**No. s1290** MILTON® INDUSTRIES, INC.

# VACUUM AND FUEL PUMP TEST KIT

Today's vehicles are making more use of vacuum controls than ever before. You find them in virtually every system—from emission and carburation controls to computer feedback circuits. Many perform critical functions where even the slightest vacuum leak can adversely affect the performance of the engine.

The Milton Vacuum Test Kit contains all the basic items you need to test and troubleshoot these systems—including a unique Air Operated Vacuum Pump.

## THE AIR OPERATED VACUUM PUMP

Simply connect it to your shop air line (60-125 PSI) and you have a continuous source of CONTROLLABLE vacuum. No hand pumping required. Since there are no moving parts, there's nothing to wear out.

It makes leak testing a snap. Just connect it to the system to be checked, as shown below, and apply the vacuum. Then pinch off the vacuum test hose and watch the gage. If the reading increases, you have a leak.

It has the power and capacity to operate the various diaphragm vacuum motors found in the modern vehicle (heater controls, modulators, air cleaner heat doors, vacuum advance controls, etc.). The controllable vacuum feature makes it ideal for checking EGR valves and other emission controls.

## USING THE VACUUM PUMP

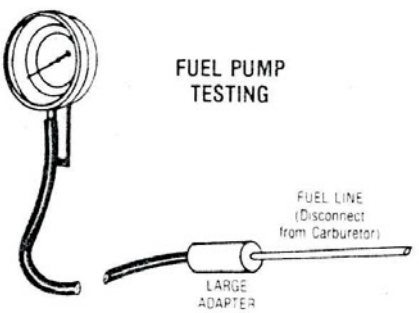
1. Connect the pump to the shop air line (adapters are available to fit all air line couplers). Maximum vacuum is obtained at around 60-80 PSI, although any pressure between 60 and 125 PSI will generate normal manifold vacuum (typically 0-18 inches).
2. Regulate the vacuum, if required, by partially restricting the discharge air with the thumb. This procedure is normally used for vacuum advance testing or checking the actuating point of vacuum motors and EGR valves. (Vacuum can also be controlled by regulating line pressure.
   Suggestion: Use Milton 638 In-Line Regulator.)

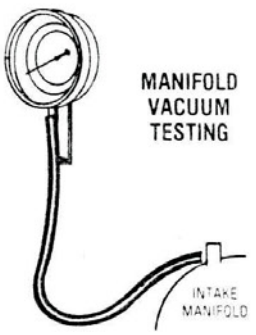
NOTE: When leak testing large capacity systems (e.g., power brakes), allow approximately 1 to 2 minutes for the system to pump down to the limit of the pump. (Determine pump limit by momentarily pinching off hose and noting gage reading.) If the pump limit cannot be reached, it indicates a leak.


USING THE HOSE PULLER

## FUEL PUMP TESTING

1. Disconnect the fuel line at the carburetor and connect the test gage to the disconnected line using the large rubber adapter.
2. Crank the engine until the gage reaches its maximum reading. Compare with the specified pressure.




## MANIFOLD VACUUM TESTING

The amount of vacuum existing in the intake manifold at idle speed can frequently indicate certain engine problems. To check this—

1. Locate a convenient vacuum port in the intake manifold and attach the gage to it, using one of the adapters if necessary. THE VACUUM PUMP IS NOT USED FOR THIS TEST.
2. Operate the engine at idle and note the gage reading the reaction:
   A. High, steady vacuum—normal.
   B. Drifting—carburetor mixture off.
   C. Pulsating—burned or sticking valve. Also ignition mis-fire.
   D. Low—late ignition or valve timing. Also, intake manifold leak.
   E. Drops when speed is increased—restricted exhaust system.