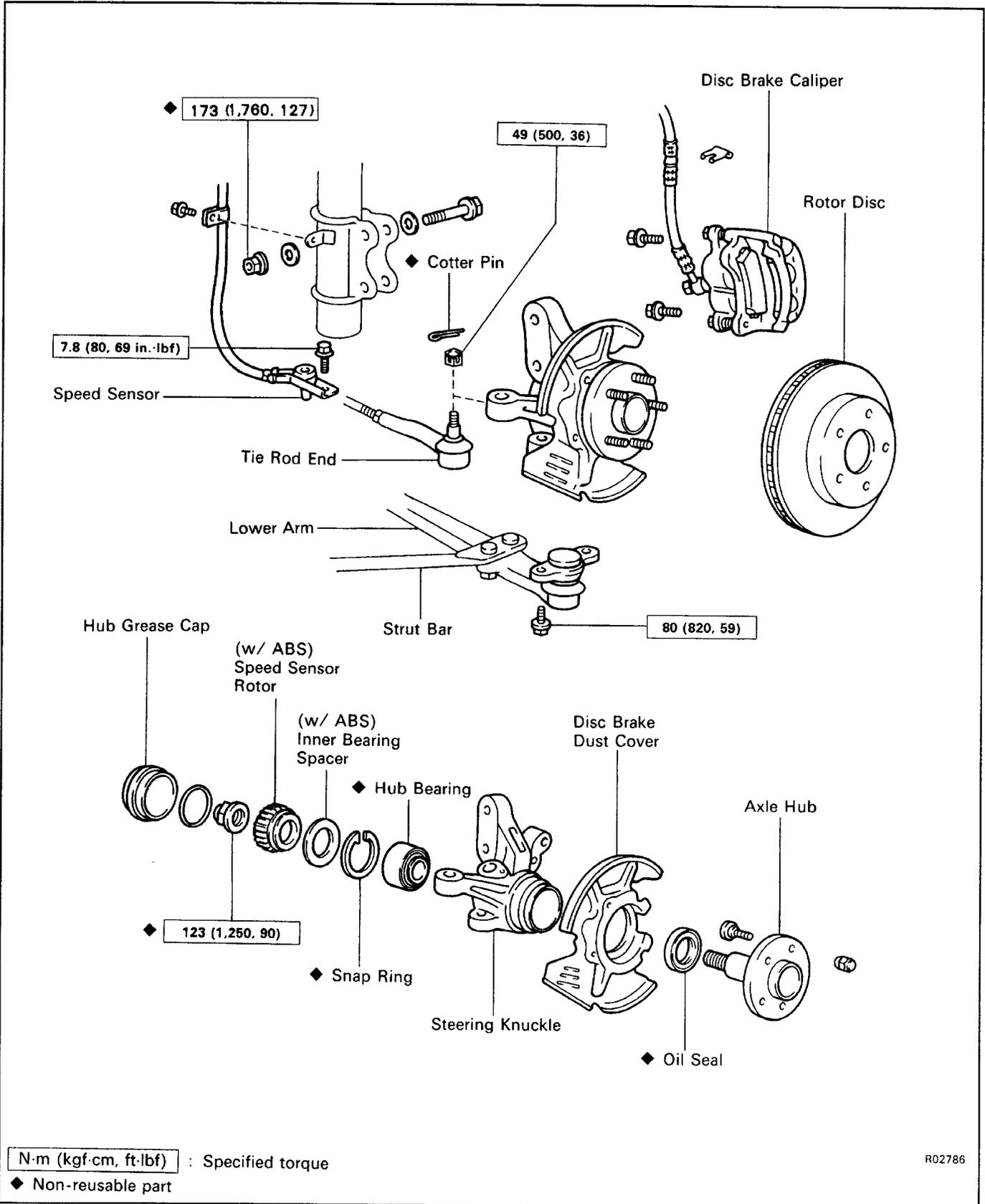
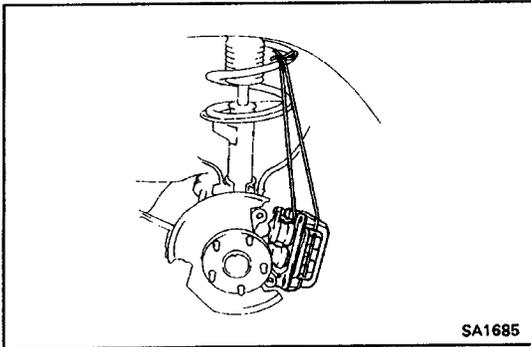


