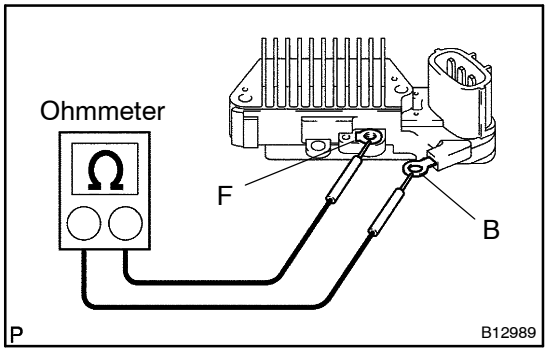


ALTERNATOR

CH0KG–04

INSPECTION

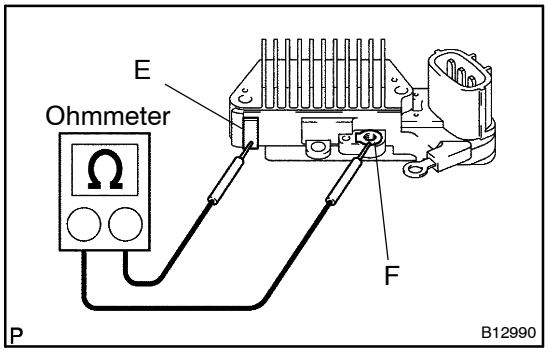
1. INSPECT VOLTAGE REGULATOR

(a) Using an ohmmeter, check the continuity between terminals F and B.

Standard:

When the positive and negative poles between terminals F and B are exchanged, there is continuity in one way but no continuity in another way.

If the continuity is not as specified, replace the regulator.

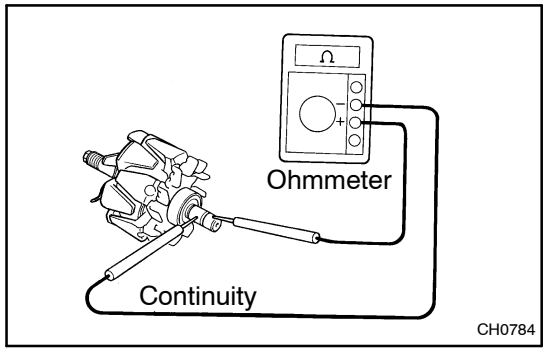


(b) Using an ohmmeter, check the continuity between terminals F and E.

Standard:

When the positive and negative poles between terminals F and E are exchanged, there is continuity in one way but no continuity in another way.

If the continuity is not as specified, replace the voltage regulator.

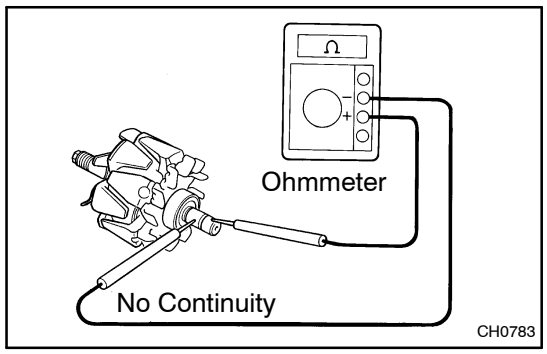


2. INSPECT ROTOR FOR OPEN CIRCUIT

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

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

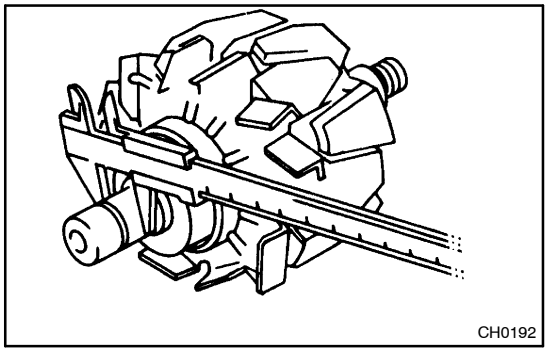
If there is no continuity, replace the rotor.



