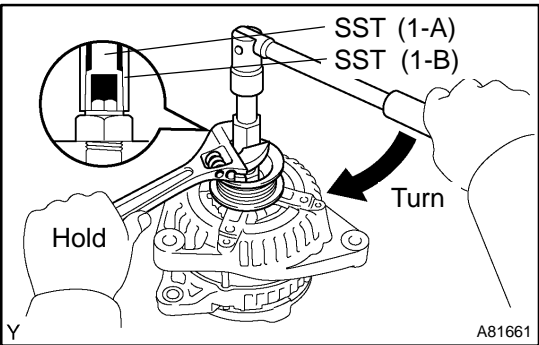
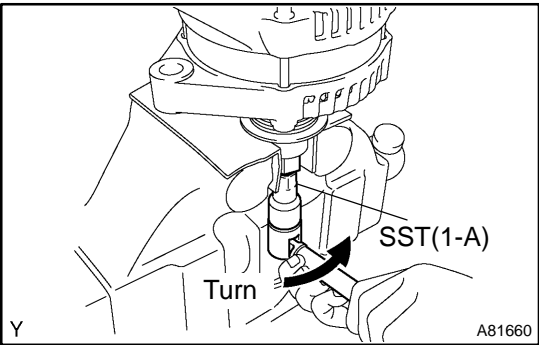
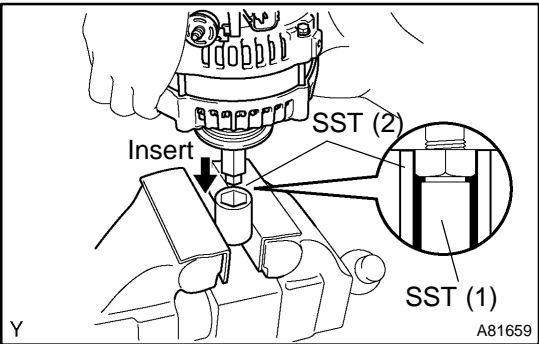
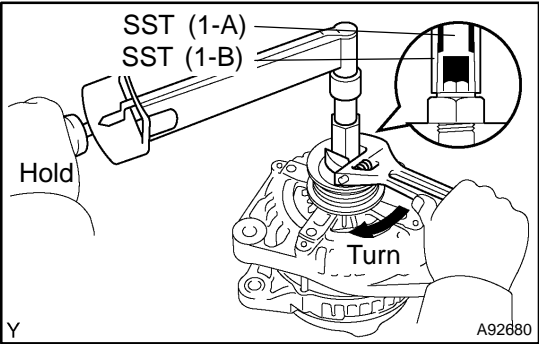


OVERHAUL



1. REMOVE GENERATOR PULLEY

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

HINT:

SST (1-A, B)	09820-06010
SST (2)	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.

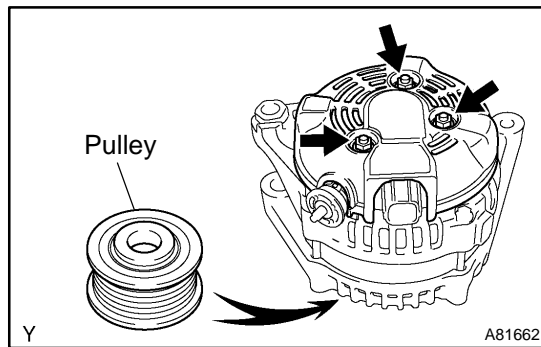
- (b) Mount SST (2) in a vise.
(c) Insert SST (1-A, B) into SST (2), and attach the pulley nut to SST (2).

