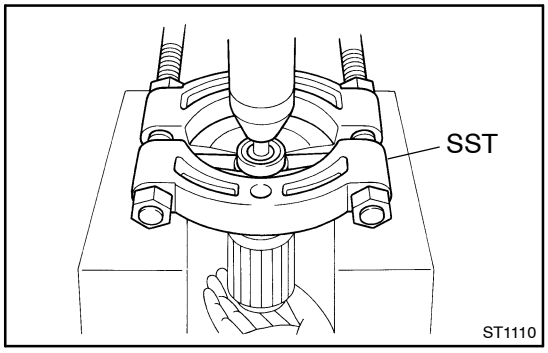
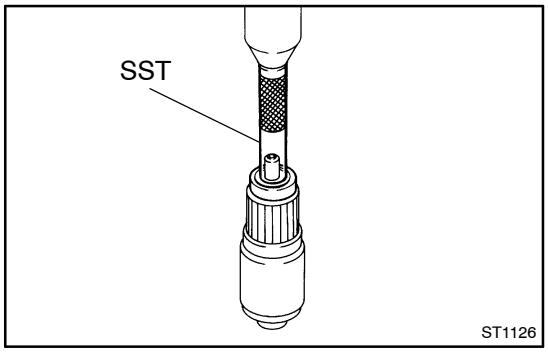
ST0HL–01

REPLACEMENT

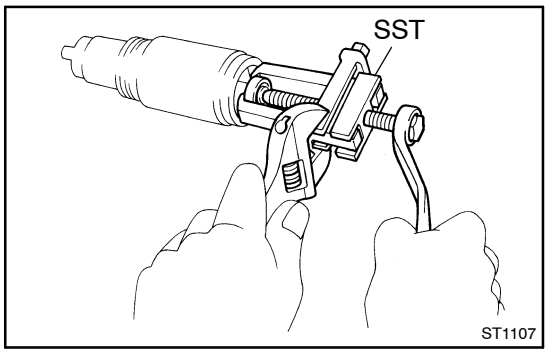


1. REPLACE FRONT BEARING

(a) Using SST and a press, press out the bearing.
SST 09950–00020

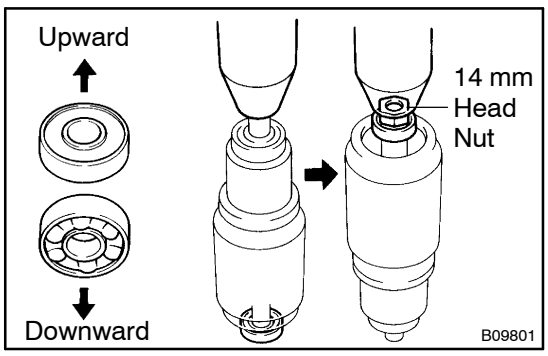


(b) Using SST and a press, press in a new bearing.
SST 09201–41020



2. REPLACE REAR BEARING

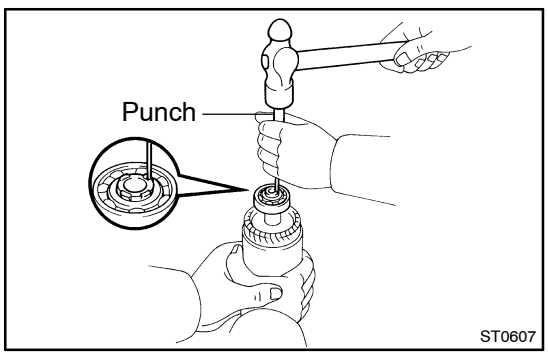
(a) Using SST, remove the bearing.
SST 09286–46011



(b) Using a 14 mm head nut and press, press in a new bearing.

