

# FUEL INJECTION PRESSURE TESTER

Item Number W80595

## MANUAL



### **▲WARNING**

*It is the owner and/or operators' responsibility to study all WARNINGS, operating, and maintenance instructions contained on the product label and instruction manual prior to operation of this product. The owner/operator shall retain product instructions for future reference.*

*The owner and/or operator are responsible for maintenance, maintaining all decals or warning labels and while in use, maintaining the unit in good working order. If the owner and/or operator are not fluent in English, the product warnings and instructions shall be read and discussed with the operators' native language by the purchaser/owner or his designee. Make sure that the operator comprehends its contents. Safety information shall be emphasized and understood prior to usage. The product shall be inspected per the operating instructions.*

*Users of this product must fully understand these instructions. Each person operating this product must also be of sound mind and body and must not be under the influence of any substance that might impair their vision, dexterity or judgment.*

*Protect yourself and others by observing all safety information.*

*Failure to comply with instructions could result in personal injury and/or property damage!*

On occasion, after printing of our literature is completed, our manufacturers may make changes and/or modifications to merchandise which will not be reflected in this manual. Although we strive to maintain complete and accurate information, it is possible in some instances, that the product may differ slightly from printed specifications. Illustrations are intended for reference only. Actual merchandise may vary. Wilmar is not responsible for typographical errors.

**PT**  
Performance Tool

Please read these instructions carefully and retain them for future use.

Performance Tool®

## SAFETY GUIDELINES / DEFINITIONS

This instruction manual is intended for your benefit. Please read and follow the safety, installation, maintenance and troubleshooting steps described within to ensure your safety and satisfaction. The contents of this instruction manual are based upon the latest product information available at the time of publication. The manufacturer reserves the right to make product changes at any time without notice.

**▲ WARNING:** Read and understand this entire instruction manual before attempting to assemble or operate this tool. Failure to comply with the instructions may result in serious personal injury and/or property damage.

**▲ WARNING:** Cancer and Reproductive Harm

## IMPORTANT SAFETY INFORMATION

• To prevent accidents that could result in serious injury and/or damage to your vehicle or test equipment, carefully follow these safety rules and test procedures at all times when working on vehicles.

• Always wear approved eye protection.

• Never use Fuel Pressure Tester Kit on Diesel or Flex Fuel engines!

• Never attach Fuel Pressure Tester to any place other than the fuel rail test port. Do not confuse Air Conditioning Schrader valves with the fuel rail test port.

• Never attach or remove Fuel Pressure Tester Kit from fuel rail test port with the ignition key on.

• Always place end of 6 ft. bleed-off hose in an approved container for fuel during testing and when bleeding off fuel pressure.

• Never smoke or have open flames near vehicle. Vapors from fuel and charging battery are highly flammable and explosive.

• Never permit fuel to spill on hot engine parts. If a spill or leak occurs, immediately turn ignition key off, and clean up fuel.

• Only use the Fuel Pressure Tester Kit for measuring fuel pressure on vehicles having Schrader valves as their fuel rail test port. Do not use this kit for any other purpose!

• Always operate the vehicle in a well ventilated area. Do not inhale exhaust gases or fuel vapors - they are very hazardous!

• Always keep yourself, tools and test equipment away from all moving or hot engine parts. These would include fan blades or exhaust manifolds.

• Always make sure the vehicle is in PARK (Automatic transmission) or NEUTRAL (manual transmission) and that the parking brake is firmly set. Block the drive wheels.

• Never lay tools on vehicle battery. You may short the terminals together causing harm to yourself, the tools or the battery.

• Never leave vehicle unattended while running tests.

• Always keep a fire extinguisher suitable for fuel/electrical/chemical fires handy.

• Always use extreme caution when working around the ignition coil, distributor cap, ignition wires, and spark plugs. These components contain High Voltage when the engine is running.

• Complete all Pre-Testing Checks before beginning fuel pressure testing.

• Always follow vehicle manufacturer's warnings, cautions and service procedures.

