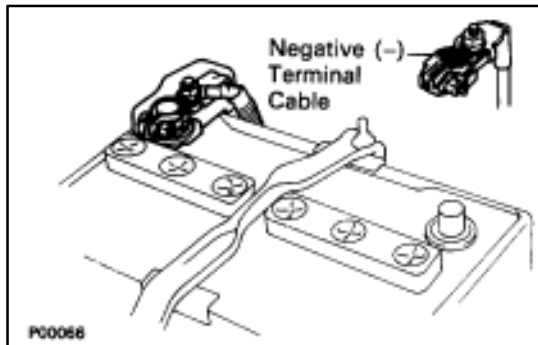
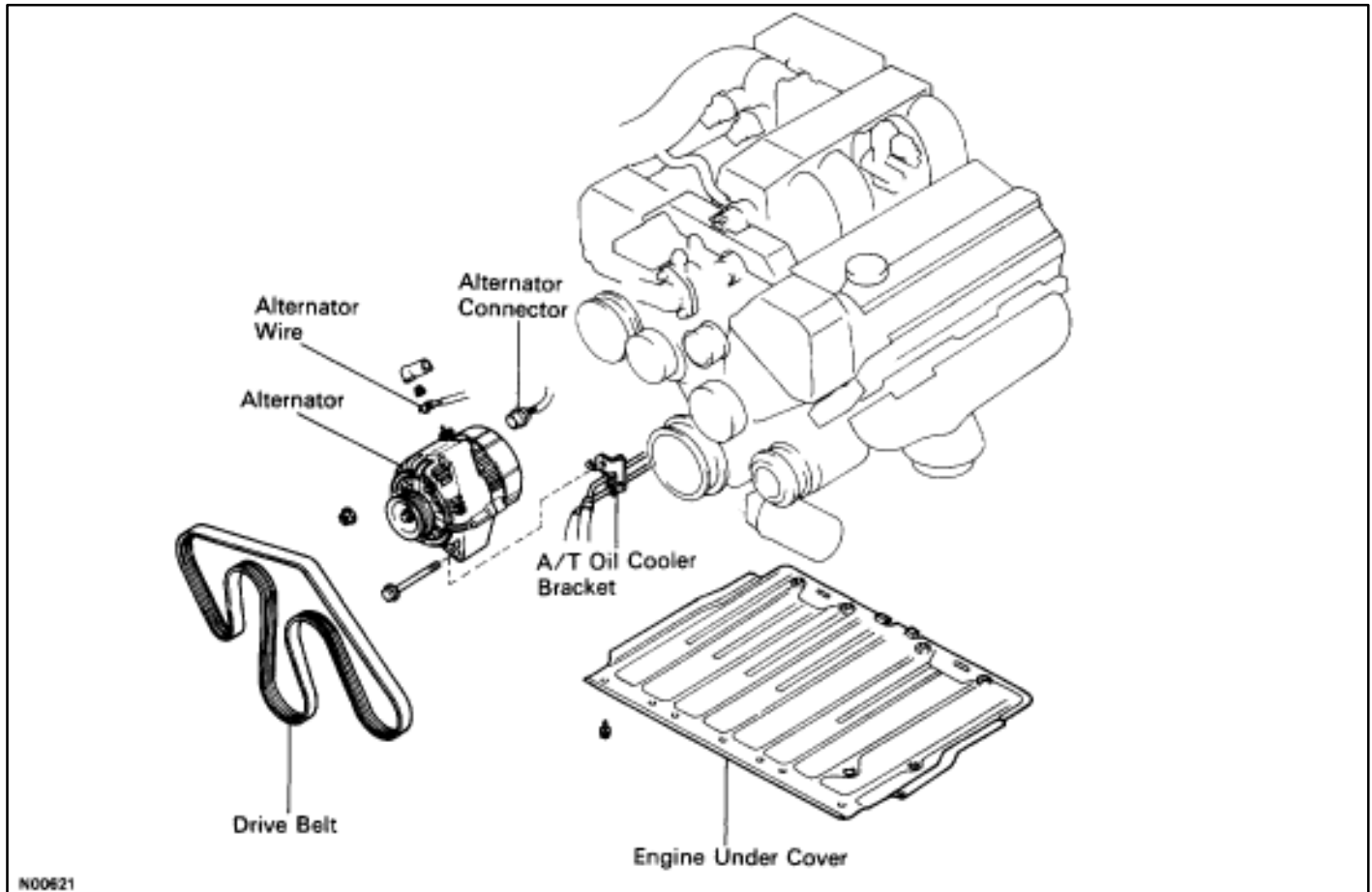


ALTERNATOR COMPONENTS FOR REMOVAL AND INSTALLATION

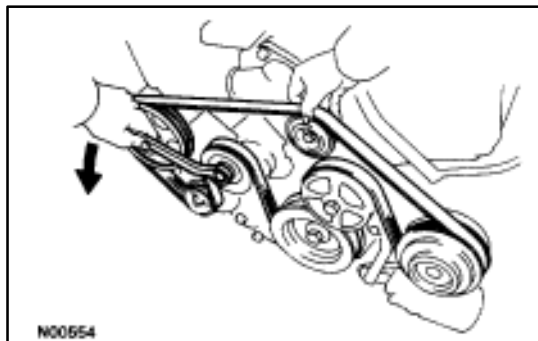


REMOVAL OF ALTERNATOR

1. DISCONNECT CABLE FROM NEGATIVE TERMINAL OF BATTERY

CAUTION: Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.

