COMPRESSION

EM1M1–03

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 (See page EM–14)

3. DISCONNECT INJECTOR CONNECTORS

4. CHECK CYLINDER COMPRESSION PRESSURE

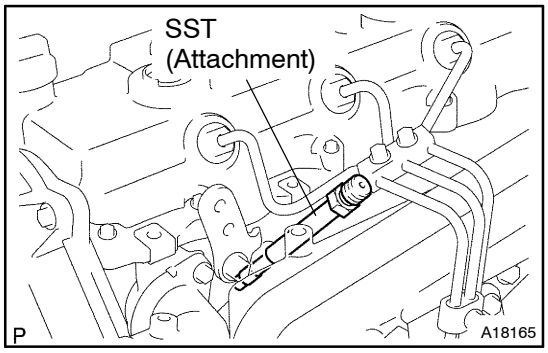
HINT:

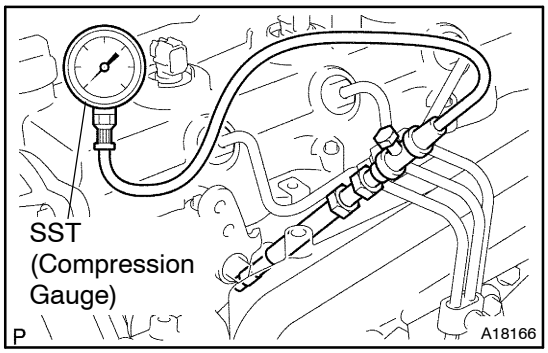
Turn the starter before measuring the compression and discharge the foreign objects.

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

SST 09992–00025 (09992–00121)

Torque: 13 N·m (133 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:
2,700 kPa (27.5 kgf/cm^2, 391 psi) or more
Minimum pressure: 2,200 kPa (22.5 kgf/cm^2, 320 psi)
Difference between each cylinder:
500 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 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 SST.

SST 09992–00025 (09992–00121, 09992–00211)

5. RECONNECT INJECTOR CONNECTORS
6. REINSTALL GLOW PLUGS (See page EM–18)
7. START ENGINE AND CHECK FOR LEAK