	(09951–00520) Replacer 52	Rotor front bearing for 24 type
	09950–70010 Handle Set	
	(09951–07100) Handle 100	Rotor front bearing

CH00E–00

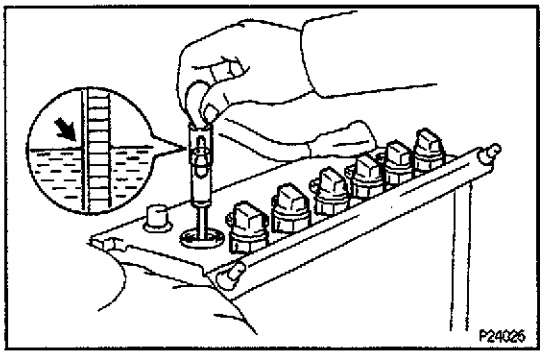
RECOMMENDED TOOLS

	09082–00050 TOYOTA Electrical Tester Set.	
	09200–00010 Engine Adjust Kit .	
	09905–00013 Snap Ring Pliers .	Alternator washer for 24 V type for BU

CH00U–01

EQUIPMENT

Battery specific gravity gauge	
Torque wrench	
Vernier calipers	Rotor (Slip ring), Brush



ON–VEHICLE INSPECTION

CH00F–01

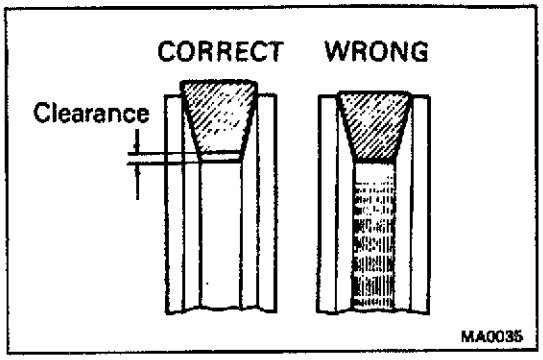
1. CHECK BATTERY SPECIFIC GRAVITY AND ELECTROLYTE LEVEL

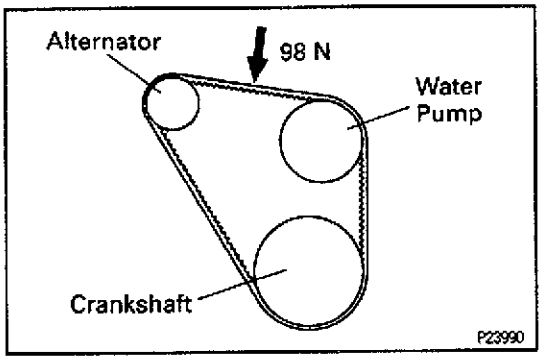
(a) Check the electrolyte level of each cell.
If insufficient, refill with distilled (or purified) water.

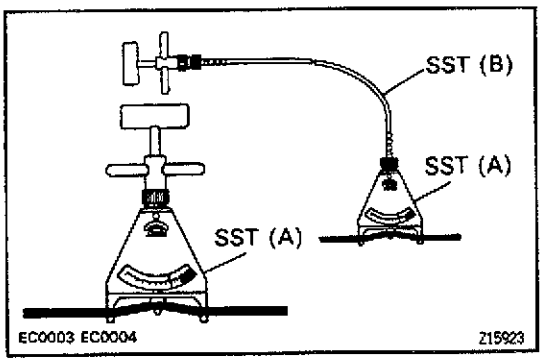
(b) Check the specific gravity of each cell.
Standard specific gravity at 20°C (68°F):
55D23R, 75D31R, 105E41R
1.25 – 1.27
95D31R, 130E41R
1.27 – 1.29
If the gravity is less than specification, charge the battery.

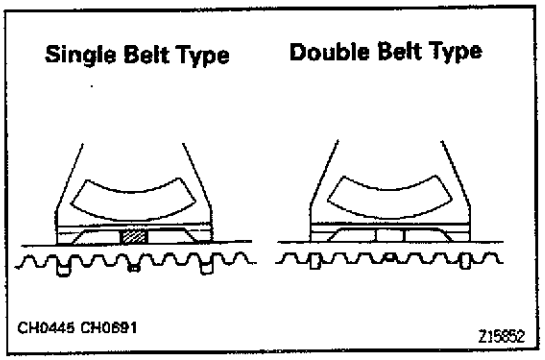
2. CHECK BATTERY TERMINALS, FUSIBLE LINK AND FUSES

(a) Check that the battery terminals are not loose or corroded.
If the terminals are corroded, clean the terminals.









