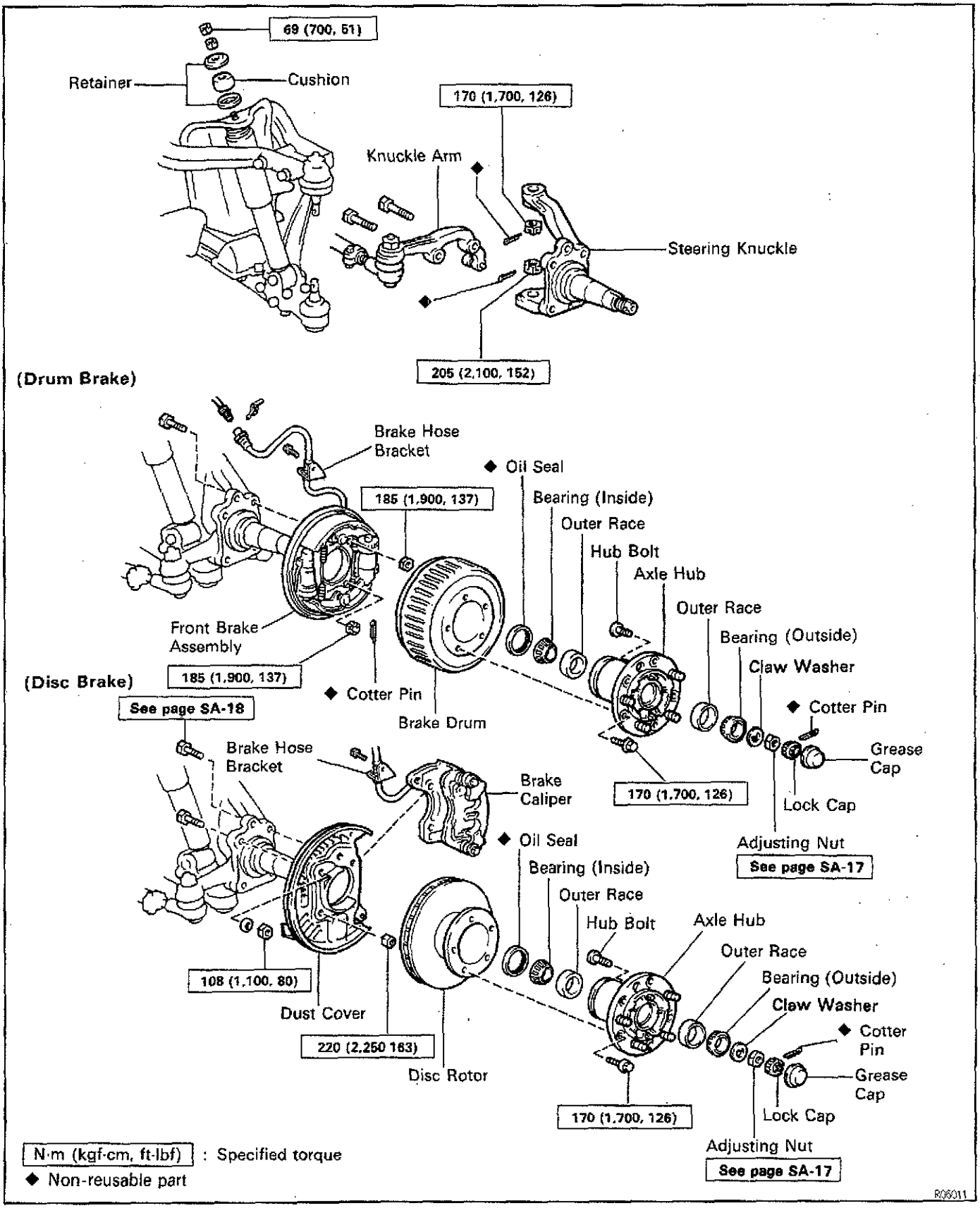
FRONT AXLE HUB AND STEERING KNUCKLE

COMPONENTS

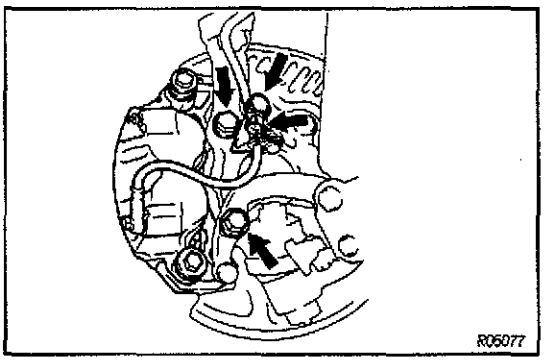
SA0WP-01



8A6WD–01

AXLE HUB AND STEERING KNUCKLE REMOVAL

1. **JACK UP AND SUPPORT FRAME ON STANDS**
2. **REMOVE FRONT WHEEL**



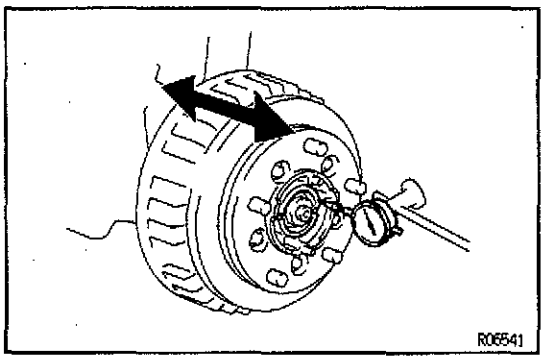
3. **(w/ Disc brake)**
   REMOVE BRAKE CALIPER

(a) Remove the bolt and disconnect the brake hose bracket to the steering knuckle.

(b) Remove the 3 brake caliper set bolts.

(c) Remove the brake caliper and suspend with wire, etc.

