

Installation Instructions PowerBoard®

Automatic Retracting Running Board

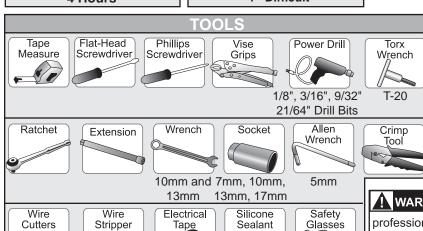
Vehicle Application

• Chevy Silverado/GMC Sierra Crew Cab 1999 – 2007 (7 ft.) Part Number: 75113-15

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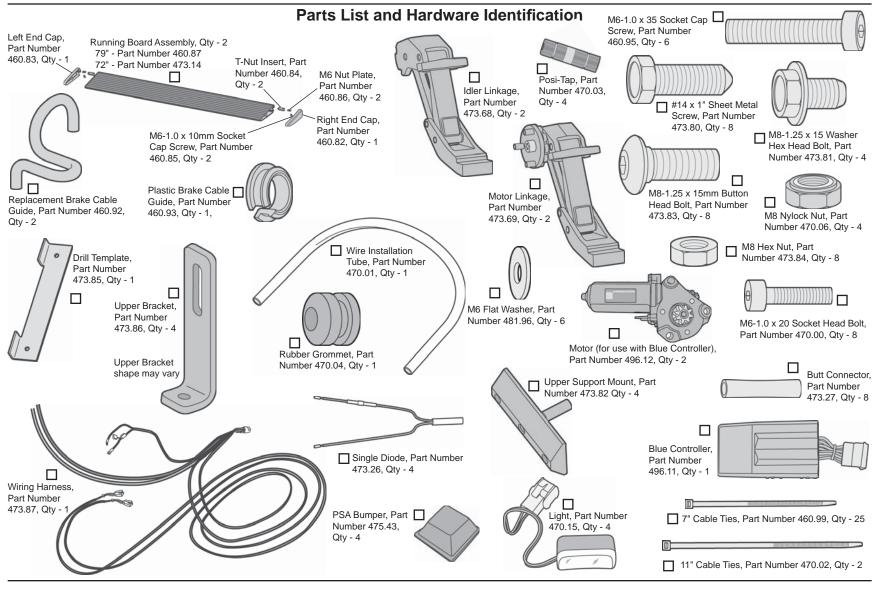
WARNING The manufacturer strongly recommends that this product be professionally installed.

WARNING Failure to carefully follow the electrical installation steps could result in severe electrical shock which could harm the installer and/or damage the vehicle.

WARNING Do not rely in any way on the components of this product to protect against injury or death in the event of an accident. Never operate the vehicle in excess of manuracturer's specifications.

WEAR SEAT BELTS AT ALL TIMES

Read and follow, precisely, all installation instructions provided when installing product. Failure to do so may result in a poor fit and could place occupants of the vehicle in a potentially dangerous situation.





Steps One through Three are for Heavy Duty Trucks only. For all other vehicles skip to Step Four.

Heavy Duty Trucks Only Remove Brake Cable Guide(s)

Heavy Duty Short Bed

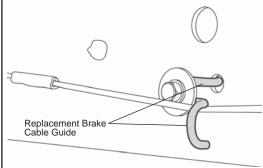
Remove the front Brake Cable Guide.

Heavy Duty Long Bed

Remove the first and third Brake Cable Guides.

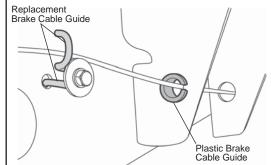
Heavy Duty Trucks Only Install Replacement Brake Cable Guides

Install the Replacement Brake Cable Guides.



Heavy Duty Long Bed Only Install Plastic Brake Cable Guides

Install the Plastic Brake Cable Guide in the front hole of the rear body mount.



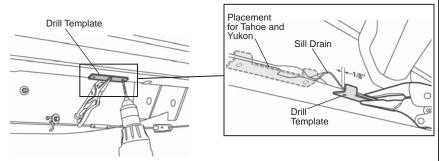
4

Drill Holes for Rear Arm

Locate the Drill Template in the parts kit. Place it along the sill 1/8" behind the sill drain that is second from the rear. Use vise grips to secure the Template to the sill. Drill a 1/8" pilot hole at each location in the Template. Remove the Template and drill the holes out to 21/64".

