4. SPECIFICATIONS

1.7L THROTTLE BODY INJECTION

IGNITION

CRANK SENSOR COIL RESISTANCE	500-700 OHMS
IGNITION COIL	
PRIMARY RESISTANCE	0.35-1.45 OHMS
SECONDARY RESISTANCE	5000-6500 OHMS
SECONDARY WIRE RESISTANCE	LESS THAN 15,000 OHMS

IGNITION TIMING IS CONTROLLED BY THE ELECTRONIC CONTROL MODULE AND IS NOT ADJUSTABLE.

FUEL

THROTTLE BODY INJECTION FUEL SYSTEM PRESSURE (WITH IGNITION "ON," ENGINE RUNNING)	190-210 kPa (27-30 psi; 1.9-2.1 bar)
THROTTLE BODY INJECTION FUEL INJECTOR RESISTANCE	1.42 TO 2.0Ω WHEN MEASURED BETWEEN 20°C and 50°C

IDLE SPEED IS CONTROLLED BY THE ELECTRONIC CONTROL MODULE. WHEN ENGINE IS WARM, IDLE SPEED SHOULD BE WITHIN 50 REVOLUTIONS PER MINUTE* OF DESIRED IDLE SPEED.

* SEE TECH 1 SCAN DATA VALUES.

5. TORQUE SPECIFICATIONS

1.7L THROTTLE BODY INJECTION

TORQUE SPECIFICATIONS

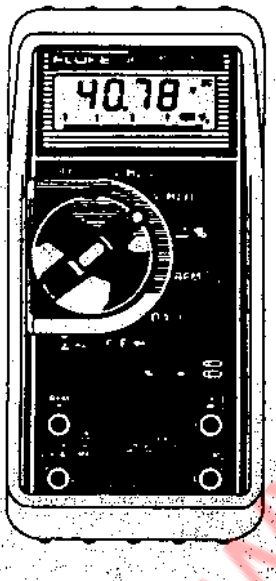
THROTTLE BODY INJECTION ATTACH. BOLT/STUDS	17.0 N·m (12 lb. ft.)
FUEL LINE NUTS AT CONNECTION POINT TO THROTTLE BODY INJECTION ASSEMBLY	27.0 N·m (20 lb. ft.)
FUEL LINE NUTS AT FUEL FILTER	27.0 N·m (20 lb. ft.)
FUEL PRESSURE REGULATOR COVER	2.5 N·m (22 lb. in.)
FUEL METER BODY-THROTTLE BODY	6.0 N·m (53 lb. in.)
THROTTLE BODY INJECTION FUEL INLET NUT	27.0 N·m (20 lb. ft.)
THROTTLE BODY INJECTION FUEL OUTLET NUT	27.0 N·m (20 lb. ft.)
THROTTLE POSITION SENSOR	2.0 N·m (18 lb. in.)
IDLE AIR CONTROL VALVE	1.5 N·m (13 lb. in.)
TUBE MODULE ASSEMBLY	3.0 N·m (28 lb. in.)
INJECTOR RETAINER SCREW	3.0 N·m (28 lb. in.)
COOLANT TEMPERATURE SENSOR	14.0 N·m (10 lb. ft.)
INTAKE AIR TEMPERATURE SENSOR	14.0 N·m (10 lb. ft.)
SPARK PLUGS	15.0 N·m (11 lb. ft.)

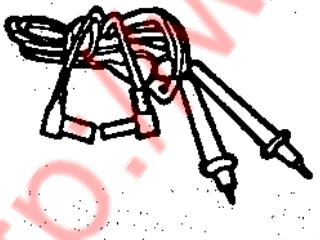
6. SPECIAL TOOLS

1.7L THROTTLE BODY INJECTION

Special diagnostic service tools that are mentioned in this service manual and described below are available for worldwide distribution from:

Kent-Moore
SPX Corporation
29784 Little Mack
Roseville, MI 48066-2298
1-800-345-2233
Monday through Friday
8:00 a.m. through 8:00 p.m. EST
Telex: 244040 KMTR UR
Fax: 313-578-7375





DIGITAL MULTIMETER

J 39689-78

VOLTMETER—Voltage position V measures magnitude of voltage when connected in parallel to an existing circuit. A digital voltmeter with a 10 megohm input impedance is used because this type of meter will not load down the circuit and result in faulty readings. Some circuits require accurate low resistance. Direct Current Voltage measurement selection V is used for most automotive measurements.

AMMETER—When used as an ammeter, this meter accurately measures extremely low current flow. Refer to meter instructions for more information.

- Selector must be set properly for both function and range. Direct Current measurement selection A is used for most automotive measurements.

OHMMETER—Measurement selection "Ω" measures resistance of circuit directly in ohms. Refer to meter instructions for more information.

- Overload display "OL" in all ranges indicates open circuit.
- Zero display in all ranges indicates a short circuit.
- An intermittent connection in a circuit may be indicated by a digital reading that will not stabilize on the circuit.

FREQUENCY—Position Hz measures frequency of AC or pulsed DC voltages.

