Rough Country PSR50110 Installation Instructions

Power Running Boards for Toyota Tundra CrewMax (2007–2021)

Part number: PSR50110

trailfortress.com/rough-country-power-running-boards-psr50110

Scan for fitment, price and install help

PRBOX50110

ROUGH COUNTRY
SUSPENSION SYSTEMS®

TOYOTA 2007-21 TUNDRA

Thank you for choosing Rough Country for all your vehicle needs.

Please read instructions before beginning installation. Check the kit hardware against the kit contents shown below. Be sure you have all needed parts and know where they go.
If questions exist, please call us @1-800-222-7023. We will be happy to answer any questions concerning this product.
Check all fasteners for proper torque. Check to ensure for adequate clearance between all components.
Periodically check all hardware for tightness.

KIT CONTENTS:
Board Assembly x2
Front Motor Left x1
Front Motor Right x1
Rear Motor Left x1
Rear Motor Right x1
Controller Assembly x1
LED Lights x4
Power Board Switch x1
Wiring Harness

Wired Magnetic Sensors
Module x2
Magnet x4

TOOLS NEEDED:
5mm Allen
13mm Wrench
Screw Driver
Pry Tool
Weatherproof Tape

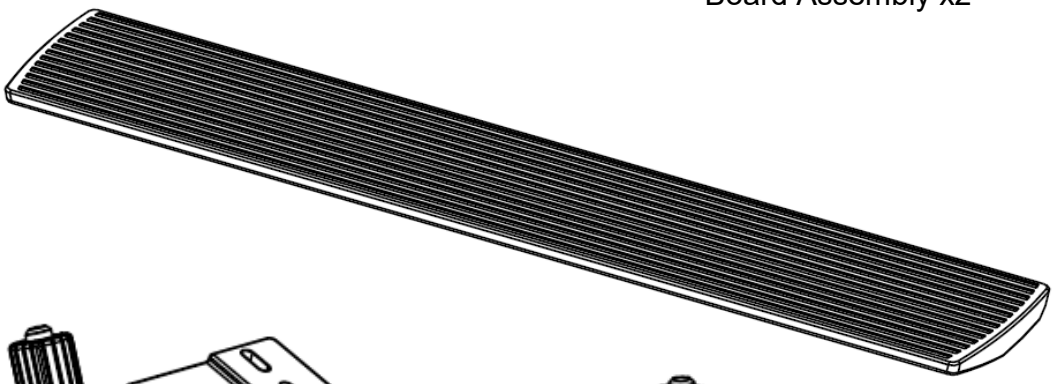
HARDWARE INCLUDED:
M8X30mm Hex Head Flange Bolt x8
M6x25mm Socket Cap Screw x8
M8x25mm Hex Head Flange Bolt x2
Wire Tie x25
Fuse x2

