

# INSTRUCTION MANUAL



## UNIVERSAL MASTER FUEL INJECTION PRESSURE TEST KIT WITH QUICK COUPLERS

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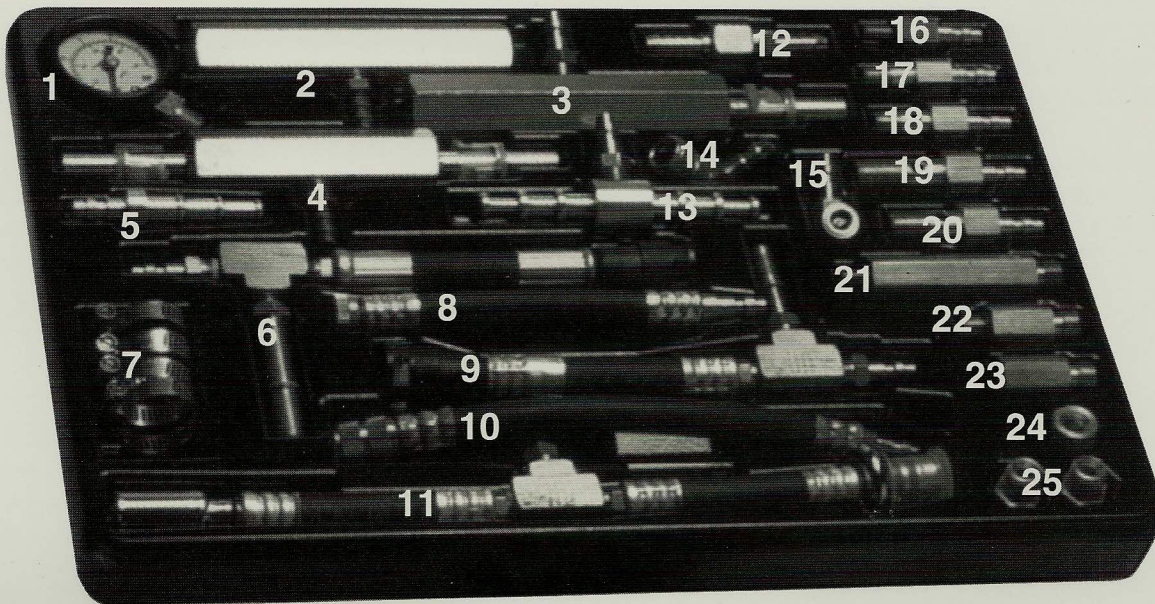
### I. IMPORTANT PRE-TEST INFORMATION

**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. TEST KIT LAYOUT



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### LIFT OUT TRAY

- |  |  |
|--|--|
| 1. 0-50 PSI (0-3.5 BAR) Gage                               | 14. 90° GM & Chrysler Swivel Adapter                           |
| 2. GM Throttle Body Injection (TBI) Fuel Pressure Adapter  | 15. 90° Ford Swivel Adapter                                    |
| 3. GM 2.2 Liter Fuel Injection Pressure Test Adapter       | 16. Honda Fuel Injection Pressure Test Adapter                 |
| 4. GM 2.5 & 5.7 Liter Quick Connect Fuel Injection Adapter | 17. 8mm-1.00 Banjo Bolt Adapter                                |
| 5. Single End Barbed Adapter                               | 18. 10mm-1.00 Banjo Bolt Adapter                               |
| 6. GM & Chrysler 3/8" Inline Hair Pin Adapter              | 19. 12mm-1.25 Banjo Bolt Adapter                               |
| 7. Hose Clamps (4 Pieces)                                  | 20. 12mm-1.50 Banjo Bolt Adapter                               |
| 8. Small Schrader Valve Test Adapter for Ford              | 21. 12mm-1.50 Male x 8mm-1.00 Male x 3" Adapter                |
| 9. Ford 5/16" Inline Hair Pin Adapter                      | 22. 12mm-1.50 Male x 10mm-1.00 Male x 1 9/16" Adapter          |
| 10. Large Schrader Valve Test Adapter for GM & Chrysler    | 23. 12mm-1.50 Male x 10mm-1.00 Female x 1 1/4" Adapter         |
| 11. Ford Inline Spring Lock Fitting Adapter                | 24. 12mm-1.50 Male x 8mm-1.00 Female x 15/16" Adapter          |
| 12. Volvo 14mm LH-Jetronic Adapter                         | 25. 12mm-1.50 Male x 8mm-1.00 Male x 15/16" Adapter (2 Pieces) |
| 13. Double End Barbed Adapter                              |  |

