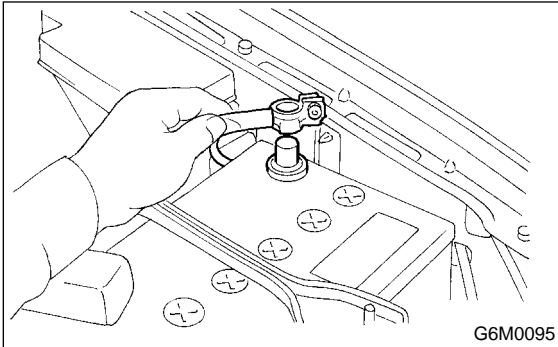


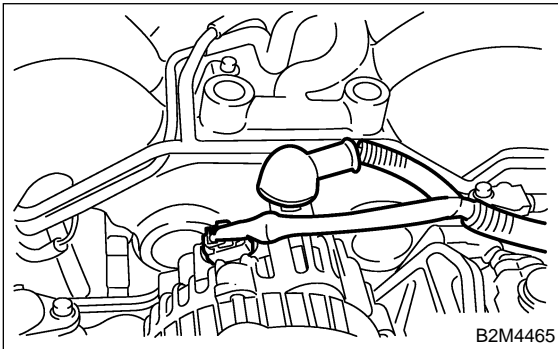
3. Generator S149008

A: REMOVAL S149008A18

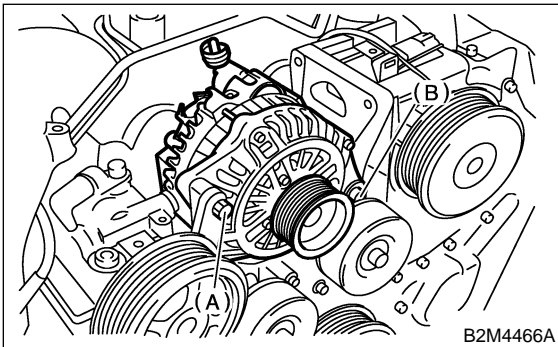
- 1) Disconnect battery ground cable.



- 2) Disconnect connector and terminal from generator.

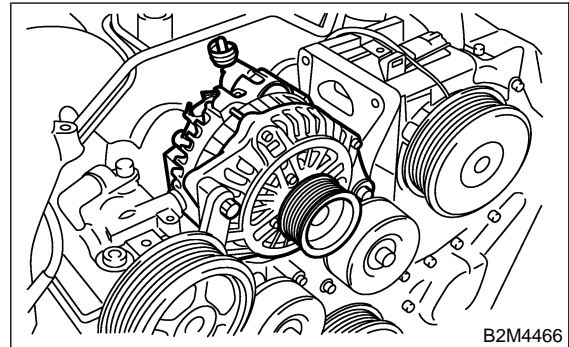


- 3) Remove V-belt. <Ref. to ME(H6)-31, REMOVE, V-belt.>
- 4) Remove bolt (A), and loosen bolt (B). Then, remove generator from bracket.



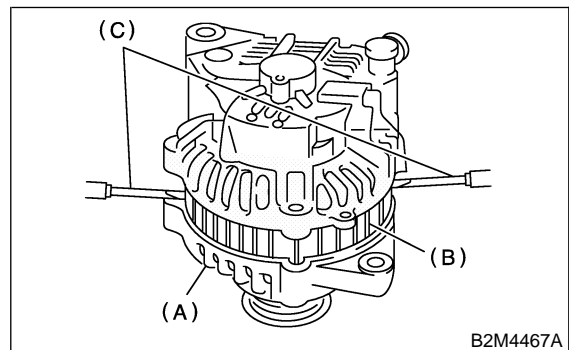
B: INSTALLATION S149008A11

Install in the reverse order of removal.