Crew Cab

Clamp the Drill Template 1/8" in front of the rear sill drain. Then drill the holes as above.



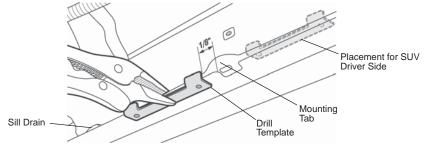
5 Drill Holes for Front Arm

Most Vehicles

Clamp the Drill Template to the pinch weld 1/8" behind the front mounting tab. Drill a 1/8" pilot hole at each location in the Template. Remove the Template and drill the holes out to 21/64".

SUV's - Driver's Side Only

Clamp the Drill Template 1/8" in front of the front mounting tab. Then drill the holes as above.





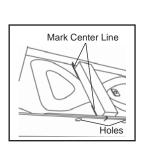
Make sure the wiring harness is out of the way before drilling.

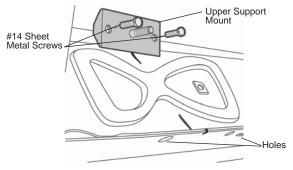


Install Front Upper Support Mount

Use a tape measure to locate the center between each pair of holes drilled in the previous steps. Use a straight edge to draw a vertical line up the sill from this center point.

Center the Upper Support Mount on this line in the upper corner of the sill. Use the Mount as a template to drill two 1/8" pilot hole. Remove the Mount and drill two 3/16" holes. Replace the Mount and install it with two #14 Sheet Metal Screws.







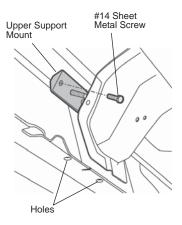
Make sure the wiring harness is out of the



Install Rear Upper Support Mount

Use a tape measure to locate the center between each pair of holes drilled in the previous steps. Use a straight edge to draw a vertical line up the sill from this center point.

Center the Upper Support Mount on this line in the upper corner of the sill. The rear Upper Support Mounts will be installed behind the frame support and will only require one #14 Sheet Metal Screw. Use the Mount as a template to drill a 1/8" pilot hole. Remove the Mount and drill a 3/16" hole. Replace the Mount and install it with a #14 Sheet Metal Screw.





Because of model year variations, should you encounter CAUTION interference with wiring looms, hydraulic lines, air conditioning lines and/or cables, contact Bestop Customer Service before proceeding.

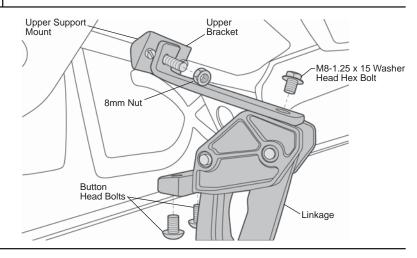


Install Linkages and Upper Brackets

Orient the Linkages so that the Motor Linkages are in front and the Idler Linkages are in back.

Slide the hole in the Upper Bracket over the stud on the Upper Support Mount and secure it in place with an 8mm Nut. Attach a Linkage to the Upper Bracket with an M8-1.25 x 15 Washer Head Hex Bolt through the slot in the Upper Bracket. Mount the Linkage to the sill with two Button Head Bolts.

Finger tighten the fasteners at this time.

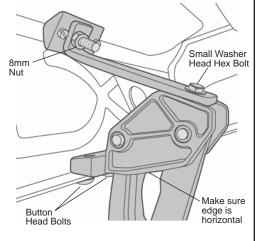




Adjust and Tighten Fasteners

Tighten the Upper 8mm Nut. Adjust the bottom edge to make sure that it is horizontal. Then tighten the Small Washer Head Bolt.

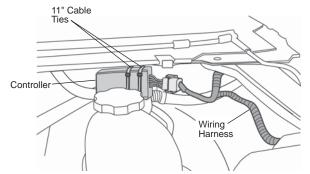
Finger tighten the Button Head Bolts at this time.

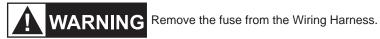




Install Controller

Use the 11" Cable Ties to secure the Controller to the factory wire conduit above the brake booster on the driver's side of the engine compartment. Plug the Wiring Harness into the Controller. Make sure that the Locking Tabs engage.