### LOWER CASE COMPARTMENT

(Not Pictured)

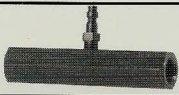
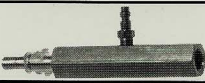
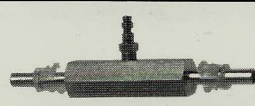

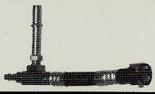



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|---|---|
| 26. Basic Gage Assembly with 100 PSI Gage | 29. 5/16" x 3" Hose (2 Pieces)  |
| 27. CIS Testing Assembly with Ball Valve  | 30. Repair Kit (includes seal washers, valve cores, brass depressor and gasket) |
| 28. 1/4" x 3" Hose                        | 31. Instruction Manual  |

**NOTE:** Please familiarize yourself with all parts of this kit before assembling any components or performing any tests. After any test, clean the adapter(s) and components if necessary. Replace all components in their original positions inside the case. This will ensure proper operation and organization for every use.







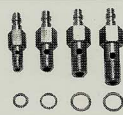

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### III. APPLICATION INFORMATION

#		DESCRIPTION	APPLICATION
2		General Motors Throttle Body Injection (TBI)	Inline Adapter – Replaces fuel filter with threads on both ends
3		General Motors 2.2 Liter (Non Multi-port)	1992 & up such as Chevrolet Cavalier, Pontiac Sunbird, Buick Skylark and Quad 4 equipped Pontiac Grand Am
4		General Motors 2.5 Liter & 5.7 Liter (Non Multi-port)	For vehicles with quick connect fuel filters such as 2.5 Liter Oldsmobile Ciera 1989 & up, and 5.7 Liter Chevrolet Caprice 1991 & up
5		Single End Barbed Adapter	All vehicles requiring end of line testing with 1/4", 5/16" or 3/8" fuel line hose
6		General Motors and Chrysler Inline Adapter	Inline adapter for vehicles with 3/8" hair pins
8		Ford Multi-port (EFI)	For smaller Schrader valves
9		Ford CFI	For 5/16" hair pin connections
10		General Motors, Chrysler & Imports with 7/16"-20 threaded test port	For larger Schrader valves on Multi-port vehicles

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11		Ford EFI	For Spring Lock fittings
12		Volvo	14mm LH-Jetronic
13		Double End Barbed Adapter	Where vehicles require testing by splicing into 1/4", 5/16" or 3/8" fuel lines
14		General Motors, Chrysler & Imports with threaded test port	90° Adapter- For Multi-port vehicles having restricted access to larger Schrader valves
15		Ford (EFI)	90° Adapter- For vehicles having restricted access to smaller Schrader valves
16		Honda, Acura & Sterling Multi-port (PGM-FI)	For vehicles with 6mm-1.00 Banjo Bolts
17 thru 20		Asian and European Vehicles with Multi-port & Bosch AFC	For vehicles with 8mm-1.00, 10mm-1.00, 12mm-1.25 & 12mm-1.50 Banjo Bolts
21 thru 25		E- & K- Jetronic Systems	Test CIS (Continuous Injection System) found on European cars and Volkswagen models assembled in the U.S. For vehicles with metric threads

**NOTE:** 1. Be sure the male and female quick connectors are properly mated together before making any tests.  
 2. Please familiarize yourself with all parts of this kit before assembling any components or performing any test. After any test, clean the adapter(s) and components if necessary. Replace all components in their original positions inside the case. This will ensure proper operation and organization for every use.