HINT: Do not disconnect the brake hose.



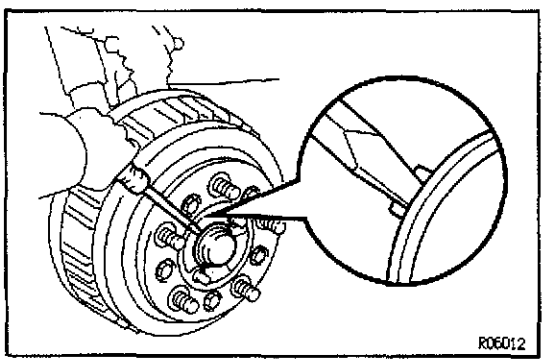
4. **MEASURE AXLE HUB AXIAL PLAY**

Using a dial indicator, measure the axle hub axial play.

Axial play:

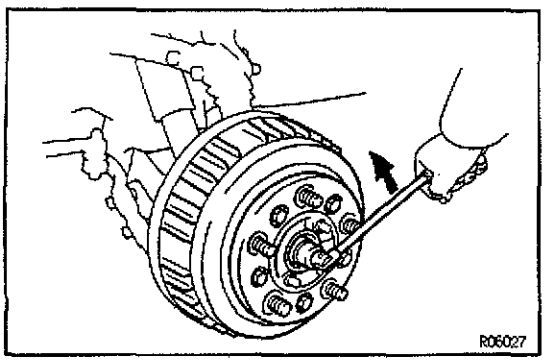
0.05 mm (0.0020 in.) or less

If greater than the specified limit, check the hub bearing preload or replace the hub bearings.

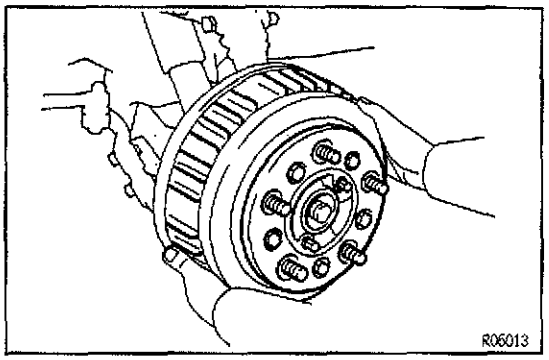


5. **REMOVE AXLE HUB**

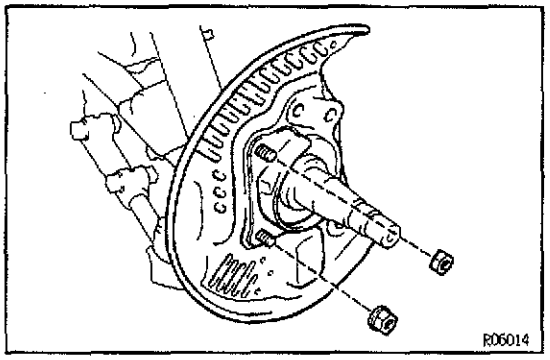
(a) Using a screwdriver, remove the grease cap.



(b) Remove the cotter pin, lock cap and adjusting nut.

