



# **FORD 6.4L POWERSTROKE (2008-10)**

## **VARIABLE VANE EXHAUST BRAKE**

### **Installation Instructions**

**P/N# 2001100**

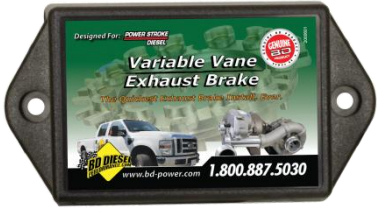

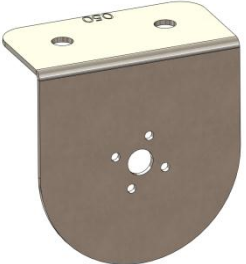

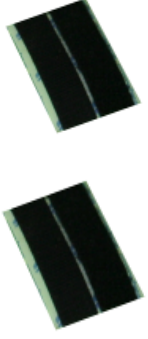



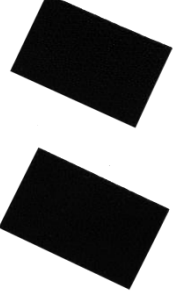
**PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION**

**UNLESS AN EO# IS LISTED, THIS PRODUCT IS LEGAL IN CALIFORNIA FOR RACING VEHICLES ONLY, WHICH MAY NEVER BE USED UPON A HIGHWAY.**

BD Engine Brake Inc.  
Plant Address: 33541 MacLure Rd. Abbotsford, BC, Canada V2S 7W2  
U.S. Shipping Address: 88-446 Harrison St, Sumas, WA 98295 U.S. Mailing Address: P.O. Box 231, Sumas, WA 98295  
Phone: 604-853-6096 | Fax: 604-853-8749 | Internet: [www.bd-power.com](http://www.bd-power.com)

# KIT CONTENTS:

Please check to make sure that you have all the parts listed in this kit **before** you start the disassembly of your truck.

2100020		2000603		1330050	
					
<b>Module</b>		<b>Switch Decal</b>		<b>Switch Bracket</b>	
<b>Qty: 1</b>		<b>Qty: 1</b>		<b>Qty: 1</b>	
1330053	1800060	1300349	1300131	1330052	1330051
					
<b>Alcohol Swab</b>	<b>Velcro</b>	<b>Posi-Tap 12-18awg Black</b>	<b>Cable Ties</b>	<b>Screw</b>	<b>Switch Bracket Velcro</b>
<b>Qty: 1</b>	<b>Qty: 2 X 4"</b>	<b>Qty: 1</b>	<b>Qty: 8</b>	<b>Qty: 2</b>	<b>Qty: 2 x 1.5"</b>

## Tools Required

- Socket 8,10mm / 5/16"
- Drill
- Drill Bit 1/16" & 1/4"
- Wrench 5/16"
- Allen Wrench 1/16"
- Needle Nose Pliers
- Side Cutters
- Blade Screw Driver

## Special Note:

***Do not use position 2 in adverse weather conditions.***

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## Installation

1. Block wheels to secure vehicle and disconnect negative battery cables.  
(Record radio settings for customer before battery disconnect.)

2. Clean the back of the module and top of fuse cover with the supplied alcohol swab. Secure the module to fuse cover using supplied Velcro.



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3. Mount switch. Route harness through firewall and connect to module in engine bay.

### **Mounting Switch with Bracket**

**Velcro:** To mount the switch bracket using the 3M dual lock. Prep both surfaces with the supplied alcohol swab. Then remove backing from dual lock and press firmly, one onto the dash location and one onto the switch bracket mounting surface.

