19095–01

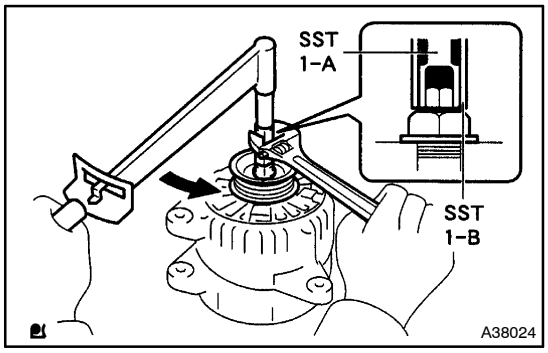
OVERHAUL

1. REMOVE GENERATOR PULLEY

SST 09820–63010 (09820–06010, 09820–06020)

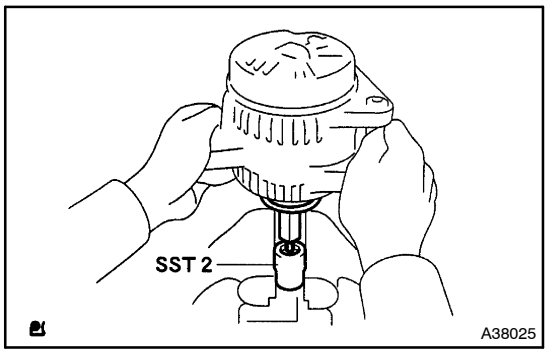
HINT:

SST1 – A, B	09820–06010
SST2	09820–06020

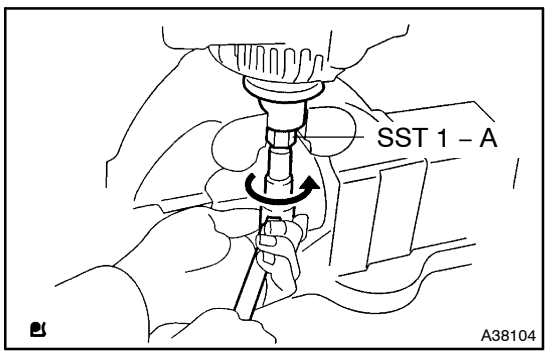


(a) Hold SST 1 – A with a torque wrench, and tighten SST 1 – B clockwise to the specified torque.
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

NOTICE:
Check that SST is secured to the rotor shaft.



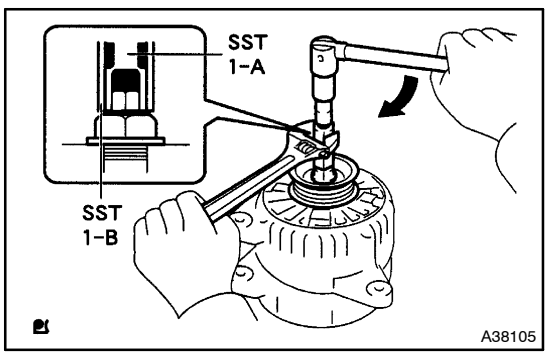
(b) Mount SST 2 in a vise.
(c) Insert SST 1 – A, B into SST 2, and attach the pulley nut to SST 2.



(d) To loosen the pulley nut, turn SST 1 – A in the direction shown in the illustration.

NOTICE:
To prevent damage to the rotor shaft, do not loosen the pulley nut more than one–half of a turn.

(e) Remove the alternator form SST 2.



(f) Turn SST 1 – B, and remove SST 1 – A, B.
(g) Remove the pulley nut and pulley.

2. REMOVE GENERATOR BRUSH HOLDER ASSY

(a) Remove the nut and terminal insulator.
(b) Remove the bolt, 3 nuts, plate terminal and end cover.
(c) Remove the brush cover.
(d) Remove the 2 screws and brush holder.

3. REMOVE GENERATOR REGULATOR ASSY

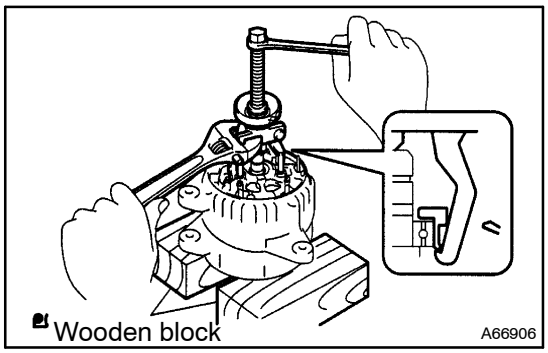
(a) Remove the 3 screws and voltage regulator.

4. REMOVE GENERATOR HOLDER W/RECTIFIER

(a) Remove the 4 screws and rectifier holder.

