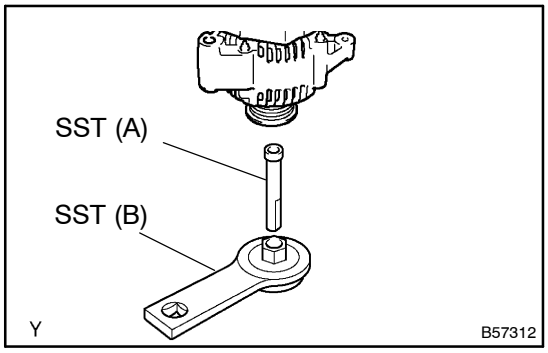
190IE–01

OVERHAUL

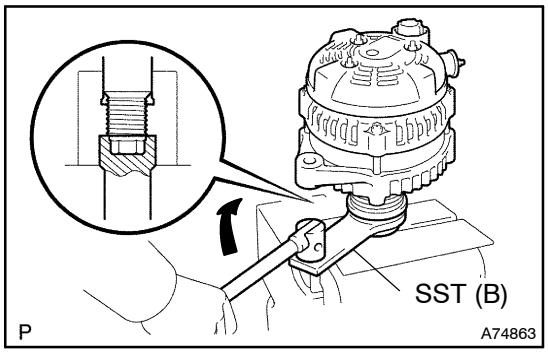


1. REMOVE GENERATOR PULLEY

(a) Remove the generator pulley cap.

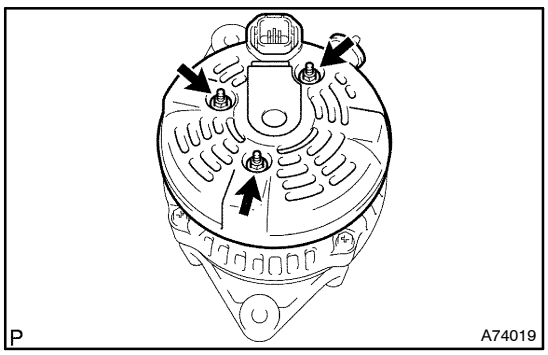
(b) Install SST to the pulley and vise as shown in the illustration.

(c) Mount SST (A) in a vise.
SST 09820–63020



(d) Turn SST (B) clockwise, loosen the pulley.
SST 09820–63020

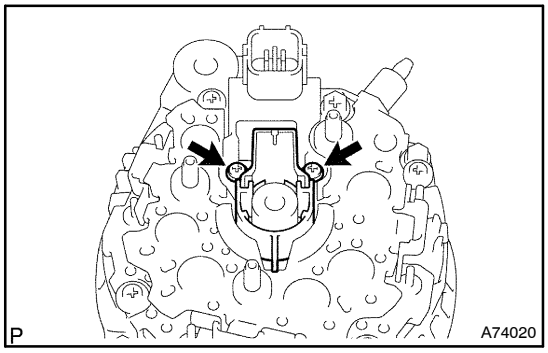
(e) Remove the pulley.



2. REMOVE GENERATOR REAR END COVER

(a) Remove the 3 nuts and end cover.

(b) Remove the terminal insulator.

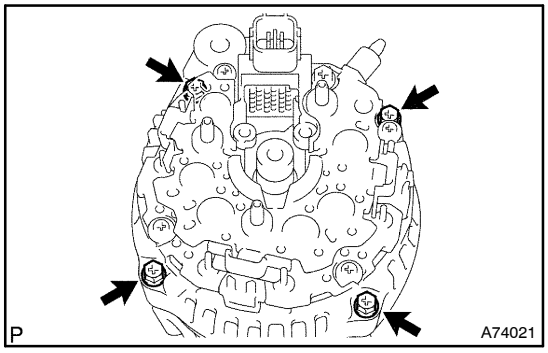


3. REMOVE GENERATOR BRUSH HOLDER ASSY

(a) Remove the rear seal plate from the brush holder.

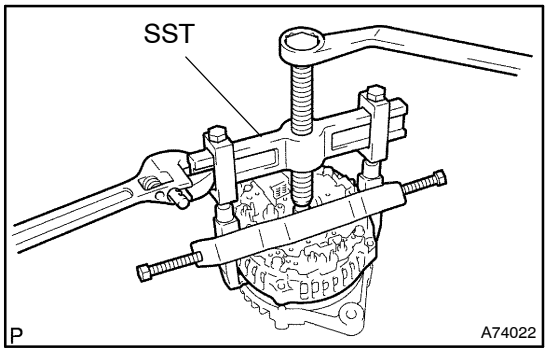
(b) Remove the 2 screws and brush holder.

