



Installation Instructions

PowerBoard®

Automatic Retracting Running Board

Vehicle Application

• **Dodge Ram 1500 Crew Cab**
2009 - Current
Part Number: 75138-15

• **Dodge Ram 2500/3500 & HD Crew Cab**
2010 - Current
Part Number: 75138-15

• **Dodge Ram 1500 Quad Cab**
2009 - Current
Part Number: 75143-15

• **Dodge Ram Mega Cab 2500/3500**
2010 - Current
Part Number: 75138-15

2014 - Current 2500-3500 If your truck is equipped with the factory installed rear air load leveling system, it will be necessary to use the Air Ride Bracket Kit, Bestop part number 515.57.

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



4 Hours

SKILL LEVEL

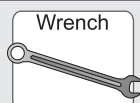


4 - Difficult

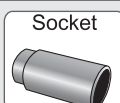
TOOLS



Tape Measure

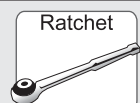


Wrench

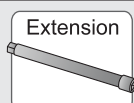


Socket

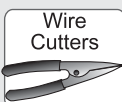
10mm, 13mm and 19mm



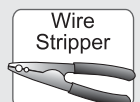
Ratchet



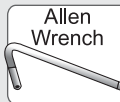
Extension



Wire Cutters

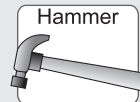


Wire Stripper

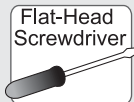


Allen Wrench

5mm



Hammer



Flat-Head Screwdriver



Safety Glasses



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.



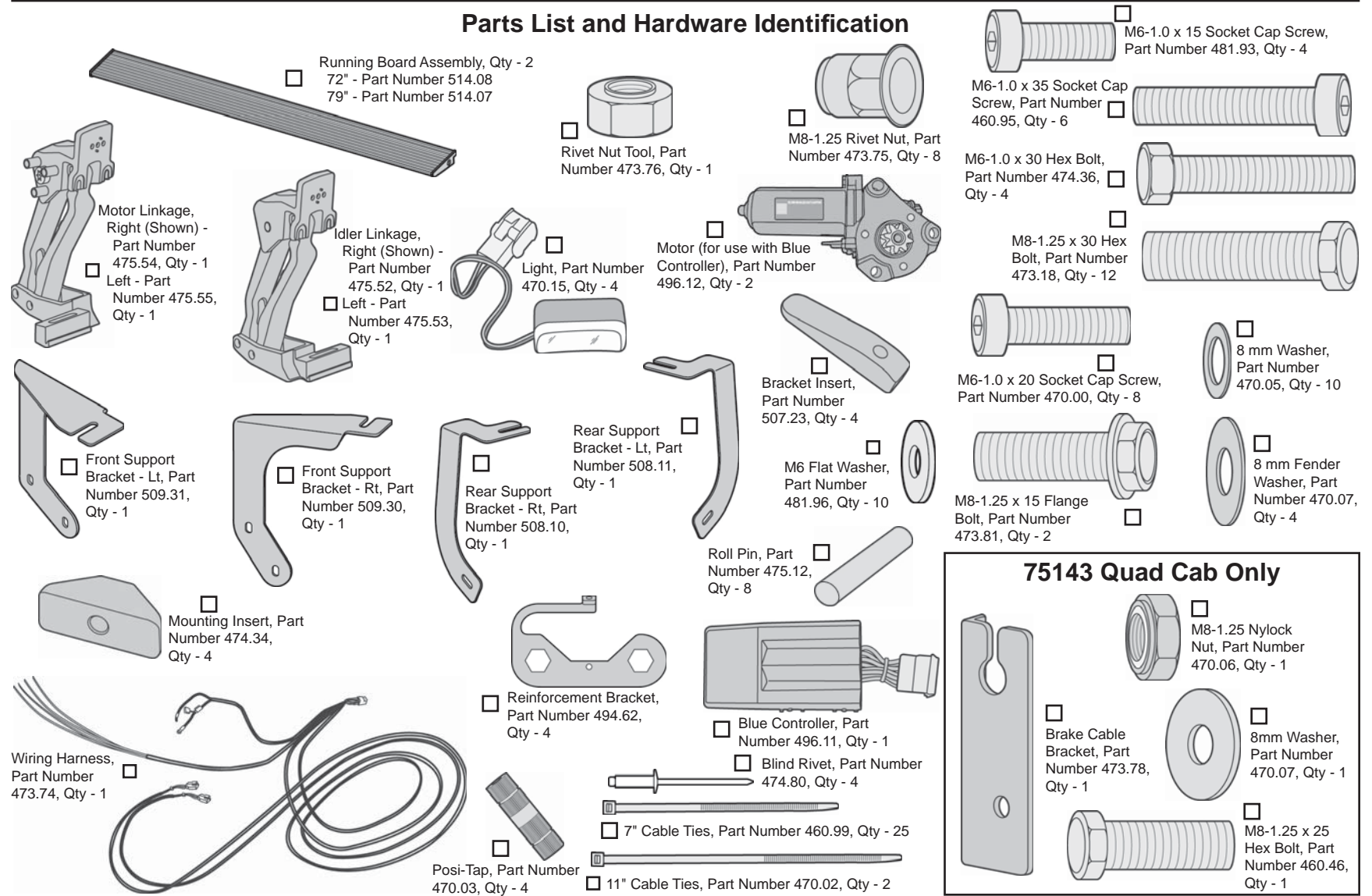
WARNING Do not rely in any way on the components of this product to protect against injury or death in the event of an accident. Never operate the vehicle in excess of manufacturer's specifications.