5. REMOVE ALTERNATOR RECTIFIRE END FRAME

(a) Remove the rubber insulator.
(b) Remove the seal plate.
(c) Remove the 4 nuts.

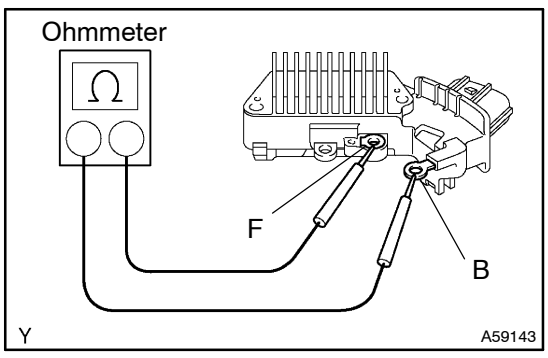


(d) Using bearing puller set, remove the rectifier end frame.

6. REMOVE GENERATOR ROTOR ASSY

(a) Remove the alternator washer from the rotor.
(b) Remove the rotor from drive end frame.

NOTICE:
Do not drop the rotor.

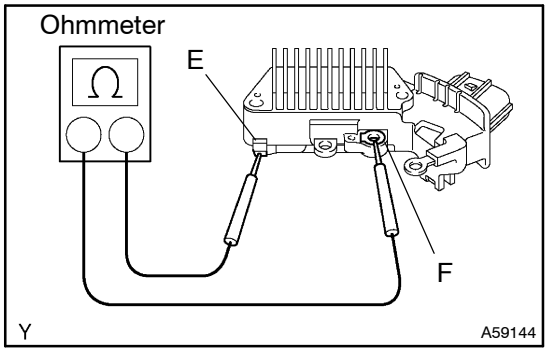


7. INSPECT GENERATOR REGULATOR ASSY

(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 voltage regulator.

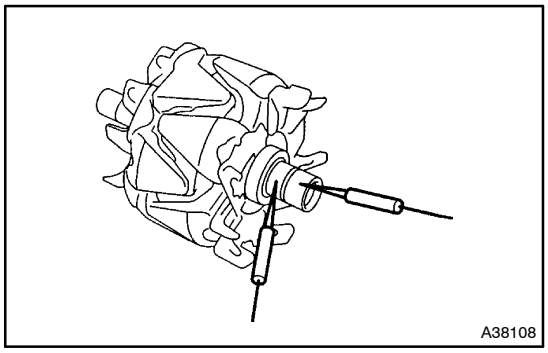


(b) Using an ohmmeter, check the continuity between terminals F and E.

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 voltage regulator.



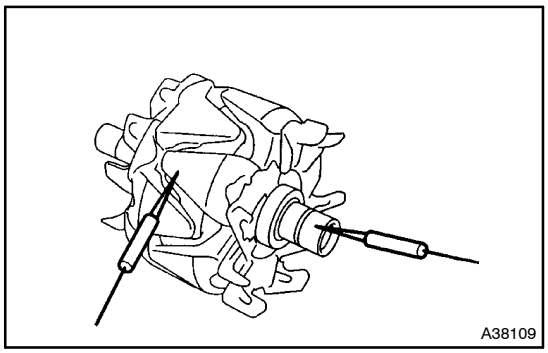
8. INSPECT GENERATOR ROTOR ASSY

(a) Inspect rotor for open circuit.

(1) Using an ohmmeter, check that there is continuity between the slip rings.

Standard resistance: 2.7 – 3.1 Ω at 20°C (68°F)

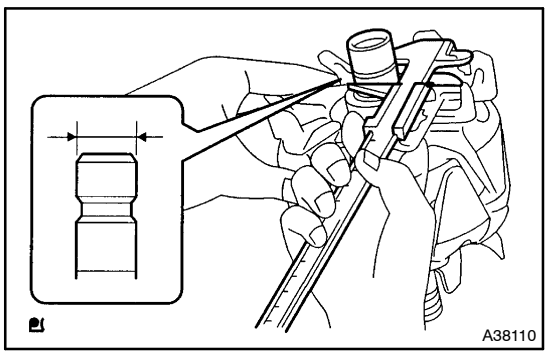
If there is no continuity, replace the rotor.



(b) Inspect 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.