# FRONT AXLE HUB COMPONENTS

SAGAY-01





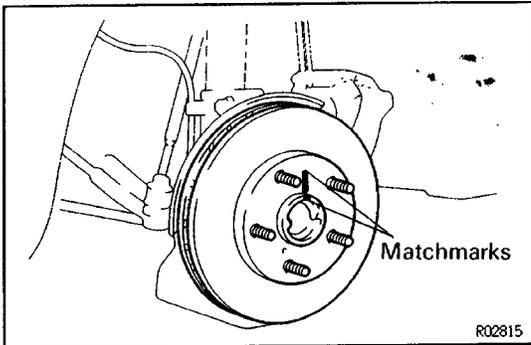
## FRONT AXLE HUB REMOVAL

### 1. JACK UP VEHICLE AND REMOVE FRONT WHEEL

### 2. REMOVE BRAKE CALIPER AND ROTOR DISC

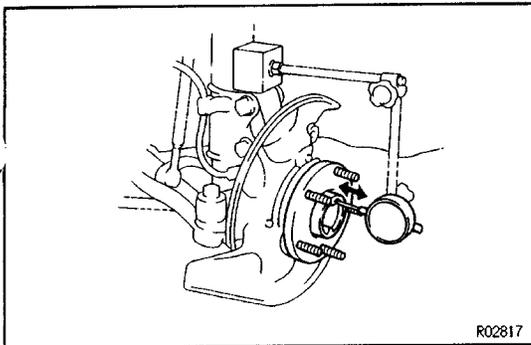
(a) Remove the two bolts.

(b) Remove the brake caliper from the steering knuckle and suspend it with wire.



(c) Remove the rotor disc.

HINT: Before removing the rotor disc, place the matchmarks on the axle hub and rotor disc.

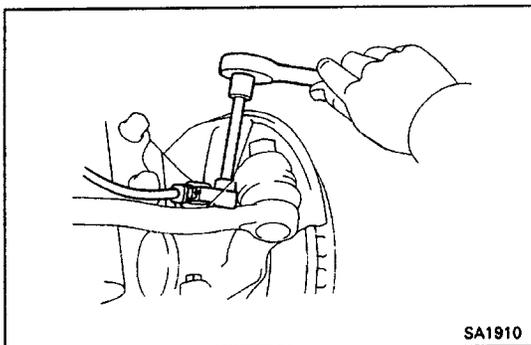


### 3. CHECK BEARING PLAY IN AXIAL DIRECTION

Bearing play:

**0.05 mm (0.0020) or less**

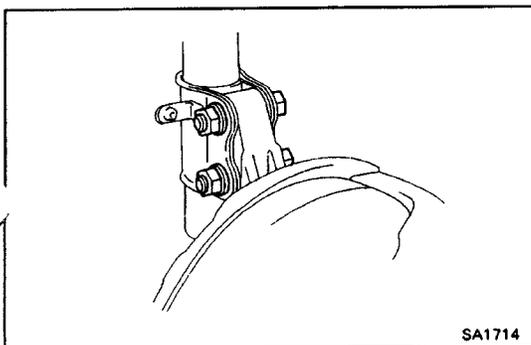
If the bearing play is greater than the maximum, replace the bearing.



### 4. (W/ ABS)

#### REMOVE SPEED SENSOR

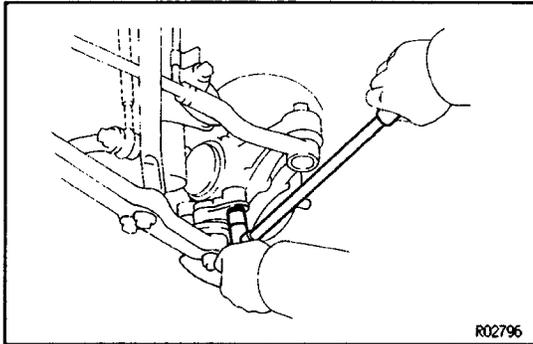
Remove the bolt and pull out the speed sensor.



### 5. LOOSEN BOLTS AND NUTS OF SHOCK ABSORBER LOWER BRACKET

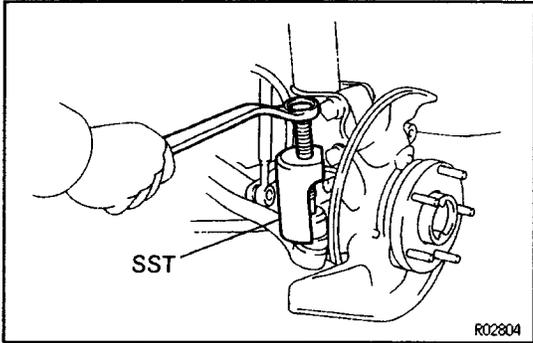
Loosen the nuts and bolts, and remove the washers and nuts.

HINT: Leave the bolts not to drop the steering knuckle assembly.



