

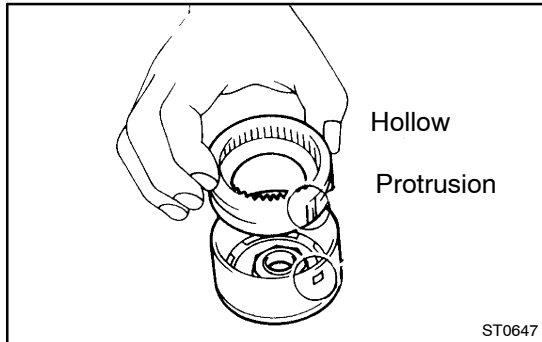
REASSEMBLY

HINT:

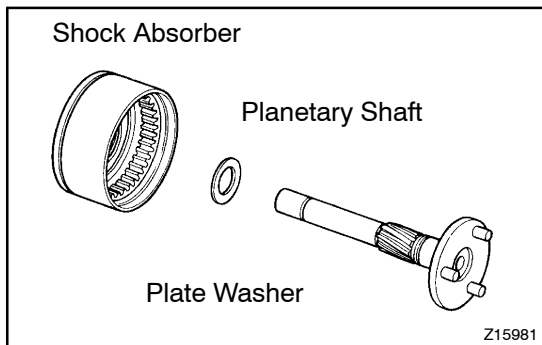
Use high temperature-resistant grease to lubricate the bearings and sliding parts when assembling the starter.

1. INSTALL INTERNAL GEAR AND PLANETARY SHAFT

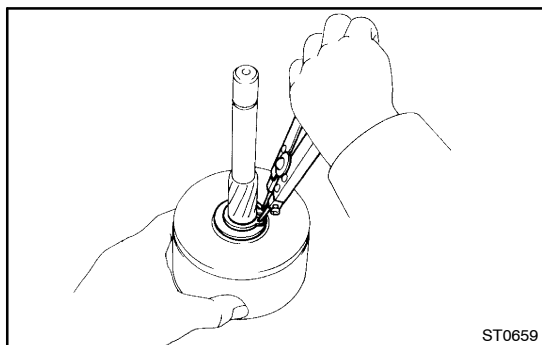
- (a) Apply grease to the internal gear touching the sock absorber and planetary gears.
- (b) Align the hollow of the internal gear with the protrusion inside the shock absorber.
- (c) Insert and turn the internal gear so that it interlocks with the shock absorber.



- (d) Apply turbine oil with additives to the center bearing.
- (e) Apply grease to the plate washer, and install it to the planetary shaft.
- (f) Install the planetary shaft to the shock absorber.

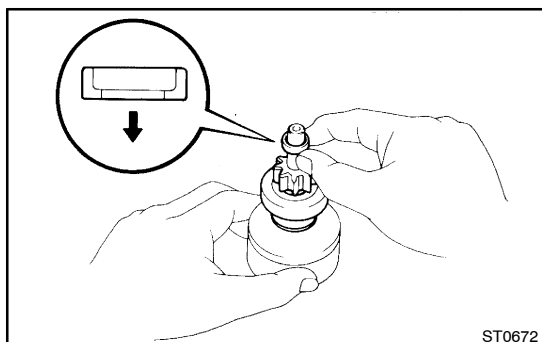


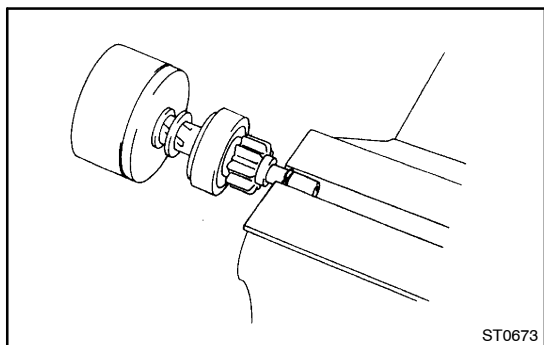
- (g) Using snap ring pliers, install the plate washer and snap ring.



