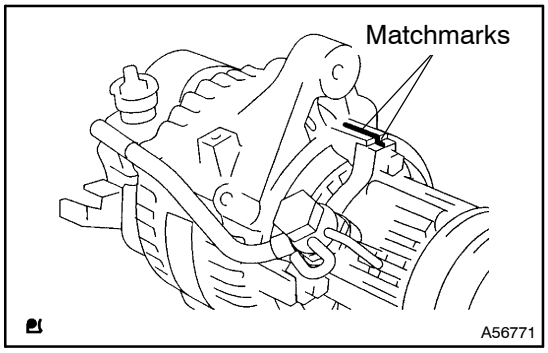
190IX–01

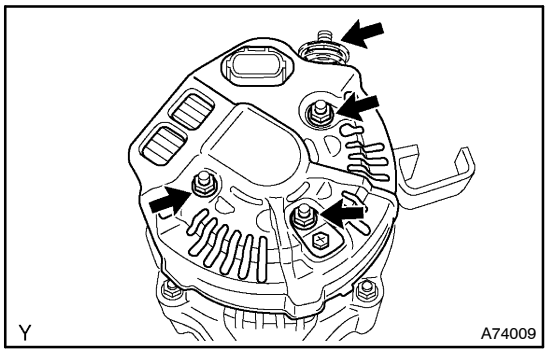
OVERHAUL



1. REMOVE VACUUM PUMP ASSY

(a) Place the matchmarks as shown.

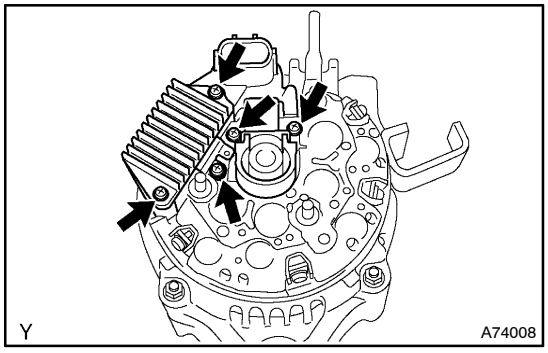
(b) Remove the 4 bolts and vacuum pump assy.



2. REMOVE REAR END COVER

(a) Remove the nut and terminal insulator.

(b) Remove the bolt, 3 nuts, plate terminal and rear end cover.



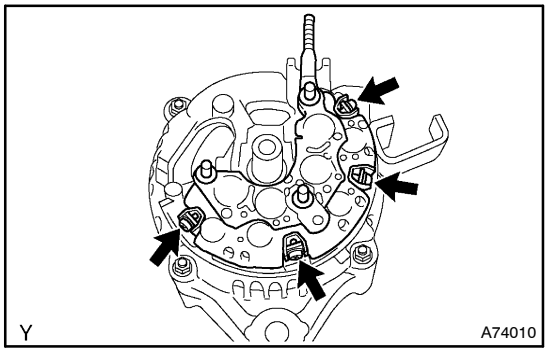
3. REMOVE GENERATOR BRUSH HOLDER AND GENERATOR REGULATOR

(a) Remove the brush holder cover.

(b) Remove the 2 screws and brush holder assy.

(c) Remove the seal plate.

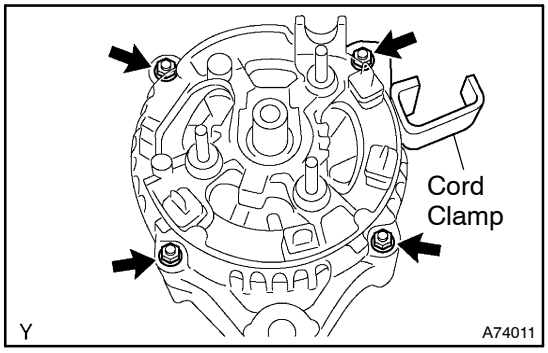
(d) Remove the 3 screws and regulator assy.



