TOYOTA SERVICE BULLETIN

Group: 06 No.: 01 Date: May, 18

Model: LandCruiser 70

Subject: Corrections to Repair Manuals RM183E, RM290E & RM730E

Please ensure these pages are distributed to all relevant staff for their information; and a copy made available for future reference, with the above repair manual.

Section	Title	Paragraph
SUSPENSION AND AXLE (HARDTOP & CANVAS TOP)	POWER LOCKING HUB	Power Locking Hub Actuator COMPONENTS (1990/01-)
SUSPENSION AND AXLE (HARDTOP & CANVAS TOP)	POWER LOCKING HUB	INSTALLATION OF POWER LOCKING HUB ACTUATOR (1990/01-)
SUSPENSION AND AXLE (HARDTOP & CANVAS TOP)	Front Axle Hub	FRONT AXLE HUB COMPONENTS (1990/01-)
SUSPENSION AND AXLE (HARDTOP & CANVAS TOP)	Steering Knuckle and Axle Shaft	STEERING KNUCKLE AND AXLE SHAFT COMPONENTS (1990/01-)
SUSPENSION AND AXLE (HARDTOP & CANVAS TOP)	FRONT AXLE HUB	COMPONENTS (1992/01-)
SUSPENSION AND AXLE (HARDTOP & CANVAS TOP)	STEERING KNUCKLE SHAFT AND AXLE SHAFT	COMPONENTS (1992/01-)
SUSPENSION AND AXLE	STEERING KNUCKLE AND AXLE SHAFT	COMPONENTS （1998/08−）
		REMOVAL （1998/08-）
		INSTALLATION （1998/08-）

The revised pages listed above are attached.

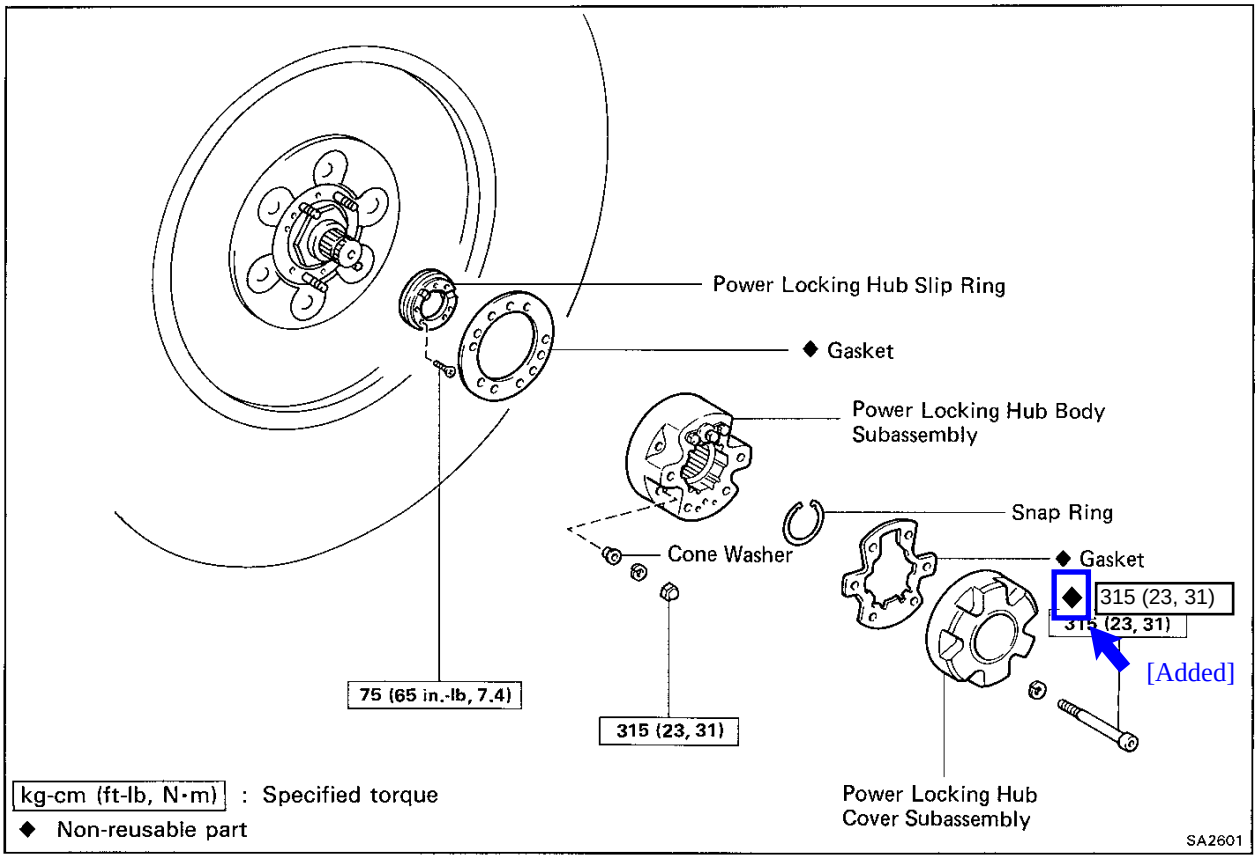
(The corrected parts are indicated by arrows.)