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® – Installation Instructions

Parts List and Hardware Identification

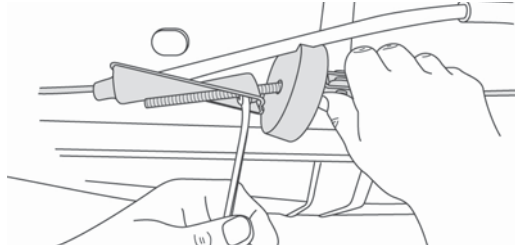


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NOTE Steps 1 through 4 are for Quad Cab Vehicles only. If you have Crew Cab, skip to Step 5.

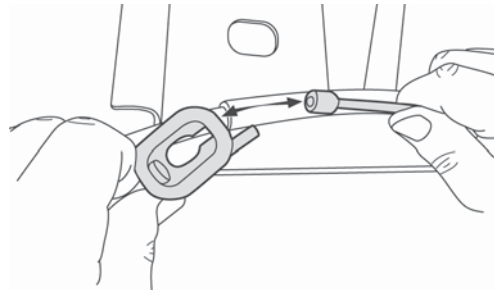
1 Install Brake Cable Bracket - Quad Cab Only

Locate the brake cable adjustment nut on the driver's side of the frame toward the rear. Mark the position of the nut. Hold the adjustment nut with a 13mm wrench and loosen the cable to create some slack.



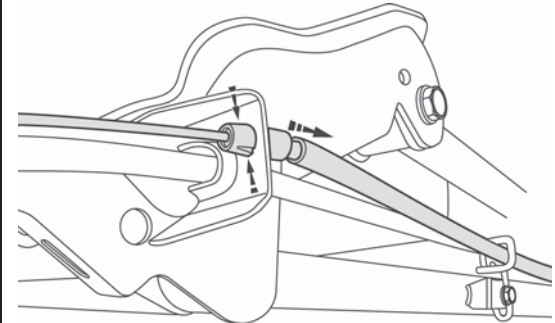
2 Install Brake Cable Bracket - Quad Cab Only

Once you have enough slack, detach the brake cable just behind the brake cable adjustment nut.



3 Install Brake Cable Bracket - Quad Cab Only

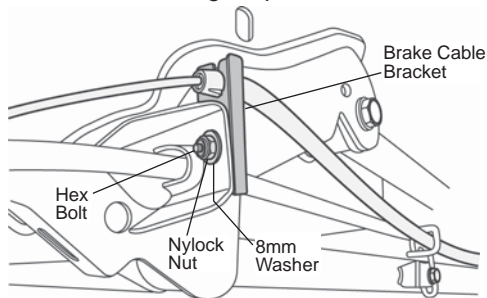
Depress the locking tabs on the brake cable guide and slide it out through the hole in the frame. Unthread the brake cable from the frame mount.



4 Install Brake Cable Bracket - Quad Cab Only

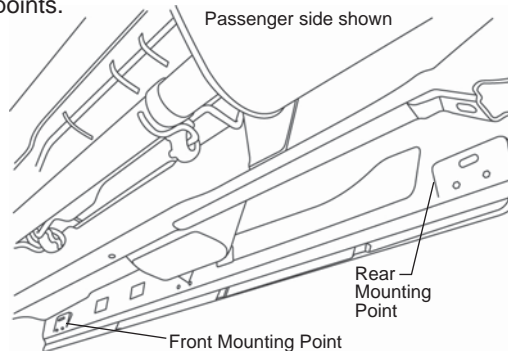
Slide the brake cable guide into the Brake Cable Bracket provided in the parts kit. Use the Hex Bolt, 8mm Washer and Nylock Nut from the kit to mount the Brake Cable Bracket to the frame.

Reattach the brake cable and adjust the brake cable adjustment nut to its original position.



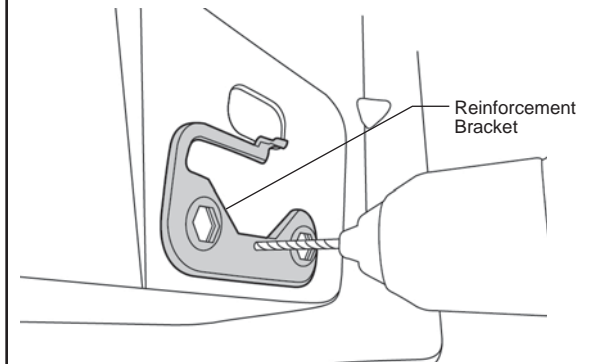
5 Locate Linkage Mounting Points

Locate the mounting points for the Idler and Motor Linkages. The Motor Linkage mounts in the front and the Idler Linkage mounts in the rear. Remove the tape from the sill drain hole at both mounting points.



6 Install Reinforcement Bracket

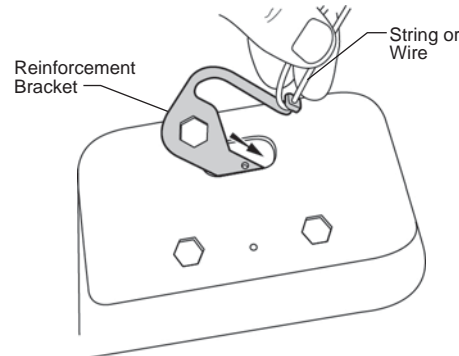
Set a Reinforcement Plate in place and position with the Rivet Nuts. Use the bracket as a template to drill a 1/8" hole.



