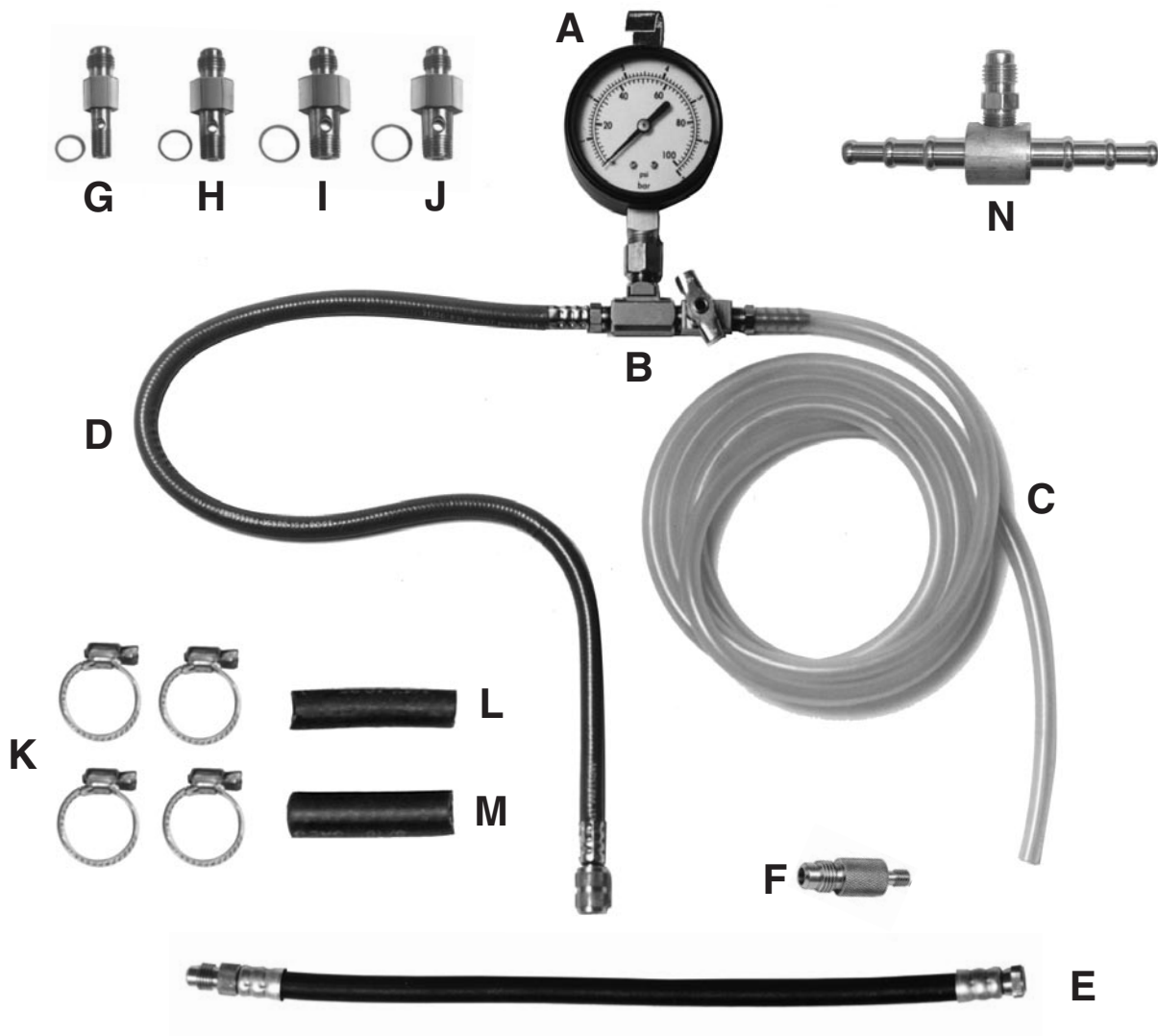


# INSTRUCTIONS FOR MULTI-PORT FUEL INJECTION PRESSURE TESTER

- TESTS FUEL INJECTION PRESSURE ON MOST DOMESTIC AND IMPORT MULTI-PORT SYSTEMS
- TESTS FUEL INJECTION PRESSURE ON THROTTLE BODY INJECTION SYSTEMS EQUIPPED WITH SMALL SCHRADER VALVE
- GAGE INDICATES PSI AND BAR
- CLEAR, ILLUSTRATED INSTRUCTIONS PROVIDED
- EASY TO HOOK-UP AND USE