This bulletin does not cause the Flat Rate Manual to be changed

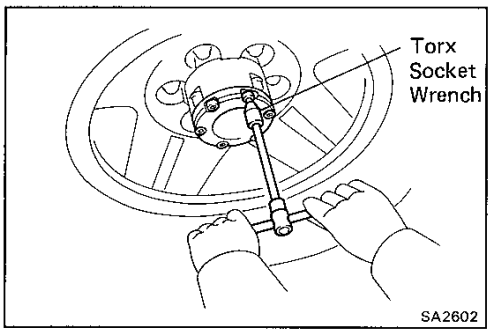
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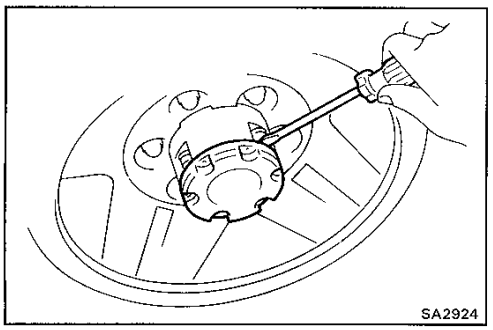
Power Locking Hub Actuator

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.

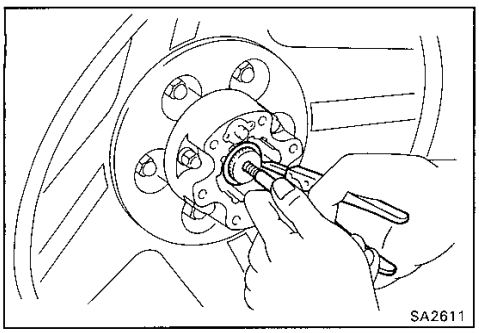
   (Torx socket wrench T40 09042-00020)

   (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.

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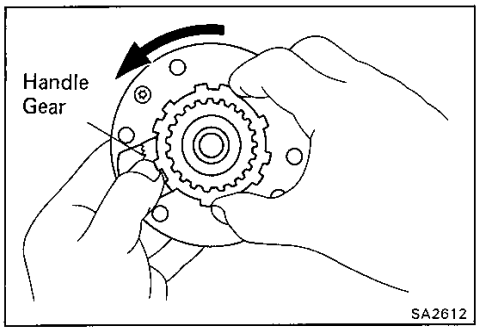


5. INSTALL SNAP RING

(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.



6. INSTALL POWER LOCKING HUB COVER SUB-ASSEMBLY

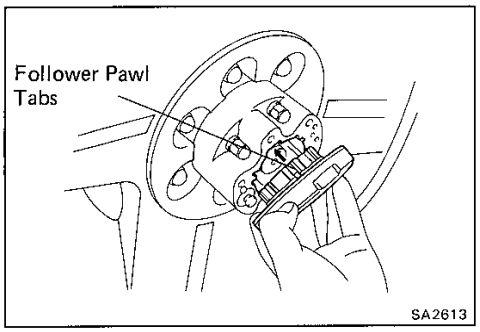
(a) Hold the handle gear, turn the clutch counterclockwise and set the hub cover subassembly to ''FREE'' condition.

(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.**

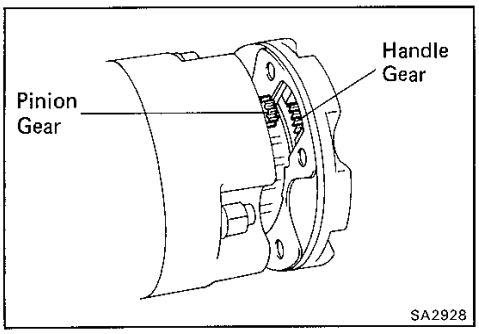
(c) Install the hub cover subassembly to the hub body assembly with the follower pawl tabs aligned with the non-toothed portions of the body.



(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.



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

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

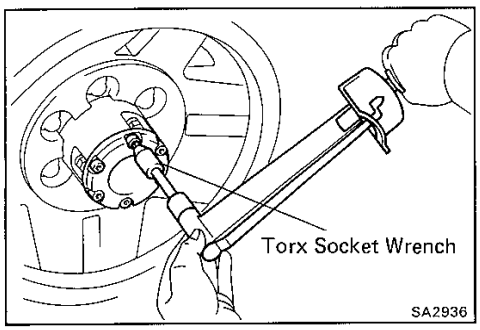
(f) Using torx socket wrench, install and torque the six

(Tc Using torx socket wrench, install and apply the specified torque to the 6 new set bolts.

Torque: 315 kg-cm (23 ft-lb, 31 N·m)

[Corrected]

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.

