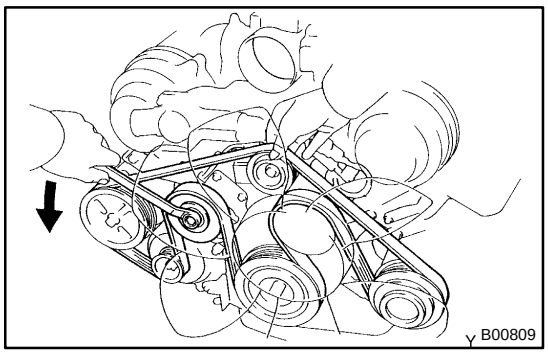
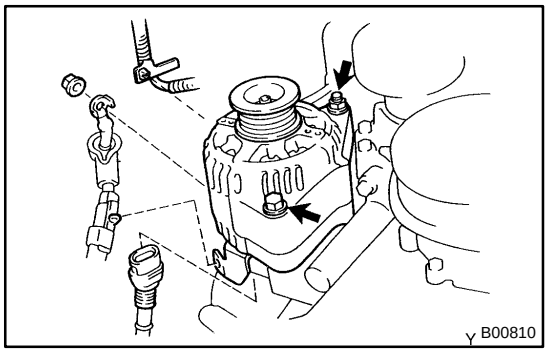
CH03D–01





REMOVAL

1. REMOVE BATTERY CLAMP COVER

2. REMOVE AIR CLEANER INLET

3. REMOVE GENERATOR DRIVE BELT

Loosen the belt tension by turning the belt tensioner counterclockwise, and remove the drive belt.

HINT:

The pulley bolt for the belt tensioner has a left – hand thread.

4. REMOVE OIL PAN PROTECTOR

5. REMOVE ENGINE UNDER COVER

6. DISCONNECT PS OIL COOLER PIPE FROM OIL PAN

7. REMOVE PS PUMP

(See page EM–77)

8. REMOVE GENERATOR

(a) Disconnect the generator connector.

(b) Remove the rubber cap and nut, and disconnect the generator wire.

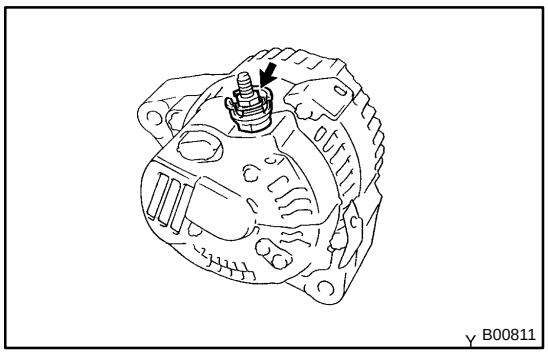
(c) Disconnect the generator wire clamp from the cord clip on the generator.

(d) Disconnect the heated oxygen sensor wire clamp from the cord clip on the generator.

(e) Remove the bolt, nut and generator.

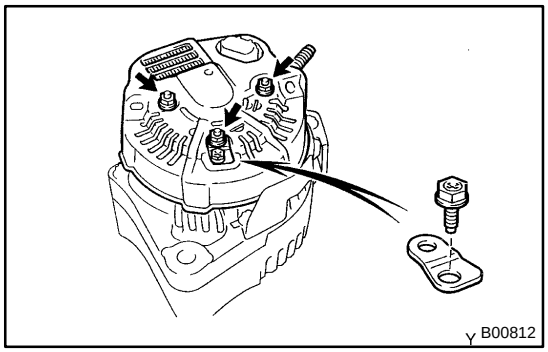
CH03E–01

DISASSEMBLY

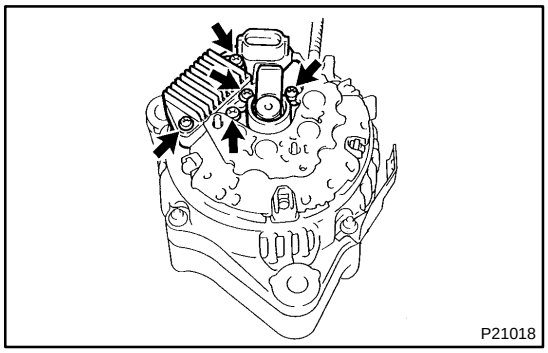


1. REMOVE REAR END COVER

(a) Remove the nut and terminal insulator.