C: DISASSEMBLY S149008A06

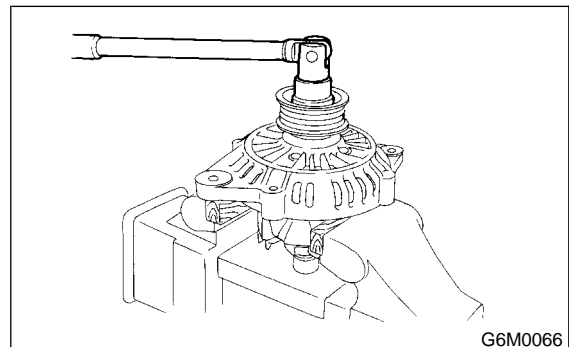
- 1) Remove the four through bolts. Then insert the tip of a flat-head screwdriver into the gap between the stator and front bracket. Pry them apart to disassemble.



- (A) Front cover
- (B) Stator
- (C) Screwdriver

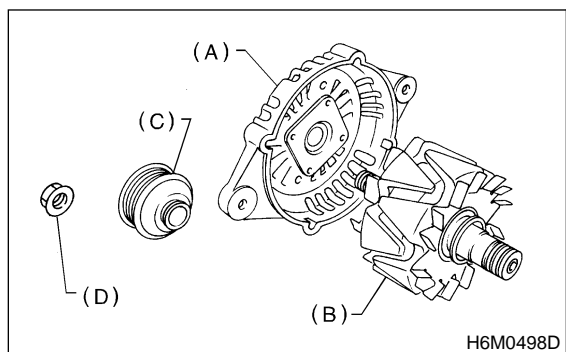
- 2) Hold rotor with a vise and remove pulley nut.

CAUTION:
When holding rotor with vise, insert aluminum plates or wood pieces on the contact surfaces of the vise to prevent rotor from damage.



GENERATOR

Starting/Charging Systems

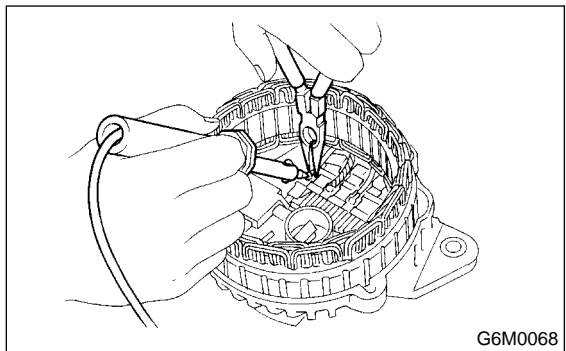


- (A) Front bracket
- (B) Rotor
- (C) Pulley
- (D) Nut

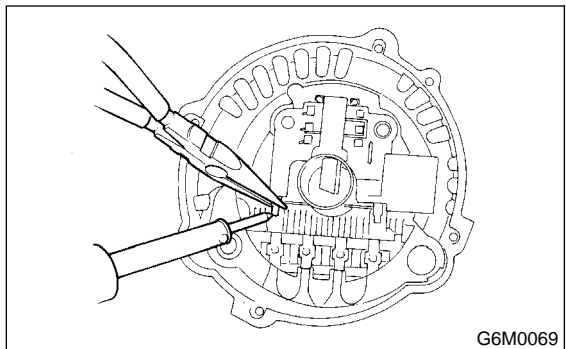
3) Unsolder connection between rectifier and stator coil to remove stator coil.

CAUTION:

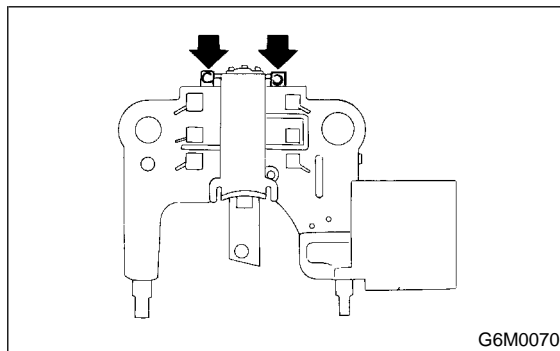
Finish the work rapidly (less than three seconds) because the rectifier cannot withstand heat very well.



