

# CT155A DELUXE COMPRESSION TEST SET

## Testing Procedure

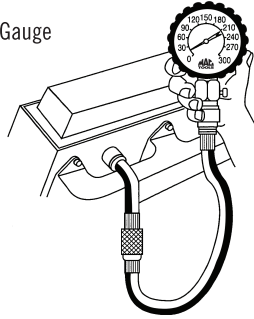
1. Before performing a compression test, operate the engine until it achieves a normal operating temperature.
2. Turn engine off and disconnect all the spark plug wires, numbering them according to their cylinder number. Ex. #1 cylinder, #1 spark plug wire; #2 cylinder, #2 spark plug wire, etc.
3. Do not remove, but loosen each spark plug about one full turn. Using a brush or shop air remove any accumulated dirt from the spark plug wells. At this point, remove each spark plug and place them on a bench top according to their corresponding cylinder number.
4. After removing the air filter, set the throttle plates to the wide open position. Care is needed to avoid damage to linkage or any components.

### ⚠ CAUTION:

Remember to return throttle plates to the closed position prior to engine start-up. Failure to do so may cause serious engine damage.

5. Following the manufacturer's instructions or referencing a service manual, disconnect the ignition system for the engine.
6. Choose the correct size spark plug adapter and/or hose to fit the vehicle. By hand tightening only, screw the adapter and/or hose into a spark plug hole. Only hand tighten, do not use any wrench to tighten. Figure #1.

**Figure #1**  
Compression Gauge  
Installation

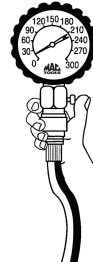


### ⚠ WARNING:

Use the long reach hose only with engines using long reach spark plugs. Using the long reach hose in short reach spark plug holes may damage the top of the piston.

7. Properly couple the gauge hose to the spark plug hose fitting. Be certain coupler is properly seated.
8. Using the ignition key, allow the engine to turn over five or more compression strokes or until the pressure gauge reading stops increasing.
9. After recording the gauge reading, use the side valve to release pressure (Figure #2). For each of the remaining cylinders repeat the test; recording the gauge reading, relieving the pressure before removing the connection hose to the next spark plug well.

**Figure #2**  
Relieving Pressure in Hose



## Results of Test

1. For a properly operating cylinder, the needle on the gauge should move upward until it peaks and stabilizes. Check the manufacturer's specifications to indicate the recorded pressures are within the recommended range and not more than a 10% variance from one another.
2. If the gauge needle fails to increase or if it remains at the same low value for several compression strokes, this could indicate a sticking engine valve.
3. If a reading is considerably higher than the manufacturer's recommended range this could indicate either a build-up of carbon or a modification to the piston or cylinder head.
4. On the occasion that two adjacent cylinders are 20 psi, or more, lower than the other cylinders check for a damaged head gasket or cylinder head. A second indicator would be the presence of oil or coolant in these two cylinders.
5. If the pressure readings are low or vary widely perform a test by pouring a teaspoon of grade 30 engine oil into each cylinder and pressure test again. A considerable increase in pressure may indicate worn or damaged engine rings. If the readings remain unchanged; the problem may lie in worn valves or associated components. The same results would result from damaged or a burned piston.
6. After the test is complete; either install new spark plugs or clean, re-gap and reinstall the previous spark plugs in their sequential order. Properly install the spark plug wires in the correct firing order. Close the throttle plate and reconnect the ignition wiring system.

## Mac Tools Repair Parts

Description	Part Number
2-1/2" 0-300psi Gauge	CT155A-1
2-1/2" Red Gauge Boot	CT155A-2
26" Hose / Release Valve	CT155A-3
10MM Adapter	CT155A-4
12MM Adapter	CT155A-5
18MM Adapter	CT155A-6
Female Q.C.	CT155A-7
14MM Std. Hose Ass'y.	CT155A-8
14MM(LR) Hose Ass'y.	CT155A-9
M16 Hose	CT155A-10
Deep Well Connector	CT155A-11
Repair Kit	CT155A-12
Red Carry Case	CT155A-13

