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## TIPM Test/Bypass Cable for 2007-2014 Dodge/Chrysler/Jeep/VW Vehicles

Thank you for your purchase of our TIPM Test/Bypass cable. Please visit our website for the current list of applicable vehicles (new models are regularly added) and contact us with any questions you may have.

### Cable Capabilities:

- Checks the TIPM-mounted fuel pump relay for proper functionality via LED feedback. This is effective if your vehicle fails to start due to a defective fuel pump relay or the battery drains due to a fuel pump relay that is stuck in the on position.
- Checks fuel pump functionality. Service departments often claim that you have a bad fuel pump when the TIPM fuel pump relay is the true problem. With the vehicle turned off, our cable can power your fuel pump and you'll be able to hear it pumping
- Bypasses a bad fuel pump relay, allowing most vehicles that will not start to work properly. It works for vehicles that won't start (fuel pump relay won't pass 12 VDC) or those that power the fuel pump when the vehicle is off (fuel pump stuck on).

### Cable Limitations:

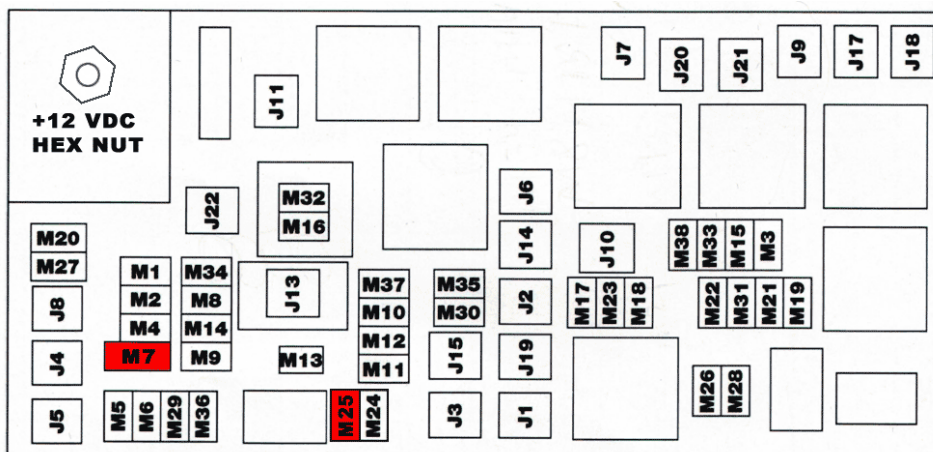
- No remote start on some vehicles due to the vehicle disabling the power adapter circuit (M7) used to power the fuel pump (M25) in bypass mode.
- In bypass mode, it is unknown how it will affect safety mechanisms that shut off power to your faulty fuel pump relay during a crash.

**NOTE:** The LED end of the cable normally plugs into M25. The non-LED end plugs into M7. Visit [www.VerticalVisions.com](http://www.VerticalVisions.com) for a TIPM testing/bypass cable video showing all tests listed below.

If you'd prefer a permanent fix, we repair TIPMs with 24 hour service and a one year warranty. Simply send us your TIPM and we'll replace your faulty fuel pump relay at the circuit board level. We'll also refund the full price of your TIPM test/bypass cable if you send it back along with your TIPM repair order. See our website for further information.



TIPM disassembled - Faulty relay shown circled in red



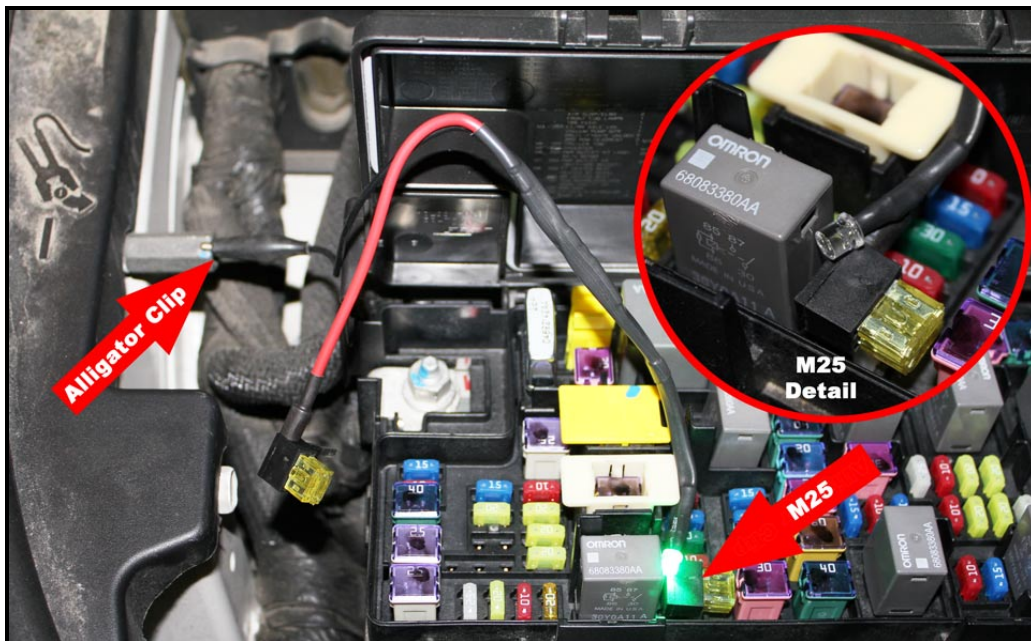
TIPM fuse locations (M7 and M25) are shown in red for use with our test/bypass cable. M7 consists of three terminals (far right position provides 12VDC when vehicle is off while the far left position provides 12VDC only when the key is on).