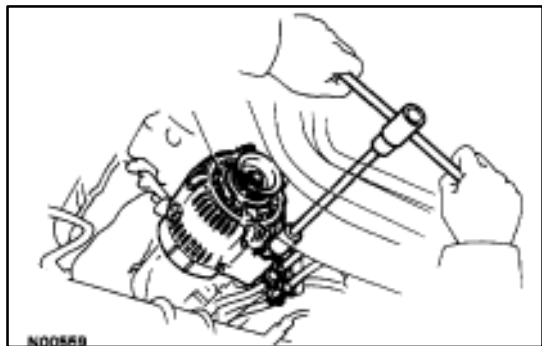
2. REMOVE ENGINE UNDER COVER



3. REMOVE DRIVE BELT

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

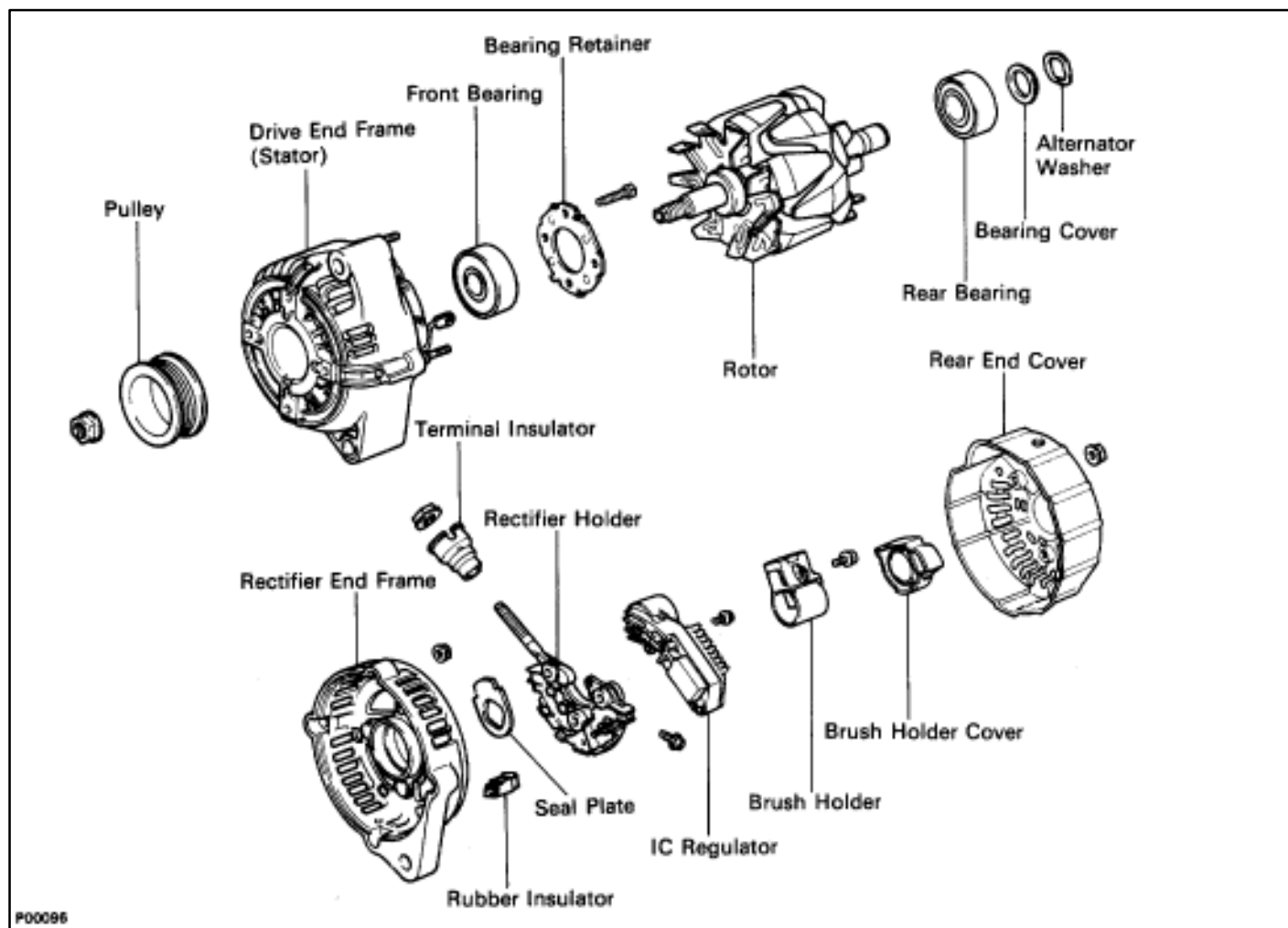
HINT: The pulley bolt for the belt tensioner has a left-hand thread.



4. REMOVE ALTERNATOR

- (a) Disconnect the alternator connector.
- (b) Remove the cap and nut, and disconnect the alternator wire.
- (c) Remove the bolt, and disconnect the A/T oil cooler pipe bracket.
- (d) Remove the nut and alternator.

