Installation Instructions
PowerBoard NX

Automatic Retracting Running Board

Patent Pending

Vehicle Application

- **Chevy Silverado/GMC Sierra Extended Cab 1500 / 2500 / 3500**
  2007 - Current
  Part Number: 75623-15
- **Chevy Silverado/GMC Sierra Crew Cab 1500 / 2500 / 3500**
  2007 - Current
  Part Number: 75626-15

www.bestop.com - We're here to help! Visit our web site and click on "Ask a Question". Click here for more Truck Accessories by Bestop.

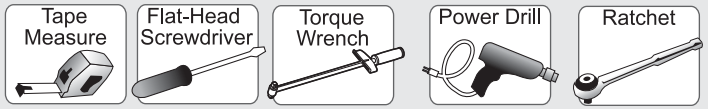
INSTALLATION TIME

3 Hours

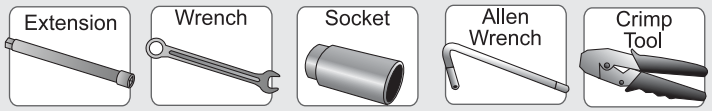
SKILL LEVEL

3 - Moderately Difficult

TOOLS



9/32" Drill Bit



13 mm

10 mm, 13 mm

5 mm

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.

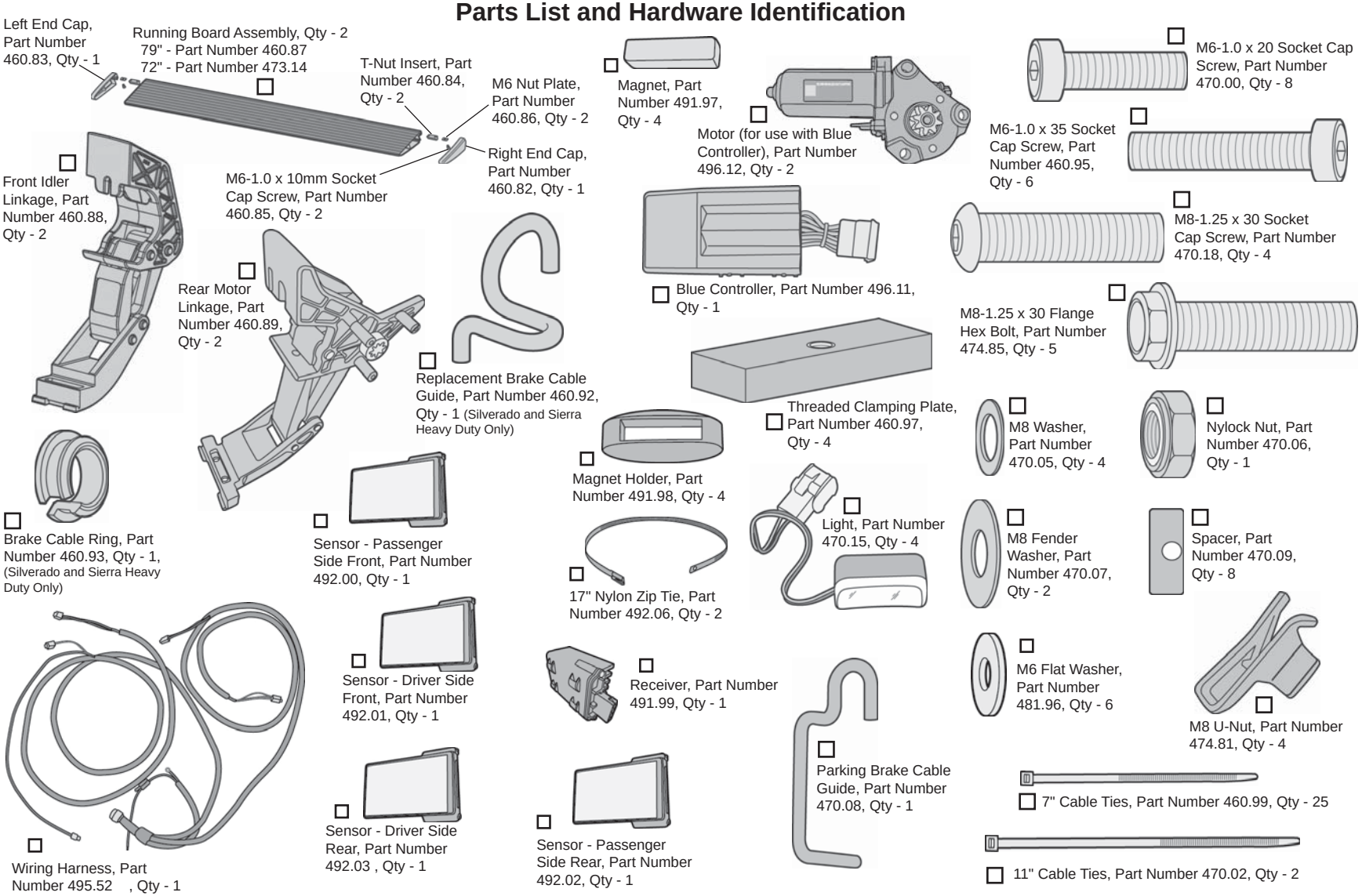
WARNING Do not rely in any way on the components of this product to protect against injury or death in the event of an accident. Never operate the vehicle in excess of manuracturer's specifications.

