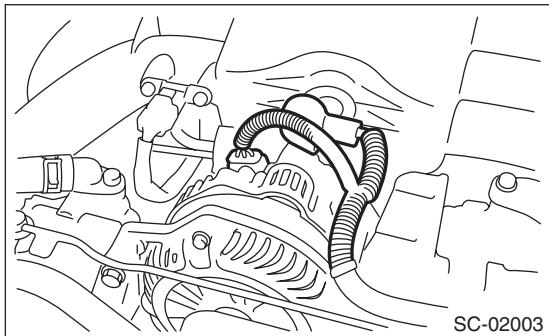


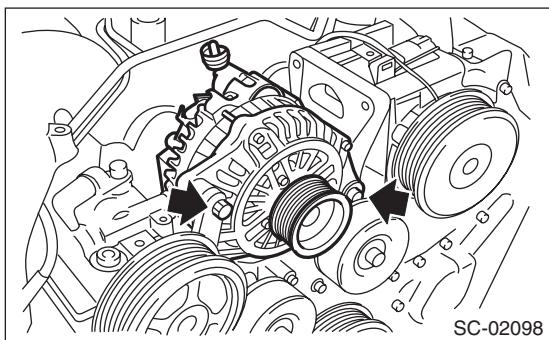
### 3. Generator

#### A: REMOVAL

- 1) Remove the collector cover.
- 2) Disconnect the ground cable from the battery.
- 3) Disconnect the connector and terminal B from generator.



- 4) Remove the V-belt. <Ref. to ME(H6DO)-46, REMOVAL, V-belt.>
- 5) Remove the generator.



#### B: INSTALLATION

Install in the reverse order of removal.

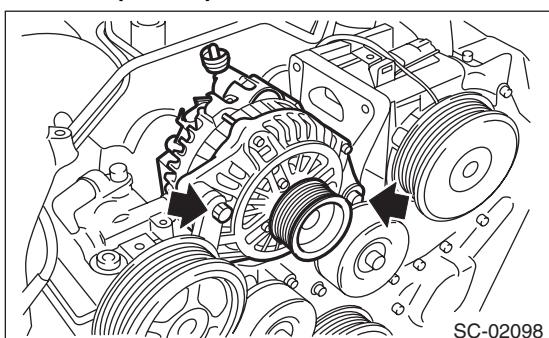
##### **Tightening torque:**

**25 N·m (2.5 kgf·m, 18.4 ft-lb)**

##### **CAUTION:**

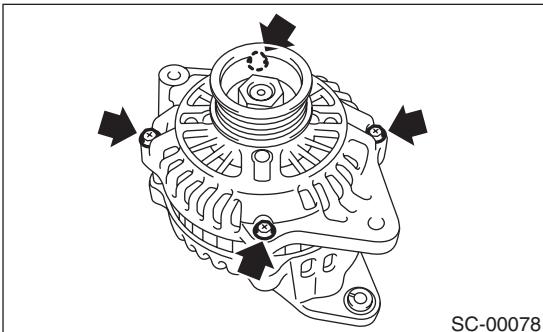
**Check and adjust the V-belt tension.**

<Ref. to ME(H6DO)-46, INSPECTION, V-belt.>

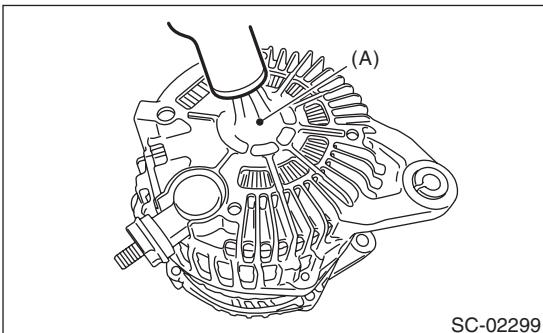


#### C: DISASSEMBLY

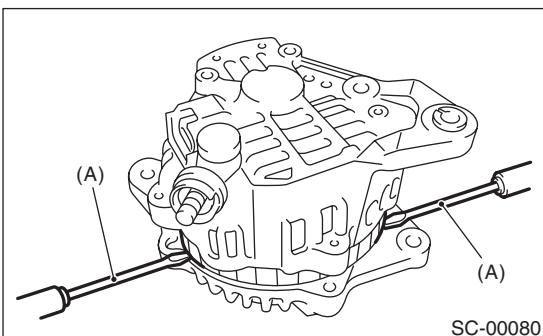
- 1) Remove the four through-bolts.