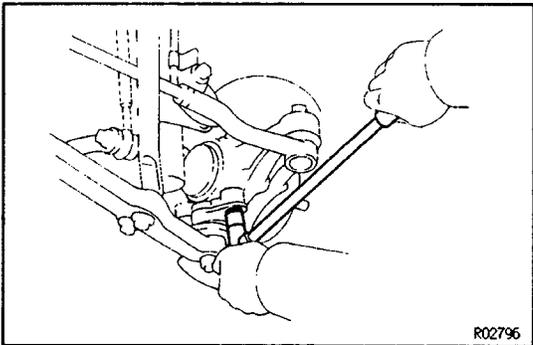
## 6. DISCONNECT LOWER BALL JOINT AND TIE ROD END

- (a) Loosen the two ball joint set bolts.
- (b) Remove the cotter pin and nut from the tie rod end.

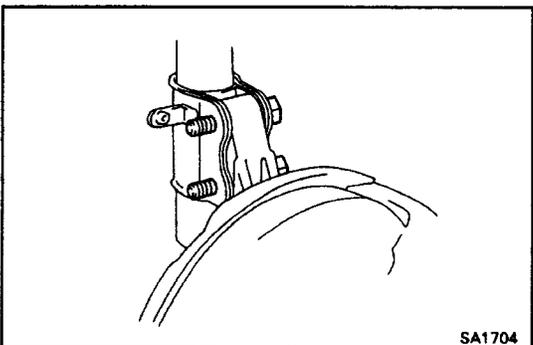


- (c) Using SST, disconnect the tie rod end from the steering knuckle.

SST 09610-20012

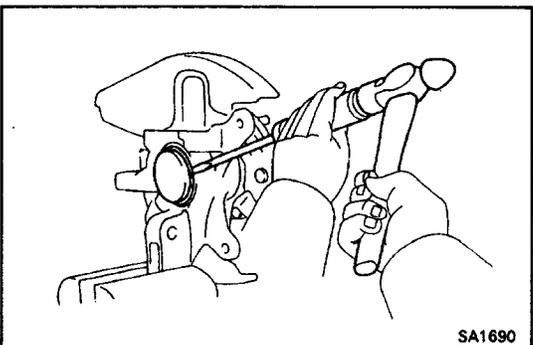


- (d) Remove the two bolts and ball joint from the steering knuckle.



## 7. REMOVE STEERING KNUCKLE WITH AXLE HUB

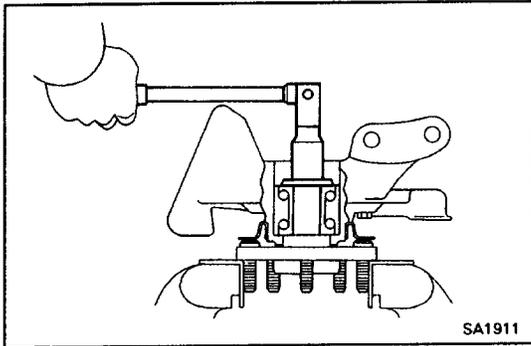
Remove the two bolts and washer-s, and remove the steering knuckle.



## FRONT AXLE HUB DISASSEMBLY

### 1. REMOVE HUB BEARING CAP

- (a) Clamp the steering knuckle in a soft jaw vice.
- (b) Using a screwdriver and hammer, remove the hub bearing cap.

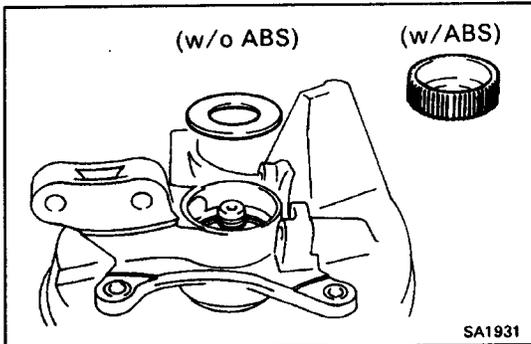


## 2. REMOVE FRONT AXLE HUB LOCK NUT

(a) Clamp the axle hub in soft jaw vice.

HINT: Close vice until it holds hub bolt. Do not tighten further.

(b) Using a hammer and chisel, loosen the staked part of the nut and remove the lock nut.



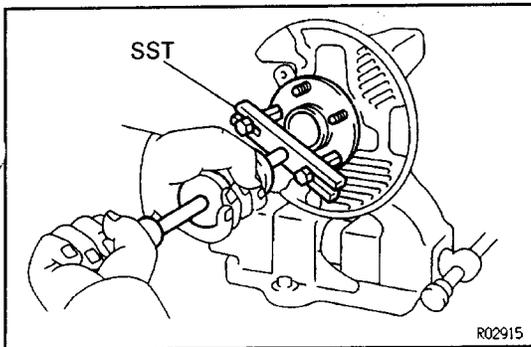
## 3. (w/ ABS)

### REMOVE SPEED SENSOR ROTOR

NOTICE: Take care to not scratch the serrations of speed sensor rotor.