3. 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.


CH0192

4. INSPECT SLIP RINGS

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

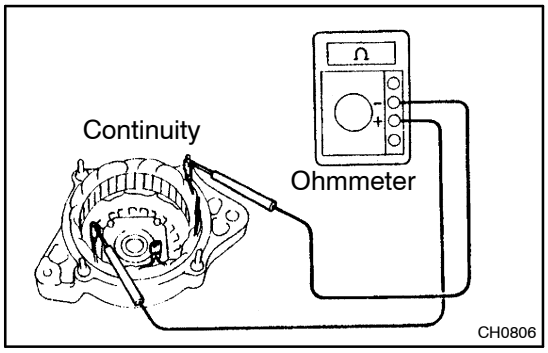
If rough or scored, replace the rotor.

(b) Using vernier calipers, measure the slip ring diameters.

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 the minimum, replace the rotor.

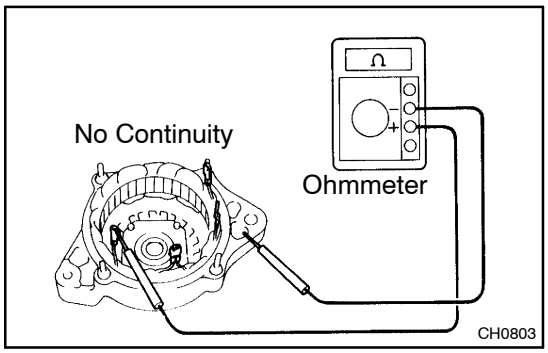


CH0806

5. 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.

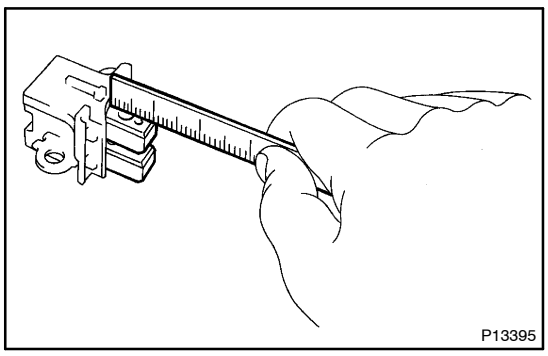


CH0803

6. INSPECT STATOR FOR GROUND

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

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


P13395

7. INSPECT EXPOSED BRUSH LENGTH

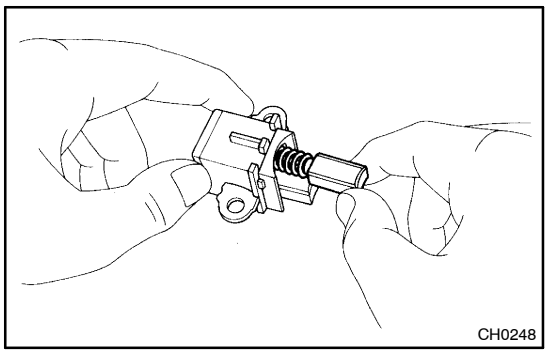
Using a scale, measure the exposed brush length.

Standard exposed length:

9.5 – 11.5 mm (0.374 – 0.452 in.)

Minimum exposed length: 1.5 mm (0.059 in.)

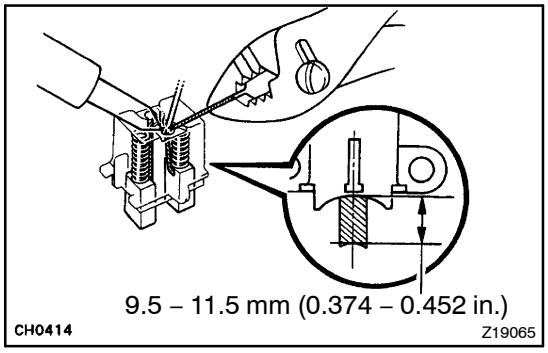
If the exposed length is less than the minimum, replace the brushes.


