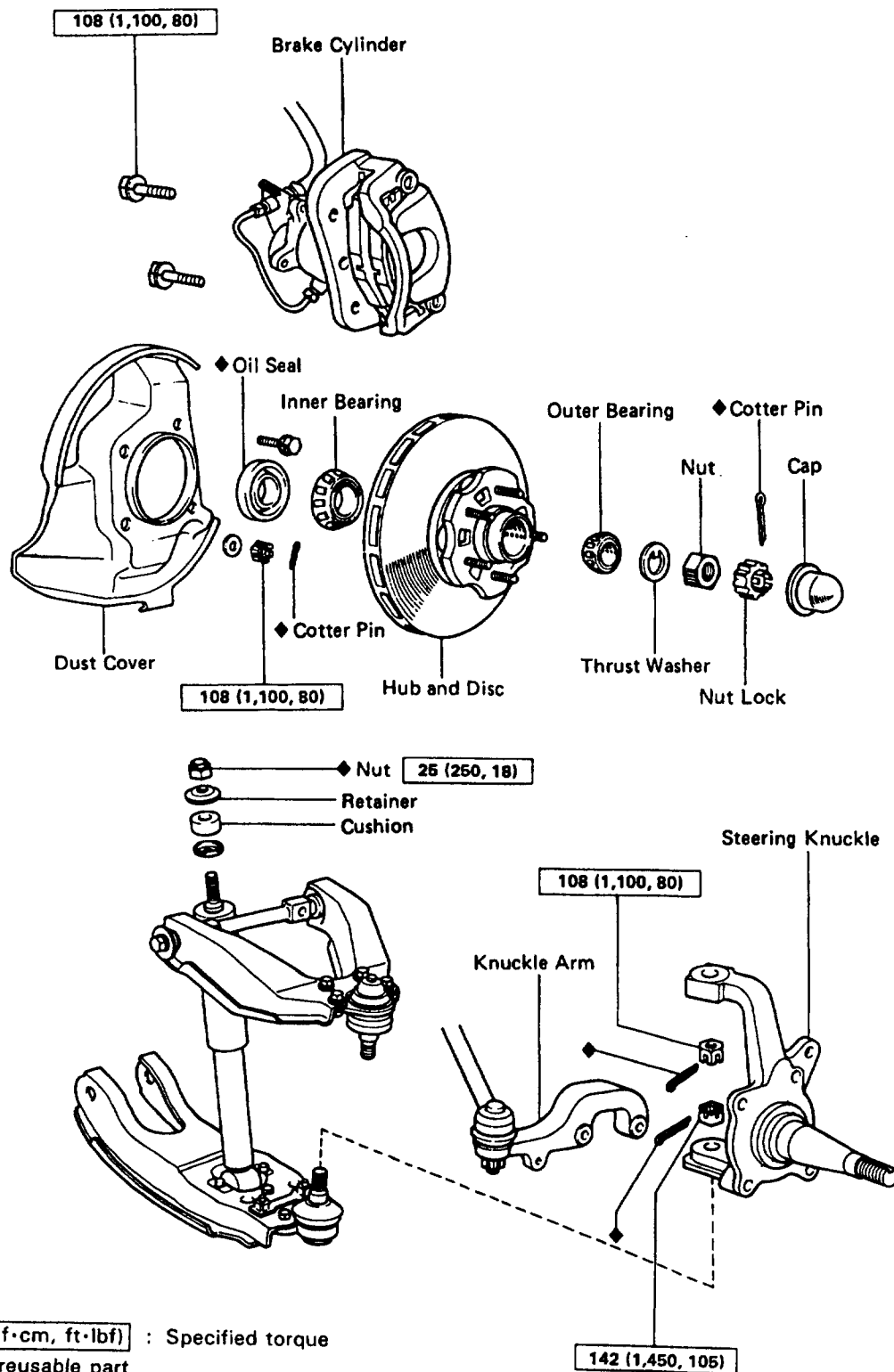
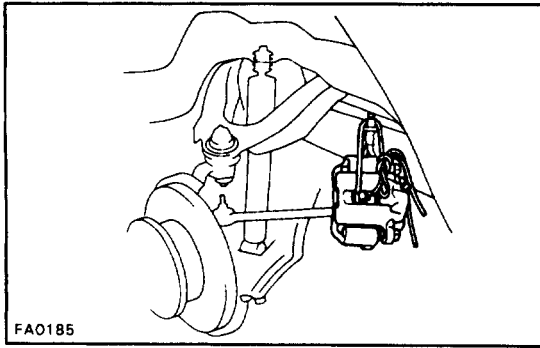


