

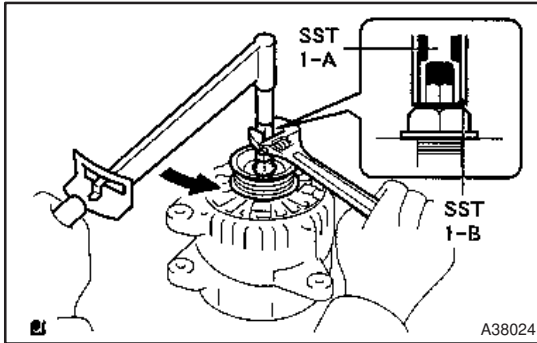
# GENERATOR ASSY (1AZ-FE) OVERHAUL

1906M-01

## 1. REMOVE GENERATOR PULLEY

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

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

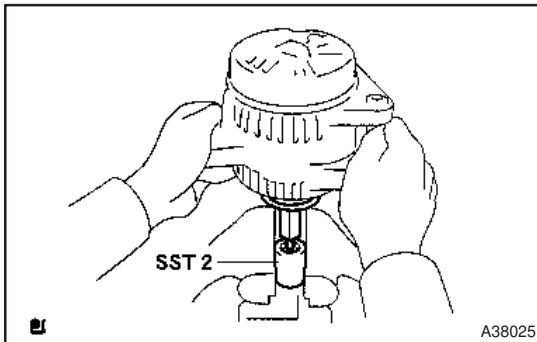


- (a) Hold SST 1 - A with a torque wrench, and tighten SST 1 - B clockwise to the specified torque.

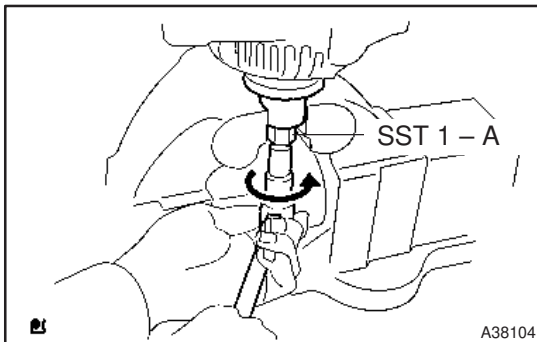
**Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)**

**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.

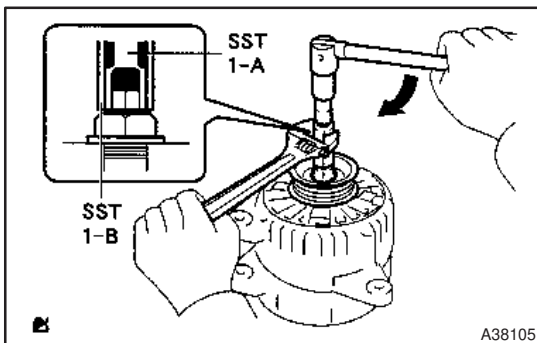


- (d) To loosen the pulley nut, turn SST 1 - A in the direction shown in the illustration.

**NOTICE:**

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

- (e) Remove the alternator from SST 2.



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

**2. REMOVE GENERATOR BRUSH HOLDER ASSY**

- (a) Remove the nut and terminal insulator.
- (b) Remove the bolt, 3 nuts, plate terminal and end cover.
- (c) Remove the brush cover.
- (d) Remove the 2 screws and brush holder.

**3. REMOVE GENERATOR REGULATOR ASSY**

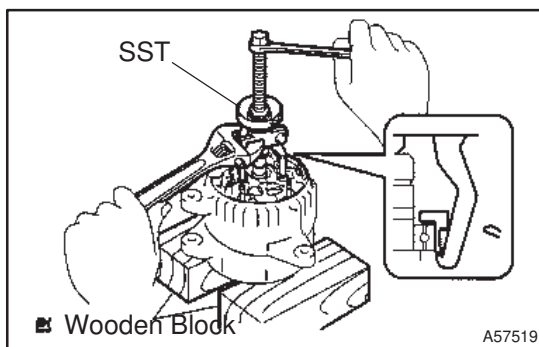
- (a) Remove the 3 screws and voltage regulator.

