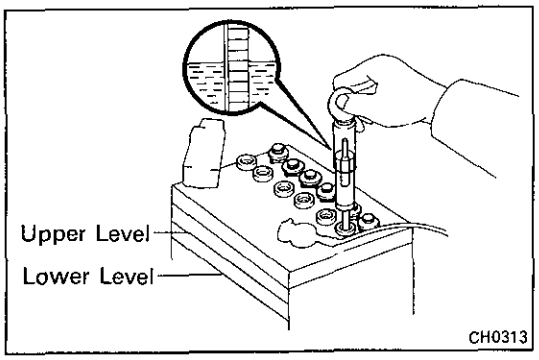


ON-VEHICLE INSPECTION

1. **INSPECT BATTERY SPECIFIC GRAVITY AND ELECTROLYTE LEVEL**

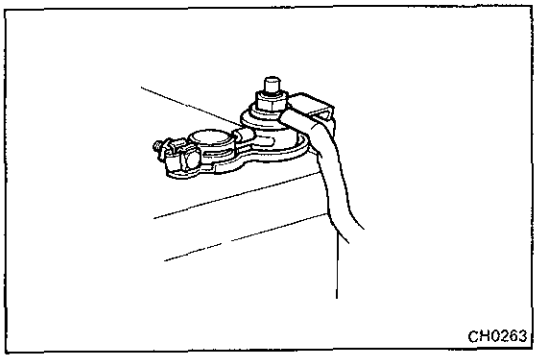
(a) Check the specific gravity of each cell.

Standard specific gravity
When fully charged at 20°C (68°F): 1.25 – 1.27

If not within specifications, charge the battery.

(b) Check the electrolyte quantity of each cell.

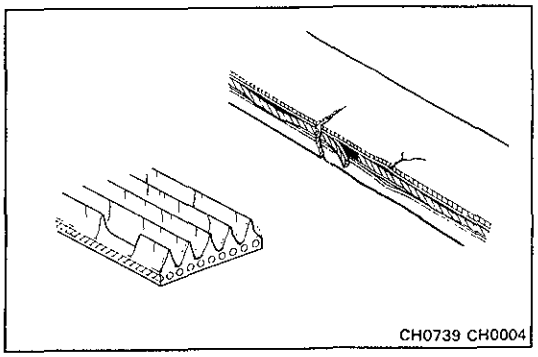
If insufficient, refill with distilled (or purified) water.



2. **CHECK BATTERY TERMINALS AND FUSIBLE LINKS**

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

(b) Check the fusible links for continuity.

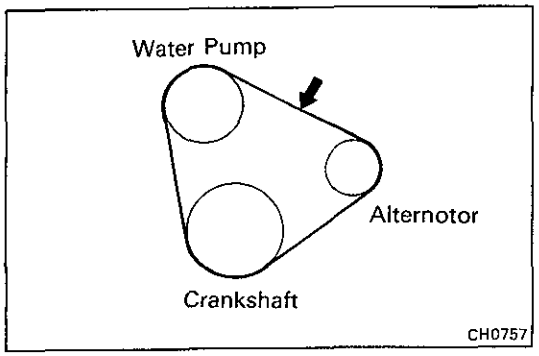


3. **INSPECT DRIVE BELT**

(a) Visually check the belt for excessive wear, frayed cord etc.

If necessary, replace the drive belt.

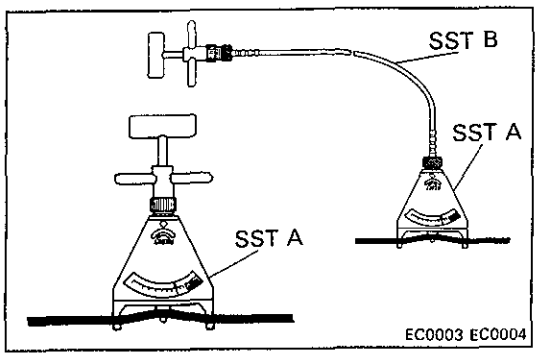
HINT: Cracks on the rib side of a belt are considered acceptable. If the belt has chunks missing from the ribs, it should be replaced.



(b) Check the drive belt deflection by pressing on the belt at the points indicated in the figure with 10 kg (22 lb, 98.1 N) pressure.

Drive belt deflection:
New belt 5 – 7 mm (0.20 – 0.28 in.)
Used belt 7 – 8 mm (0.28 – 0.31 in.)

If necessary, adjust the drive belt deflection.



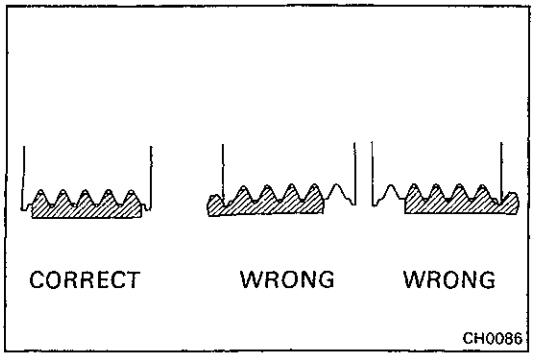
[Reference]

Using SST, check the drive belt tension.

SST A 09216-00020
SST B 09216-00030

Drive belt tension:
New belt 70 – 80 kg
Used belt 30 – 45 kg

If necessary, adjust the drive belt tension.