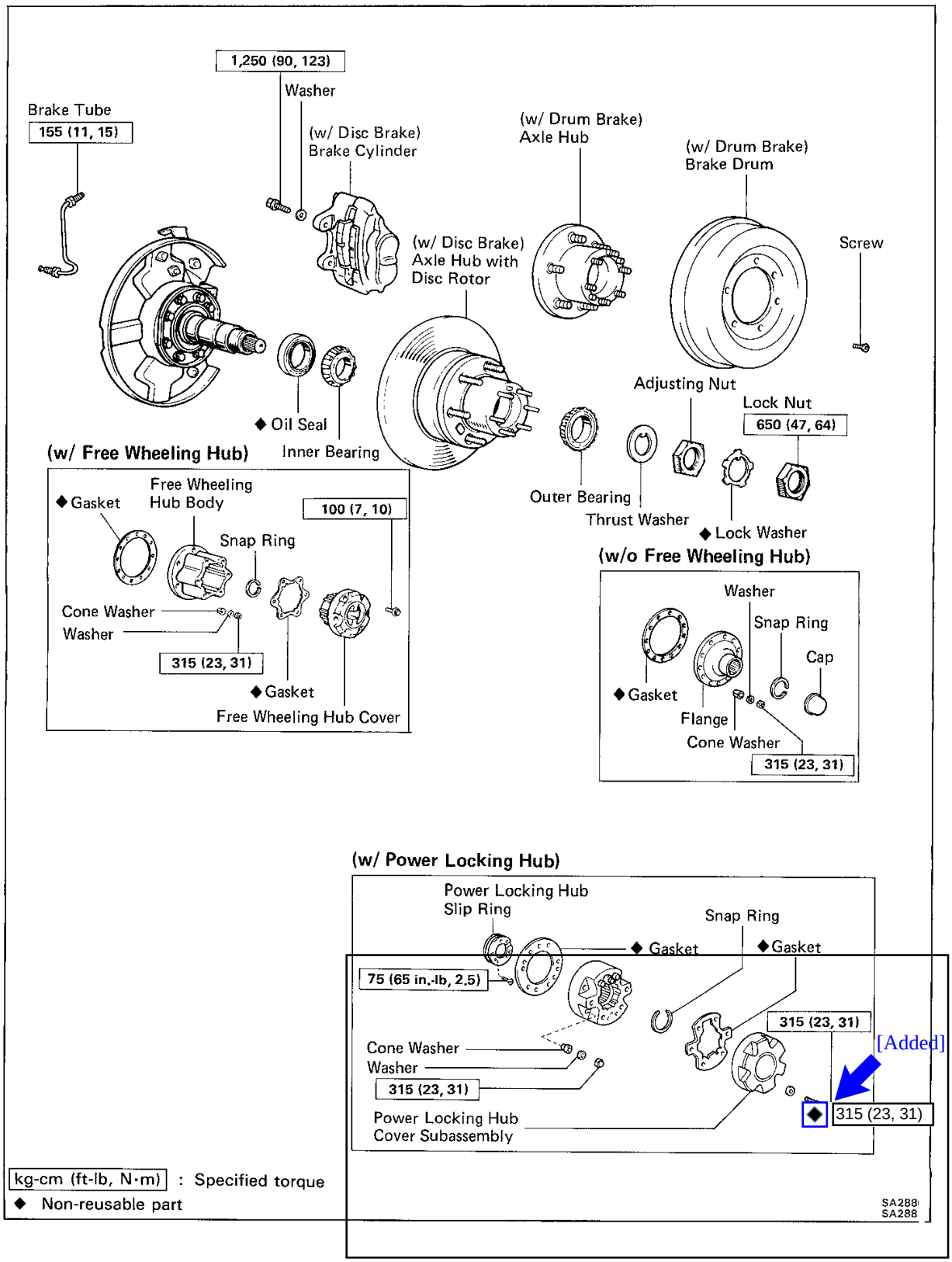


7. CHECK OPERATION

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FRONT AXLE HUB

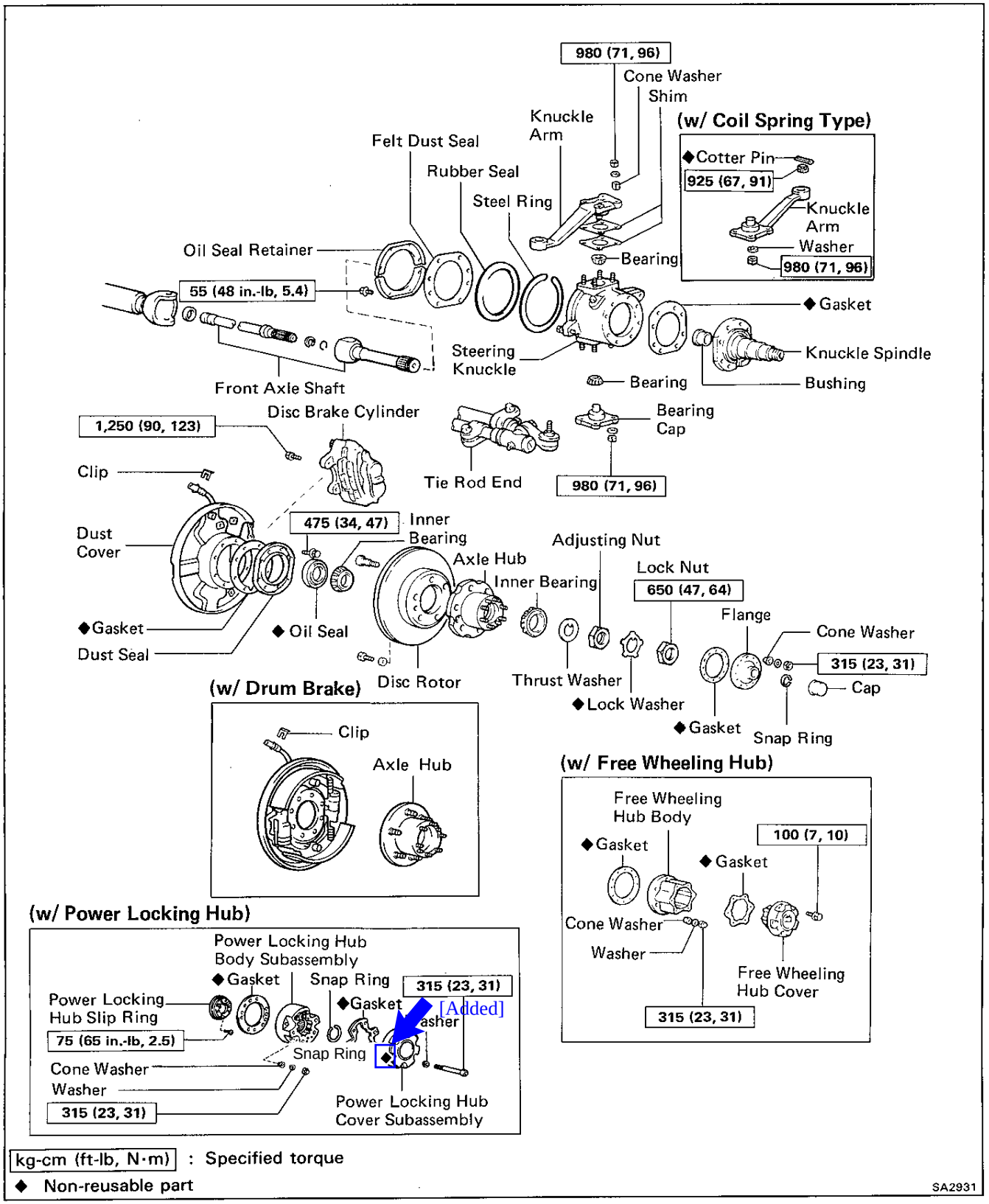
COMPONENTS



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STEERING KNUCKLE AND AXLE SHAFT