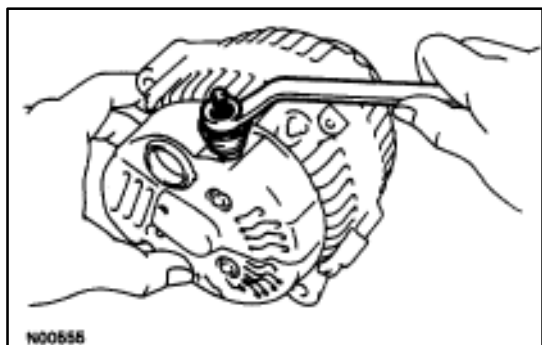
COMPONENTS FOR DISASSEMBLY AND ASSEMBLY

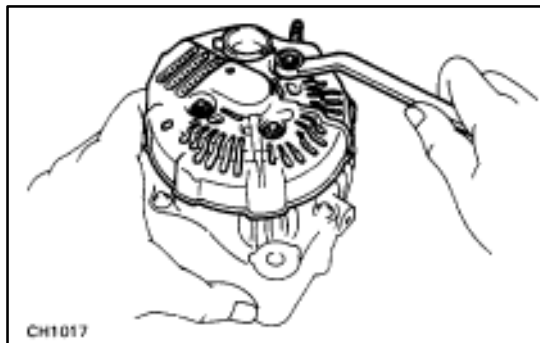


DISASSEMBLY OF ALTERNATOR

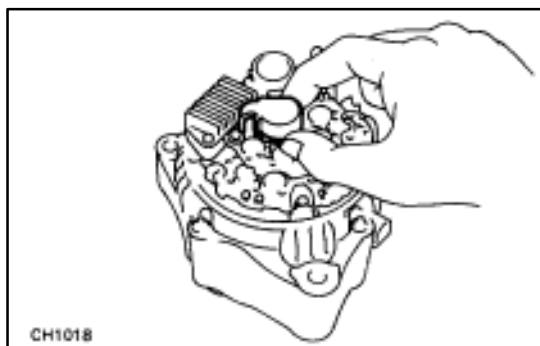
1. REMOVE REAR END COVER

- (a) Remove the nut and terminal insulator.



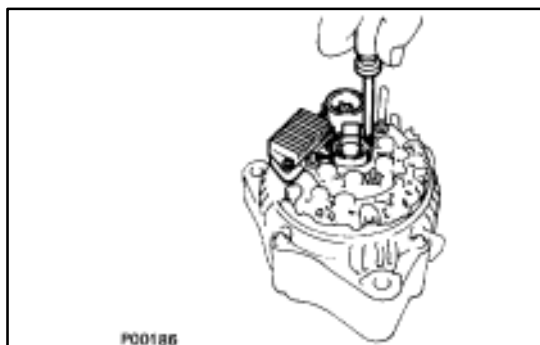


(b) Remove the three nuts and end cover.

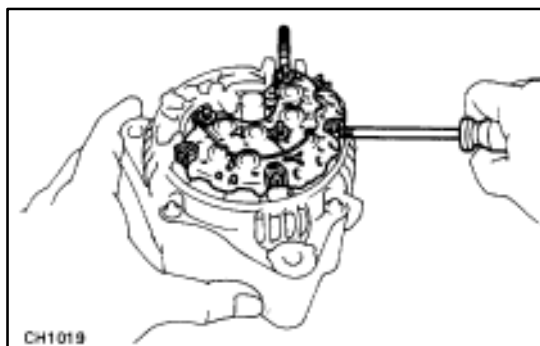


2. REMOVE BRUSH HOLDER AND IC REGULATOR

(a) Remove the brush holder cover from the brush holder.

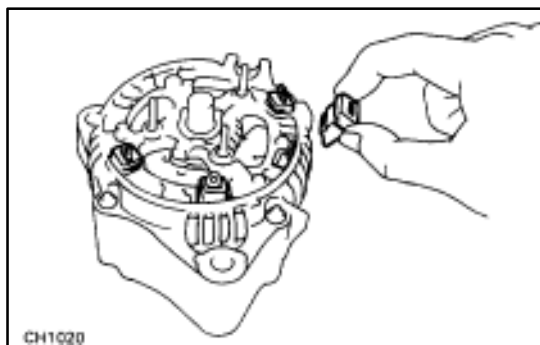


(b) Remove the five screws, brush holder and IC regulator.

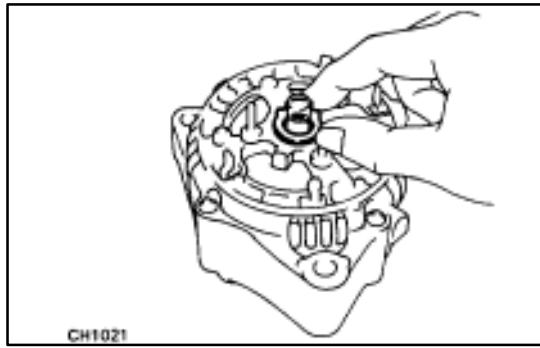


3. REMOVE RECTIFIER HOLDER

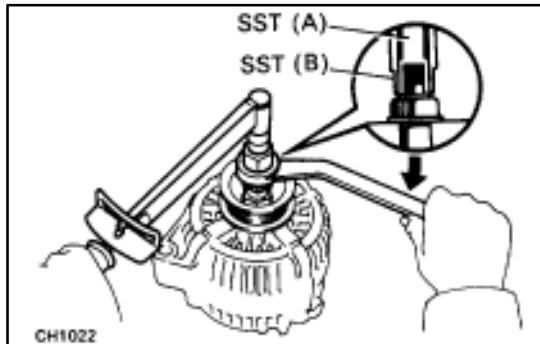
(a) Remove the four screws and rectifier holder.



(b) Remove the four rubber insulators.



- (c) Remove the seal plate.



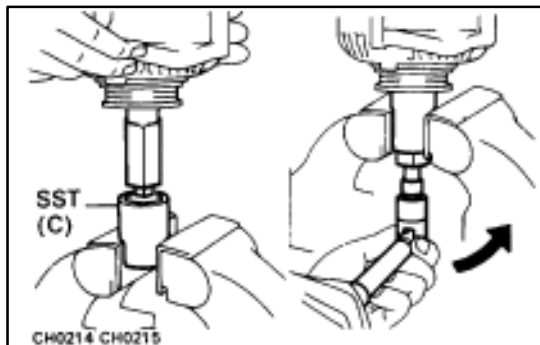
4. REMOVE PULLEY

- (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.

