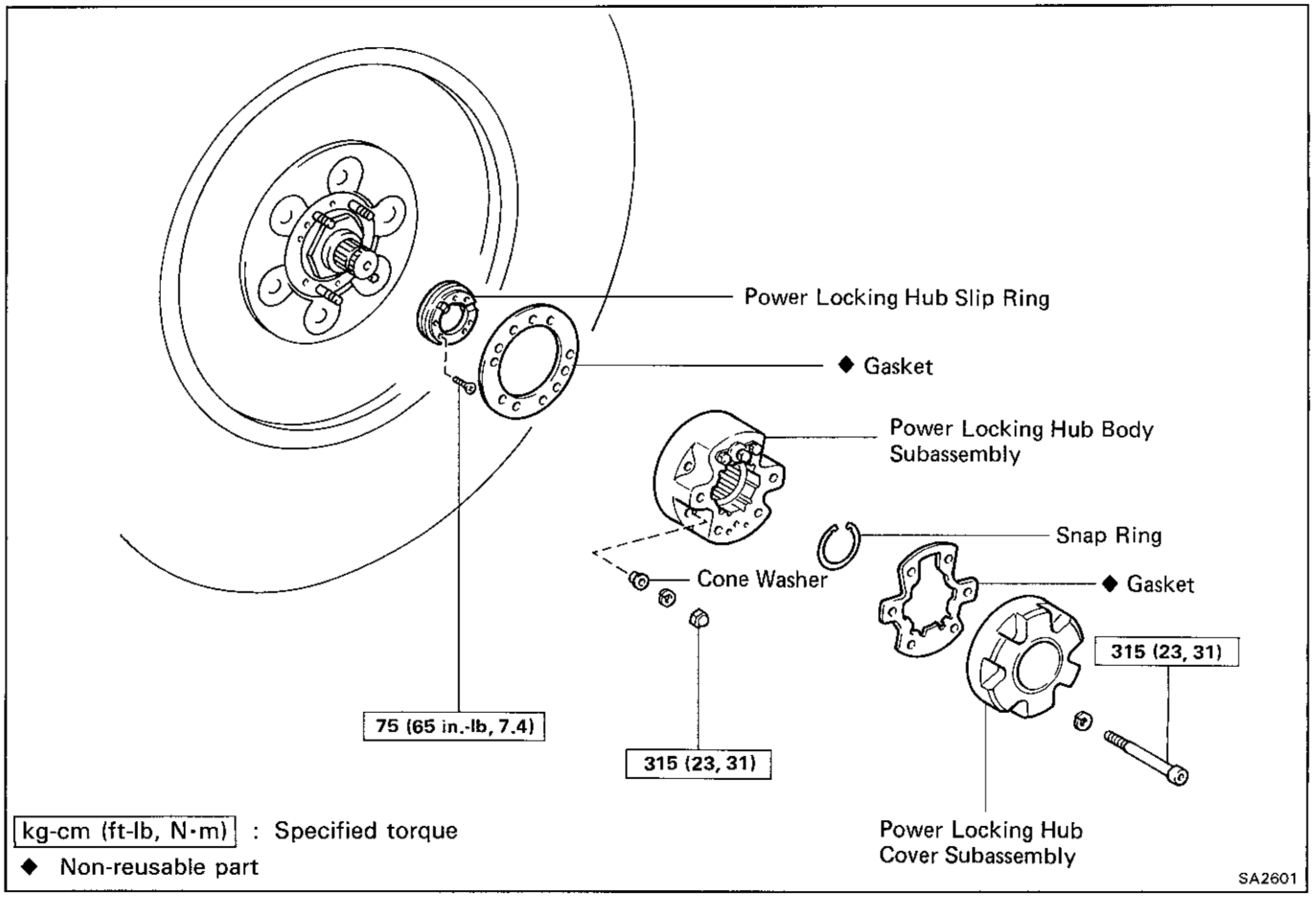
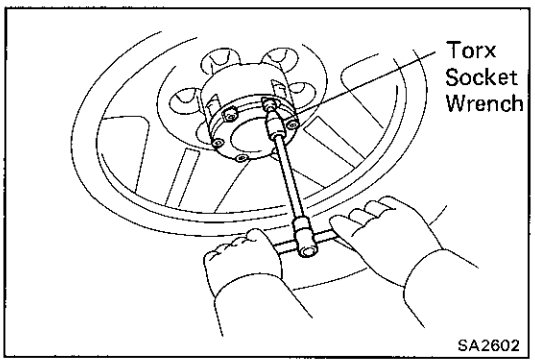
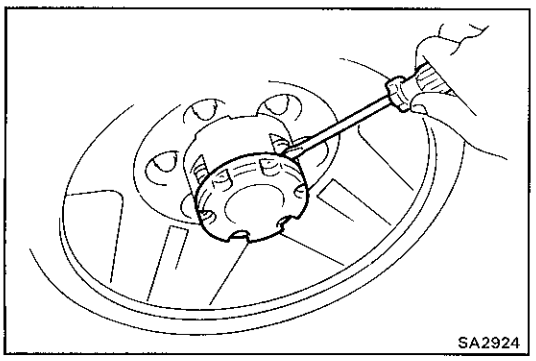
Power Locking Hub Actuator