**▲ CAUTION:** Some vehicles are equipped with SRS Supplemental Restraint System, safety air bags. You must follow vehicle service manual cautions when working around the air bag components or wiring. If the cautions are not followed, the air bag may open up unexpectedly, resulting in personal injury. Note that the air bag can still open up several minutes after the ignition key is off, or even if the vehicle battery is disconnected because of a special energy reserve module.

## ABOUT THIS TESTER

The W80595 Fuel Injection Pressure Tester Kit is designed to perform fuel pressure tests on most domestic and import cars and trucks. The tester saves you time and money by helping you test and troubleshoot fuel system problems which can affect your vehicle's performance and fuel economy.

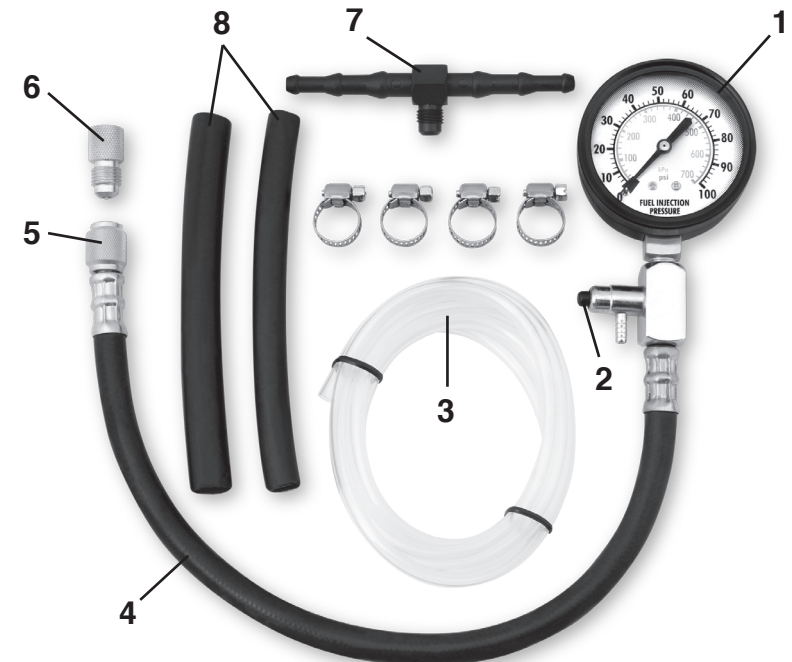
The tester can help you identify and diagnose the following symptoms.

- Low fuel pump pressure
- Leaking fuel injectors
- Faulty fuel pressure regulator
- Clogged fuel filter
- Leaks in the fuel system

## COMPONENTS

1. Gauge - Shows the amount of fuel pressure present in fuel system.
2. Pressure Release Button - Removes fuel and pressure from the fuel rail as a result of the test.
3. Bleed Off Hose - Removes the fuel and pressure after the pressure release button has been pressed. Hose should be long enough to fit into an approved container for fuel.
- ▲ Caution:** Never use a short hose, must be long enough to clamp into an approved container on the floor.
4. High Pressure Hose - Carries the fuel to the gauge for measuring pressure.
5. Test Port Adapter - This adapter is used to connect GM, Chrysler, Dodge, and Jeep models to the test port Schrader valve on the fuel rail.
6. Test Port Adapter - This adapter is used to connect Ford, Lincoln, and Mercury models to the test port Schrader valve on the fuel rail.
7. Tee Fitting Adapter - This adapter is used to connect some Import Vehicles to the Fuel Pressure Tester. Use this on vehicles not factory-equipped with a test port Schrader valve.
8. 5/16" and 3/8" Hoses - Universal high-pressure hoses used with the tee fitting, and hose clamps.

The adapters included with the tester fit the most common fuel injection applications. Some vehicle applications may require additional tools or adapters to properly test the vehicle. Always refer to your vehicle's service manual, when doing any testing.