**4. REMOVE GENERATOR HOLDER W/RECTIFIER**

- (a) Remove the 4 screws and rectifier holder.

**5. REMOVE ALTERNATOR RECTIFIER END FRAME**

- (a) Remove the rubber insulator.
- (b) Remove the seal plate.
- (c) Remove the 4 nuts and cord clip.



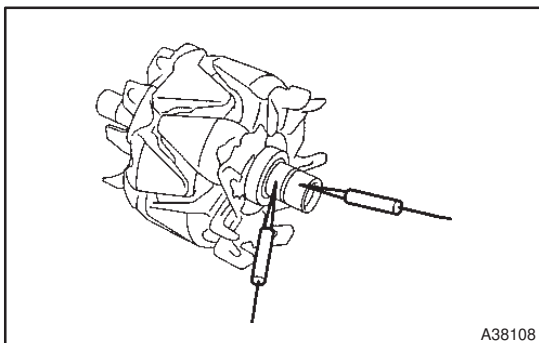
- (d) Using bearing puller set, remove the rectifier end frame.

**6. REMOVE GENERATOR ROTOR ASSY**

- (a) Remove the alternator washer from the rotor.
- (b) Remove the rotor from drive end frame.

**NOTICE:**

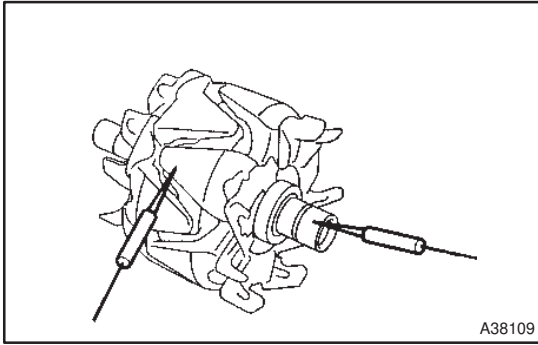
**Do not drop the rotor.**

**7. INSPECT GENERATOR ROTOR ASSY**

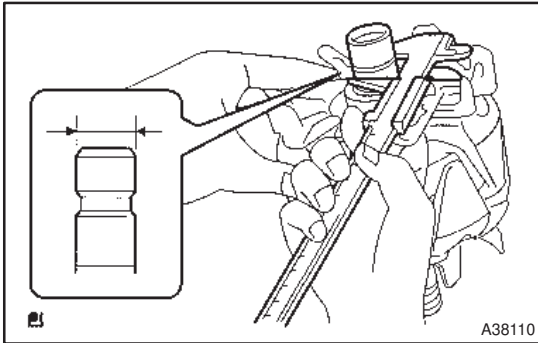
- (a) Inspect rotor for open circuit.
  - (1) Using an ohmmeter, check that there is continuity between the slip rings.

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

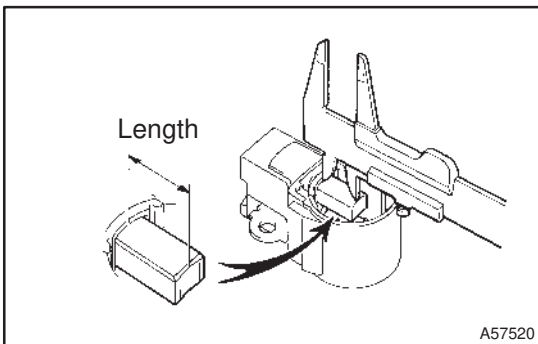
If there is no continuity, replace the rotor.



- (b) Inspect 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) Inspect slip rings.  
 (1) 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.