PowerBoard® – Installation Instructions

7 Install Reinforcement Bracket

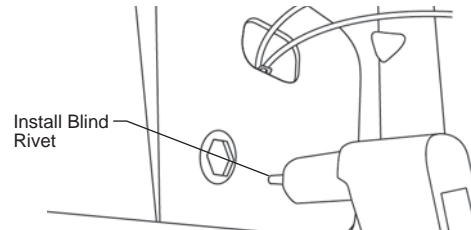
Once the hole is drilled, insert a piece of string or wire through the hole in the Reinforcement Bracket. Set the bracket into position.



8 Install Blind Rivet

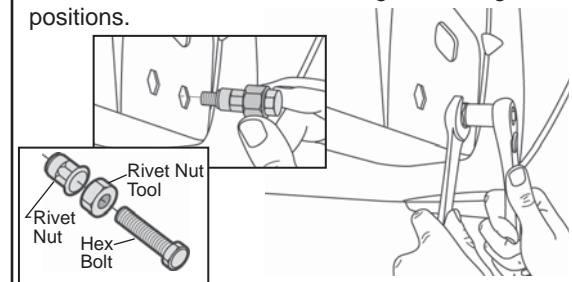
Set the Rivet Nuts into place for alignment. Make sure the Reinforcement Bracket is flush to the body of the vehicle. Insert the Blind Rivet through the hole in the Reinforcement Bracket and secure in place. When the rivet is installed, remove the string or wire from the bracket.

NOTE Make sure the Reinforcement Bracket is flush with the body before securing Blind Rivet.



9 Install Rivet Nuts

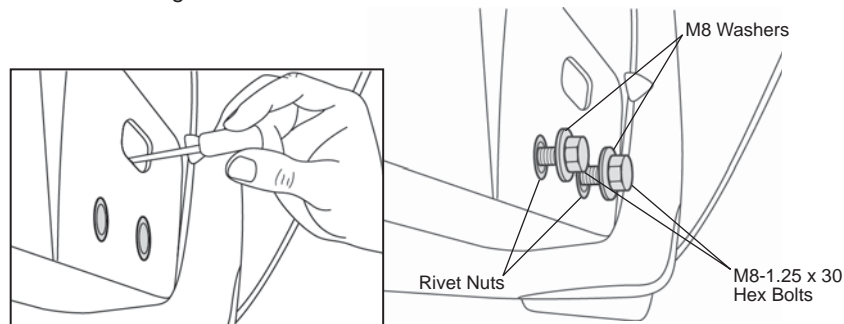
Assemble a Hex Bolt, Rivet Nut Tool and Rivet Nut. Place the assembly into the cutout in the sill. Hold the Rivet Nut Tool with a 19 mm wrench and tighten the bolt until the Rivet Nut deforms and secures to the sheet metal (15 ft. lbs.). Hold the Rivet Nut Tool with a wrench and remove the bolt and tool. Repeat for all Rivet Nuts in the four linkage mounting positions.



10 Secure Reinforcement Bracket

Once the Rivet Nuts are in place, use a screwdriver to push the tab on the Reinforcement Bracket back into the hole to avoid interference with the Linkage Mount.

Install M8-1.25 x 30 Hex Bolts and Washers in the Rivet Nuts. Leave about 1/2" of thread showing. Make sure that the M8 Washers are flush to the bolt head.

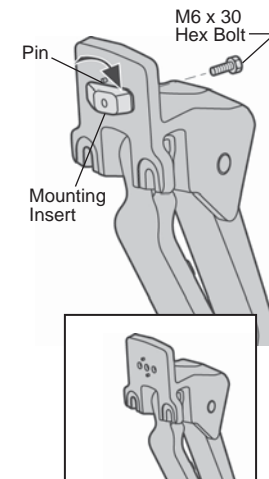


11 Orient Mounting Insert on Linkage

Vehicles except Quad Cab: Tap a Roll Pin in the small upper hole in the Linkage. Hold the Linkage firmly and use an M6 x 30 Hex Bolt to install the Mounting Insert in the center hole in the Linkage. Make sure the insert is oriented properly.

Quad Cab Idler Linkages Only: Install the Mounting Insert in the rear hole and tap a Roll Pin in the small lower hole.

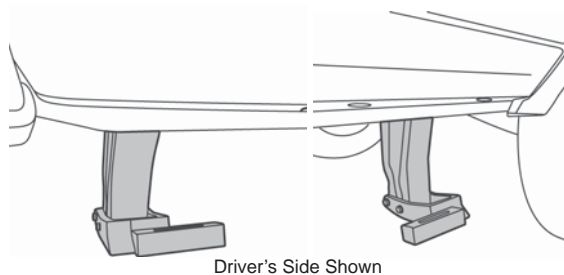
All other applications: Tap a Roll Pin in both small holes.