FRONT AXLE HUB AND STEERING KNUCKLE COMPONENTS

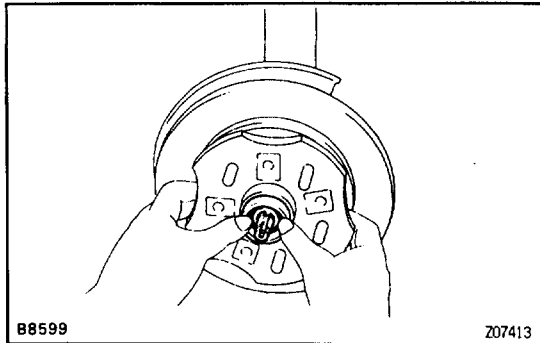




FRONT AXLE HUB AND STEERING KNUCKLE REMOVAL

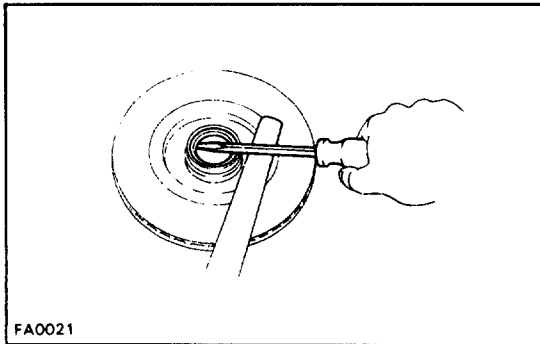
1. **JACK UP VEHICLE AND REMOVE FRONT WHEEL**
2. **REMOVE BRAKE CALIPER AND TORQUE PLATE**
 - (a) Remove the brake caliper and suspend it with wire etc.
 - (b) Remove the torque plate.

HINT: Do not disconnect the brake tube and hose.



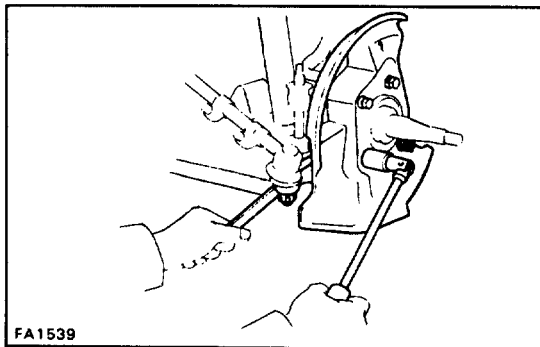
3. **REMOVE AXLE HUB WITH DISC**
 - (a) Remove the cap.
 - (b) Remove the hub and disc together with the outer bearing and thrust washer.

HINT: Be careful not to drop the outer bearing.



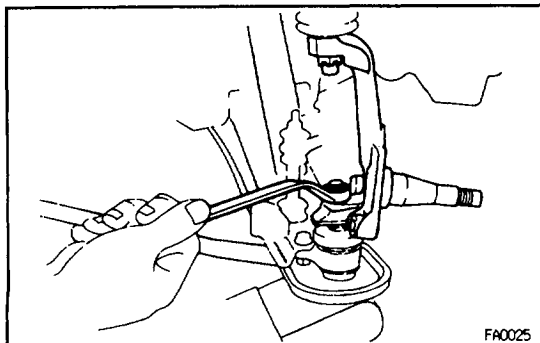
4. **REMOVE OIL SEAL AND INNER BEARING**

- (a) Using a screwdriver, pry out the oil seal.
- (b) Remove the inner bearing from the hub.



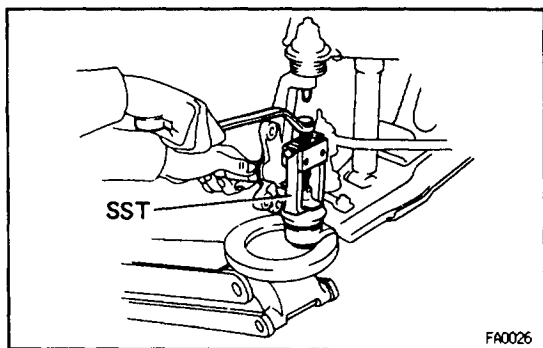
5. **REMOVE DUST COVER**

- (a) Remove the 2 bolts.
- (b) Remove the 2 cotter pins, nuts and bolts and remove the dust cover.
- (c) Remove the knuckle arm from the steering knuckle.

