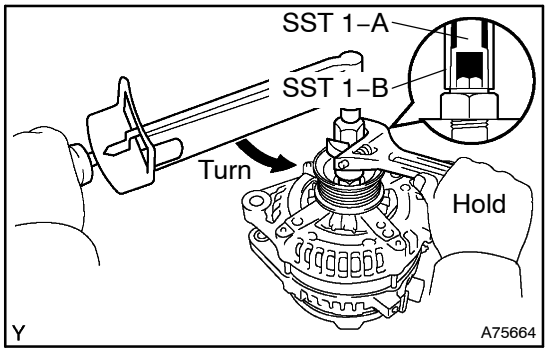
19133–02

OVERHAUL



1. REMOVE GENERATOR PULLEY

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

HINT:

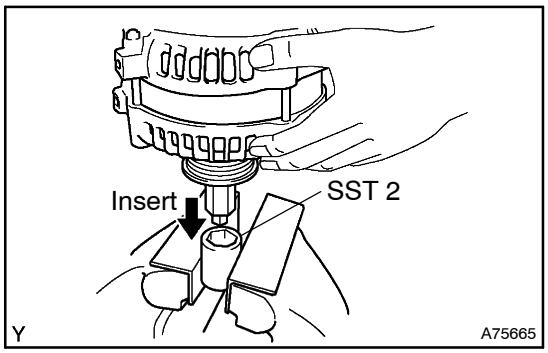
SST 1–A and B	09820 to 06010
SST 2	09820 to 06020

(a) Hold SST 1–A with a torque wrench, and tighten SST 1–B clockwise with the specified torque.

Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

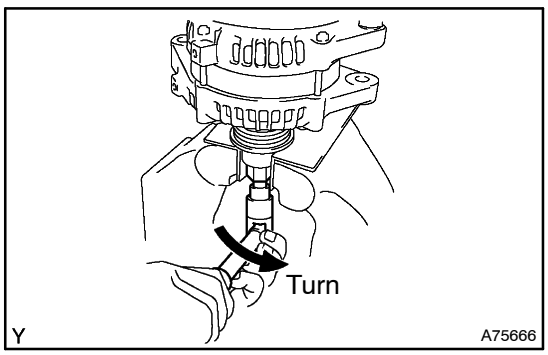
NOTICE:

Check that the SST is secured to the generator rotor shaft.



(b) Mount SST 2 in a vise.

(c) Insert SST 1–A and B into SST 2, and attach the generator pulley nut to SST 2.

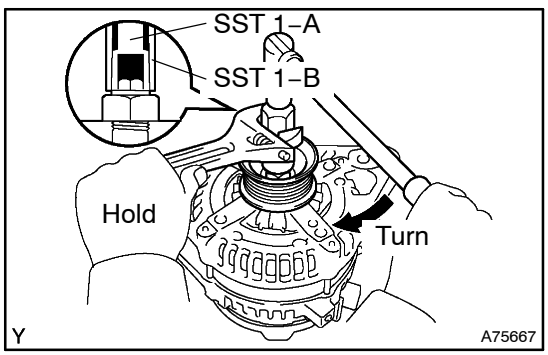


(d) To loosen the generator pulley nut, turn SST 1–A in the direction shown in the illustration.

NOTICE:

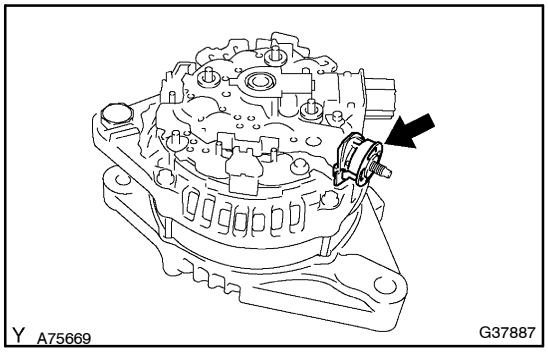
To prevent damage to the rotor shaft, do not loosen the generator pulley nut more than one–half turn.