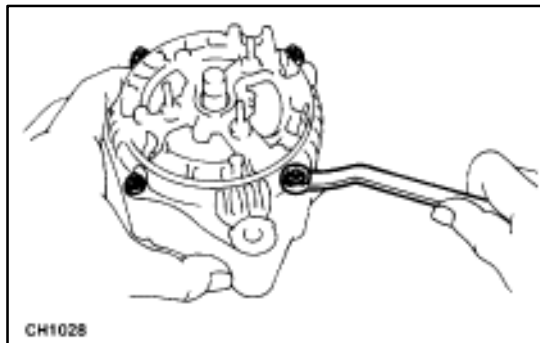


- (c) As shown in the illustration, mount SST (C) in a vise, and install the alternator to SST (C).

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

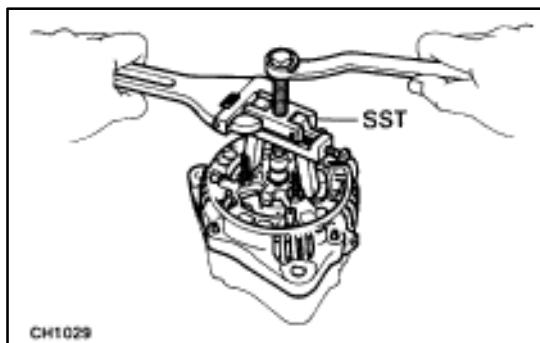
NOTICE: To prevent damage to the rotor shaft, do not loosen the pulley nut more than one-half of a turn.

- (e) Remove the alternator from SST (C).
(f) Turn SST (B) and remove SST (A and B).
(g) Remove the pulley nut and pulley.

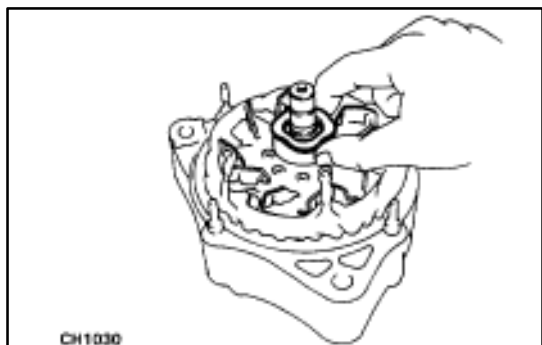


5. REMOVE RECTIFIER END FRAME

- (a) Remove the four mounting nuts.



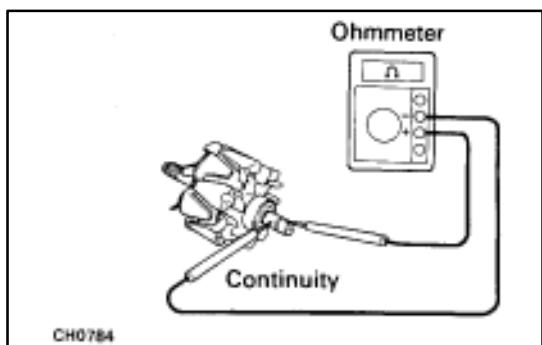
- (b) Using SST, remove the rectifier end frame.
SST 09286-46011



(c) Remove the alternator washer.



6. REMOVE ROTOR FROM DRIVE END FRAME



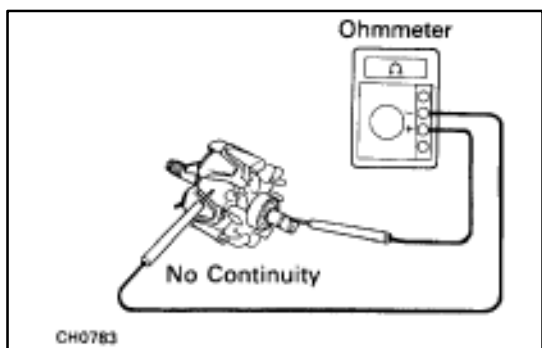
INSPECTION AND REPAIR OF ALTERNATOR Rotor

1. INSPECT ROTOR FOR OPEN CIRCUIT

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

Standard resistance (Cold): 2.8–3.0 Ω

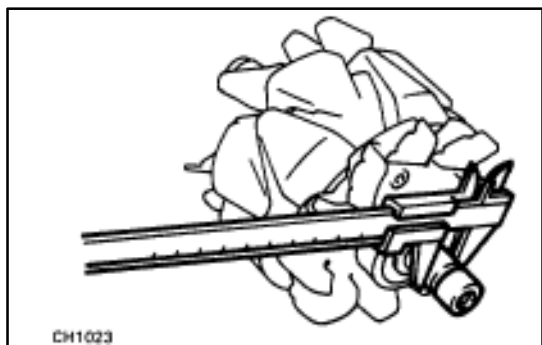
If there is no continuity, replace the rotor.



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.

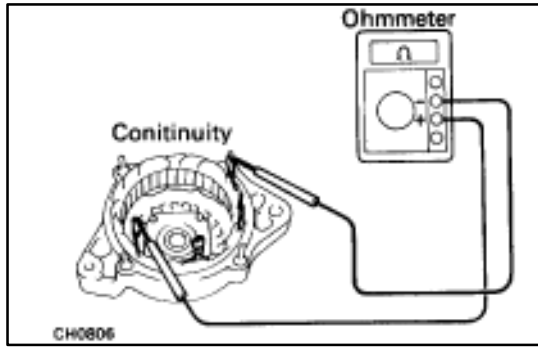
(b) Using a vernier caliper, measure the slip ring diameter.

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.