COMPONENTS



REMOVAL OF POWER LOCKING HUB ACTUATOR





1. **REMOVE POWER LOCKING HUB COVER SUB-ASSEMBLY**

   (a) With the ignition switch to the "ON" position, turn the hub lock switch to off and set the hub in "FREE" condition.

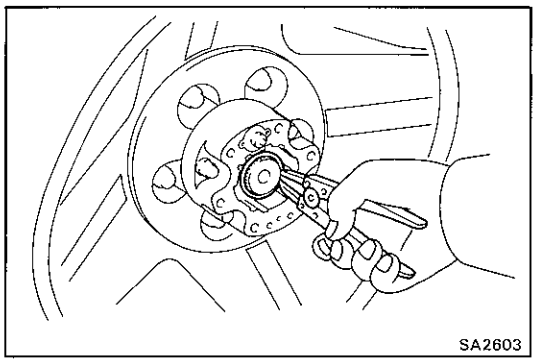
   (b) Using torx socket wrench, remove the six hexagon bolts.

   (Torx socket wrench T40 09042-00020)

   (c) Insert a screwdriver between the hub cover sub-assembly and hub body set nut, and pry off the hub cover sub-assembly.

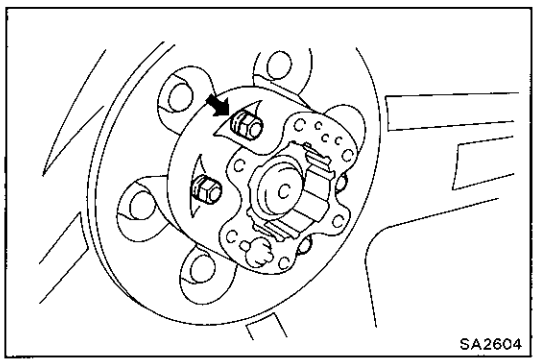
   NOTICE:
   - **Apply equal force at the four positions around the set nut.**
   - **Be careful not to scratch or damage the hub cover.**
   - **Do not tap the hub cover subassembly with a hammer or an equivalent so as not to deform the hub cover sub-assembly.**

   (d) Remove the gasket from the hub cover sub-assembly.

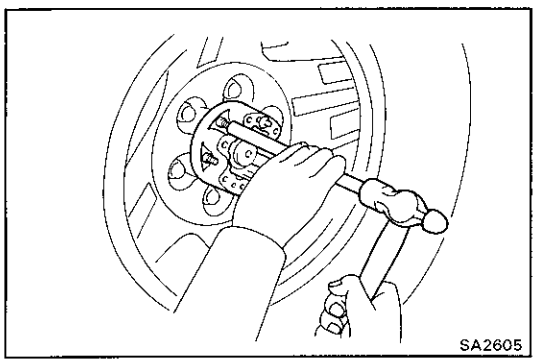

SA2603

2. REMOVE POWER LOCKING HUB BODY SUBASSEMBLY

(a) Using snap ring pliers, remove the snap ring.