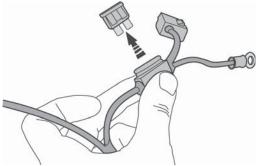






1 Remove Fuse from Wiring Harness

Remove the fuse from the Wiring Harness. Failure to do so could result in severe electrical shock which could harm the installer and/or damage the vehicle.

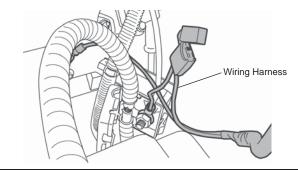




Do not ground the wrench when engaged with the



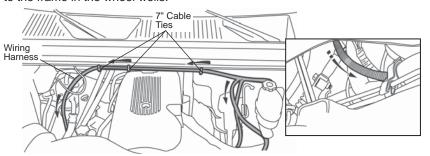
Attach the red Power Lead wire to the positive lead in the junction box. Attach the Ground Lead to the junction box mounting bracket.





Secure Wiring Harness

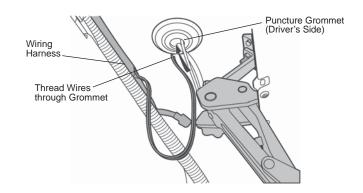
Route the longer leg of the harness across the front of the engine compartment and down to the motor on the passenger's side step. Route the shorter leg to the driver's side. Use the 7" Cable Ties in the parts kit to secure the harness to the cowling clips on the fire wall in the engine compartment. Secure the harness to the frame in the wheel wells.





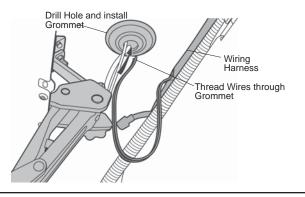
Install Wires - Driver's Side

Puncture the grommet in the floor panel near the front door and thread the two wires from the Wiring Harness through the firewall.



15 Install Wires – Passenger's Side

Drill a 9/32" hole in the floor panel and install the Rubber Grommet from the parts kit. Then thread the wires from the harness through the Grommet. Pull the wires up through the floor on both sides and seal all holes with Silicone Sealant.



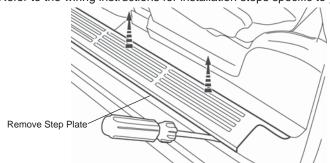


16 Remove Step Plate and Kick Plate

Open the door. Use a flat screwdriver to pop off the Step Plate in the door opening. When the fasteners release, slide the Kick Panel out from under the seat. Do this on both sides of the vehicle.

Peel back the carpet. Move the wiring harness out of the way.

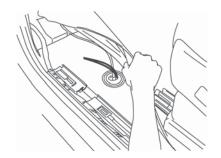
Refer to the wiring instructions for installation steps specific to your vehicle.





Install Wires - Driver's Side

Pull up the carpet and thread the wires through the floor panel.

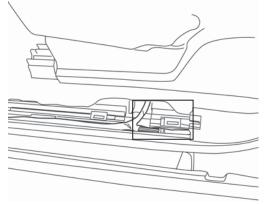


Connect Wires – 2003 and newer Crew Cab

Carefully remove wire wrap and find LIGHT BLUE wire with BLACK STRIPE (on passenger side find GREEN wire with BLACK STRIPE) to the rear of the "T" junction where wires cross under the front seat.

NOTE

See Wiring Diagrams for model years previous to 2003.

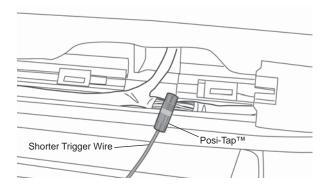


2003 - 2005 Vehicles Shown
Other years see Wiring Diagram for your vehicle

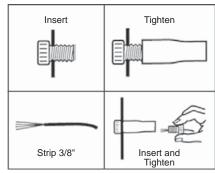
19

Connect Wires – 2003 and newer Crew Cab

Use the Posi-Tap™ Connector to splice the shorter trigger wire into the wire found in Step 18.



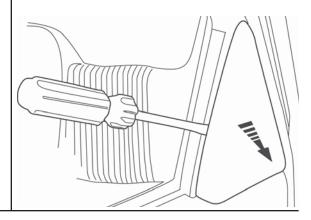
2003 - 2005 Vehicles Shown Other years see Wiring Diagram for your vehicle



Posi-Tap™ Instructions

20 Remove Door Trim

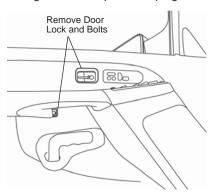
Remove the plastic trim on the door near the mirror attachment.