PowerBoard® – Installation Instructions

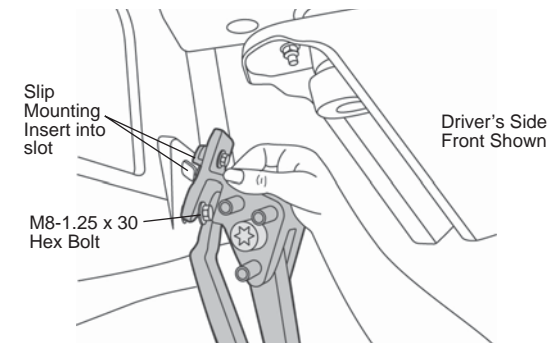
12 Orient Linkages

Orient the Linkages on the vehicle with the Idler Linkages to the rear and the Motor Linkages to the front. The feet on the Linkages should face each other on each side of the vehicle.



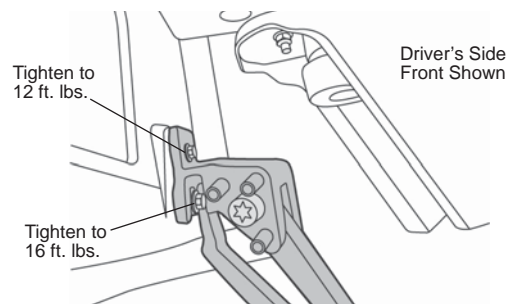
13 Install Linkages

Retract the Linkage part way and make sure the Mounting Insert is in the proper position. Tilt the Linkage and slide the mounting slots over the bolts installed in Step 7. Rotate the Linkage until the Mounting Insert slips into the slot in the sheet metal.



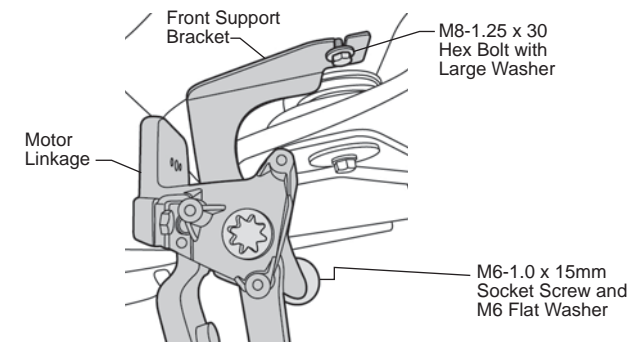
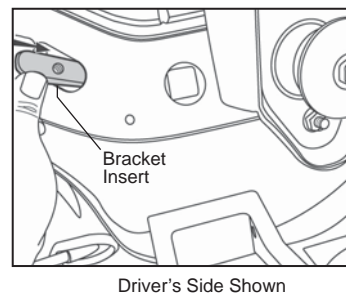
14 Install Linkages

Use a 10mm wrench to tighten the M6 Flange Hex Bolt to 12 ft. lbs. Do not allow the bolt to rotate counter-clockwise which may disengage the Mounting Insert. Then tighten the lower Hex Bolts to 16 ft. lbs. Repeat for all Linkages



15 Install Front Support Bracket

Slide a Bracket Insert into the access hole in the body support member above the front Motor Link. Push it forward and over to the hole next to the body mount. Thread an M8-1.25 x 30 Hex Bolt with a Large Washer into the insert. Hook the Left Front Support Bracket over the Large Washer and attach it to the bottom front and outboard bosses and on the Motor Linkage with the M6-1.0 x 15mm Socket Screws and M6 Flat Washers. Tighten all fasteners and repeat on other side.

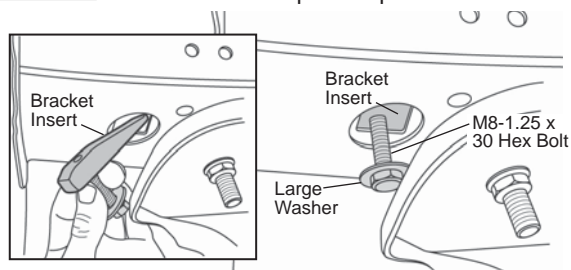


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16 Install Bracket Insert

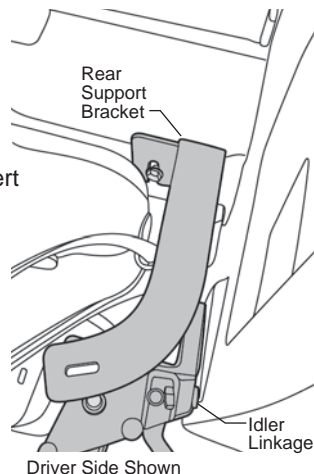
Thread an M8-1.25 x 30 Hex Bolt and Large Washer into a Bracket Insert. Slide the Bracket Insert assembly into the body support member above the Idler Linkage. Orient the Bracket Insert with the long end pointing toward the center of the vehicle. Leave enough threads showing to install the Support Bracket.

NOTE The Support Bracket is not used on Mega Cab vehicles. Skip to Step 19.



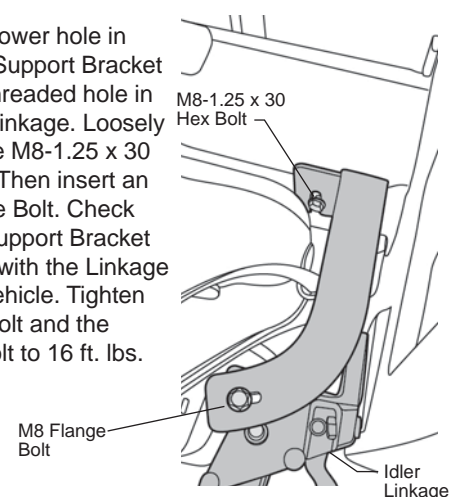
17 Install Rear Support Bracket

Slide the slotted end of the Rear Support Bracket over the M8-1.25 x 30 Hex Bolt and Large Washer from the Bracket Insert Assembly. The lower part of the bracket should rest against the front of the Idler Linkage.