(c) Remove the front seal plate from the coil assembly.



4. REMOVE GENERATOR COIL ASSY

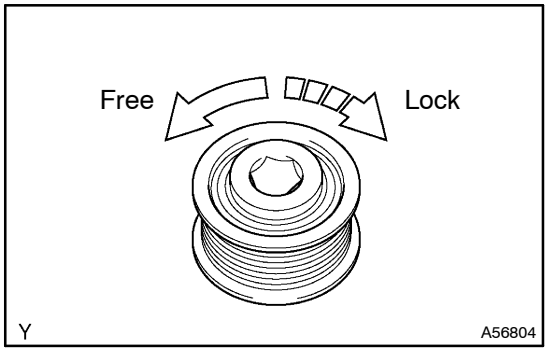
(a) Remove the 4 bolts.



(b) Using SST, remove the coil assembly.
SST 09950–40011 (09951–04020, 09952–04010, 09953–04020, 09954–04010, 09955–04071, 09957–04010, 09958–04011)

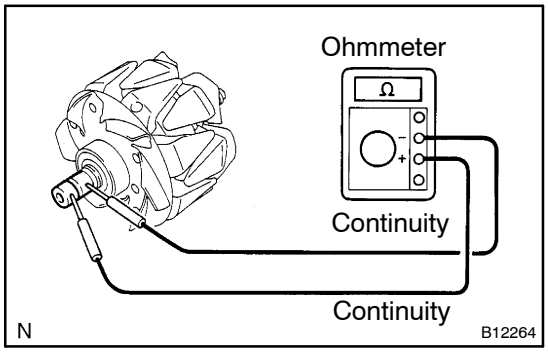
(c) Remove the generator washer.

5. REMOVE GENERATOR ROTOR ASSY



6. INSPECT GENERATOR PULLEY

(a) When rotating the pulley, check that it turns clockwise and it does not turn counterclockwise.



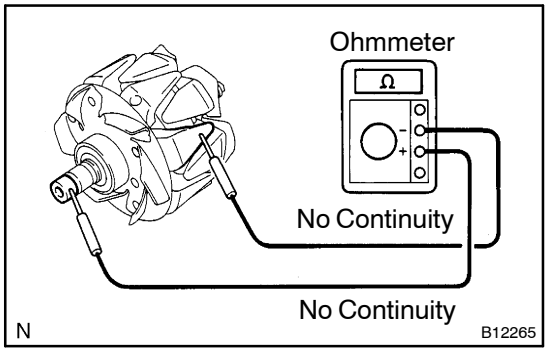
7. INSPECT GENERATOR ROTOR ASSY

(a) Check the rotor for open circuit.

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

Standard resistance: 2.3 – 2.7 Ω at 20°C (68°F)

If there is no continuity, replace the rotor.

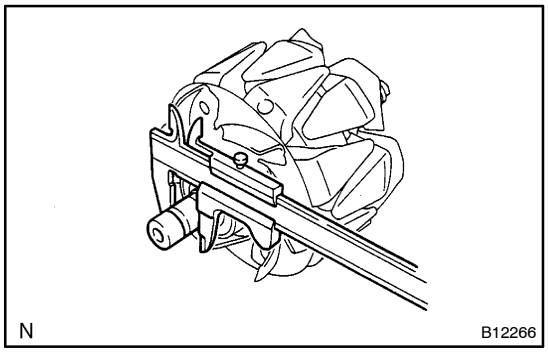


(b) Check the rotor for ground.
(1) Using an ohmmeter, check that there is no continuity between the slip ring and rotor.

If there is continuity, replace the rotor.

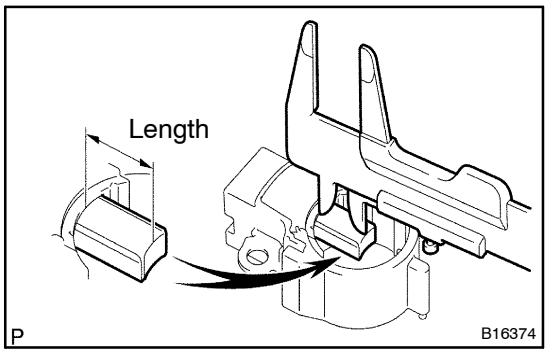
(c) Check that the slip rings are not rough or scored.

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: 14.0 mm (0.551 in.)