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

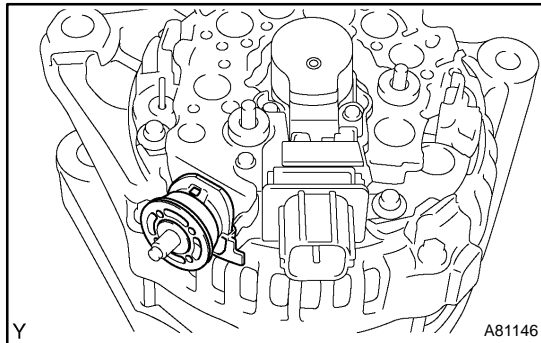
NOTICE:

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

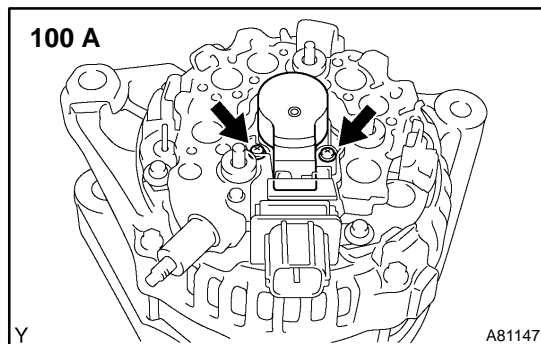
- (e) Remove the generator from SST (2).
(f) Turn SST (1-B) and remove SST (1-A, B).
(g) Remove the pulley nut and pulley.

**2. REMOVE GENERATOR REAR END COVER**

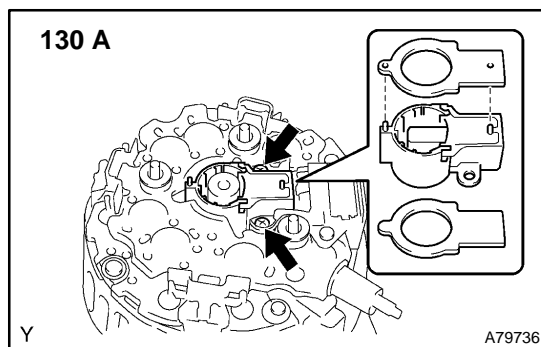
- (a) Place the generator on the pulley.
- (b) Remove the 3 nuts and rear end cover.

**3. REMOVE TERMINAL INSULATOR**

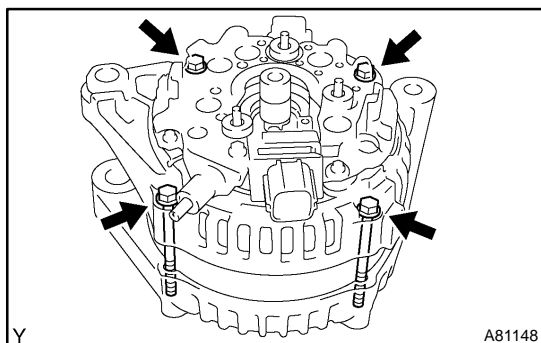
- (a) Remove the terminal insulator from the rectifier end frame.

**4. REMOVE GENERATOR BRUSH HOLDER ASSY**

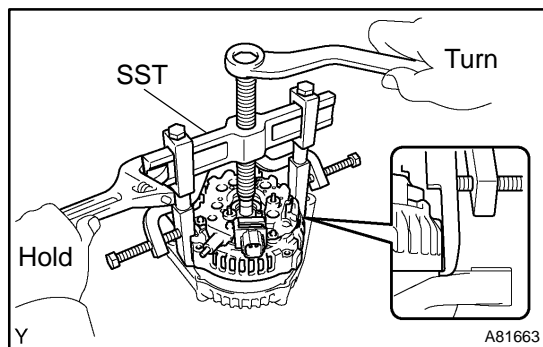
- (a) 100 A:
Remove the 2 screws and brush holder.