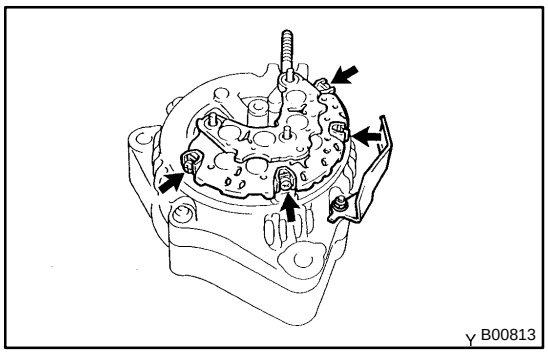


(b) Remove the 3 nuts, bolt, plate terminal and rear end cover.



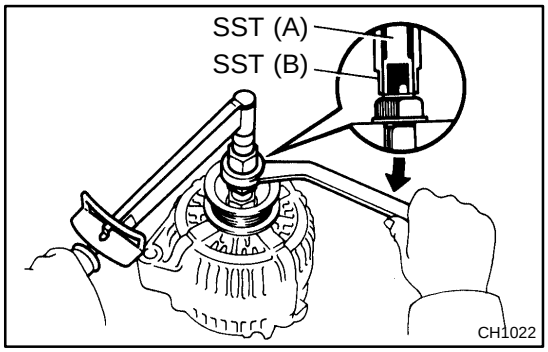
2. REMOVE BRUSH HOLDER AND VOLTAGE REGULATOR

(a) Remove the brush holder cover from the brush holder.
(b) Remove the 5 screws, brush holder and voltage regulator.
(c) Remove the seal plate from the rectifier end frame.



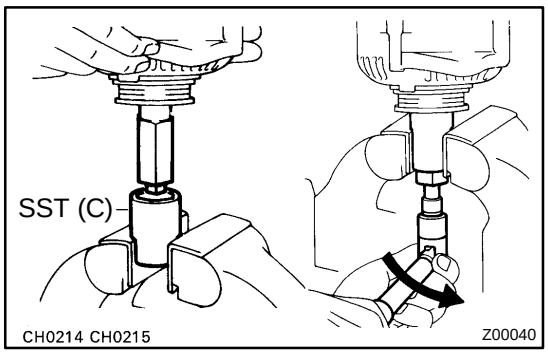
3. REMOVE RECTIFIER HOLDER

(a) Remove the nut and cord clip.
(b) Remove the 4 screws and rectifier holder.
(c) Remove the 4 rubber insulators.



4. REMOVE PULLEY

(a) Hold SST (A) with a torque wrench, and tighten SST (B) clockwise to the specified torque.
SST 09820–63010
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)
(b) Check that SST (A) is secured to the rotor shaft.



(c) As shown in the illustration, mount SST (C) in a vise, and install the generator to SST (C).

(d) To loosen the pulley nut, turn SST (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.

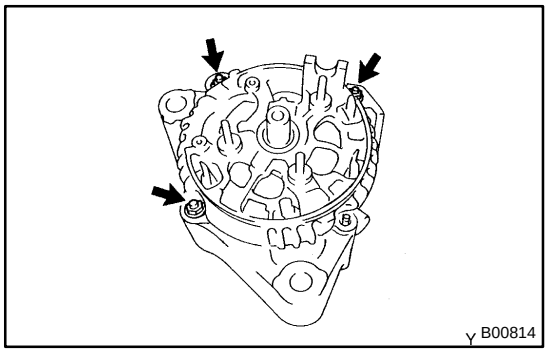
(e) Remove the generator from SST (C).

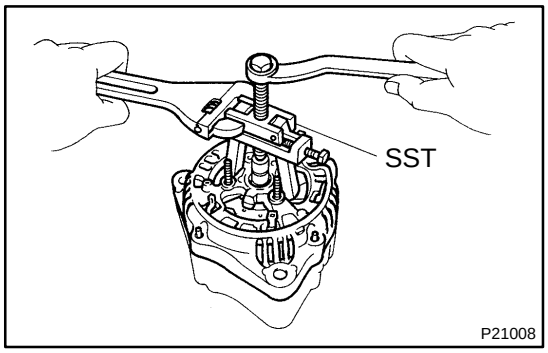
(f) Turn SST (B), and remove SST (A and B).

(g) Remove the pulley nut and pulley.

5. REMOVE RECTIFIER END FRAME

(a) Remove the 3 nuts and cord clip.