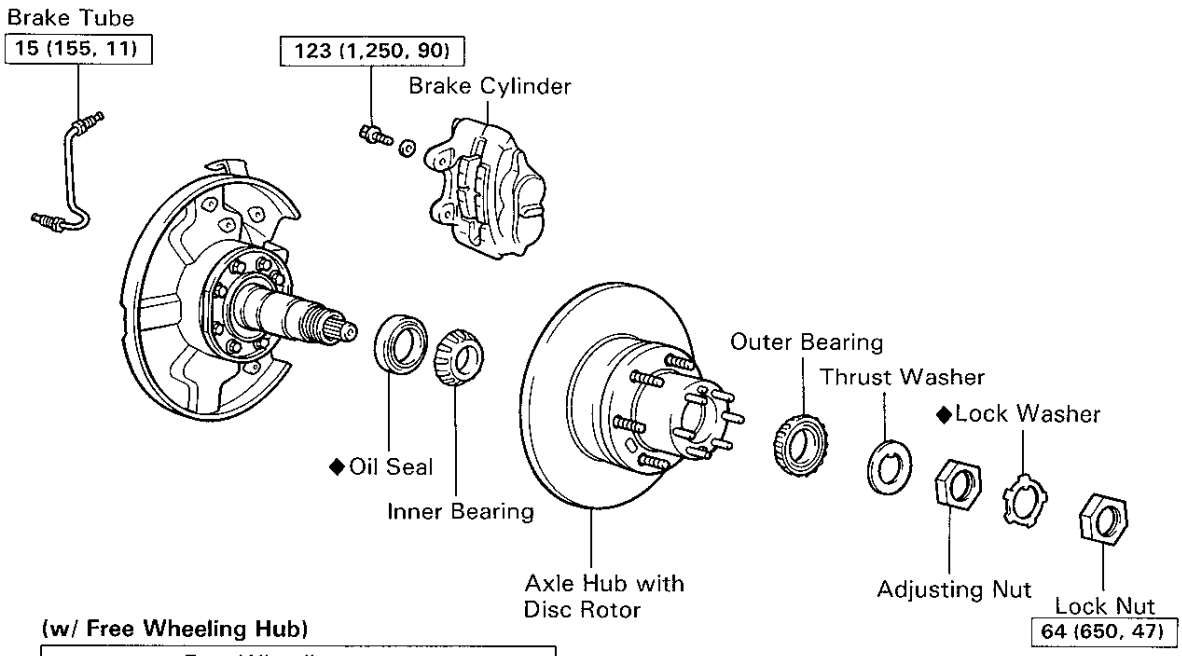
COMPONENTS



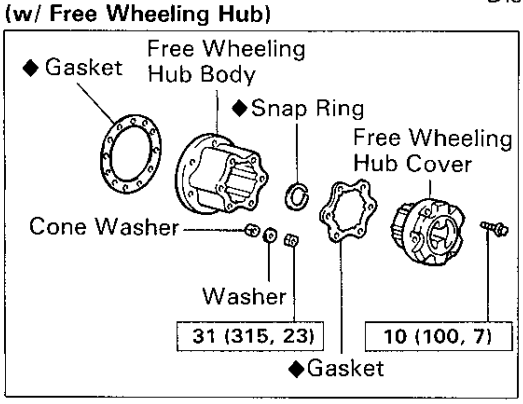
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FRONT AXLE HUB

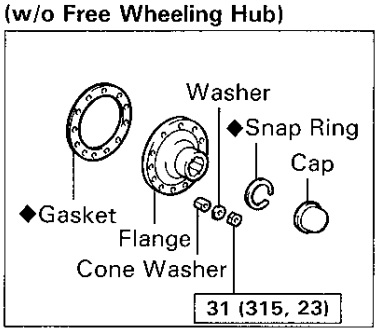
COMPONENTS



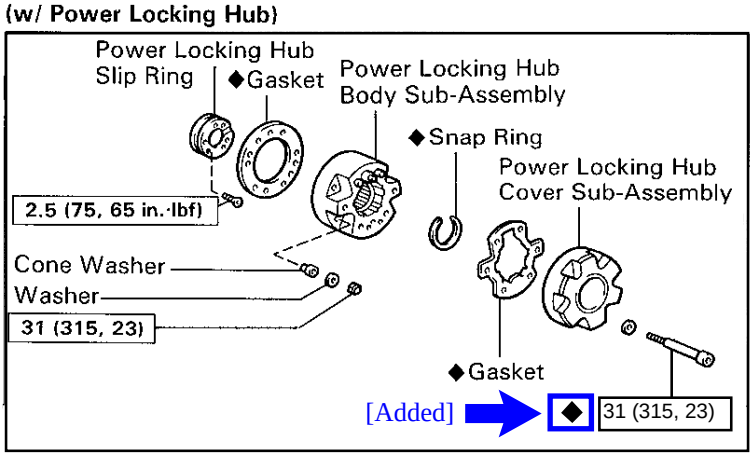
(w/ Free Wheeling Hub)