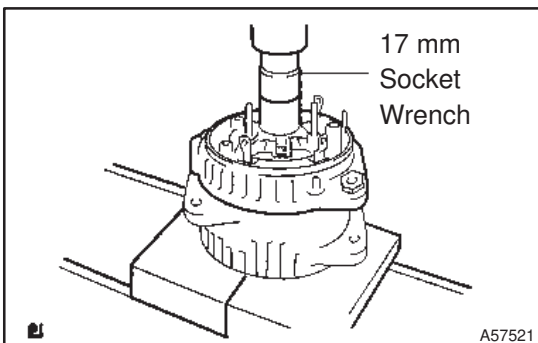


### 8. INSPECT BRUSH

- (a) Using vernier calipers, measure the exposed brush length.  
**Standard exposed length: 9.5 – 11.5 mm (0.374 – 0.453 in.)**  
**Minimum exposed length: 1.5 mm (0.059 in.)**  
 If the exposed length is less than minimum, replace the brush holder assembly.

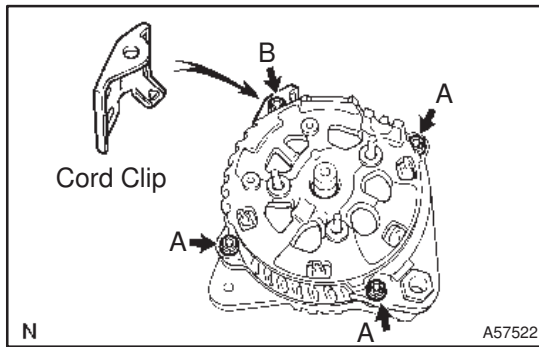
### 9. INSTALL GENERATOR ROTOR ASSY

- (a) Install the generator rotor.  
 (b) Install the alternator washer to the rotor.



### 10. INSTALL ALTERNATOR RECTIFIER END FRAME

- (a) Using a 17 mm socket wrench and press, slowly press in the rectifier end frame.



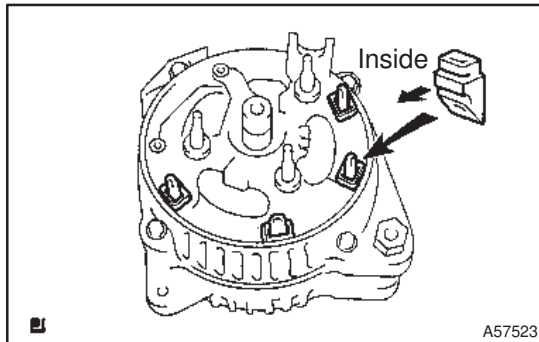
- (b) Install the cord clip and 4 nuts.

**Torque:**

**Nut A 4.5 N·m (46 kgf·cm, 39 in·lbf)**

**Nut B 5.4 N·m (55 kgf·cm, 47 in·lbf)**

- (c) Install the seal plate on the rectifier end frame.



- (d) Install the 4 rubber insulators on the lead wires.

**NOTICE:**

**Be careful of the rubber insulators installation direction.**

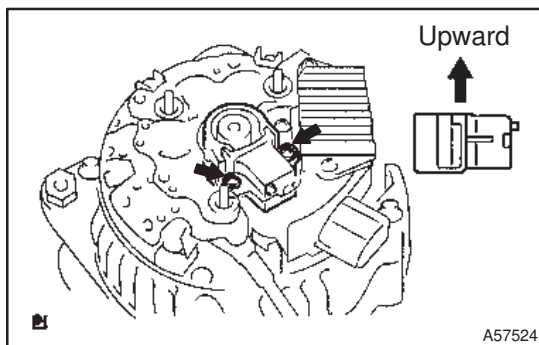
## 11. INSTALL GENERATOR HOLDER W/RECTIFIER

- (a) Install the rectifier holder while pushing it with the 4 screws.