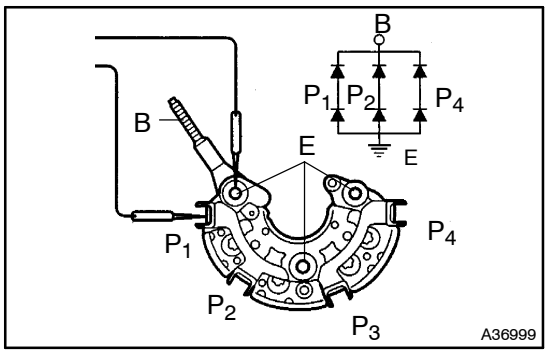
(c) Inspect slip rings.

(1) 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 minimum, replace the rotor.

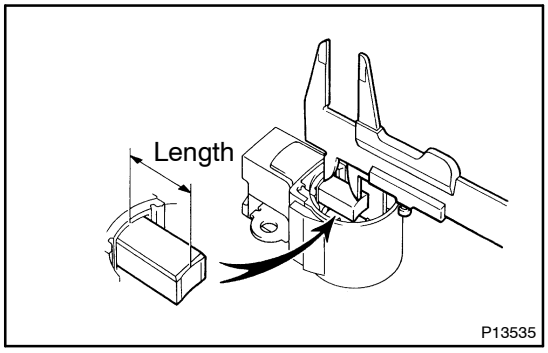


9. INSPECT GENERATOR HOLDER W/RECTIFIER

(a) Using an ohmmeter, connect one tester probe to the B or E terminal and the other to each rectifier terminal.

(b) Reverse the polarity of the tester probes and repeat step (a).

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



10. INSPECT BRUSH

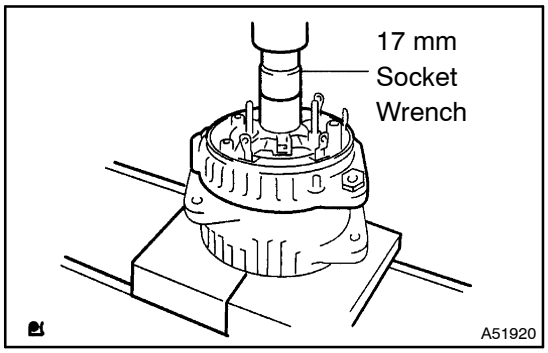
(a) Using vernier calipers, measure the exposed brush length.

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 minimum, replace the brush holder assembly.

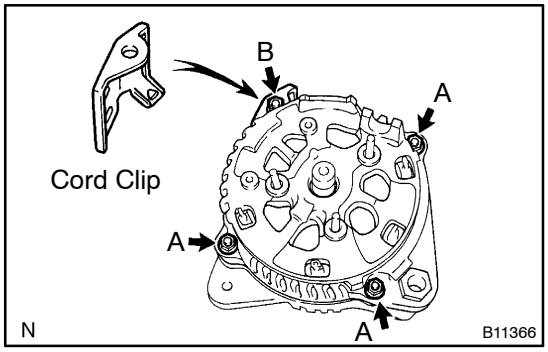
11. INSTALL GENERATOR ROTOR ASSY

(a) Install the generator rotor.
(b) Install the alternator washer to the rotor.



12. INSTALL ALTERNATOR RECTIFIRE END FRAME

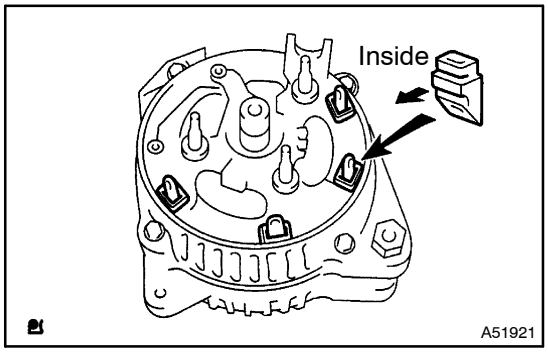
(a) Using a 17 mm socket wrench and press, slowly press in the rectifier end frame.



(b) Install the cord clip and 4 nuts.

Torque:
Nut A 4.5 N·m (46 kgf·cm, 39 in.·lbf)
Nut B 5.4 N·m (55 kgf·cm, 47 in.·lbf)

(c) Install the seal plate on the rectifier end frame.



(d) Install the 4 rubber insulators on the lead wires.

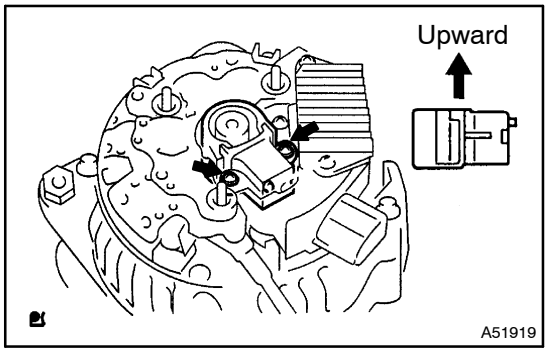
NOTICE:
Be careful of the rubber insulators installation direction.