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.

PowerBoard NX – Installation Instructions

Parts List and Hardware Identification

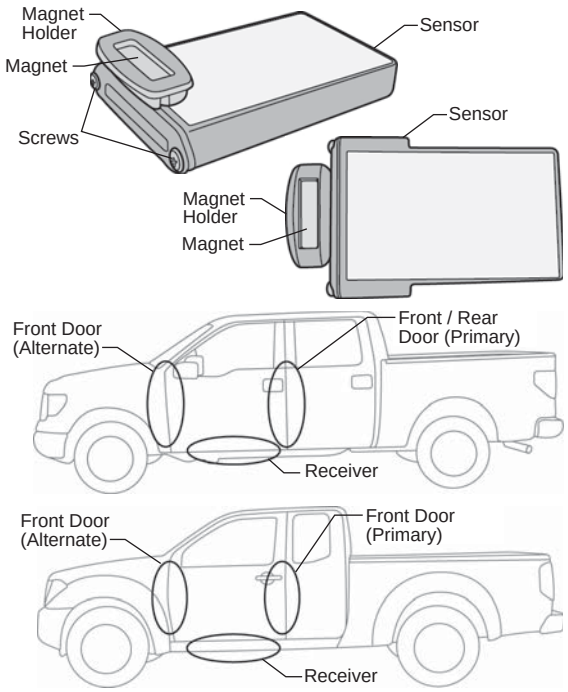


RF System Overview

The PowerBoards are activated by Sensors that are to be mounted inside the door openings for each door. The Sensors are off when a magnet is next to the Sensor end that has the two screws. The Sensor triggers the PowerBoards to deploy when the magnet is moved about 3 inches away from the Sensor. The magnet can work in either of the locations shown to signal the PowerBoards to retract.

Be sure to mount the Sensors in a location that will allow removal of the screws for battery replacement. See Battery Replacement at the end of the instructions.

See Steps 15 – 21 for detailed instructions.



1 System Initialization

a. Remove fuse from wire harness and connect the red lead to the battery positive and the black lead to negative.

b. Layout the harness so the long leg crosses the engine compartment towards the drivers side and the short leg is on the passenger side.

c. Attach a motor to each motor link with 3 M6-1.0 x 35mm Socket Cap Screws.

d. Plug the Controller, Receiver, Motors and Lights into the harness.

e. Plug the fuse back into the harness. After a one second delay the linkages will retract as shown.

f. Lay out all four sensors as they would be installed on the vehicle with the drivers side to your left and the passengers side to your right. Place a magnet next to each sensor as shown in the overview above.

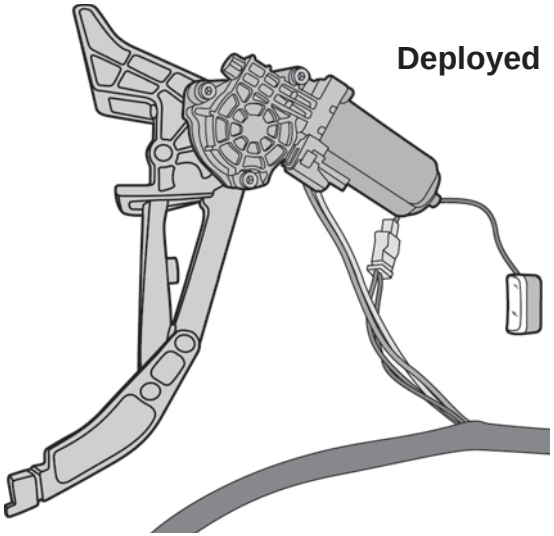
g. Move the magnet more than 4 inches away from the driver front sensor. All four lights will come on and the drivers side linkage will deploy.