SA2604

(b) Remove the four nuts and plate washers.

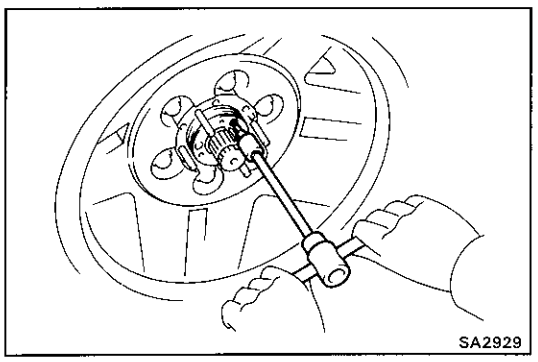

SA2605

(c) Using a hammer and brass bar, tap the bolt heads and remove four cone washers.

NOTICE: Do not tap the power locking hub body subassembly.

(d) Remove the power locking hub body subassembly and the gasket.

NOTICE: Be careful not to damage the brush.

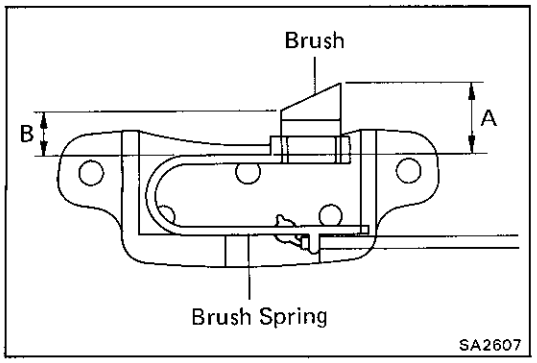

SA2929

3. REMOVE POWER LOCKING HUB SLIP RING

(a) Using a torx socket wrench, remove the three set screws.

(Torx socket wrench T20 09041-00010)

(b) Remove the power locking hub slip ring.



INSPECTION OF ACTUATOR COMPONENTS

1. INSPECT BRUSH

(a) Measure the brush height.

Standard height:

A 6.5 mm (0.256 in.)
B 4.7 mm (0.185 in.)

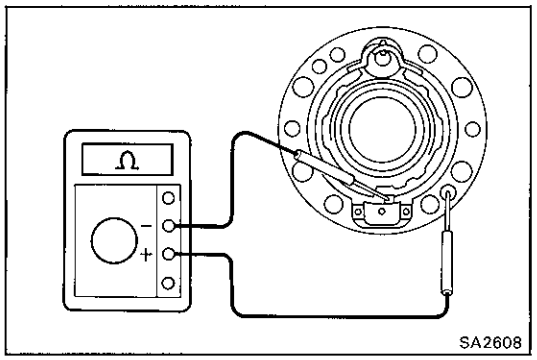
Minimum height:

A 4.2 mm (0.165 in.)
B 4.2 mm (0.122 in.)

If the height of the brush is out of the specification, replace the power locking hub body subassembly.

NOTICE:

- **Do not remove the brush from the brush holder.**
- **Be careful not to damage the brush spring.**



2. INSPECT POWER LOCKING HUB SUBASSEMBLY

Using a ohmmeter, check that there is no continuity between the brush and hub body subassembly.

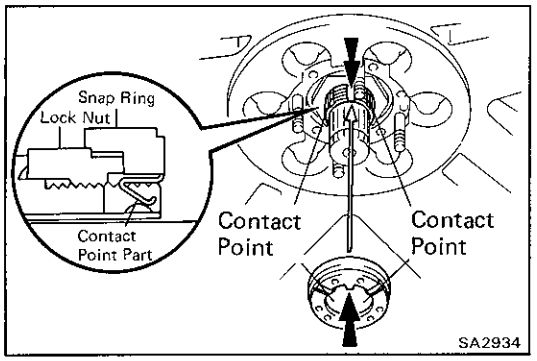
If there is continuity, replace the power locking hub body subassembly.