NOTICE:

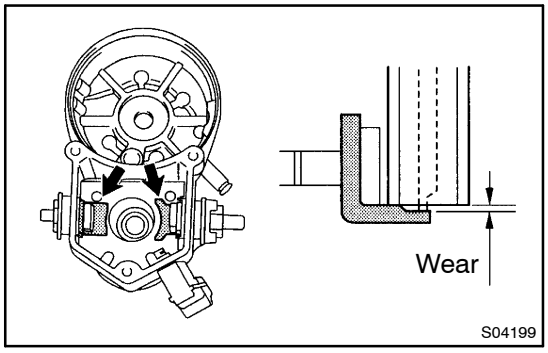
Be careful of the bearing installation direction.



(c) Using a punch, stake the armature shaft.

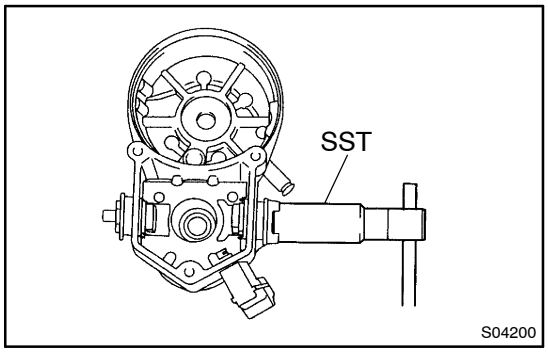
3. REPLACE MAGNETIC SWITCH TERMINAL KIT PARTS

(a) Remove the 3 bolts, end cover, gasket and plunger.

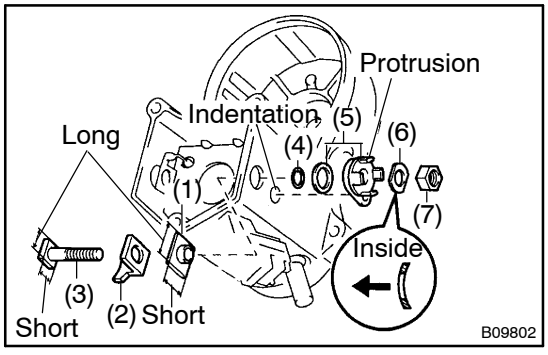


(b) Inspect the contact plate for wear.
Using vernier calipers, measure the contact plate for depth of wear.
Maximum wear: 0.9 mm (0.035 in.)

If the depth of wear is greater than the maximum, replace the contact plate.



(c) Remove the terminal kit parts.
(1) Using SST, loosen the terminal nuts.
SST 09810–38140
(2) Terminal C:
Remove the terminal nut, wave washer, terminal insulator (outside), O–ring, terminal bolt, contact plate and terminal insulator (inside).
(3) Terminal 30:
Remove the terminal nut, wave washer, terminal insulator (outside), packing, O–ring, terminal bolt, contact plate, terminal insulator (inside).

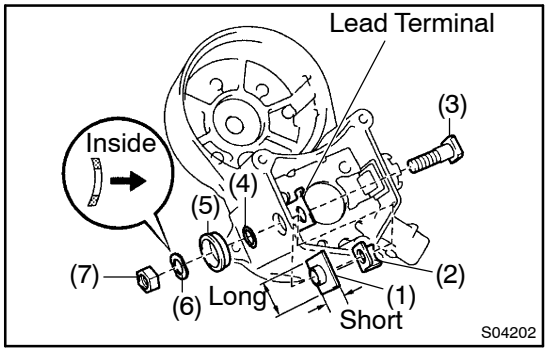


(d) Install new terminal 30 kit parts.
(1) Temporarily install a new terminal insulator (inside).
(2) Temporarily install a new contact plate.
(3) Temporarily install a new terminal bolt.
(4) Temporarily install a new O–ring.
(5) Temporarily install a new packing and new terminal insulator (outside).

HINT:
Match the protrusion of the insulator with the indentation of the housing.

(6) Temporarily install a new wave washer.
(7) Temporarily install a new terminal nut.

NOTICE:
Be careful to install the terminal insulators (inside) and wave washer and terminal bolt in the correct direction.