## IV. TYPICAL HOOK-UPS

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

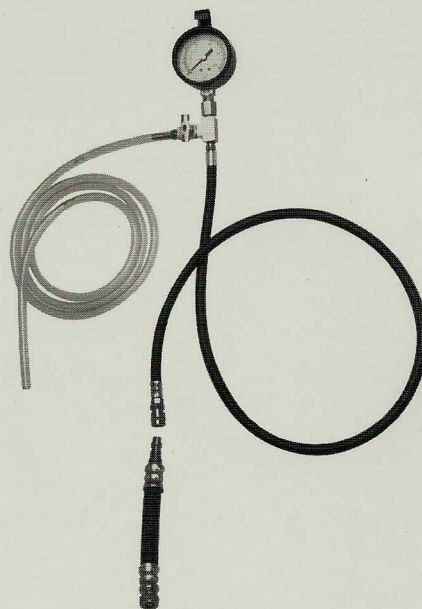
1. Turn ignition OFF.
2. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
3. Relieve fuel pressure. Refer to the vehicle's service manual for specific pressure relief procedure(s).
4. Remove protective cap from test fitting on vehicle.
5. Attach swivel female fitting on adapter (#10) to the test fitting on vehicle. Hand tighten.
6. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter.
7. Start engine and allow it to idle. Check 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 (Page 2) before removing tester from vehicle.
12. Replace protective cap onto test fitting on vehicle. Check for leaks.



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### B. Ford Multi-port ( EFI )

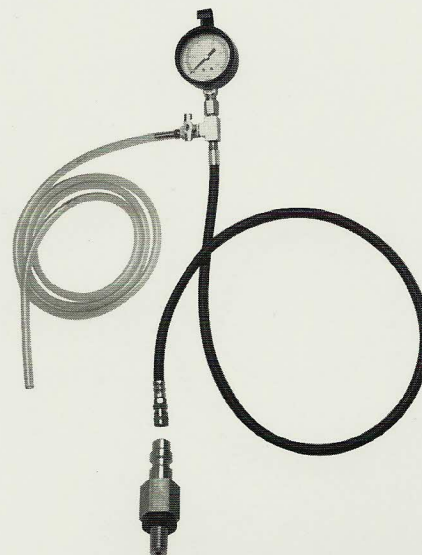
1. Turn ignition OFF.
2. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
3. Relieve fuel pressure. Refer to the vehicle's service manual for specific pressure relief procedure(s).
4. If vehicle has multi-port fuel injection, the test valve is located on the fuel rail. Remove protective cap from the test valve.
5. Attach female end of Ford Adapter (#8) to the test valve. Hand tighten.
6. Attach female quick coupler on Basic Gage Assembly to male quick coupler on Ford Adapter.
7. Start engine and allow it to idle. Check 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 (Page 2) before removing tester from vehicle.
12. Replace protective cap onto test fitting on vehicle. Check for leaks.



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### C. Honda, Acura & Sterling Multi-port ( PGM-FI ):

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. The test point is at the vehicle's fuel filter, under the hood, just forward of the firewall.
5. 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.
6. Place a shop cloth around the fuel outlet and slowly remove the smaller hexagonal bolt.
7. Screw the small male end of the Honda Adapter (#16) into the hole where the removed hexagonal bolt was. Hand tighten.
8. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter.
9. Start engine and allow it 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 Pre-Test Information (Page 2) before removing tester from vehicle.
14. Re-install hexagonal bolt on the fuel filter. Check for leaks.



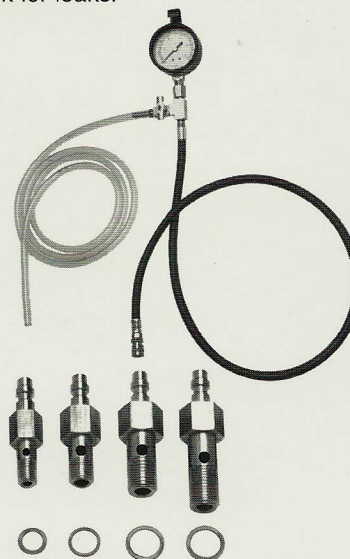
### D. Asian and European Multi-port Vehicles (Bosch AFC)

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 (# 's 17, 18, 19 or 20) 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:

ADAPTER #	SIZE	WRENCH	TORQUE SPECIFICATION
17	8mm-1.00	1/2"	48 in. lbs. (5.5 N-m)
18	10mm-1.00	9/16"	72 in. lbs. (8.0 N-m)
19	12mm-1.25	11/16"	96 in. lbs. (11.0 N-m)
20	12mm-1.50	11/16"	96 in. lbs. (11.0 N-m)

8. Attach the female quick coupler on the Basic Gage Assembly to male quick coupler on test adapter. Hand tighten.
9. Start engine and allow it to idle. Check for leaks.
10. Read gage and compare result with pressure in service manual.