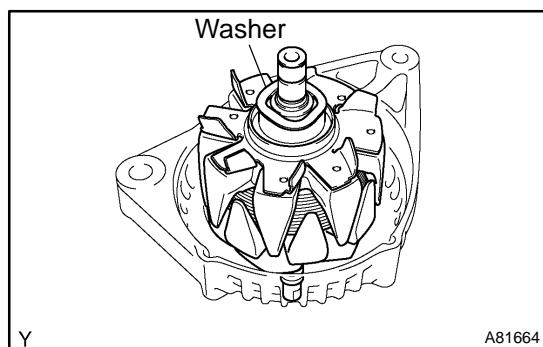
- (b) 130 A:
Remove the brush holder.
 - (1) Remove the plate seal.
 - (2) Remove the 2 screws and brush holder.
 - (3) Remove the plate seal.

**5. REMOVE GENERATOR COIL ASSY**

- (a) Remove the 4 bolts.

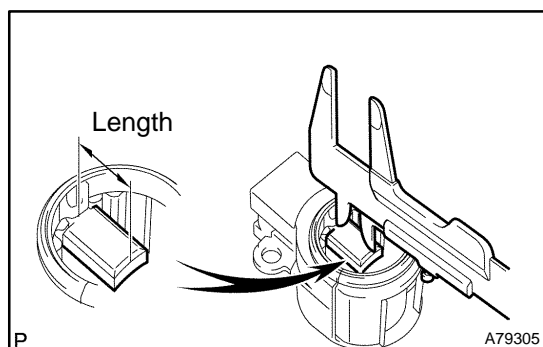


- (b) Using SST, remove the rectifier end frame.
 SST 09950-40011 (09951-04020, 09952-04010, 09953-04020, 09954-04010, 09955-04071, 09957-04010, 09958-04011)



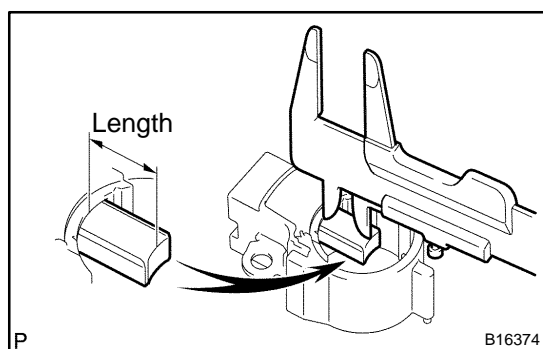
6. REMOVE GENERATOR ROTOR ASSY

- (a) Remove the washer and rotor.

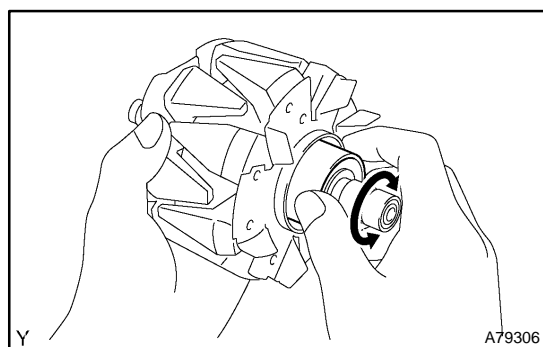


7. INSPECT GENERATOR BRUSH HOLDER ASSY

- (a) 100 A:
 Using a vernier caliper, measure the exposed brush length.
Standard exposed brush length: 10.5 mm (0.413 in.)
Minimum exposed brush length: 4.5 mm (0.177 in.)
 If the exposed brush length is less than the minimum, replace the brush holder assy.

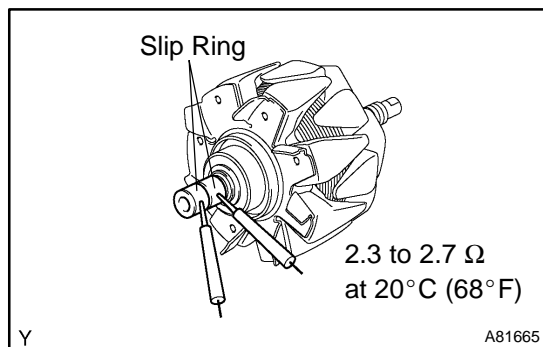


- (b) 130 A:
 Using a vernier caliper, measure the exposed brush length.
Standard exposed brush length: 10.5 mm (0.413 in.)
Minimum exposed brush length: 4.5 mm (0.177 in.)
 If the exposed brush length is less than the minimum, replace the brush holder assy.