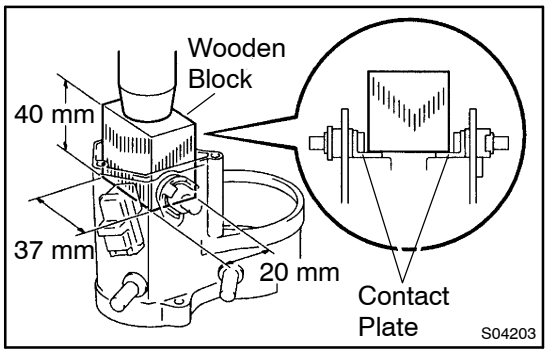


(e) Install new terminal C kit parts.
(1) Temporarily install a new terminal insulator (inside).
(2) Temporarily install a new contact plate.
(3) Temporarily install a new terminal bolt.
(4) Temporarily install a new O–ring.
(5) Temporarily install a new terminal insulator (outside).
(6) Temporarily install a new wave washer.
(7) Temporarily install a new terminal nut.

NOTICE:

Be careful to install the terminal insulators (inside) and wave washer in the correct direction.

(f) Temporarily tighten the terminal nuts.



(g) Tighten the terminal nuts.
(1) Put a wood block on the contact plate and press it down with a hand press.

Dimensions of wood block:
20 x 37 x 40 mm (0.97 x 1.46 x 1.57 in.)
Press force: 981 N (100 kgf, 221 lbf)

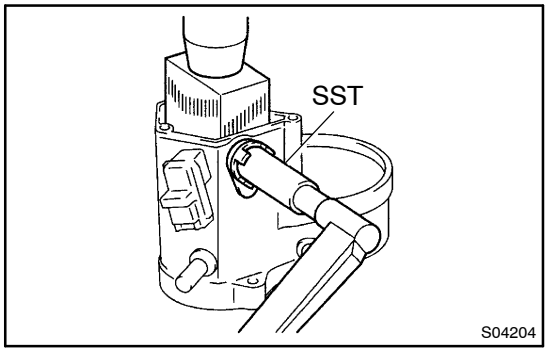
NOTICE:

- **Check the diameter of the hand press ram. Then calculate the gauge pressure of the press when 981 N (100 kgf, 221 lbf) of force is applied.**
  Gauge pressure

$$\text{(kgf/cm}^2\text{)} = \frac{100\ \text{kgf}}{\left(\frac{\text{Ram diameter (cm)}}{2}\right)^2 \times 3.14\ (\pi)}$$

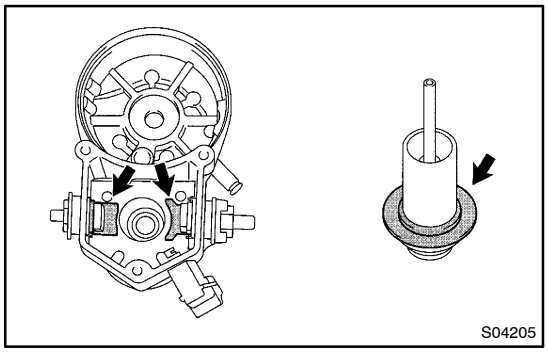
$$\text{(psi)} = \frac{221\ \text{lbf}}{\left(\frac{\text{Ram diameter (in.)}}{2}\right)^2 \times 3.14\ (\pi)}$$

  (kPa) = (kgf/cm^2) x 98.1
  (kPa) = (psi) x 6.9
- **If the contact plate is not pressed down with the specified pressure, the contact plate may tilt due to coil deformation or the tightening of the nut.**



(2) Using SST, tighten the nuts to the specified torque.
SST 09810–38140
Torque: 17 N·m (173 kgf·cm, 13 ft·lbf)

NOTICE:
If the nut is over tightened, it may cause cracks on the inside of the insulator.



(h) Clean the contact surfaces of the remaining contact plate and plunger with a dry shop rag.

(i) Reinstall the plunger, a new gasket and end cover with the 3 bolts.
Torque: 3.6 N·m (36 kgf·cm, 32 in.·lbf)