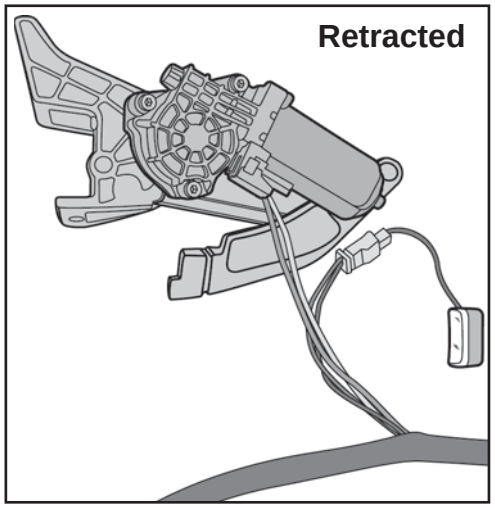
h. Move the magnet back to the sensor and after a three second delay the lights will turn off and the linkage will retract.

i. Repeat with the remaining sensors and the lights and corresponding linkage will operate in the same manner.

j. Remove the motors to continue with the installation.

If the system does not operate as stated above see the Troubleshooting and Battery Replacement sections at the end of the instructions or go to our web site at http://www.bestop.com/support.





PowerBoard NX – Installation Instructions

NOTE Steps 2 and 3 are for HD 2500 and 3500 only. For all other vehicles skip to Step 4.

Short Bed

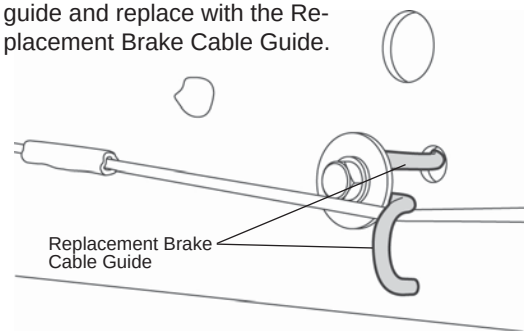
Step 2 only.

Long Bed

Steps 2 and 3.

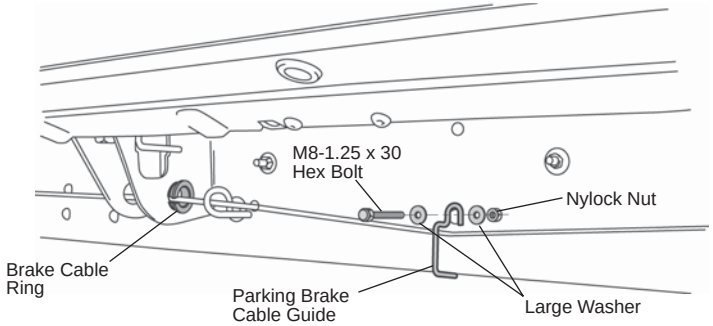
2 Heavy Duty Trucks Only Install Replacement Brake Cable Guides

Remove the forward brake cable guide and replace with the Replacement Brake Cable Guide.



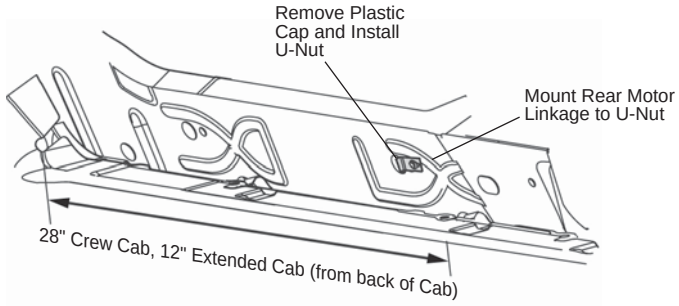
3 Heavy Duty Long Bed Only Install Brake Cable Ring and Parking Brake Cable Guide

Install Brake Cable Ring in rear of middle body mount. Install new Parking Brake Cable Guide in existing frame hole as shown.



4 Install Rear Motor Linkage

Remove the plastic cap and install a U-Nut in fourth sheet metal tab / hole from front. Mount driver side Rear Motor Linkage to U-Nut so that the Arm will clear parking brake cable..