8. INSPECT GENERATOR ROTOR ASSY

- (a) Check that the bearing is not rough or worn.
 100 A:
 If necessary, replace the rotor assy.
 130 A:
 If necessary, replace the rotor bearing.



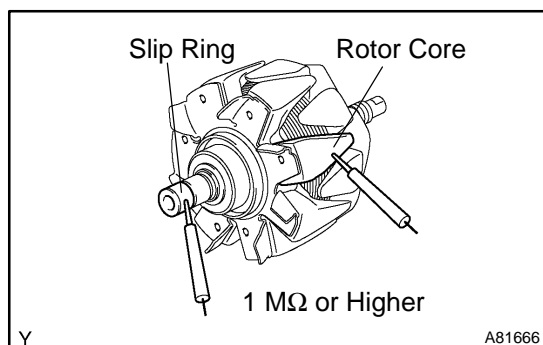
- (b) Check if the rotor has open circuit.

(1) Measure the resistance between the slip ring.

Resistance:

2.3 to 2.7 Ω at 20°C (68°F)

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



- (c) Check the rotor for ground.

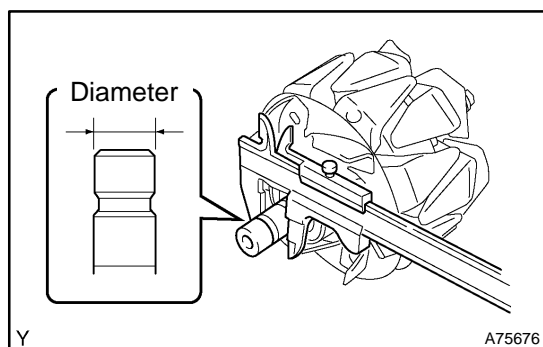
(1) Measure the resistance between the slip ring and rotor core.

Standard: 1 M Ω or higher

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

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

If rough or scored, replace the rotor assy.



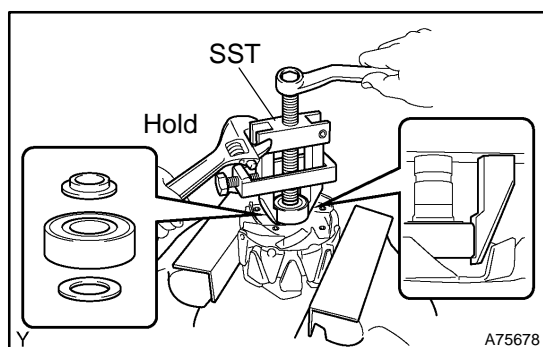
- (e) Using vernier calipers, measure the slip ring diameter.

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 rotor assy.



9. 130 A:

REMOVE GENERATOR ROTOR BEARING

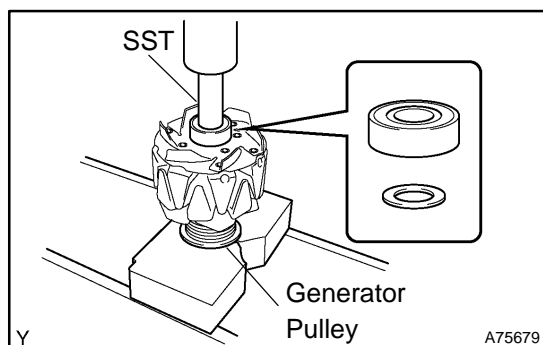
- (a) Using SST, remove the bearing cover (outside) and bearing.