**Torque: 2.9 N·m (30 kgf·cm, 26 in·lbf)**

## 12. INSTALL GENERATOR REGULATOR ASSY

- (a) Install the 3 screws and voltage regulator.



## 13. INSTALL GENERATOR BRUSH HOLDER ASSY

- (a) Install the 2 screws and brush holder.

**NOTICE:**

**Be careful of the holder installation direction.**

- (b) Install the brush cover.

- (c) Install the end cover and plate terminal with the bolt and 3 nuts.

**Torque:**

**Nut 4.4 N·m (45 kgf·cm, 39 in·lbf)**

**Bolt 3.9 N·m (39 kgf·cm, 35 in·lbf)**

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

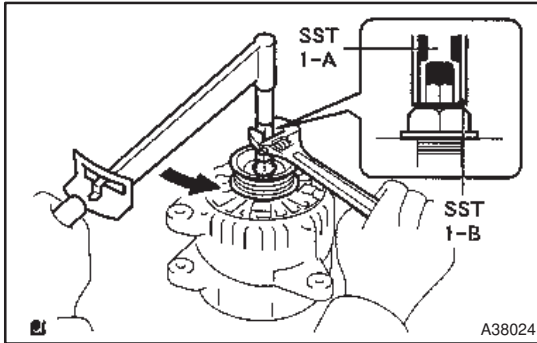
**Torque: 4.1 N·m (42 kgf·cm, 36 in·lbf)**

## 14. INSTALL GENERATOR PULLEY

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

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.

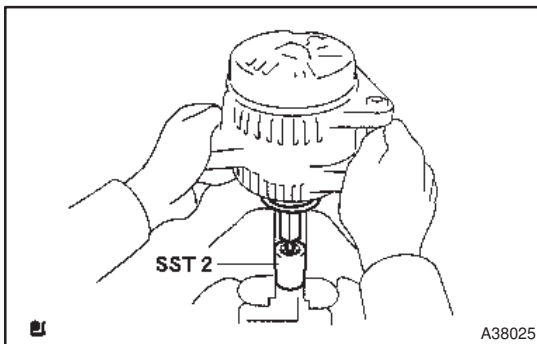


- (b) Hold SST 1 - A with a torque wrench, and tighten SST 1 - B clockwise with the specified torque.

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

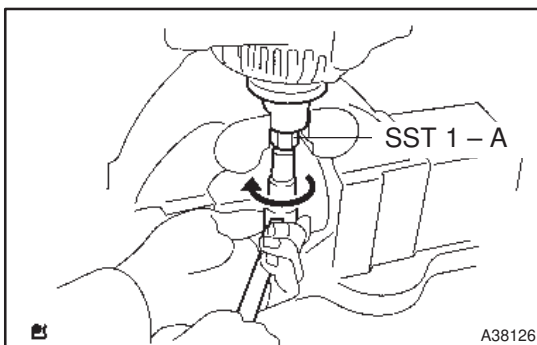
**NOTICE:**

**Check that SST is secured to the pulley shaft.**



- (c) Mount SST 2 in a vise.

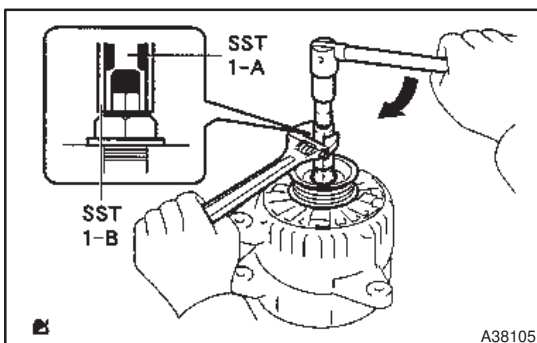
- (d) Insert SST 1 - A, B into SST 2, and attach the pulley nut to SST 2.



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

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

- (f) Remove the alternator 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.