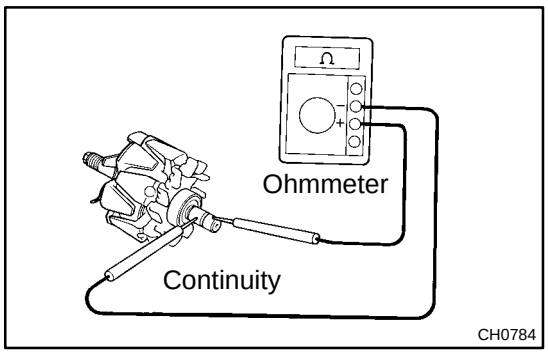
(b) Using SST, remove the rectifier end frame.
SST 09286–46011

(c) Remove the generator washer.

6. REMOVE ROTOR FROM DRIVE END FRAME

CH03F–01

INSPECTION

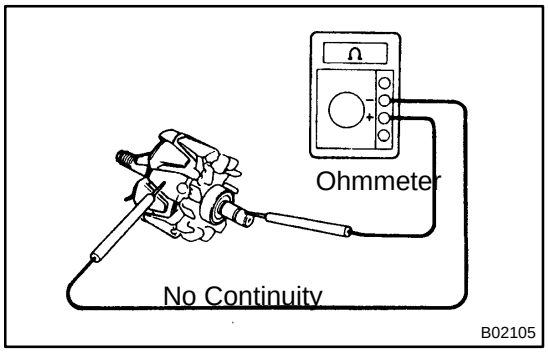


1. INSPECT ROTOR FOR OPEN CIRCUIT

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

Standard resistance: 2.1 – 2.5 Ω at 20˚C (68˚F)

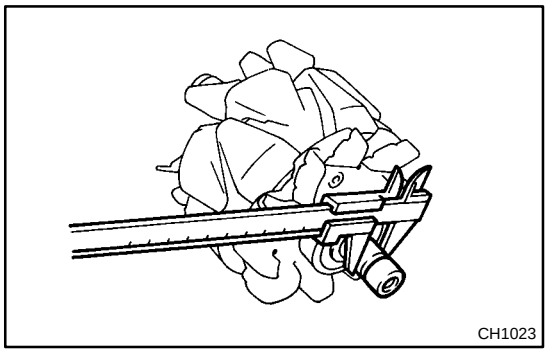
If there is no continuity, replace the rotor.



2. INSPECT ROTOR FOR GROUND

Using an ohmmeter, check that there is no continuity between the slip ring and rotor.

If there is continuity, replace the rotor.



3. INSPECT SLIP RINGS

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

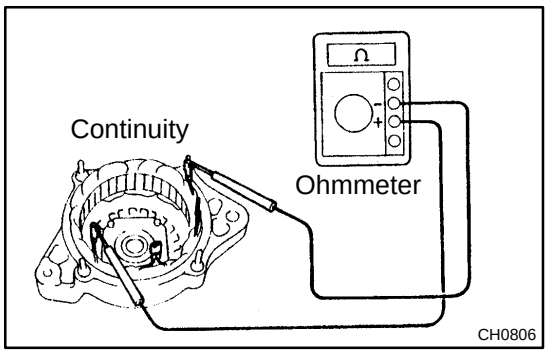
If rough or scored, replace the rotor.

(b) 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.)

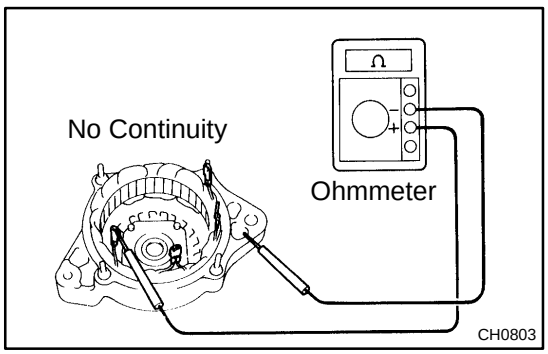
If the diameter is less than minimum, replace the rotor.



4. INSPECT STATOR FOR OPEN CIRCUIT

Using an ohmmeter, check that there is continuity between the coil leads.