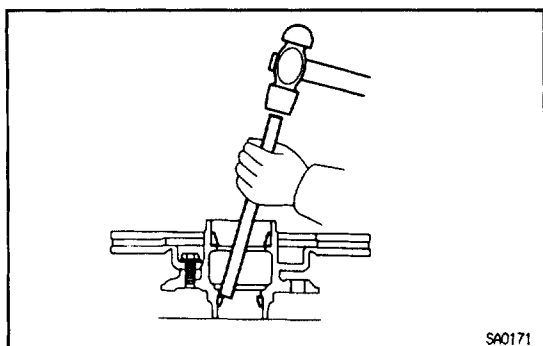


6. **REMOVE STEERING KNUCKLE**

- (a) Support the lower arm with a jack.
- (b) Remove the 2 cotter pins and 2 nuts.



- (c) Using SST, disconnect the steering knuckle from the lower ball joint.
SST 09628-62011
- (d) Using SST, disconnect the steering knuckle from the upper ball joint.
SST 09628-620011
- (e) Remove the steering knuckle.



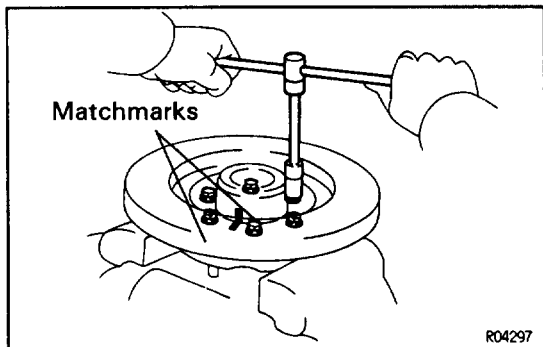
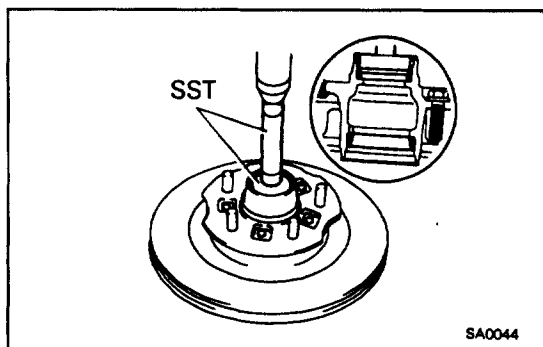
FRONT AXLE HUB BEARING INSPECTION AND REPAIR

1. INSPECT BEARING

Clean the bearings and outer races and inspect them for wear or damage.

2. REPLACE BEARING OUTER RACE

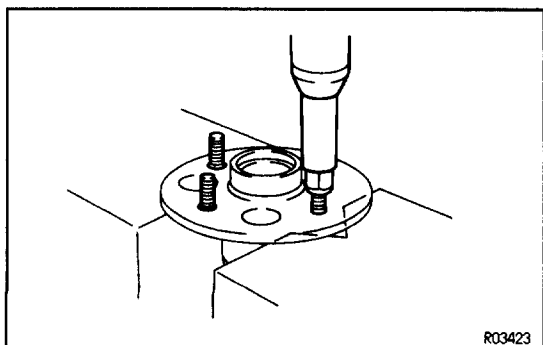
- (a) Using a brass bar and hammer, drive out the bearing outer races.
- (b) Using SST, carefully drive in new bearing outer race.
SST 09608-30012,
 Inside race (09608-04020, 09608-04100)
 Outside race (09608-04020, 09608-04060)



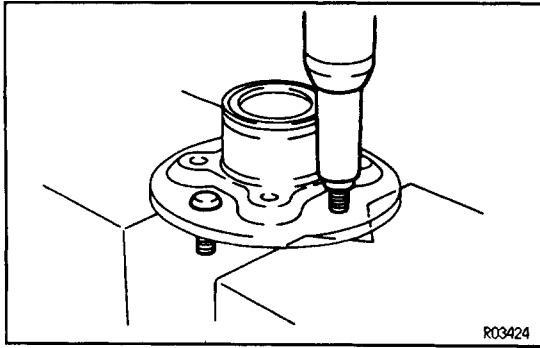
HUB BOLT REPLACEMENT

1. REMOVE HUB BOLT

- (a) Place the matchmarks on the disc rotor and axle hub.
- (b) Remove the 6 bolts, and separate the disc rotor and axle hub.

