Installation Instructions
PowerBoard®
Automatic Retracting Running Board

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**Installation Time**

<table>
<thead>
<tr>
<th>INSTALLATION TIME</th>
<th>SKILL LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Hours</td>
<td>4 - Difficult</td>
</tr>
</tbody>
</table>

**Tools**

- Tape Measure
- Wrench
- Socket
- Ratchet
- Extension
- 10mm, 13mm and 19mm
- 10mm and 13mm
- Wire Cutters
- Wire Stripper
- Allen Wrench
- Hammer
- Flat-Head Screwdriver
- 5mm
- Safety Glasses

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

**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

**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.
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.
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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 counterclockwise 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.

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

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

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

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.

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.

### Door Ajar Wire
<table>
<thead>
<tr>
<th>Color Wire/Stripe</th>
<th>Connector Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Front</td>
<td>White</td>
</tr>
<tr>
<td>Passenger Front</td>
<td>White</td>
</tr>
<tr>
<td>Driver Rear</td>
<td>Blue</td>
</tr>
<tr>
<td>Passenger Rear</td>
<td>Black</td>
</tr>
</tbody>
</table>
### PowerBoard® – Installation Instructions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>27</strong> Splice Trigger Wires into Door Ajar Wires</td>
<td><strong>28</strong> Route Trigger Wires</td>
<td><strong>29</strong> Route Trigger Wires</td>
</tr>
<tr>
<td>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.</td>
<td>Route the purple Wire Harness trigger wires down to the fuse box in front of the battery.</td>
<td>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.</td>
</tr>
</tbody>
</table>

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

#### 31 Wiring
Locate the vehicle’s Door Ajar wires on the connector from Step 29. If you do not have this connector on the bottom of the fuse box follow steps 23-27.

#### Color Function

<table>
<thead>
<tr>
<th>Model Year</th>
<th>Color</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 – Current</td>
<td>Violet</td>
<td>Driver Door Ajar Switch Sensor</td>
</tr>
<tr>
<td>2010 – Current</td>
<td>Violet / White</td>
<td>Passenger Door Ajar Switch Sensor</td>
</tr>
<tr>
<td>2009 – 2010</td>
<td>Violet / Gray</td>
<td>Driver Rear Door Ajar Switch Sensor</td>
</tr>
<tr>
<td>2009 – 2010</td>
<td>Violet / Yellow</td>
<td>Passenger Rear Door Ajar Switch Sensor</td>
</tr>
</tbody>
</table>
## PowerBoard® – Installation Instructions

### 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.

<table>
<thead>
<tr>
<th>Insert</th>
<th>Tighten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strip 3/8&quot;</td>
<td>Insert and Tighten</td>
</tr>
</tbody>
</table>

**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.
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. 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.

39 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.

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.

42 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.
**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.

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<table>
<thead>
<tr>
<th><strong>PowerBoard® Troubleshooting</strong></th>
<th><strong>PowerBoard® Service Tips</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Issue:</strong></td>
<td><strong>Confirming PowerBoard® is functional-blue controller:</strong></td>
</tr>
<tr>
<td>Possible cause</td>
<td>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.</td>
</tr>
<tr>
<td>Boards do not operate:</td>
<td>Boards don’t operate correctly when connected to wires identified in instructions:</td>
</tr>
<tr>
<td>• Connected to incorrect vehicle wire</td>
<td>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.</td>
</tr>
<tr>
<td>• Wire connections not secure</td>
<td>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.</td>
</tr>
<tr>
<td>• Fuse burned</td>
<td></td>
</tr>
<tr>
<td>• Factory door-ajar circuit inoperable</td>
<td></td>
</tr>
<tr>
<td>Board creaks or squeaks during operation:</td>
<td></td>
</tr>
<tr>
<td>• Gear shaft wedge bolt is loose</td>
<td></td>
</tr>
<tr>
<td>• Loosen mounting bracket and board attachment screws. Adjust linkages so they are parallel to each other and the noise is gone. Tighten all fasteners.</td>
<td></td>
</tr>
<tr>
<td>Intermittent operation:</td>
<td></td>
</tr>
<tr>
<td>• Wire connections not secure</td>
<td></td>
</tr>
<tr>
<td>• Bad ground</td>
<td></td>
</tr>
<tr>
<td>• Bad battery connection</td>
<td></td>
</tr>
<tr>
<td>Boards operate randomly:</td>
<td></td>
</tr>
<tr>
<td>• Wire connections not secure</td>
<td></td>
</tr>
<tr>
<td>• Connected to incorrect vehicle wire</td>
<td></td>
</tr>
<tr>
<td>Board stays down all the time and can be moved by hand:</td>
<td></td>
</tr>
<tr>
<td>• Gear shaft wedge screw is missing or loose</td>
<td></td>
</tr>
<tr>
<td>Board shakes and or shutters during operation:</td>
<td></td>
</tr>
<tr>
<td>• Bad ground</td>
<td></td>
</tr>
<tr>
<td>• Wire connections not secure</td>
<td></td>
</tr>
<tr>
<td>• Bad battery connection</td>
<td></td>
</tr>
<tr>
<td>One or more doors operate the board and other do not:</td>
<td></td>
</tr>
<tr>
<td>• Wire connections not secure</td>
<td></td>
</tr>
</tbody>
</table>
**PowerBoard® – Installation Instructions**

**Linkage Component Identification**

- **Upper Casting**
- **Motor Gear Shaft**
- **Mounting Tab**
- **Motor Mounting Boss**
- **Outer Link**
- **Pivot Leg**
- **Mounting Foot**
- **Motor Linkage**
- **Inner Link**
- **Motor Mounting Boss**
- **Idler Linkage**
- **Lower Casting**

**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

**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.