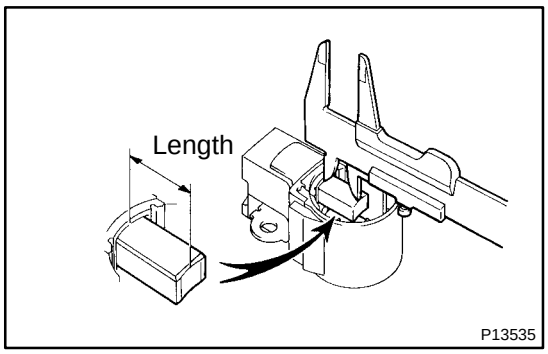
If there is no continuity, replace the drive end frame assembly.



5. INSPECT STATOR FOR GROUND

Using an ohmmeter, check that there is no continuity between the coil lead and drive end frame.

If there is continuity, replace the drive end frame assembly.



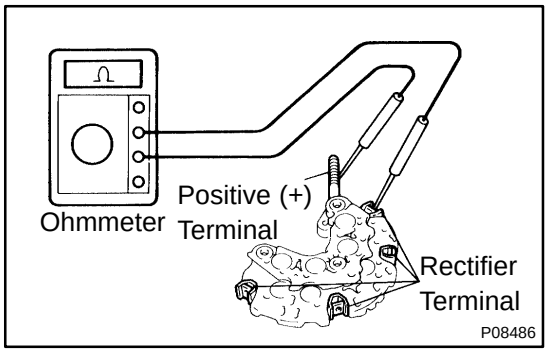
6. INSPECT EXPOSED BRUSH LENGTH

Using vernier calipers, measure the exposed brush length.

Standard exposed length: 10.5 mm (0.413 in.)

Minimum exposed length: 1.5 mm (0.059 in.)

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



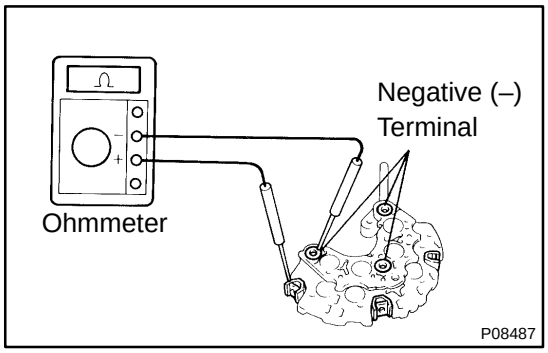
7. INSPECT POSITIVE RECTIFIER

(a) Using an ohmmeter, connect one tester probe to the positive (+) 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.

If continuity is not as specified, replace the rectifier holder.



8. INSPECT NEGATIVE RECTIFIER

(a) Using an ohmmeter, connect one tester probe to each negative (–) 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.

If continuity is not as specified, replace the rectifier holder.

9. INSPECT FRONT BEARING

Check that the bearing is not rough or worn.

If necessary, replace the front bearing.

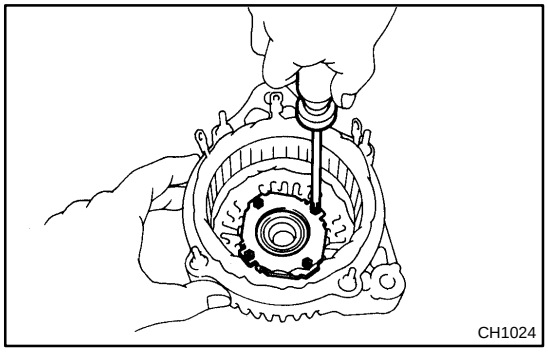
10. INSPECT REAR BEARING

Check that the bearing is not rough or worn.

If necessary, replace the rear bearing.

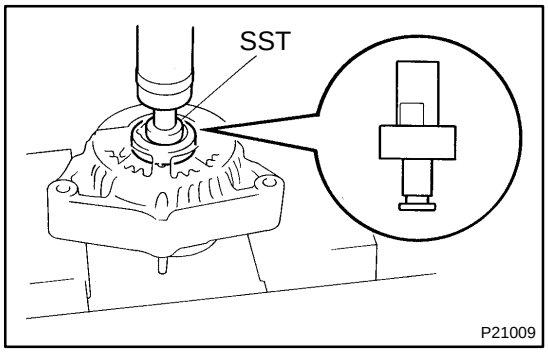
CH03G–01

REPLACEMENT

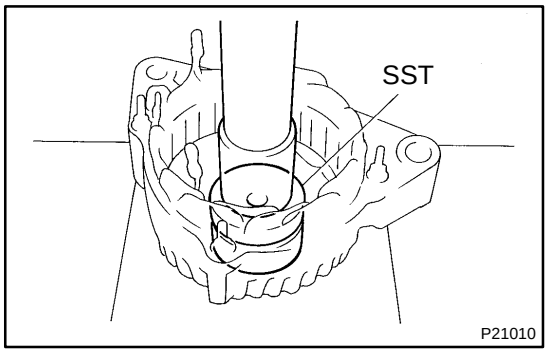


1. REPLACE FRONT BEARING

(a) Remove the 4 screws and bearing retainer.