5 Install Front Idler Linkage

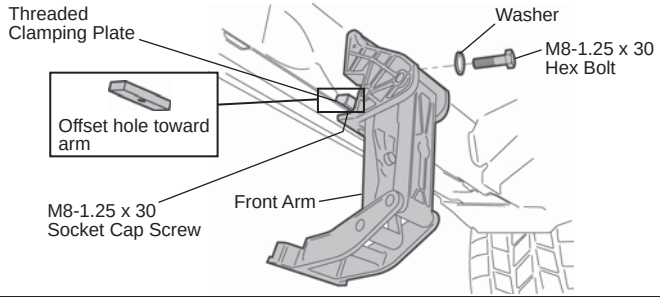
Install driver side Front Idler Linkage in first sheet metal tab / hole from front.

Install Threaded Clamping Plate on top of pinch weld if the hole is not tapped. Thread M8-1.25 x 30 Socket Cap Screw into clamping plate. Then install an M8-1.25 x 30 Hex Bolt and Washer.

Finger tighten fasteners at this time.

Repeat Steps 3 and 4 to install the passenger side Linkages.

NOTE If there is a weld nut at this location, do not use the Threaded Clamping Plate.

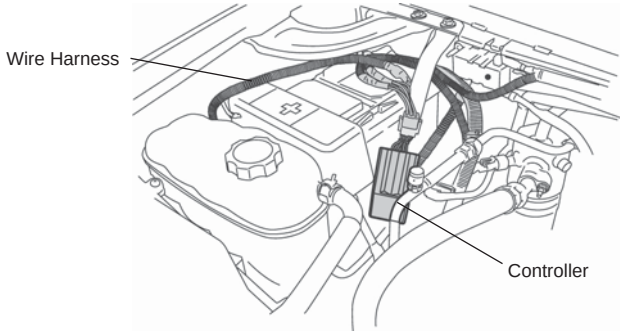


6 Install Controller and Wire Harness

Use the two (2) 11" Cable Ties to mount the Controller to the support arm next to the battery (behind the support arm on diesel engines).

Plug in the Wire Harness. Make sure that the locking tabs engage.

NOTE On hybrid models mount the Controller on the driver's side.

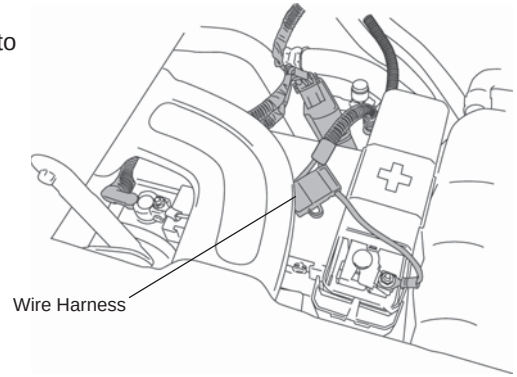


⚠ CAUTION Do not ground wrench when engaged with nut.

8 Attach Leads

Attach power lead (RED wire) to positive pole on the battery.

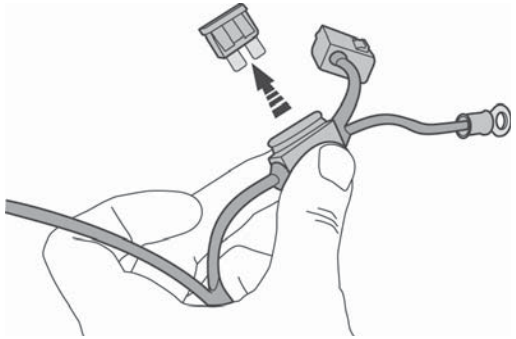
Attach ground lead to negative battery pole.



⚠ WARNING Remove the fuse from the Wiring Harness.

7 Remove Fuse from Wiring Harness

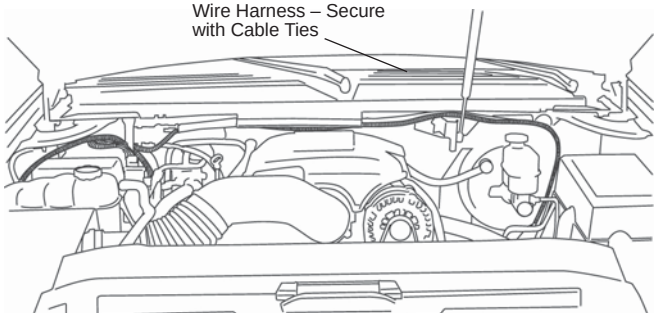
Remove the fuse from the Wiring Harness. Failure to do so could result in severe electrical shock which could harm the installer and/or damage the vehicle.