- 2) Heat the portion (A) of rear cover to 50 — 60°C (122 — 140°F) with a heater drier.

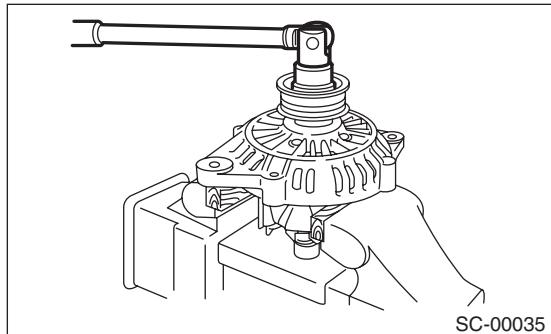


- 3) Then insert the tip of a flat tip screwdriver into the gap between stator core and front cover. Pry them apart to disassemble.



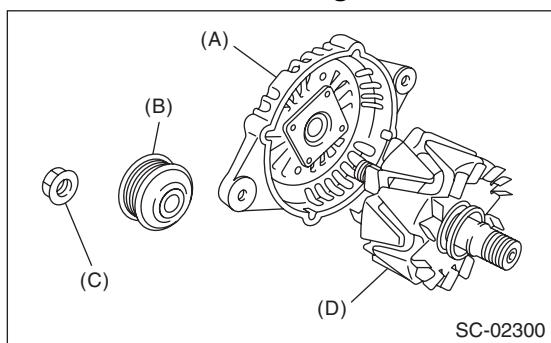
(A) Screwdriver

4) Hold the rotor with a vise and remove pulley nut.



**CAUTION:**

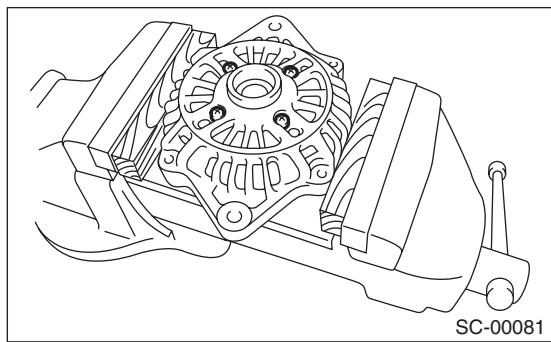
**When holding the rotor with a vise, place aluminum plates or wooden pieces on the vise jaws to prevent rotor from damage.**



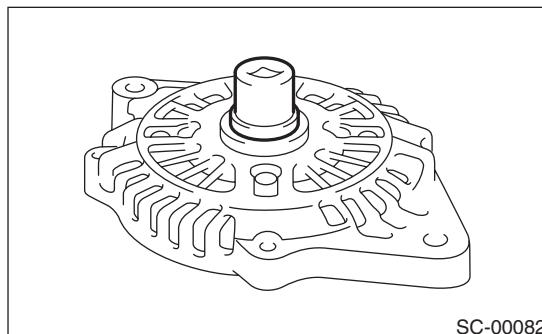
- (A) Front cover
- (B) Pulley
- (C) Nut
- (D) Rotor

5) Use the following procedures to remove the ball bearings.

(1) Remove the bolt, and then remove the bearing retainer.