4. REMOVE GENERATOR HOLDER W/RECTIFIER

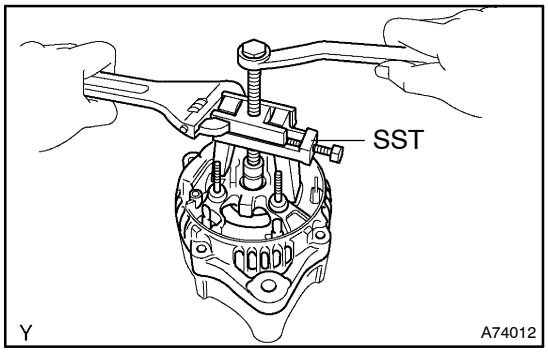
(a) Remove the 4 screws and rectifier holder.

(b) Remove the 4 rubber insulators.



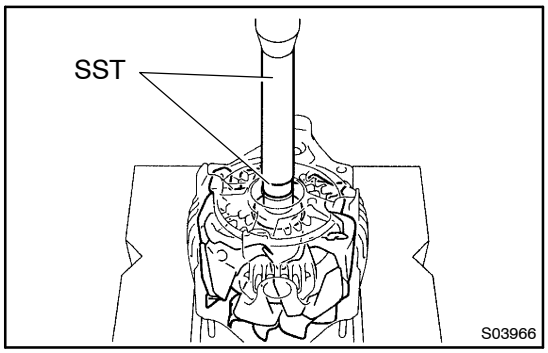
5. REMOVE RECTIFIER END FRAME

(a) Remove the 4 nuts and cord clamp.



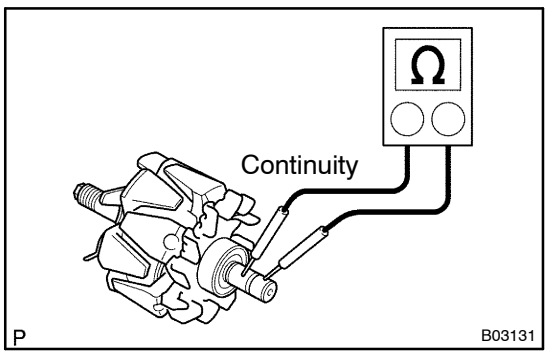
(b) Using SST, remove the rectifier end frame.
SST 09286–46011

(c) Remove the generator washer from the rotor.



6. REMOVE GENERATOR ROTOR ASSY

(a) Using SST and press, press out the rotor.



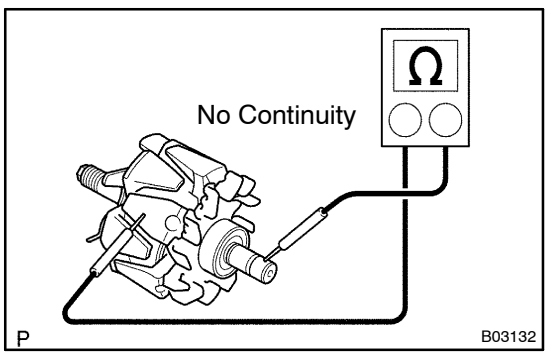
7. INSPECT GENERATOR ROTOR ASSY

(a) Check the rotor for open circuit.

(1) Measure the resistance between the slip rings.

Standard resistance: 2.1 – 2.5 Ω at 20 °C (68 °F)

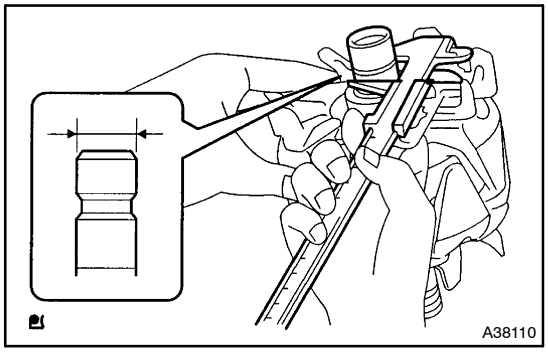
If there is no continuity, replace the rotor.



(b) Check the rotor for ground.

(1) Using an ohmmeter, check that there is no continuity between the slip ring and rotor.

If there is continuity, replace the rotor.



(c) Check that the slip rings are not rough or scored.

If rough or scored, replace the rotor.

(d) Using vernier calipers, measure the slip ring diameter.

Standard diameter: 14.2 – 14.4 mm (0.559 – 0.567 in.)