### 1) How To Test The LED and Ground Connection On Your Bypass Cable

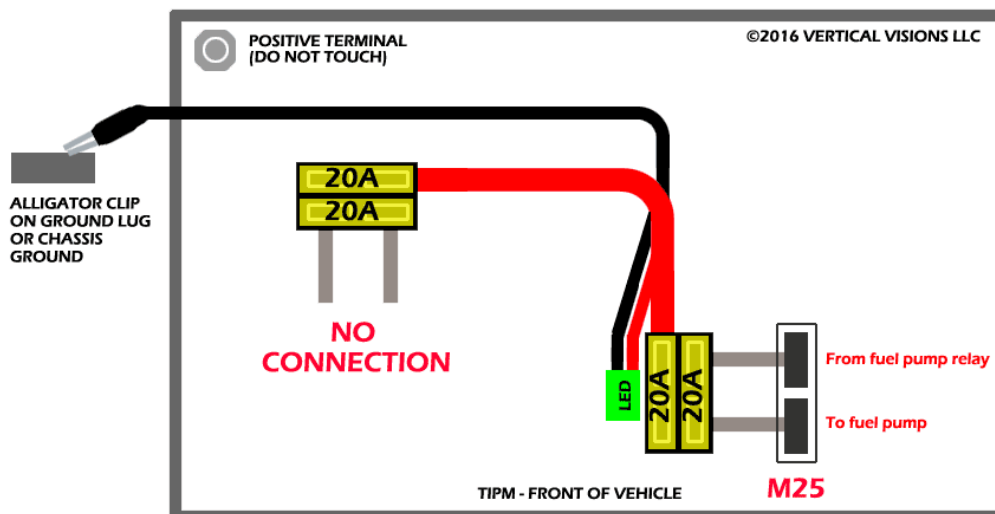
- A proper ground connection and functioning LED is critical for accurate testing.
- Turn vehicle off and open your hood.
- Connect the alligator clip to any ground lug or chassis ground connection.
- Remove the 20A fuse M7. Verify that M7 is your power adapter (cigarette lighter).
- Insert the M7 end of our test/bypass device into the **FAR RIGHT** slots of the M7 fuse slot.
- The green LED should light up. If not lit, confirm a proper alligator clip ground connection to bare metal.

## 2) How To Test Your Fuel Pump Relay

- Turn vehicle off
- Open hood and remove 20A fuel pump fuse M25. Verify that M25 is your fuel pump slot.
- Insert the M25 end of our test/bypass device containing the LED into the M25 slot of your fuse box.
- Connect the alligator clip to any ground lug or chassis ground connection. DO NOT connect the alligator clip to the positive terminal hex nut located in the upper left corner of your TIPM.
- If the green LED immediately lights up, your fuel pump relay is stuck in the "on" position and will eventually drain your battery. You can likely hear the gas tank mounted fuel pump operating if in a quiet environment. You'll need a new fuel pump relay. We suggest you pull fuse M25 each time the vehicle is turned off in order to prevent battery drainage until repairs can be made. In the meantime, you can use our test/bypass device to keep your vehicle on the road by using our device in the bypass mode (see details below) while removing the lower 20A fuse under our LED.
- Have someone attempt to start your vehicle while you watch the green LED
- If the vehicle starts and the green LED remains continuously lit, everything is functioning properly.
- If the vehicle starts and the green LED flickers on and off, your fuel pump relay is going bad. My vehicle experienced this type of flickering on and off for approximately 30-60 seconds when first started, but the fuel pump was still able to deliver enough fuel to not starve the engine. After several minutes, the fuel pump relay would work appropriately and the green LED would remain lit. History shows this problem will become worse.
- If the vehicle does not start and the green LED never lights up, your fuel pump relay is bad. See the fuel pump relay bypass section below to start your vehicle until permanent repairs can be made.
- If the vehicle starts and the green LED is not lit, make sure you've connected the alligator clip to ground.