CH0248

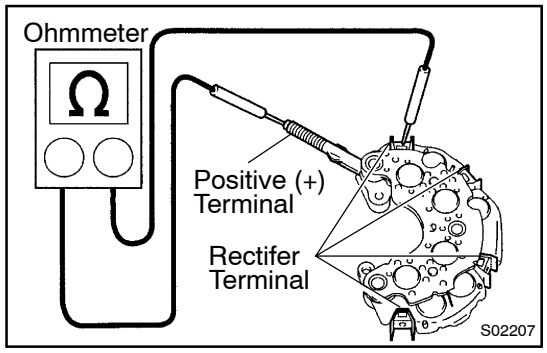
8. IF NECESSARY, REPLACE BRUSHES

(a) Unsolder and remove the brush and spring.

(b) Run the wire of the brush through the hole in the brush holder, and insert the spring and brush into the brush holder.

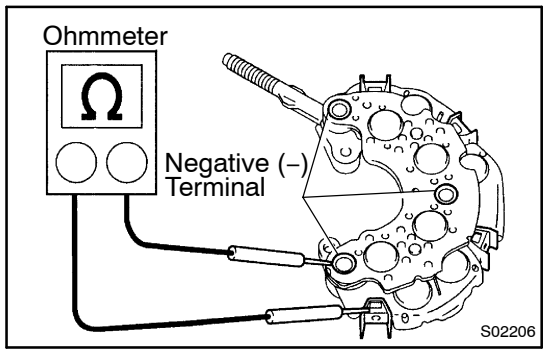


(c) Solder the brush wire to the brush holder at the exposed length.
Exposed length: 9.5 – 11.5 mm (0.374 – 0.452 in.)
(d) Check that the brush moves smoothly in the brush holder.
(e) Cut off the excess wire.
(f) Apply insulation paint to the soldered point.



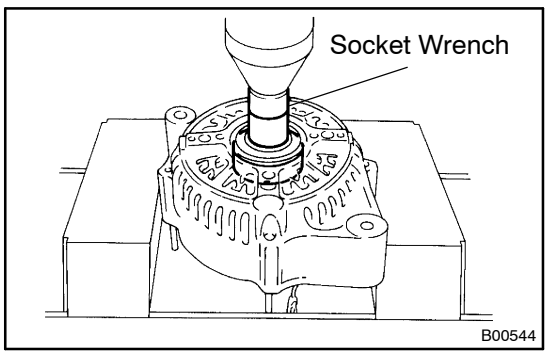
9. INSPECT POSITIVE RECTIFIER
(a) Using an ohmmeter, connect one tester probe to the positive (+) terminal and the other to each rectifier terminal.
(b) Reverse the polarity of the tester probes and repeat step (a).
(c) Check that one shows continuity and the other shows no continuity.

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



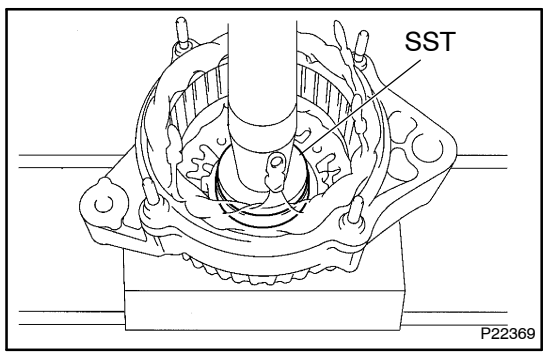
10. INSPECT NEGATIVE RECTIFIER
(a) Using an ohmmeter, connect one tester probe to each negative (–) terminal and the other to each rectifier terminal.
(b) Reverse the polarity of the tester probes and repeat step (a).
(c) Check that one shows continuity and the other shows no continuity.