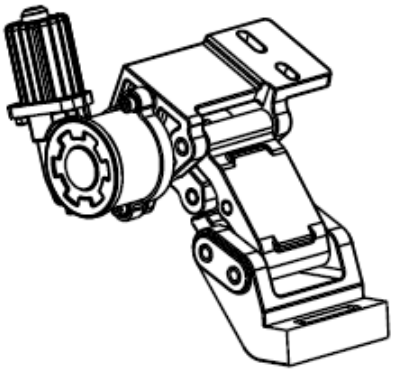




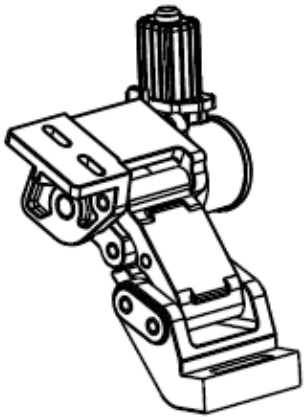
Product Packing List

Board Assembly x2

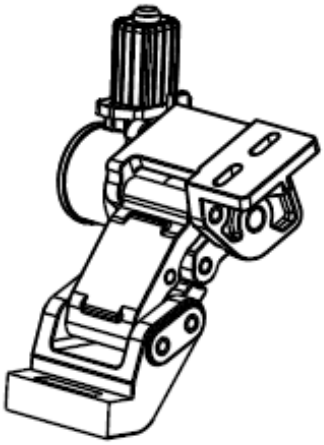




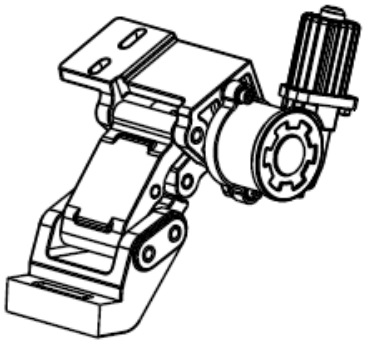
Front Left Motor x1
Driver Side



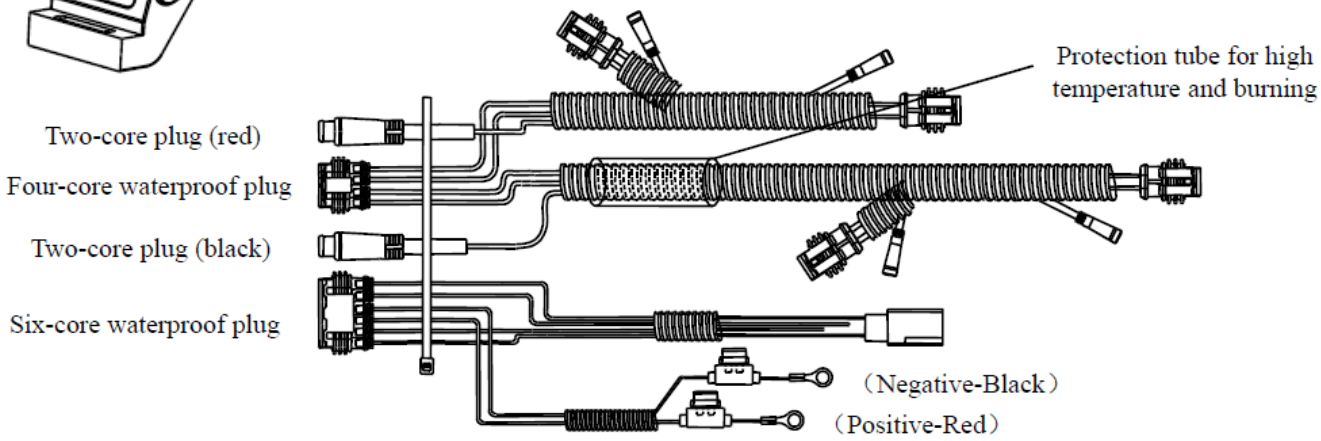
Rear Left Motor x1
Driver Side (CrewMax)



Rear Right Motor x1
Passenger Side (CrewMax)