SST 09820-00021

NOTICE:

Be careful not to damage the fan.

- (b) Remove the bearing cover (inside).

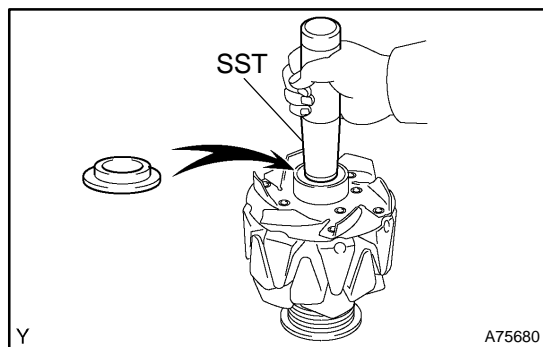


10. 130 A:

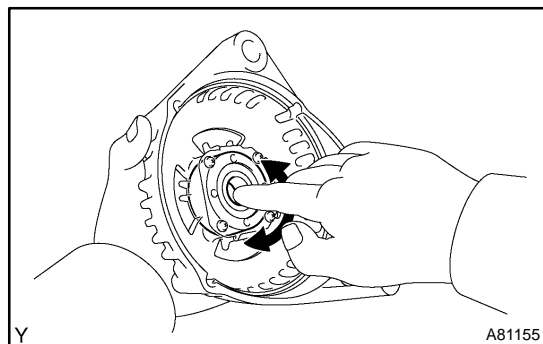
INSTALL GENERATOR ROTOR BEARING

- (a) Place the generator rotor on the generator pulley.
- (b) Install the bearing cover (inside).
- (c) Using SST and a press, press in a new bearing.

SST 09820-00031

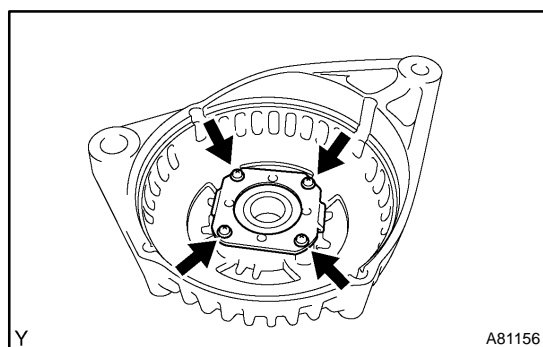


- (d) Using SST, push in the bearing cover (outside).
SST 09285-76010



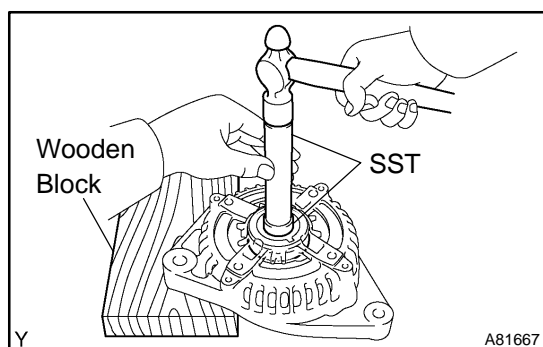
11. INSPECT GENERATOR DRIVE END FRAME BEARING

- (a) Check that the bearing is not rough or worn.
If necessary, replace the bearing.

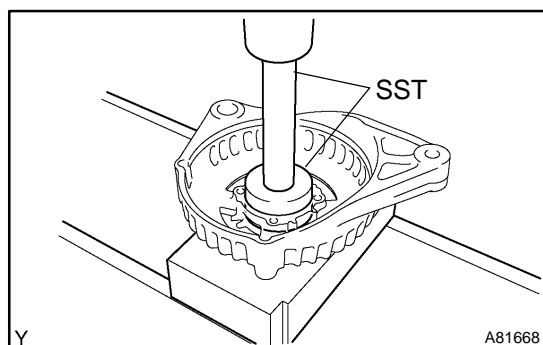


12. REMOVE GENERATOR DRIVE END FRAME BEARING

- (a) Remove the 4 screws and retainer plate.