## PRETEST PROCEDURES

### Prior to Testing Follow these Pretest Procedures.

1. Read all safety precautions listed in this manual and the vehicles shop manual. Paying close attention to Air Bag Connections and precautions.
2. Do a thorough hands-on inspection of the fuel system. Look for fuel or vacuum line leaks, cracked or loose electrical connections. If fuel leaks are present wipe them up immediately.
3. Insure you have a fully charged battery and enough fuel to conduct this test.
4. Verify that the inertia switch on certain Ford/Lincoln/Mercury vehicles has not been tripped. The inertia switch is designed to shutoff the fuel pump in the event of a collision. This switch is typically mounted under the dash on the passenger side, or in the trunk.
5. Check that all fuel system fuses are good.
6. Verify that the fuel vapor recovery system, and gas cap are in good condition.
7. Locate the vacuum line which is attached to the fuel pressure regulator and remove it, this line should be free of fuel, if fuel is observed the regulator has failed.
8. Once the inspection for the fuel pressure regulator is complete reinstall the vacuum line.
9. Test manifold vacuum to ensure it is within manufacturer's specification. A typical vacuum reading would be 18-20 in. at idle.

**▲ CAUTION:** Be aware that fuel systems are **UNDER PRESSURE AND HIGHLY FLAMMABLE**. Relieve system pressure before connecting the tester. Refer to your vehicle's service manual for those procedures. Systems without test ports require that fuel lines be removed or disconnected. Be aware that these lines are also **UNDER PRESSURE AND HIGHLY FLAMMABLE**. When removing the lines it could cause fuel to spray and/or leakage onto hot engine parts. In addition to following all safety precautions, a basic understanding of your fuel injection systems is necessary. Read your shop manual thoroughly to prevent personal injury or damage to your vehicle.

## PRETEST PROCEDURES

1. Before connecting tester, relieve fuel system pressure. Refer to your vehicle's service manual for procedures. Loosen or remove cap from the fuel tank to relieve potential tank pressure.
2. Ignition key must be in the off position.
3. Locate the fuel system's test port, and remove the protective cap. You're A/C test port is similar to the fuel system. Both have a protective cap and a Schrader valve inside. The low side A/C port is typically larger than the fuel ports. Do not get these ports confuse. Refer to your vehicle's service manual to ensure proper connections. Wrap shop rags around fitting when connecting or disconnecting the tester. Have shop rags ready to clean up leaks or spills.
4. Connect the tester to your vehicle's fuel system test port  
- **Ford, Lincoln, Mercury and some Chrysler vehicles**  
Install the port adapter on the throttle body or fuel rail test port. Be sure the threads are correct, it should thread on easily. Finger tight only, then connect the gauge hose to the adapter. Clamp bleed-off hose into an approved drain container. Make sure the hose remains in the container until testing is complete.

## PRETEST PROCEDURES CONT.

### -GMC, Chevrolet, Buick, Oldsmobile, Pontiac, Cadillac and some Chrysler vehicles

- The port adapter for the above models is permanently attached to the High Pressure Hose.
5. Connect the gauge hose directly to the test port, and finger tighten only. Clamp bleed-off hose into an approved drain container. Make sure the hose remains in the container until testing is complete.
  6. Make sure all of the vehicle's accessories including the A/C, fan, radio, defroster, lights, etc. are all off.
  7. Turn your key to the on position, (KOEO), listen for the fuel pump to activate. Most injection systems will activate the pump for about two seconds to pressurize the fuel system.
  8. Check the setup connections for fuel leaks. If you have a fuel leak, turn off the ignition immediately! Repair the leak and clean up the spilled fuel.
  9. If your fuel system does not activate as described above, turn ignition key off. Refer to the manufacturer's service manual for repair procedures or fuel pump activation instructions.
  10. When you hear the fuel pump activate, the fuel system is pressurized. Verify by looking at the pressure gauge, it should show a system pressure.
  11. Check this against the information in the Specification section of your vehicle's service manual. If pressure is not within specifications, turn ignition off. Follow the repair procedures in the service manual. If fuel pressure is within manufacturer's specifications, proceed to the next step.
  12. Start the engine, (KOER), bring it to a normal idle. While warming recheck connections for fuel leaks.
  13. Read the fuel pressure on the tester. If the fuel pressure is steady and within specifications for your vehicle, proceed to the next step. If pressure is not within specifications, turn ignition off and follow the test and repair procedures in your vehicle's service manual. After all necessary repairs have been completed, return to step 12 and retest.
  14. When your test is complete and the desired pressure has been reached, record the information and turn the ignition off. Typically in the back of a service manual there is a "notes" section. This is a good place to record the detailed results.
  15. Make sure the bleed-off hose is still clamped to the drain container.
  16. Press and hold the pressure release valve to bleed off pressure still in the tester. Hold the valve until the gauge indicates 0 psi.
  17. Jiggle the bleed-off hose to ensure all the fuel has been removed.
  18. Use a shop towel to wrap around test port fitting. This will aid in absorbing any residual fuel, and guard against spray from potential pressure in the line.
  19. Carefully unthread the fitting from the port adapter. For Ford vehicles remove the additional adapter from the vehicle's test port. Replace protective cap on port fitting.
  20. After the bleed off hose has drained completely remove it from the drain container. Store the tester in a well-ventilated area to dry completely. Service life of the port adapter's O-rings can be prolonged by applying a protective coating oil to them before storing.
  21. Verify that all fuel system components were reconnected. Start the engine, check for leaks and repair as necessary. It might take a few extra cranks for the fuel system to energize after delivery was interrupted.