(e) Remove the generator from SST 2.



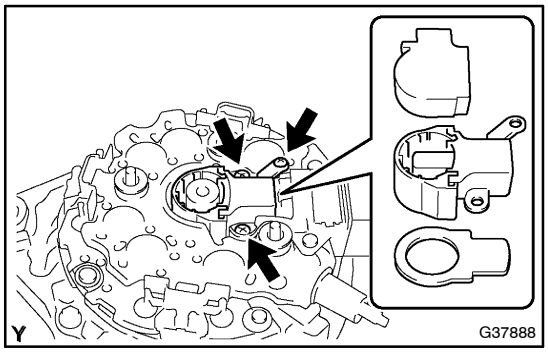
(f) Turn SST 1–B, and remove SST 1–A and B.

(g) Remove the generator pulley nut and generator pulley.

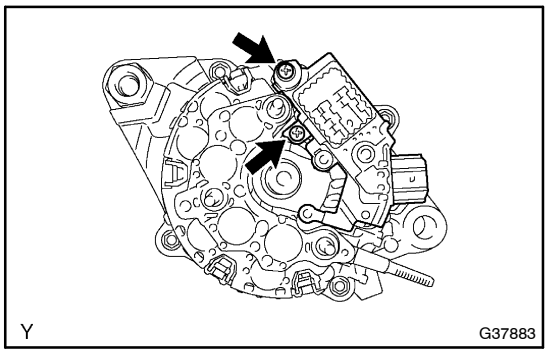


2. REMOVE GENERATOR BRUSH HOLDER ASSY

(a) Remove the nut and terminal insulator.
(b) Remove the nut, screw and rectifier plate.
(c) Remove the 2 nuts and rear end cover.

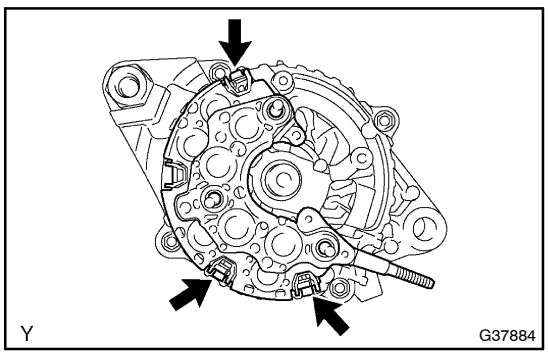


(d) Remove the brush cover from the generator brush holder assy.
(e) Remove the 3 screws and generator brush holder assy.
(f) Remove the plate seal.



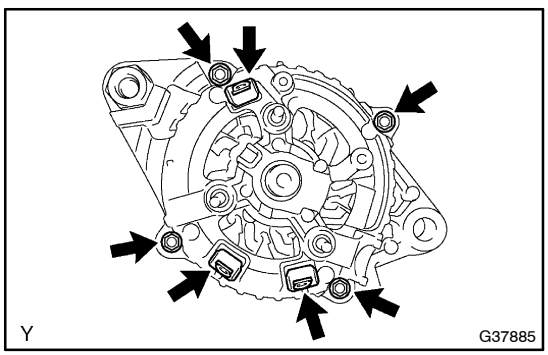
3. REMOVE GENERATOR REGULATOR ASSY

(a) Remove the 2 screws and generator regulator assy.



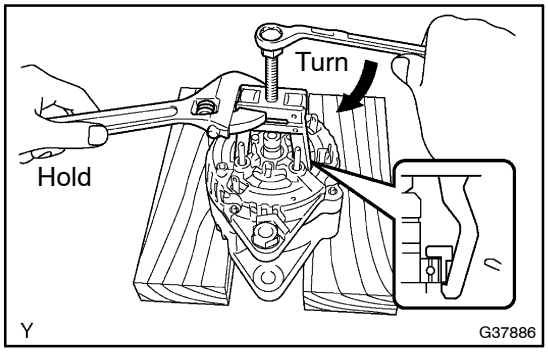
4. REMOVE GENERATOR HOLDER W/RECTIFIER

(a) Remove the 3 screws and generator rectifier holder.



