



## **Toggle Switch Installation Instructions for B&M Ratchet Shifter**

Thank you for choosing our toggle switch design for your B&M Shifter. The installation is very straight forward and much simpler than installing the actual B&M Shifter. So, if you have made it this far, relax and know that it is all downhill from here. We recommend you read through these directions entirely before starting the installation. If you have any questions or if there is any problem with your installation kit please contact us!

### **Tools and Materials Required:**

Wire strippers  
Crimping tool for insulated connectors or a soldering iron  
Electrical tape  
Heat gun or hair dryer

### **Included with the kit:**

All B&M components (Refer to the B&M Instruction manual for the full list)  
2 butt connectors  
2 sections of heat shrink  
1 ring terminal

**Switch Position:** UP = OFF, DOWN = ON

### **Step 1:**

Verify that the ignition is set to the "OFF" position.

### **Step 2:**

Decide what switches you would like to assign to overdrive and lockup. Then refer to the following table for their corresponding wire color. We like to set lockup as the top switch and overdrive as the lower switch.

<b>TOP SWITCH (RED)</b>
<b>BOTTOM SWITCH (BLUE)</b>
<b>GROUND (BLACK)</b>

**Step 3:**

Run the black wire to a location with a known good chassis ground. We recommend using an existing ground terminal under the drivers' knee bolster. Cut the wire to length. Strip the end and crimp the supplied ring terminal to the wire. Secure the ring terminal to a good chassis ground.

Now run the blue and red wires down to the 8-pin connector on the driver's side of the transmission.

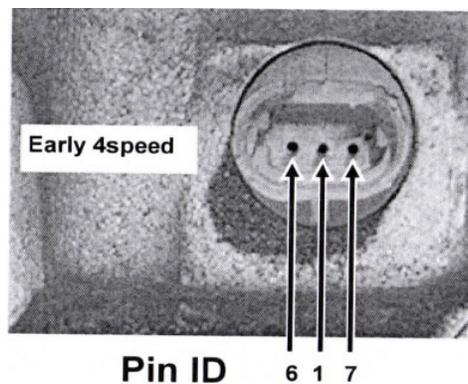
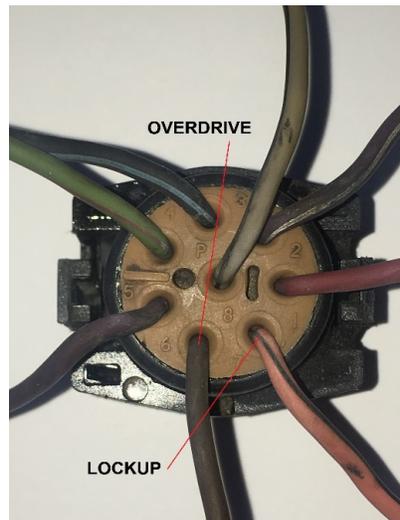
**Step 4:**

Unplug the 8 or 3 pin harness from the transmission and clean off the back side of the connector so you can read the pin numbers. Use the following image to find the lockup and overdrive pins. Do not go by wire color as they have changed over the years.

**Pin 1 is 12V ignition on power (You must run independent 12-volt ignition on power supply \*)**

**Pin 6 is Overdrive**

**Pin 7 is Lockup**



**\* This is required because the governor pressure solenoid and transducer are disabled in a full manual valve body, so the truck will no longer supply power to the existing pin 1 line.**

Cut one of the wires to 10 inches and the other to 12. That way the butt connectors are not stacked on top of each other and they will fit nicely in the supplied wire loom.

**Step 5:**

Take the two wires that were cut from the 8-pin connector going to the trucks engine bay and fold them (180 degrees) over themselves, by about an inch. Now take two pieces of the supplied heat shrink and run them over the folded ends of the two wires and shrink them, creating a water tight seal. You can now stuff these wires back in the trucks wire loom and forget about them as they are no longer used. (if truck was originally automatic and has existing wiring harness)

**Step 6:**

Strip the ends of the red and blue wires from the table in **Step 2**. Crimp one end of an insulated butt connector to the red wire and one end of a second butt connector to the blue wire.

Now crimp the desired overdrive wire to the wire cut at pin 6. Do the same for the desired lockup wire to pin 7.

Heat shrink the insulated butt connectors and re loom the wires such that the smaller loom feeds into the bigger 8 pin connector loom. Secure this "tee" with electrical tape.

**Step 7:**

Raise the rear axle off of the ground and secure on jack stands. Start the truck and shift into 3<sup>rd</sup> gear. Verify first that overdrive works, now verify lockup works.

If there is a problem, check all of your connections thoroughly. If you are sure everything is connected correctly and you are still having problems, please give us a call and we will be more than happy to help you.

**FINISHED!**

Enjoy your new switches and thank you again for choosing Muldoon's Diesel Performance!