9 Route Wire Harness – Gas Engine

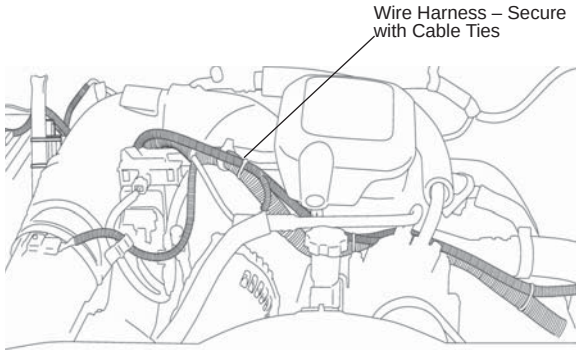
Route long end of wire harness above engine and down through drivers side wheel well. Cable tie harness to cowling clips on fire wall. Route short end down passengers side.

NOTE On hybrid models route the long end of the wire harness down the passenger wheel well and the short end down the driver's side.



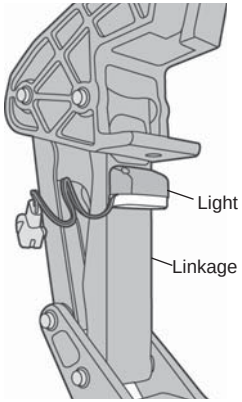
10 Route Wire Harness – Diesel Engine

Route long end of wire harness under intake and along factory engine harness to driver side wheel well. Route short end down passengers side.



11 Install Lights

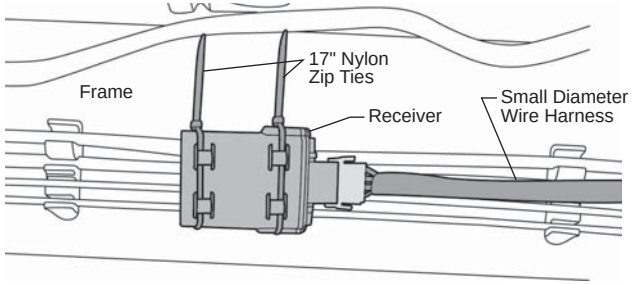
Clean the outboard surface of the of the Linkage below the bottom mounting bolt. Peal the adhesive liner off the back of the Light and firmly press it 1/8" below the mounting bolt. Plug the light into the connector with the black and orange wires in the wire harness. Repeat with the other three lights.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



12 Install Receiver

Route the small diameter wire harness along the side of the frame. Find a location that is protected but is not surrounded by dense metal. Plug in the Receiver and insert 17" Nylon Zip Ties through the loops on the Receiver. Mount the Receiver with the stand off ribs against the vehicle.

NOTE **Due to vehicle variations, installation may differ from that shown.**

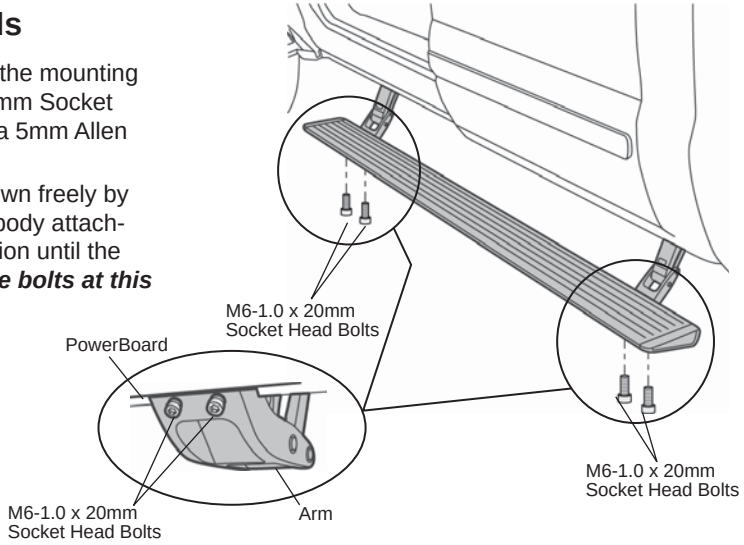


13 Install Running Boards

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.