OR

**Screws:** The switch bracket can also be mounted using the supplied self-tapping screws with a 5/16" socket.

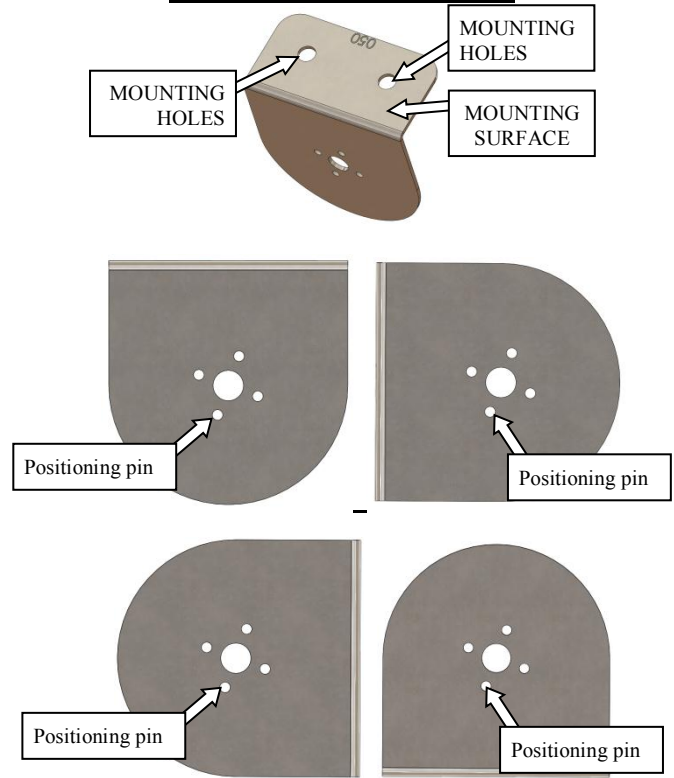
Note the plate can be mounted to the dash in four positions to accommodate any location.

Warning: Before mounting the plate to the dash ensure the area behind the dash is clear.

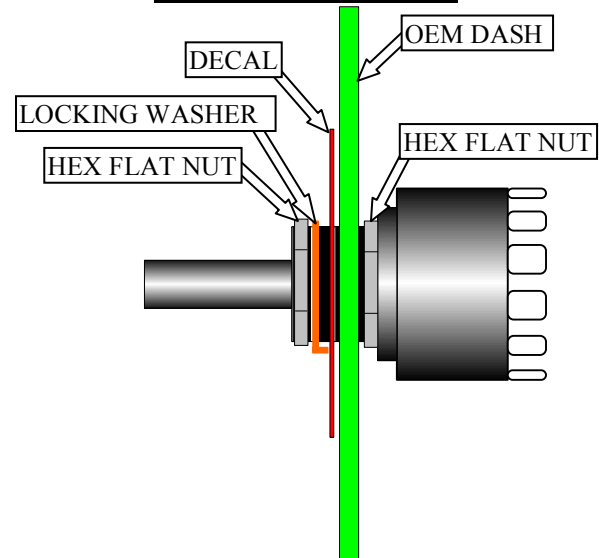
### **Mounting Switch into dash**

Find suitable location on dash to mount switch. Wipe location on dash with swab and place decal to use as a template. Drill 1/4" (center) hole in dash panel and a 1/16" locator hole, then push switch through from behind. Install and tighten nut with 5/16" wrench to secure switch. Place knob on switch, fasten both set screws with 1/16" allen wrench.

#### **Mounting switch with Bracket**



#### **Mounting switch into dash**



**Important:** Check behind panel for proper clearance before drilling.

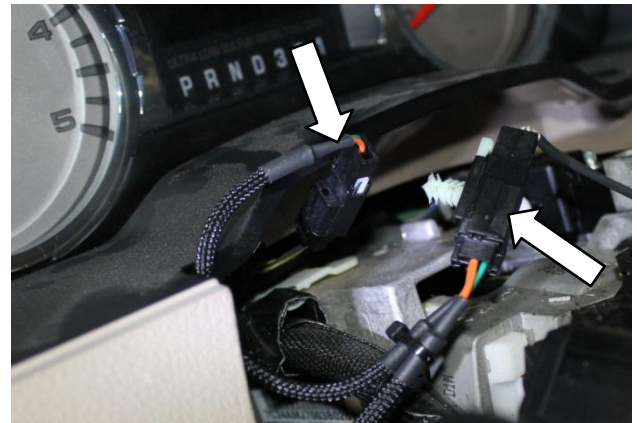
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4. Remove the top cover on steering wheel column, locate and disconnect tow/haul connector. Then insert connectors from BD harness between the OEM connectors. Route harness wire into dash and replace top cover onto steering column.