## CONTENTS OF KIT

<u>PART DESCRIPTION</u>	<u>QUANTITY</u>
A. Pressure Gage with PSI and Bar Scales .....	1
B. Gage Assembly with Bleed-off Valve and Hose Barb .....	1
C. Bleed-off Hose .....	1
D. 24" Long Hose with Fittings Attached (for use as basic test assembly and for GM and Chrysler Multi-port) .....	1
E. 12" Long Hose with Fittings Attached (for use on Ford Multi-port and CFI).....	1
F. Honda, Acura and Sterling Test Adapter .....	1
G. 8mm-1.00 Banjo Bolt Adapter.....	1
H. 10mm-1.00 Banjo Bolt Adapter.....	1
I. 12mm-1.25 Banjo Bolt Adapter.....	1
J. 12mm-1.50 Banjo Bolt Adapter.....	1
K. Hose Clamps .....	4
L. 1/4" x 2" Fuel Line Hose .....	1
M. 5/16" x 2" Fuel Line Hose .....	1
N. Double End Barbed Adapter.....	1

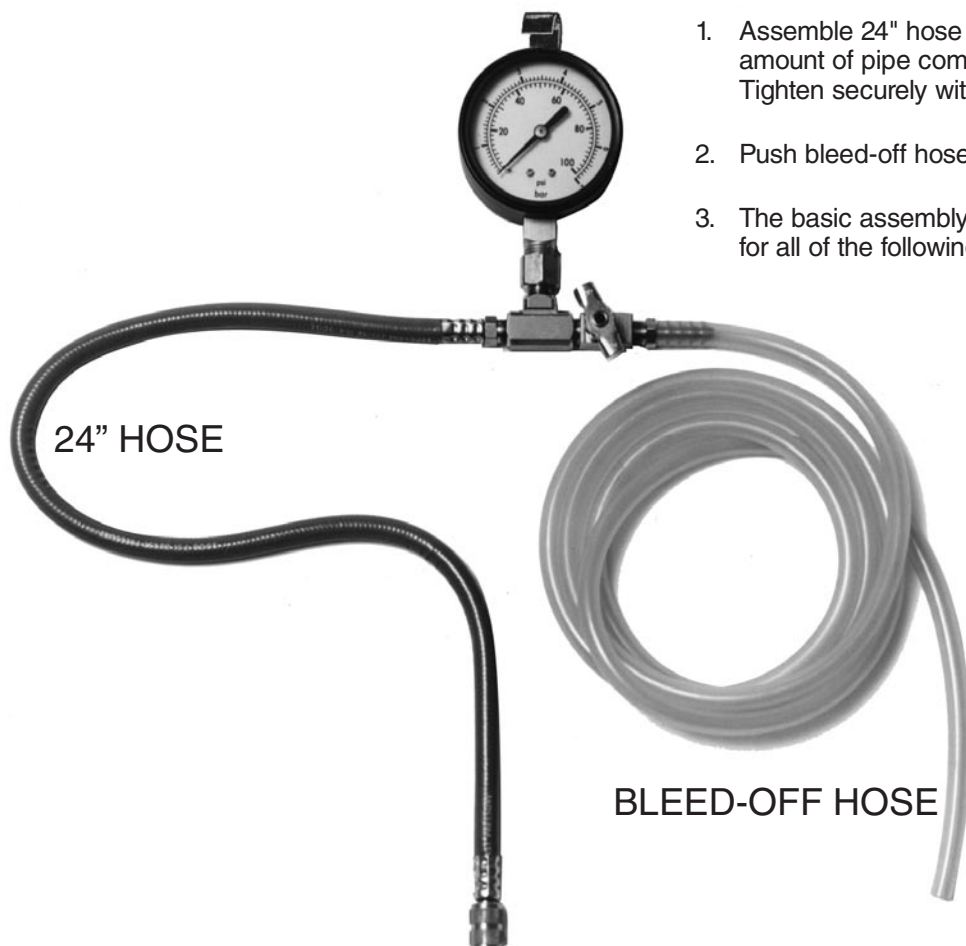


# I. IMPORTANT PRE-TEST INFORMATION

**CAUTION: FUEL INJECTION SYSTEMS ARE PRESSURIZED! RELIEVE FUEL PRESSURE BEFORE CONNECTING ANY TEST EQUIPMENT TO SYSTEM OR DISASSEMBLING ANY SYSTEM COMPONENT(S). REFER TO THE VEHICLE'S SERVICE MANUAL FOR SPECIFIC FUEL PRESSURE RELIEF PROCEDURE(S).**

