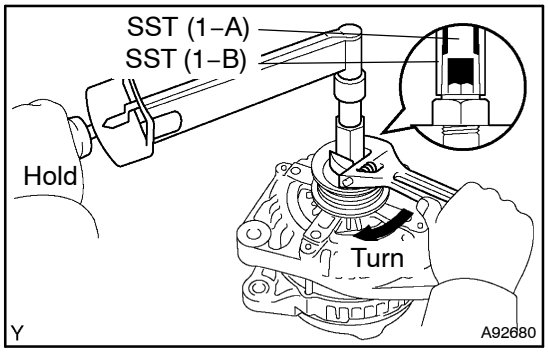
190WD–01

OVERHAUL



1. REMOVE GENERATOR PULLEY

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

HINT:

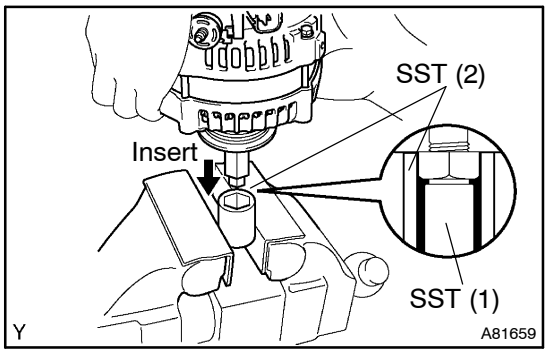
SST (1–A, B)	09820–06010
SST (2)	09820–06020

(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)

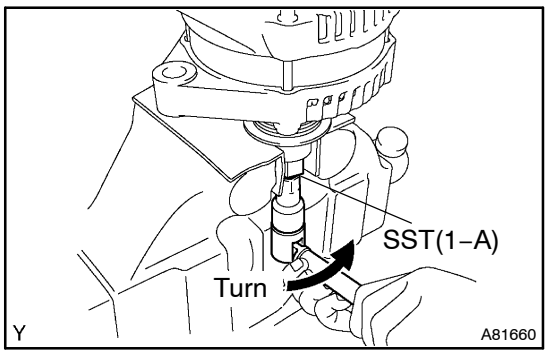
NOTICE:

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).

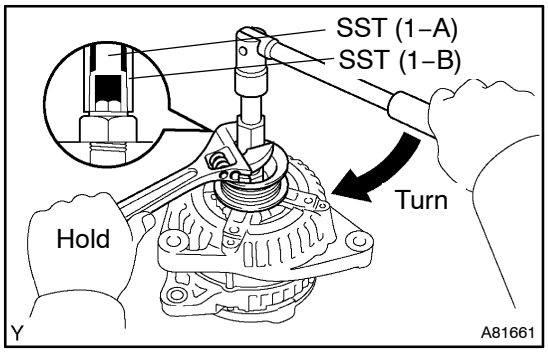


(d) To loosen the pulley nut, turn SST (1–A) in the direction shown by the arrow mark in the illustration.

NOTICE:

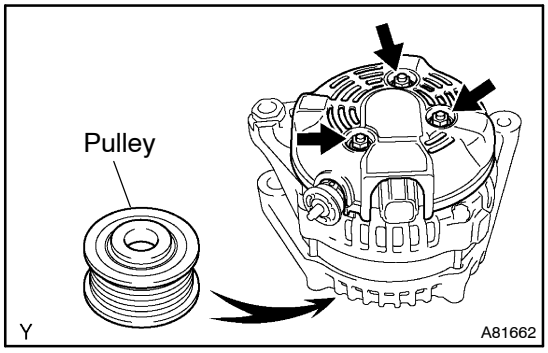
To prevent damage to the rotor shaft, do not loosen the pulley nut more than one–half turn.

(e) Remove the generator from SST (2).



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

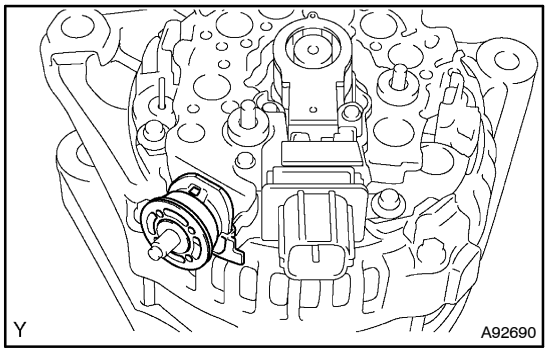
(g) Remove the pulley nut and pulley.