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

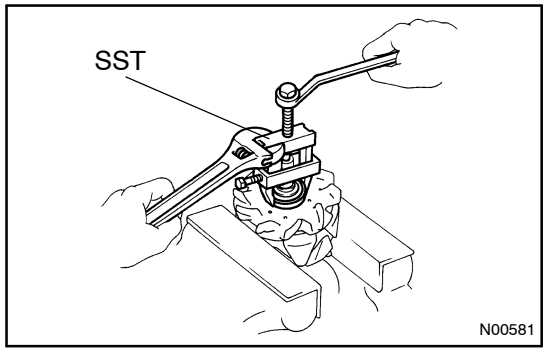


11. INSPECT FRONT BEARING
Check that the bearing is not rough or worn.

12. IF NECESSARY, REPLACE FRONT BEARING
(a) Remove the 4 screws and bearing retainer.
(b) Using a press and socket wrench, press out the front bearing.



(c) Using SST and a press, press the front bearing into the drive end frame.
SST 09950–60010 (09951–00500)
(d) Install the bearing retainer with the 4 screws.



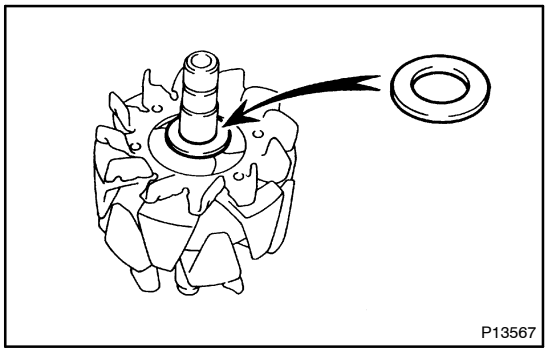
13. INSPECT REAR BEARING

Check that the bearing is not rough or worn.

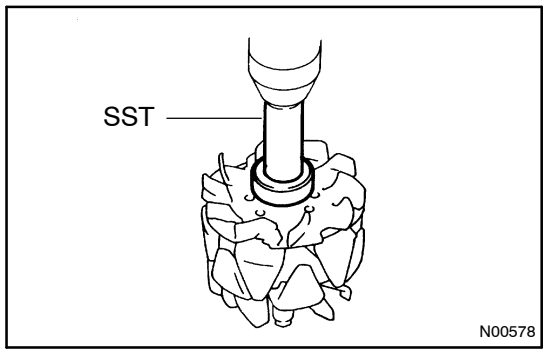
14. IF NECESSARY, REPLACE REAR BEARING

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

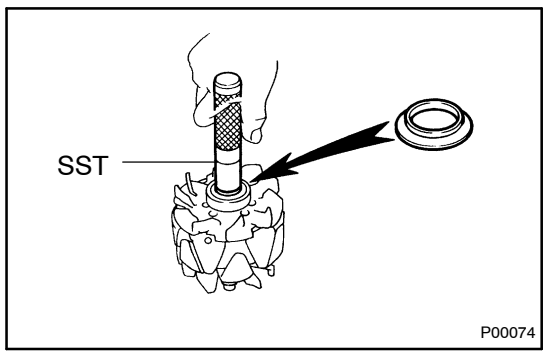
(b) Remove the bearing cover (inside).



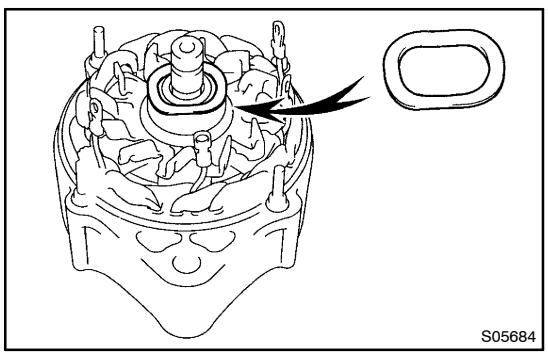
(c) Place the bearing cover (inside) on the rotor.



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



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



(f) Place the alternator washer on the rotor.