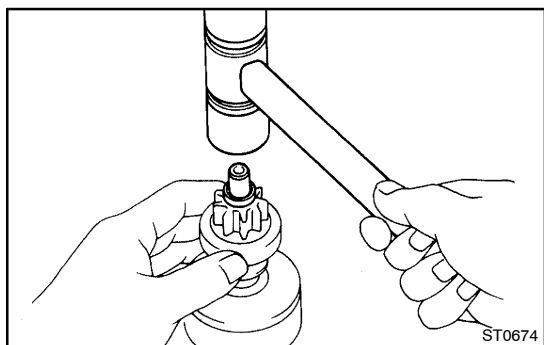
2. INSTALL STARTER CLUTCH

- (a) Apply grease to the bushing and spline of the starter clutch and stop collar.
- (b) Place the starter clutch and stop collar on the planetary shaft.

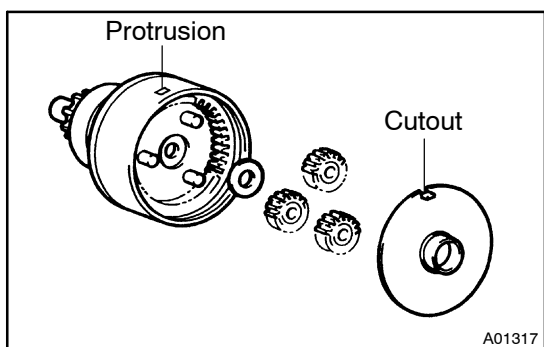




- (c) Apply grease to the snap ring, and install it to the planetary shaft groove.
- (d) Using a vise, compress the snap ring.

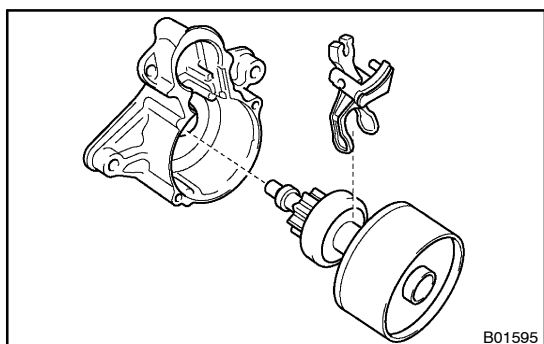


- (e) Hold the starter clutch, tap the planetary shaft and install the stop collar onto the snap ring with a plastic-faced hammer.



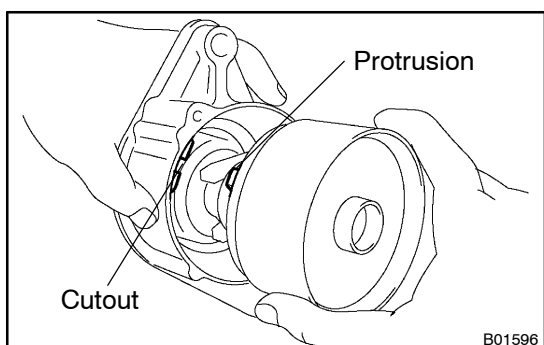
3. INSTALL PLANETARY GEARS

- (a) Apply grease to the planetary gears and flange pin parts of the planetary shaft.
- (b) Install the plate washer and 3 planetary gears.
- (c) Align the cutout of the plate with the protrusion inside the shock absorber, and install the plate.



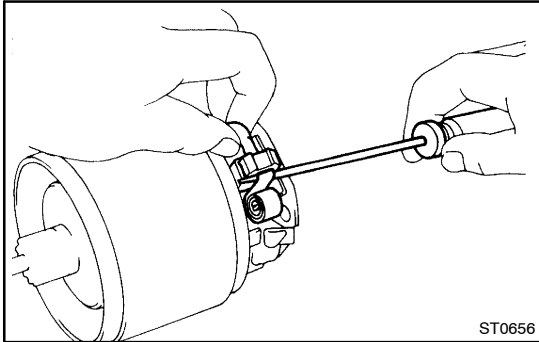
4. INSTALL DRIVE LEVER AND STARTER CLUTCH WITH SHOCK ABSORBER

- (a) Apply turbine oil with additives to the bearing of the starter housing.
- (b) Apply grease to the drive lever touching the starter pivot part of the drive lever.
- (c) Install the drive lever to the starter clutch.