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



8. INSPECT GENERATOR BRUSH HOLDER ASSY

(a) Using vernier caliper, measure the exposed brush length.
Standard exposed length: 10.5 mm (0.413 in.)
Minimum exposed length: 4.5 mm (0.177 in.)

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

9. INSPECT GENERATOR ROTOR BEARING

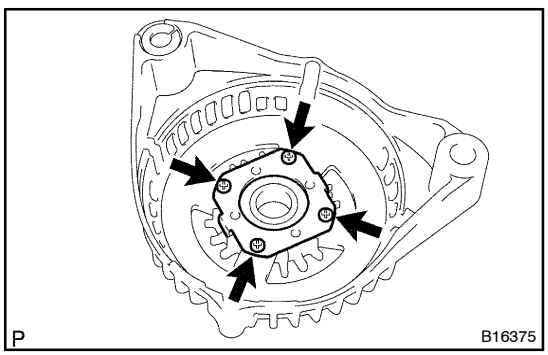
(a) Inspect the bearing is not rough or worn.

If necessary, replace the bearing.

10. INSPECT GENERATOR DRIVE END FRAME BEARING

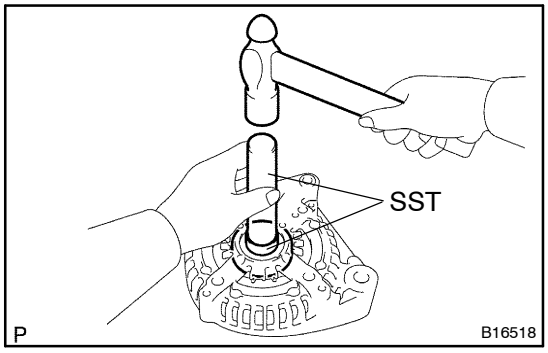
(a) Inspect the bearing is not rough or worn.

If necessary, replace the bearing.

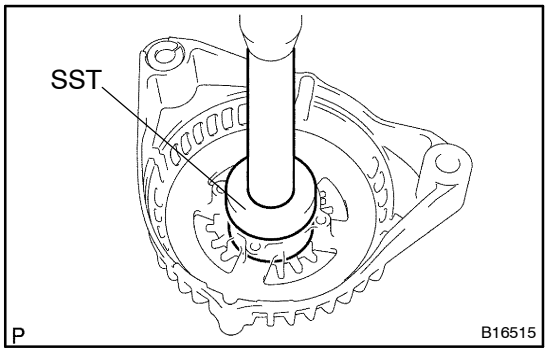


11. REMOVE GENERATOR ROTOR BEARING

(a) Remove the 4 screws, bearing retainer and bearing.



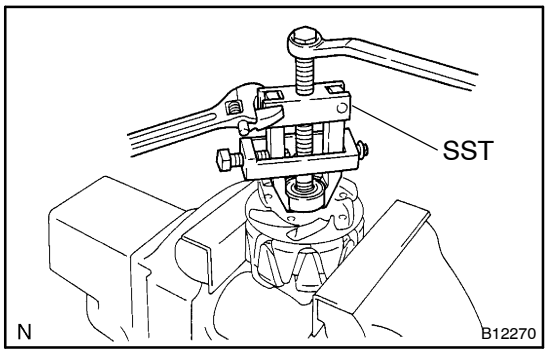
(b) Using SST and a hammer, tap out the bearing.
SST 09950–60010 (09951–00250), 09950–70010 (09951–07100)



12. INSTALL GENERATOR ROTOR BEARING

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

(b) Install the bearing retainer with the 4 screws.
Torque: 2.6 N·m (27 kgf·cm, 23 in.·lbf)

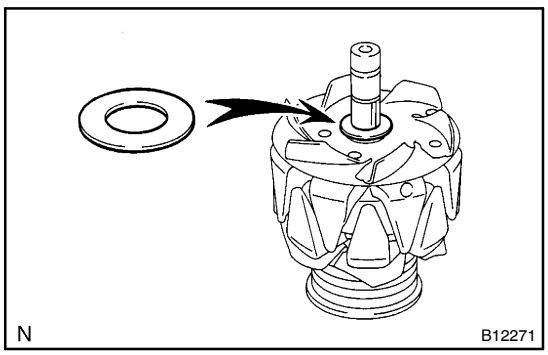


13. REMOVE GENERATOR DRIVE END FRAME BEARING

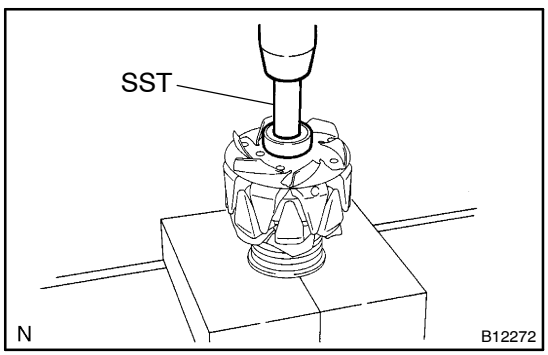
(a) Using SST, remove the bearing cover (outside) and bearing.
SST 09820–00021