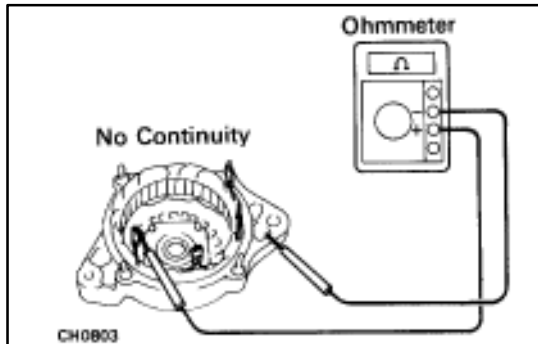


Stator (Drive End Frame)

1. INSPECT STATOR FOR OPEN CIRCUIT

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

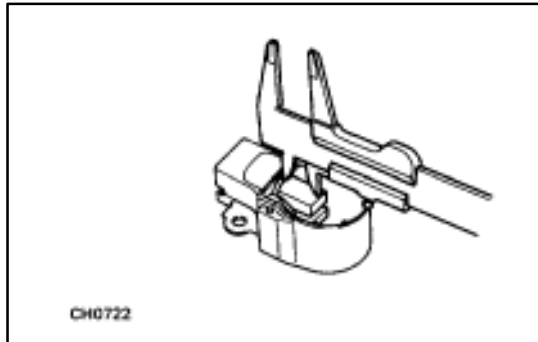
If there is no continuity, replace the drive end frame assembly.



2. 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.



Brushes

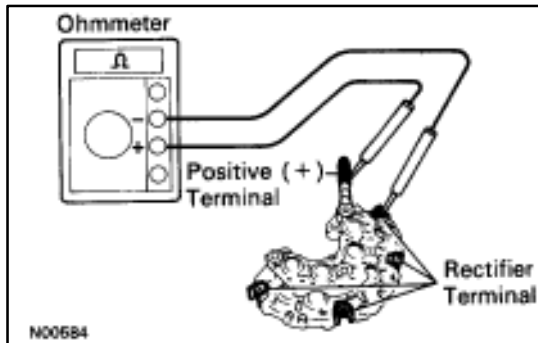
INSPECT EXPOSED BRUSH LENGTH

Using a vernier caliper, 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.



Rectifiers (Rectifier Holder)

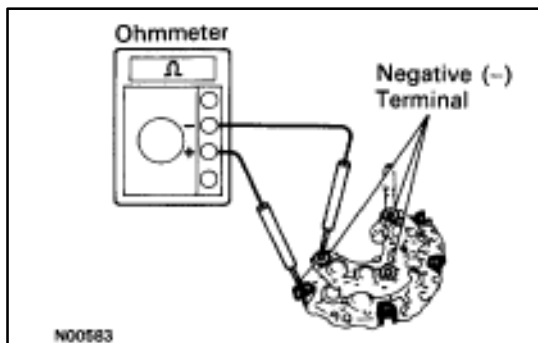
1. INSPECT POSITIVE RECTIFIER

(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 and repeat (a).

(c) Check that one shows continuity and the other shows no continuity.

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



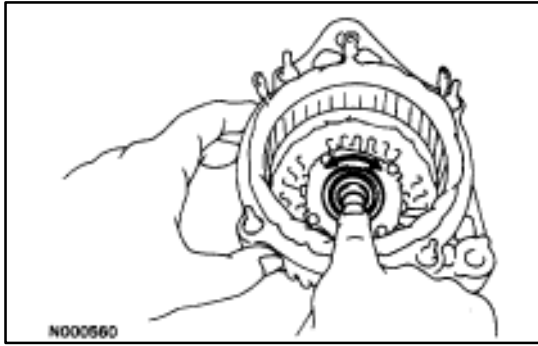
2. INSPECT NEGATIVE RECTIFIER

(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 (a).

(c) Check that one shows continuity and the other shows no continuity.

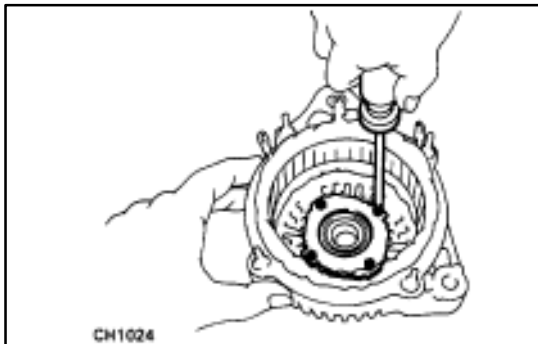
If continuity is not as specified, replace the rectifier holder.



Bearings

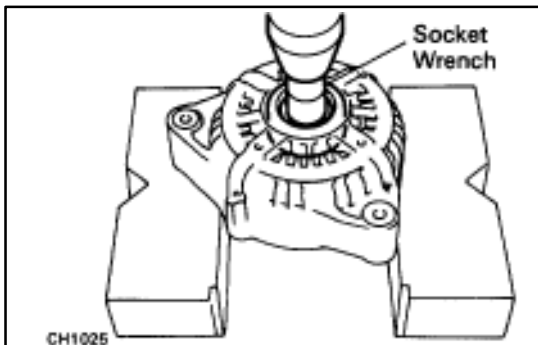
1. INSPECT FRONT BEARING

Check that the bearing is not rough or worn.

