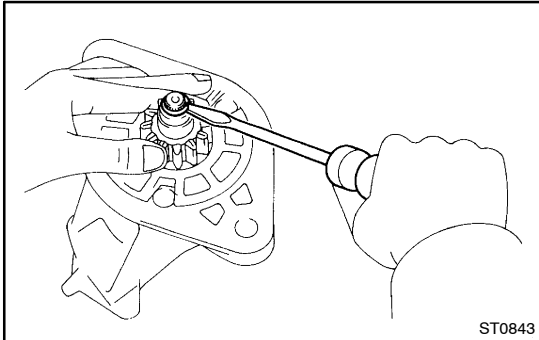


## REPLACEMENT

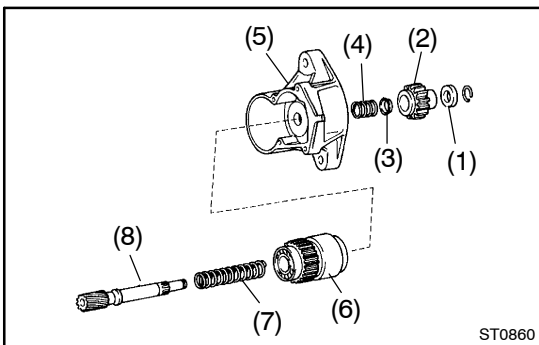
### 1. REPLACE CLUTCH ASSEMBLY:

#### DISASSEMBLY STARTER HOUSING AND CLUTCH ASSEMBLY

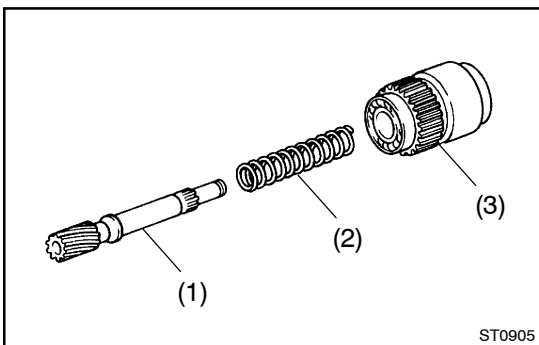
- (a) Push down the pinion gear and starter housing.
- (b) Using a plastic -faced hammer, tap down the stop collar.



- (c) Using a screwdriver, pry out the snap ring.



- (d) Disassemble these parts:
  - (1) Stop collar
  - (2) Pinion gear
  - (3) Retainer
  - (4) Compression spring
  - (5) Starter housing
  - (6) Starter clutch
  - (7) Compression spring
  - (8) Clutch shaft

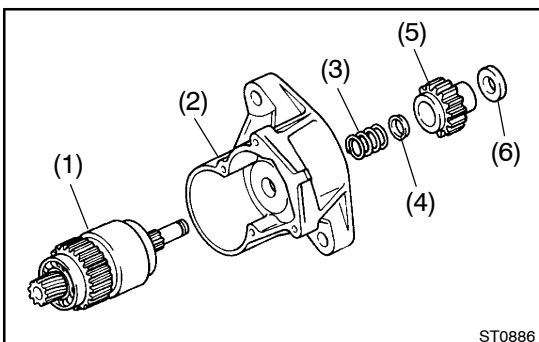


### 2. REPLACE CLUTCH ASSEMBLY:

#### ASSEMBLE STARTER HOUSING AND CLUTCH ASSEMBLY

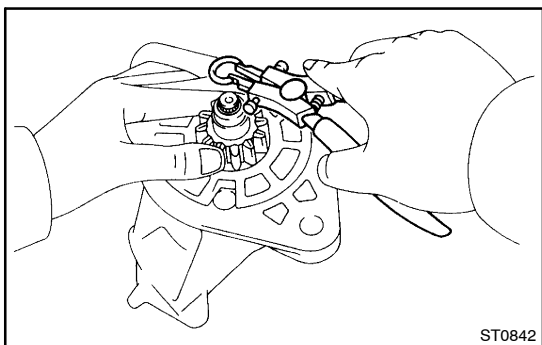
- (a) 1st, assemble these parts:

- (1) Clutch shaft
- (2) Compression spring
- (3) Starter clutch

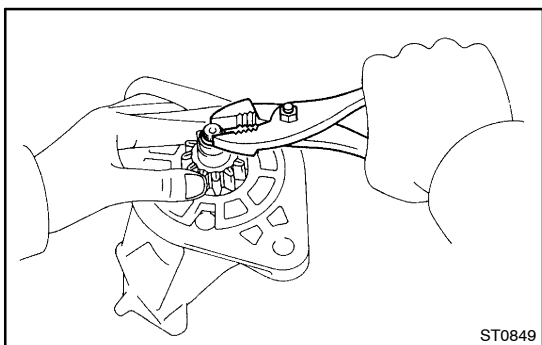


- (b) 2nd, assemble these parts:

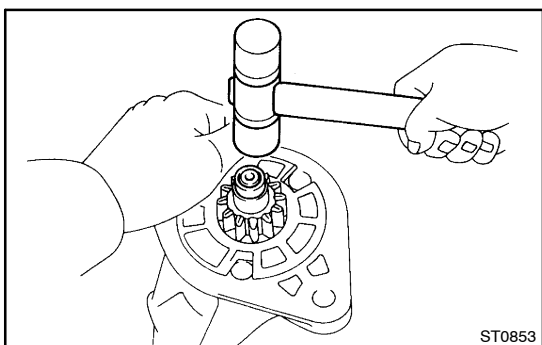
- (1) Clutch shaft and starter shaft assembly
- (2) Starter housing
- (3) Compression spring
- (4) Retainer
- (5) Pinion gear
- (6) Stop collar



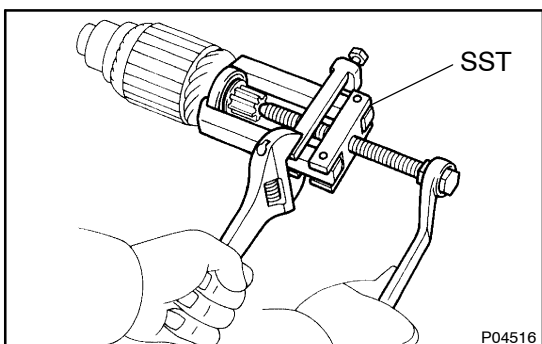
- (c) Push down the pinion gear and starter housing.
- (d) Using snap ring pliers, install a new snap ring.



- (e) Using pliers, compress the snap ring.
- (f) Check that the snap ring fits correctly.

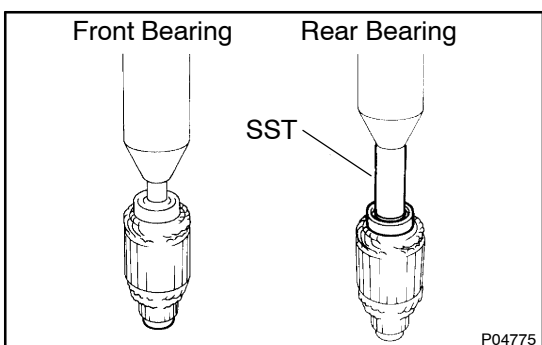


- (g) Using a plastic -faced hammer, tap the clutch shaft and install the stop collar onto the snap ring.