# VEHICLE APPLICATION LIST

The W80595 Fuel Pressure Tester Kit works on most domestic fuel injected vehicles with a Schrader valve test port on the fuel rail. This includes Ford high pressure central fuel injection and GM, Ford, and Chrysler multiport fuel injection. **Does not work on Diesel vehicles.**

## **Domestic FORD, LINCOLN, MERCURY**

### **High Pressure Central Fuel Injected (CFI) Vehicles**

1981-86 Country Squire, Crown Victoria, LTD, Colony Park, Grand Marquis, & Marquis  
1985-86 Mustang & Capri  
1985-97 Thunderbird & Cougar  
1981-85 Continental, Town Car, Mark VI & Mark VII  
1980 Versailles

### **Most Multi-Port Fuel Injected (MPI) Vehicles 1983 to 1996.**

Not including the following Models:

Festiva & Aspire 1.3L  
Capri 1.6L  
Escort & Tracer 1.8L  
Probe 2.0L, 2.2L & 2.5L  
Villager 3.0L

## **Domestic Vehicles GMC, CHEVROLET, BUICK, OLDSMOBILE, PONTIAC, CADILLAC**

### **Most Multi-Port Fuel Injected (MPI) Vehicles 1984 to 1996.**

Not including the following Models:

1988 1.6L Nova  
1988-89 1.5L Spectrum  
1987-90 Sprint Turbo

## **Domestic Vehicles CHRYSLER, PLYMOUTH, DODGE, JEEP, EAGLE**

### **Multi-Port Fuel Injected Passenger Vehicles**

1995-96 2.0L 8th Digit VIN C or Y  
1984-93 2.2L Turbo 8th Digit VIN E  
1995-96 2.4L 8th Digit VIN X  
1991-95 2.5L 8th Digit VIN P  
1984-92 2.5L Turbo 8th Digit VIN J  
1987-96 3.3L 8th Digit VIN R or T  
1993-96 3.5L 8th Digit VIN F  
1987-93 3.8L 8th Digit VIN L  
1987-96\* 4.0L 8th Digit VIN S

### **Multi-Port Fuel Injected Trucks & Vans**

1996 2.4L 8th Digit VIN B  
1989 2.5L Turbo 8th Digit VIN J  
1992-96 3.3L 8th Digit VIN R  
1994-96 3.8L 8th Digit VIN L  
1992-96\* 3.9L 8th Digit VIN X  
1992-96\* 5.2L 8th Digit VIN Y  
1993-96 5.9L 8th Digit VIN 5 or Z  
1994-96 8.0L 8th Digit VIN W

1993-96\* 5.2L 8th Digit VIN Y

It's necessary to have the 8th Digit of the Vehicle Identification Number to verify application

\*Some 1996 and older vehicles may not have the Schrader valve test port on the fuel rail.

## **Import Vehicles GEO, ISUZU, MAZDA, NISSAN, SUBARU, SUZUKI, VOLKSWAGEN**

1980-98 Vehicles that don't have a Schrader valve test port on the fuel rail.