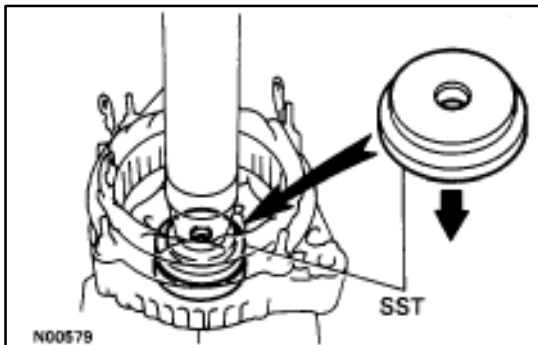


2. IF NECESSARY, REPLACE FRONT BEARING

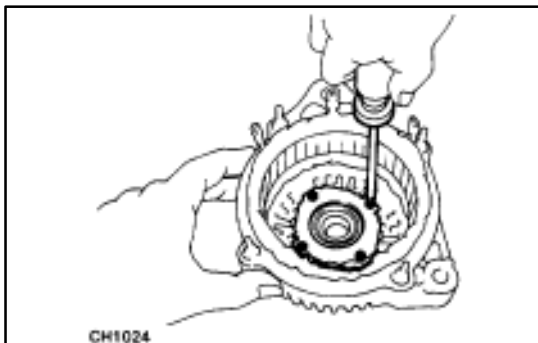
(a) Remove the four screws, bearing retainer and bearing.



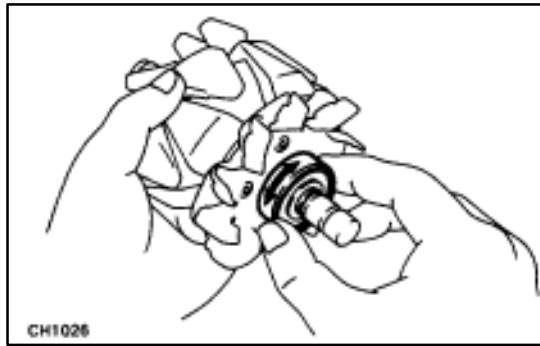
(b) Using a socket wrench and press, press out the bearing.



(c) Using SST and a press, press in a new bearing.
SST 09608-20012 (09608-00030)

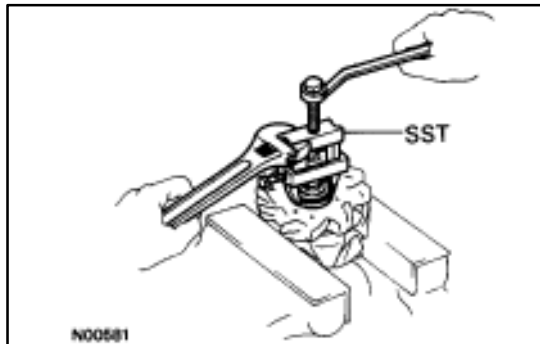


(d) Install the bearing retainer with the four screws.



3. INSPECT REAR BEARING

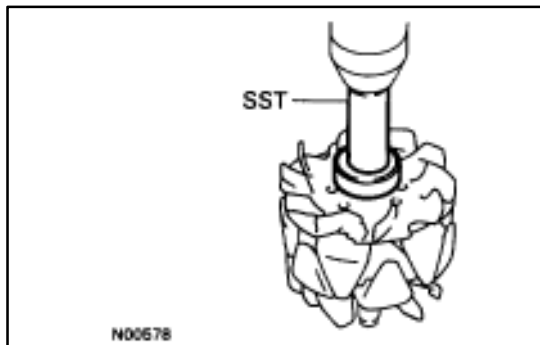
Check that the bearing is not rough or worn.



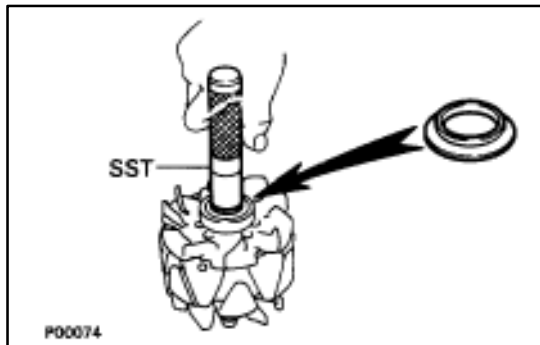
4. IF NECESSARY, REPLACE REAR BEARING

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

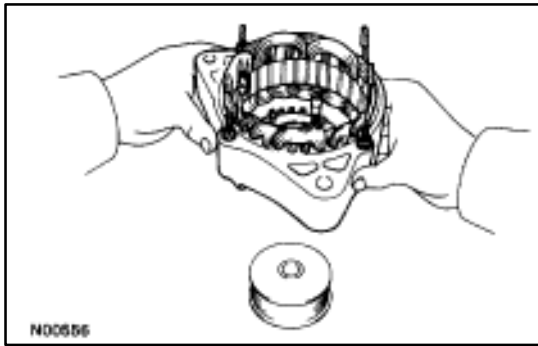
NOTICE: Be careful not to damage the fan.



(b) Using SST and a press, press in a new bearing.
SST 09820-00030



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



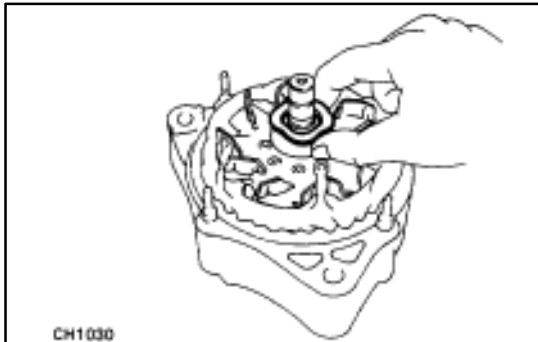
ASSEMBLY OF ALTERNATOR

(See Components on page [CH-10](#))

