



## **THROTTLE BODY**

**P/N 502-3 (1985 1/2 – 89 GM Truck 2.8L V-6 Engine) 400 CFM**  
**P/N 502-4 (1986 – 89 GM Truck 4.3L V-6 Engine) 670 CFM**  
**P/N 502-5 (1987 – 89 GM Truck 5.0L V-8 Engine) 670 CFM**  
**P/N 502-6 (1987 – 89 GM Truck 5.7L V-8 Engine) 670 CFM**  
**P/N 502-7 (1988 – 91 "S" & "T" Trucks 4.3L V-6 Engine) 670 CFM**  
**P/N 502-8 (1985 – 90 Passenger Cars 4.3L V-6 Engine) 670 CFM**

## **INSTALLATION & ADJUSTMENT INSTRUCTIONS**

### **INTRODUCTION**

Congratulations on your purchase of a Holley throttle body! Holley Performance Products has written this manual for the installation of the **Holley throttle body**. Please read all the **WARNINGS** and **NOTES**. They contain valuable information that can save you time and money. Should you need information or parts assistance, please do not return the unit to the store without first contacting technical service at 1-270-781-9741, Monday - Friday, 7 a.m. to 5 p.m. CST. By using this number, you may obtain any information and/or parts assistance that you may require. Please have the part number on hand of the product you purchased when you call technical service.

**WARNING!** To preserve the warranty, instructions must be read and followed thoroughly and completely, before and during installation.

**NOTE:** Holley Performance Products cannot and will not be responsible for any alleged or actual engine or other damage or other conditions resulting from misapplication of the throttle body described.

**NOTE:** Prior to and after installing your new throttle body, manually operate the throttle lever to check for binding or other malfunction. Also, make a visual inspection of the throttle body, looking for bent levers, etc., or any other shipping damage.

### **REMOVAL**

1. Remove the fuse marked "fuel pump" from the fuse block. Start the engine and allow it to run until the fuel supply remaining in the lines is consumed. When the engine stalls, engage the starter for three seconds to ensure all the pressure is relieved. DO NOT turn the key to the "RUN" position until the installation is complete.
2. Remove the air cleaner. Remove the air cleaner spacer from the top of the throttle body. This spacer will be used on the new throttle body.
3. Mark and remove the remaining vacuum lines from the throttle body. Remove all the electrical connections from the TBI.

4. Disconnect the throttle linkage and cruise control linkage from the throttle lever. Remove the transmission kickdown cable from the throttle lever (if equipped). Save all linkage clips. They will be used on the new Holley unit.
5. Remove the fuel lines from the TBI. It may be necessary to loosen clamps located away from the TBI in order to remove the lines from the fittings. Remove the fuel fittings from the TBI. These will be used with the Holley TBI.
6. Remove the TBI and the base gasket from the intake manifold. Place a clean shop towel in the manifold opening to prevent any foreign material entry into the intake. Clean the gasket surface of any remaining gasket material. Remove the towel after cleaning the flange surface.

## INSTALLATION

1. Install fuel fittings on the Holley TBI. Fuel fittings should be torqued to 22 ft./lbs. Remove the 1/4-20 bolt. Install the stud (supplied) and 1/4-20 nut (supplied), torquing to 48 in./lbs. Use non-permanent Loctite on the air cleaner studs.

**WARNING! Not properly tightening the air cleaner stud can lead to a fire hazard, which in turn can lead to property damage and/or personal injury.**

2. Loosely install the TBI on the intake manifold using the new base gasket provided. Be sure to install the air cleaner base gasket. Reconnect the fuel lines to the TBI using the new O-rings provided. Torque the TBI bolts first to 6-8 ft./lbs. and then torque the front TBI bolts to 10-12 ft./lbs. Do not reuse the TBI flange gasket. Always use a new gasket when reinstalling the TBI unit.
3. Reinstall the electrical connections, except for injectors, and vacuum lines to the TBI. Be sure that the vacuum lines are connected to the proper tubes and electrical connections are aligned and snapped together tightly.