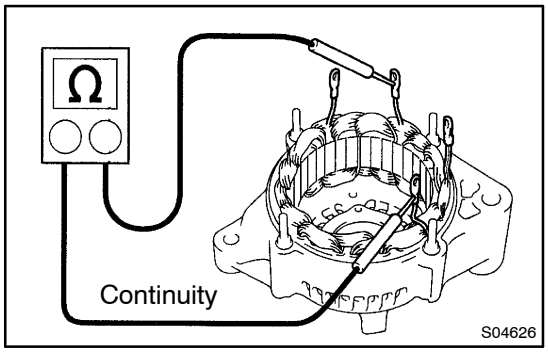
Minimum diameter: 12.8 mm (0.504 in.)

If the diameter is less than the minimum, replace the rotor.

(e) Inspect the bearing.

(1) Inspect the bearing is not rough or worn.

If necessary, replace the generator rotor.

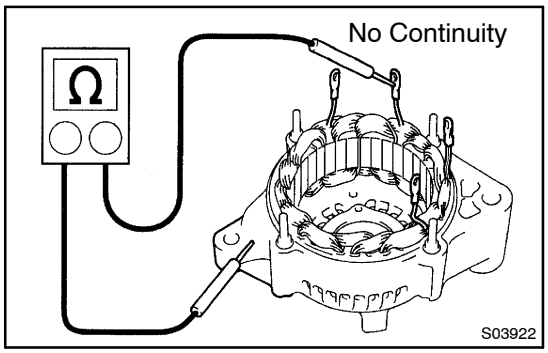


8. INSPECT DRIVE END FRAME

(a) Check the stator for open circuit.

(1) Using an ohmmeter, check that there is continuity between the coil leads.

If there is no continuity, replace the drive end frame assembly.



(b) Check the stator for ground.

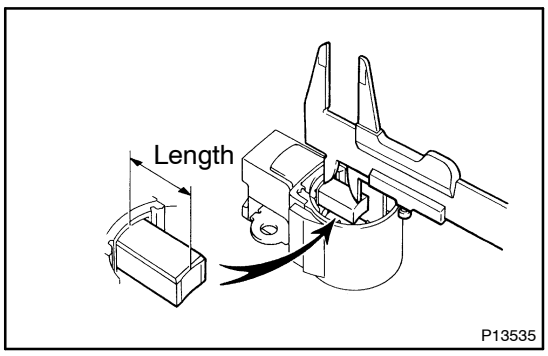
(1) Using an ohmmeter, check that there is no continuity between the coil lead and drive end frame.

If there is continuity, replace the drive end frame assembly.

(c) Inspect the bearing.

(1) Inspect the bearing is not rough or worn.

If necessary, replace the generator assy.



9. INSPECT GENERATOR BRUSH HOLDER ASSY

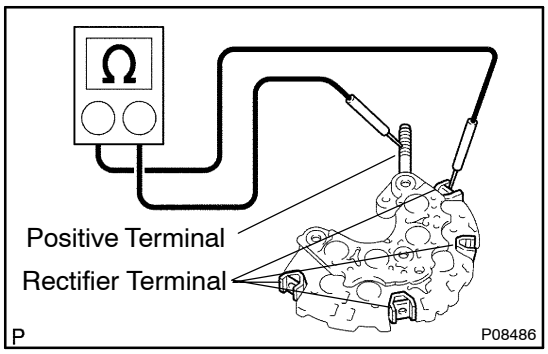
(a) Using vernier calipers, measure the exposed brush length.

Standard exposed length:

9.5 – 11.5 mm (0.374 – 0.453 in.)

Minimum exposed length: 1.5 mm (0.059 in.)

If the exposed length is less than the minimum, replace the brush holder assembly.



10. INSPECT GENERATOR HOLDER W/RECTIFIER

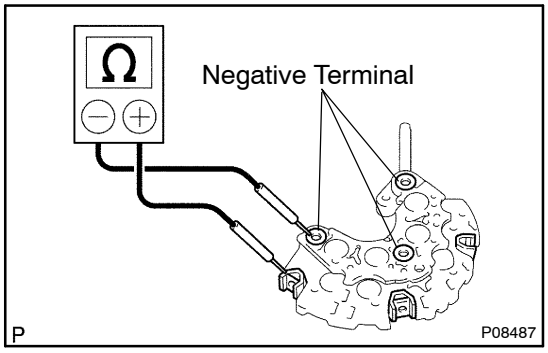
(a) Check the positive rectifire.