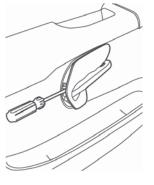


Remove Door Panel

Pry off the door lock and remove the bolts.

Pry off the door handle plate and any remaining panel fasteners. Remove the door light and door panel. Unplug the switch plate.

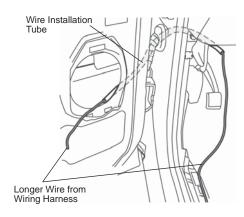




22 Thread Long Wire from Harness

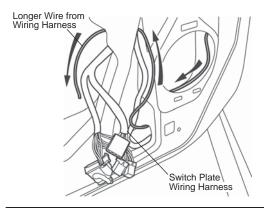
Pull back the door weather guard to access the speaker. Pry out the speaker and unplug it.

Locate the plastic Wire Installation Tube in the parts kit. Thread the tube into the hole in the door, through the accordion between the door and the vehicle. Then thread the longer white wire from the Wiring Harness through the tube into the door. Once the wire is in place, remove the tube from the door side.



23 Route Connecting Wire in Door

Thread the longer wire from the Wiring Harness along the path of the Wiring Harness that goes to the switch plate in the door.

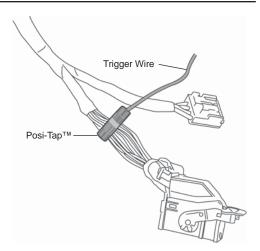




24 Install Posi-Tap™

Locate the door ajar wire leading to the connector with a cam-release lever. Use a Posi-Tap™ to splice the trigger wire into the door ajar wire.

> Driver's Side: Gray Wire with a Black Stripe Passenger Side: Black Wire with White Stripe

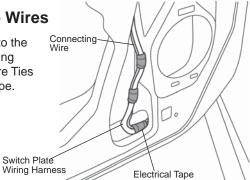


2003 - 2007 Vehicles Shown Other years see Wiring Diagram for your vehicle



Unsecured wire may interfere with



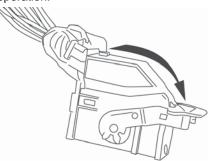




A plug lever that is not fully open CAUTION may interfere with window and power step operation.

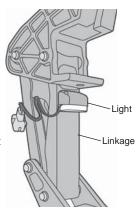


Make sure that the plug lever is fully opened before reattaching the switch plate. Reassemble the door.



Install Lights

Clean the outboard surface of the of the Linkage below the bottom mounting bolt. Peal the adhesive liner off the back of the Light and firmly press it 1/8" below the mounting bolt. Plug the light into the connector with the black and orange wires in the wire harness. Repeat with the other three lights. Secure lose wires with Cable Ties.



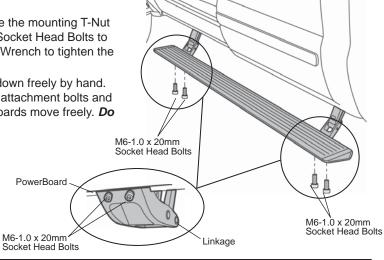
28 Install Running Boards

Mount the Steps to the linkages. Slide the mounting T-Nut into position. Install M6-1.0 x 20mm Socket Head Bolts to secure the boards. Use a 5mm Allen Wrench to tighten the bolts.

Make sure the board moves up and down freely by hand. If it binds, loosen the linkage to body attachment bolts and adjust the linkage position until the boards move freely. Do not tighten the bolts at this time.

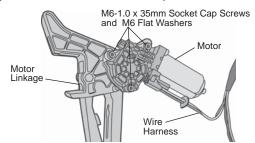
Tightening the fasteners before

cycling the step several times may create a bind, causing a squeaking sound and preventing the boards from retracting completely and evenly.



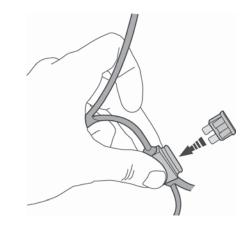
29 Install Motor

Slide Motor assembly onto drive shaft and mounting bosses of Motor Linkage assembly. Use three (3) M6-1.0 x 35mm Socket Cap Screws and (3) M6 Flat Washers to secure Motor. Plug female connector into Motor. Wrap any exposed wires from the motor with electrical tape. Torque the screws to 5–7 ft. lbs. (6.78–9.49 Nm or 60-84 in. lbs.).