INSTALLATION OF POWER LOCKING HUB ACTUATOR

(See page SA-23)

1. **CLEAN POWER LOCKING HUB COVER SET BOLT AND BOLT HOLE**

   Using the cleaning solvent, clean the set bolt and bolt hole.



2. **INSTALL POWER LOCKING HUB SLIP RING**

   (a) Clean the slip ring, locking nut, drive shaft, and spindle of the tip.

   (b) Match the slip ring protrusion with the knuckle spindle cut-out and install the slip ring to the lock nut.

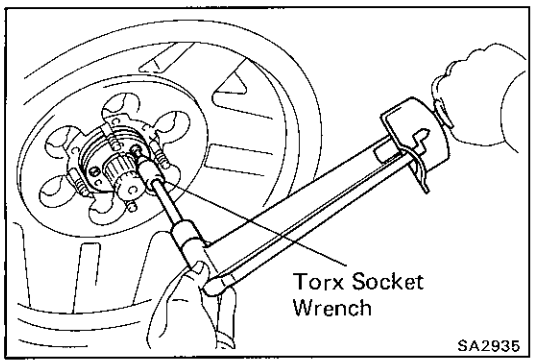
   (c) Check that the two contact points between the slip ring and knuckle spindle are actually in contact.

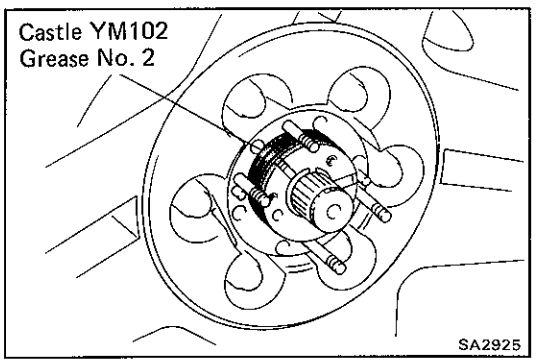
   NOTICE: Make sure there is no grease or oil, etc. on the parts at the contact point.

   (d) Using a torx socket wrench, install the three set screws.

   (Torx socket wrench T20 09042-00030)

   Torque: 75 kg-cm (65 in.-lb, 7.4 N·m)





3. **APPLY CASTLE BODY GREASE W TO HUB BODY SUBASSEMBLY AND HUB COVER SUBASSEMBLY**

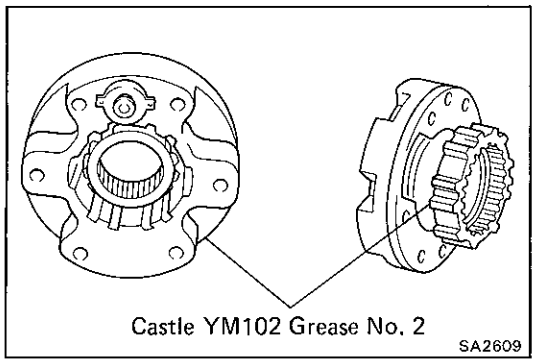
   (a) After cleaning the slip ring again, thinly and evenly speed castle body grease w around the circumference of the slip ring.

   Grease: Part No. 08887-02007, CASTLE BODY GREASE W

   NOTICE: Do not apply any grease other than castle YM102 No.2 to the slip ring.

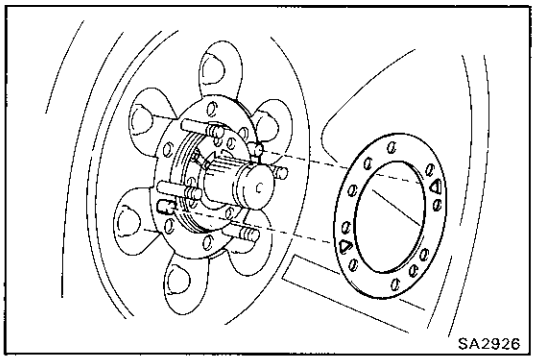
   HINT:

   - Apply approx. 2 — 3 g (0.04 — 0.07 lb) of the grease.
   - If grease is not applied, or grease other than castle body grease W is applied, non-continuity at low temperatures and premature wearing of the flange will occur.



