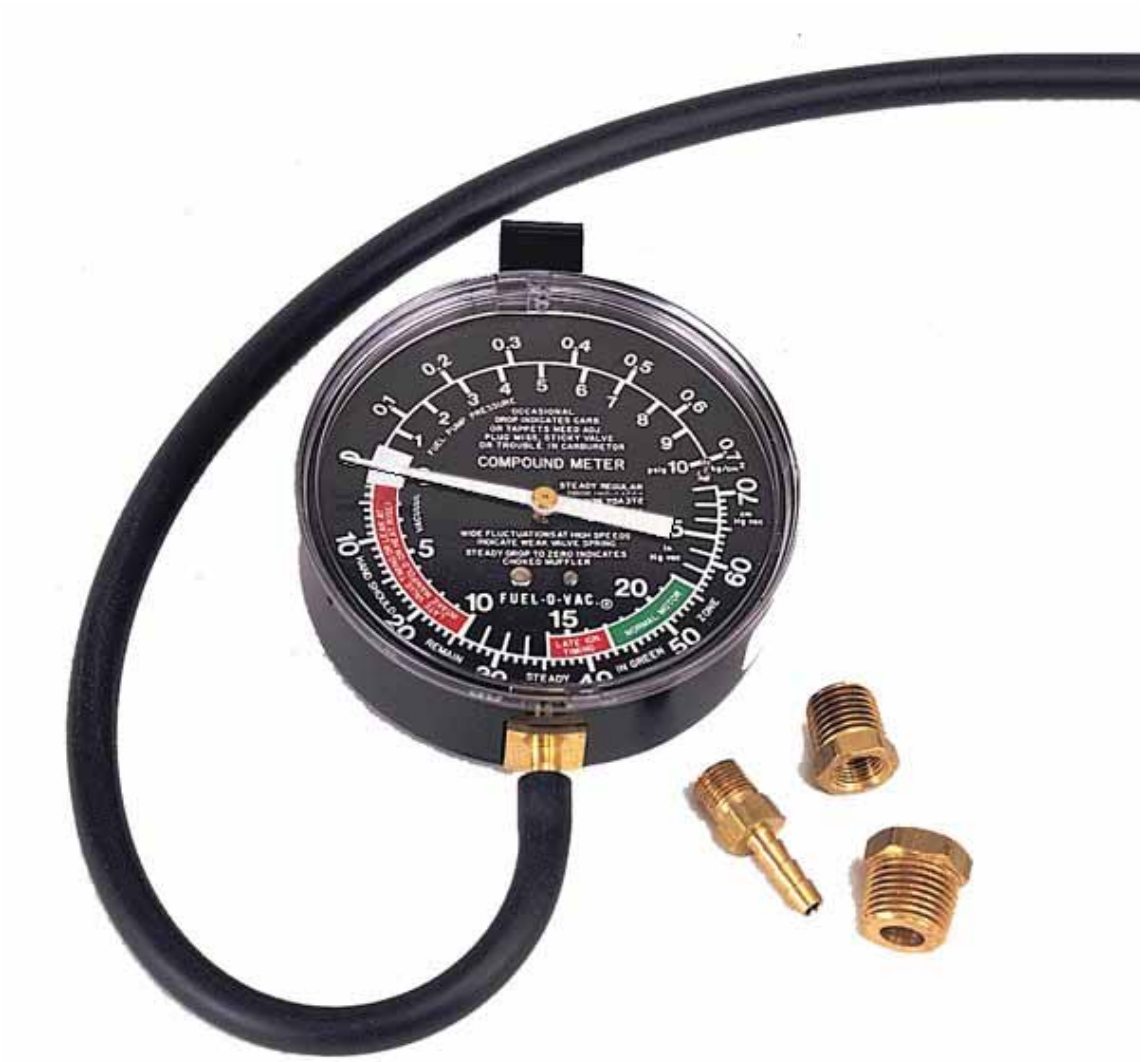
ATD-5657
Deluxe Vacuum and Fuel Pump Tester
Owner's Manual



Complete with 2 ft. of high quality hose, plus (3) fittings to test domestic and foreign cars and trucks with gasoline engines
3-1/2" compound gauge has a multicolor dual scale dial with ranges from 0–10 psi, 0–0.7kg/cm2 pressure and 0–28inHg/0-70cmHg vacuum
Hook-on gauge enables technician to hang gauge and hose assembly to free his hands

Assists in diagnosing:

- Fuel pump pressure
- Incorrect timing
- Leaky, burnt or sticky valves
- Heating and A/C controls
- Leaky intake manifold
- Windshield wipers
- Restricted exhaust systems
- Power brakes
- Turbo pressures
- Emission control devices
- Worn piston rings

⚠ WARNING ⚠

WARNING: This product contains chemicals, including lead, known to the State of California to cause cancer, birth defects or other reproductive harm. ***Wash hands after handling.***

VACUUM AND FUEL PUMP TESTING

REFER TO VEHICLE SERVICE MANUAL FOR SPECIFIC VACUUM AND FUEL PUMP PRESSURE REQUIREMENTS

VACUUM TEST

1 Connect gauge hose to intake manifold as close as possible. Hose should not be kinked. Be sure that connection is tight and that suction exists at point where connection is made. On engines using two intake manifolds, make separate tests on each manifold.