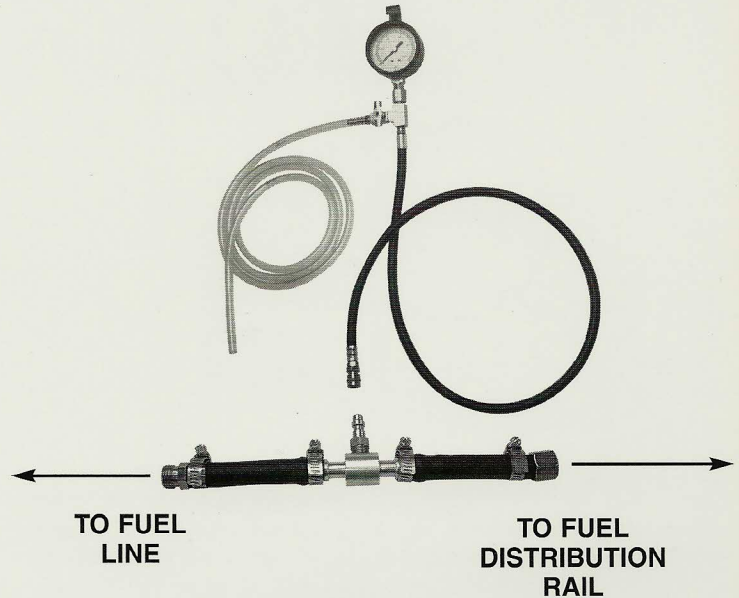
11. Stop engine and turn ignition OFF.
12. With free end of bleed-off hose in suitable container, open bleed-off valve on tester (turn counterclockwise) slowly to de-pressurize the fuel system.
13. Refer to Pre-Test Information (Page 2) before removing tester from vehicle.
14. Remove the tester and the 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. Volvo 14mm LH-Jetronic

1. Turn ignition OFF.
2. Relieve fuel pressure. Refer to the vehicle's service manual for specific fuel pressure relief procedure(s).
3. Disconnect the fuel line from the fuel distribution rail.
4. Use the three piece Adapter (#12) for this test. Put the nut over the barbed fitting with the round end and thread onto the fuel distribution rail. Connect the 14mm male barbed fitting to the nut on the fuel line. Install a 5/16" x 3" hose over each barbed fitting. Put two Hose Clamps (#7) over each length of hose. Insert the Double End Barbed Adapter (#13) into each open length of hose. The hose goes over the 5/16" barb. Tighten all Hose Clamps and fittings.
5. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
6. Start engine and allow it to idle. Check all connections for leaks.
7. Read gage and compare result with pressure values 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 (Page 2) before removing tester from vehicle.
11. Replace vehicle's fuel line and tighten all clamps securely. Check all connections for leaks.



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## F. GM Throttle Body Injection (TBI) with Fuel Filter Threaded on Both Sides

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. Locate the fuel filter on the vehicle.
5. Remove the fuel filter by unscrewing the fuel lines from both ends of the fuel filter. Use a container to catch any fuel that may spill out. Wipe off any excess fuel that may spill on the vehicle.
6. Install the GM TBI Adapter (#2) in place of the fuel filter by threading each fuel line into either end of the adapter. Do not over tighten.
7. Attach female quick coupler on Basic Gage Assembly to male quick coupler on GM TBI Adapter.
8. Start the engine and check for leaks. Read the fuel pressure. Compare the value on the gage to the value in the 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. Remove the fuel pressure adapter following the above instructions for removing the fuel filter.
12. Refer to Pre-Test Information (Page 2) before removing tester from vehicle.
13. Re-install the fuel filter. Start the vehicle and check for leaks.



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## G. GM Throttle Body Injection (TBI) with Quick Connect Fuel Filter (2.5L 1989 and up, 5.7L 1991 and up)

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. Locate the fuel filter on the vehicle.
5. Remove the fuel filter by compressing the tabs while pulling outward on each fuel line. Use a container to catch any fuel that may spill out. Wipe off any excess fuel that may spill on the vehicle.
6. Install the fuel pressure adapter (#4) in place of the fuel filter by pushing each of the adapter's male tubes into the fuel lines. Make sure the nylon clips on the tubes are seated inside the fuel line connectors.
7. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter.
8. Start the engine and check for leaks. Read the fuel pressure. Compare the value on the gage to the value in the 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. Remove the fuel pressure adapter following the above instructions for removing the fuel filter.