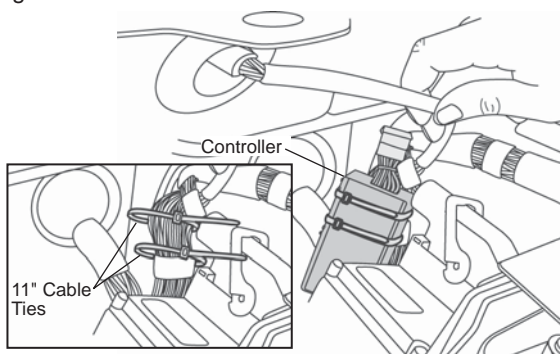
18 Secure Rear Support Bracket

Align the lower hole in the Rear Support Bracket with the threaded hole in the Idler Linkage. Loosely tighten the M8-1.25 x 30 Hex Bolt. Then insert an M8 Flange Bolt. Check that the Support Bracket is square with the Linkage and the vehicle. Tighten the Hex Bolt and the Flange Bolt to 16 ft. lbs.



19 Install Controller

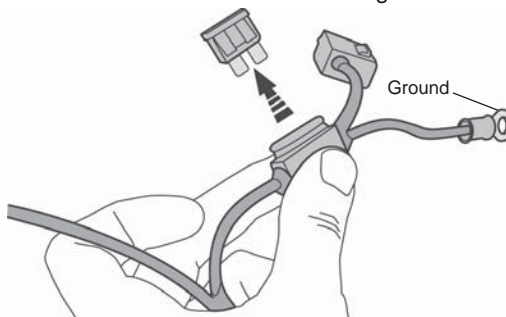
Loosely wrap 11" Cable Ties around the large bundle of wires behind the battery in engine compartment. Slide the Controller through the Cable Ties and tighten.



! WARNING Remove the fuse from the Wiring Harness.

20 Remove Fuse from Wiring Harness

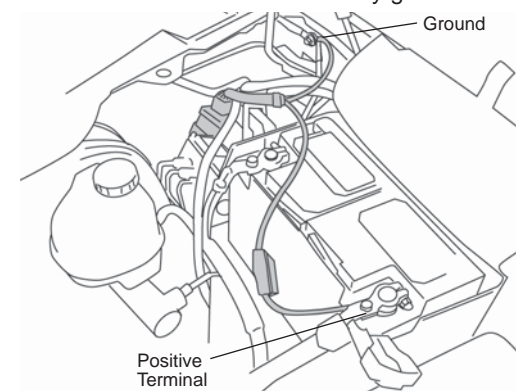
Remove the fuse from the Wiring Harness. Failure to do so could result in severe electrical shock which could harm the installer and/or damage the vehicle.



21 Attach Power Leads

Attach the Wiring Harness to the Controller.

Connect the red power lead to the positive battery terminal and black lead to the body ground.



PowerBoard® – Installation Instructions

22 Wiring to Door Ajar Wires: Important Notes

2013 - Current RAM 1500 vehicles: Steps 23 - 26

2009 - 2012 RAM 1500 vehicles: Steps 27 - 31

2010 - Current RAM 2500/3500 vehicles:
Steps 27 - 31

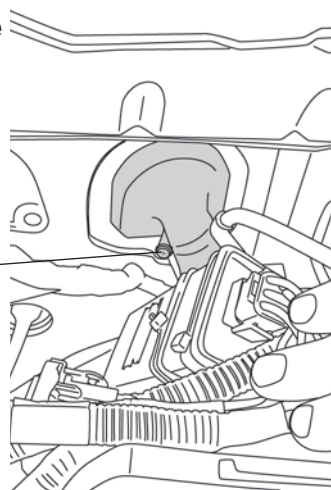
Vehicle	2013 RAM 1500	2009 - 2012 RAM 1500 2010 - Current RAM 2500/3500
Location	Under dash on driver's side, on white connector panel, located on three lower connectors.	Driver's side front corner of engine compartment, on underside of fuse panel, located on a single connector.

2013 - Current RAM 1500

23 Cut Hole

Locate the rubber wire boot on the driver's side firewall. Cut a small hole for the trigger wires.

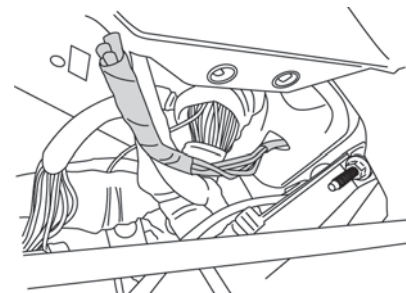
Cut a slit in boot



2013 - Current RAM 1500

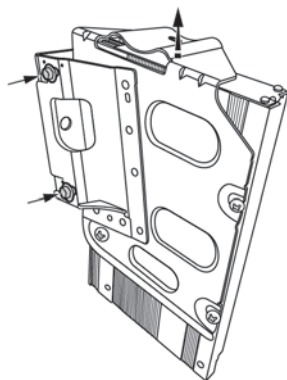
24 Slide Trigger Wires through Firewall

Tape the leading end of the wires together. Coat with silicon sealant. Slide the ends of the wire bundle through the rubber boot into the cabin. The wires will come out just above and to the left of the brake pedal.



