

ENGINE MECHANICAL SYSTEM (K3-VE)

OPERATION CHECK

1. **CHECK COOLANT** (Ethylene glycol based anti-freeze solution)
(See page CO-3)

2. **CHECK ENGINE OIL QUALITY** (See page LU-2)

3. **INSPECT BATTERY SPECIFIC GRAVITY**

- (a) Check the specific gravity of each cell.

Standard:

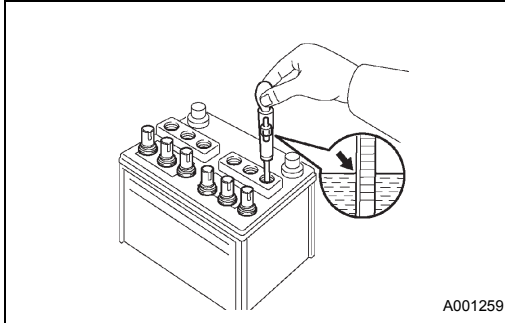
1.25 to 1.29 (Liquid temperature: 20°C)

HINT:

If the specific gravity is not as specified, charge the battery.

4. **CHECK AIR CLEANER FILTER ELEMENT**

- (a) Check for dirt and blockage in the air cleaner pipe.



5. **CHECK V-BELT TENSION AND DEFLECTION**

- (a) Check the V-belt tension and deflection using the belt tension gauge.

Standard

Item	When Installing New Part	When Inspecting
Tension [N (kgf)]	883±49{90±5}	441±98{45±10}
Deflection (Thrust power: 100 N (10.2 kg)) (mm)	9-11	13-15

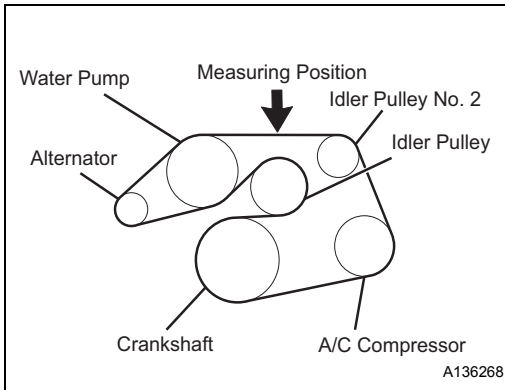
NOTICE:

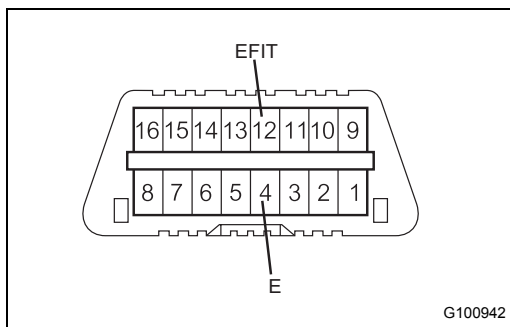
- Measure the belt deflection between the specified pulleys.
- Crank the engine 2 times before measuring the tension.
- To install a new belt, adjust the belt so that the tension is at the middle of the specified value given for **WHEN INSTALLING NEW PART** in the table above.
- When installing a new belt, check the tension within 2.5 minutes after installation.
- For the belt that has been used for 5 minutes or more, check the tension using the specified value in **WHEN INSPECTION** in the table above.
- To reassemble the belt that has been used for 5 minutes or more, adjust the belt so that the tension is in the middle of the specified value given for **WHEN INSPECTION** in the table above.
- To use a belt tension gauge, check its accuracy with the master gauge before measuring the tension.

6. **CHECK IGNITION TIMING**

- (a) Check the timing with the DS-II.

- (1) Connect the DS-II to the DLC.





- (2) Follow the prompts on the screen to display the DATA LIST / IGNITION TIMING #1 screens, and measure the ignition timing.

Standard:**BTDC 0-15°CA****NOTICE:**

Check the ignition timing with the A/C off, the electrical fan off, and the shift lever in the N and P positions.

- (3) Check that the ignition timing advances immediately when the engine speed is increased.

- (b) Check the timing with commonly-used gauges.

- (1) Using the diagnosis check wire, short-circuit between terminals 12 (EFIT) and 4 (E) of the DLC.

NOTICE:

- **Do not short-circuit the wrong terminals. Doing so may cause malfunctions.**
- **Check the ignition timing with the A/C off, the electrical fan off, and the shift lever in the N and P positions.**

- (2) Connect the timing light clip to the coil connector wire harness for the cylinder No. 1.

NOTICE:

Use a timing light that can detect the first signal.

- (3) Check that the ignition timing is as the specified value.

Standard:**BTDC 4 to 8°**

- (4) Open the circuit between terminals 12 (EFIT) and 4 (E) of the DLC.
- (5) Check that the ignition timing advances immediately when the engine speed is increased.
- (6) Remove the timing light.

7. CHECK IDLE SPEED

- (a) Connect the DS-II to the DLC.
- (b) Follow the prompts on the screen to display the DATA LIST / IGNITION TIMING #1 screens, and measure the engine speed (r/min).

Standard:**600 to 750 r/min****NOTICE:**

Check the ignition timing with the A/C off, the electrical fan off, and the shift lever in the N and P positions.

8. CHECK COMPRESSION

- (a) Fully warm up the engine and then stop it.

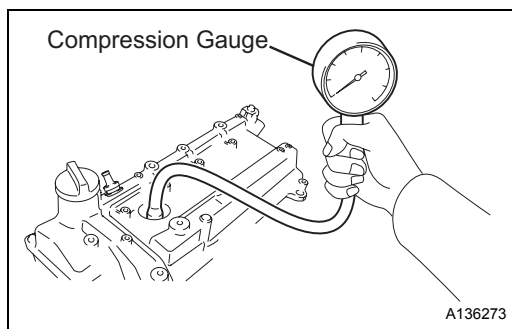
NOTICE:

A warmed up engine should have an engine coolant temperature of over 85°C, have an engine oil temperature of 60°C, and the engine rpm should be stabilized.

- (b) Remove the air cleaner assembly.
- (c) Remove all the ignition coils.
- (d) Remove all the spark plugs.
- (e) Disconnect all the injector connectors.

NOTICE:

Stop fuel injection to prevent unburned fuel from damaging the catalyst.



- (f) Check the compression.
- (1) Install a compression gauge to the plug hole.
 - (2) Fully open the throttle.
 - (3) Crank the engine, then check the compression.

Standard:

1471 kPa (15.0 kgf/cm²)

Maximum limit:

1079 kPa (11.0 kgf/cm²)

Reference value:

**Maximum difference between cylinders: 147 kPa
(1.5 kgf/cm²)**

NOTICE:

- The measurement must be done as quickly as possible.
- After all work is completed, be sure to clear all DTCs and check that a normal code is output.

9. CHECK DENSITY OF CO AND HC

- (a) Keep the engine speed at 2,500 r/min for 2 minutes and then check the density of CO and HC at idle.

Standard:

CO density: 0.2%

HC density: 200 ppm

NOTICE:

As the specified value is used for reference only, no adjustment is required.