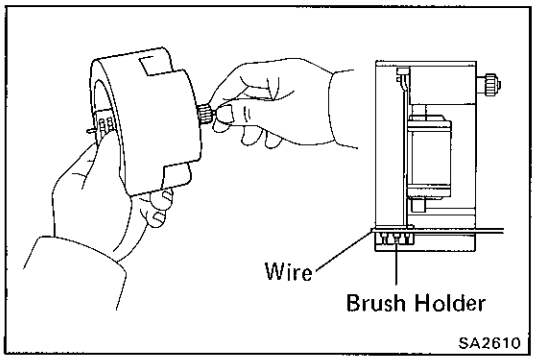
(b) Thinly and evenly apply castle body grease W to the sliding parts of the hub body subassembly and hub cover assembly.

Grease: Part No. 08887-02007, CASTLE BODY GREASE W



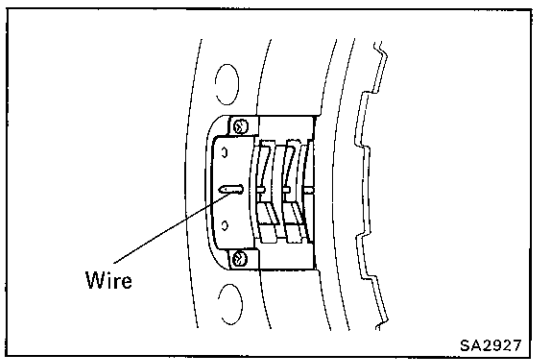
4. INSTALL POWER LOCKING HUB BODY SUBASSEMBLY

(a) Align the knock-pin of the axle hub and a new gasket's triangular hole, and install a gasket to the axle hub.

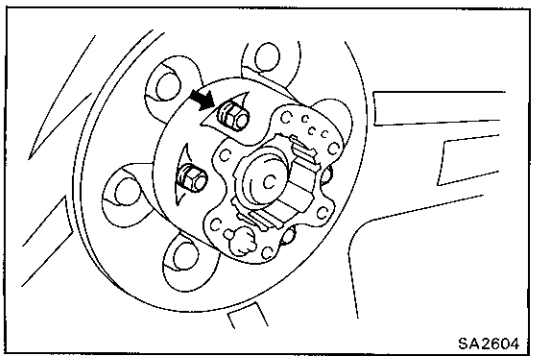


(b) Using a wire or an equivalent, fix the brush as shown.

NOTICE: Do not allow oil or grease to get on the brush.



(c) Check that the brush is hold in the brush holder.

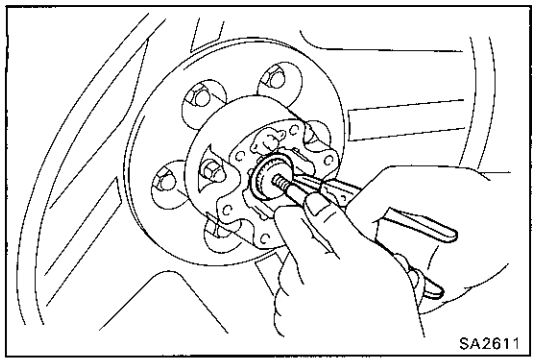


(d) Install the hub body subassembly to the axle hub with the four cone washers, washers and nuts.

Torque: 315 kg-cm (23 ft-lb, 31 N·m)

HINT: Before installing the hub body subassembly, check that the brush fixed.

(e) Remove the wire or and equivalent from the power locking hub body subassembly.

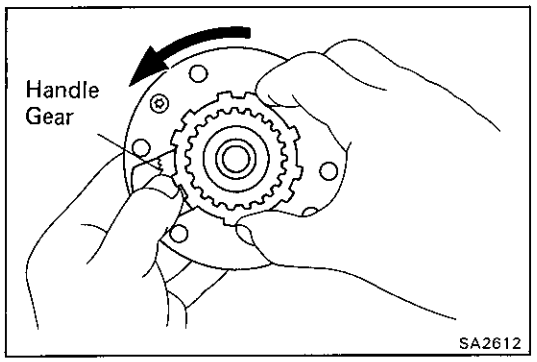

SA2611

5. **INSTALL SNAP RING**

(a) Install a bolt to the drive shaft and pull it out.

