COMPRESSION

EM0QI–02

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**

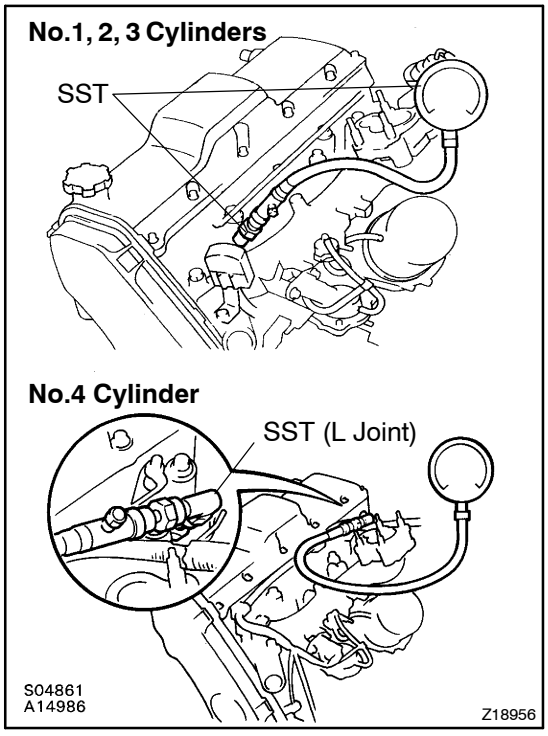
Allow the engine to warm up to normal operating temperature.

2. **DISCONNECT INJECTION PUMP (SPILL CONTROL VALVE) CONNECTOR**
3. **DISCONNECT GLOW PLUG WIRE FROM GLOW PLUG CONNECTOR**

NOTICE:

In order not to short the glow plug wire, apply vinyl tape around the terminal.

4. **REMOVE INTAKE PIPE (See page EM–44)**
5. **REMOVE INJECTION PIPES (See page FU–18)**
6. **REMOVE INJECTION NOZZLES (See page FU–5)**



7. **CHECK CYLINDER COMPRESSION PRESSURE**

HINT:

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

(a) Install SST (attachment) to the injection nozzle hole.
SST 09992–00500

(b) Connect SST (compression gauge) to the attachment.
SST 09992–00024 (09992–00200, 09992–00211)

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

HINT:

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

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

NOTICE:

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

Compression pressure:
3,040 kPa (31.0 kgf/cm^2, 441 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

(e) If the cylinder compression in one or more cylinders is low, pour a small amount of engine oil into the cylinder through the injection nozzle hole and repeat steps (a) through (c) 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.

8. **REINSTALL INJECTION NOZZLES (See page FU–18)**
9. **REINSTALL INJECTION PIPES (See page FU–25)**
10. **REINSTALL INTAKE PIPE (See page EM–64)**
11. **RECONNECT GLOW PLUG WIRE TO GLOW PLUG CONNECTOR**
12. **RECONNECT INJECTION PUMP (SPILL CONTROL VALVE) CONNECTOR**
13. **START ENGINE AND CHECK FUEL LEAKAGE**