NOTICE:
Be careful not to damage the fan.

(b) Remove the bearing cover (inside).

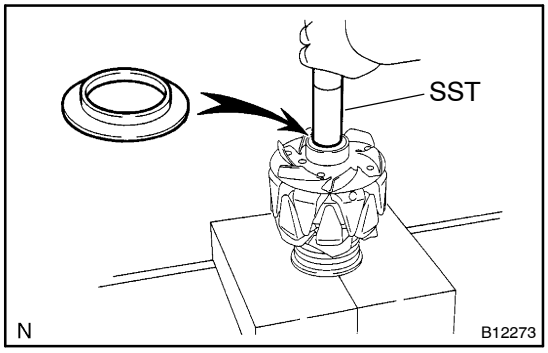


(c) Place the bearing cover (inside) on the rotor.



14. INSTALL GENERATOR DRIVE END FRAME BEARING

(a) Using SST and a press, press in a new bearing.
SST 09820–00031

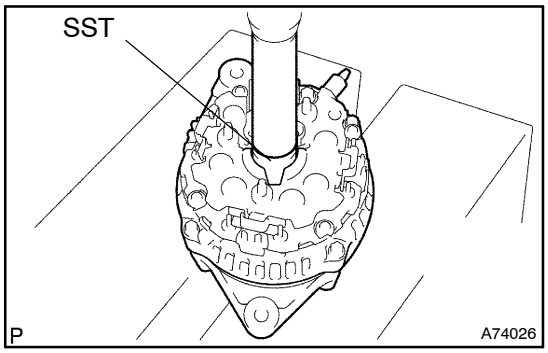


(b) Using SST, push in the bearing cover (outside).
SST 09285–76010

15. INSTALL GENERATOR ROTOR ASSY

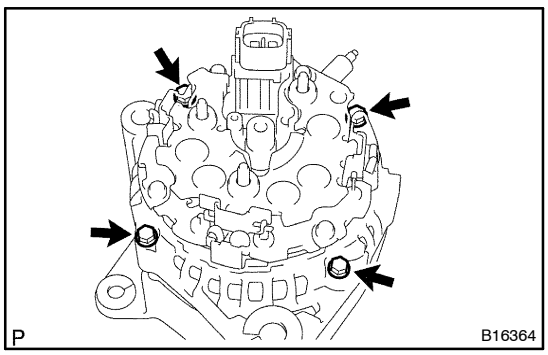
(a) Install the rotor to the drive end frame.

(b) Place the generator washer on the rotor.

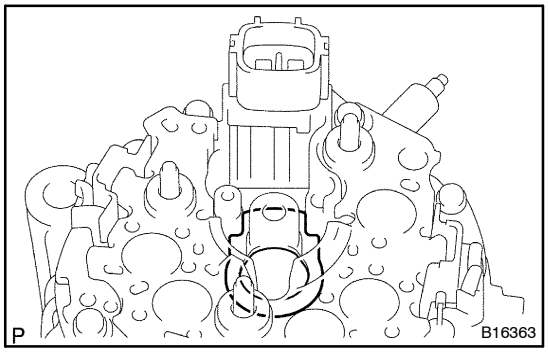


16. INSTALL GENERATOR COIL ASSY

(a) Using SST and a press, slowly press in the coil assembly.
SST 09285–76010

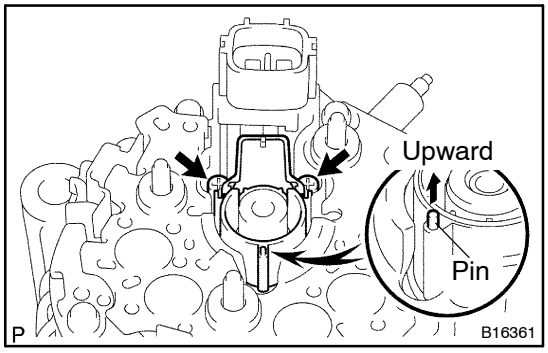


(b) Install the coil assembly with the 4 bolts.
Torque: 5.8 N·m (59 kgf·cm, 51 in.·lbf)



17. INSTALL GENERATOR BRUSH HOLDER ASSY

(a) Place the front seal plate on the coil assembly.