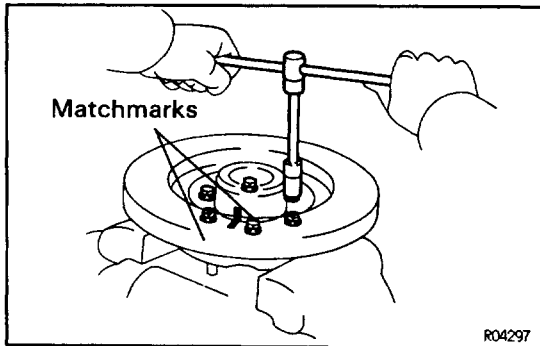


- (c) Install the nut to the axle hub bolt.
- (d) Using an extension bar and press, press out the hub bolt.



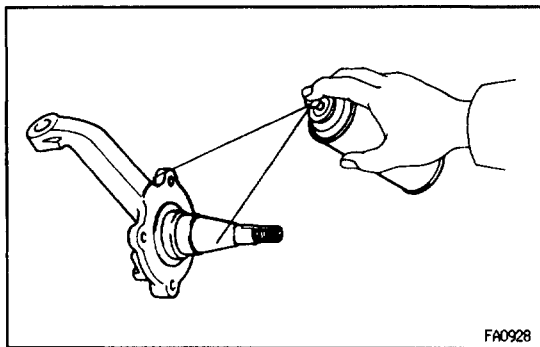
2. INSTALL HUB BOLT

- (a) Using an extension bar and press, press in the hub bolt.



- (b) Align the matchmarks and install the axle hub to the disc rotor with the 6 bolts.

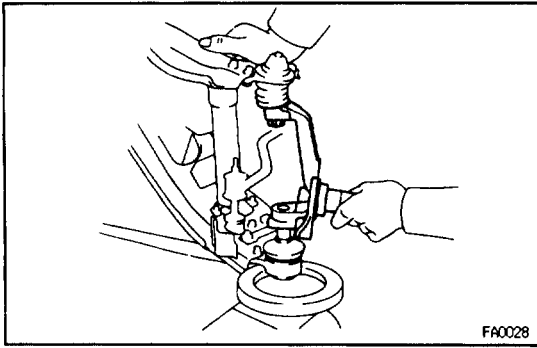
Torque: 64 N·m (650 kgf·cm, 47 ft·lbf)



STEERING KNUCKLE INSPECTION

INSPECT STEERING KNUCKLE

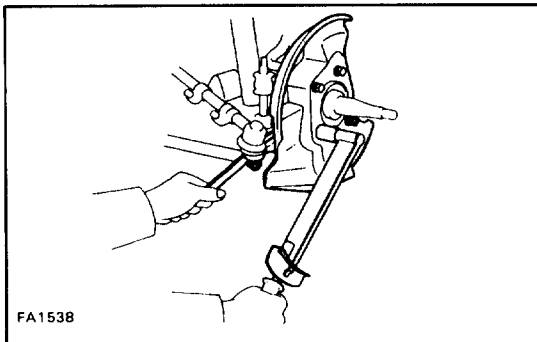
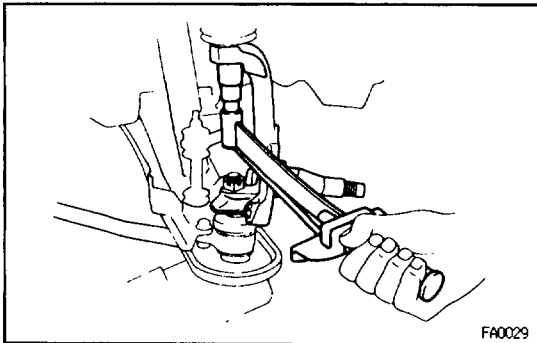
Using a dye penetrant, check the steering knuckle for cracks. If a crack is found, replace the steering knuckle.



