PROCEDURE

1.CHECK BATTERY CONDITION

NOTICE:
If the battery is weak or if the engine is difficult to start, recharge the battery and perform inspections again before returning the vehicle to the customer.

a. Check the battery for damage and deformation. If severe damage, deformation or a leak is found, replace the battery.

b. Check the volume of electrolyte in each cell.

i. For batteries that are maintenance-free:

- If the electrolyte volume is below the lower line, replace the battery.
- If the electrolyte volume is above the lower line, check the battery voltage when cranking the engine. If the voltage is below 9.6 V, recharge or replace the battery.

HINT:
Before checking the battery voltage, turn off all the electrical systems (headlights, blower motor, rear defogger, etc.).

ii. For batteries that are not maintenance-free:

- If the electrolyte volume is below the lower line, add distilled water to each cell. Then recharge the battery and check the electrolyte specific gravity.

  Standard specific gravity:
  1.25 to 1.29 at 20°C (68°F)

  If the electrolyte volume is above the lower line, check the battery voltage when cranking the engine. If the voltage is below 9.6 V, recharge or replace the battery.

  HINT:
  Before checking the battery voltage, turn off all of the electrical systems (headlights, blower motor, rear defogger, etc.).

c. Check the voltage.

i. Turn the ignition switch off and turn on the headlights for 20 to 30 seconds. This will remove the surface charge from the battery.

ii. Measure the battery voltage according to the value(s) in the table below.

Standard Voltage:

Tester Connection	Condition	Specified Condition
Positive (+) terminal - Negative (-) terminal	20°C (68°F)	12.6 to 12.8 V

HINT:
If the voltage is not as specified, charge the battery.

2.CHECK BATTERY TERMINALS, FUSIBLE LINKS AND FUSES

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

Torque:
Positive (+) battery terminal : 5.4 N*m (55 kgf*cm, 48 in.*lbf)
Negative (-) battery terminal : 5.4 N*m (55 kgf*cm, 48 in.*lbf)

If the terminals are corroded, clean them.

b. Measure the resistance of the fuses.

Standard resistance:
Below 1 Ω

If the results are not as specified, replace the fuses as necessary.

3.INSPECT FAN AND GENERATOR V BELT 16361A

Click hereEngine / Hybrid System>1GR-FE ENGINE MECHANICAL>DRIVE BELT>ON-VEHICLE INSPECTION

4.INSPECT GENERATOR WIRING 27020

a. Visually check the generator wiring.
i. Check that the wiring is in good condition.

5.INSPECT FOR ABNORMAL NOISES

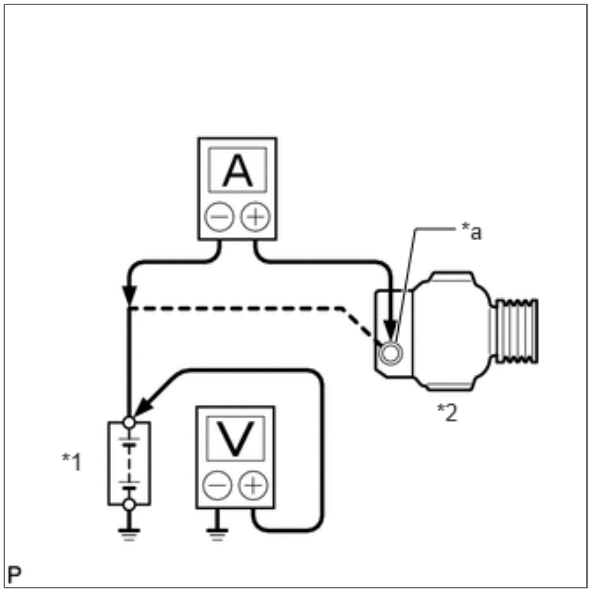
a. Listen for abnormal noises from the generator.
i. Check that no abnormal noises are heard from the generator while the engine is running.

6.INSPECT CHARGE WARNING LIGHT CIRCUIT

a. Turn the ignition switch to ON. Check that the charge warning light comes on.

b. Start the engine and check that the light goes off.
If the light does not operate as specified, troubleshoot the charge warning light circuit.

7.INSPECT CHARGING CIRCUIT WITHOUT LOAD



*1	Battery
*2	Generator Assembly
*a	Terminal B

a. If a tester is not available, connect a voltmeter and ammeter to the charging circuit as follows.
i. Disconnect the wire from terminal B of the generator assembly and connect it to the negative (-) lead of the ammeter.

ii. Connect the positive (+) lead of the ammeter to terminal B of the generator assembly.

iii. Connect the positive (+) lead of the voltmeter to the positive (+) terminal of the battery.

iv. Ground the negative (-) lead of the voltmeter.

b. Check the charging circuit.

i. Maintain the engine speed at 2000 rpm and check the reading on the ammeter and voltmeter.

Standard current:
10 A or higher
Standard voltage:
13.2 to 14.8 V

If the result is not as specified, replace the generator assembly.

HINT:
If the battery is not fully charged, the ammeter reading will sometimes be more than the standard current.

8.INSPECT CHARGING CIRCUIT WITH LOAD

a. With the engine running at 2000 rpm, turn the high beam headlights on and turn the heater blower switch to the HI position.

b. Check the reading on the ammeter.

Standard current:
30 A or higher

If the ammeter reading is below the standard current, repair the generator assembly.

HINT:
If the battery is fully charged, the indication will sometimes be less than the standard current. If this is the case, add more electrical load (operate the wipers, rear window defogger, etc.) and check the reading on the ammeter again.