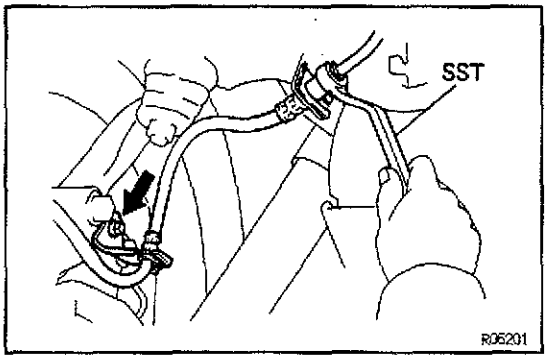


(c) Remove the claw washer, outer bearing and axle hub.
NOTICE: Be careful not to drop the outer bearing.



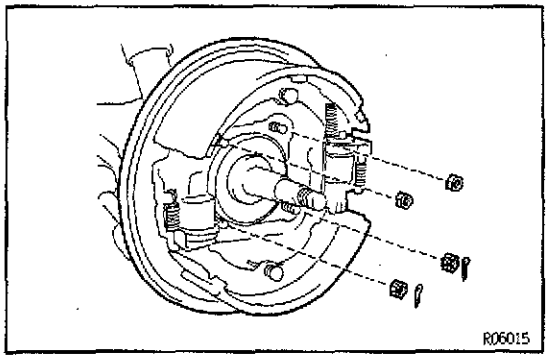
6. (w/ Disc brake)
DISCONNECT KNUCKLE ARM AND REMOVE DUST COVER

(a) Remove the 2 nuts and bolts.
(b) Remove the dust cover.
(c) Disconnect the knuckle arm.

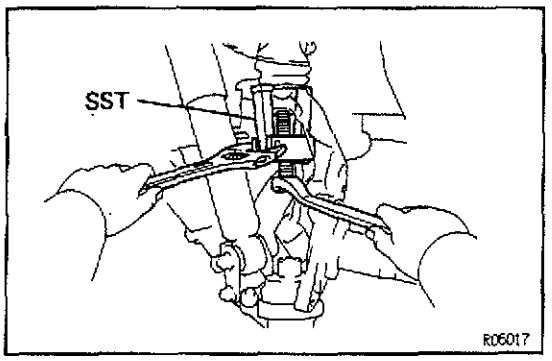


7. (w/ Drum brake)
DISCONNECT KNUCKLE ARM AND REMOVE DRUM BRAKE ASSEMBLY

(a) Using SST, disconnect the brake hose.
SST 09751–36011
(b) Remove the brake hose clip.
(c) Remove the bolt and disconnect the brake hose bracket to the steering knuckle.

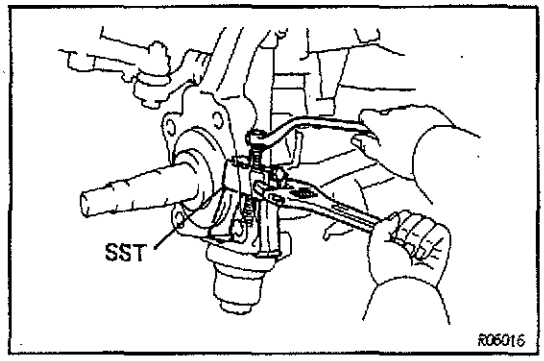


(d) Remove the 2 cotter pins, 4 nuts and bolts.
(e) Remove the front brake assembly.
(f) Disconnect the knuckle arm.

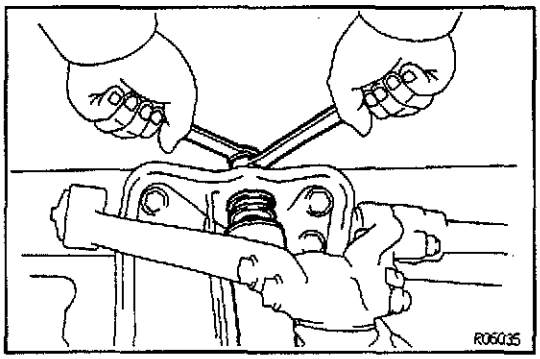


8. DISCONNECT STEERING KNUCKLE

(a) Using a jack, support the lower arm.
(b) Remove the 2 cotter pins from the upper and lower ball joint nuts.
(c) Loosen the upper and lower ball joint nuts.
NOTICE: Only loosen the nuts until SST can be caught, do not remove it.
(d) Using SST, disconnect the steering knuckle from the upper ball joint.
SST 09628–62011



(e) Using SST, disconnect the steering knuckle from the lower ball joint.
SST 09628–62011