5. REMOVE GENERATOR ROTOR ASSY

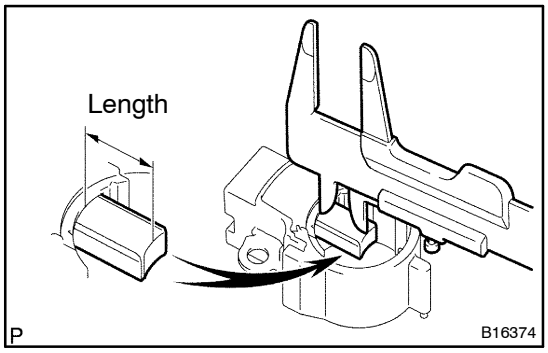
(a) Remove the 3 terminal insulators from the rectifier end frame.
(b) Remove the 4 nuts.



(c) Using SST, remove the rectifier end frame.
SST 09286 – 46011
(d) Remove the plate retainer.
(e) Remove the generator rotor assy from the drive end frame.

NOTICE:
Do not drop the generator rotor assy.

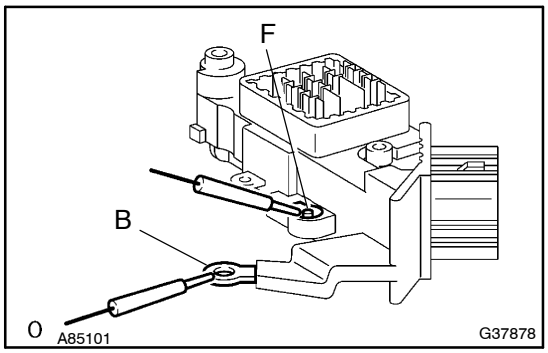
HINT:
If the generator rotor is engaged too firmly, lightly tap the generator rotor shaft to remove it using a plastic hammer.



6. INSPECT GENERATOR BRUSH HOLDER ASSY

(a) Using vernier calipers, measure the exposed brush length.
Standard exposed length:
9.5 to 11.5 mm (0.374 to 0.453 in.)
Minimum exposed length: 4.5 mm (0.177 in.)

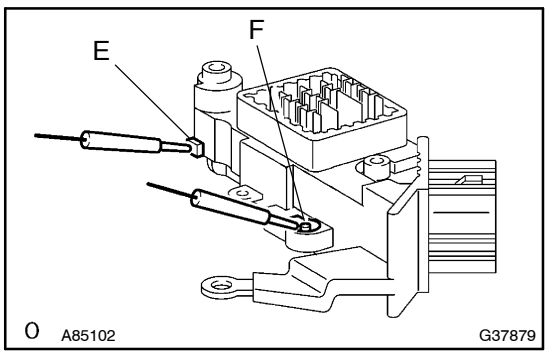
If the exposed length is less than the minimum, replace the generator brush holder assy.



7. INSPECT GENERATOR REGULATOR ASSY

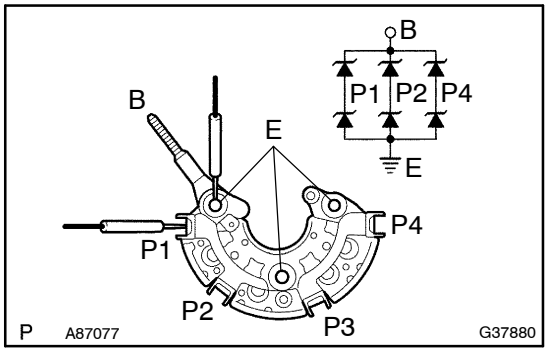
(a) Using an ohmmeter, check the continuity between terminals F and B.
Standard:
When the positive and negative poles between terminals F and B are exchanged, there is continuity in one way but no continuity in another way.