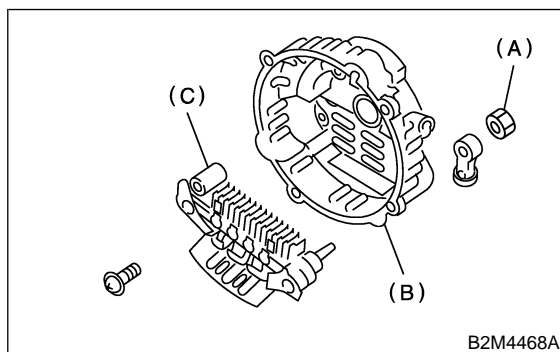
4) Remove screws which secure IC regulator to rear cover, and unsolder connection between IC regulator and rectifier to remove IC regulator.



5) Remove the brushes by unsoldering at the pig-tails.



6) Remove the nut and insulating bushing at terminal B, and remove rectifier.



- (A) Nut
- (B) Rear cover
- (C) Rectifier

D: ASSEMBLY S149008A02

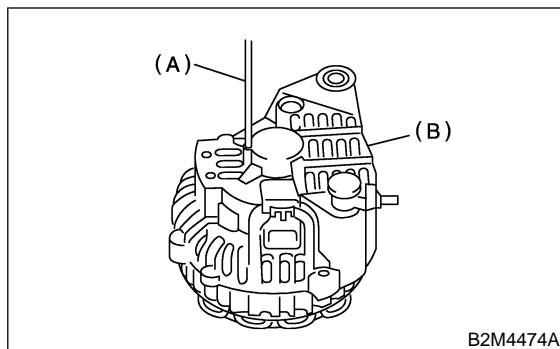
Assemble in the reverse order of disassembly.

1) Pulling up brush

Before assembling, press the brush down into the brush holder with your finger and secure in that position by passing a [2 mm (0.08 in) dia. length 4 to 5 cm (1.6 to 2.0 in)] wire (A) through the hole shown in the figure.

CAUTION:

Be sure to remove the wire after reassembly.



- (A) Wire
- (B) Rear cover

2) Heat the bearing box in the rear bracket [50 to 60°C (122 to 140°F)] and press the rear bearing into the rear bracket.

CAUTION:

Grease should not be applied for the rear bearing. Remove oil completely if it is found on the bearing box.

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

E: INSPECTION S149008A10

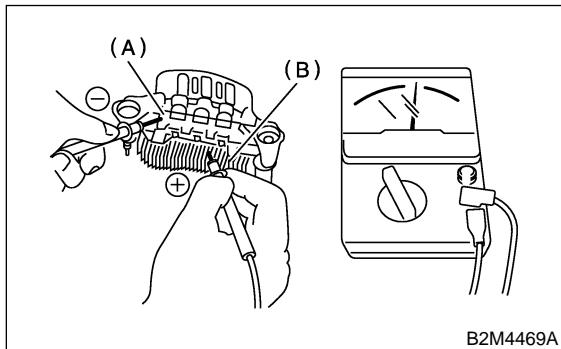
1. DIODE S149008A1001

CAUTION:

Never use a megatester (measuring use for high voltage) or any other similar measure for this test; otherwise, the diodes may be damaged.

1) Checking positive diode

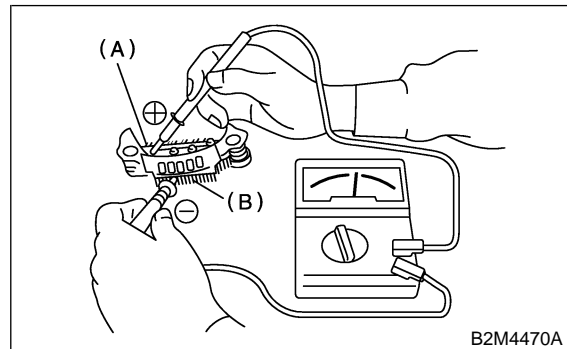
Check for continuity between the diode lead and the positive side heat sink. The positive diode is in good condition if continuity exists only in the direction from the diode lead to the heat sink.



(A) Diode lead
(B) Heat sink (Positive side)

2) Checking negative diode

Check for continuity between the negative side heat sink and diode lead. The negative diode is in good condition if continuity exists only in the direction from the heat sink to the diode lead.



(A) Diode lead
(B) Heat sink (Negative side)

2. ROTOR S149008A1002

1) Slip ring surface

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

2) Slip ring outer diameter

Measure slip ring outer diameter. If slip ring is worn replace rotor assembly.