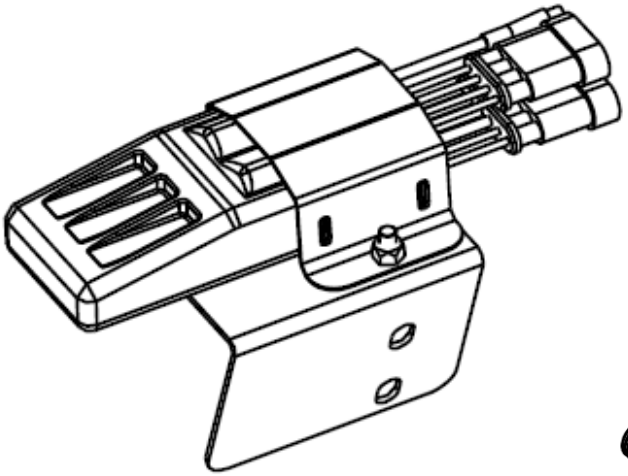


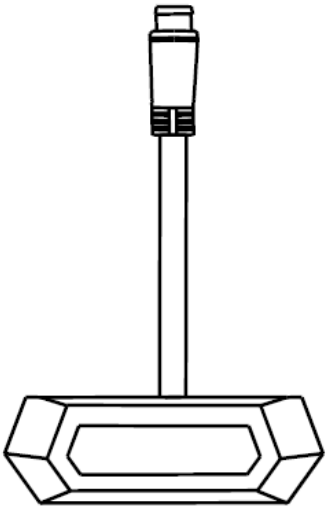
Front Right Motor x1
Passenger Side



Wiring Harness x1

Controller Assembly x1





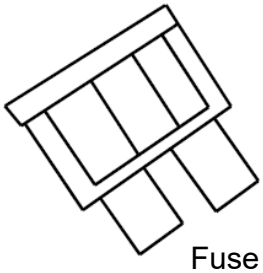
LED Lights x4



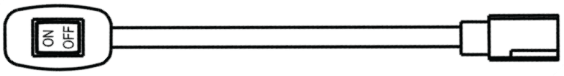
M6x25mm Socket Cap Screw x8



Wire Tie x25



Fuse x2

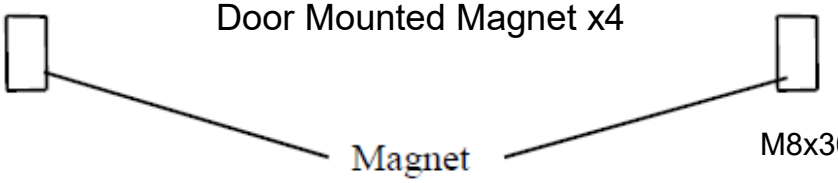


Power Board Switch

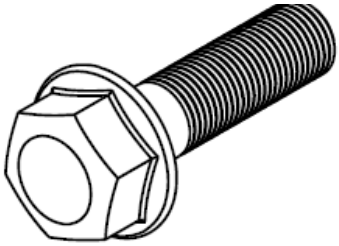


Body Mounted Module x2

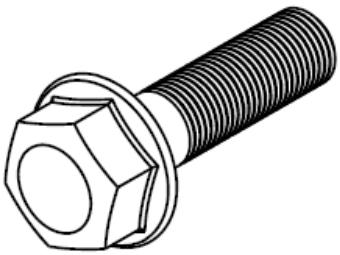
Door Mounted Magnet x4

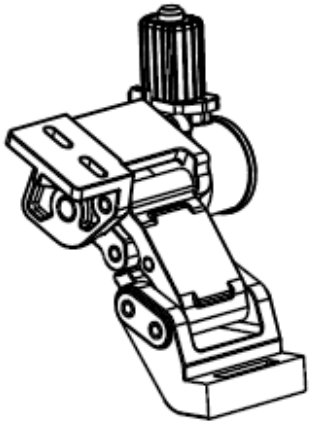


M8x30mm Hex Head Flange Bolt x8

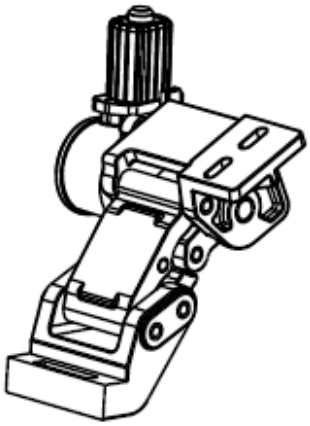


M8x25mm Hex Head Flange Bolt x2





Rear Right Motor x1
Passenger Side (Double Cab)



Rear Left Motor x1
Driver Side (Double Cab)

1. Locate the mounting locations on the driver side of the vehicle. **See Photo 1.**
2. Install the rear driver side motor and front driver side motor in previously located mounting holes with two (2) M8x30mm hex head flange bolts for each motor. **See Photo 2. NOTE:** When installing the rear motors, make sure the brake line is between the motor and bracket. **See Photo 2B.** Do not fully tighten at this time.

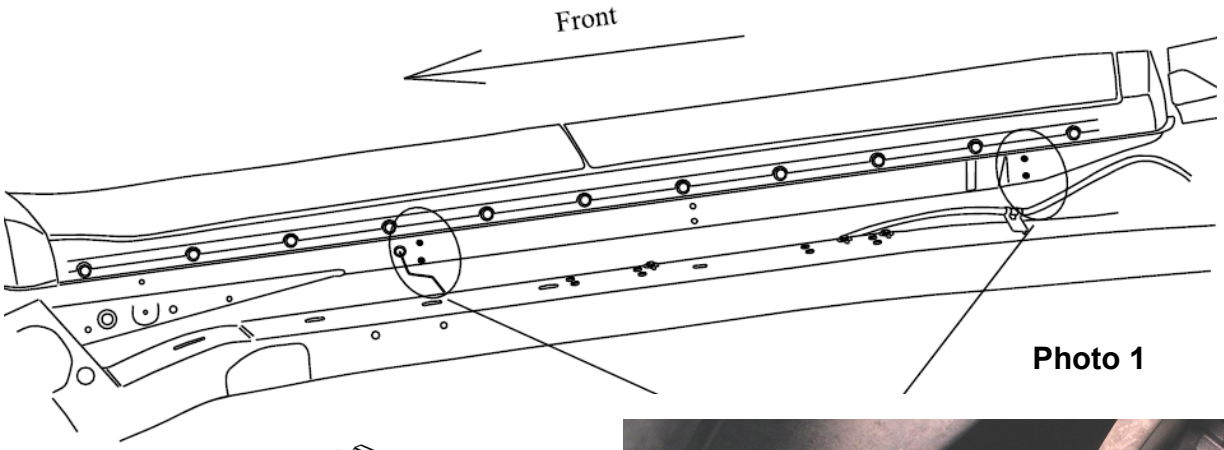
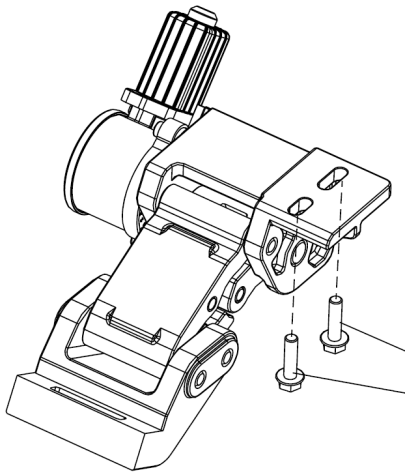


Photo 1

Photo 2A



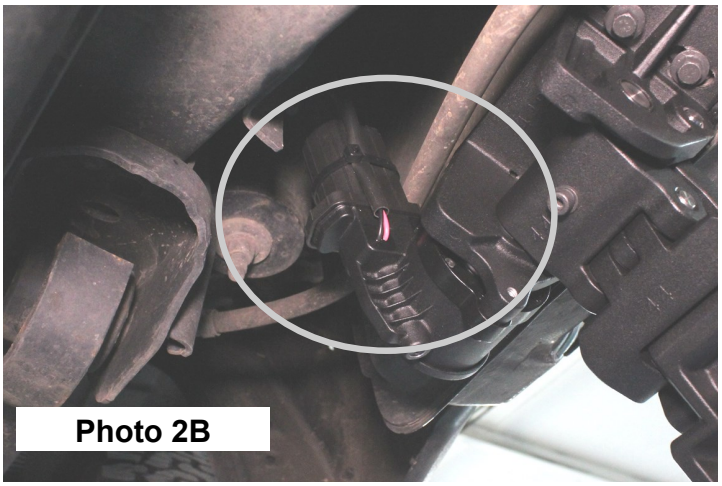


Photo 2B

3. Use four (4) of the supplied M6x25mm socket cap screws to attach the board assembly to the driver side motors. Tighten with a 5mm Allen wrench. **See Photo 3.**
4. Repeat Steps 1-3 for passenger side of vehicle.