(1) Using an ohmmeter, connect one tester probe to the positive terminal and the other to each rectifier terminal.

(2) Reverse the polarity of the tester probes and repeat step (1).

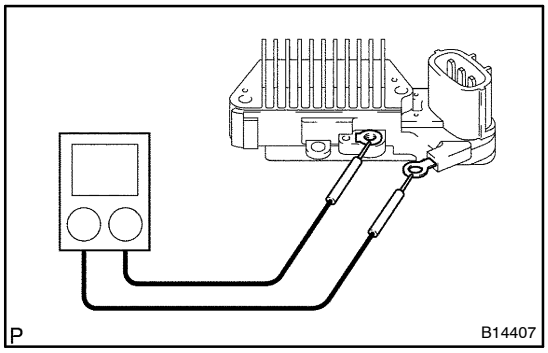
(3) Check that one shows continuity and the other shows no continuity.

If the continuity is not as specified, replace the rectifier holder.



(b) Check the negative rectifire.
(1) Using an ohmmeter, connect one tester probe to each negative terminal and the other to each rectifier terminal.
(2) Reverse the polarity of the tester probes and repeat step (1).
(3) Check that one shows continuity and the other shows no continuity.

If the continuity is not as specified, replace the rectifier holder.



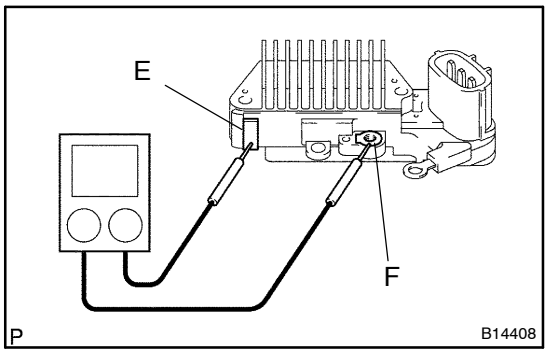
11. INSPECT GENERATOR REGULATOR ASSY

(a) Using an ohmmeter, check the continuity between terminals F and B.

Standard:

When the positive and negative poles between terminals F and B are exchanged, there is continuity in one way but no continuity in another way.

If the continuity is not as specified, replace the regulator.



(b) Using an ohmmeter, check the continuity between terminals F and E.

Standard:

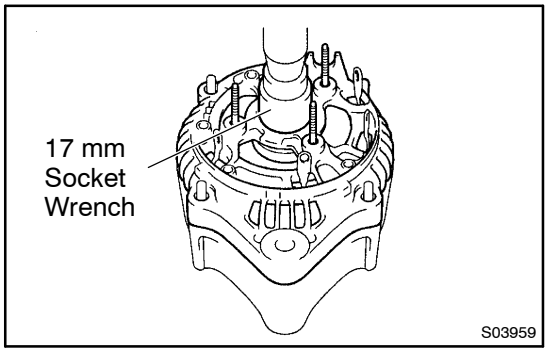
When the positive and negative poles between terminals F and E are exchanged, there is continuity in one way but no continuity in another way.

If the continuity is not as specified, replace the regulator.

12. INSTALL GENERATOR ROTOR ASSY

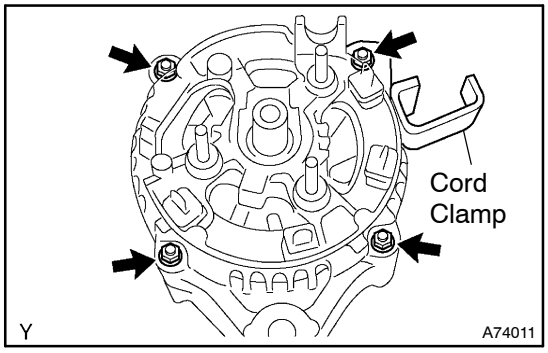
(a) Using a press, press in the rotor.

(b) Place the alternator washer to the rotor.