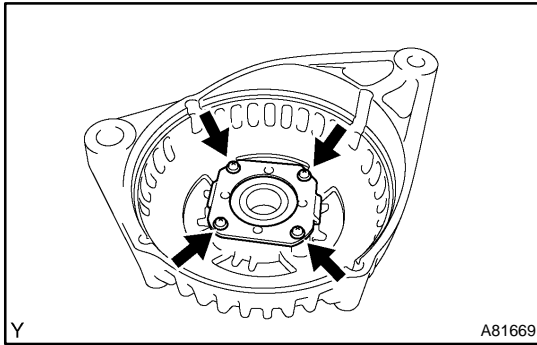


- (b) Using SST and a wooden block, tap out the bearing.
SST 09950-60010 (09951-00250), 09950-70010 (09951-07100)

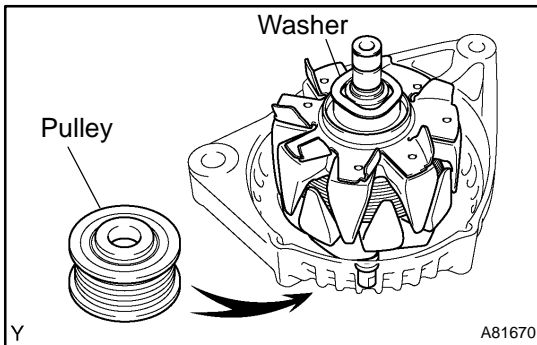


13. INSTALL GENERATOR DRIVE END FRAME BEARING

- (a) Using SST and a press, press in a new bearing.
SST 09950-60010 (09951-00470), 09950-70010 (09951-07100)

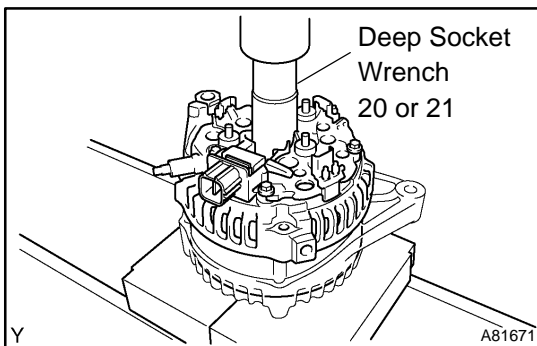


- (b) Install the retainer plate with the 4 screws.
Torque: 2.3 N·m (23 kgf·cm, 20 in.-lbf)



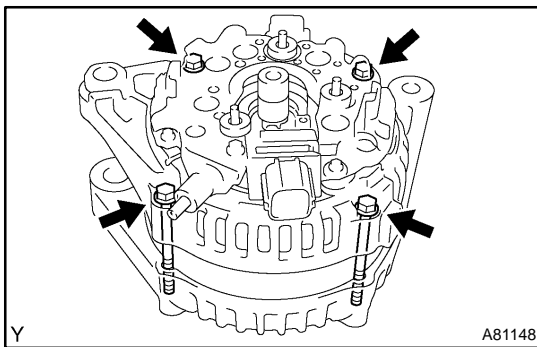
14. INSTALL GENERATOR ROTOR ASSY

- (a) Place the generator drive end frame on the pulley.
 (b) Install the rotor and washer.

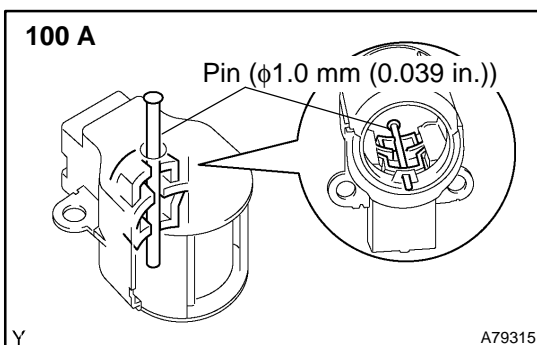


15. INSTALL GENERATOR RECTIFIER END FRAME

- (a) 100 A:
 Using deep socket wrench 21 and a press, press in the coil carefully.
 (b) 130 A:
 Using deep socket wrench 20 and a press, press in the coil carefully.