2 Start engine: adjust throttle butterfly valve and set idling adjustment on carburetor to get as smooth an "idle" as possible.

3 If engine is in perfect condition, pointer of vacuum gauge will remain steady between 17 and 22 (gauge readings will vary with altitude. At sea level, the approximate gauge reading will be 19.5. For each 1,000 feet above sea level, the vacuum gauge will drop one inch. For instance, at 2,000 feet, the approximate gauge reading will be 18.5. At 5,000 feet, it will be 14.5).

- **Gauge will indicate sticky valves** when gauge pointer drops back intermittently about 4 points on the dial. To make sure, disconnect vacuum hose and inject penetrating oil into manifold. If occasional drop of gauge pointer stops, the valves were sticking. Use a good top-cylinder oil.
- **Gauge will indicate a burnt valve** by a constant drop of the pointer whenever burnt valve or valves which are holding open come into operation. Insufficient tappet clearances will also be indicated by a constant drop of the pointer.
- **Gauge will indicate weak valve springs** when the engine is speeded up, and the gauge pointer pulsates rapidly. When valves seat properly, the gauge pointer will remain steady between 17 and 22.
- **Gauge will indicate loose valve stem guides** when gauge pointer pulsates rapidly at idling speed. This rapid pulsation disappears with the increasing speed of the engine.
- **Gauge will indicate a choked muffler** when engine is speeded up several times in succession, and the gauge pointer drops slowly. A clear muffler is indicated by a quick drop to zero.
- **Gauge will indicate late valve timing** when the gauge pointer will remain at approximately 12, and will not indicate a higher reading.
- **Gauge will indicate a carburetor adjustment is required** when there is a slow drop of the gauge pointer between 17 and 20. Adjust carburetor so that pointer will be almost stationary.

For best results, there should be a compression test when using the vacuum gauge. A good compression gauge will indicate whether the compression is perfect or not. Poor compression will result in lower vacuum readings than outlined in the preceding paragraphs.

- **Gauge will indicate choke test** Close throttle and turn engine over with starting motor. Gauge pointer should rise steadily and quickly to 17 and 22. If gauge pointer stays around 3 to 6, this may indicate a burned riser tube, or the failure of the throttle valve to close, or that there are air leaks in the intake manifold system.

FUEL PUMP VACUUM TEST

1 Disconnect fuel line from fuel pump.

2 Gauge hose should be connected to fuel pump inlet.

3 Start engine: If gauge pointer rises up to 10 before carburetor is empty, and the engine stops, the fuel pump is in good condition.

FOR FUEL PUMP PRESSURE TEST, PROCEED AS FOLLOWS:

1 Disconnect fuel line outlet from carburetor. This is on the out-put side of the fuel pump and is the connection between the pump and carburetor.

2 Connect gauge hose to output side of fuel pump.

3 Start engine and run at idling speed. **NOTE:** The gasoline in carburetor bowl should be sufficient to operate the engine for about two minutes.

4 Fuel pump reading should not exceed the specified values given in the vehicle service manual.

5 Fuel pump should hold its pressure for several minutes after the engine is stopped before the hand gradually returns to zero. If pressure does not hold, inspect pump for: leaks around the diaphragm, puncture in the diaphragm, or a worn pump valve.

TO TEST CARBURETOR: Perfect ignition, high compression, good spark plugs and proper valve clearance are necessary for a properly functioning carburetor. Look for gasoline leaks at all connections, particularly under the carburetor bowl. Outlined below are the steps to follow:

1 Connect gauge hose to intake manifold as close as possible.

2 Let engine run long enough so that the heat indicator will indicate normal motor temperature. At idling speed, and with a properly adjusted carburetor, the gauge pointer will remain stationary between 17 and 22. A slow floating motion of the gauge pointer between 14 and 22 indicates that the carburetor needs adjusting.

3 Carburetor is properly adjusted as follows: **NOTE 1**: No carburetor can be adjusted to satisfactory if parts are worn, jets are stopped up or not of the proper diameter.

NOTE 2: On engines equipped with carburetors with both high and low speed adjustments, the high speed adjustment should be made first.