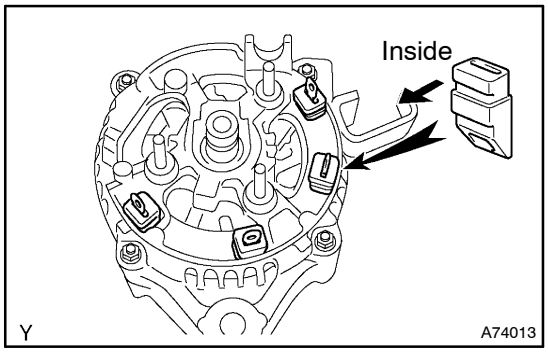


13. INSTALL RECTIFIER END FRAME

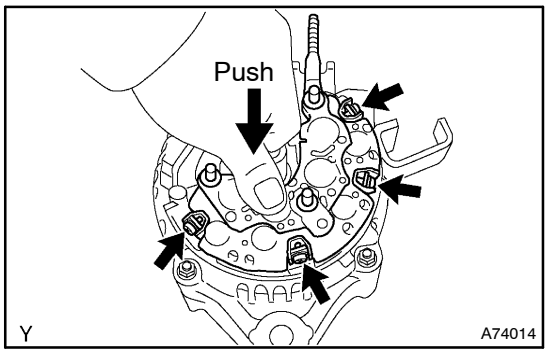
(a) Using a 17 mm socket wrench and press, slowly press in the rectifier end frame.



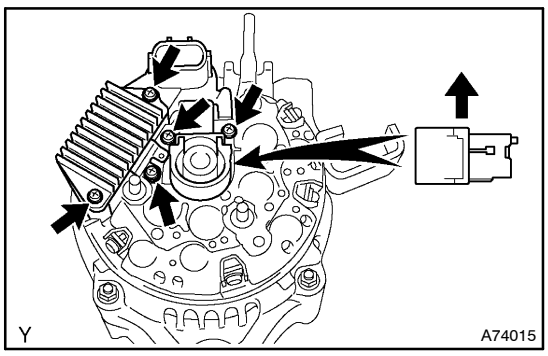
(b) Install the cord clamp and 4 nuts.
Torque: 4.5 N·m (46 kgf·cm, 40 in.·lbf)



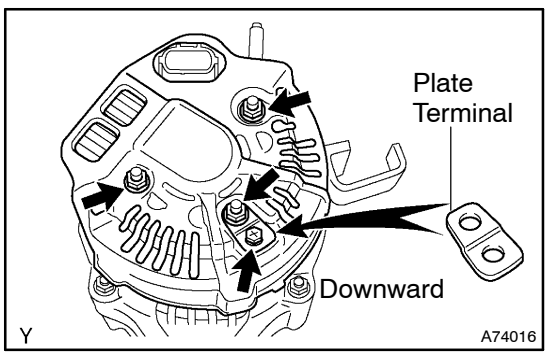
14. INSTALL GENERATOR HOLDER W/RECTIFIER
(a) Install the 4 rubber insulators on the lead wires.
NOTICE:
Be careful of the rubber insulators installation direction.



(b) Install the rectifier holder while pushing it with the 4 screws.
Torque: 2.9 N·m (30 kgf·cm, 26 in.·lbf)



15. INSTALL GENERATOR BRUSH HOLDER AND GENERATOR REGULATOR
(a) Install the regulator assy with the 3 screws.
Torque: 2.0 N·m (20 kgf·cm, 18 in.·lbf)
(b) Place the seal plate.
(c) Install the brush holder assy with the 2 screws.
(d) Place the brush holder cover.
Torque: 2.0 N·m (20 kgf·cm, 18 in.·lbf)



16. INSTALL REAR END COVER
(a) Install the rear end cover and plate terminal with the bolt and 3 nuts.
Torque:
4.4 N·m (45 kgf·cm, 39 in.·lbf) for nut
3.8 N·m (39 kgf·cm, 34 in.·lbf) for bolt
(b) Install the terminal insulator with the nut.
Torque: 4.1 N·m (42 kgf·cm, 36 in.·lbf)

17. INSTALL VACUUM PUMP ASSY

(a) Set the new O–ring to the vacuum pump assy.

(b) Align the matchmarks and install the vacuum pump assy with the 4 bolts.
Torque: 7.8 N·m (80 kgf·cm, 69 in.·lbf)