30 Reinstall Fuse

Reinstall the fuse in the harness.



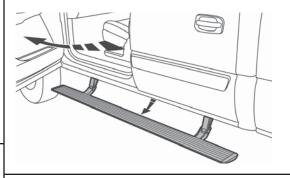
31 Test Doors and PowerBoards®

Open the doors to make sure that the Step drops into position on each side of the vehicle.

Cycle boards several times and then fully tighten all bolts.

NOTE

If the Step position is not even, repeat the adjustment from Step 9.

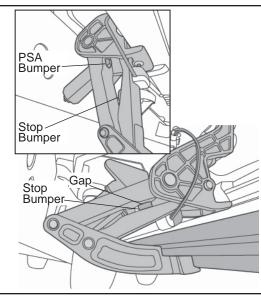


32 Install PSA Bumper – Optional

Due to variations in vehicle build, the PowerBoards® may contact the vehicle body when in the up position. If you would like to stop the board's travel earlier, install the supplied PSA Bumpers to the inner links or stick the bumper to the body at the location of contact.

To stop the board travel earlier, look for the area on the inner link where the Stop Bumper on the outer link would make contact if the board did not stop early (see gap in illustration).

Open the door to lower the board. Stand on the board to keep it in the down position and shut the door. Remove the fuse. Peel the backing off of the PSA Bumper and stick it to the surface on the inner link where the Stop Bumper will contact it. Do this on both idler and motor links. Reinstall the fuse and check to make sure the Stop Bumper hits the PSA Bumper when the doors are shut.



33 Reassemble Doors

Once you have checked that the Steps function properly, reassemble the doors and reinstall the Kick Plates and Step Plates on both sides of the vehicle.

PowerBoard® Troubleshooting

Issue:

· Possible cause

Boards do not operate:

- Connected to incorrect vehicle wire
- · Wire connections not secure
- Fuse burned
- Diodes reversed or damaged
- · Factory door-ajar circuit inoperable

Board creaks or squeaks during operation:

- · Gear shaft wedge bolt is loose
- Loosen mounting bracket and board attachment screws. Adjust linkages so they are parallel to each other and the noise is gone. Tighten all fasteners.

Intermittent operation:

- · Wire connections not secure
- · Faulty diode or connection
- · Bad ground
- Bad battery connection

Boards operate randomly:

- · Wire connections not secure
- · Diodes reversed or damaged
- Connected to incorrect vehicle wire

Board stays down all the time and can be moved by hand:

· Gear shaft wedge screw is missing or loose

Board shakes and or shutters during operation:

- Bad ground
- · Wire connections not secure
- · Bad battery connection

One or more doors operate the board and other do not:

- Wire connections not secure
- · Diodes reversed or damaged

Delay in board operation or boards operate after doors are shut:

· Diodes reversed or damaged

Board Hits Body:

 Install supplied PSA bumper per the installation instructions

PowerBoard® Service Tips

Confirming PowerBoard® is functional-black controller:

To test if the black controller (460.91), wire harness, motor and lights work, hook up to battery and touch any of the 4 door trigger wires to ground. The board for that side should go down and the lights should turn on. The board should go up and the lights should turn off when the wire is removed from ground.

Boards don't operate correctly when connected to wires identified in instructions:

Unfortunately vehicle manufactures do not consistently keep the same wire colors in their wire harnesses. The PowerBoard® trigger wires need to be connected the factory door-ajar wire that is connected to each door latch switch. The correct wire is likely in the same bundle that is identified in the instructions. If

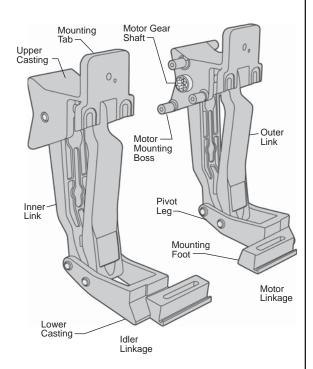
none of them work you can locate the correct wire by removing the door panel and tracing the wire bundle that leads to the door latch.