Slip ring outer diameter:

Standard

22.7 mm (0.894 in)

Limit

22.1 mm (0.870 in)

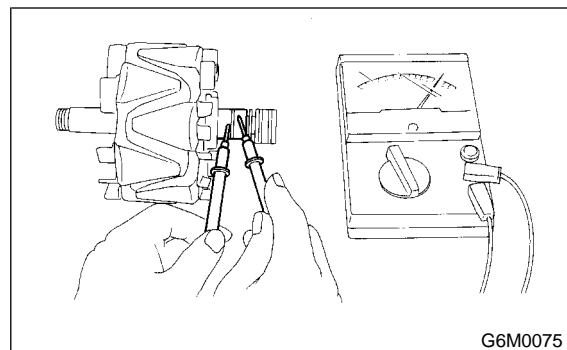
3) Continuity test

Check resistance between slip rings using circuit tester.

If the resistance is not within specification, replace rotor assembly.

Specified resistance:

Approx. 2.7 — 3.2 Ω

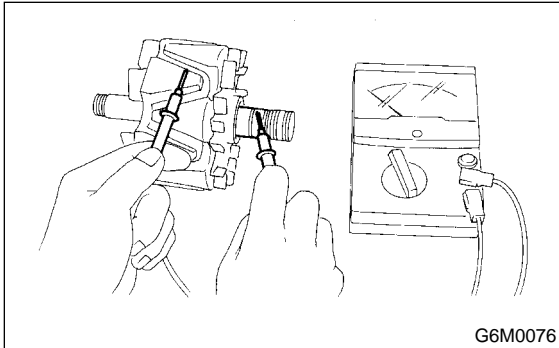


GENERATOR

Starting/Charging Systems

4) Insulation test

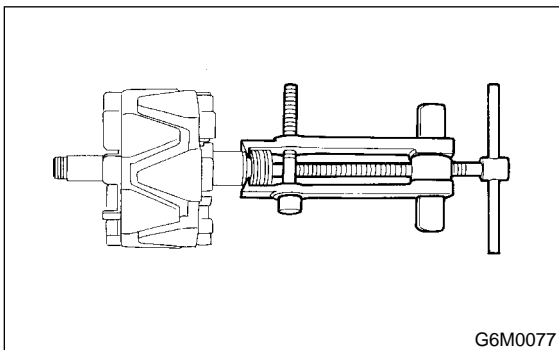
Check continuity between slip ring and rotor core or shaft. If continuity exists, the rotor coil is grounded, and so replace rotor assembly.



5) Ball bearing (rear side)

(1) Check rear ball bearing. Replace if it is noisy or if rotor does not turn smoothly.

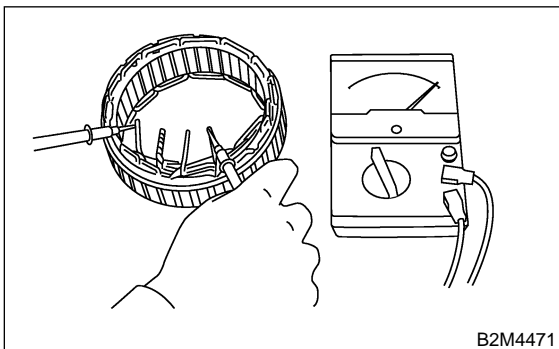
(2) The rear bearing can be removed by using common bearing puller.



3. STATOR S149008A1003

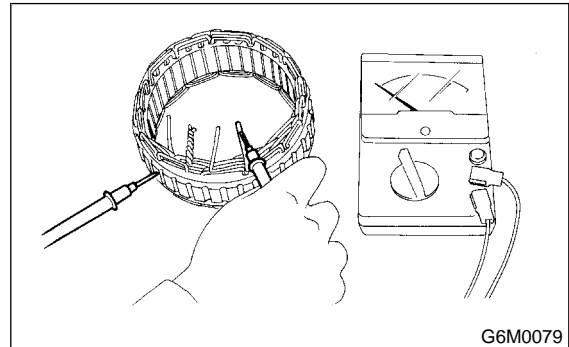
1) Continuity test

Inspect stator coil for continuity between each end of the lead wires. If there is no continuity between individual lead wires, the lead wire is broken, and so replace stator assembly.