If the continuity is not specified, replace the generator regulator assy.



(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 generator regulator assy.



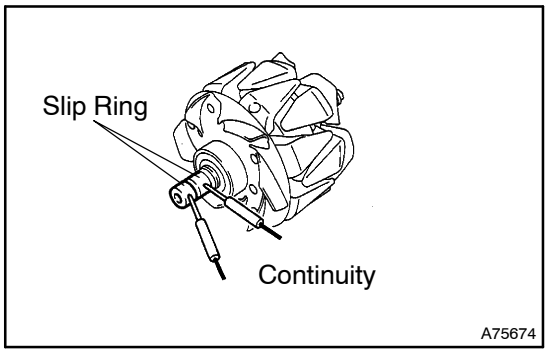
8. INSPECT GENERATOR HOLDER W/RECTIFIER

(a) Using an ohmmeter, check the continuity between terminals P1, P2, P3, P4 and B, and between P1, P2, P3, P4 and E.

Standard:

- **When the positive and negative poles between terminals P1, P2, P3, P4 and B are exchanged, there is continuity in one way but no continuity in another way.**
- **When the positive and negative poles between terminals P1, P2, P3, P4 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 generator rectifier holder.



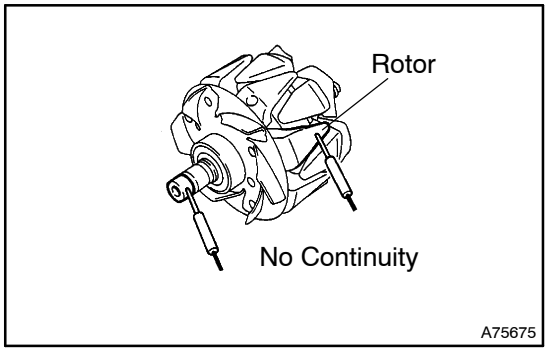
9. INSPECT GENERATOR ROTOR ASSY

(a) Check for open in the generator rotor circuit.

(1) Using an ohmmeter, measure the resistance between the slip rings.

Standard resistance: 1.7 to 2.1 Ω at 20°C (68°F)

If the resistance is not as specified, replace the generator rotor assy.



(b) Check for short in the generator rotor circuit.

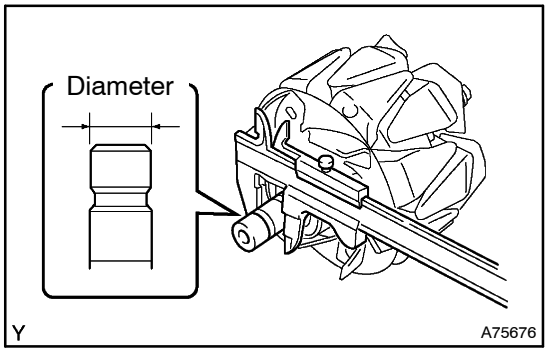
(1) Using an ohmmeter, check that there is no continuity between the slip ring and generator rotor assy.

If there is continuity, replace the generator rotor assy.

(c) Inspect slip rings.

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

If rough or scored, replace the generator rotor assy.



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

Standard diameter:

14.2 to 14.4 mm (0.559 to 0.567 in)

Minimum diameter: 14.0 mm (0.551 in)

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

10. INSTALL GENERATOR ROTOR ASSY

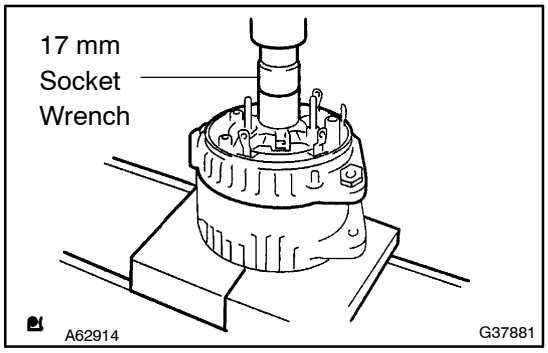
(a) Place the drive end frame on the generator rotor assy.