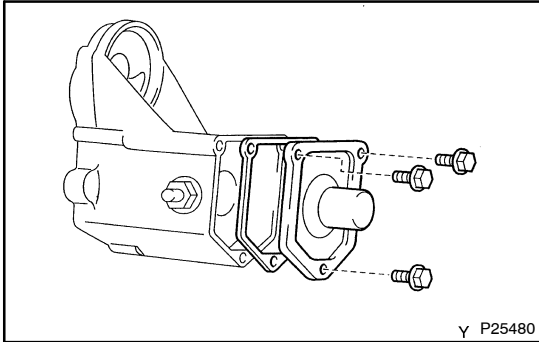


### 3. REPLACE FRONT AND REAR BEARINGS

- (a) Using SST, remove the front and rear bearings.  
SST 09286 -46011

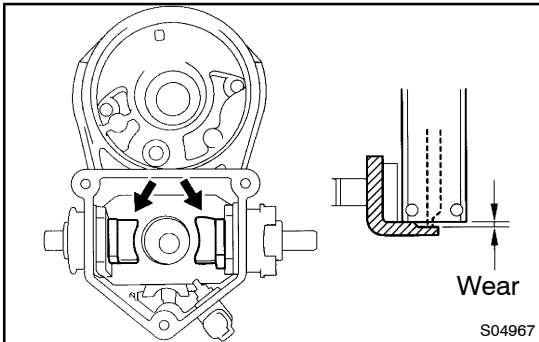


- (b) Using a press, press in a new front bearing.
- (c) Using SST and a press, press in a new rear bearing.  
SST 09820 -00030



#### 4. REPLACE MAGNETIC SWITCH TERMINAL KIT PARTS

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

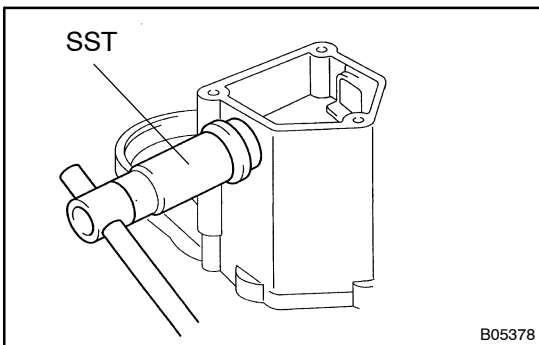


- (b) Inspect contact plate for wear.  
Using vernier calipers, measure the contact plate for depth of wear.

**Maximum wear:**

**1.6 mm (0.063 in.)**

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



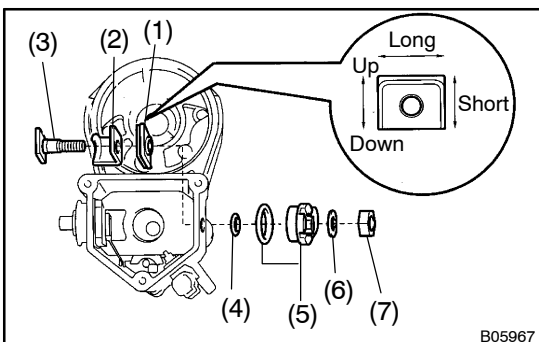
- (c) Remove terminal kit parts.  
(1) Using SST, loosen the terminal nuts.  
SST098 10-38140

- (2) Terminal C:

Remove the terminal nut, wave washer, terminal insulator (outside), terminal bolt, contact plate and terminal insulator (inside).

- (3) Terminal 30:

Remove the terminal nut, wave washer, terminal insulator (outside), O-ring, terminal bolt, contact plate, terminal insulator (inside).



- (d) Temporarily install these new terminal 30 kit parts:

- (1) Terminal insulator (inside)
  - (2) Contact plate
  - (3) Terminal bolt
  - (4) O-ring
  - (5) Packing and terminal insulator (outside)
- Install the packing to the terminal insulator, and install them.