2) Insulation test

Inspect stator coil for continuity between stator core and each end of the lead wire. If there is continuity, the stator coil is grounded, and so replace stator assembly.



4. BRUSH S149008A1004

1) Measure the length of each brush. If wear exceeds the service limit, replace the brush. Each brush has the service limit mark (A) on it.

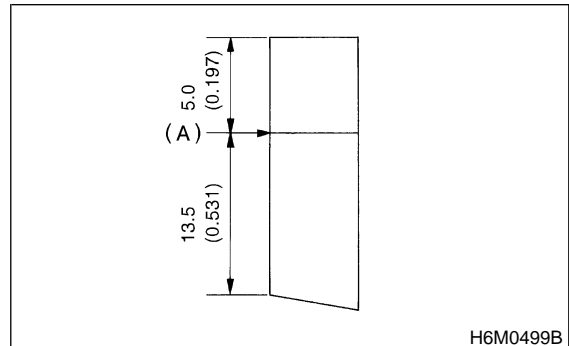
Brush length:

Standard

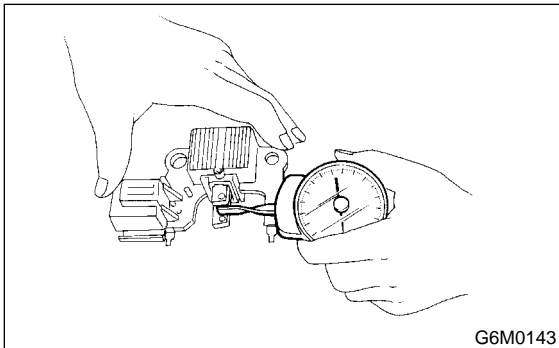
18.5 mm (0.728 in)

Service limit

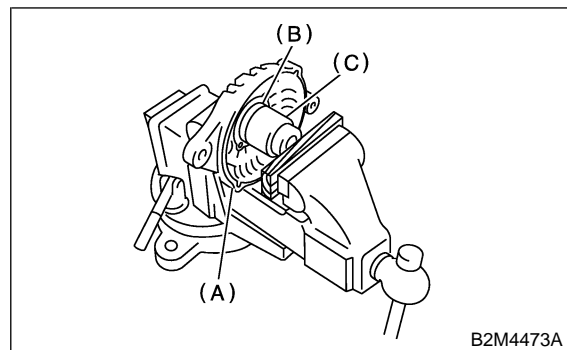
5.0 mm (0.197 in)



2) Checking brush spring for proper pressure
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 the brush spring. If the pressure is less than 2.648 N (270 g, 9.52 oz), replace the brush spring with a new one. The new spring must have a pressure of 4.609 to 5.786 N (470 to 590 g, 16.58 to 20.81 oz).



(3) Set a new bearing and closely install a fit tool on the bearing outer race. Press the bearing down into place with a hand press or vise. A socket wrench can serve as the tool.
(4) Install front bearing retainer.



- (A) Front bracket
- (B) Bearing
- (C) Socket wrench

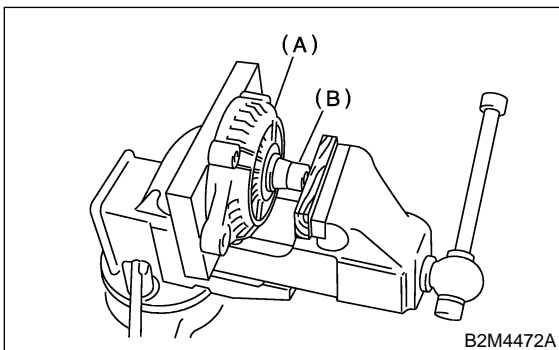
5. BEARING (FRONT SIDE) S149008A1005

1) Check front ball bearing. If resistance is felt while rotating, or if abnormal noise is heard, replace the ball bearing.

2) Replacing front bearing

(1) Remove front bearing retainer.

(2) Closely install a fit tool on the bearing inner race. Press the bearing down out of front bracket with a hand press or vise. A socket wrench can serve as the tool.



- (A) Front bracket
- (B) Socket wrench