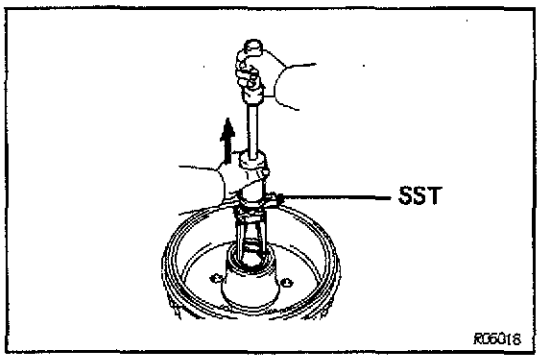
9. DISCONNECT SHOCK ABSORBER AND REMOVE STEERING KNUCKLE

(a) Holding the shock absorber rod, remove the 2 nuts.
(b) Remove the retainers and cushion, and disconnect the shock absorber.
(c) Lower the lower arm.
(d) Remove the 2 nuts and steering knuckle.

SA

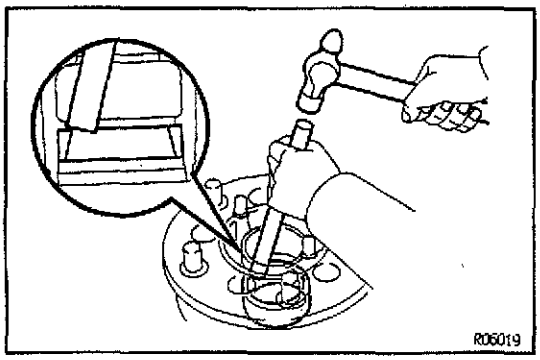
FRONT AXLE HUB DISASSEMBLY

SA0WR–01



1. REMOVE OIL SEAL AND INNER BEARING

(a) Using SST, remove the oil seal.
SST 09308–00010
(b) Remove the inner bearing from the axle hub.

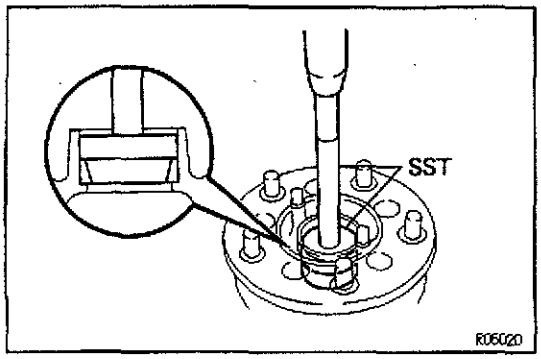


2. REMOVE BEARING OUTER RACE

Using a brass bar and hammer, drive out the bearing outer race.

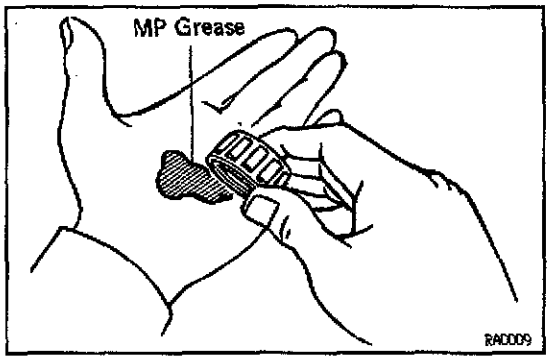
FRONT AXLE HUB ASSEMBLY

SA0WS–01



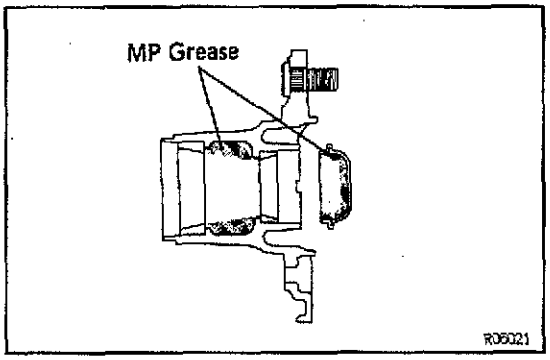
1. INSTALL BEARING OUTER RACE

Using SST and a press, install a new bearing outer race.
(Outside)
SST 09608–20012 (09608–03020, 09608–03060)
(Inside)
SST 09316–60010 (09316–00010, 09316–00060)