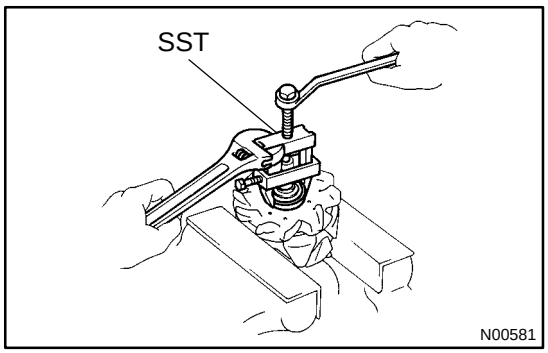


(b) Using SST and a press, press out the bearing.
SST 09950–60010 (09951–00260, 09952–06010)



(c) Using SST and a press, press in a new bearing.
SST 09950–60010 (09951–00500)

(d) Install the bearing retainer with the 4 screws.
Torque: 3.0 N·m (31 kgf·cm, 27 in.·lbf)

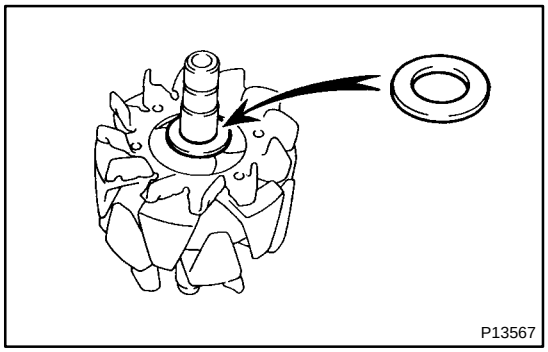


2. REPLACE REAR BEARING

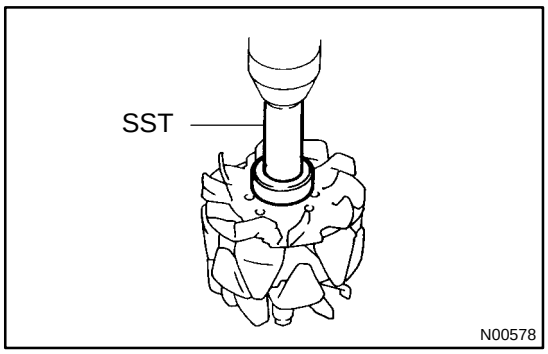
(a) Using SST, remove the bearing cover (outside) and bearing.
SST 09820–00021

NOTICE:
Be careful not to damage the fan.

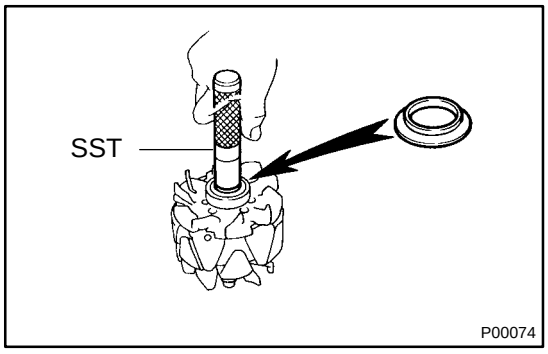
(b) Remove the bearing cover (inside).



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



(d) Using SST and a press, press in a new bearing.
SST 09820–00030



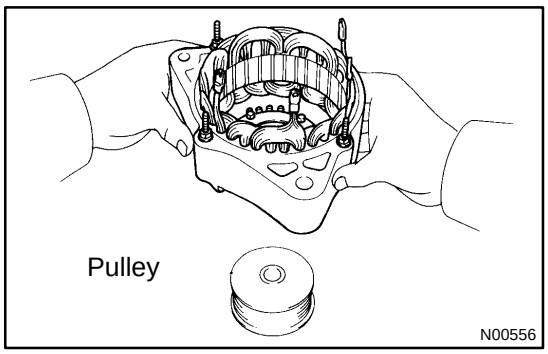
(e) Using SST, push in the bearing cover (outside).
SST 09285–76010