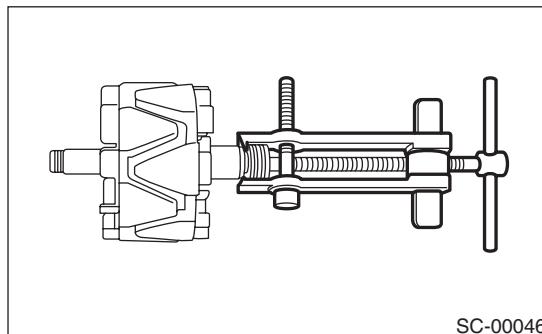


(2) Firmly install an appropriate tool (such as a fit socket wrench) to bearing inner race.

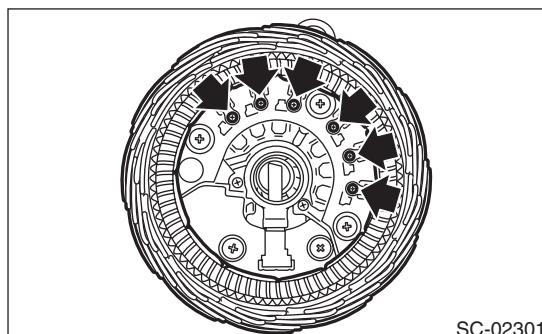


(3) Push the ball bearing off the front cover using a press.

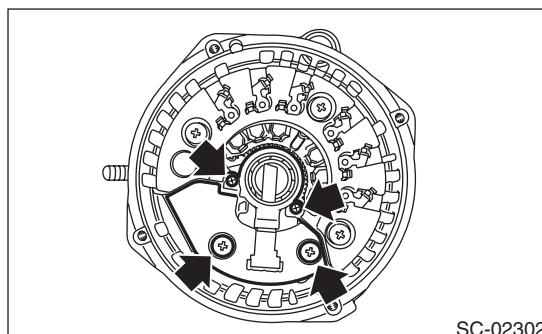
6) Remove the bearing from rotor using a bearing puller.



7) Remove six bolts between rectifier and stator coil, then remove the stator coil.



8) Remove four screws which secure the IC regulator to the rear cover, then remove the IC regulator.

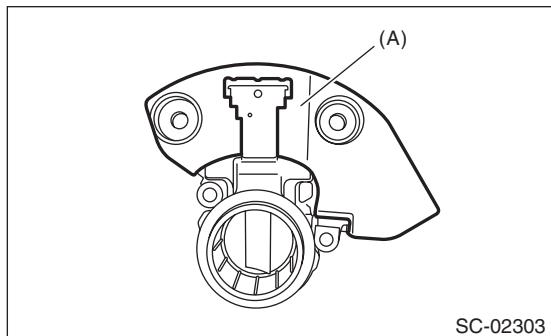


# Generator

## STARTING/CHARGING SYSTEMS

9) Use the following procedures to remove the brush.

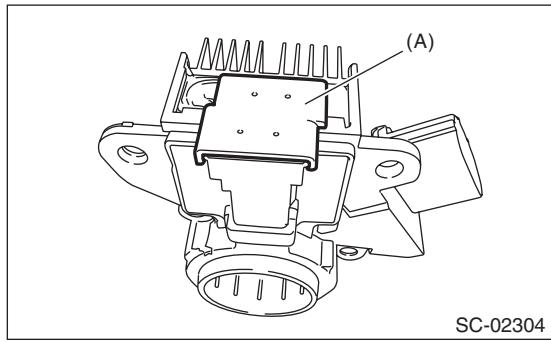
(1) Remove the cover A.



SC-02303

(A) Cover A

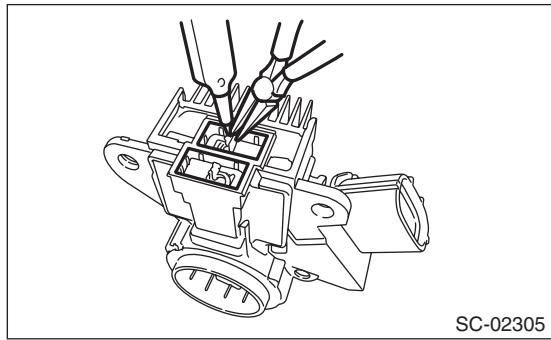
(2) Remove the cover B.