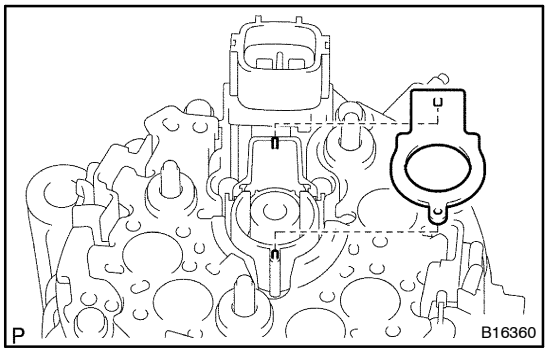
(b) Place the brush holder on the coil assembly with the pin facing upward.

NOTICE:

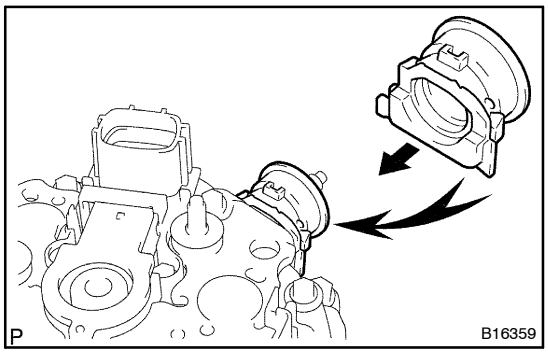
Be careful of the holder installation direction.

(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 rear seal plate, and install the rear seal plate.

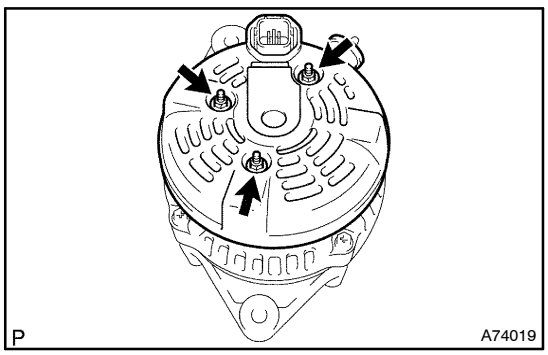


18. INSTALL GENERATOR REAR END COVER

(a) Install the terminal insulator.

NOTICE:

Be careful of the terminal insulator installation direction.

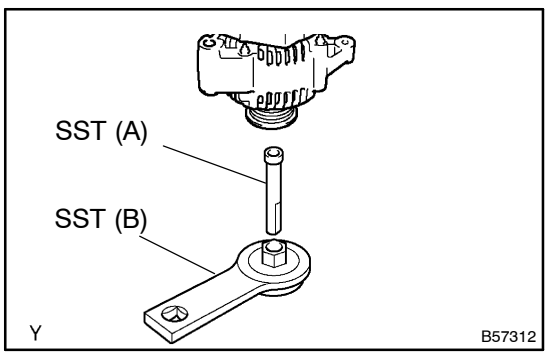


(b) Install the end cover with the 3 nuts.

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

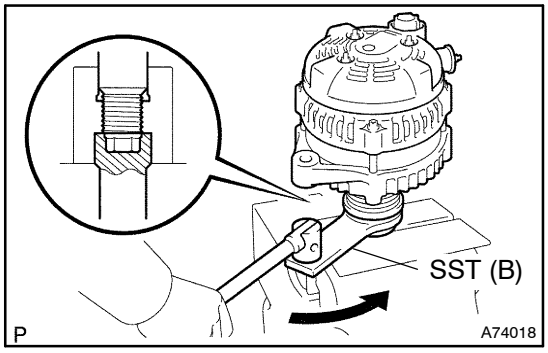
19. INSTALL GENERATOR PULLEY

(a) Install the pulley by hand.



(b) Install SST to the pulley and vise as shown in the illustration.

SST 09820–63020



(c) Turn SST (B) counterclockwise, tighten the pulley.
SST 09820–63020
Torque: 111 N·m (1,125 kgf·cm, 81 ft·lbf)

(d) Check that the generator pulley rotates smoothly.

(e) Install the generator pulley cap.