13. INSTALL GENERATOR HOLDER W/RECTIFIER

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

14. INSTALL GENERATOR REGULATOR ASSY

(a) Install the 3 screws and voltage regulator.
Torque: 2.0 N·m (20 kgf·cm, 18 in.·lbf)



15. INSTALL GENERATOR BRUSH HOLDER ASSY

(a) Install the 2 screws and brush holder.
Torque: 2.0 N·m (20 kgf·cm, 18 in.·lbf)

NOTICE:
Be careful of the holder installation direction.

(b) Install the brush cover.
(c) Install the end cover and plate terminal with the bolt and 3 nuts.
Torque:
Nut 4.4 N·m (45 kgf·cm, 39 in.·lbf)
Bolt 3.9 N·m (39 kgf·cm, 35 in.·lbf)
(d) Install the terminal insulator with the nut.
Torque: 4.1 N·m (42 kgf·cm, 36 in.·lbf)

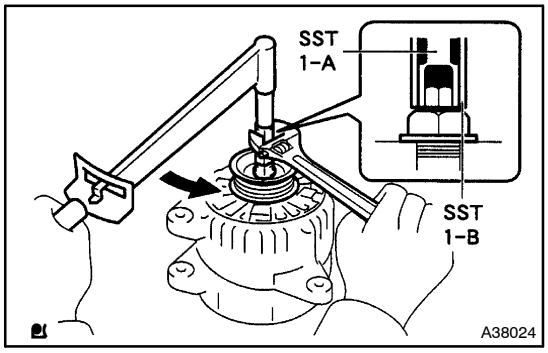
16. INSTALL GENERATOR PULLEY

SST 09820–63010 (09820–06010, 09820–06020)

HINT:

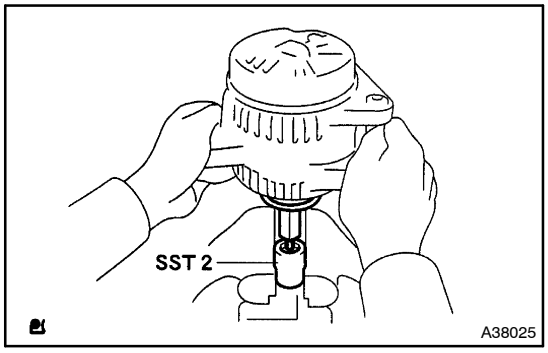
SST1 – A, B	09820–06010
SST2	09820–06020

(a) Install the pulley to the rotor shaft by tightening the pulley nut by hand.

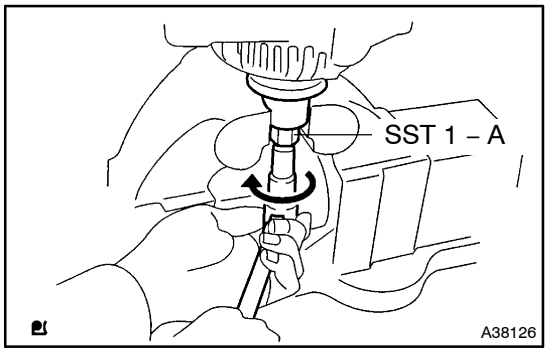


(b) Hold SST 1 – A with a torque wrench, and tighten SST 1 – B clockwise to the specified to torque.
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

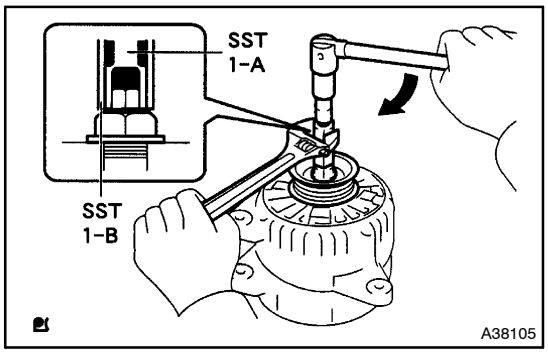
NOTICE:
Check that SST is secured to the pulley shaft.



(c) Mount SST 2 in a vise.
(d) Insert SST 1 – A, B into SST 2, and attach the pulley nut to SST 2.



(e) Tighten the pulley nut, turn SST 1 – A in the direction shown in the illustration.
Torque: 111 N·m (1,125 kgf·cm, 81 ft·lbf)
(f) Remove the alternator form SST 2.



(g) Turn SST 1 – B, and remove SST 1 – A, B.
(h) Turn the pulley, and check that the pulley moves smoothly.