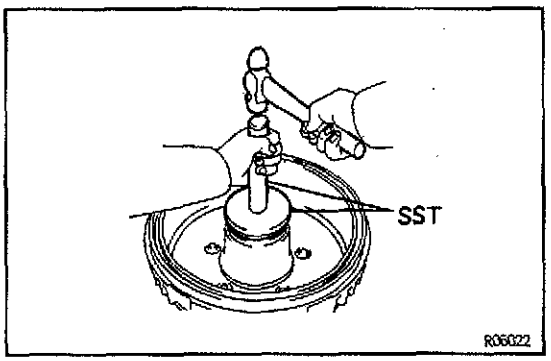


2. INSTALL INNER BEARING AND NEW OIL SEAL

(a) Place MP grease in the palm of your hand.
(b) Pack grease into the bearing, continuing until the grease oozes out from the other side.
(c) Do the same around the bearing circumference.



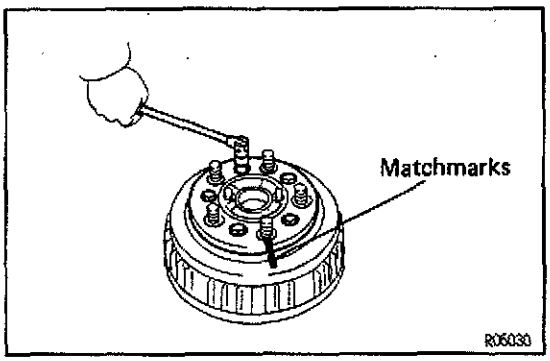
(d) Coat the inside of the axle hub and grease cap with MP grease.



(e) Install the inner bearing.
(f) Using SST and a hammer, drive in a new oil seal into the axle hub.
SST 09218–56030, 09608–20012 (09608–03020)
(g) Coat the lip of the oil seal with MP grease.

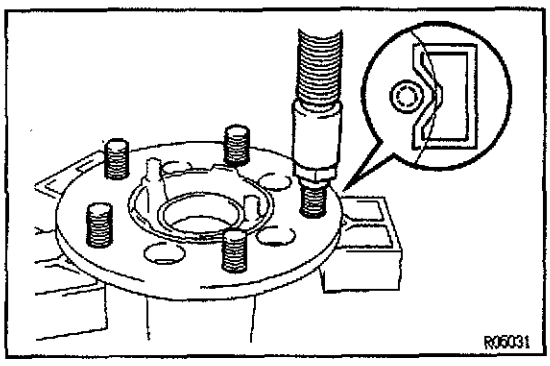
HUB BOLT REPLACEMENT

SADWT–01

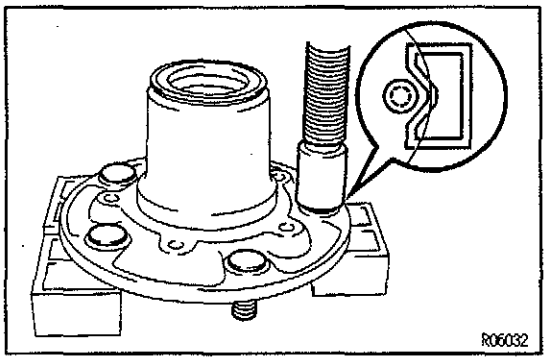


1. REMOVE HUB BOLT

(a) Place the matchmarks on the disc rotor or brake drum and axle hub.
(b) Remove the 5 bolts, and separate the disc rotor or brake drum and axle hub.

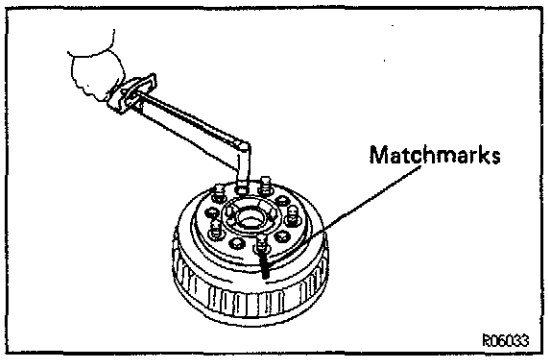


(c) Install the nut to the axle hub bolt.
(d) Using a press, press out the hub bolt.



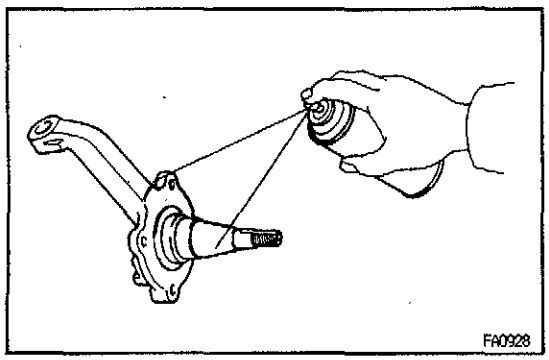
2. INSTALL NEW HUB BOLT

(a) Using a press, press in the new hub bolt.