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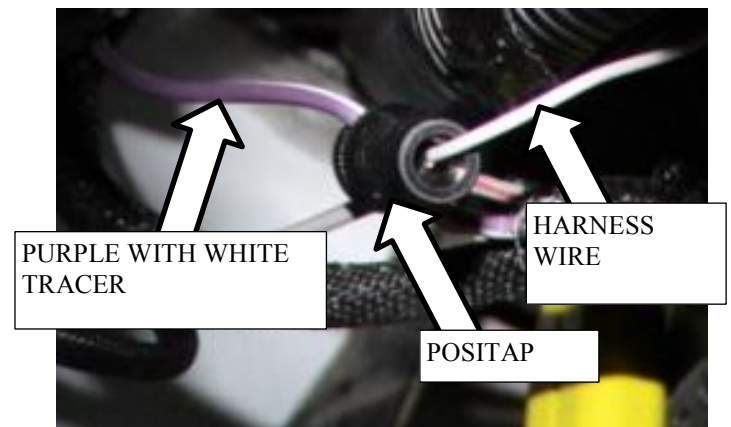
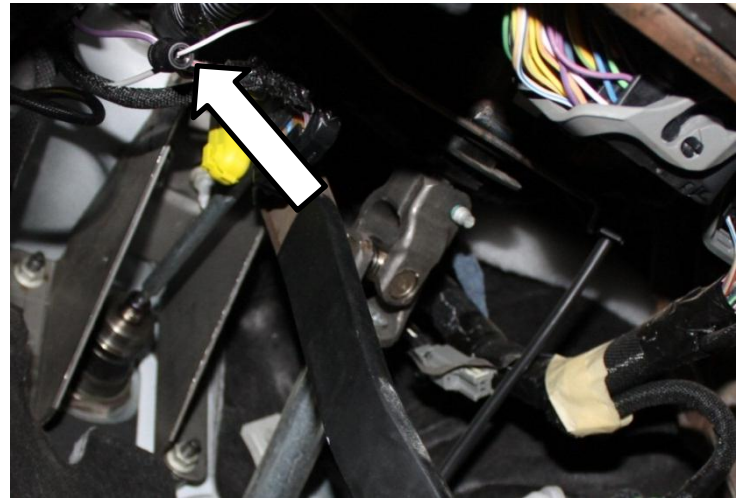
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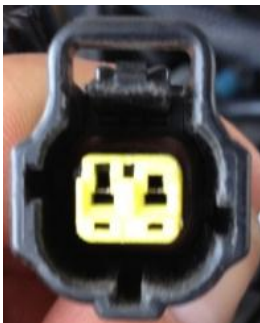
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5. Locate the factory purple w/ white tracer wire that connects to the brake pedal switch. Attach the white wire from the BD harness to it using one of the supplied posi-tap. Route harness through firewall (same location as the rotary switch) and connect to module in engine bay.



6. Route harness from module under power steering lines and over the brake hydro booster.
7. Disconnect master cylinder pressure switch. Connect harness to switch and OE plug.

**Socket****Plug**

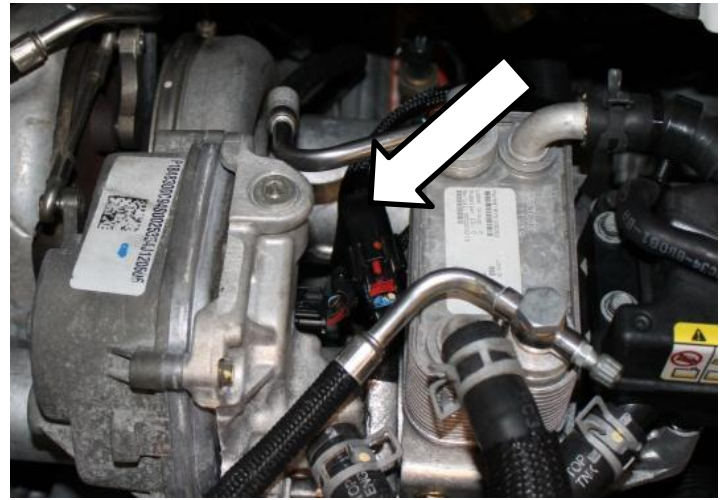
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8. Lastly disconnect turbo vane actuator. Connect BD harness to actuator and OE plug.



9. Secure wiring harness away from moving parts and heat sources using the supplied cable ties.
10. Reconnect negative battery terminals and ready vehicle for road test.
11. Road test vehicle to verify operation of VVB.

Position 0 = Stock operation ( Counter clock wise )

Position 1 = Vane braking only on Deceleration ( Center ) Light Braking Assist

Position 2 = Vane braking with downshift ( Clockwise ) Heavy Braking Assist

#### **General Notes:**

- On long descents with the exhaust brake engaged you may hear a momentary release/relief or discharge of pressure. No need to worry it is the EGR valve cycling briefly, which is a normal operational characteristic.
- If the main switch or main power is disconnected the vehicle will revert back to stock and the brake will not function.

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