FRONT AXLE HUB AND STEERING KNUCKLE INSTALLATION

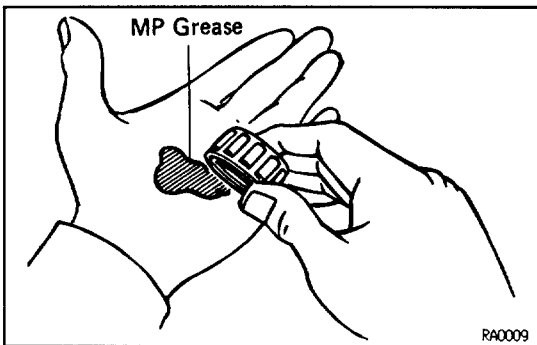
1. INSTALL STEERING KNUCKLE

- (a) Support the lower arm with a jack.
- (b) Install the steering knuckle to the upper ball joint and install the nut.
- (c) Push the upper arm and steering knuckle down and install the steering knuckle to the lower ball joint and install the nut.
- (d) Torque the upper ball joint nut.
Torque: 108 N·m (1,100 kgf·cm, 80 ft.lbf)
- (e) Torque the lower ball joint nut.
Torque: 142 N·m (1,450 kgf·cm, 105 ft.lbf)
- (f) Install new cotter pins.



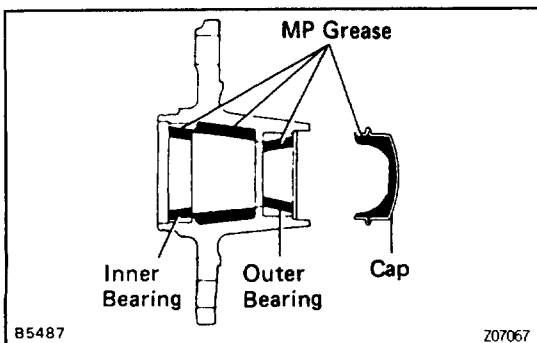
2. INSTALL KNUCKLE ARM AND DUST COVER

- (a) Install the knuckle arm and the dust cover.
- (b) Torque the bolts and nuts.
Torque: 108 N·m (1,100 kgf·cm, 80 ft.lbf)
- (c) Secure the nuts with new cotter pins.

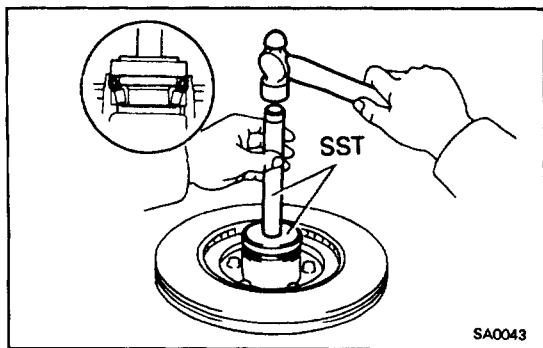


3. PACK BEARINGS WITH MP GREASE

- (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.



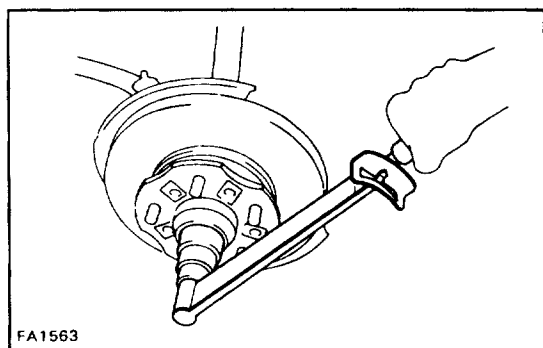
4. COAT INSIDE OF HUB AND CAP WITH MP GREASE

**5. INSTALL INNER BEARING AND OIL SEAL**

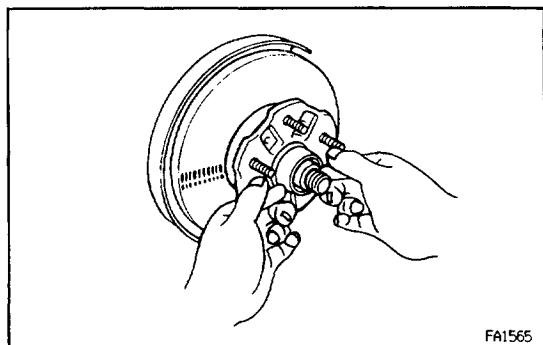
- (a) Place the inner bearing into the hub.
- (b) Using SST and a hammer, drive the oil seal into the hub.
SST 09608-30012 (09608-04020, 09608-04100)
- (c) Coat the oil seal with MP grease.