2. REMOVE GENERATOR REAR END COVER

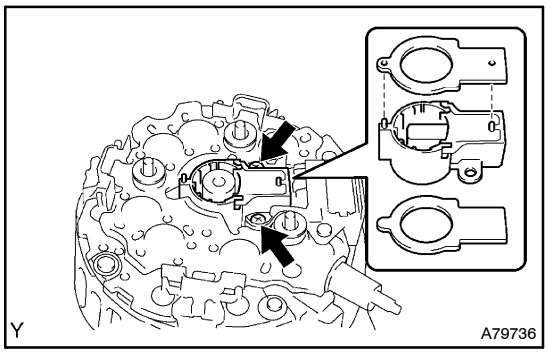
(a) Place the generator on the pulley.

(b) Remove the 3 nuts and rear end cover.



3. REMOVE TERMINAL INSULATOR

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

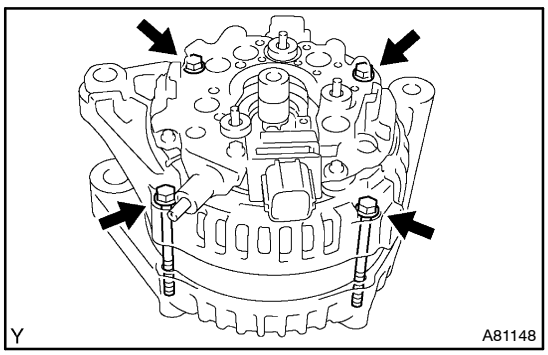


4. REMOVE GENERATOR BRUSH HOLDER ASSY

(a) Remove the plate seal.

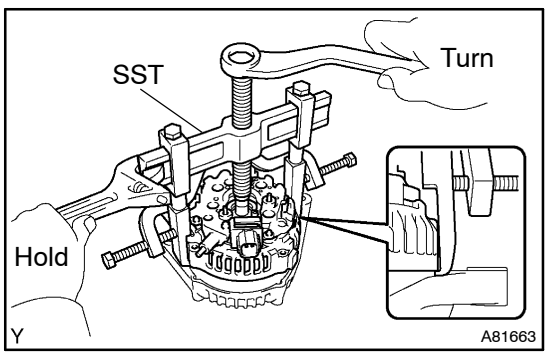
(b) Remove the 2 screws and brush holder.

(c) Remove the plate seal.



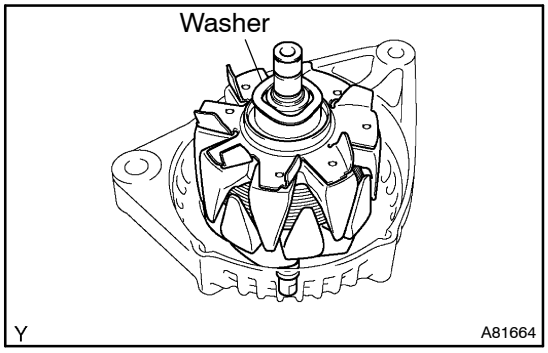
5. REMOVE GENERATOR RECTIFIER END FRAME

(a) Remove the 4 bolts.



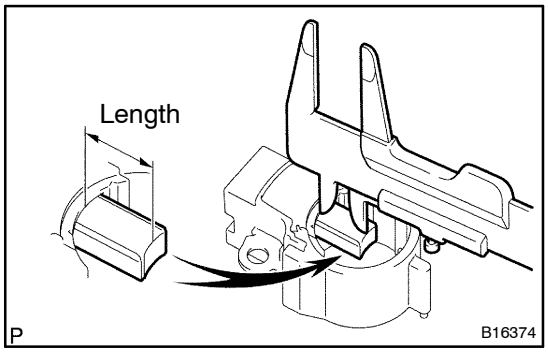
(b) Using SST, remove the end frame.

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.