1. Always refer to the vehicle's service manual whenever possible for proper fuel pump pressures and maintenance procedures.
2. DO NOT USE THIS TEST EQUIPMENT ON DIESEL FUEL SYSTEMS!
3. Always wear eye protection. DO NOT SMOKE WHILE PERFORMING ANY FUEL INJECTION TESTS OR REPAIRS.
4. Have a dry chemical (Class B) fire extinguisher within reach.
5. Provide a suitable container to catch released fuel when the system is de-pressurized.
6. Take extra care to prevent fuel from contacting hot engine surfaces. It is recommended that tests are performed when the engine is cold.
7. If a drop light is used, do not allow fuel to contact the hot surface of the bulb.
8. NEVER REMOVE ANY FITTINGS WITH THE ENGINE RUNNING!
9. Never loosen any fittings or attempt to remove hoses of vehicle or test kit until you have relieved the fuel system pressure. Refer to the vehicle service manual for specific fuel pressure relief procedure(s).
10. Always check all connections for leaks during test. At any sign of leaks, turn off the engine or disable the fuel pump. Clean up any spilled fuel and correct all leaks before resuming test.
11. When test is complete, de-pressurize the system and remove test equipment. Re-assemble vehicle's fuel line(s) to original condition. Start engine and check for leaks. If any leaks are present, stop the engine, relieve fuel pressure and repair all leaks.
12. Use caution at all times. Keep yourself, clothing, and test equipment away from all moving engine parts.
13. DO NOT DRIVE VEHICLE WITH TESTER CONNECTED!

## II. BASIC ASSEMBLY INSTRUCTIONS



1. Assemble 24" hose to gage assembly. Use a small amount of pipe compound or Teflon tape on threads. Tighten securely with wrench.
2. Push bleed-off hose onto barb of gage assembly.
3. The basic assembly is now complete and will be used for all of the following tests.

# III. VARIOUS HOOK-UPS AND TEST PROCEDURES



24" GM & CHRYSLER ADAPTER HOSE

## A. GM Multi-port and Chrysler Multi-Port:

1. Turn ignition OFF.
2. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
3. Relieve fuel pressure. Refer to the vehicle service manual for specific pressure relief procedure(s).
4. Remove protective cap from test fitting on vehicle.
5. Attach swivel female fitting on 24" long hose to the test fitting on vehicle. Hand tighten.
6. Start engine and allow it to idle. Check connections for leaks.
7. Read gage and compare result with pressure in service manual.
8. Stop engine and turn ignition OFF.
9. With free end of bleed-off hose in suitable container, open bleed-off valve on tester (turn counterclockwise) slowly to de-pressurize the fuel system.
10. Refer to Pre-Test Information before removing tester from vehicle.
11. Replace protective cap onto test fitting on vehicle. Check for leaks.



12" FORD ADAPTER HOSE

## B. Ford Multi-port and Ford Throttle Body Injection Systems (C.F.I.) Equipped with Small Schrader Valve:

1. Turn ignition OFF.
2. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
3. Relieve fuel pressure. Refer to the vehicle service manual for specific pressure relief procedure(s).
4. Remove protective cap from test fitting on vehicle.
5. Attach male end on 12" long Ford adapter to the female fitting on 24" long hose. Hand tighten.
6. If vehicle has Throttle Body Injection (C.F.I.), remove air cleaner housing from the throttle body. The test valve is located at the top of the throttle body unit.
7. If vehicle has multi-port fuel injection, remove protective cap from test fitting on fuel rail.
8. Attach female end of Ford adapter to the test valve.
9. Start engine and allow it to idle. Check connections for leaks.
10. Read gage and compare result with pressure in service manual.
11. Stop engine and turn ignition OFF.
12. With free end of bleed-off hose in suitable container, open bleed-off valve on tester (turn counterclockwise) slowly to de-pressurize the fuel system.
13. Refer to Pre-Test Information before removing tester from vehicle.
14. Replace protective cap onto test fitting on vehicle. Replace air cleaner housing onto throttle body. Check for leaks.