(w/o Free Wheeling Hub)



(w/ Power Locking Hub)



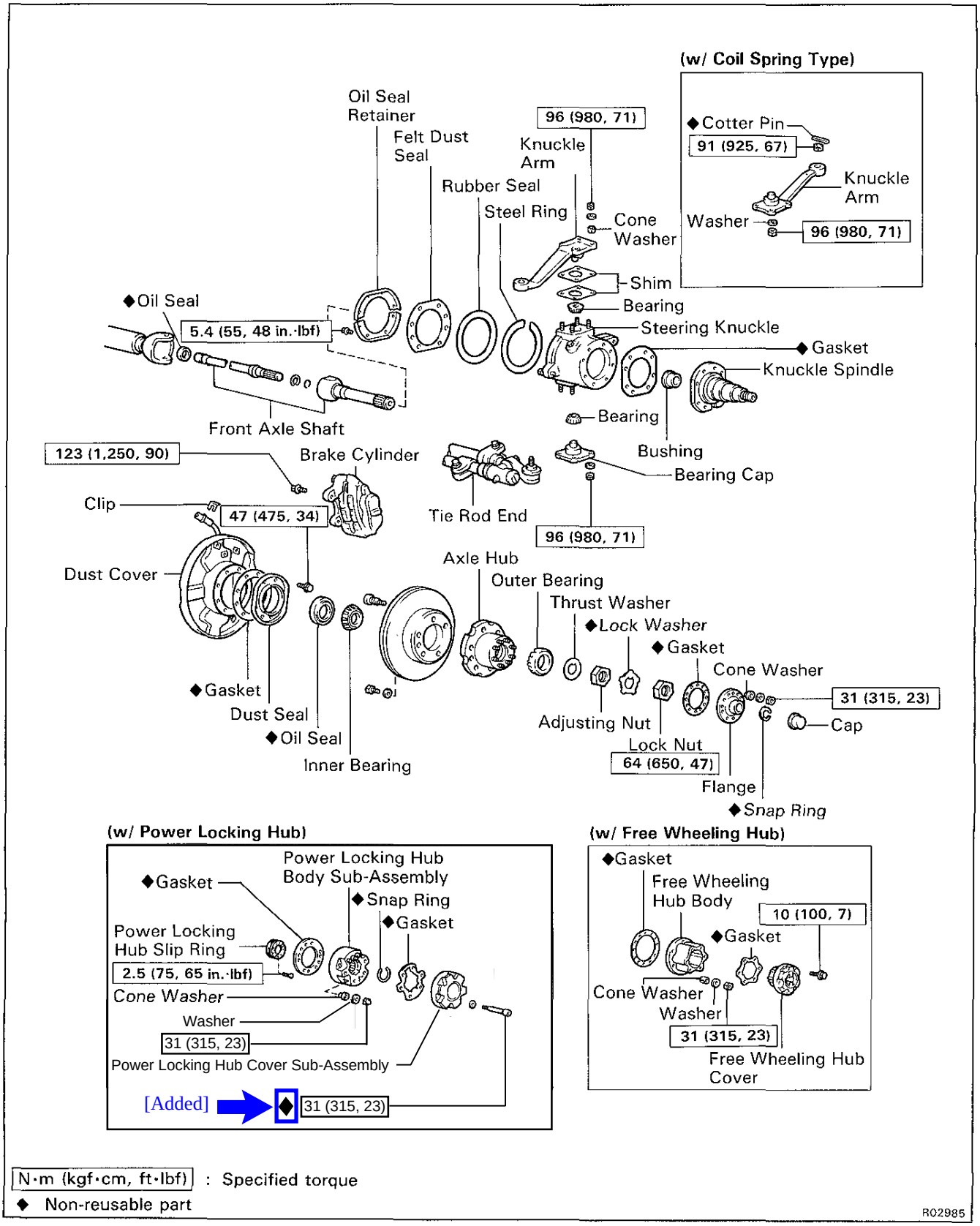
N·m (kgf·cm, ft·lbf) : Specified torque
◆ Non-reusable part

R02986

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STEERING KNUCKLE AND AXLE SHAFT