CH03H–01

REASSEMBLY

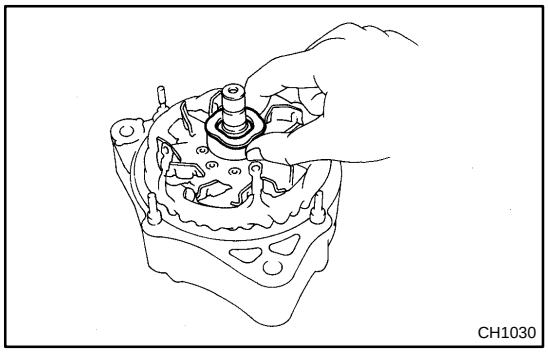
1. PLACE DRIVE END FRAME ON PULLEY

2. INSTALL ROTOR TO DRIVE END FRAME

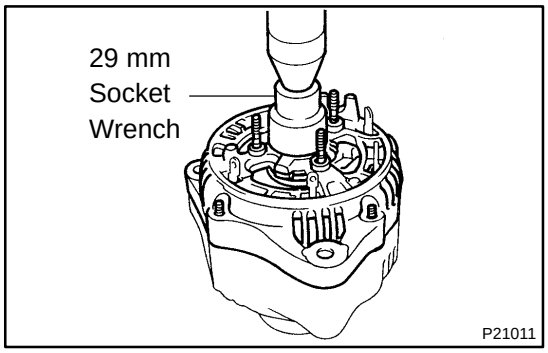


3. INSTALL RECTIFIER END FRAME

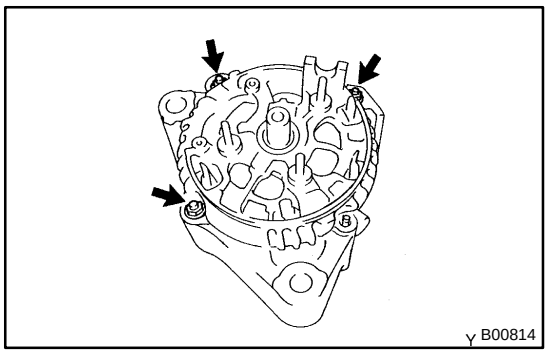
(a) Place the generator washer on the rotor.



(b) Using a 29 mm socket wrench and press, slowly press in the rectifier end frame.



(c) Temporarily install the cord clip and 3 nuts.



4. INSTALL PULLEY

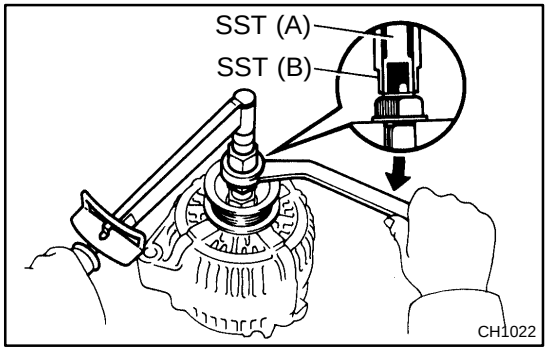
(a) Install the pulley to the rotor shaft by tightening the pulley nut by hand.

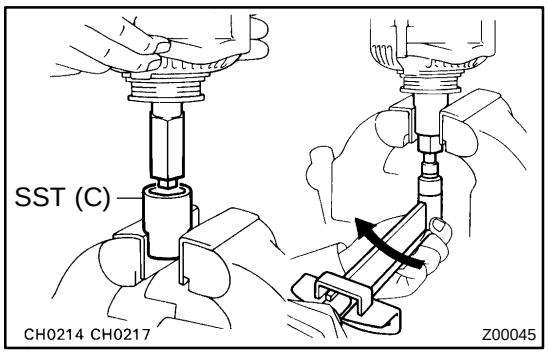
(b) Hold SST (A) with a torque wrench, and tighten SST (B) clockwise to the specified torque.

SST 09820–63010

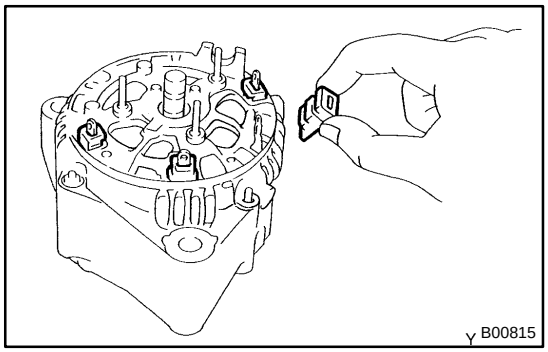
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

(c) Check that SST (A) is secured to the pulley shaft.

