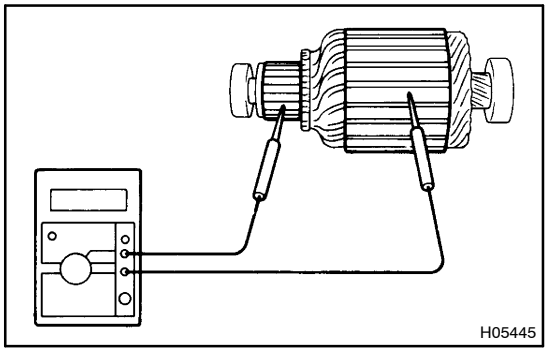
WI00Q–01

INSPECTION


H05445

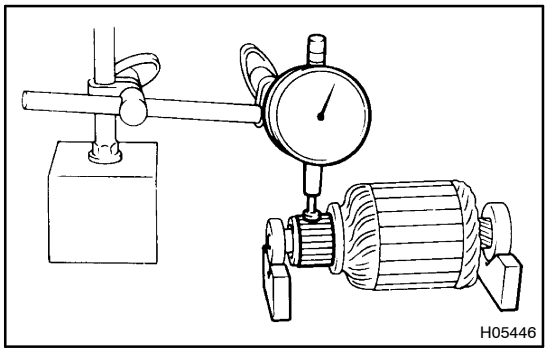
1. INSPECT THAT COMMUTATOR IS NOT GROUNDED

Using an ohmmeter, check that there is no continuity between the commutator and armature core.

If there is continuity, replace the armature.

2. INSPECT COMMUTATOR FOR DIRTY OR BURNT SURFACE

If the surface is dirty or burnt, clean with sandpaper (No. 400) or a lathe.

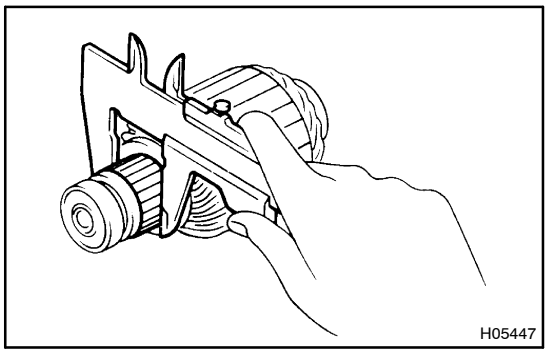

H05446

3. INSPECT COMMUTATOR CIRCLE RUNOUT

Using a dial indicator, measure the circle runout of the commutator.

If the circle runout is greater than the maximum, correct with a lathe.

Standard runout: 0.05 mm (0.0020 in.) or less
Maximum runout: 0.2 mm (0.08 in.)

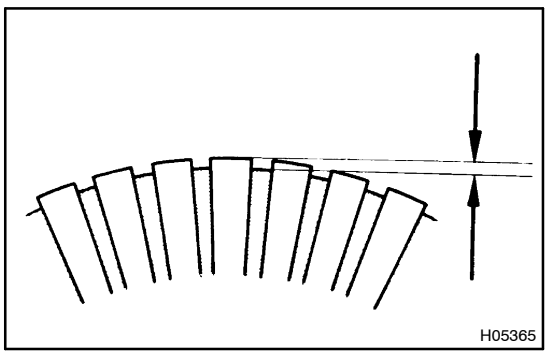

H05447

4. MEASURE DIAMETER OF COMMUTATOR

Using vernier calipers, measure the diameter of the commutator.

Standard diameter: 43 mm (1.69 in.)
Minimum diameter: 4 1 mm (1.61 in.)

If the diameter of the commutator is less than minimum, replace the armature.

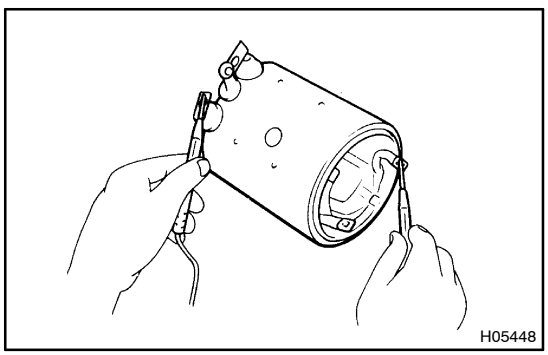

H05365

5. INSPECT UNDERCUT DEPTH

Check that the undercut depth is clean and free of foreign particles. Then smooth off the edge.

Standard under cut depth:
0.5 – 0.8 mm (0.020 – 0.031 in.)
Minimum undercut depth:
0.2 mm (0.008 in.)

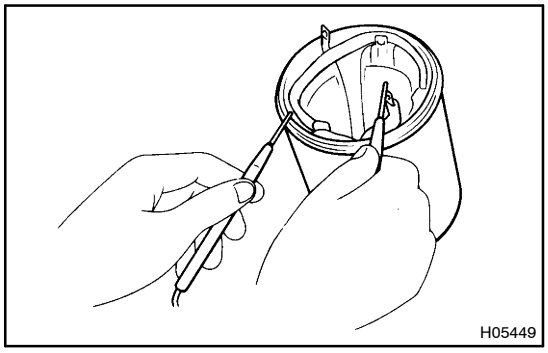
If the undercut depth is less than the minimum, correct with a hacksaw blade.


H05448

6. INSPECT FIELD COIL FOR OPEN CIRCUIT

Using an ohmmeter, check for continuity between the lead wire and field coil brush lead.