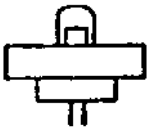
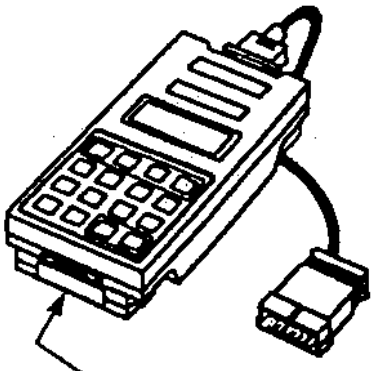
TEMPERATURE—Position °C °F, measures temperature using the included thermocouple probe.

DWELL-DUTY CYCLE—Position ∠° % measures dwell or duty cycle of pulse with modulated signals.

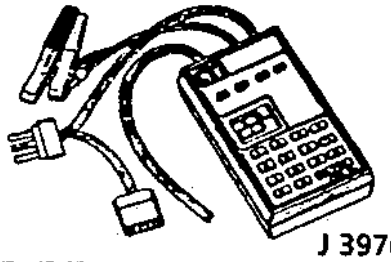
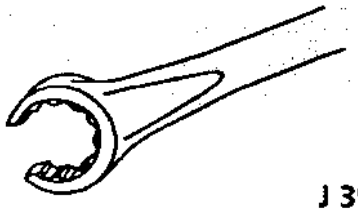
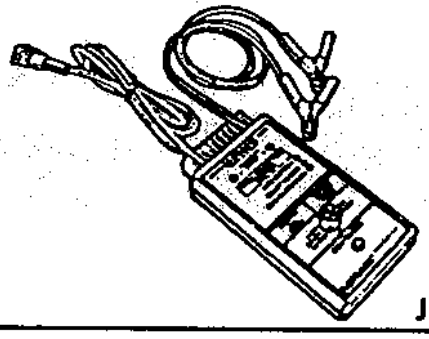
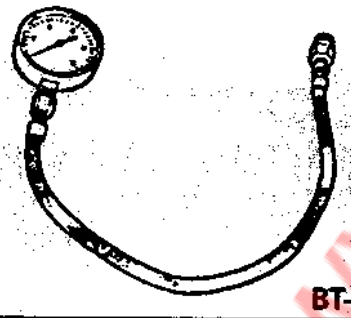
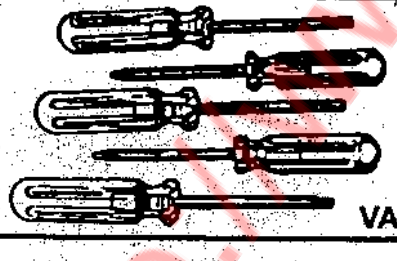
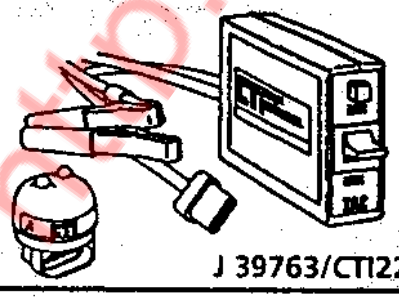
ENGINE SPEED—Position RPM measures engine speed. See meter sample for symbol.

12-21-92
NS 14431

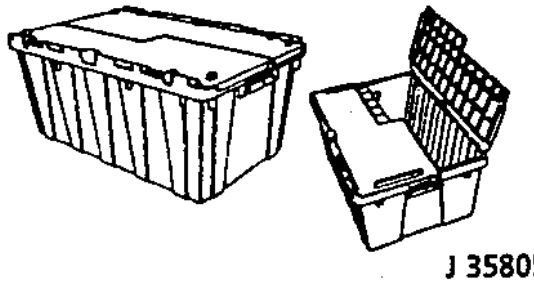
Special Tools (1 of 4)

 J 38970-V	**FUEL PRESSURE GAGE KIT** Used for checking and monitoring fuel line pressure of both throttle body fuel injection and port fuel injection. Includes one (1) Diagnostic Test fitting, needed to test the fuel pressure on the throttle body fuel injection system at the outlet fitting of the fuel filter.
 J 34730-2A	**INJECTOR CIRCUIT TEST LIGHT** Used for testing fuel injector circuits on both throttle body injection and port fuel injection systems. This is packaged in the J 35616-V connector test adapter kit.
	**TECH 1 DIAGNOSTIC COMPUTER** A hand-held scan tool used to analyze and diagnose fuel and emission system.
	**TECH 1 VAZ TESTER CARTRIDGE** The Tech 1 tester cartridge is a VAZ specific cartridge that allows the Tech 1 tool to test the VAZ fuel injection system.
 J 35616-V	**CONNECTOR TEST ADAPTER KIT** Used for making electrical test connections in current Weather Pack, Metri-Pack, and Micro-Pack style terminals. The secondary ignition spark tester part number J 26792 (ST 125) and injector circuit test light J 34730-2A are included in this kit.
 J 26792	**SECONDARY IGNITION VOLTAGE TESTER** Used for checking available secondary ignition voltage. Also called an ST 125. This spark tester is packaged in the connector test adapter kit #J 35616-V. 4-28-93 NS 14432