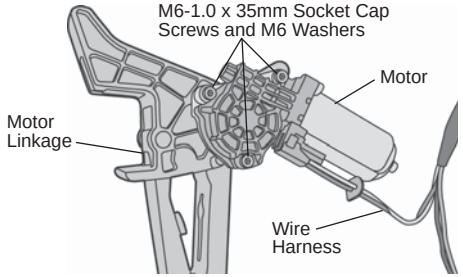
Make sure the board moves up and down freely by hand. If it binds, loosen the linkage to body attachment bolts and adjust the linkage position until the boards move freely. ***Do not tighten the bolts at this time.***

NOTE ***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.***



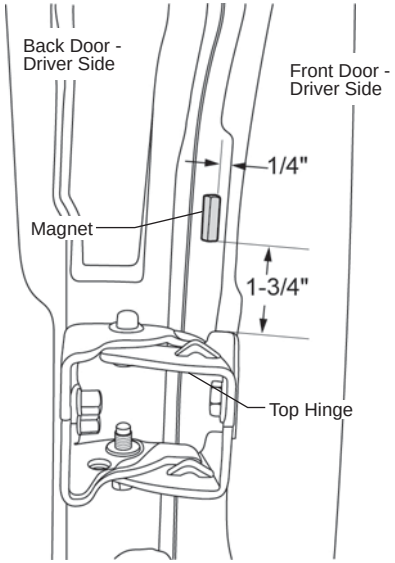
14 Install Motor

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 M6 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.)



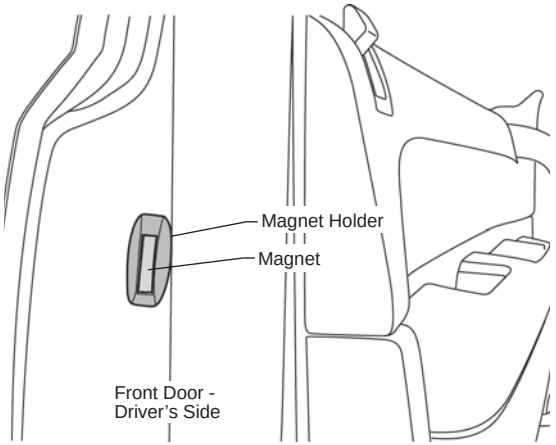
15 Install Magnet

Open the back door on the driver's side and clean the area where the magnet will be installed with a 50/50 solution of water and alcohol. Stick a magnet to the back side of the front door as shown.



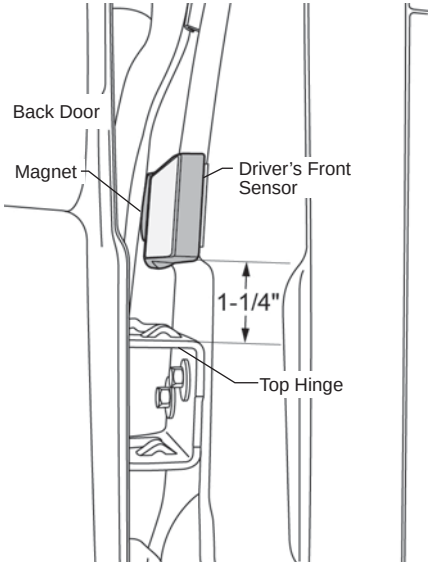
16 Install Magnet Holder

Carefully open the front door. Peel the liner off the back of a magnet holder and place it around the magnet. Be careful not to move the magnet. Press firmly on the holder to stick it to the door. Shut the door.



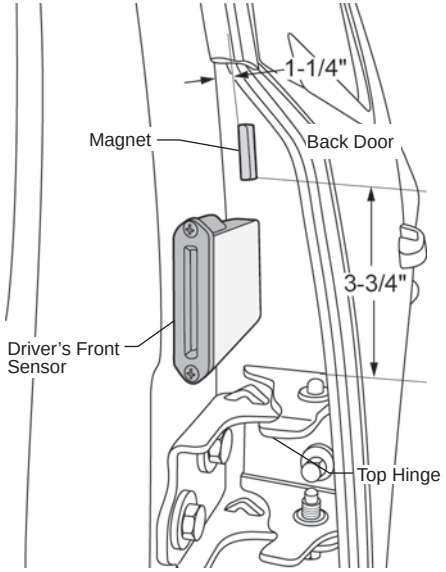
17 Install Driver's Side Front Sensor

Peel the liner off of the Drivers Side Front Sensor. Position it on the door pillar so it is about 1/6" away from the magnet. Press firmly on the Sensor to stick it to the pillar.