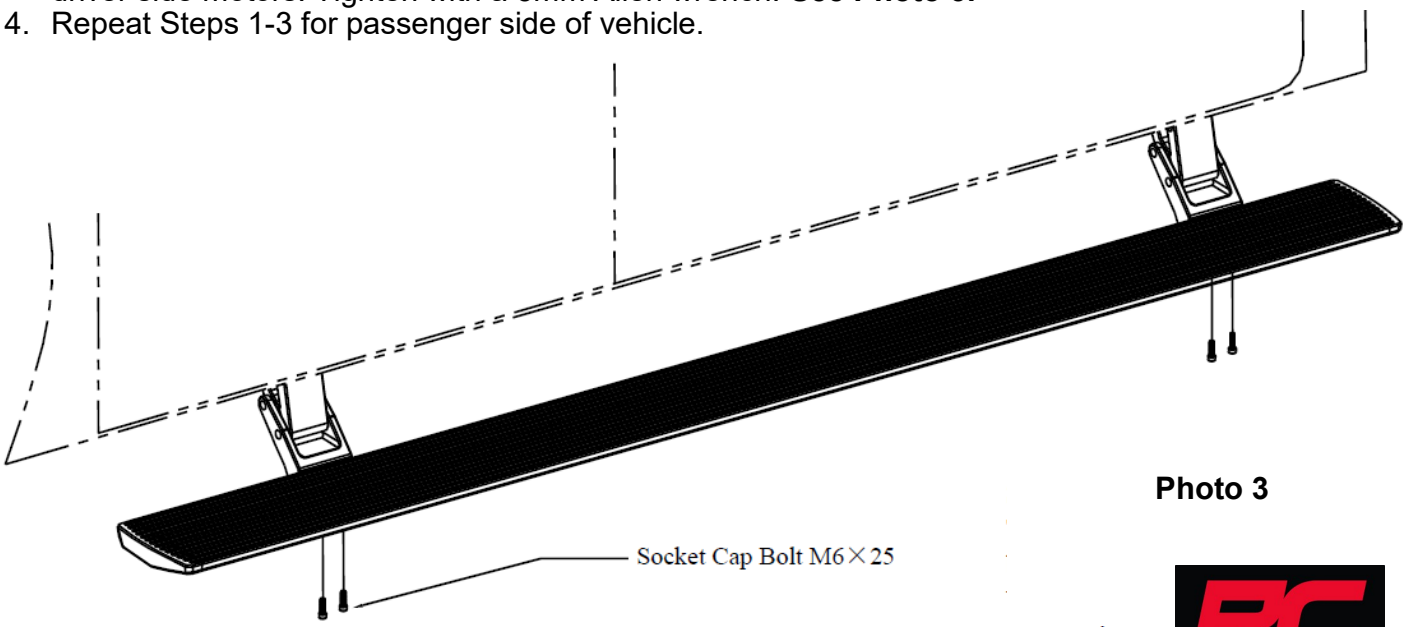


Photo 3

5. If the there is an inconsistent gap along the installed board, loosen the rear motor and slide in or out to reduce the gap. If the front motor gap is larger than the rear motor gap, move the rear motor in towards the vehicle. If the rear motor gap is larger than the front motor gap, move the rear motor towards the outside of the vehicle.
6. Install the controller assembly on the driver side of the vehicle with the two M8x30 bolts. **See Photo 4.**

