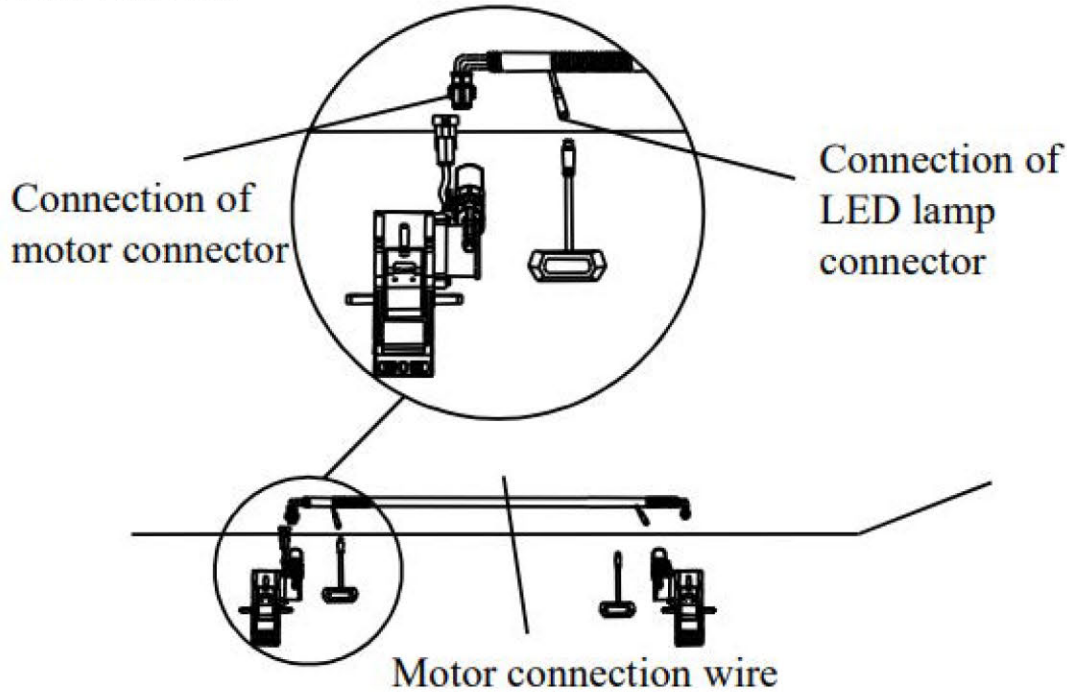


Step 8. Proceed to install the LED light by peeling the double sided tape. Apply the led light strip to the pinch weld under the rocker panel. The led light should sit 21.5 inches from the front door line. Refer to figure below.