Use an ohm meter or continuity tester to find the doorajar wire on PowerBoards® with black controllers. The correct wire will go from neutral to ground when the door is opened and return to neutral when the door is shut. Connect one test lead to the negative battery terminal and probe the wires with the other lead. You can use a pin or a Posi-Tap connector to pierce the wire insulation. The correct wire will make the tester go from no continuity to complete continuity when the door opened and return to no continuity when the door is shut. You can also shut the door latch with the door open by pushing on the latch catch with a screw driver.

Checking Diodes:

If a diode is faulty or installed backwards, the system will not receive necessary signal to deploy the step. Diodes transmit current in only one direction. To test, disconnect the diode from the system. The diode will have a silver stripe on one end. Connect the side of the diode without the stripe to positive twelve volts. Connect the end with the stripe to a tester and ground the tester. Current should flow through the diode in this direction. There should be no current flow when the end with the stripe is connected to positive twelve volts. The diode is bad if current flows in this direction or there is no current flow in either direction.

Linkage Component Identification



LIMITED WARRANTY

We warrant our product to be free from defects in material and workmanship, for the terms specified below, provided there has been normal use and proper maintenance. This warranty applies to the original purchaser only. All remedies under this warranty are limited to the repair or replacement of any item or items found by the factory to be defective within the time period specified. If you have a warranty claim, first you must call our factory at the number below for instructions. You must retain proof of purchase and submit a copy with any items returned for warranty work. Upon completion of warranty work, if any, we will return the repaired or replaced item or items to you freight prepaid. Damage to our products caused by accidents, fire, vandalism, negligence, misinstallation, misuse, Acts of God, or by defective parts not manufactured by us, is not covered under this warranty.

THE WARRANTY TIME PERIOD IS AS FOLLOWS FOR ALL PowerBoards® MANUFACTURED BY OUR COMPANY: THREE YEARS / 36,000 MILES FROM DATE OF PURCHASE.

ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE CREATED HEREBY ARE LIMITED IN DURATION TO THE SAME DURATION AND SCOPE AS THE EXPRESS WRITTEN WARRANTY. OUR COMPANY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE.

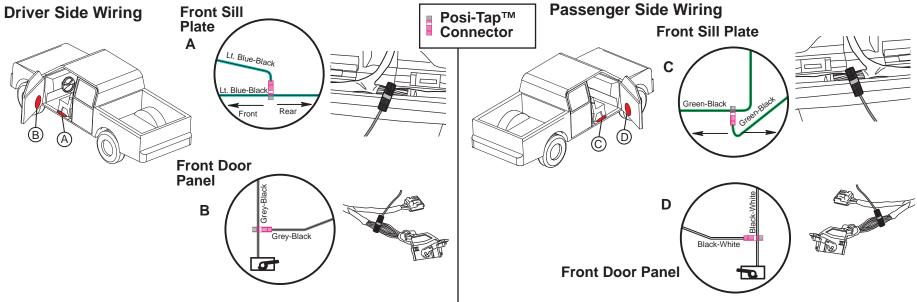
Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For further information or request for warranty work, please contact: Bestop Inc. Customer Service



PowerBoard® – Wiring Instructions

GM Truck (2003 - 2007)



- 1. Remove the front door step plate, lift carpet and pull PowerBoard® trigger wires through floor of vehicle.
- 2. Open wire bundle under front door step plate and locate 18Ga Rear Door Ajar Wire (light blue with black stripe).
- 3. Use a Posi-Tap connector to splice the shorter trigger wire into the Rear Door Ajar wire (light blue with black stripe).
- 4. Remove the door panel to access the wire bundle at the black cam-plug from the window control panel. Open the bundle and locate 18Ga Door Ajar Wire (grey with black stripe).
- 5. Route the longer trigger wire through the front door accordion to the door panel.
- 6. Use a Posi-Tap connector to splice the longer trigger wire into the Door Ajar wire (grey with black stripe).

- 1. Remove the front door step plate, lift carpet and pull PowerBoard® trigger wires through floor of vehicle.
- 2. Open wire bundle under front door step plate and locate 18Ga Rear Door Ajar Wire (green with black stripe).
- 3. Use a Posi-Tap connector to splice the shorter trigger wire into the Rear Door Ajar wire (green with black stripe).
- 4. Remove the door panel to access the wire bundle at the black cam-plug from the window control panel. Open the bundle and locate 18Ga Door Ajar Wire (black with white stripe).
- 5. Route the longer trigger wire through the front door accordion to the door panel.
- 6. Use a Posi-Tap connector to splice the longer trigger wire into the Door Ajar wire (black with white stripe).