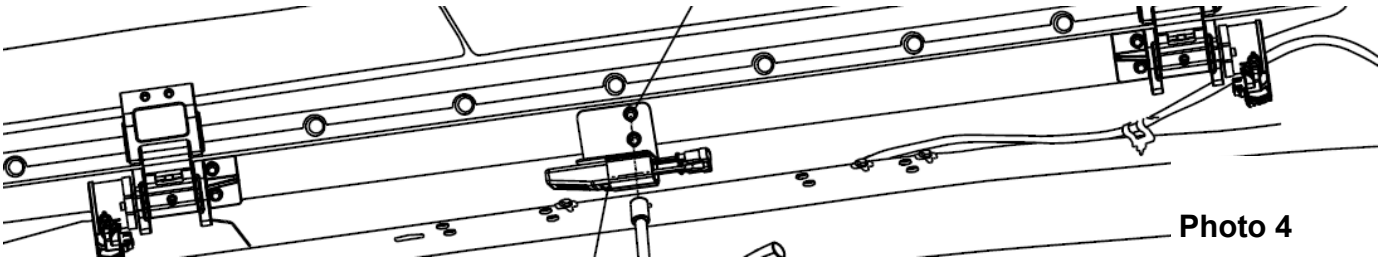
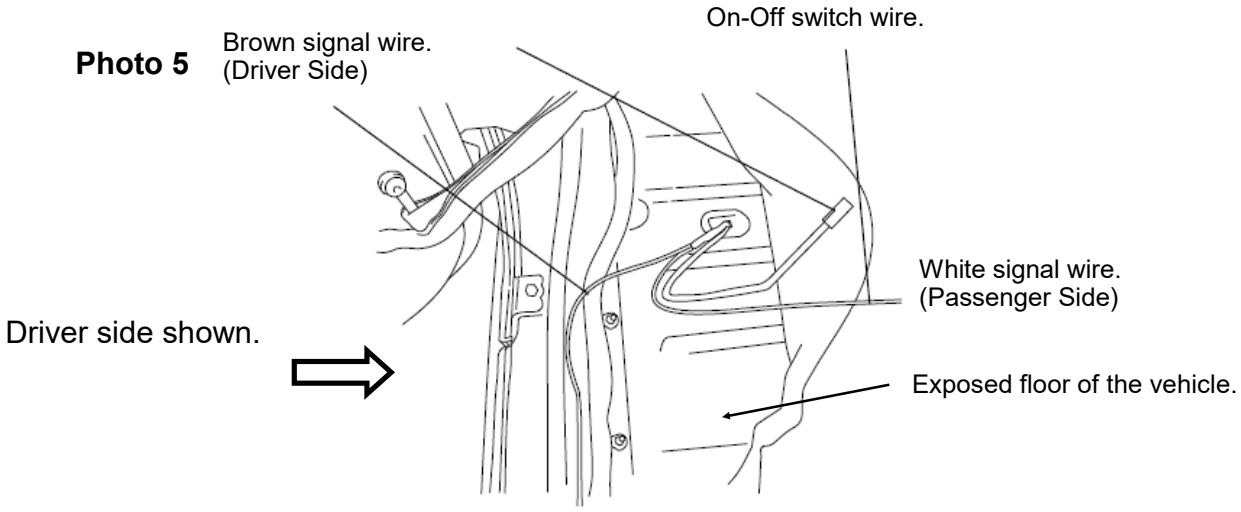


Photo 4

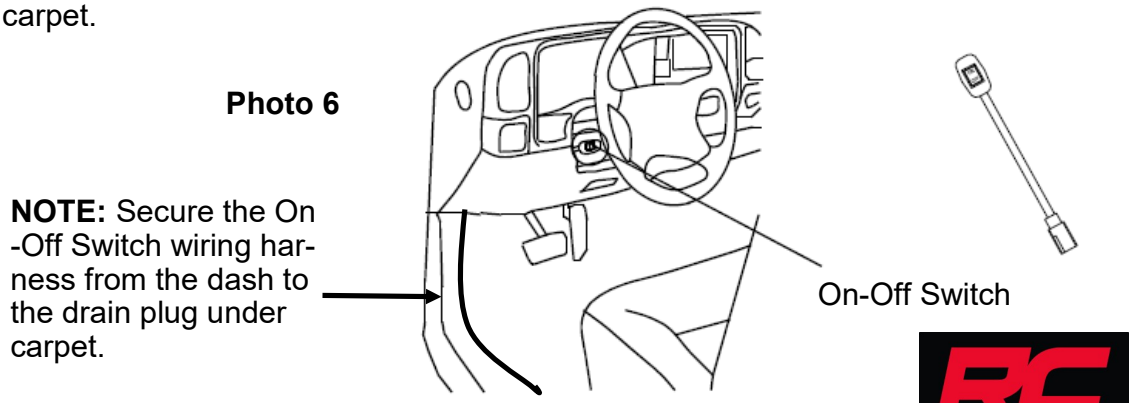
7. Remove the kick panel and the scuff plate on the driver side of the vehicle.
8. Install the supplied wiring harness' Brown, White, and On/Off Switch wire through the rubber grommet in the floor of the vehicle. **See Photo 5.**
9. **NOTE:** Apply waterproof tape to the wiring harness and the drain plug once the wiring harness has been fully installed.