(b) Align the matchmarks and install the axle hub to the disc rotor or brake drum with the 5 bolts.
Torque: 170 N·m (1,700 kgf·cm, 126 ft·lbf)

SA



STEERING KNUCKLE INSPECTION

SA0WU–01

INSPECT STEERING KNUCKLE

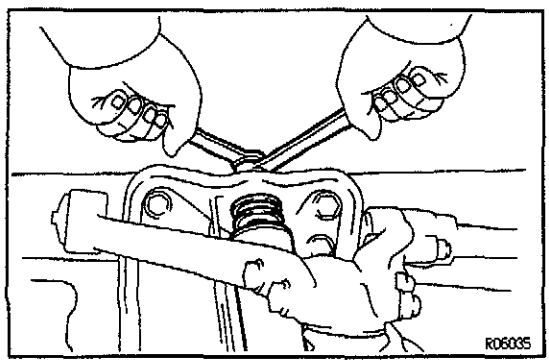
Using a dye penetrant, check the steering knuckle for cracks.
If a crack is found, replace the steering knuckle.

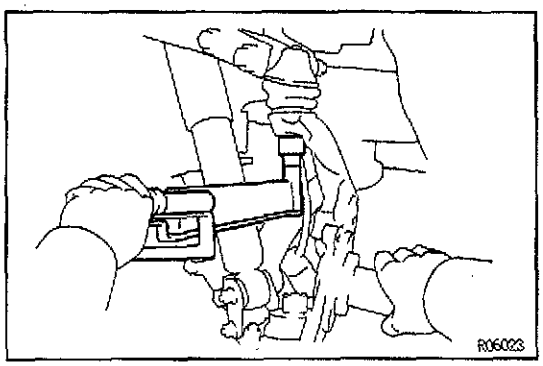
AXLE HUB AND STEERING KNUCKLE INSTALLATION

SA0WV–01

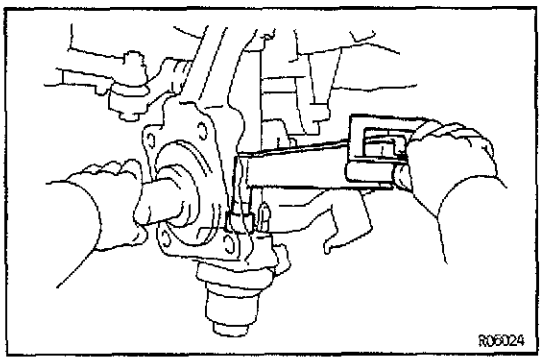
1. INSTALL STEERING KNUCKLE

(a) Connect the steering knuckle to the lower ball joint and temporarily install the nut.
(b) Jack up the lower suspension arm, connect the shock absorber and steering knuckle.
(c) Install the retainers and cushion.
(d) Temporarily connect the steering knuckle with the nut.
(e) Holding the shock absorber rod, connect the shock absorber with the 2 nuts.
Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)



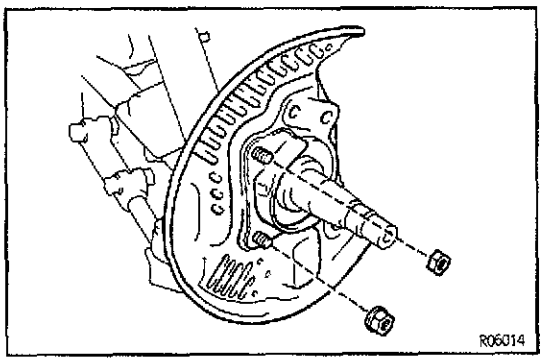


(f) Tighten the upper ball joint nut.
Torque: 170 N·m (1,700 kgf·cm, 126 ft·lbf)



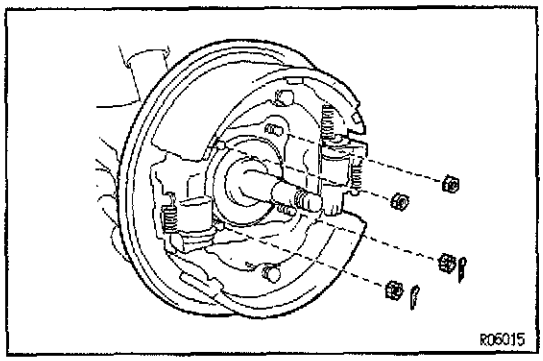
(g) Tighten the lower ball joint nut.
Torque: 205 N·m (2,100 kgf·cm, 152 ft·lbf)

(h) Install 2 new cotter pins.