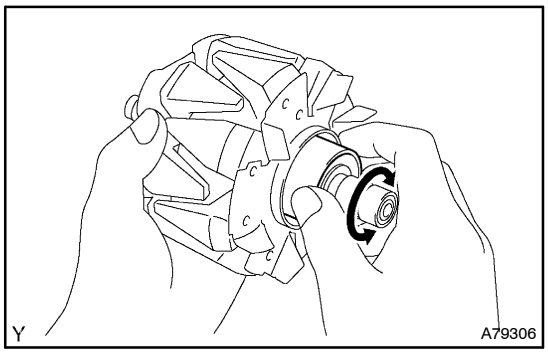
7. INSPECT GENERATOR BRUSH HOLDER ASSY

(a) 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.)

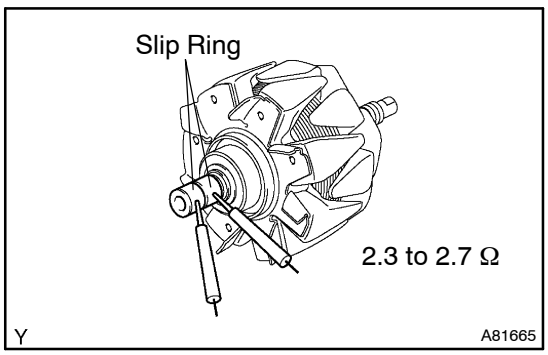
If the exposed brush length is less than the minimum, replace the brush holder assy.



8. INSPECT GENERATOR ROTOR ASSY

(a) Check that the bearing is not rough or worn.

If necessary, replace the rotor bearing.

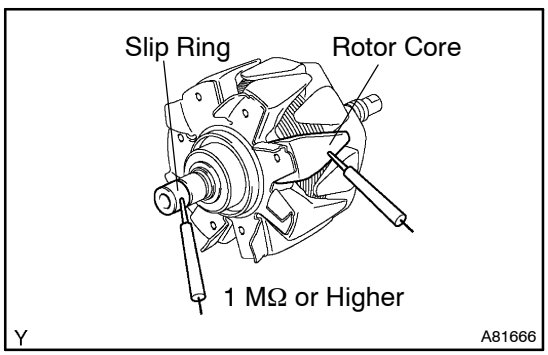


(b) Check the rotor for open circuit.

(1) Measure the resistance between the slip rings.

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.

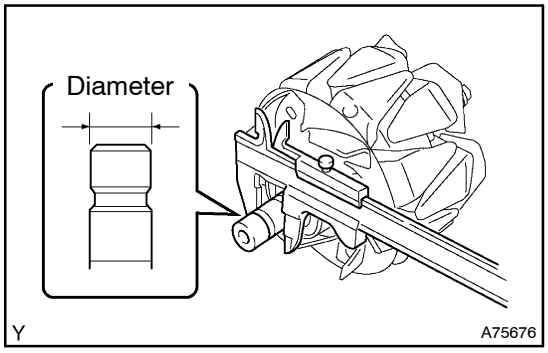
(1) Measure the resistance between the slip ring and rotor core.

Resistance: 1 MΩ 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.



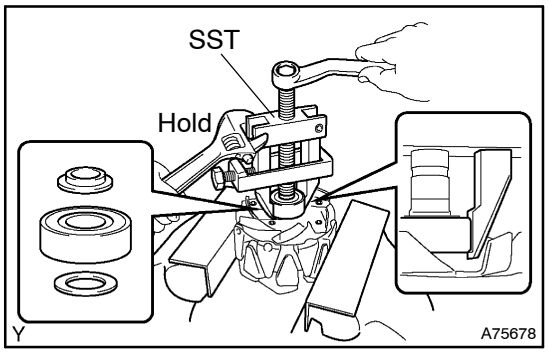
(e) Using a vernier caliper, measure the slip ring diameter.
Standard diameter: 14.2 to 14.4 mm (0.559 to 0.567 in.)
Minimum diameter: 14.0 mm (0.551 in.)

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

9. INSPECT BEARING

(a) Check that bearing is not rough or worn.

If necessary, replace the bearing.

