

TROUBLESHOOTING

BATTERY IS DAMAGED OR WEAK

1. BATTERY TEST

Remove the battery (page 17-5).

Check the battery condition using the recommended battery tester.

RECOMMENDED BATTERY TESTER: BM-210 or equivalent

Is the battery in good condition?

NO – Faulty battery.

YES – GO TO STEP 2.

2. CURRENT LEAKAGE TEST

Install the battery (page 17-5).

Check the battery current leakage test (page 17-6).

Is the current leakage below 0.01 mA?

YES – GO TO STEP 4.

NO – GO TO STEP 3.

3. CURRENT LEAKAGE TEST WITHOUT REGULATOR/RECTIFIER CONNECTOR

Disconnect the regulator/rectifier connector and recheck the battery current leakage.

Is the current leakage below 0.01 mA?

YES – Faulty regulator/rectifier

NO – • Shorted wire harness
• Faulty engine stop switch

4. ALTERNATOR CHARGING COIL INSPECTION

Check the alternator charging coil (page 17-7).

Is the alternator charging coil resistance within 0.2 – 1.2 Ω (20°C/68°F)?

NO – Faulty charging coil.

YES – GO TO STEP 5.

5. CHARGING VOLTAGE INSPECTION

Measure and record the battery voltage using a digital multimeter (page 17-6).

Start the engine.

Measure the charging voltage page 17-6.

Compare the measurements to the results of the following calculation.

STANDARD:

Measured battery Voltage < Measured charging voltage < 15.5 V

Is the measured charging voltage within the standard voltage?

YES – Faulty battery

NO – GO TO STEP 6.

6. REGULATOR/RECTIFIER SYSTEM INSPECTION

Check the voltage and resistance at the regulator/rectifier connector (page 17-7).

Are the measurements correct?

YES – Faulty regulator/rectifier

NO – • Open circuit in related wire
• Loose or poor contacts of related terminal
• Shorted wire harness