SC-02304

(A) Cover B

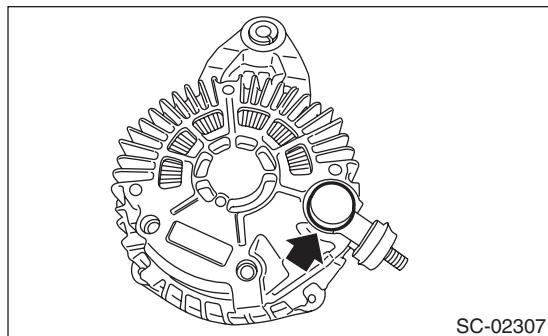
(3) Separate the brush from connection to remove.



SC-02305

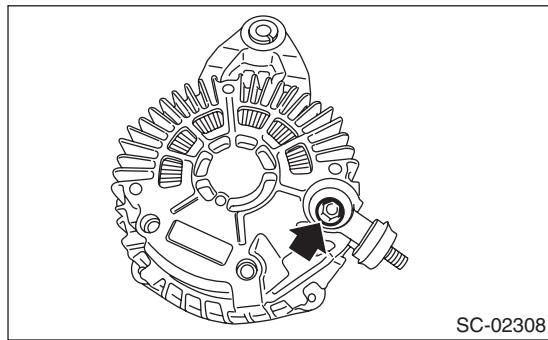
10) Use the following procedures to remove the rectifier.

(1) Remove the cover of terminal B.



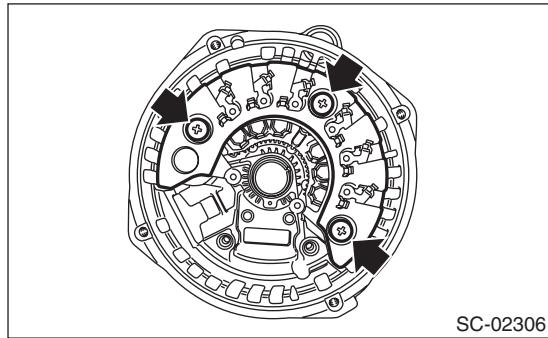
SC-02307

(2) Remove the nut of terminal B.



SC-02308

(3) Remove the bolts which secure the rectifier, then remove the rectifier.



SC-02306

## D: ASSEMBLY

Assemble in the reverse order of disassembly.

**NOTE:**

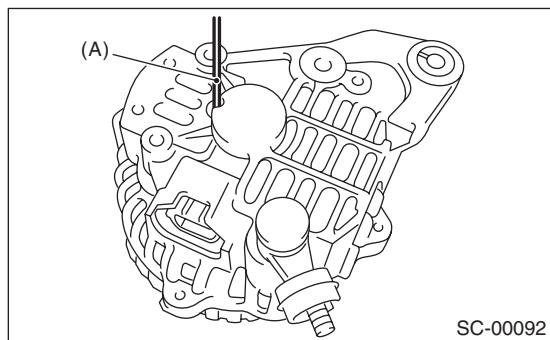
Refer to "COMPONENT" for tightening torques of each section. <Ref. to SC(H6DO)-4, GENERATOR, COMPONENT, General Description.>

1) Push of the brush

Before assembling the front and rear parts, press the brush down into brush holder, and then fix them in that position by passing a [1 mm (0.08 in) dia., 40 — 50 mm (1.6 — 2.0 in) long] wire through the hole as shown in the figure.

**CAUTION:**

**Be sure to remove the wire after reassembly.**



(A) Wire

2) Install the ball bearing.

(1) Set the ball bearing on the front cover, and then securely install an appropriate tool (such as a fit socket wrench) to the bearing outer race.

(2) Press the ball bearing into the specified position using a press.

(3) Install the bearing retainer.

3) Press the bearing (rear side) into the rotor shaft using a press to install.

4) Heat the bearing box in rear cover up to 50 — 60°C (122 — 140°F), and then press the rear bearing into rear cover.