12. Refer to Pre-Test Information (Page 2) before removing tester from vehicle.
13. Re-install the fuel filter. Start the vehicle and check for leaks.



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## H. GM 2.2L Engines, 1992 and up

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. Locate the fuel filter on the vehicle.
5. Remove the fuel filter by unscrewing the steel fuel line from one end of the fuel filter. Remove the nylon fuel line on the other end by compressing the tabs while pulling outward on the fuel line. Use a container to catch any fuel that may spill out. Wipe off any excess fuel that may spill out.
6. Install the fuel pressure adapter (#3) in place of the fuel filter by threading the steel fuel line into the threaded end of the adapter. Do not overtighten. Connect the other end of the adapter by pushing the male tube into the nylon fuel line. Make sure the nylon clip on the tube is seated inside the fuel line connector.
7. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter.
8. Start the engine and check for leaks. Read the fuel pressure. Compare the value on the gage to the value in the 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 (Page 2) before removing tester from vehicle.

12. Remove the fuel pressure adapter following the above instructions for removing the fuel filter.
13. Re-install the fuel filter. Start the vehicle and check for leaks.

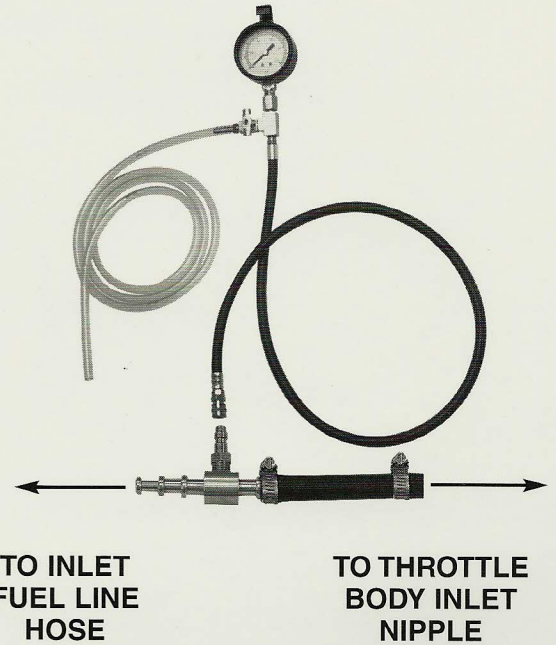


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## I. Chrysler Throttle Body Injection

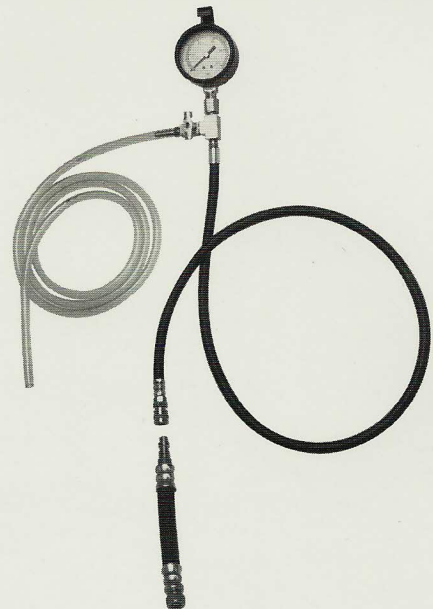
1. Turn ignition OFF.
2. Relieve fuel pressure. Refer to vehicle's service manual for specific fuel pressure relief procedures.
3. Loosen the hose clamp and disconnect the fuel line hose from the inlet side of the vehicle's throttle body.
4. Confirm if the size of the inlet fuel line hose is 1/4" or 5/16".
5. Assemble the correct supplied hose (#'s 28 or 29) using hose clamps (#7) to the Double End Barbed Adapter (#13) as shown.
6. Connect the adapter assembly between the disconnected fuel line and the throttle body inlet nipple on the vehicle. Tighten all hose clamps securely.
7. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
8. Start engine and allow it to idle. Check all connections for leaks.
9. Read gage and compare result with pressure values in service manual.
10. Stop engine and turn ignition OFF.
11. 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.
12. Refer to Pre-Test Information (Page 2) before removing tester from vehicle.
13. Replace vehicle's fuel line and tighten all clamps securely. Check all connections for leaks.