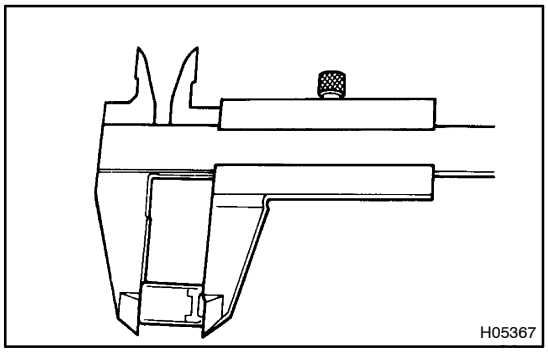
If there is no continuity, replace the field coil.



7. INSPECT THAT FIELD COIL NOT GROUNDED

Using an ohmmeter, check for continuity between the field coil brush lead and field frame.

If there is continuity, repair or replace the yoke sub –assembly.



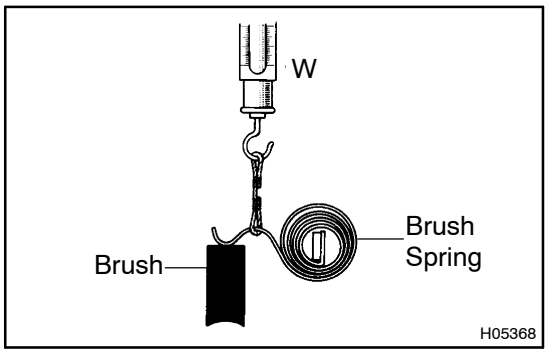
8. MEASURE BRUSH LENGTH

Using vernier calipers, measure the length of the brush.

Standard length: 22 mm (0.87 in.)

Minimum length: 15 mm (0.59 in.)

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



9. MEASURE BRUSH SPRING LOAD

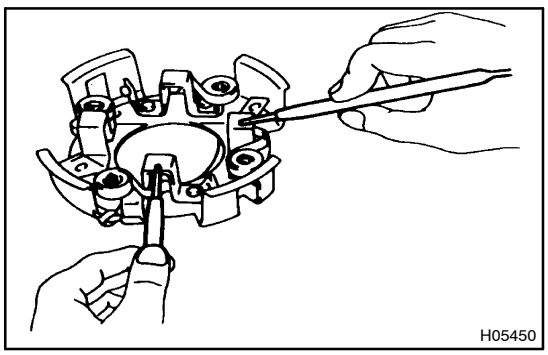
Using a pull scale, measure the installed load of the brush spring.

Standard installed load:

1.8 ± 0.2 kg (4.0 ± 0.4 lb, 18 ± 0.2 N)

HINT:

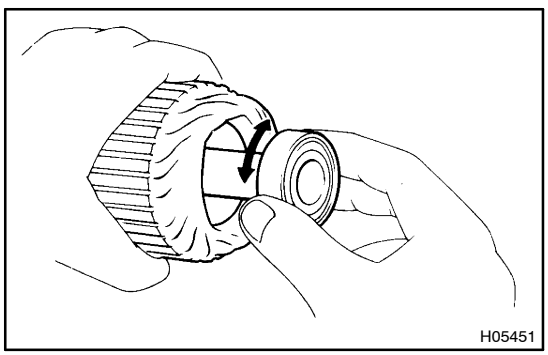
Take the pull scale reading at the very instant the brush spring separates from the brush.



10. INSPECT BRUSH HOLDER

Using an ohmmeter, check for continuity between the positive and negative brush holders.

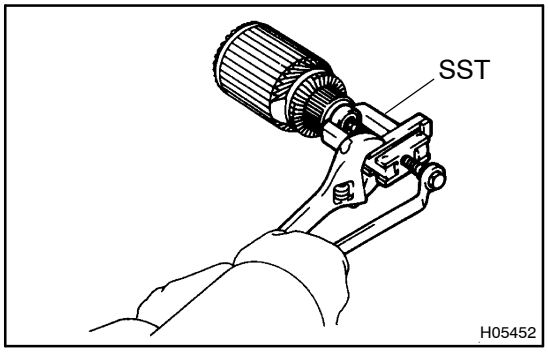
If there is continuity, replace the brush holder assembly.



11. INSPECT BEARING

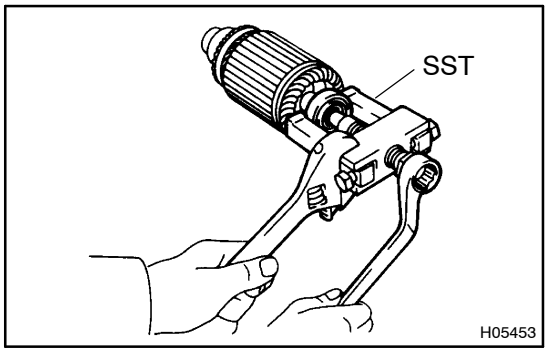
Turn each bearing by hand while applying inward force.

If the bearing sticks or resists, replace it.

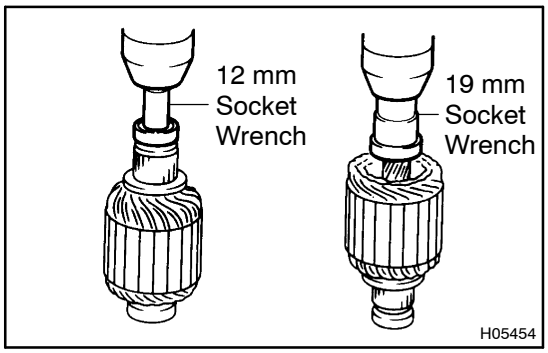


12. IF NECESSARY, REPLACE BEARING

(a) Using SST, remove the bearing.
SST 09286 –46011



(b) Using SST, remove the bearing.
SST 09628 –62011



(c) Using 12 mm and 19 mm socket wrenchs and a press, press in 2 new bearings, as shown in the illustration.