A Turn idling adjustment screw either to rich or lean until the gauge pointer will indicate the highest reading possible without pulsation. This will be the correct position for idling adjustment.

B If high speed adjustment is required, speed engine up to 20 or 25 MPH. Adjust carburetor so that gauge pointer will indicate the highest possible reading without pointer pulsation.

C If low speed adjustment is required, engine should be run at idling speed. Adjust carburetor so that gauge pointer will indicate the highest possible reading without pointer pulsation.

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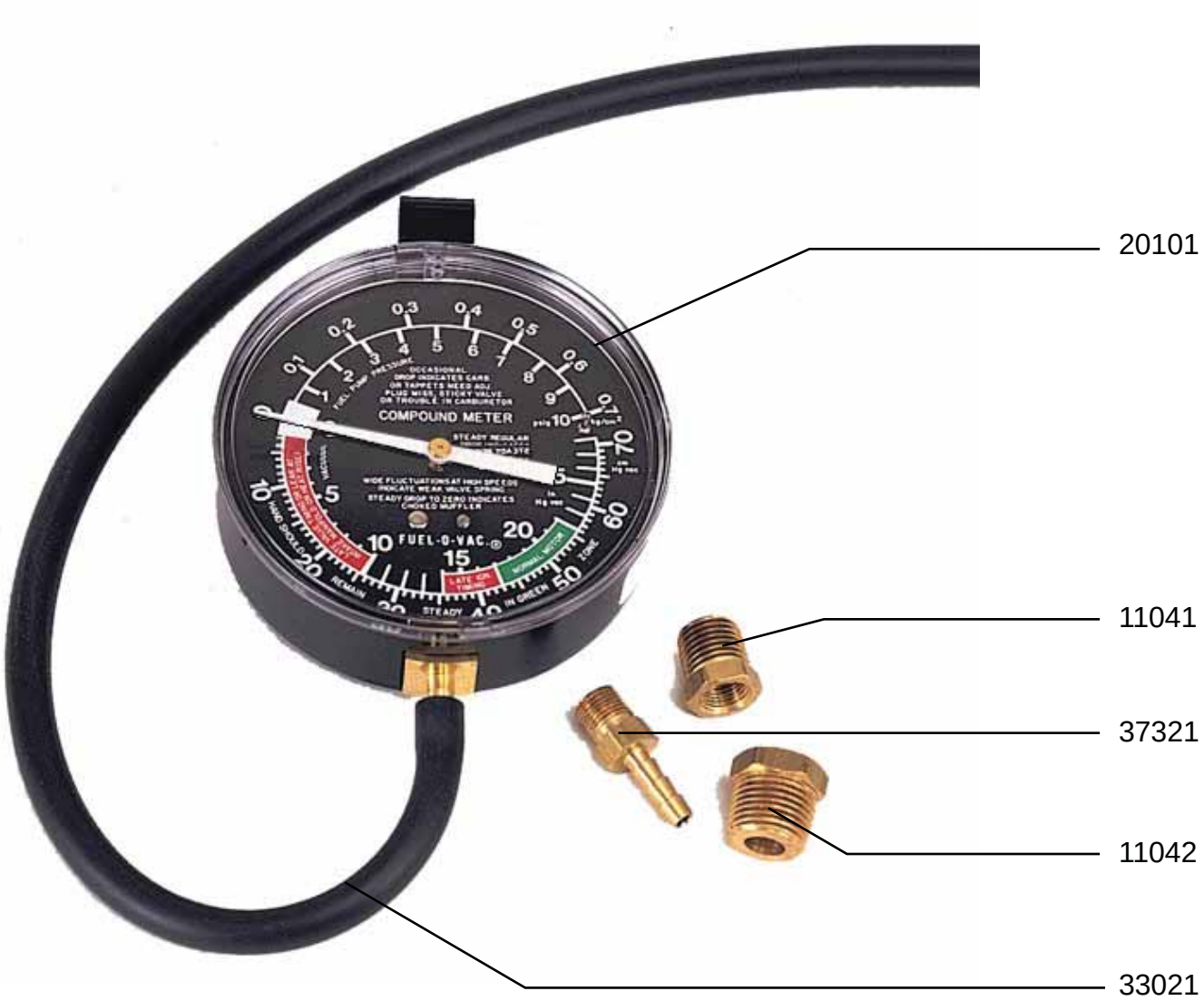

Part Number	Description
51007	Plastic Pouch
20101	Gauge and Hose Assembly
11041	Fitting, 1/4" x 1/8" NPT
37321	Barbed hose fitting, 3/16" hose x 1/8" MNPT
11042	Fitting, 3/8" x 1/8" NPT
33021	Hose, 2'

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