

Compression Test Procedure

1. Charge the battery if the battery is not fully charged.
2. Disable the ignition system.
3. Disable the fuel injection system.
4. Remove all the spark plugs.
5. Block the throttle plate wide open.
6. Start with the compression gauge at zero, and crank the engine through four compression strokes (four puffs).
7. Make the compression check for each cylinder. Record the reading.
8. If a cylinder has low compression, inject approximately 15 ml (one tablespoon) of engine oil into the combustion chamber through the spark plug hole. Recheck the compression and record the reading.
9. The minimum compression in any one cylinder should not be less than 70 percent of the highest cylinder. No cylinder should read less than 690 kPa (100 psi). For example, if the highest pressure in any one cylinder is 1035 kPa (150 psi), the lowest allowable pressure for any other cylinder would be 725 kPa (105 psi). ($1035 \times 70\% = 725$) ($150 \times 70\% = 105$).

NOTE: Compression in a brand new engine will only read about 60 psi until the rings have seated.

- Normal - Compression builds up quickly and evenly to the specified compression for each cylinder.
- Piston Rings Leaking - Compression is low on the first stroke. Compression then builds up with the following strokes but does not reach normal. Compression improves considerably when you add oil.
- Valves Leaking - Compression is low on the first stroke. Compression usually does not build up on the following strokes. Compression does not improve much when you add oil.
- If two adjacent cylinders have lower than normal compression and injecting oil into the cylinders does not increase the compression; the cause may be a head gasket leaking between the cylinders.