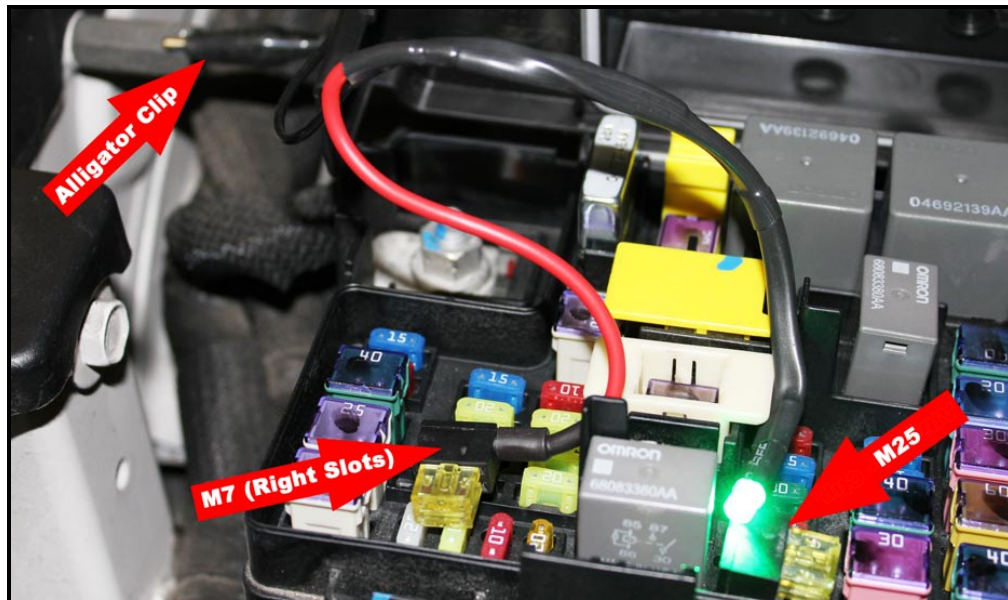


Connect LED end of bypass device to M25 fuse slot, connect alligator clip to ground

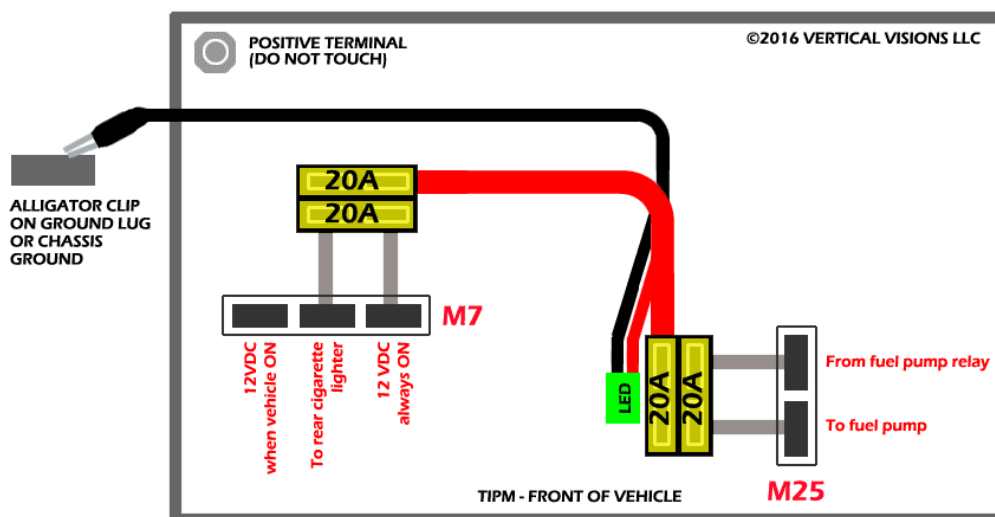


### 3) How To Test Your Fuel Pump

- Turn vehicle off
- Open hood and remove 20A fuel pump fuse M25. Verify that M25 is your fuel pump slot.
- Insert the M25 end of our test/bypass device containing the LED into the M25 slot of your fuse box.
- Remove the 20A fuse M7. Verify that M7 is your power adapter (cigarette lighter).
- Insert the M7 end of our test/bypass device into the **FAR RIGHT** slots of the M7 fuse slot. The M7 fuse slots consist of three terminals (the far right terminals provide 12VDC power when the vehicle is off).
- Connect the alligator clip to any ground lug or chassis ground connection.
- If your fuel pump is working properly, you'll see the green LED light up and hear the gas tank mounted fuel pump operating if you're in a quiet environment.
- If you see the green LED but don't hear the fuel pump, you may have a bad fuel pump.
- If you do NOT see a green LED, but do hear the fuel pump, you likely need to check your alligator clip ground connection.