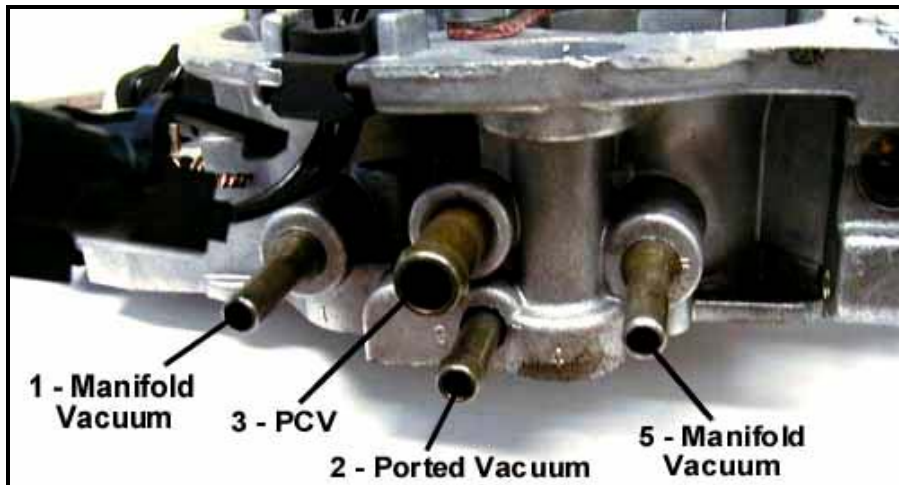


Figure 1

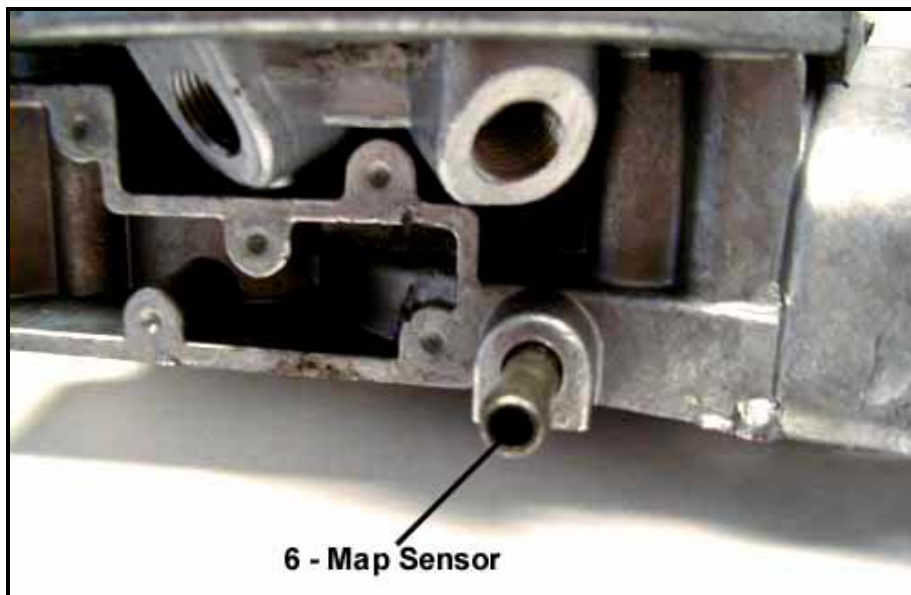
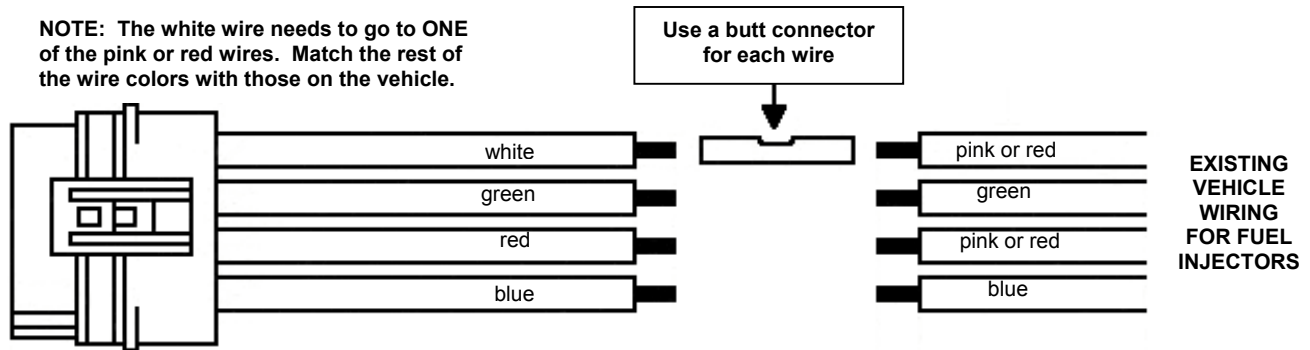


Figure 2

4. Cut the (4) injector wires about 12" from the factory injector connectors. Strip 1/4" of the insulation from the wires left on the vehicle. Connect these to the wires on the harness adapter assembly by using the butt connectors provided. The white wire needs to go to ONE of the pink or red wires. MATCH the remaining wire colors with those on the vehicle. Push the connector with wires into the mating connector on the throttle body. See Figure 3.
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6. Reconnect the throttle linkage. For vehicles equipped with cruise control, reconnect the linkage, and secure it with a clip. Reconnect the transmission kickdown cable (if equipped).



**Figure 3**

**IMPORTANT:** The TV cable must be readjusted in order for the automatic transmission to shift properly. Depress the metal lock tab on the adjuster and hold on. Pull the cable through the adjuster away from the TBI. Release the metal lock tab. Depress the accelerator pedal to wide-open throttle. The cable will self-adjust.

7. Reinstall the fuel pump fuse.
8. Cycle the ignition key from the "OFF" position to the "RUN" position several times, keeping the key in the "RUN" position for three seconds each time. Check the fuel connections for leaks.
9. Reinstall the air cleaner spacer and the air cleaner. Use the new gasket provided.
10. **Use a fuel pressure gauge to verify that the fuel pressure is 12 psi for 502-3, 502-4, 502-5, 502-7, & 502-8. The fuel pressure for the 502-6 should be 11 psi.** Start the engine and let it reach operating temperature.
11. Unplug the idle air control unit (IAC).
12. We suggest adjusting the idle to 700 RPM or desired RPM (the throttle adjustment screw is located on the opposite side of the TPS).
13. Reconnect idle air control unit (IAC).
14. Turn the key to "ENGINE OFF" and adjust the TPS to .65 volts.
15. Start the engine and let it run for several seconds. Shut off the engine and recheck for fuel leaks.

**NOTE:** The on-board computer has adaptive memory; therefore, performance characteristics may change after a few days of driving.

**NOTE:** The on-board computer may have stored codes caused by the previous TBI malfunction. If it is necessary to clear these codes, disconnect the negative cable at the battery for 30 seconds. If the "CHECK ENGINE" light comes on, consult the vehicle's service manual and follow the diagnostic recommendations.



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**For online help, please refer to the Tech Service  
section of our website: [www.holley.com](http://www.holley.com)**