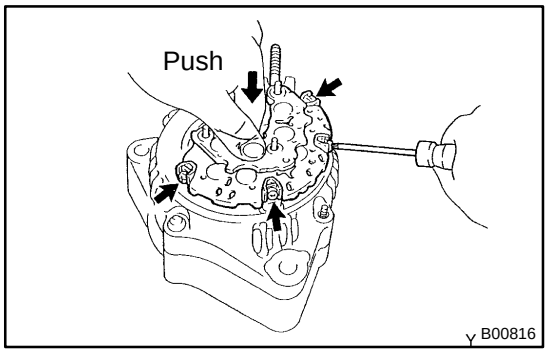




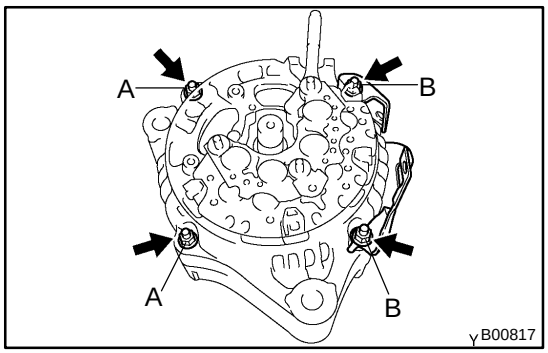
(d) As shown in the illustration, mount SST (C) in a vise, and install the generator to SST (C).
(e) To torque the pulley nut, turn SST (A) in the direction shown in the illustration.
Torque: 110.5 N·m (1,128 kgf·cm, 81 ft·lbf)
(f) Remove the generator from SST (C).
(g) Turn SST (B), and remove SST (A and B).



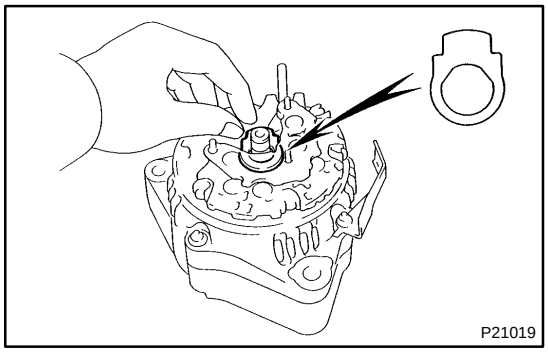
5. INSTALL RECTIFIER HOLDER
(a) Install the 4 rubber insulators on the lead wires.



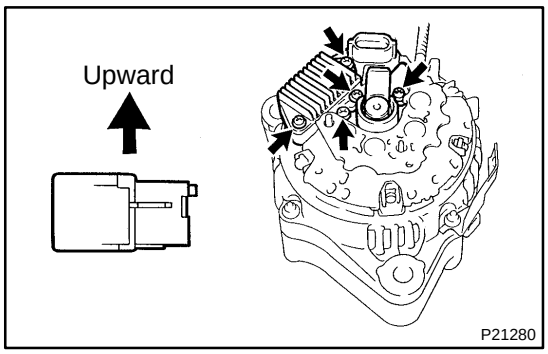
(b) Install the rectifier holder while pushing it with the 4 screws.
Torque: 2.94 N·m (30 kgf·cm, 26 in.·lbf)



(c) Install the cord clip and nut.
Tighten the 4 nuts.
Torque:
A: 4.5 N·m (46 kgf·cm, 40 in.·lbf)
B: 5.4 N·m (55 kgf·cm, 48 in.·lbf)



6. INSTALL VOLTAGE REGULATOR AND BRUSH HOLDER
(a) Place the seal plate on the rectifier end frame.

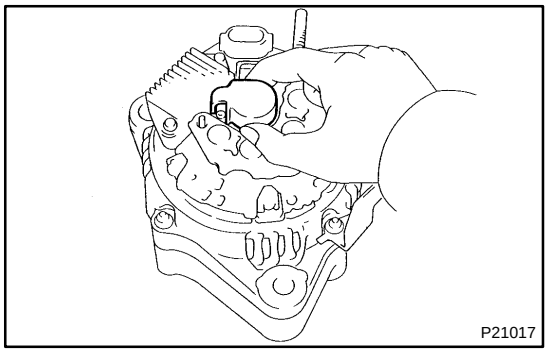


(b) Place the voltage regulator and brush holder on the rectifier end frame.