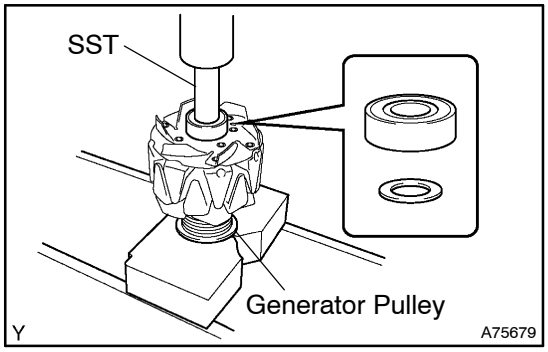


10. REMOVE GENERATOR ROTOR BEARING

(a) Using SST, remove the bearing cover (outside) and bearing.
SST 09820–00021

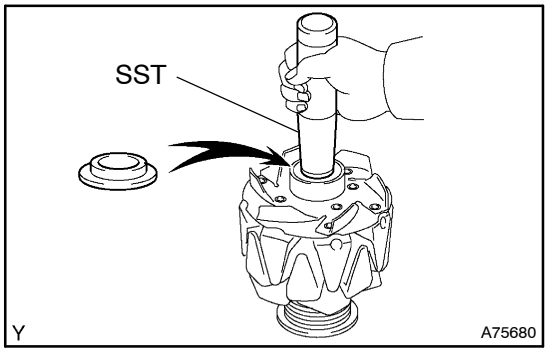
NOTICE:
Be careful not to damage the fan.

(b) Remove the bearing cover (inside).

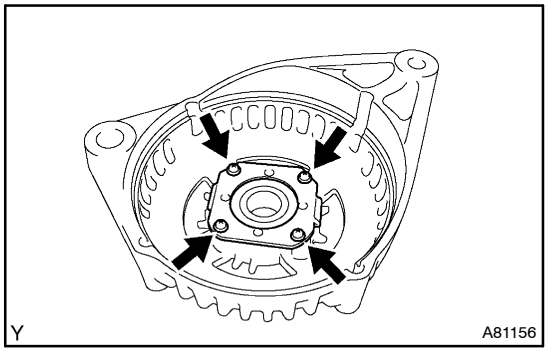


11. INSTALL GENERATOR ROTOR BEARING

(a) Place the rotor on the pulley.
(b) Install the bearing cover (inside).
(c) Using SST and a press, press in a new bearing.
SST 09820–00031

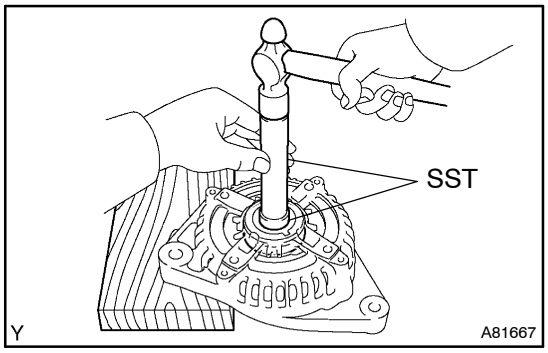


(d) Using SST, push in the bearing cover (outside).
SST 09285–76010

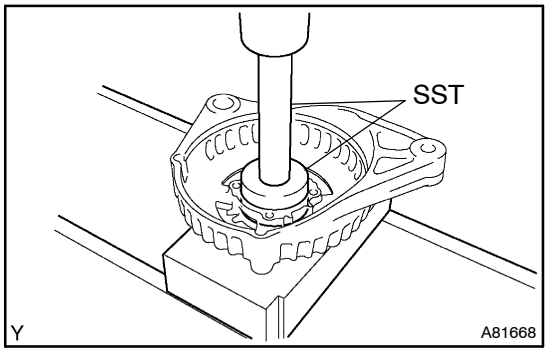


12. REMOVE GENERATOR DRIVE END FRAME BEARING

(a) Remove the 4 screws and retainer plate.