1. PLACE RECTIFIER END FRAME ON PULLEY

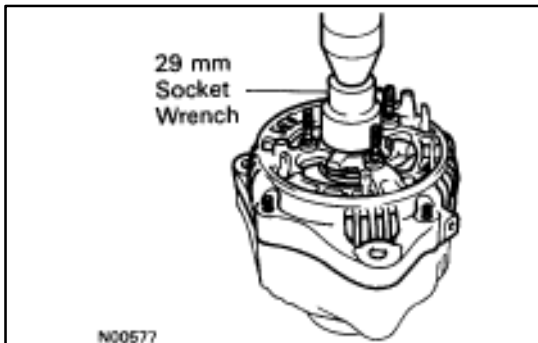


2. INSTALL ROTOR TO RECTIFIER END FRAME

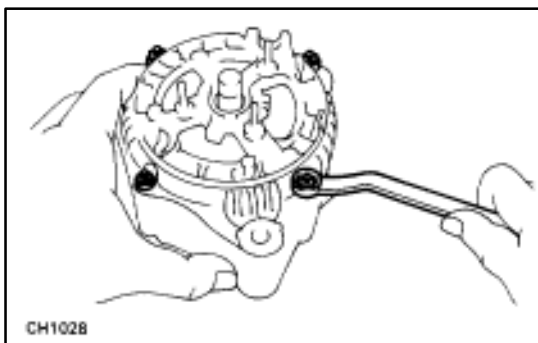


3. INSTALL RECTIFIER END FRAME

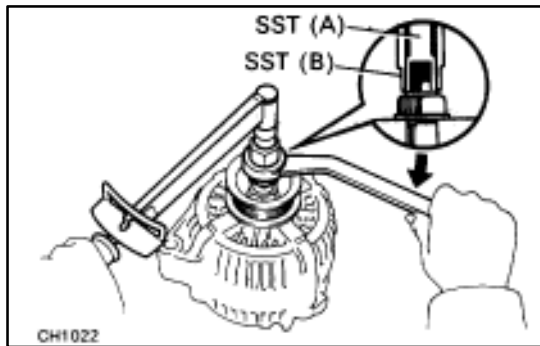
(a) Place the alternator washer on the rotor.



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



(c) Install the four mounting nuts.



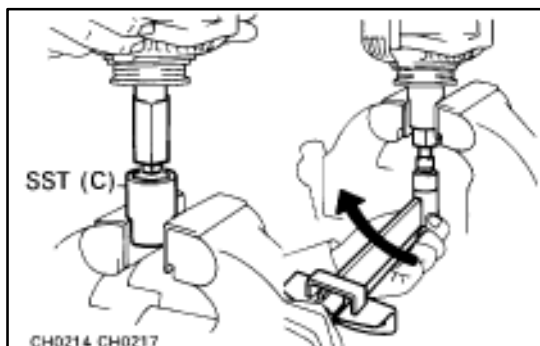
4. INSTALL PULLEY

- (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)

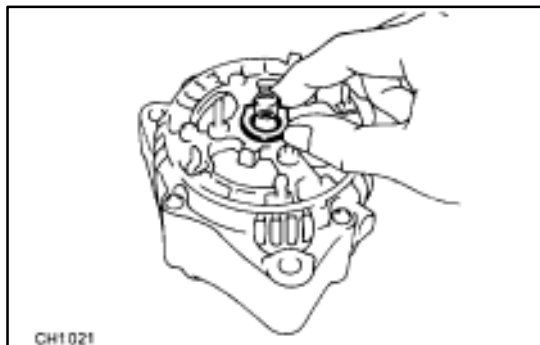
- (c) Check that SST (A) is secured to the pulley shaft.



- (d) As shown in the illustration, mount SST (C) in a vise, and install the alternator to SST (C).
- (e) To torque the pulley nut, turn SST (A) in the direction shown in the illustration.

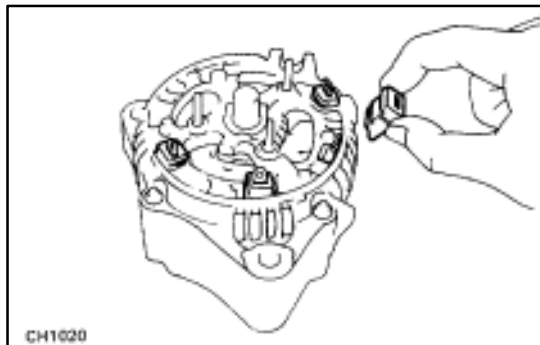
Torque: 110 N·m (1,125 kgf·cm, 81 ft·lbf)

- (f) Remove the alternator from SST (C).
- (g) Turn SST (B) and remove SST (A and B).

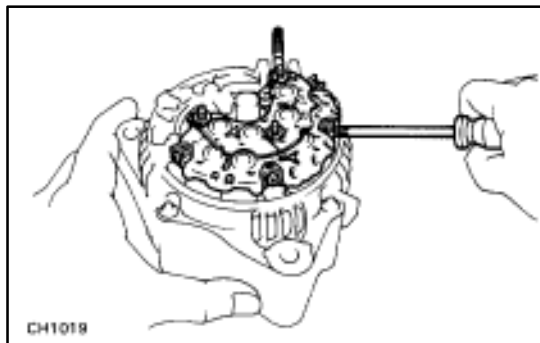


5. INSTALL RECTIFIER HOLDER

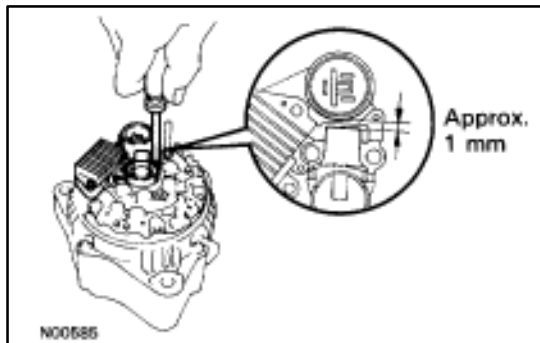
- (a) Place the seal plate on the rectifier end frame.



