Snap Ring Pliers

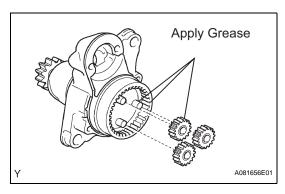
REASSEMBLY

HINT:

Use high-temperature grease to lubricate the bearings, gears, return spring and steel ball when assembling the starter.

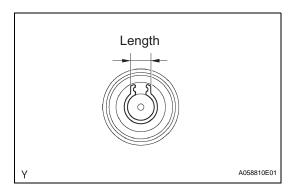


- (a) Apply grease to the planetary gears and pin parts of the planetary shaft.
- (b) Install the 3 planetary gears.



2. INSTALL STARTER ARMATURE ASSEMBLY

- (a) Apply grease to the plate washer and the armature shaft.
- (b) Install the starter armature to the starter commutator end frame.
- (c) Using snap ring pliers, install the plate washer and a new snap ring.



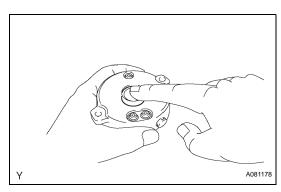
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(d) Using a vernier caliper, measure length of the snap ring.

Maximum length:

5.0 mm (0.197 in.)

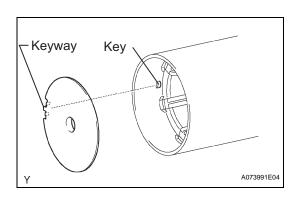
If the length is greater than the maximum, replace it with a new snap ring.



3. INSTALL STARTER COMMUTATOR END FRAME COVER

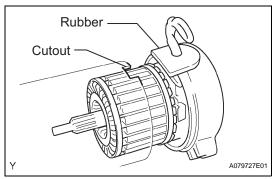
(a) Install the end frame cover to the commutator end frame.

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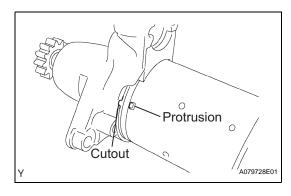
4. INSTALL STARTER ARMATURE PLATE

- (a) Insert the armature plate to the starter yoke.
- (b) Align the keyway of the starter plate with the key inside the starter yoke, and install the starter plate.



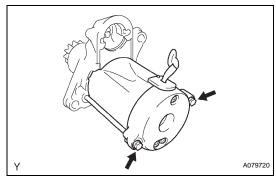
5. INSTALL STARTER COMMUTATOR END FRAME ASSEMBLY

- (a) Align the rubber of the end frame with the cutout of the starter yoke.
- (b) Install the end frame to the starter yoke.

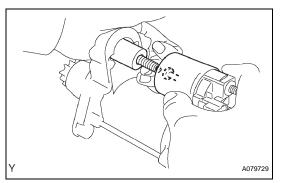


6. INSTALL STARTER YOKE ASSEMBLY

(a) Align the protrusion of the starter yoke with the cutout of the starter drive housing.



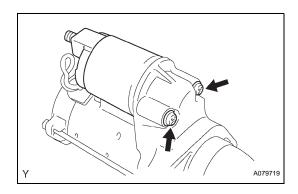
(b) Install the starter yoke with the 2 through-bolts. Torque: 5.9 N*m (60 kgf*cm, 52 in.*lbf)



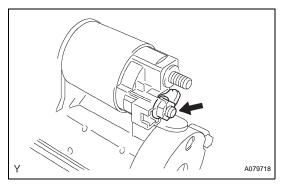
7. INSTALL MAGNETIC SWITCH ASSEMBLY

- (a) Apply grease to the plunger and the hook.
- (b) Hang the plunger hook of the magnetic switch to the drive lever.
- (c) Install the plunger and return spring.



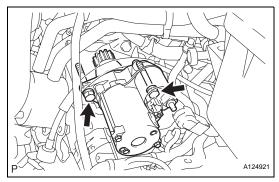


(d) Install the magnetic switch with the 2 screws. Torque: 7.5 N*m (76 kgf*cm, 66 in.*lbf)



(e) Connect the lead wire to the magnetic switch with the nut.

Torque: 10 N*m (102 kgf*cm, 7 ft.*lbf)

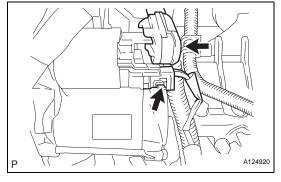


INSTALLATION

1. INSTALL STARTER ASSEMBLY

(a) Install the starter with the 2 bolts.

Torque: 37 N*m (377 kgf*cm, 27 ft.*lbf)



(b) Connect the starter connector.

(c) Install the terminal nut and cover the nut with the

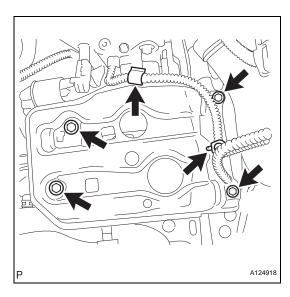
Torque: 9.8 N*m (100 kgf*cm, 7 ft.*lbf)



2. INSTALL BATTERY BRACKET REINFORCEMENT

(a) Install the bracket reinforcement.

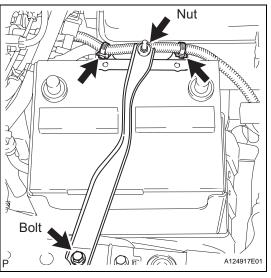
Torque: 19 N*m (194 kgf*cm, 14 ft.*lbf)



3. INSTALL FRONT BATTERY BRACKET

- (a) Install the bracket front with the 4 bolts.

 Torque: 19 N*m (194 kgf*cm, 14 ft.*lbf)
- (b) Attach the 2 wire harness clamps.
- 4. INSTALL BATTERY
- 5. INSTALL BATTERY INSULATOR



6. INSTALL BATTERY CLAMP

- (a) Attach the hook of the battery clamp to the battery bracket front.
- (b) Temporarily tighten the nut and install the bolt.
- (c) Adjust the battery clamp's position.
- (d) Fully tighten the nut and bolt.

 Torque: 5.0 N*m (51 kgf*cm, 44 in.*lbf)
- (e) Attach the 2 wire harness clamps.
- 7. CONNECT CABLE TO POSITIVE BATTERY TERMINAL
- 8. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

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