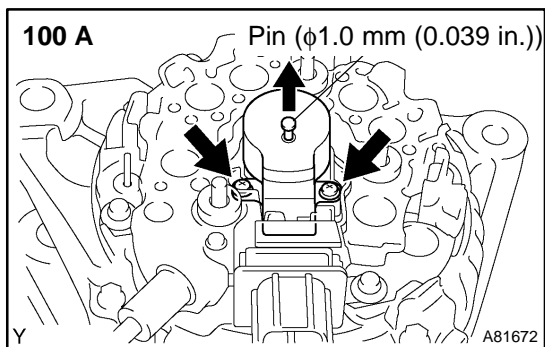


- (c) Tighten the 4 bolts.
Torque: 5.8 N·m (59 kgf·cm, 51 in.-lbf)



16. INSTALL GENERATOR BRUSH HOLDER ASSY

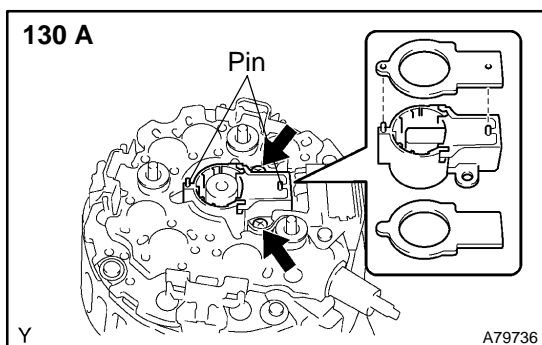
- (a) 100 A:
 Install the brush holder.
 (1) While pushing the 2 brushes to inside the brush holder, insert a pin (φ1.0 mm (0.039 in.)) into the brush holder hole.



- (2) Install the brush holder with the 2 screws.

Torque: 1.8 N·m (18 kgf·cm, 16 in.-lbf)

- (3) Pull out the pin ($\phi 1.0$ mm (0.039 in.)) from the brush holder.



- (b) 130 A:

Install the brush holder

- (1) Install the plate seal (inside).
(2) Place the brush holder with the pin facing upward.

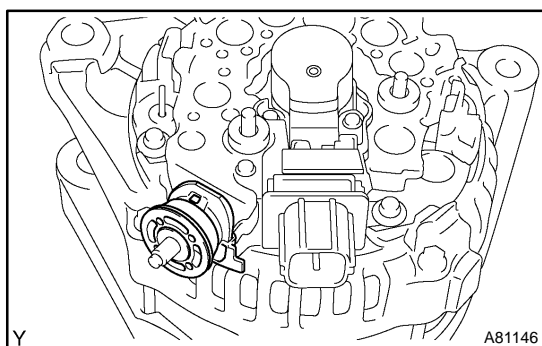
NOTICE:

Be careful of the generator brush holder installing direction.

- (3) Tighten the 2 screws.

Torque: 1.8 N·m (18 kgf·cm, 16 in.-lbf)

- (4) Align the pins of the brush holder with the holes of the plate seal (outside), and install the plate seal (outside).

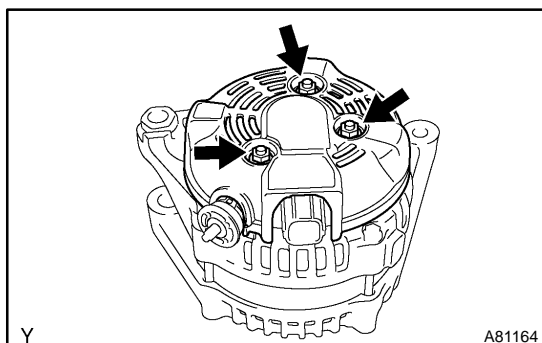


17. INSTALL TERMINAL INSULATOR

- (a) Install the terminal insulator.