25 Access Connector Panel

Some vehicles have a cover that will need to be removed to access the white connector panel inside the cab, against the driver side firewall, and behind the emergency brake pedal. Remove the three fasteners shown to remove the cover bracket.



2013 - Current RAM 1500

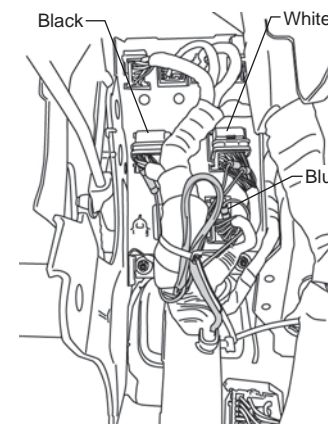
26 Locate Door Ajar Wires

Locate white connector panel against the driver's side firewall, behind the e-brake pedal. Locate the three (3) connectors shown below. Connect trigger wires as shown in chart.

NOTE

There may be two (2) Violet/Grey wires, but only one (1) will allow the steps to be triggered by the front passenger door.

Door Ajar Wire	Color Wire/Stripe	Connector Color
Driver Front	Violet	White
Passenger Front	Violet / White	White
Driver Rear	Violet / Gray	Blue
Passenger Rear	Violet / Yellow	Black



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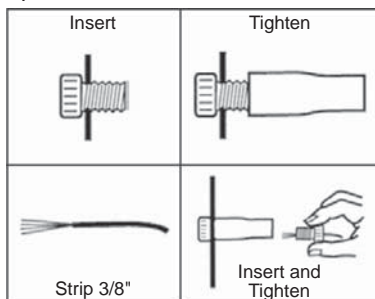
2013 - Current RAM 1500

27 Splice Trigger Wires into Door Ajar Wires

The trigger wires are color coded to match the Door Ajar wires. Use the Posi-Taps™ to splice the trigger wires into the matching Door Ajar wires.

Proceed to Step 32.

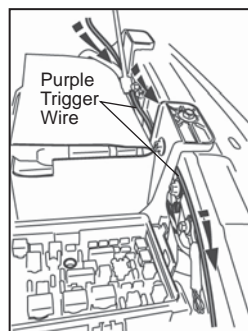
Posi-Tap™
Instructions



2009 – 2012 RAM 1500 2010 – Current RAM 2500/3500

28 Route Trigger Wires

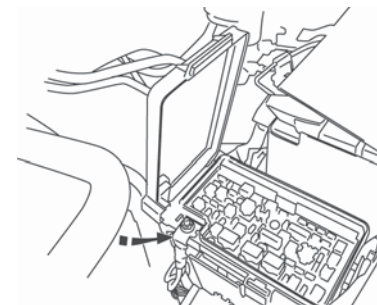
Route the purple Wire Harness trigger wires down to the fuse box in front of the battery.



2009 – 2012 RAM 1500 2010 – Current RAM 2500/3500

29 Route Trigger Wires

Use a 13mm wrench to remove the fuse box lid and power lead. Depress the release tabs and lift the fuse box to access the bottom.



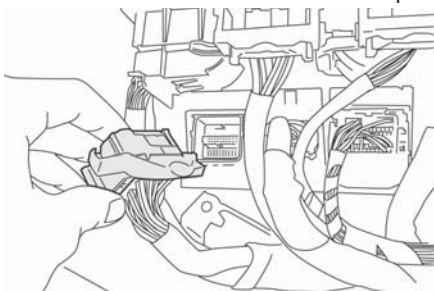
2009 – 2012 RAM 1500 2010 – Current RAM 2500/3500

30 Disconnect Fuse Box

Locate the black connector with the gray latch, labeled "G" on the bottom of the fuse box. Disconnect it.

NOTE

If you do not have this connector on the bottom of the fuse box follow steps 23-27.



2009 – 2012 RAM 1500 2010 – Current RAM 2500/3500

31 Wiring

Locate the vehicle's Door Ajar wires on the connector from Step 29.

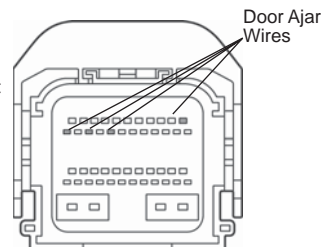
NOTE

If you do not have this connector on the bottom of the fuse box follow steps 23-27.

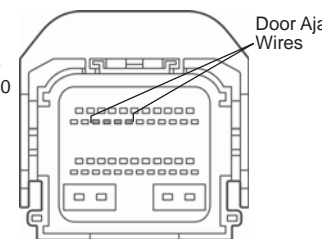
Cavity	Color	Function
11	Violet	Driver Door Ajar Switch Sensor
12	Violet / White	Passenger Door Ajar Switch Sensor
16	Violet / Gray	Driver Rear Door Ajar Switch Sensor
14	Violet / Yellow	Passenger Rear Door Ajar Switch Sensor

Color	Function
Violet	Driver Door Ajar Switch Sensor
Violet / White	Passenger Door Ajar Switch Sensor
Violet / Gray	Driver Rear Door Ajar Switch Sensor
Violet / Yellow	Passenger Rear Door Ajar Switch Sensor