Photo 5

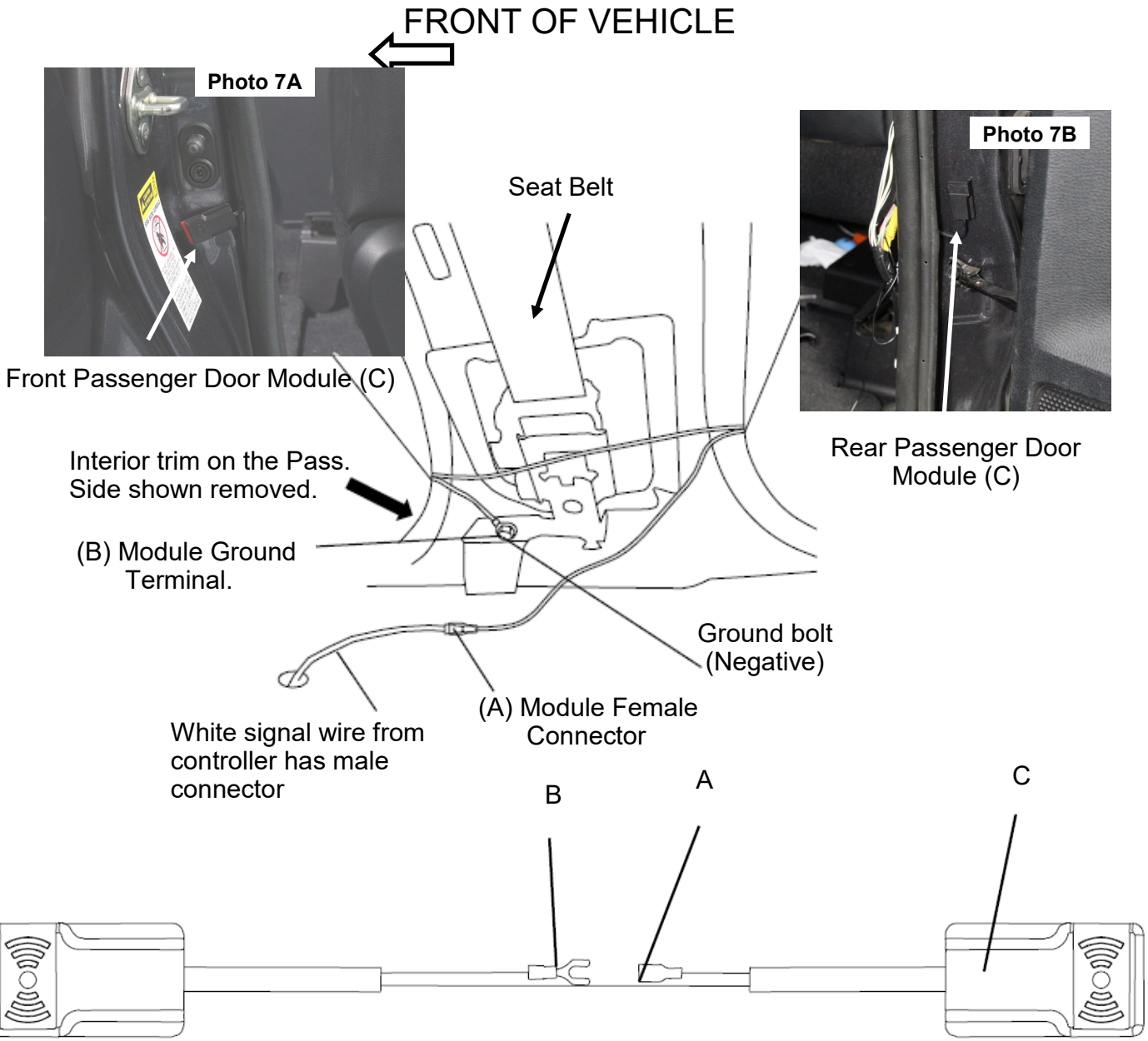


10. Mount the On-Off switch. Clean the area of installation and remove the covering on the double sided tape and apply it to the dash. Switch shown on the upper dash. **See Photo 6.**
11. Connect the On-Off switch to the wiring harness installed in the floor of the cab. Leave switch in the On position, this will keep the motors in the extended position as installed to the vehicle when power is connected. Secure the On-Off switch wiring harness behind the dash to the drain plug under the carpet.