COMPONENTS



N·m (kgf·cm, ft·lbf) : Specified torque

◆ Non-reusable part

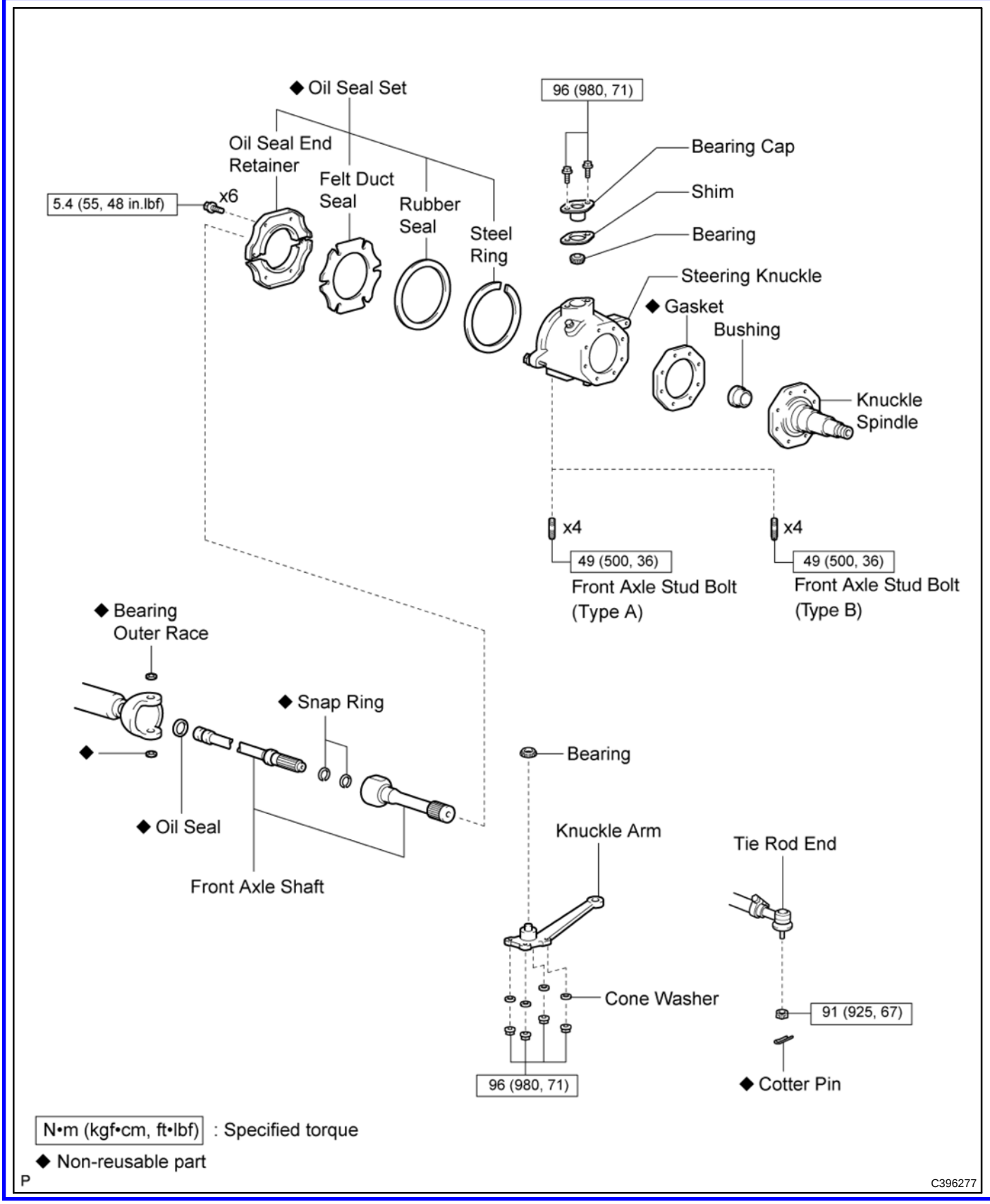
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STEERING KNUCKLE AND AXLE SHAFT