HONDA ADAPTER

## C. Honda, Acura & Sterling Multi-port:

1. Turn ignition OFF.
2. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
3. Assemble large male end of Honda adapter into female fitting on 24" hose. Hand tighten.
4. Relieve fuel pressure. Refer to the vehicle service manual for specific pressure relief procedure(s).
5. The test point is at the vehicle's fuel filter, under the hood, just forward of the firewall.
6. The fuel outlet is secured to the filter by a "double D" bolt. Within this bolt is a smaller hexagonal bolt that provides access to the test connection.
7. Place a shop cloth around the fuel outlet and slowly remove the smaller hexagonal bolt.
8. Screw the small male end of the Honda adapter into the hole where the removed hexagonal bolt was. Hand tighten.
9. Start engine and allow it to idle. Check connections for leaks.
10. Read gage and compare result with pressure in service manual.
11. Stop engine and turn ignition OFF.
12. With free end of bleed-off hose in suitable container, open bleed-off valve on tester (turn counterclockwise) slowly to de-pressurize the fuel system.
13. Refer to Pre-Test Information before removing tester from vehicle.
14. Re-install hexagonal bolt on the fuel filter. Check for leaks.



## D. Asian and European Multi-port Vehicles (Bosch AFC)

1. Turn ignition OFF.
2. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
3. Relieve fuel pressure. Refer to the vehicle's service manual for specific pressure relief procedure(s).
4. The pressure test connection for these vehicles is located at the point where the fuel inlet meets the fuel rail or cold start injector. The fuel inlet is secured to the fuel rail or cold start injector by a banjo fitting.
5. Remove the banjo fitting that secures the fuel inlet to the fuel rail or cold start injector. Place a shop cloth around the bolt to catch any spilled fuel.
6. Install one of the four pressure test adapters (G, H, I or J) with corresponding sealing washer and one of the gaskets from the banjo fitting so that the fuel inlet is once again connected to the fuel rail or cold start injector. The test adapter will hold the banjo assembly in position.
7. Torque the adapters to the following specifications:

<u>ADAPTER</u>	<u>SIZE</u>	<u>WRENCH</u>	<u>TORQUE SPECIFICATION</u>
G	8mm-1.00	1/2" hex	48 in. lbs. (5.5 N-m)
H	10mm-1.00	9/16" hex	72 in. lbs. (8.0 N-m)
I	12mm-1.25	11/16" hex	96 in. lbs. (11.0 N-m)
J	12mm-1.50	11/16" hex	96 in. lbs. (11.0 N-m)

8. Thread swivel female fitting on 24" basic hose to the banjo bolt adapter. Hand tighten.
9. Start engine and allow to idle. Check for leaks.
10. Read gage and compare result with pressure in service manual.
11. Stop engine and turn ignition OFF.
12. With free end of bleed-off hose in suitable container, open bleed-off valve on tester (turn counterclockwise) slowly to de-pressurize the fuel system.
13. Refer to the Pre-Test Information before removing tester from vehicle.
14. Remove the tester and the pressure test adapter.
15. Re-assemble the banjo fitting to the fuel inlet and fuel rail (or cold start injector). New gaskets should be used when re-assembling fuel lines. Check for leaks.

## E. Typical hook-up with 1/4" or 5/16" fuel line:

1. Turn ignition OFF.
2. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
3. Relieve fuel pressure. Refer to service manual for specific fuel pressure relief procedure(s).
4. Loosen the hose clamp and disconnect the hose from the discharge side of the vehicle fuel pump.
5. Using the appropriate Fuel Line Hose (L or M), connect tester as shown into the system between the loose fuel line and the fuel pump.
6. Tighten hose clamps securely on the hose.
7. Start engine and allow it to idle. Check connections for leaks.
8. Read gage and compare result with pressure in service manual.
9. Stop engine and turn ignition OFF.
10. With free end of bleed-off hose in suitable container, open bleed-off valve on tester (turn counterclockwise) slowly to de-pressurize the fuel system.
11. Refer to Pre-Test Information before removing tester from vehicle.
12. Replace vehicle's fuel line hose and tighten all clamps securely. Check all connections for leaks.



**NOTE:** This is only one of several hook-ups which can be made.