NOTICE:

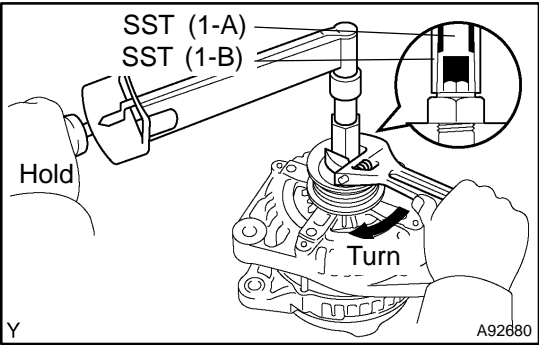
pay attention to the mounting direction of the terminal insulator.



18. INSTALL GENERATOR REAR END COVER

- (a) Install the rear end cover with the 3 nuts.

Torque: 4.6 N·m (47 kgf·cm, 41 in.-lbf)



19. INSTALL GENERATOR PULLEY

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

HINT:

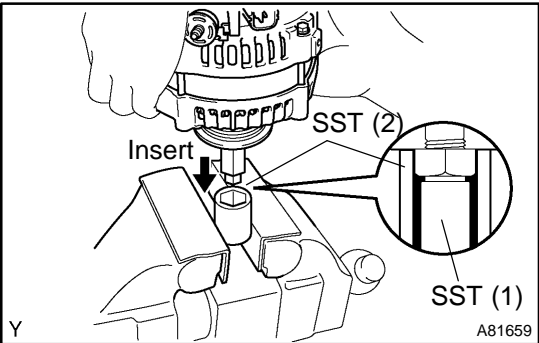
SST 1-A and B	09820-06010
SST 2	09820-06020

- (a) Install the pulley to the 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.

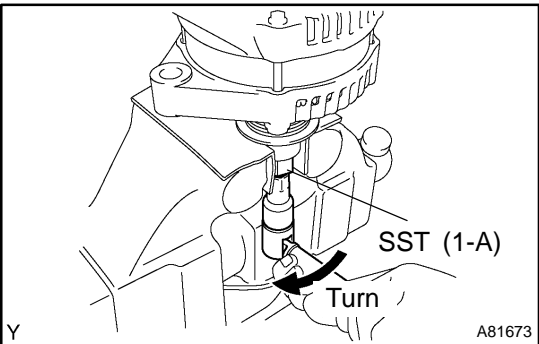
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

NOTICE:

Check that SST is secured to the rotor shaft.



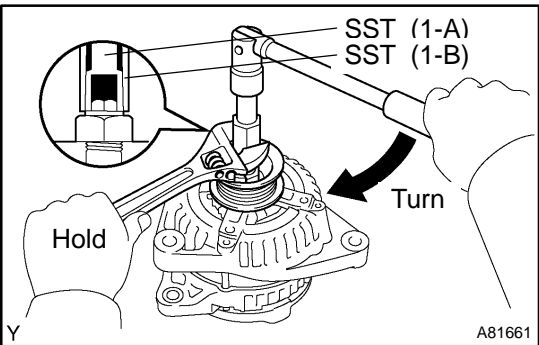
- (c) Mount SST (2) in a vise.
- (d) Insert SST (1-A) and (B) into SST (2), and attach the generator pulley nut to SST (2)



- (e) Tighten the pulley nut by turning SST (1-A) in the direction shown in the illustration.

Torque: 111 N·m (1,125 kgf·cm, 81 ft·lbf)

- (f) Remove the generator from SST (2).



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