(b) Using snap ring pliers, install the snap ring.

(c) Remove the bolt.



SA2612

6. **INSTALL POWER LOCKING HUB COVER SUB-ASSEMBLY**

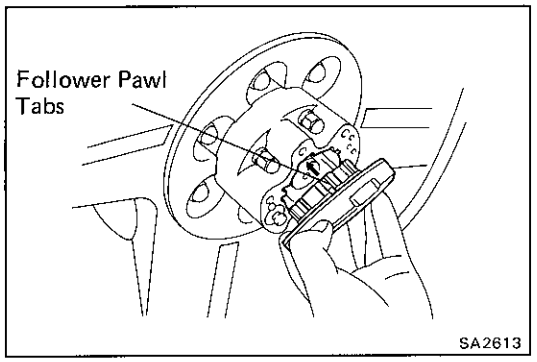
(a) Hold the handle gear, turn the clutch counterclockwise and set the hub cover subassembly to "FREE" condition.

(b) Remove the backing paper from the new gasket and install the gasket to the hub cover subassembly.

NOTICE:

- **Install the sealant-covered surface of the gasket (from which the backing paper was removed) to the hub cover subassembly.**
- **Check that the gasket is properly aligned and that there is no unevenness.**

(c) Install the hub cover subassembly to the hub body assembly with the follower pawl tabs aligned with the non-toothed portions of the body.

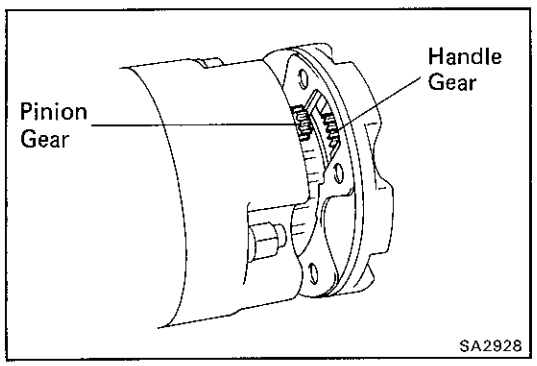


SA2613

(d) Align the installation position of the 4WD control motor's pinion gear with that of the hub cover's handle gear, and install the hub cover subassembly.

NOTICE: With the hub cover subassembly lightly held down by hand onto the hub body subassembly, check that there is no pace between the hub body subassembly and hub cover subassembly.

HINT: If there is a gap between the hub body subassembly and hub cover subassembly when the set bolt is tightened, the motor, the gasket etc. will be damaged, so again check steps (1) — (4) above and check that there is no gap between the hub body subassembly and hub cover subassembly.



SA2928

(e) Apply sealant to the threads of the set bolts.

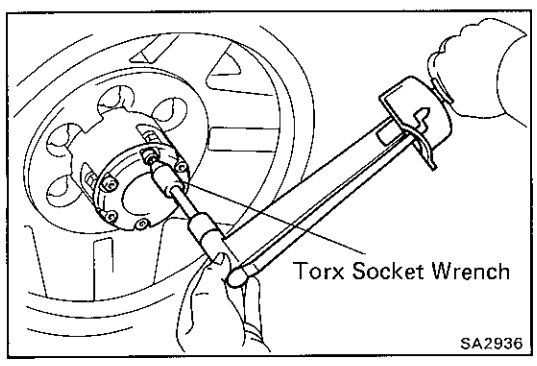
Sealant: Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

(f) Using torx socket wrench, install and torque the six set bolts.

(Torx socket wrench T40 09042-00020)

Torque: 315 kg-cm (23 ft-lb, 31 N·m)

NOTICE: After temporarily tightening diagonally opposite hub cover bolts to 200 kg-cm (14 ft-lb, 20 N·m), tighten them to the specified torque.



SA2936

7. **CHECK OPERATION**