Photo 6

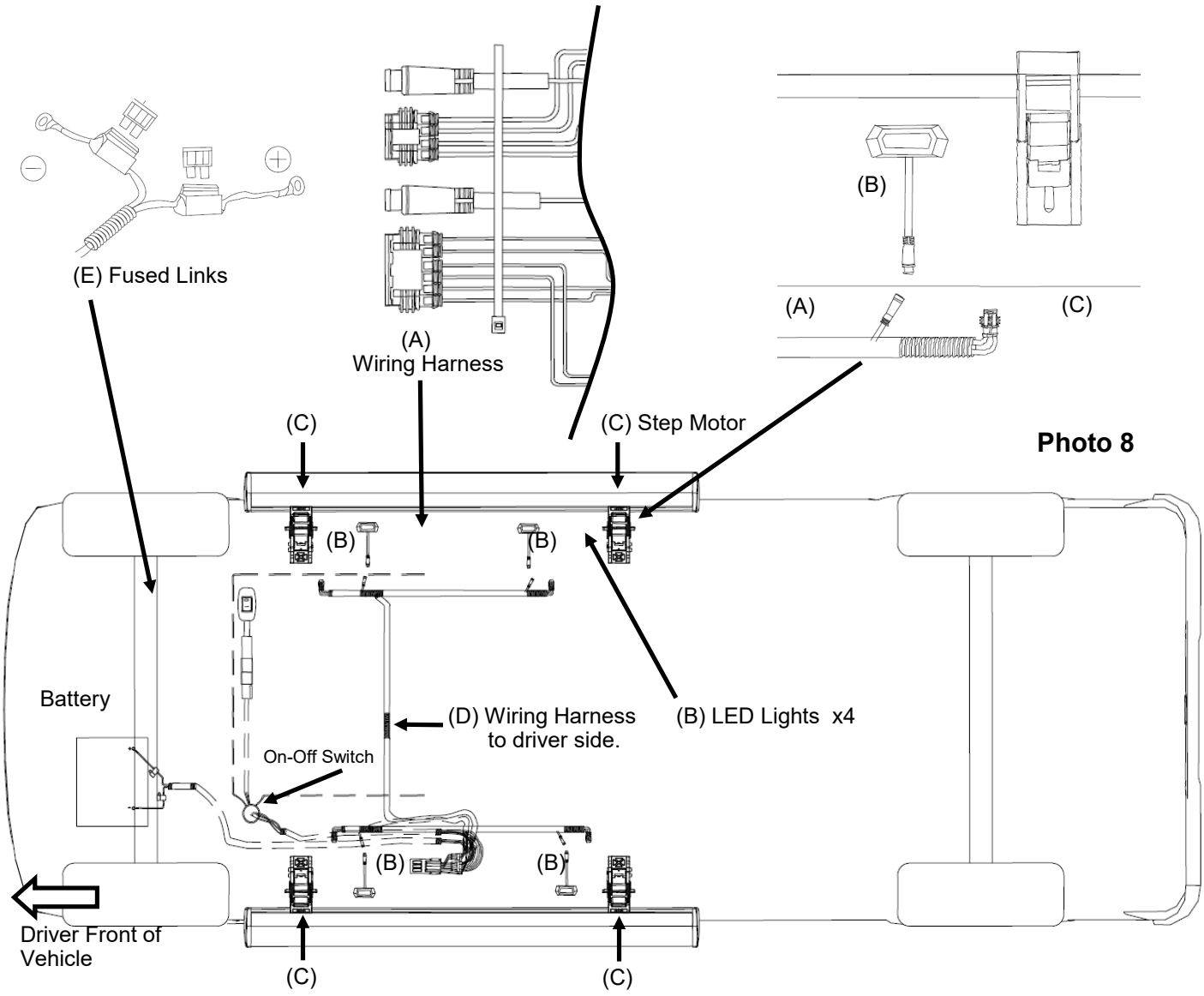


NOTE: Normal function of the On-Off switch once power has been connected to the positive and negative fused links on the battery. (On) the steps will extend for use and entering the vehicle. Steps will retract when both doors per side are closed connecting the magnet to the module. (Off) the steps will retract to the body of the vehicle even when the doors are open and the magnet is away from the module.



11. Remove the interior trim panel on the passenger side of the vehicle (*If interior trim is equipped with air bag, use caution*). Connect the White signal wire from the wiring harness to terminal (A) on the module. Connect module wire (B) to the vehicle ground. Remove the double sided tape backing and place the front module (C) in a secure location to the inside of the door jamb. **See Photo 7A.** Remove the cover off of the double sided tape and place the place the rear module (C) in a secure location to the inside of the door jamb. **See Photo 7B.**
12. Follow step 11 and install the driver side module using the brown wire from the supplied wiring harness. *Photos 7A and 7B are shown from the passenger side of the vehicle*.

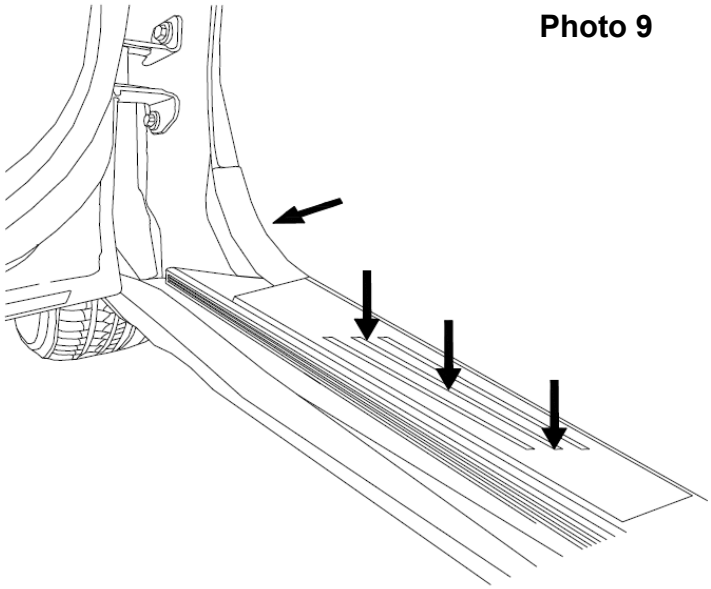
NOTE: The magnets will be installed in a later step after the power has been connected.



13. (A) Connect the 4 plugs of the wiring harness to the controller assembly mounted to the body of the vehicle on the driver side. **See Photo 8.**
14. (B) Mount the (4) LED Lights. Clean the surface of the pinch weld under the center of each door on the driver and passenger side of the vehicle. Remove the double sided tape backing and apply to the pinch weld.
15. (A) Route the wiring harness along the frame of the driver side.
16. (C) Connect the step motor labeled to the corresponding wiring harness (Driver) Front Left Motor and Rear Left Motor.
17. (B) Connect the LED light plugs on the driver side.
18. (D) Route the wiring harness across the frame to the passenger side of the vehicle.
19. (C) Connect the step motor labeled to the corresponding wiring harness (Passenger Side) Front Right Motor and Rear Right Motor.
20. (B) Connect the LED light plugs on the passenger side.
21. (E) Route the fused link harness along the driver side frame up to the battery box, secure the wiring harness with the supplied wire ties away from heat or moving parts. Connect the fused links to the Positive and Negative side of the battery.