Notes:

- 1. All signal wires tapped into will be 18Ga. Do not tap into anything with a thicker gauge than this.
- 2. Occasionally the wire colors do not match the wire schematics. Under these circumstances, you will need to locate the door ajar signal wires.
- 3. Make sure you secure all wires after installation. Loose wires can be damaged and may cause a failure of the PowerBoard's function.

PowerBoard® - Wiring Instructions

GM Truck – Luxury and UP Level (1999 – 2002)



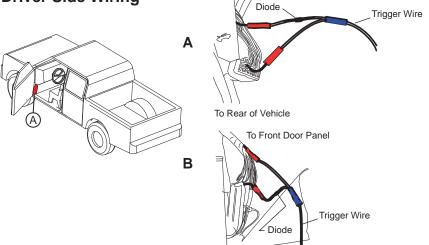
Butt Connector Qty - 8





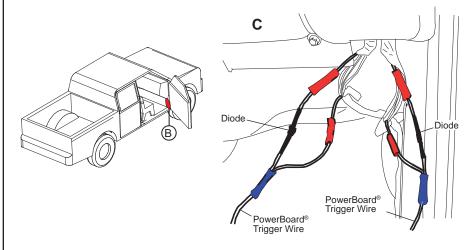
Make sure Single Diode Harnesses are oriented properly for the PowerBoard® to function.

Driver Side Wiring



- Remove the front door step plate, lift carpet and pull PowerBoard® trigger wires through floor of vehicle.
- 2. Locate the Rear Door Ajar Wire (dark blue with white stripe) on the black connector below the hood-release lever. There will be two wires this color; use the wire located on the row closest to the plug release.
- 3. Cut this wire and install a Single Diode Harness as shown in A.
- 4. Trim a trigger wire to the correct length and it to the blue connector of the Single Diode Harness.
- 5. Locate the Front Door Ajar Wire (tan) on the large connector behind the connector in Step 2.
- 6. Cut this wire and install a Single Diode Harness as shown in B.
- Trim a trigger wire to the correct length and connect it to the blue connector of the Single Diode Harness.
- 8. Wrap all connections with electrical tape and secure any loose wires.

Passenger Side Wiring



- Remove the front door step plate, lift carpet and pull PowerBoard® trigger wires through floor of vehicle.
- Locate the two wire bundles running up along the kick panel area below the glove compartment.
- 3. Unwrap the bundles and locate the Front and Rear Door Ajar wires (both dark blue with white stripe), one in each bundle.
- 4. Cut each wire and install a Single Diode Harness as shown in C. Make sure that the leg with the diode is toward the top.
- Trim each trigger wire to the correct length and connect to the blue connector of the Single Diode Harness.
- 6. Wrap all connections with electrical tape and secure any loose wires.

Notes:

- 1. All signal wires tapped into will be 18Ga. Do not tap into anything with a thicker gauge than this.
- 2. Occasionally the wire colors do not match the wire schematics. Under these circumstances, you will need to locate the door ajar signal wires.
- 3. Make sure you secure all wires after installation. Loose wires can be damaged and may cause a failure of the PowerBoard's function.

PowerBoard® - Wiring Instructions

GM Truck – Base Level (1999 – 2002)

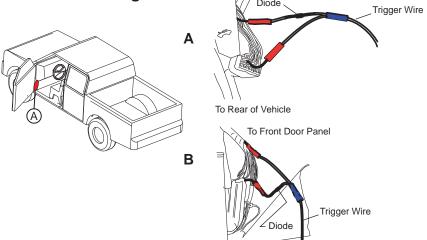






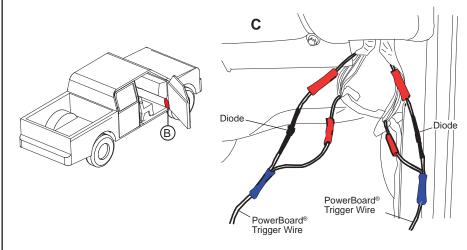
Make sure Single Diode Harnesses are oriented properly for the PowerBoard® to function.