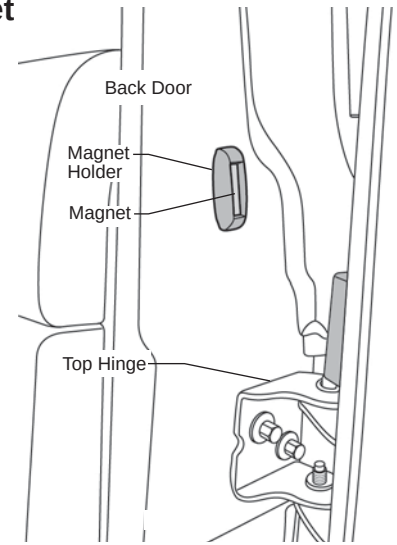
18 Install Magnet

Open the front driver's side door and clean the area where the magnet and sensor will be installed with a 50/50 solution of water and alcohol. Stick a magnet to the front side of the rear door as shown. Hold the Drivers Rear Sensor against the door pillar and position the magnet so it is directly in front of the sensor.



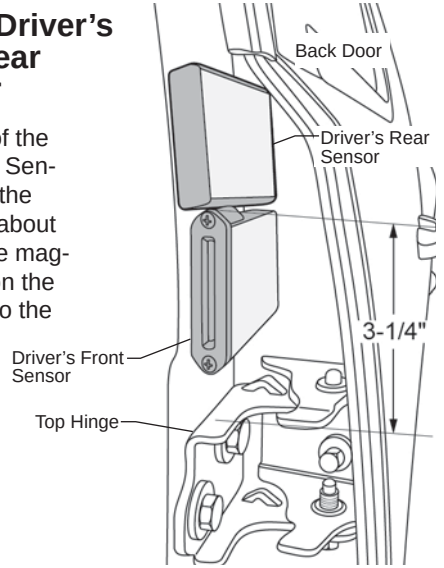
19 Install Magnet Holder

Peel the liner off the back of a magnet holder and place it around the magnet. Be careful not to move the magnet. Press firmly on the holder to stick it to the door.



20 Install Driver's Side Rear Sensor

Peel the liner off of the Drivers Side Rear Sensor. Position it on the door pillar so it is about 1/6" away from the magnet. Press firmly on the Sensor to stick it to the pillar.

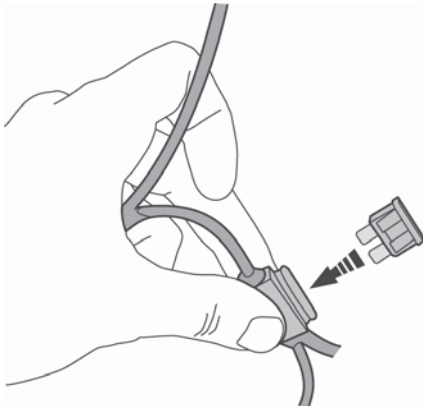


21 Install Passenger Side Sensors and Magnets

Repeat Steps 16 through 21 on the passenger side of the vehicle.

22 Reinstall Fuse

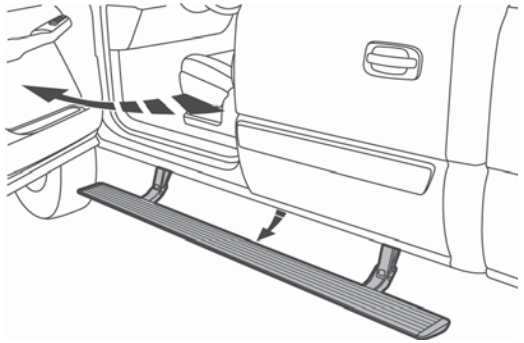
Reinstall the fuse in the harness.



23 Test Doors and PowerBoards

Open and shut each door to make sure the PowerBoards deploy and retract. There is a slight delay in the board deployment so make sure they are fully down before stepping on them. There is also a 3-4 second delay in board retraction after the door is shut. This gives you time to open another door with out cycling the board again. **Cycle the boards several times and then fully tighten all of the fasteners.**

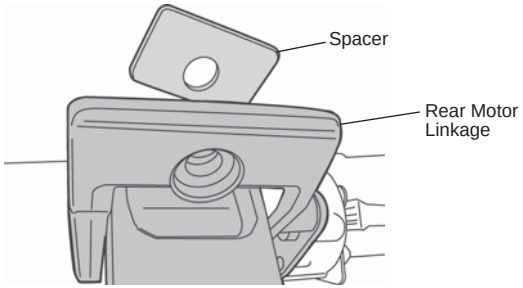
CAUTION Never force the board up or down. Use the motors to cycle the board.