Model Year
2011 – Current



Model Year
2009 – 2010

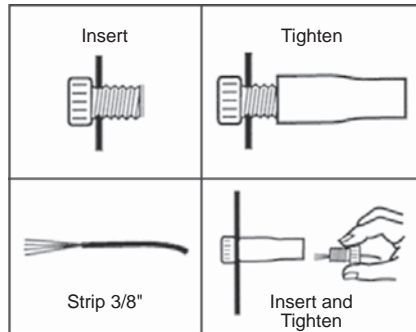


PowerBoard® – Installation Instructions

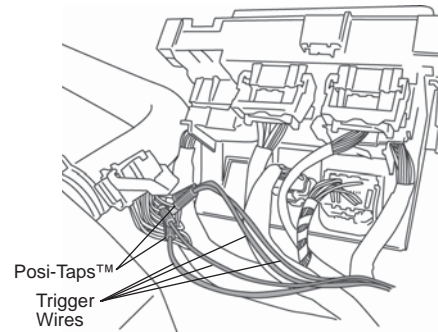
2009 – 2012 RAM 1500
2010 – Current RAM 2500/3500

32 Splice Trigger Wires into Door Ajar Wires

The trigger wires are color coded to match the Door Ajar wires. Use the Posi-Taps™ to splice the trigger wires into the matching Door Ajar wires.



Posi-Tap™ Instructions

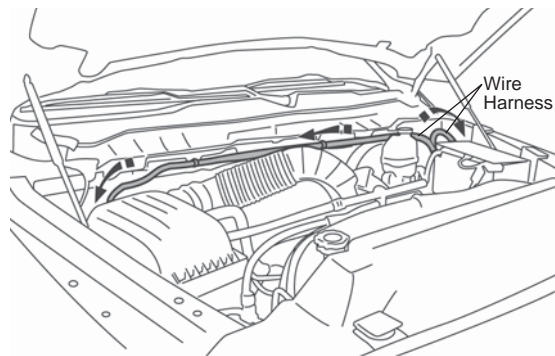


33 Reconnect Fuse Box

Replace the connector removed in Step 16. Replace the wire bundles and fuse box.

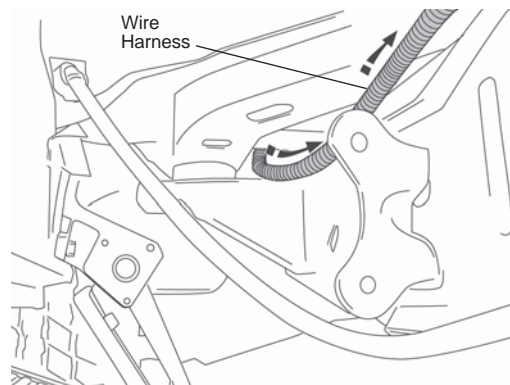
34 Route Wiring Harness

Route the long leg of the Wire Harness across the engine compartment to the passenger side wheel well. Route the short leg to the driver's side. Secure them with 7" Cable Ties.



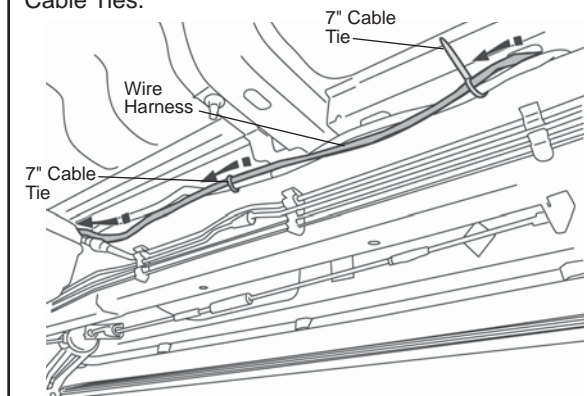
35 Route Wiring Harness – Driver's Side

On the driver's side route the Wire Harness down along the underside of the floor and the frame. Secure it with 7" Cable Ties.



36 Route Wiring Harness – Driver's Side

Continue to route the Wire Harness along the inside and top of the driver's side frame. Secure it with 7" Cable Ties.

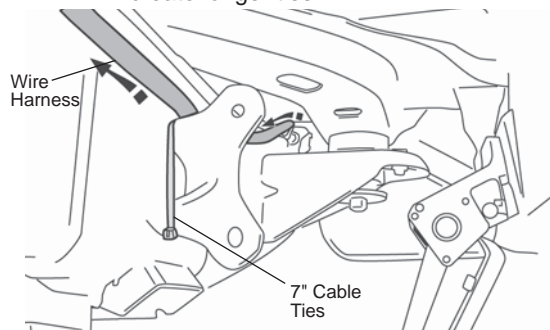


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37 Route Wiring Harness – Passenger's Side

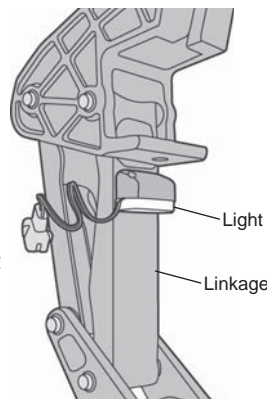
Route the Wire Harness down to the wheel well on the Passenger side and along the top of the frame rail. Secure it with 7" Cable Ties.

NOTE You may have to combine Cable Ties to create longer ties.



38 Install Lights

Clean the outboard surface of the of the Linkage below the bottom mounting bolt. Peel 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 loose wires with Cable Ties.