Driver Side Wiring



- Remove the front door step plate, lift carpet and pull PowerBoard® trigger wires through floor of vehicle.
- Locate the Rear Door Ajar Wire (orange) on the black connector below the hoodrelease lever. There will be two wires this color; use the wire located on the row closest to the plug release.
- 3. Cut this wire and install a Single Diode Harness as shown in A.
- 4. Trim a trigger wire to the correct length and connect it to the blue connector of the Single Diode Harness.
- Locate the Front Door Ajar Wire (tan) on the large connector behind the connector in Step 2.
- 6. Cut this wire and install a Single Diode Harness as shown in B.
- Trim a trigger wire to the correct length and connect it to the blue connector of the Single Diode Harness.
- 8. Wrap all connections with electrical tape and secure any loose wires.

Passenger Side Wiring



- Remove the front door step plate, lift carpet and pull PowerBoard® trigger wires through floor of vehicle.
- 2. Locate the two wire bundles running up along the kick panel area below the glove compartment.
- 3. Unwrap the bundles and locate the Front and Rear Door Ajar wires (both dark blue with white stripe), one in each bundle.
- 4. Cut each wire and install a Single Diode Harness as shown in C. Make sure that the leg with the diode is toward the top.
- Trim each trigger wire to the correct length and connect to the blue connector of the Single Diode Harness.
- 6. Wrap all connections with electrical tape and secure any loose wires.

Notes:

- 1. All signal wires tapped into will be 18Ga. Do not tap into anything with a thicker gauge than this.
- 2. Occasionally the wire colors do not match the wire schematics. Under these circumstances, you will need to locate the door ajar signal wires.
- 3. Make sure you secure all wires after installation. Loose wires can be damaged and may cause a failure of the PowerBoard's function.

PowerBoard® - Wiring Instructions

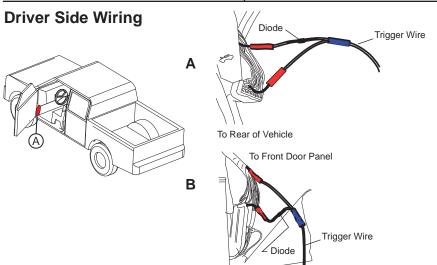
Sierra Denali (1999 - 2002)

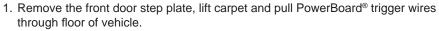






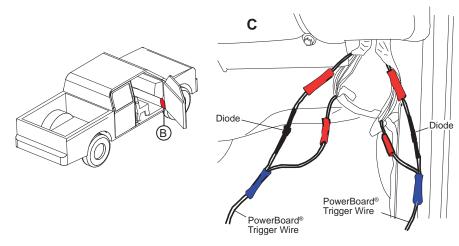
Make sure Single Diode Harnesses are oriented properly for the PowerBoard® to function.





- 2. Locate the Rear Door Ajar Wire (dark blue with white stripe) on the black connector below the hood-release lever. There will be two wires this color; use the wire located on the row closest to the plug release.
- 3. Cut this wire and install a Single Diode Harness as shown in A.
- Trim a trigger wire to the correct length and connect it to the blue connector of the Single Diode Harness.
- 5. Locate the Front Door Ajar Wire (light green with black stripe) on the large connector behind the connector in Step 2.
- 6. Cut this wire and install a Single Diode Harness as shown in B.
- 7. Trim a trigger wire to the correct length and connect it to the blue connector of the Single Diode Harness.
- 8. Wrap all connections with electrical tape and secure any loose wires.

Passenger Side Wiring



- Remove the front door step plate, lift carpet and pull PowerBoard® trigger wires through floor of vehicle.
- 2. Locate the two wire bundles running up along the kick panel area below the glove compartment.
- 3. Unwrap the bundles and locate the Rear Door Ajar wire (dark blue with white stripe), in one bundle and the Front Door Ajar wire (light green with black stripe) in the other bundle.
- 4. Cut each wire and install a Single Diode Harness as shown in C. Make sure that the leg with the diode is toward the top.
- Trim each trigger wire to the correct length and connect to the blue connector of the Single Diode Harness.
- 6. Wrap all connections with electrical tape and secure any loose wires.

Notes:

- 1. All signal wires tapped into will be 18Ga. Do not tap into anything with a thicker gauge than this.
- 2. Occasionally the wire colors do not match the wire schematics. Under these circumstances, you will need to locate the door ajar signal wires.
- 3. Make sure you secure all wires after installation. Loose wires can be damaged and may cause a failure of the PowerBoard's function.