2. (w/ Disc brake)
INSTALL DUST COVER AND CONNECT KNUCKLE ARM

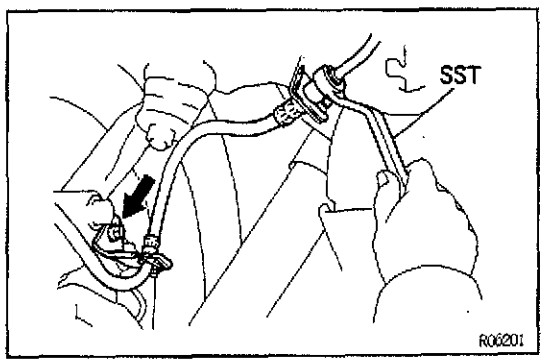
Install the dust cover and connect the knuckle arm to the steering knuckle with the 2 bolts and nuts.
Torque:
Upper side: 108 N·m (1,100 kgf·cm, 80 ft·lbf)
Lower side: 220 N·m (2,250 kgf·cm, 163 ft·lbf)



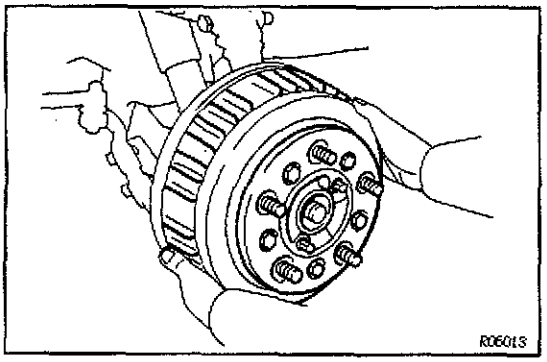
3. (w/ Drum brake)
INSTALL DRUM BRAKE ASSEMBLY AND CONNECT KNUCKLE ARM

(a) Install the drum brake assembly and connect the knuckle arm to the steering knuckle with the 4 bolts and nuts.
Torque: 185 N·m (1,900 kgf·cm, 137 ft·lbf)

(b) Install 2 new cotter pins.



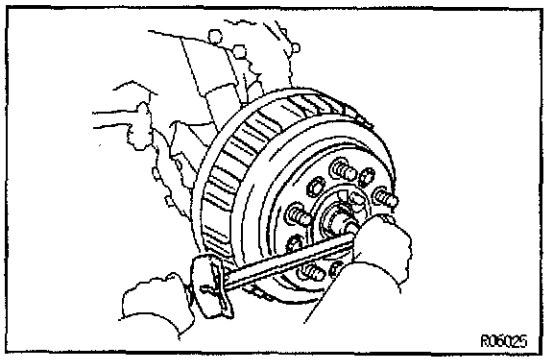
(c) Connect the brake hose bracket with the bolt.
(d) Connect the brake hose with the hose clip.
(e) Using SST, connect the brake hose.
SST 09751–36011



4. INSTALL AXLE HUB ON SPINDLE

(a) Place the axle hub on the spindle.

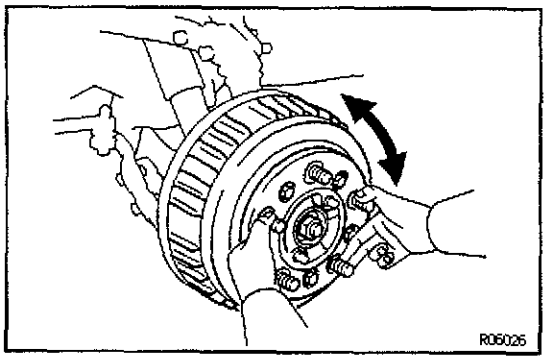
(b) Install the outer bearing and claw washer.