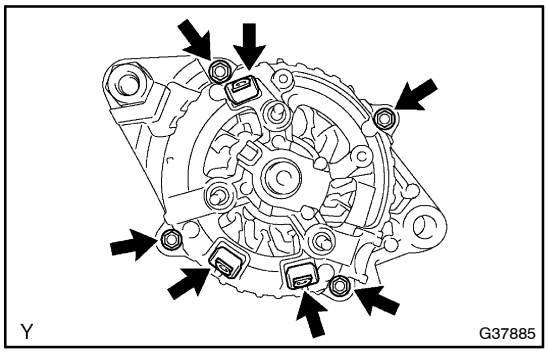
NOTICE:

Do not drop the generator rotor assy.

(b) Install the generator rotor assy and plate retainer.

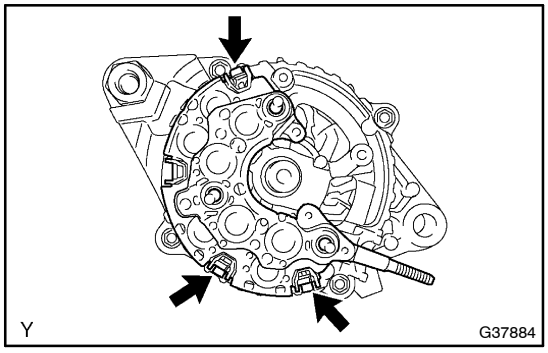
(c) Using a 17 mm socket wrench and press, slowly press in the rectifier end frame.





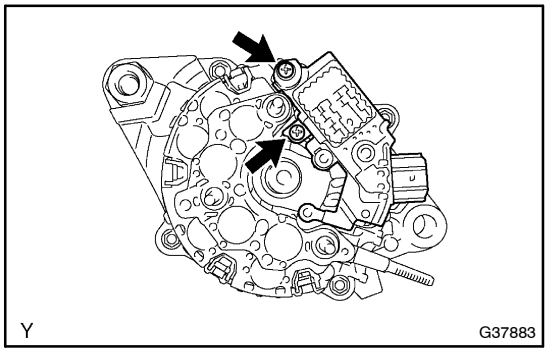
(d) Install the 4 nuts.
Torque: 4.5 N·m (46 kgf·cm, 40 in.·lbf)

(e) Install the 3 terminal insulators to the rectifier end frame.



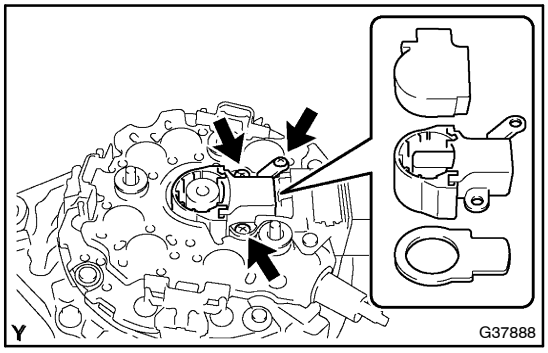
11. INSTALL GENERATOR HOLDER W/RECTIFIER

(a) Install the generator rectifier holder with the 3 screws.
Torque: 2.0 N·m (20 kgf·cm, 17 in.·lbf)



12. INSTALL GENERATOR REGULATOR ASSY

(a) Install the generator regulator assy with the 2 screws.
Torque: 2.0 N·m (20 kgf·cm, 17 in.·lbf)



13. INSTALL GENERATOR BRUSH HOLDER ASSY

(a) Install the plate seal.