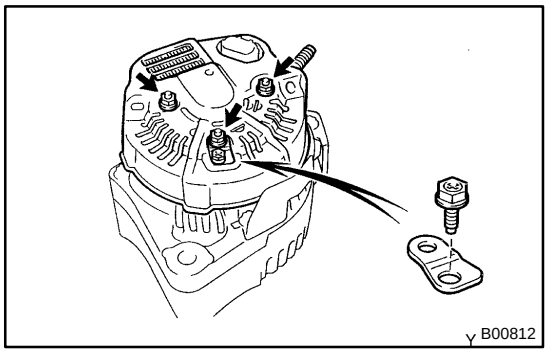
NOTICE:

Be careful of the holder installation direction.

(c) Install the 5 screws.
Torque: 2.0 N·m (20 kgf·cm, 17 in.·lbf)

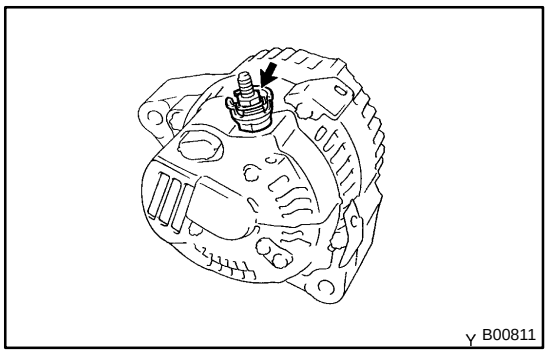


(d) Place the brush holder cover on the brush holder.



7. INSTALL REAR END COVER

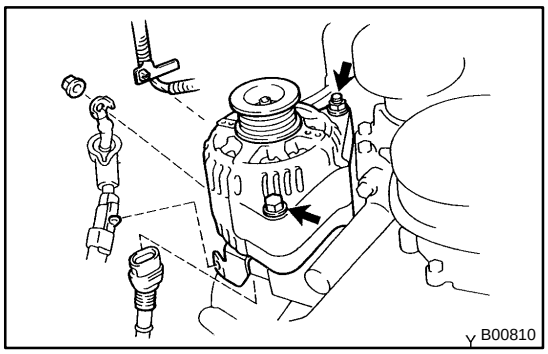
(a) Install the end cover and plate terminal with the 3 nuts and bolt.
Torque:
Bolt: 3.8 N·m (39 kgf·cm, 34 in.·lbf)
Nut: 4.4 N·m (45 kgf·cm, 39 in.·lbf)

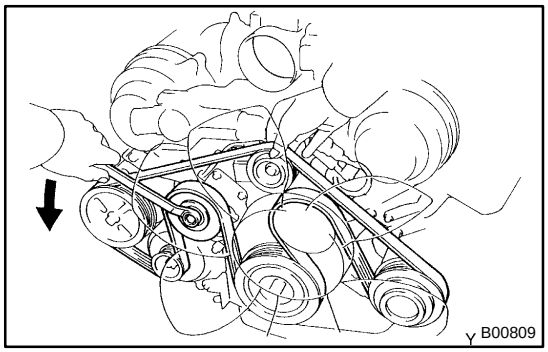


(b) Install the terminal insulator with the nut.
Torque: 6.5 N·m (66 kgf·cm, 58 in.·lbf)

8. CHECK THAT ROTOR ROTATES SMOOTHLY

CH03I–01





INSTALLATION

1. INSTALL GENERATOR

(a) Install the generator with the bolt and nut.
Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)

(b) Connect the generator connector.

(c) Connect the generator wire with the nut and rubber cap.

(d) Install the generator wire clamp to the cord clip on the generator.

(e) Install the heated oxygen sensor wire clamp to the cord clip on the generator.

2. INSTALL PS PUMP
(See page EM–82)

3. INSTALL PS OIL COOLER PIPE

4. INSTALL GENERATOR DRIVE BELT

Install the belt by turning the belt tensioner counterclockwise.

HINT:

The pulley bolt for the belt tensioner has a left – hand thread.

5. PERFORM ON–VEHICLE INSPECTION
(See page CH–2)

6. INSTALL ENGINE UNDER COVER

7. INSTALL OIL PAN PROTECTOR

8. INSTALL AIR CLEANER INLET

9. INSTALL BATTERY CLAMP COVER