(b) Check the fusible link and fuses for continuity.

3. INSPECT DRIVE BELT(S)

(a) Visually check the belt for cracks, oiliness or wear. Check that the belt does not touch the bottom of the pulley groove.

If the belt has any of the above defects, replace it.

(b) Check the drive belt deflection by pressing on the belt at the points indicated in the illustration with 98 N (10 kgf, 22 lbf) of pressure.

Drive belt deflection:

Single belt type

New belt

8 – 11 mm (0.31 – 0.43 in.)

Used belt

11 – 16 mm (0.43 – 0.63 in.)

Double belt type

New belt

9.5 – 13 mm (0.374 – 0.51 in.)

Used belt

14 – 20 mm (0.55 – 0.79 in.)

If the belt deflection is not as specified, adjust it.

Reference:

Using SST, check the drive belt tension.

SST 09216–00021 (A),
09216–00030 (B)

Drive belt tension:

Single belt type

New belt

421 – 657 N (43 – 67 kgf)

Used belt

245 – 441 N (25 – 45 kgf)

Double belt type

New belt

275 – 510 N (28 – 52 kgf)

Used belt

196 – 392 N (20 – 40 kgf)

If the belt tension is not as specified, adjust it.

HINT:

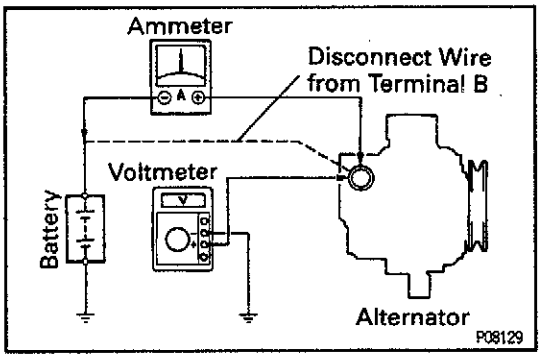
- When checking the belt tension, check that the SST (gauge) tip is on the belt protrusion (single belt type) or belt groove (double belt type).
- "New belt" refers to a belt which has been used less than 5 minutes on a running engine.
- "Used belt" refers to a belt which has been used on a running engine for 5 minutes or more.
- After installing a new belt, run the engine for about 5 minutes and recheck the belt tension.

4. VISUALLY CHECK ALTERNATOR WIRING AND LISTEN FOR ABNORMAL NOISES

(a) Check that the wiring is in good condition.
(b) Check that there is no abnormal noise from the alternator while the engine is running.

5. CHECK CHARGE WARNING LIGHT CIRCUIT

(a) Warm up the engine and then turn it off.
(b) Turn off all accessories.
(c) Turn the ignition switch ON. Check that the charge warning light is lit.
(d) Start the engine. Check that the light goes off.
If the light does not go off as specified, troubleshoot the charge light circuit.



6. INSPECT CHARGING CIRCUIT WITHOUT LOAD

HINT: If a battery/alternator tester is available, connect the tester to the charging circuit as per manufacturer's instructions.

(a) If a tester is not available, connect a voltmeter and ammeter to the charging circuit as follows:
- Disconnect the wire from terminal B of the alternator, and connect it to the negative (–) tester probe of the ammeter.
- Connect the positive (+) tester probe of the ammeter to terminal B of the alternator.
- Connect the positive (+) tester probe of the voltmeter to terminal B of the alternator.
- Ground the negative (–) tester probe of the voltmeter.

(b) Check the charging circuit as follows:
With the engine running from idling to 2,000 rpm, check the reading on the ammeter and voltmeter.

Standard amperage:

10 A or less

Standard voltage:

At 25°C (77°F)

12 V type

13.8 – 14.4 V

24 V type

27.7 – 28.7 V

At 135°C (275°F)

12 V type

12.9 – 14.4 V

24 V type

26.0 – 28.7 V

If the voltmeter reading is more than standard voltage, replace the IC regulator.
If the voltmeter reading is less than standard voltage, check the IC regulator and alternator as follows:
- With terminal F grounded, start the engine and check the voltmeter reading of terminal B.