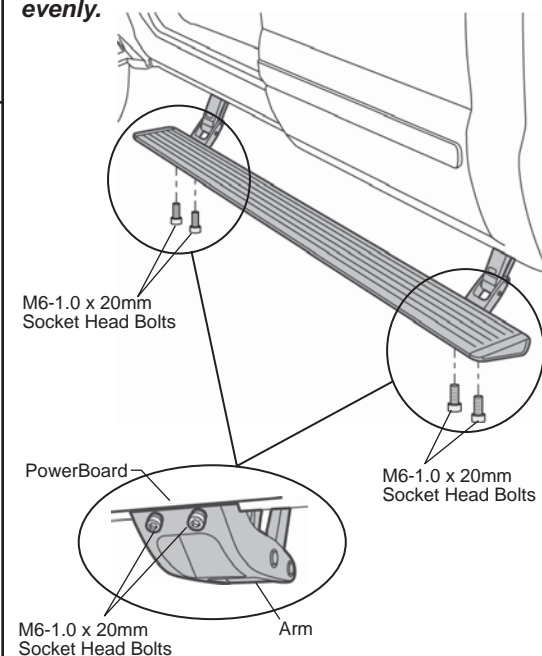


39 Install Running Boards

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

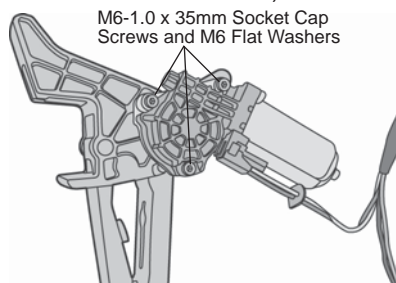
Make sure the board moves up and down freely by hand. If it binds, loosen the linkage to body attachment bolts and adjust the linkage position until the boards move freely. **Do not tighten the bolts at this time.**

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.*



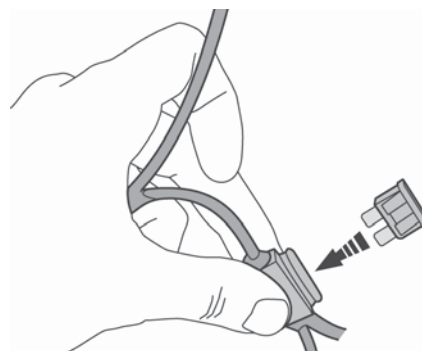
40 Install Motor

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 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.).



41 Reinstall Fuse

Reinstall the fuse in the harness.



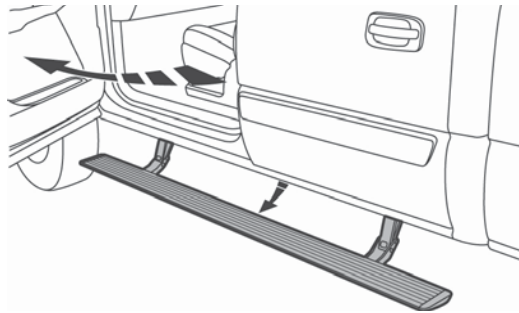
PowerBoard® – Installation Instructions

42 Test Doors and PowerBoards®

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

Cycle boards several times and then fully tighten all bolts.

Reinstall any remaining trim panels.



PowerBoard® Troubleshooting

Issue:

- Possible cause

Boards do not operate:

- Connected to incorrect vehicle wire
- Wire connections not secure
- Fuse burned
- 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
- Bad ground
- Bad battery connection

Boards operate randomly:

- Wire connections not secure
- 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

PowerBoard® Service Tips

Confirming PowerBoard® is functional-blue controller:

To test if the blue controller (496.11), 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.

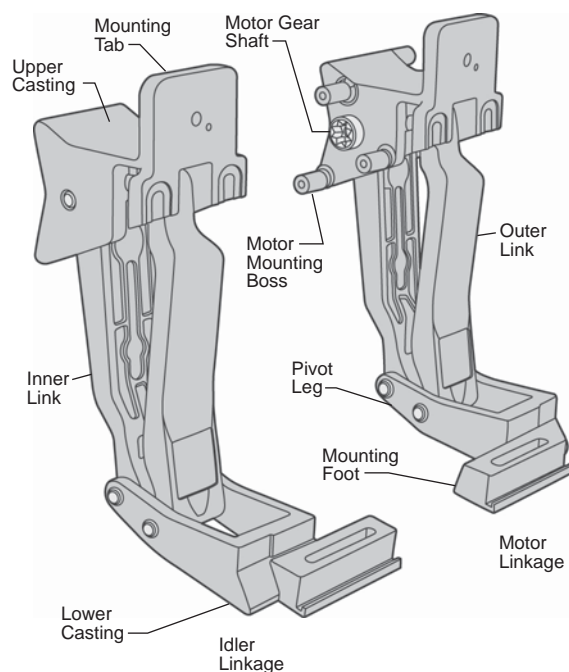
Boards don't operate correctly when connected to wires identified in instructions:

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 door-ajar 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.

PowerBoard® – Installation Instructions

Linkage Component Identification



Care and Maintenance

The step pad surface and linkage arms should be washed with mild soap and water using a soft brush or sponge to dislodge any mud, dirt or accumulated road grime. Rinse with fresh water and avoid spraying the motors directly. After it is dry, lubricate the hinge with 3-IN-ONE Oil.

To prevent slipping, avoid applying waxes, lubricants or protectants like Armor All® to the step surface.

Attention!

PowerBoard™ SHOULD ALWAYS BE STOWED IN THE RETRACTED POSITION WHEN DRIVING.

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