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## J. Ford Throttle Body Injection with Small Schrader Valve

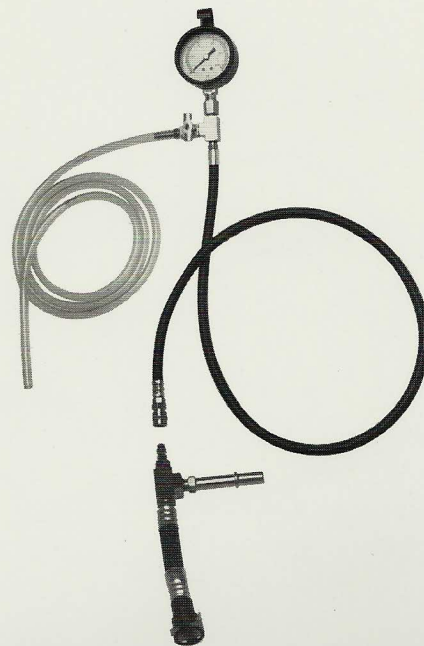
1. Turn ignition OFF.
2. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
3. Relieve fuel pressure. Refer to vehicle's service manual for specific fuel pressure relief procedures.
4. Remove air cleaner assembly. The test valve is located at the top of the throttle body unit.
5. Attach female end of the Ford Adapter (#8) to the test valve.
6. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter.
7. Start engine and allow it to idle. Check all connections for leaks.
8. Read gage and compare result with pressure values 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 (Page 2) before removing tester from vehicle.
12. Start the vehicle and check for leaks.



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## K. Ford Central Fuel Injection (CFI) 1.9L and 2.3L with 5/16" Hair Pin Coupling and GM and Chrysler 3/8" Hair Pin Coupling

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 procedures.
4. The connection with the vehicle's fuel injection system is at the throttle body. Remove fuel line at inlet by prying up on the hair pin from the coupling with a small screwdriver. Use care as the hair pin is made of plastic. Once disconnected, re-install the hair pin into the hair pin coupling.
5. Attach the Hair Pin Adapter (#9 for Ford and #6 for GM and Chrysler) to the disconnected fuel line. Make sure both ends of mating parts are seated and locked together.
6. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter.
7. Start engine and allow it to idle. Check all connections for leaks.
8. Read gage and compare result with pressure values 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 (Page 2) before removing tester from vehicle.
12. Re-install the vehicle's fuel line.
13. Start the vehicle and check for leaks.



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## L. Ford Central Fuel Injection (CFI) with Spring Lock Fittings - 2.5L

1. Turn ignition OFF.
2. Relieve fuel pressure. Refer to service manual for specific fuel pressure relief procedures.
3. The connection with the vehicle's fuel injection system is on the fuel rail.
4. A disconnect tool is required to separate the spring lock fitting on the vehicle's fuel line.
5. After the spring lock fitting has been disconnected, assemble the Ford Spring Lock Adapter (#11) into the line, making sure that both ends of the mating couplings are locked together.
6. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter.
7. Start engine and allow it to idle. Check all connections for leaks.
8. Read gage and compare result with pressure values 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 (Page 2) before removing tester from vehicle.
12. Using the disconnect tool, remove the test adapter and install the vehicle's fuel line.
13. Start the vehicle and check for leaks.

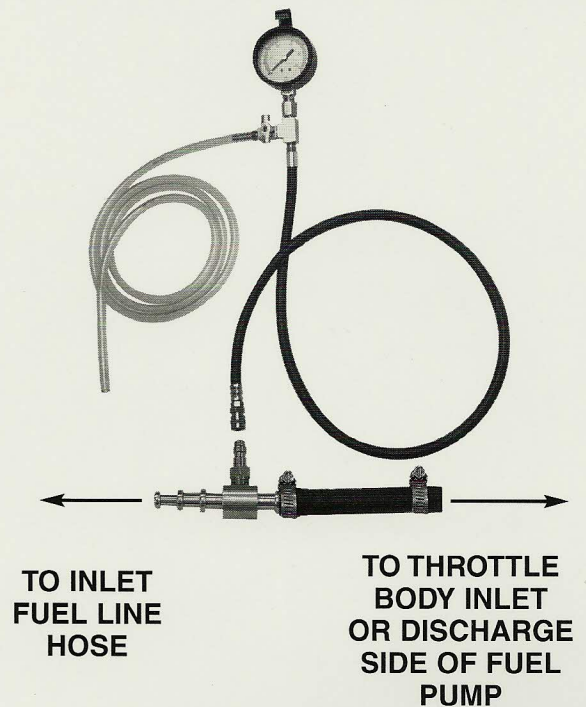


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### M. All Vehicles with 1/4", 5/16" or 3/8" Fuel Line Hose