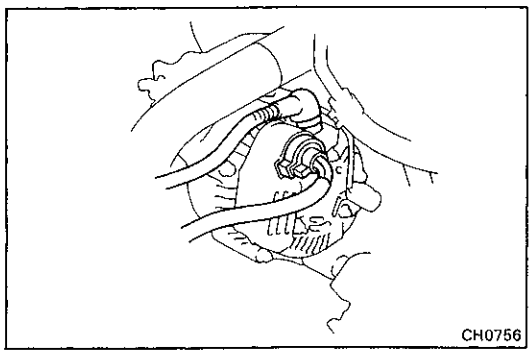


HINT:

- "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 the drive belt, check that it fits properly in the ribbed grooves. Check with your hand to confirm that the belt has not slipped out of the groove on the bottom of the crank pulley.
- After installing a new belt, run the engine for approx. 5 minutes and then recheck the tension.

4. INSPECT FUSES FOR CONTINUITY

- **ENGINE 7.5A**
- **CHARGE 7.5A**
- **IGN 7.5A**



5. VISUALLY CHECK ALTERNATOR WIRING AND LISTEN FOR ABNORMAL NOISES

(a) Check that the wring is in good condition.

(b) Check that there is no abnormal noise from the alternator while the engine is running.

6. INSPECT DISCHARGE WARNING LIGHT CIRCUIT

(a) Warm up the engine and turn it off.

(b) Turn off all accessories.

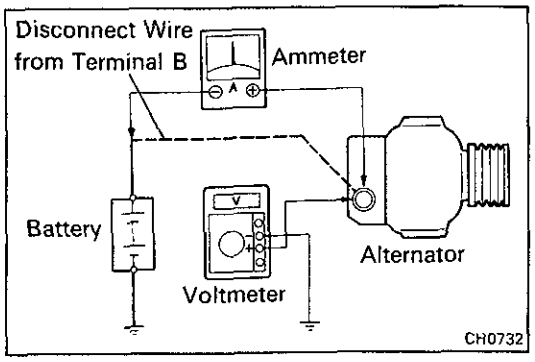
(c) Turn the ignition switch to ON. Check that the discharge warning light is light.

(d) Start the engine. Check that the light goes out.

If the light does not operate as specified, troubleshoot the warning light circuit.

7. CHECK CHARGING CIRCUIT WITHOUT LOAD

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



(a) If a tester is not available, connect a voltmeter and ammeter to the charging circuit as follows:

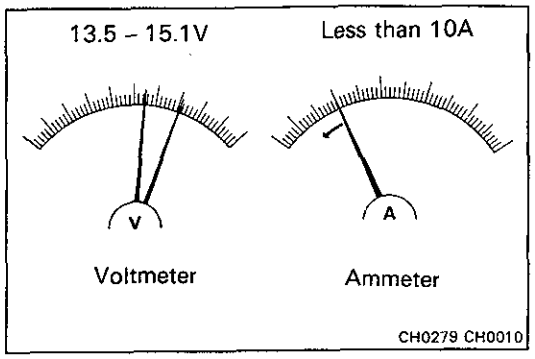
- Disconnect the wire from terminal B of the alternator and connect the wire to the negative (–) terminal of the ammeter.
- Connect the test lead from the positive (+) terminal of the ammeter to terminal B of the alternator.
- Connect the positive (+) lead of the voltmeter to terminal B of the alternator.
- Ground the negative (+) lead 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.

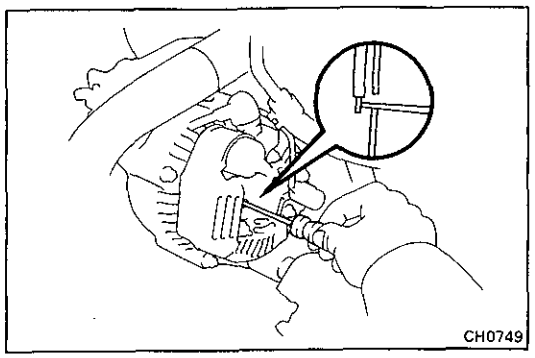
Standard amperage: Less than 10 A
Standard voltage: 13.9 – 15.1V at 25°C(77°F)
13.5 – 14.3V at 115°C(239°C)

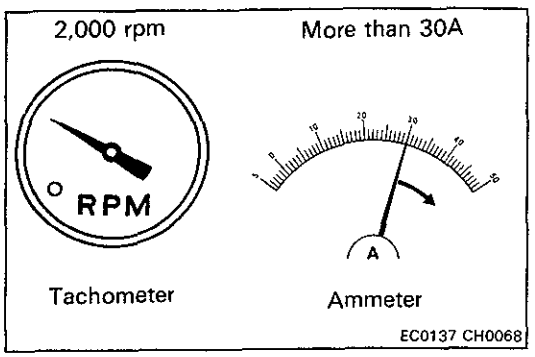
If the voltage reading is greater than standard voltage, replace the IC regulator.



If the voltage reading is less than standard voltage, check the IC regulator and alternator as follows:

- With terminal F grounded, start the engine and check the voltage reading of terminal B.
- If the voltage reading is higher than standard voltage, replace the IC regulator.
- If the voltage reading is less than standard voltage, repair the alternator.





8. INSPECT CHARGING CIRCUIT WITH LOAD

(a) With the engine running at 2,000 rpm, turn on the high beam headlights and place the heater fan control switch at HI.

(b) Check the reading on the ammeter.

Standard amperage: More than 30 A

If the ammeter reading is less than 30 A, repair the alternator. (See page CH-7)

HINT: If the battery is fully charged, the indication will sometimes be less than 30 A.