6. INSTALL AXLE HUB WITH DISC

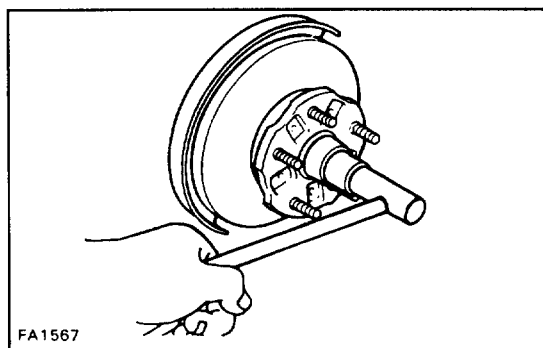
- (a) Place the axle hub on the spindle.
- (b) Install the outer bearing and thrust washer.

**7. ADJUST PRELOAD**

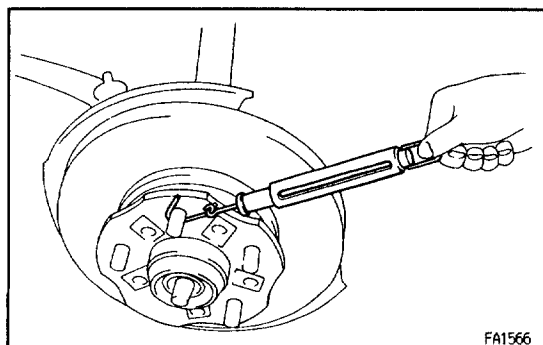
- (a) Install and torque the nut.
Torque: 34 N·m (350 kgf·cm, 25 ft.lbf)



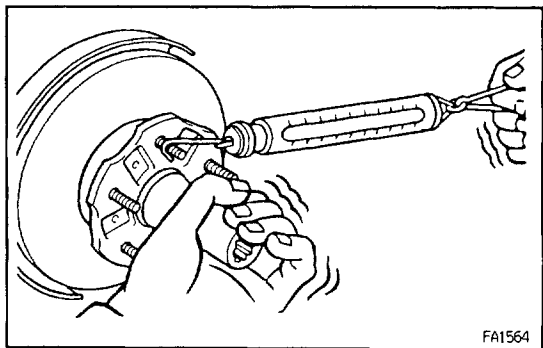
- (b) Snug down the bearing by turning the hub several times.



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



- (d) Using a spring tension gauge, measure and make a note of the frictional force of the oil seal.



- (e) Tighten the nut until the preload is within specification.

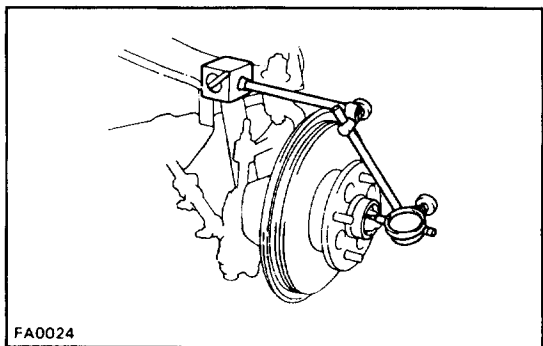
Preload (starting):

$$A - B =$$

5.9 ~ 17.7 N (0.6 ~ 1.8 kgf, 1.3 ~ 4.0 lbf)

A: Spring tension gauge reading

B: Oil seal frictional force



- (f) Measure the hub axial play.

Axial play:

0.05 mm (0.0020 in.) or less

- 8. INSTALL LOCK CAP, COTTER PIN AND GREASE CAP**
- 9. INSTALL BRAKE CALIPER AND TORQUE PLATE ONTO STEERING KNUCKLE**
(See BR-section)
- 10. INSTALL FRONT WHEEL AND LOWER VEHICLE**