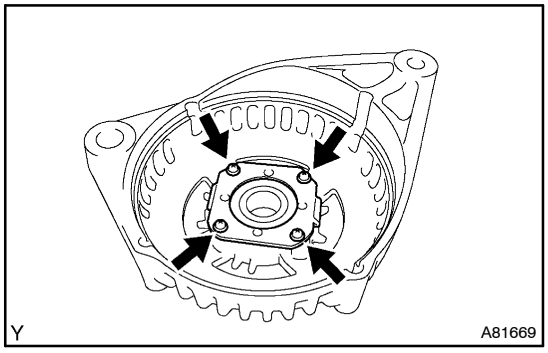


(b) Using SST, tap out the bearing.
SST 09950–60010 (09951–00250), 09950–70010 (09951–07100)

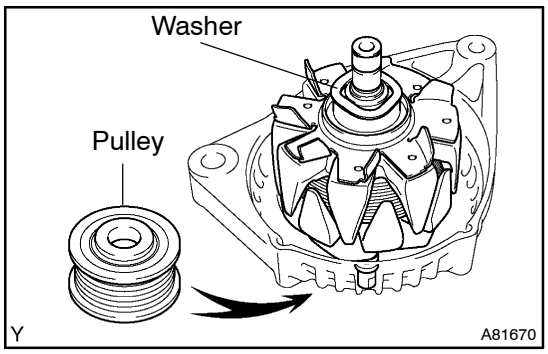


13. INSTALL GENERATOR DRIVE END FRAME BEARING

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

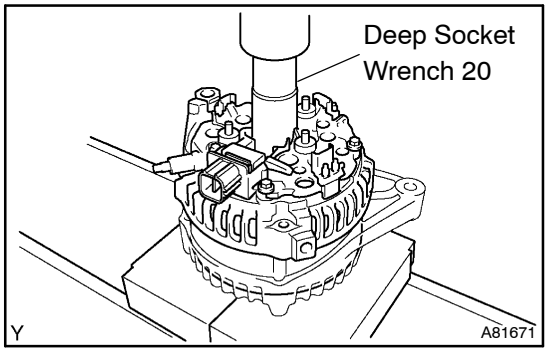


(b) Install the retainer plate with the 4 screws.
Torque: 2.3 N·m (23 kgf·cm, 20 in.·lbf)



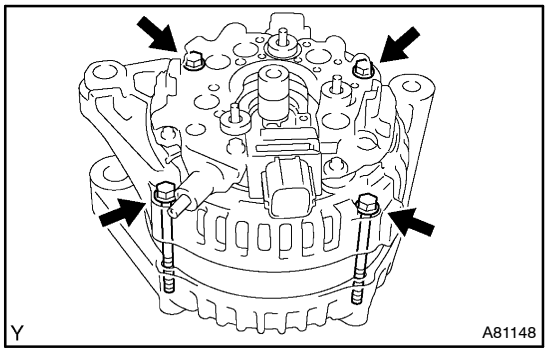
14. INSTALL GENERATOR ROTOR ASSY

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

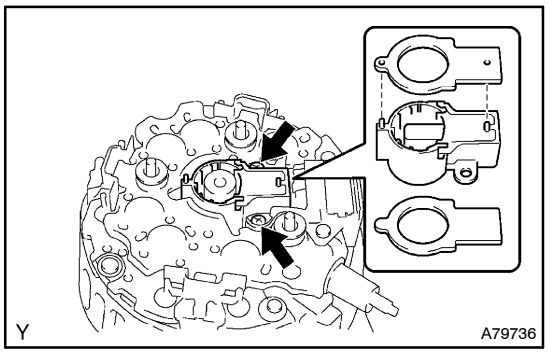


15. INSTALL GENERATOR RECTIFIER END FRAME

(a) Using deep socket wrench 20 and a press, press in the end frame carefully.



(b) Install the 4 bolts.
Torque: 5.8 N·m (59 kgf·cm, 51 in.·lbf)



16. INSTALL GENERATOR BRUSH HOLDER ASSY

(a) Install the plate seal (inside).

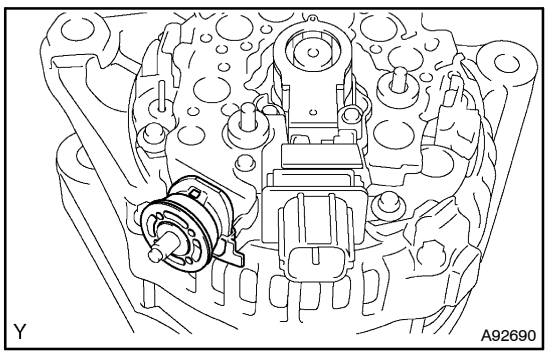
(b) Place the brush holder with the pin facing upward.