Connect LED end of bypass device to M25, non-LED end to right slots of M7, and alligator clip to ground



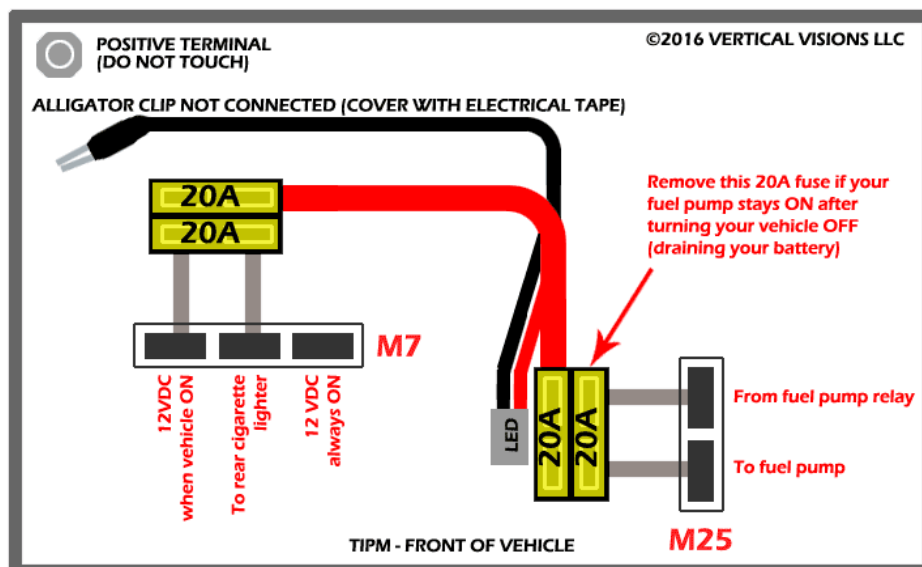
### 4) How To Bypass A Defective Fuel Pump Relay (And Stay On The Road!)

- Turn vehicle off
- Open hood and remove 20A fuel pump fuse M25. Verify that M25 is your fuel pump slot.
- Insert the M25 end of our test/bypass device containing the LED into the M25 slot of your fuse box.
- Remove the 20A fuse M7. Verify that M7 is your power adapter (cigarette lighter).
- Insert the M7 end of our test/bypass device into the **FAR LEFT** slots of the M7 fuse slot. The M7 fuse slots consists of three terminals (the far left terminals provide 12VDC power ONLY when the key is on). This connection provides alternate power directly to the fuel pump, thereby bypassing the defective fuel pump relay.

- Temporarily connect the alligator clip to any ground lug or chassis ground connection.
- Start vehicle.
- You'll see the green LED light up, indicating that alternate power from the power adapter (cigarette lighter) circuit is now powering your fuel pump.
- Disconnect alligator clip and make sure it does not come into contact with the positive terminal toward the upper left of the fuse box. A small piece of electrical tape placed over it will help keep it safe.
- You should be able to start, drive, and turn off your vehicle as you normally do. Our test/bypass device is intended as a temporary solution until you can implement a permanent fix. Due to the large number of vehicle types with fuel pump relay problems, it is unknown if any auto shut down features are affected during a crash. Use this cable in bypass mode at your own risk. You can continue to plug low power devices (cell phone, iPad, etc.) into the cigarette lighter.
- If you experience problems starting your vehicle, try cycling the key from OFF to ACC to RUN and then put your foot on the brake and start the vehicle. Some TIPMs appear to conserve power by disabling the left slots of the M7 circuit during the starting process. Less than 1% have reported this issue while in bypass mode. Bypass mode powers your fuel pump in ACC and RUN modes. Use of remote start may not work with this cable.
- **If your fuel pump relay is stuck in the ON position, remove the lower 20A fuse on our "add a circuit" device that is plugged into fuse slot M25 (located under our LED).** This will remove power supplied to the fuel pump from the faulty relay and allow alternate power to be supplied to it as described above. Then start vehicle.



Connect LED end of bypass device to M25 fuse slot, temporarily connect alligator clip to ground, then connect bypass device to left slots of M7 for bypass mode



If you have any questions, do not hesitate to contact us. We greatly appreciate your business.