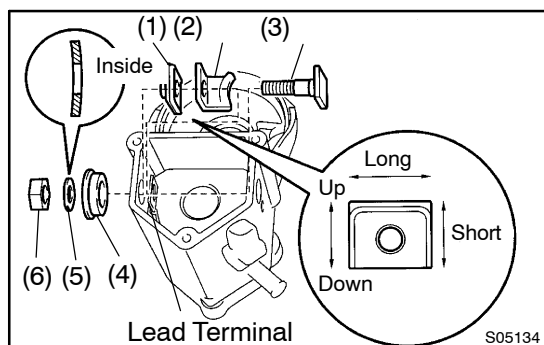
**HINT:**

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

- (6) Plate washer
- (7) Terminal nut

**NOTICE:**

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



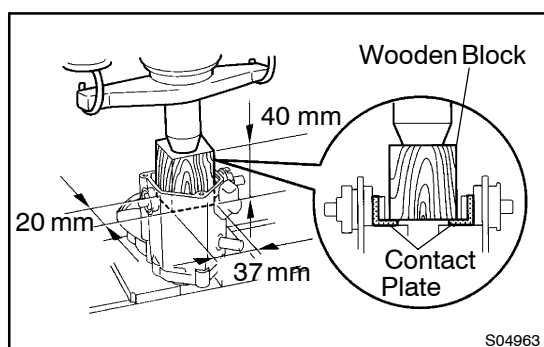
- (e) Temporarily install these new terminal C kit parts:

- (1) Terminal insulator (inside)
- (2) Contact plate
- (3) Terminal bolt
- (4) Terminal insulator (outside)
- (5) Wave washer
- (6) Terminal nut

**NOTICE:**

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

- (f) Temporarily tighten the terminal nuts.



- (g) Tighten terminal nuts.

- (1) Put a wooden block on the contact plate and press it down with a hand press.

**Dimensions of wooden block:**

**20x37x40 mm (0.79 x 1.46 x 1.57 in.)**

**Press force:**

**981 N (100 kgf, 22 1 lbf)**

**NOTICE:**

- Check the diameter of the hand press ram. Then calculate the gauge pressure of the press when 981 N (100 kgf, 22 1 lbf) of force is applied.

**Gauge pressure:**

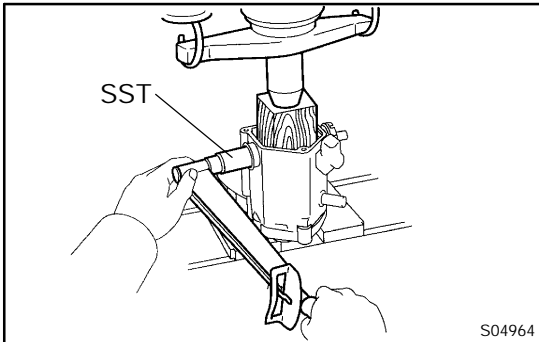
$$(\text{kgf/cm}^2) = \frac{100 \text{ kgf}}{\left( \frac{\text{Ram diameter (cm)}}{2} \right)^2 \times 3.14 (\pi)}$$

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

$$(\text{kPa}) = (\text{kgf/cm}^2) \times 98.1$$

$$(\text{kPa}) = (\text{psi}) \times 6.9$$

- § 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.

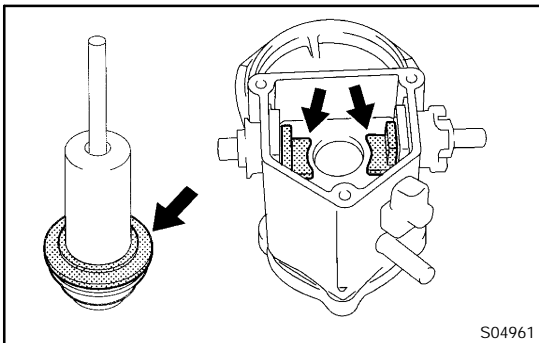


- (2) Using SST, tighten the nuts to the specified torque.  
SST 09810-38140

**Torque: 36.3 N·m (370 kgf·cm, 27 ft·lbf)**

**NOTICE:**

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



- (h) Clean contact surfaces of contact plate and plunger.  
Clean the contact surfaces of the remaining contact plate and plunger with a dry shop rag.
- (i) Reinstall magnetic switch end cover.  
Install the plunger, new gasket, end cover and lead clamp with the 3 bolts.

**Torque: 3.6 N·m (37 kgf·cm, 32 in·lbf)**