5. ADJUST PRELOAD

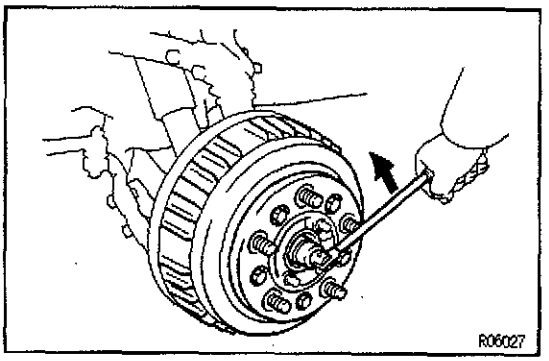
(a) Install and tighten the adjusting nut.
Torque: 34 N·m (350 kgf·cm, 25 ft·lbf)

SA

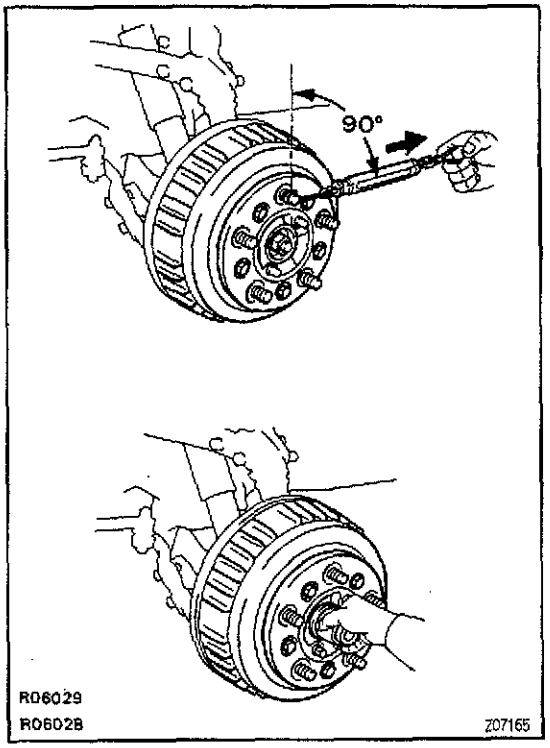


(b) Turn the hub right and left 2 or 3 times to allow the bearings to settle.

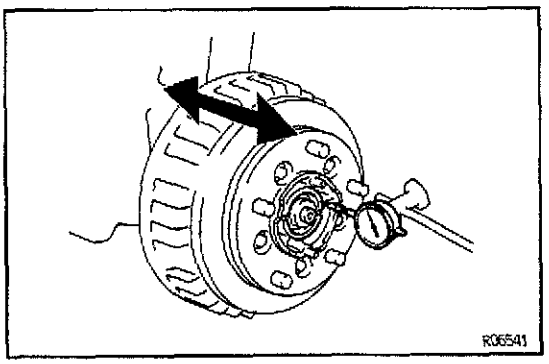
(c) Retighten the adjusting nut.
Torque: 34 N·m (350 kgf·cm, 25 ft·lbf)



(d) Loosen the nut until it can be turned by hand.

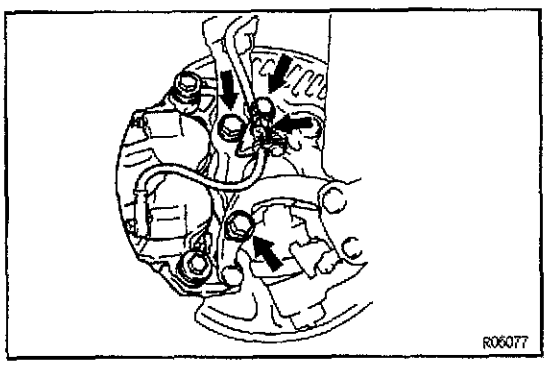


(e) Tighten the adjusting nut by hand and measure the bearing preload with the spring tension gauge.
Preload (rotating):
5 – 19 N (0.5 – 1.9 kgf, 1.1 – 4.2 lbf)



(f) Check the hub axial play.
Axial play:
0.05 mm (0.0020 in.)

6. **INSTALL LOCK CAP, COTTER PIN AND GREASE CAP**
7. **(w/ Drum brake)**
BLEED BRAKE SYSTEM
(See page BR–Section)



8. **(w/ Disc brake)**
INSTALL BRAKE CALIPER

(a) Install the brake caliper with the 3 bolts.
(Steering knuckle side)
Torque: 245 N·m (2,500 kgf·cm, 181 ft·lbf)
(Knuckle arm side)
Torque: 265 N·m (2,700 kgf·cm, 195 ft·lbf)

(b) Connect the brake hose bracket with the bolt.

9. **INSTALL FRONT WHEEL AND LOWER VEHICLE**
Torque: 515 N·m (5,250 kgf·cm, 380 ft·lbf)
10. **CHECK FRONT WHEEL ALIGNMENT**
(See page SA–4)