Special Tools (2 of 4)

 J 39764/CTI234	**MANIFOLD ABSOLUTE PRESSURE SENSOR TESTER** Allows accurate testing of the manifold absolute pressure sensor. The tester compares the output voltage signal of the vehicle sensor to the tool's own calibrated standard sensor.
 J 39194-V	**EXHAUST OXYGEN SENSOR WRENCH** Used to remove and install the oxygen sensor which is used on this system.
 J 39021-V	**FUEL INJECTOR TESTER KIT** Connector harness adapters from twist lock connector to : • Throttle Body Injector, 700 Injector (J 39021-30) • Port Fuel Injector (J 39021-20) • Injector Switch Box (J 39021-10), for testing Port Fuel Injectors without removal from VAZ Port Fuel Injection engines.
 BT-8515-V	**EXHAUST SYSTEM BACKPRESSURE TESTER** Used to test for plugged or restricted exhaust system components, particularly the catalytic converter.
 VA 70433	**TORX FASTENER REMOVAL/INSTALLATION KIT** Torx fastener removal/installation tool kit, for fuel system components.
 J 39763/CTI222DM	**IDLE AIR CONTROL SYSTEM MONITOR** Used to test idle air control motors for correct functioning and proper response to commands. 4-28-93 NS 14435

Special Tools (3 of 4)



J 35805

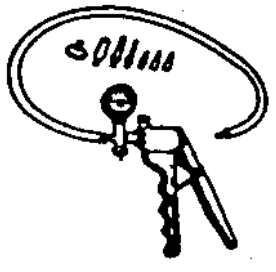
PLASTIC CONTAINER

Plastic container, lockable to contain all tools mentioned on the previous pages.

J 39745

TERMINAL REPAIR KIT

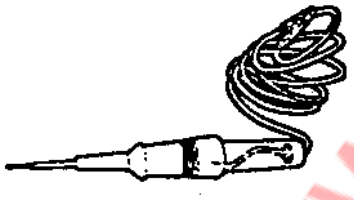
Contains proper tools and components to perform reliable wiring repairs to the engine management system wiring harness.



J 35555

VACUUM PUMP WITH GAGE

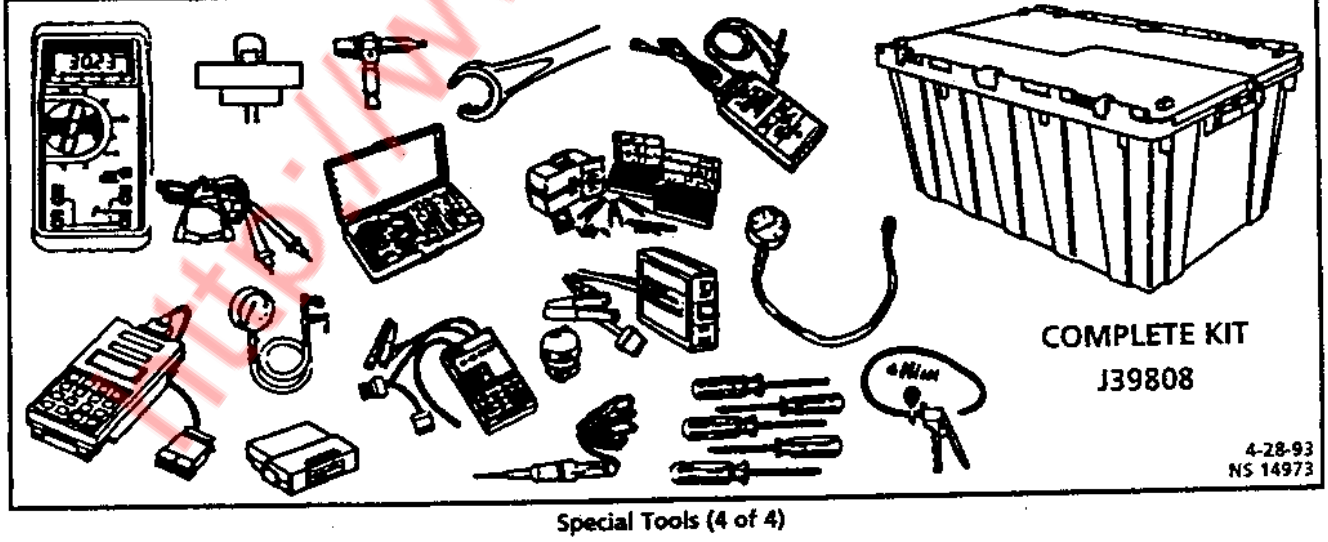
Use the gage to monitor manifold engine vacuum and use the hand pump to check vacuum sensors, solenoids and valves.



J 34142-B

UNPOWERED TEST LIGHT

Used in checking wiring for a complete circuit, short to ground, or voltage.



COMPLETE KIT
J39808

4-28-93
NS 14973

Special Tools (4 of 4)