- (d) Align the protrusion of the shock absorber with the cutout of the starter housing and install them.

5. PLACE ARMATURE INTO FIELD FRAME

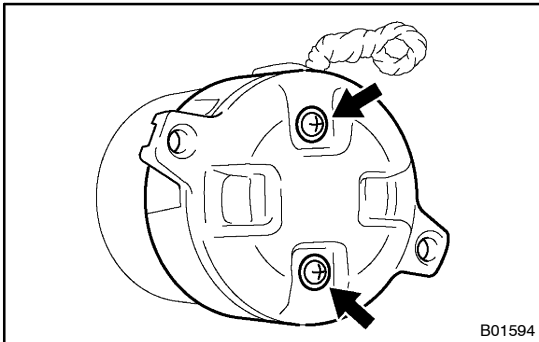


6. INSTALL BRUSH HOLDER

- (a) Place the brush holder in position on the armature.
 - (b) Using a screwdriver, hold the brush spring back, and connect the brush into the brush holder.
- Connect the 4 brushes.

NOTICE:

Check that positive (+) lead wires are not grounded.



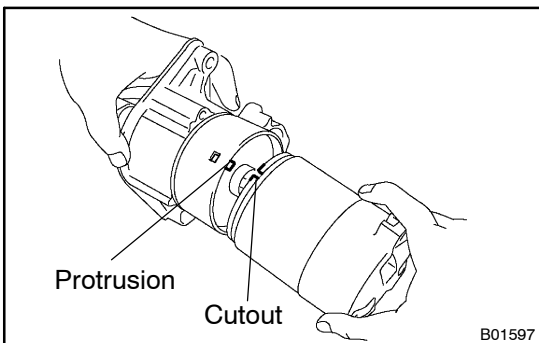
7. INSTALL COMMUTATOR END FRAME

- (a) Install a new O-ring to the groove of the field frame.
- (b) Apply turbine oil with additives to the bearing of the end frame.
- (c) Install the end frame with the 2 screws.

Torque: 1.5 N·m (15 kgf·cm, 13 in.·lbf)

NOTICE:

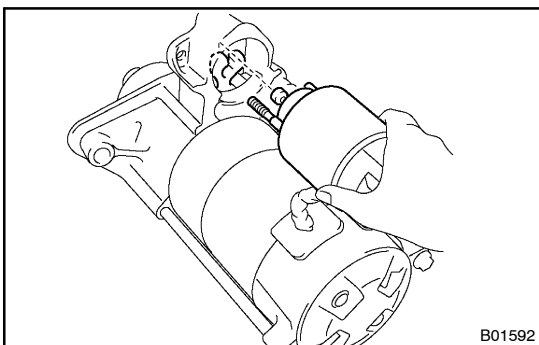
To avoid interference between the brush holder and the dust protector pull the commutator end frame away at an angle.



8. INSTALL FIELD FRAME AND ARMATURE ASSEMBLY

- (a) Install a new O-ring to the groove of the field frame.
- (b) Align the cutout of the field frame with the protrusion of the shock absorber.
- (c) Install the field frame and armature assembly with the 2 through bolts.

Torque: 5.9 N·m (60 kgf·cm, 52 in.·lbf)



9. INSTALL MAGNETIC SWITCH

- (a) Install the plunger cover to the magnetic switch.
- (b) Hang the plunger of the magnetic switch to the drive lever from the upper side.
- (c) Install the magnetic switch with the 2 nuts.

Torque: 8.3 N·m (85 kgf·cm, 73 in.·lbf)

- (d) Connect the lead wire to the terminal, and install the nut.

Torque: 9.8 N·m (100 kgf·cm, 87 in.·lbf)