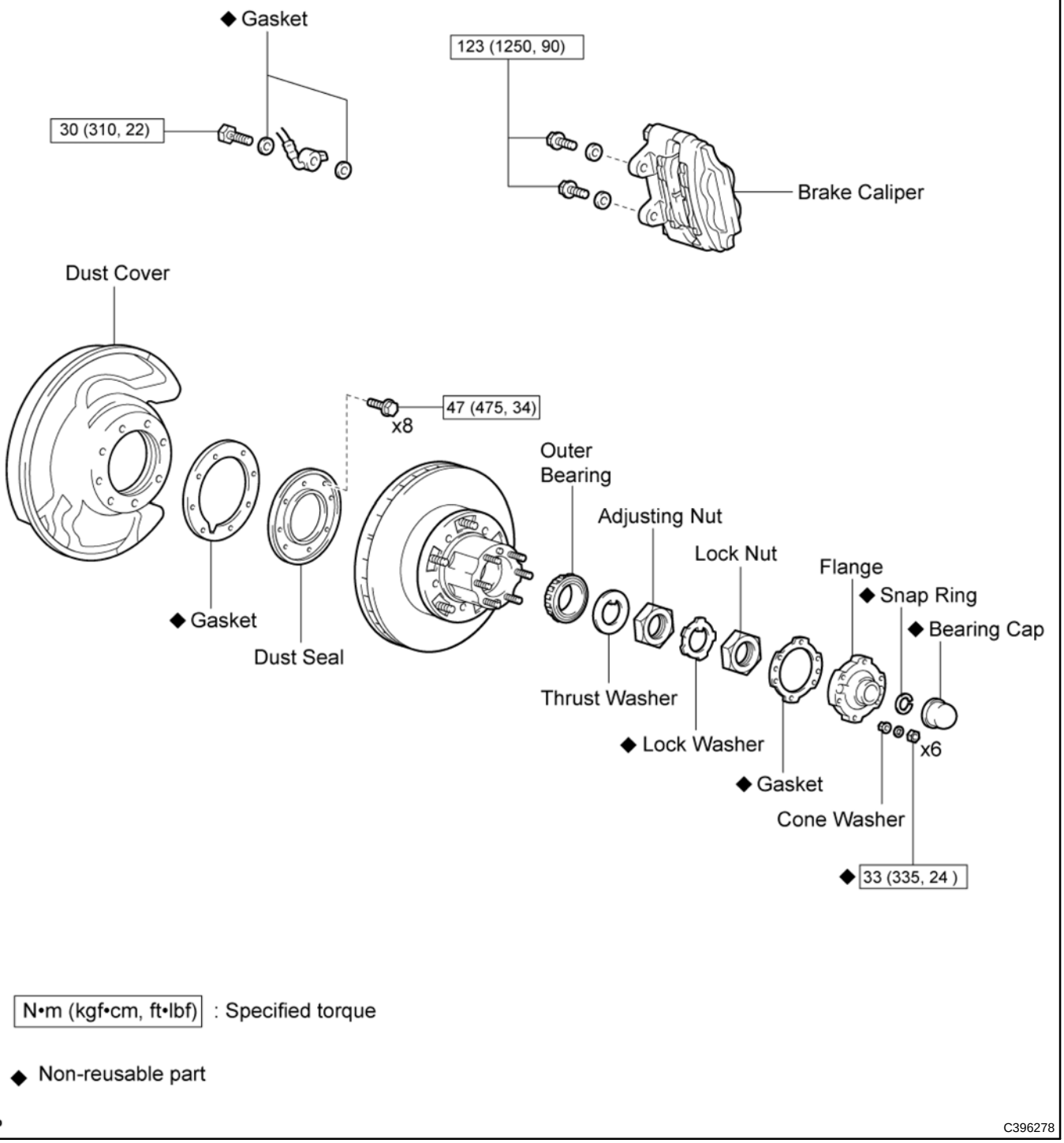
COMPONENTS

SA1AE-02



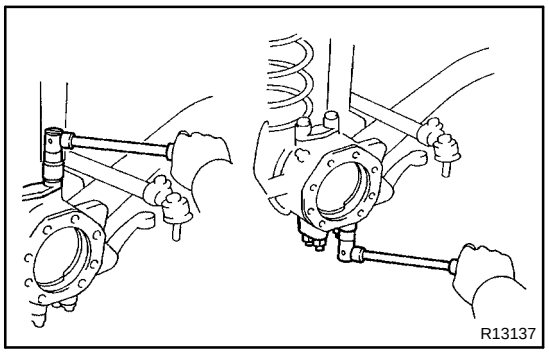
[All Corrected]

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[All Corrected]

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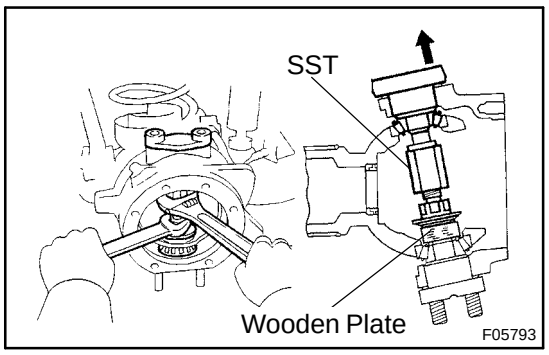


7. REMOVE KNUCKLE ARM AND BEARING CAP

(a) Remove the 2 bolts from the bearing cap.

(b) Remove the 4 nuts from the knuckle arm.

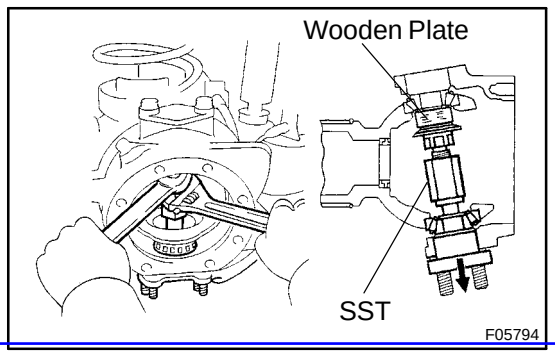
(c) Using a brass bar and hammer, tap on the 4 bolts heads and remove the 4 cone washers.



(d) Using SST and wooden plate, remove the bearing cap and shim from the steering knuckle.
SST 09606–60020

HINT:

- Use the SST without a collar.
- In some cases, to satisfy the standard value of preload, more than one shims are used.



(e) Using SST and wooden plate, remove the knuckle arm from the steering knuckle.
SST 09606–60020

HINT:

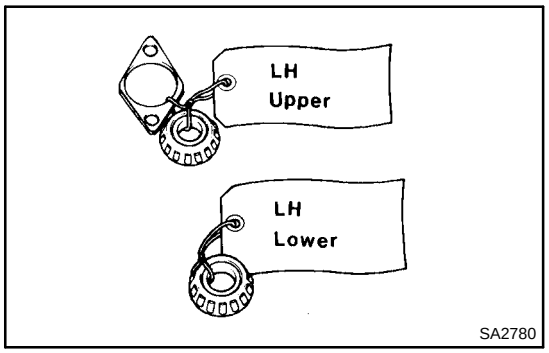
- Use the SST without a collar.
- In some cases, to satisfy the standard value of preload, more than one shims are used.

8. REMOVE OIL SEAL SET [Corrected]

Remove the steel ring, rubber seal and felt dust seal.

9. REMOVE STEERING KNUCKLE AND BEARINGS

(a) Remove the steering knuckle from the front axle housing.



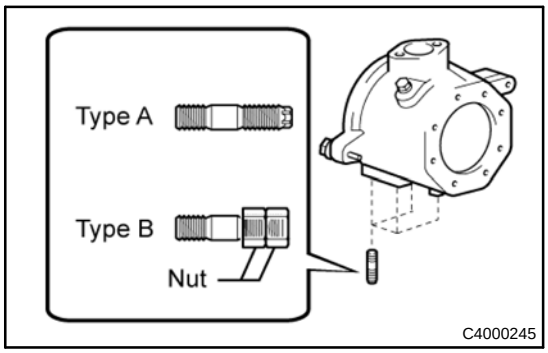
(b) Remove 2 bearings from the steering knuckle.

HINT:

Mark the removed adjusting shim and bearings so as to enable reassembling them to their proper positions.