NOTICE:

Be careful of the brush holder installing direction.

(c) Install the 2 screws.
Torque: 1.8 N·m (18 kgf·cm, 16 in.·lbf)

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

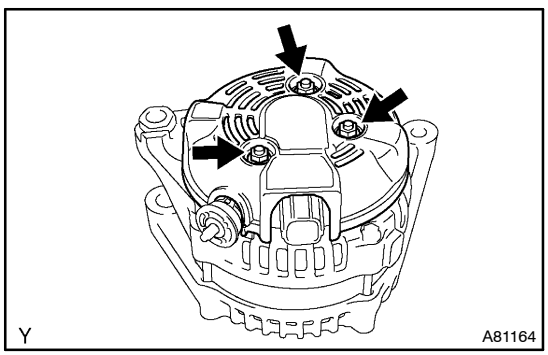


17. INSTALL TERMINAL INSULATOR

(a) Install the terminal insulator to the rectifier end frame.

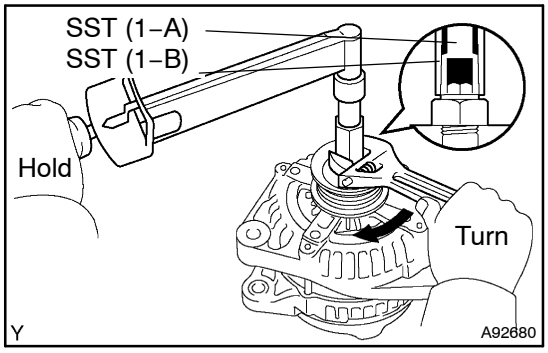
NOTICE:

Pay attention the mounting orientation 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, B)	09820–06010
SST (2)	09820–06020

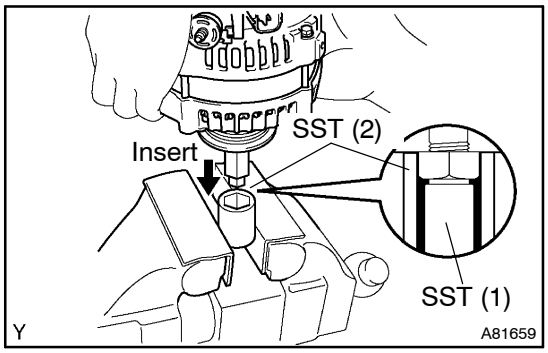
(a) Install the pulley to the rotor shaft by tightening the pulley nut by hand.

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

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

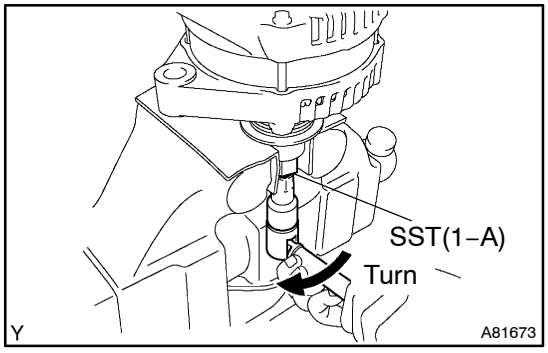
NOTICE:

Check that SST is secured to the rotor shaft.



(c) Mount SST (2) in a vise.

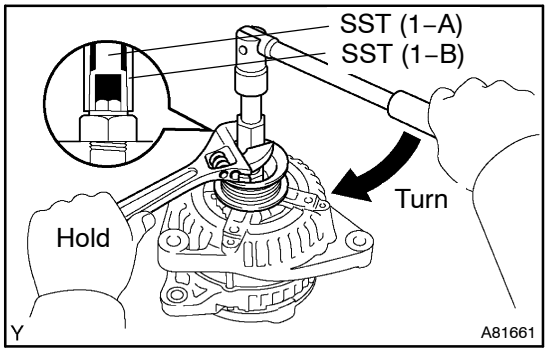
(d) Insert SST (1–A, B) into SST (2), and attach the pulley nut to SST (2).



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

Torque: 110 N·m (1,122 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.