**CAUTION:**

**Grease should not be applied to rear bearing.**

**Remove the oil completely if it is found on bearing box.**

5) After reassembly, turn the pulley by hand to check that rotor turns smoothly.

## E: INSPECTION

1. DIODE

**CAUTION:**

**There is the possibility of damaging the diodes if a mega-tester (used to measure high voltages) or a similar measuring instrument is used. Never use a mega tester or equivalent for this test.**

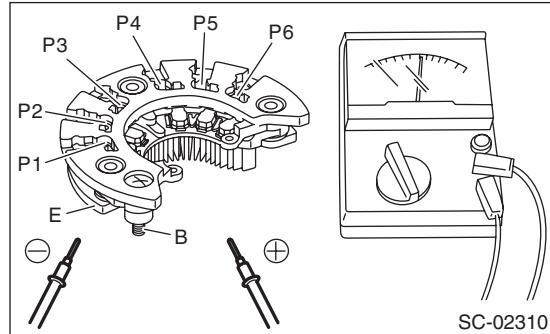
1) Check for continuity between the diode lead and terminal E or B. If continuity is not as shown in the table, replace the rectifier.

- At analog type tester

Tester lead		Continuity
-lead	+lead	
E	P1, P2, P3, P4, P5, P6	Yes
B		No
P1, P2, P3, P4, P5, P6	E	No
	B	Yes

- At digital type tester

Tester lead		Continuity
-lead	+lead	
E	P1, P2, P3, P4, P5, P6	No
B		Yes
P1, P2, P3, P4, P5, P6	E	Yes
	B	No



# Generator

## STARTING/CHARGING SYSTEMS

### 2. ROTOR

#### 1) Slip ring surface

Inspect the slip rings for contamination or any roughness on the sliding surface. Repair the slip ring surface using a lathe or sand paper.

#### 2) Slip ring outer diameter

Measure the slip ring outer diameter. Replace the rotor assembly if the slip ring is worn.

#### **Slip ring outer diameter:**

##### **Standard**

**22.7 mm (0.894 in)**

##### **Service limit**

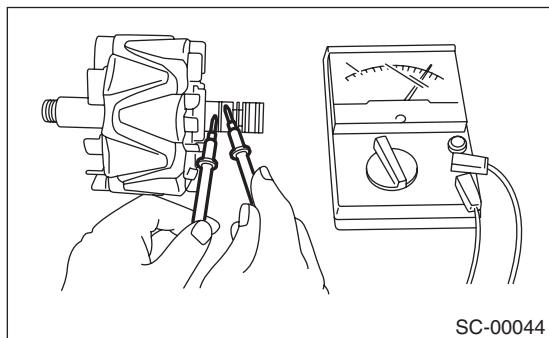
**22.1 mm (0.870 in)**

#### 3) Continuity test

Using a circuit tester, check the resistance between slip rings. If the resistance is not within the standard, replace the rotor assembly.

#### **Specified resistance:**

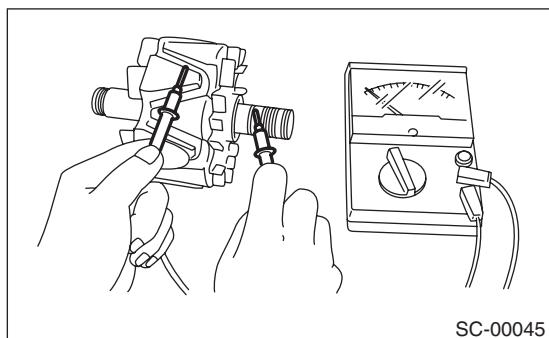
**Approximately 2.0 — 2.3  $\Omega$**



SC-00044

#### 4) Insulation test

Check the continuity between slip ring and rotor core or shaft. If there is continuity, replace the rotor assembly because the rotor coil is grounded.



SC-00045

#### 5) Bearing (rear side)

Check the bearing (rear side). If there is any noise, or the rotor does not rotate smoothly, replace the bearings.