- (b) Install the four rubber insulators on the lead wires.



- (c) Install the rectifier holder with the four screws.

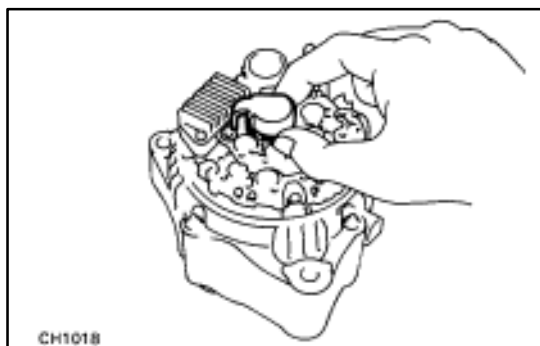


6. INSTALL IC REGULATOR AND BRUSH HOLDER

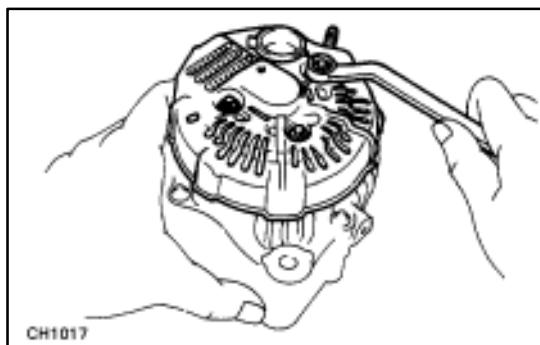
- (a) Place the IC regulator together and brush holder on the rectifier end frame.

NOTICE: Be careful of the holder installation direction.

- (b) Install the five mounting screws until there is a clearance of approx. 1 mm (0.04 in.) between the brush holder and connector.

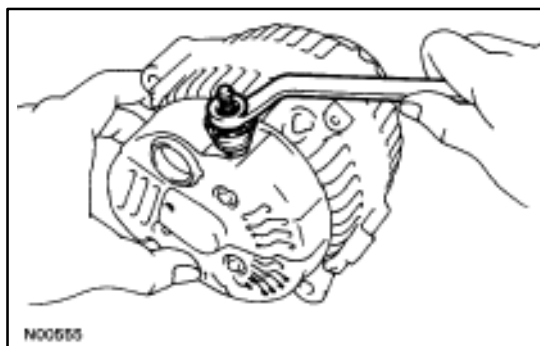


- (c) Place the brush holder cover on the brush holder.

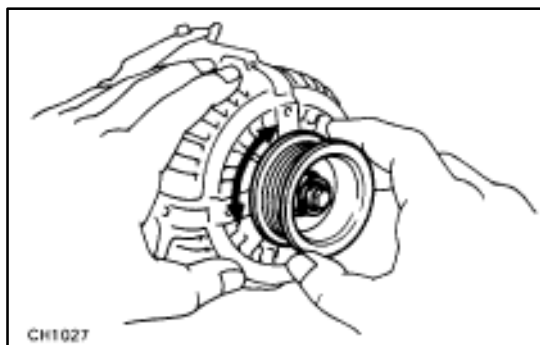


7. INSTALL REAR END COVER

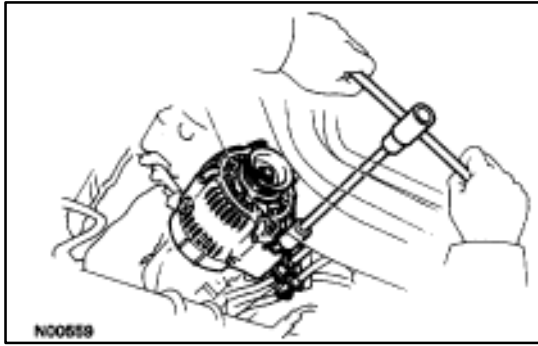
- (a) Install the end cover with the three nuts.



- (b) Install the terminal insulator with the nut.



8. CHECK THAT ROTOR ROTATES SMOOTHLY



INSTALLATION OF ALTERNATOR

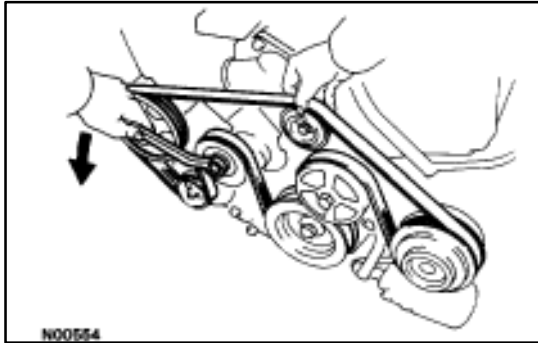
(See Components on page [CH-9](#))

1. INSTALL ALTERNATOR

- (a) Install the alternator and A/T oil cooler bracket with the bolt and nut.

Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)

- (b) Connect the alternator connector.
- (c) Connect the alternator wire with the nut and cap.



2. INSTALL DRIVE BELT

Install the drive belt by turning the drive belt tensioner counterclockwise.

HINT: The pulley bolt for the belt tensioner has a left-hand thread.

3. CONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY

4. PERFORM ON-VEHICLE INSPECTION

(See steps 6 to 8 on pages [CH-6](#) to 8)

5. INSTALL ENGINE UNDER COVER