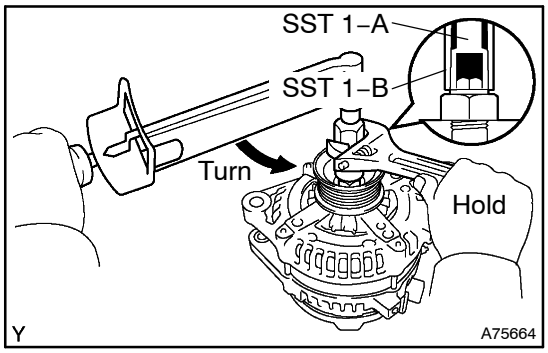
(b) Install the generator brush holder assy with the 3 screws.
Torque: 2.0 N·m (20 kgf·cm, 17 in.·lbf)

(c) Install the brush cover on the generator brush holder assy.

(d) Install the rear end cover with the 2 nuts.
torque: 4.4 N·m (45 kgf·cm, 39 in.·lbf)

(e) Install the rectifier plate with the nut and screw.
Torque: 4.4 N·m (45 kgf·cm, 39 in.·lbf) for nut
Torque: 3.9 N·m (40 kgf·cm, 34 in.·lbf) for bolt

(f) Install the terminal insulator with the nut.
Torque: 4.1 N·m (42 kgf·cm, 36 in.·lbf)



14. INSTALL GENERATOR PULLEY

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

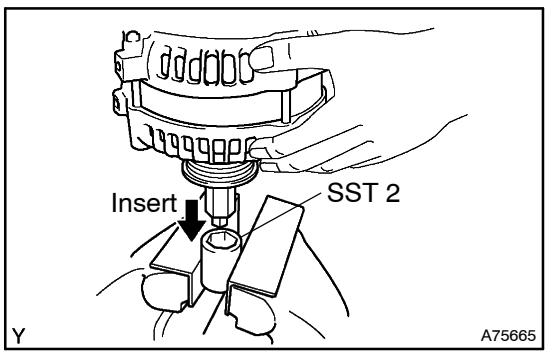
HINT:

SST 1–A and B	09820 to 06010
SST 2	09820 to 06020

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

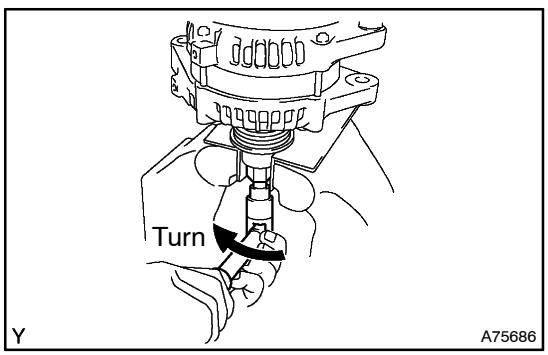
(b) Hold SST 1–A with a torque wrench, and tighten SST 1–B clockwise with the specified torque.
Torque: 39 N·m (398 kgf·cm, 29 ft·lbf)

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



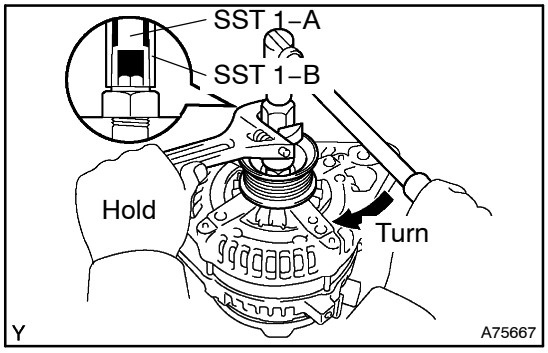
(c) Mount SST 2 in a vise.

(d) Insert SST 1–A and B into SST 2, and attach the generator pulley nut to SST 2



(e) Tighten the generator pulley nut by turning SST 1–A in the direction shown in the illustration.
Torque: 137 N·m (1,397 kgf·cm, 101 ft·lbf)

(f) Remove the generator from SST 2.



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