1. Turn ignition OFF.
2. Relieve fuel pressure. Refer to service manual for specific fuel pressure relief procedures.
3. Loosen the hose clamp and disconnect the fuel line hose from the inlet side of the vehicle's throttle body or discharge side of the fuel pump.
4. Construct the Double End Barbed Adapter (#13) and supplied hose (#s 28, 29 or 30) with hose clamps (#7) as shown.
5. Connect the Double End Barbed Adapter as assembled above between the disconnected fuel line and the throttle body inlet or fuel pump. Tighten all hose clamps securely.
6. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter. Make sure bleed-off valve on test assembly is closed tightly (turned fully clockwise).
7. Start engine and allow it to idle. Check all connections for leaks.
8. Read gage and compare result with pressure values 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 (Page 2) before removing tester from vehicle.
12. Replace vehicle's fuel line and tighten all clamps securely. Check all connections for leaks.



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### N. All Vehicles Requiring End of Line Testing with 1/4", 5/16" or 3/8" Fuel Line Hose

1. Turn ignition OFF.
2. Relieve fuel pressure. Refer to service manual for specific fuel pressure relief procedures.
3. Loosen the hose clamp and disconnect the fuel line.
4. Install the Single End Barbed Hose Adapter (#5) into the fuel supply hose. Tighten hose clamp securely.
5. Attach female quick coupler on Basic Gage Assembly to male quick coupler on adapter. Make sure bleed-off valve on test assembly is closed tightly and turned fully clockwise.
6. Start engine and allow to idle. Check all connections for leaks.
7. Read gage and compare result with pressure values 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 (Page 2) before removing tester from vehicle.
11. Reconnect vehicle's fuel line and tighten all clamps securely. Check all connections for leaks.



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## V. BOSCH CONTINUOUS INJECTION SYSTEM (CIS) TESTING

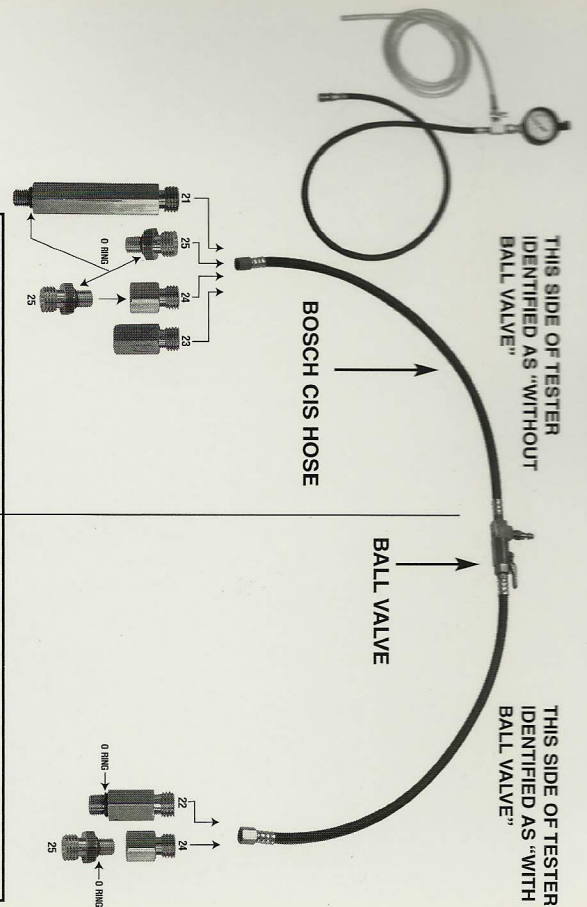
REFER TO ADAPTER SELECTION AND HOOK-UP CHART ON PAGE 22

