COMPRESSION

EM058-01

INSPECTION

HINT:

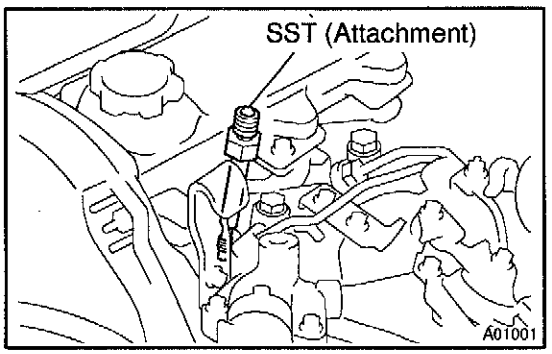
If there is lack of power, excessive oil consumption or poor fuel economy, measure the compression pressure.

1. WARM UP AND STOP ENGINE

Allow the engine to warm up to normal operating temperature.

2. REMOVE GLOW PLUGS

3. DISCONNECT INJECTION PUMP (FUEL CUT SOLENOID) CONNECTOR



4. CHECK CYLINDER COMPRESSION PRESSURE

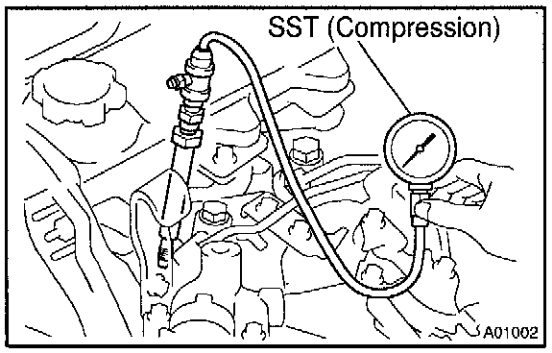
HINT:

Turn the starter before measuring the compression and discharge the foreign objects.

(a) Install SST (attachment) to the glow plug hole.

SST 09992–00025 (09992–00121)

Torque: 13 N·m (130 kgf·cm, 10 ft·lbf)



(b) Connect SST (compression gauge) to the SST (attachment).

SST 09992–00025 (09992–00211)

(c) Fully open the throttle valve, and start the engine.

(d) While cranking the engine, measure the compression pressure.

HINT:

Always use a fully charged battery to obtain engine revolution of 250 rpm or more.

(e) Repeat steps (a) through (d) for each cylinder.

NOTICE:

This measurement must be done in as short a time as possible.

Compression pressure:

2L–T	3,040 kPa (31.0 kgf/cm^2, 441 psi) or more
2L, 3L, 5L	3,138 kPa (32.0 kgf/cm^2, 455 psi) or more

Minimum pressure: 1,961 kPa (20.0 kgf/cm^2, 284 psi)

Difference between each cylinder:

490 kPa (5.0 kgf/cm^2, 71 psi) or less

(f) If the cylinder compression in one or more cylinders is low, pour a small amount of engine oil into the cylinder through the glow plug hole and repeat steps (a) through (d) for the cylinder with low compression.
- If adding oil helps the compression, chances are that the piston rings and/or cylinder bore are worn or damaged.
- If pressure stays low, a valve may be sticking or seating improperly, or there may be leakage past the gasket.

(g) Remove the SST.
SST 09992–00025 (09992–00121, 09992–00211)

5. RECONNECT INJECTION PUMP (FUEL CUT SOLENOID) CONNECTOR

6. REINSTALL GLOW PLUGS
Torque: 13 N·m (130 kgf·cm, 10 ft·lbf)

7. START ENGINE AND CHECK FOR LEAKS