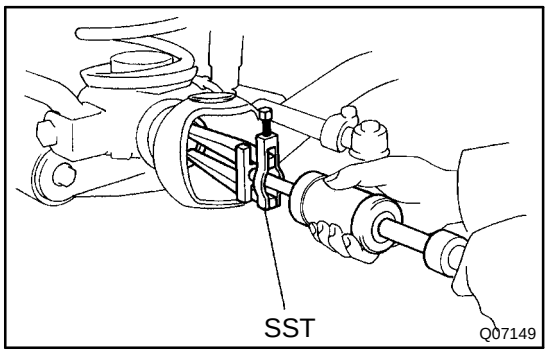
[Corrected]

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(c) Remove the front axle stud bolt (for Type A).
  (1) Using an E12 ”TORX” socket wrench, remove the 4 front axle stud bots from the steering knuckle.

(d) Remove the front axle stud bolt (for Type B).
  (1) Install the 2 nuts (M 12 x P 1.5 mm) to the front axle stud bolt.
  (2) Lock the lower side nut with the upper side nut.
  (3) Rotate the lower side nut and remove the 4 front axle stud bolts.



10. REMOVE OIL SEAL TO AXLE HOUSING

[Corrected]

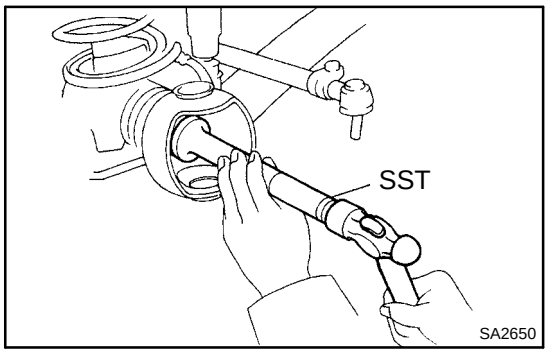
Using SST, remove the oil seal.

SST 09308–00010

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SA1AJ–02

INSTALLATION



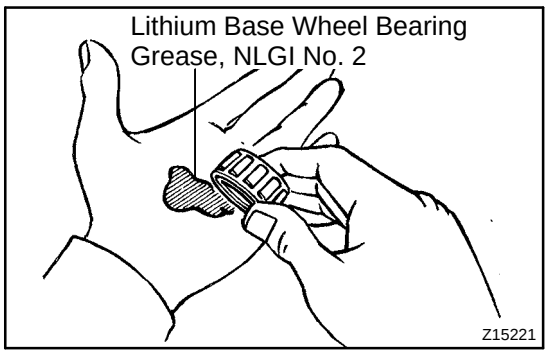
1. INSTALL OIL SEAL TO AXLE HOUSING

Using SST and a hammer, install a new oil seal into the axle housing.

SST 09618–60010

2. TEMPORALLY INSTALL NEW OIL SEAL SET TO AXLE HOUSING

Place the felt dust seal, rubber seal and steel ring to the axle housing.

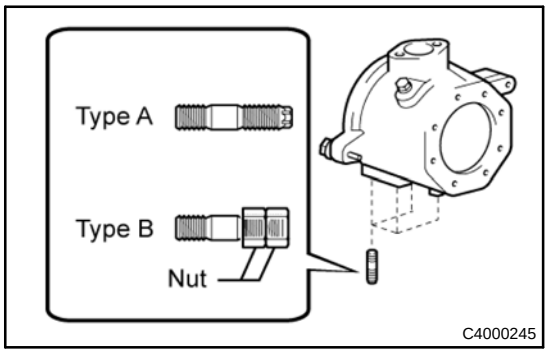


3. PACK BEARINGS WITH LITHIUM BASE WHEEL BEARING GREASE, NLGI NO. 2

(a) Place lithium base wheel bearing grease, NLGI No. 2 on your hand.

(b) Pack grease into the bearing until the grease oozes out from the outer side.

(c) Do the same around the bearing circumference.



4. INSTALL STEERING KNUCKLE AND BEARINGS

(a) Install the front axle stud bolt (for Type A).

(1) Using an E12 ”TORX” socket wrench, install the 4 front axle stud bots to the steering knuckle.

Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

(b) Install the front axle stud bolt (for Type B)

(1) Install the 2 nuts (M 12 x P 1.5 mm) to the front axle stud bolt.

(2) Lock the upper side nut with the lower side nut.

(3) Rotate the upper side nut and install the 4 front axle stud bolts.

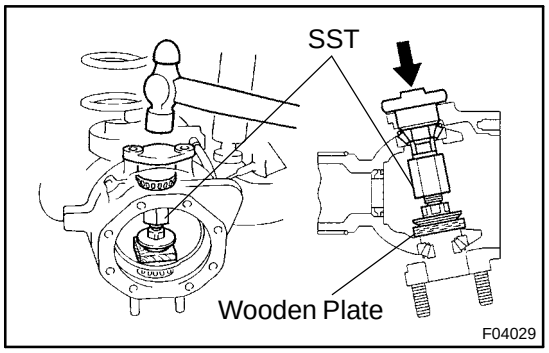
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

(4) Remove the 2 nuts from the front axle stud bolt.

(c) Place the 2 steering knuckle arm bearings in positions on the steering knuckle and front axle housing.

(d) Install the steering knuckle to the front axle housing.

[Corrected]



5. INSTALL KNUCKLE ARM AND BEARING CAP

(a) Using SST and wooden plate, support the upper bearing inner race.

SST 09606–60020

HINT:

Use the SST with a collar.

(b) Install the bearing cap over the used shim.

(c) Using a hammer, install the bearing cap into the bearing inner race.

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