24 Adjust Running Board Position

Shut all doors and check to see if there is a gap between the running board and the body. If the running board is touching the body add spacers between the body pinch weld and linkage mounting flange as shown until the board no longer touches the body.

Cycle boards several times and then fully tighten all bolts.



PowerBoard NX Troubleshooting

Issue:
- Possible cause

Boards do not operate:
- Bad ground
- Bad battery connection
- Fuse burned
- Magnet is too far away from Sensor
- Bad receiver connection
- Sensor battery low

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:
- Bad battery connection
- Bad ground
- Magnet is too far away from Sensor
- Bad receiver connection
- Sensor battery low

Boards operate randomly:
- Wire connections not secure
- Magnet is too far away from Sensor
- Bad receiver connection
- Sensor battery low

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
- Links misaligned

Delay in board operation or boards operate after doors are shut:
- Magnet is too far away from Sensor
- Sensor battery low

Board hits body
- Install supplied adhesive bumper per the installation instructions.

Board does not fully retract or deploy
- The board is designed to stop travel when the system senses a load. Misalignment can cause the board to stop early. Remove the motor and adjust the linkage alignment until the board moves up and down freely without resistance by hand.

Board retracts when doors are left open for a long period of time.
- This is normal to save sensor battery life.

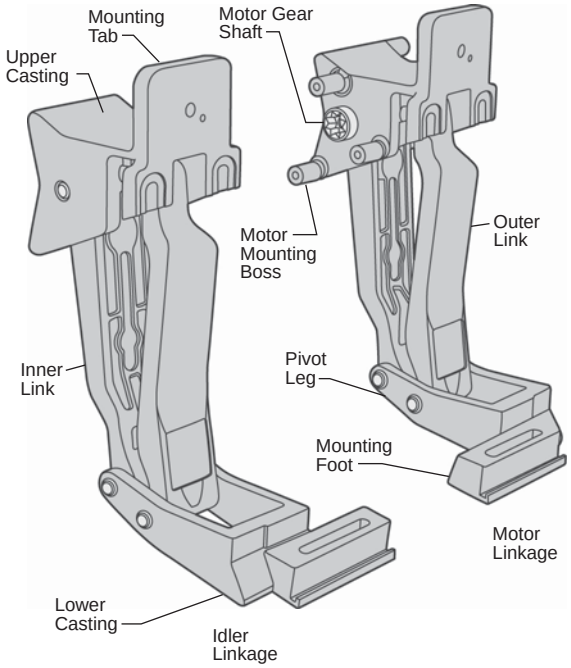
PowerBoard NX Service Tips

Adjusting Linkage alignment:

The board is designed to stop travel when the system senses a load. Misalignment can cause the board to stop early.

To adjust, remove running board and motor. Loosen mounting brackets. Adjust linkages parallel to each other. Shift the running board on linkages 1/8” in either direction and carefully set board on linkages. Start only a few threads of the allen head bolts – do not tighten yet. Lift running board to retracted position. Tighten allen head bolts that attach running board to linkage. Last, tighten linkages to body. Cycle running board by hand without motor and confirm zero resistance. Install motor and test.

Linkage Component Identification

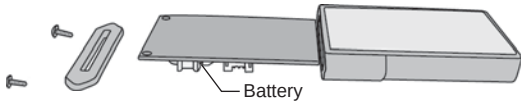


Battery Replacement

Each sensor is powered by a CR2450 3 volt battery that may periodically need to be replaced.

1. Remove the Power Board fuse that is next to the car battery.
2. Remove the two screws and the cover plate on the sensor. Slide out the circuit board and note the orientation of the board. Replace the battery and slide the board back into the housing with its original orientation. Leave the vehicle door or doors open.
3. Reinstall the PowerBoard fuse and wait 30 seconds. The sensor is reprogramming its address during this time.
4. Shut the door(s). Open and close the doors(s) to check for normal operation.

   If opening a door fails to operate the PowerBoard, open the appropriate door and remove the PowerBoard fuse. Wait 30 seconds and the reprogramming will repeat. Reinstall the fuse and check for normal operation.



This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deus conditions suivantes: (1) l'appareil ne doit pas produire de briuillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

and

(2) This device must accept any interference received, including interference that may cause undesired operation.

The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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
Toll-Free: (800)845-3567
Main: (303)465-1755
E-mail: csbestop@Bestop.com
Website: www.Bestop.com