### 3. STATOR COIL

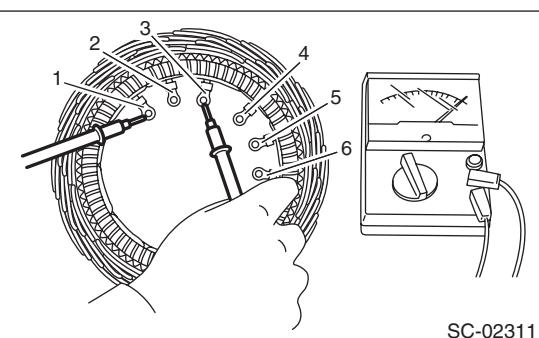
#### 1) Continuity test

Inspect the continuity between the stator coil terminals. If continuity is not as shown in the table, replace the stator coil.

(A)					
1	2	3	4	5	6
○	—	○	—	—	—
○	—	○	—	—	—
—	○	—	○	—	—
—	—	—	○	—	○
—	—	—	—	○	—
—	—	—	—	—	○

SC-02349

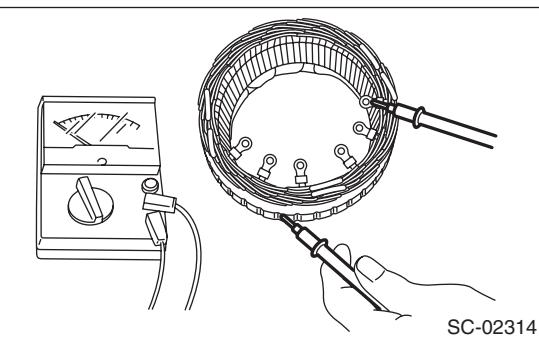
(A) Terminal



SC-02311

#### 2) Insulation test

Inspect the continuity between the stator coil stator core and lead wire terminals. If there is continuity, replace the stator coil because the stator coil is grounded.



SC-02314

### 4. BRUSH

1) Measure the length of each brush. Replace the brush if wear exceeds service limits. There is a service limit mark (A) on each brush.

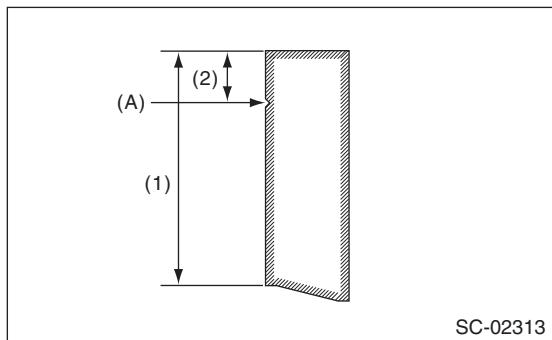
#### ***Brush length:***

**Standard (1)**

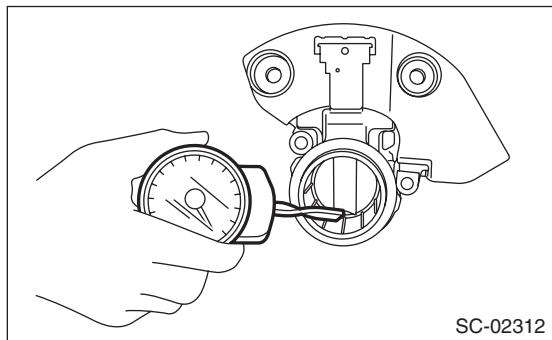
**22.5 mm (0.886 in)**

**Service limit (2)**

**5.0 mm (0.197 in)**



2) Check that there is appropriate pressure on the brush spring. Using a spring pressure indicator, push the brush into the brush holder until its tip protrudes 2 mm (0.08 in). Then measure the pressure of brush spring. If the pressure is 1.7 N (173 gf, 6.11 ozf) or less, replace the brush spring. 4.1 — 5.3 N (418 — 540 gf, 14.75 — 19.06 ozf) pressure is required on the new spring.



### 5. BALL BEARING (FRONT SIDE)

Check the ball bearings. Replace the ball bearings if there is resistance in the rotation, or if there is any abnormal noise.