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Photo 9



22. Adjust the carpet into place and re-install the B-pillar trim, kick panel and the scuff plate on the driver and passenger side of the vehicle. **See Photo 9.**
23. Using the (On-Off) switch cycle the steps (2-3 Times) leave them in the down position. The switch will be in the (On) position.
24. At this time, tighten the rear M8 x30 motor bracket bolt's using a 10mm socket to 45ft/lbs. and the front pinch weld mount M6 x20 bolts using a 8mm socket to 23ft/lbs.
25. Tighten the step to the motor bracket using a 5mm Allen to 14ft/lbs.
26. Place the magnet on the vehicle door aligned with the module. (Shown on the passenger side) for aluminum door vehicles this can be done with painter's tape to test and ensure it will work correctly. **See Photos 10 and 11.**
27. Ensure the On-Off switch is in the ON position. Now test the front and rear doors on the right and left side of the vehicle. If each one works correctly, the magnets are in line with the module. Mark the magnets position on each of the 4 doors, remove the covering from the double sided tape and stick the magnet to the door in the marked position.

NOTE: The On-Off switch will remain in the On position for normal use. We recommend the switch be in the Off position in icy or off roading conditions to prevent binding or damage to the step board, motor or motor bracket.

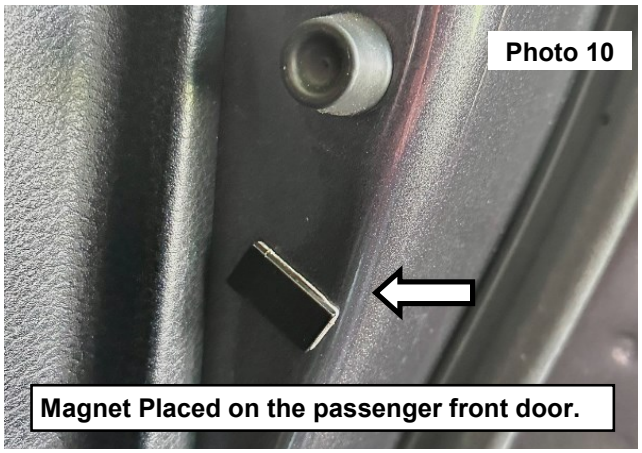


Photo 10

Magnet Placed on the passenger front door.

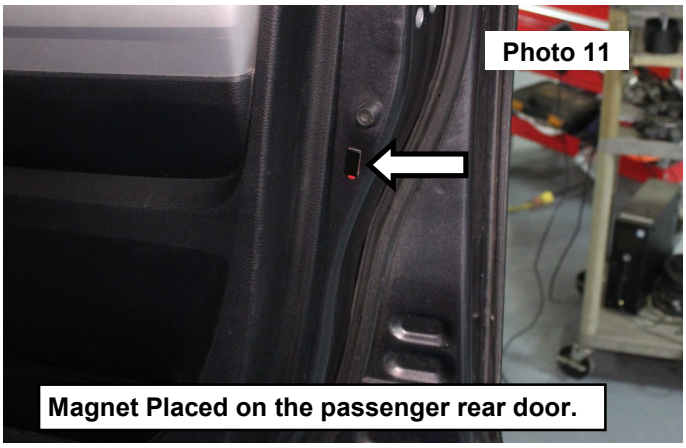


Photo 11

Magnet Placed on the passenger rear door.

Troubleshooting Guide

Steps not working.

- On/Off Switch in On position
- Check for proper Power and Ground connections to battery
- Check Fuses in the Positive and Negative wires to the battery
- Check Ground connection on Pass and Driver side at B-Pillar. Do not use a shared ground with other components. This can lead to a malfunction
- Check all plugs and connections to ensure they are seated properly and making a good connection

Steps work with On/Off Switch but not with doors opening and closing.

- Check Module to Magnet alignment on doors
- Use a magnet to position over module

Steps drop when door is closed and retract when door is opened.

- Motors will operate in reverse polarity. Check the fused links on the battery for Positive and Negative connection

Torque Specs:

Size	Grade 5	Grade 8	Size	Class 8.8	Class 10.9
5/16”	15 ft/lbs	20ft/lbs	6MM	5ft/lbs	9ft/lbs
3/8”	30 ft/lbs	35ft/lbs	8MM	18ft/lbs	23ft/lbs
7/16”	45 ft/lbs	60ft/lbs	10MM	32ft/lbs	45ft/lbs
1/2”	65 ft/lbs	90ft/lbs	12MM	55ft/lbs	75ft/lbs
9/16”	95 ft/lbs	130ft/lbs	14MM	85ft/lbs	120ft/lbs
5/8”	135ft/lbs	175ft/lbs	16MM	130ft/lbs	165ft/lbs
3/4”	185ft/lbs	280ft/lbs	18MM	170ft/lbs	240ft/lbs

By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable, State, and Local laws and regulations regarding the purchase, ownership, and use of the item. It shall be the buyers responsibility to comply with all Federal, State and Local laws governing the sales of any items listed, illustrated or sold. The buyer expressly agrees to indemnify and hold harmless Rough Country, LLC for all claims resulting directly or indirectly from the purchase, ownership, or use of the items.