21.5 inches

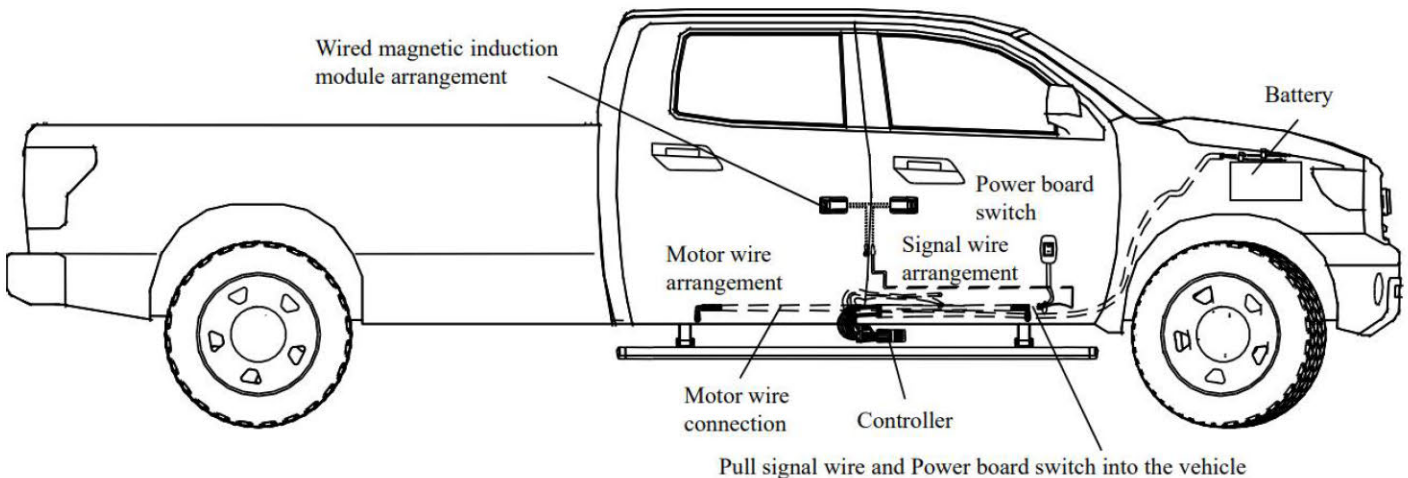


Step 9. Proceed to connect the connectors from the LED lamp and hinges to the proper connectors on the controller.



Be sure to clean up the harness using wire ties where necessary. Insert the fuses back into the harness after reviewing all connectors. Double check the functionality. If any issue occurs. Refer to our troubleshooting guide.

Summary of Electric Part





INSTALLATION INSTRUCTIONS

Maintenance

Inspect the operation of the step, ensure it works as it's supposed to.

At every oil change interval, take the time to inspect for damage to each cable connection and the exposed components, apply dielectric grease to the electrical components and dry Teflon lubricant (PTFE LUBE) to the mechanical

Inspect hardware to be sure hardware is still tight.

Be sure the board is still stable with the motor fully actuated.

Keep the underside of boards clean and free of debris and ice if in colder weather.

Warranty

2 Year Limited warranty on electrical and mechanical components

The following can potentially void warranty

- Failure to maintain the steps in accordance with the maintenance guidelines provided in the installation instructions
- Misuse of the steps (Using the product in any manner other than for the intended use of the product)
- Installation errors causing damage to the product
- Electrical and mechanical modifications

To file a warranty claim

- Contact an authorized BA dealer to initiate warranty process. Authorized dealers must contact BA to assist in evaluating the warranty claims. Valid warranties will have an RGA issued. Once issued the dealer will request the product be returned to BA facilities.
- Products purchased through an authorized BA dealer will be refunded and/or credited by that BA dealer.
- Warranty contact: help@bodyarmor4x4.com
- Return address: Body Armor 4x4, 1050 N. Vineyard Ave. Ontario CA, 91764



INSTALLATION INSTRUCTIONS

Troubleshooting Guide

After installing the steps, when the door is opened one motor goes up while the other goes down.

Disconnect the motors and swap connections.

How do I extend or retract the motor linkages when I am installing these?

Make sure your connected to the battery, connect the power to the motors and the disable switch. Then hit the disabled switch, this is a great way to control the extension or retraction of the motors.

When I open the door, the steps do not retract and come down.

Flip the override switch from “I” or “on” position. If the steps retract after the override switch is powered, then the steps have proper power. If the boards do not retract check the fuses.

The steps only work on one side.

Flip the switch on and off a few times to confirm the steps go up and down. If they don't move, check the power connectors at the front and rear motor. Then check the 6 pin and 4 pin connectors at the controller to be sure it's secure. If the steps did retract when flipping the switch a few times. Check the door magnets and sensor alignment to be sure they are in spec per the instructions. Be sure to double check the grounds on the chassis.

My steps are operating in reverse. They go up when I open the door and drop when I close the door.

Disconnect the harness to the motors and swap connections. Disconnect the harness to each front motor and plug it into the rear motor on the same side and vice versa.

My steps were working fine, now they won't go up

Check the door magnet and sensor alignment on the front and rear doors to make sure they're in spec per the instructions. Check that the ground terminal to the truck is making good contact. Check the fuses on the positive and negative power wiring harness leads.

My LED lights aren't working.

Check the round wiring connectors for each LED light. Make sure that the small arrows on the mating plug and connector are aligned and the connection is tight and secure. Check the two round connectors at the controller. Make sure that the small arrows on the mating plug and connector are aligned and the connection is tight and secure. Open a door on the Driver side of the truck and check to see if the LED lights are illuminated on the Passenger side. If opening a Driver side door is causing the Passenger side LED lights to come on, simply swap the two LED Power wires at the controller. These are two small round connectors.

I open the driver side door and the passenger side LED lights turn on.

Swap the two round connectors at the controller, making sure the small arrows on each plug are aligned and the connections are tight and secure.

My running boards are squeaking.

Using a water hose, spray the hinges on the front and rear motors to remove any dirt, sand, or mud. Dry with a towel and generously lubricate all the hinges using a PTFE LUBE.