### A. TEST INSTRUCTIONS

- Turn ignition OFF.
- Clean the top of the fuel distributor to keep dirt from entering the fuel system.
- Relieve fuel pressure. Refer to the vehicle's service manual for specific pressure relief procedure(s).
- The CIS System has a primary circuit with pressure regulated at the fuel distributor. This is known as *supply pressure*, *primary pressure* or *line pressure*. The side of the tester *without* the ball valve is connected in this circuit.
- The other circuit is known as the *control circuit*. This contains the control pressure regulator, known as the *warm-up compensator*. The side of the tester *with* the ball valve is connected in this circuit.
- Attach adapters and "O" rings as required by the Adapter Selection and Hook-Up Chart. Hand tighten only.
- Attach the female quick coupler on Basic Gage Assembly to male quick coupler on hook up hose.
- With free end of bleed-off hose in suitable container, open bleed-off valve on tester (turn counterclockwise) slowly to release any air in the test hose. Return valve to close position (turn clockwise).
- Start the engine and check for leaks. Read the fuel pressure. Compare the value on the gage to the value in the service manual.
- 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.
- Refer to Pre-Test Information (Page 2) before removing tester from vehicle.
- Remove tester and adapter(s) from vehicle.
- Reconnect vehicle's fuel injection lines to original condition. Start the vehicle and check for leaks.

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### BOSCH CIS ADAPTER SELECTION AND HOOK-UP CHART



MAKE, MODEL & YEAR	CONNECT TO (USE THESE ADAPTERS)	CONNECT TO (USE THESE ADAPTERS)
MAKE-Audi Fox MODEL-100 & 400 YEAR-1975 & up	FUEL DISTRIBUTOR (None Required) FOR BANJO FITTING (Add Adapter #25 and "O" Ring)	WARM-UP COMPENSATOR HOSE (Add Adapter #24, "O" Ring and Adapter #25) FOR BANJO FITTING (Add Adapter #24, "O" Ring and Bolt from Fuel Distributor)
MAKE-Audi Fox MODEL-5000 YEAR-1975 & up	WARM-UP COMPENSATOR HOSE TO FUEL DISTRIBUTOR (Add Adapter #23 and Bolt from Warm-Up Compensator)	WARM-UP COMPENSATOR HOSE (Add Adapter #22)
MAKE-BMW MODEL-All YEAR-1977 & up	FUEL DISTRIBUTOR (None Required)	WARM-UP COMPENSATOR HOSE (Add Adapter #24, "O" Ring and Adapter #25)
MAKE-Mercedes Benz MODEL-6 & V8 YEAR-1976 & up	PRESSURE DAMPENER HOSE TOWARDS THE FUEL DISTRIBUTOR (Add Adapter #24, "O" Ring and Adapter #25) OR REMOVE PRESSURE DAMPENER AND CONNECT TO FUEL DISTRIBUTOR (Add Adapter #21 and "O" Ring)	WARM-UP COMPENSATOR (None Required)
MAKE-Porsche MODEL-All YEAR-1973 & up	FUEL DISTRIBUTOR (Add Adapter #25 and "O" Ring) FOR BANJO FITTING (Add Adapter #24)	WARM-UP COMPENSATOR (Add Adapter #24, "O" Ring and Adapter #25 and "O" Ring) FOR BANJO FITTING (Add Adapter #24)
MAKE-SAAB MODEL-All YEAR-1975 & up	FUEL DISTRIBUTOR (None Required)	WARM-UP COMPENSATOR HOSE (Add Adapter #24, "O" Ring and Bolt from Fuel Distributor)
MAKE-Volkswagen MODEL-All YEAR-1975 & up	FUEL DISTRIBUTOR (None Required)	WARM-UP COMPENSATOR HOSE (Add Adapter #24, "O" Ring and Adapter #25) FOR BANJO FITTING (Add Adapter #24)
MAKE-Volvo MODEL-All YEAR-1974 & up	FUEL DISTRIBUTOR (None Required) FUEL DISTRIBUTOR (Add Adapter #25 and "O" Ring)	WARM-UP COMPENSATOR HOSE (Add Adapter #24, "O" Ring and Adapter #25) WARM-UP COMPENSATOR HOSE (Add Adapter #24 and Bolt from Fuel Distributor)

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