## 4. (w/o ABS)

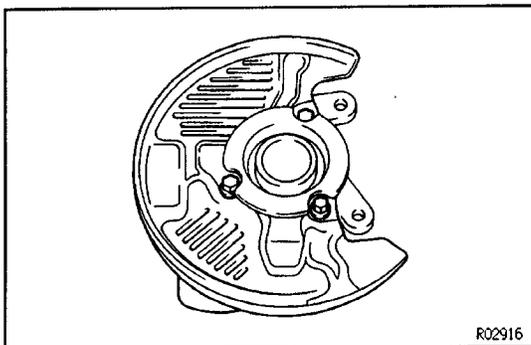
### REMOVE BEARING INNER SPACER



## 5. REMOVE AXLE HUB

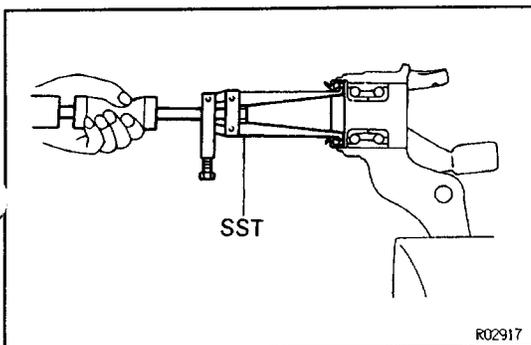
Using SST, remove the axle hub from the steering knuckle.

SST 09520-00031



## 6. REMOVE DISC BRAKE DUST COVER

Using a tor-x driver, remove the four bolts and the dust cover.

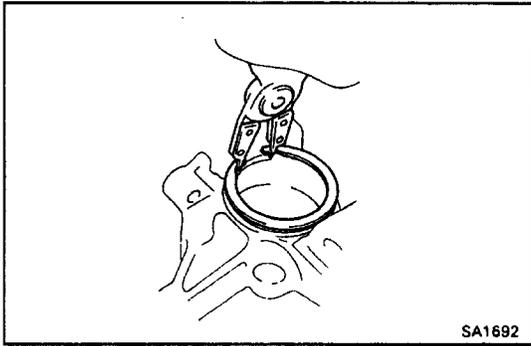


## 7. REMOVE OIL SEAL

(a) Clamp the steering knuckle in a soft jaw vice.

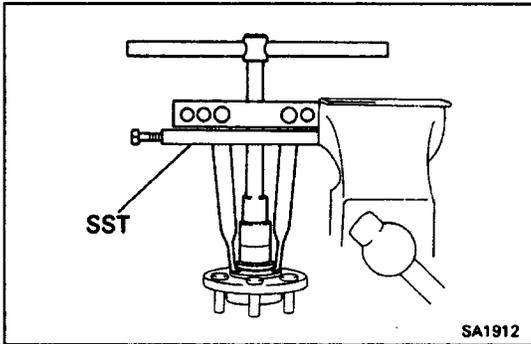
(b) Using SST, remove the oil seal from the rear axle carrier.

SST 09308-00010



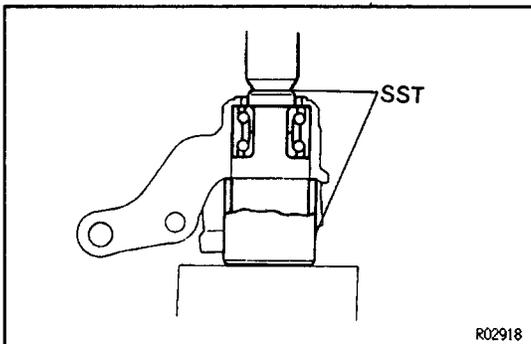
## 8. REMOVE HUB BEARING

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



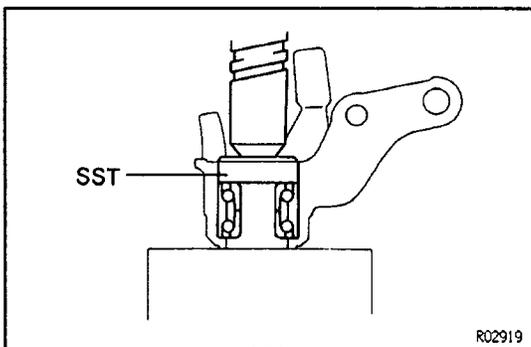
- (b) Using SST, remove the hub bearing inner race (outside) from the axle hub.

SST 09950-20017



- (c) First place the removed inner race (outside) in the bearing.  
 (d) Using SST, drive out the hub bearing from the steering knuckle.

SST 09608-30012 (09608-04060),  
 09649-17010



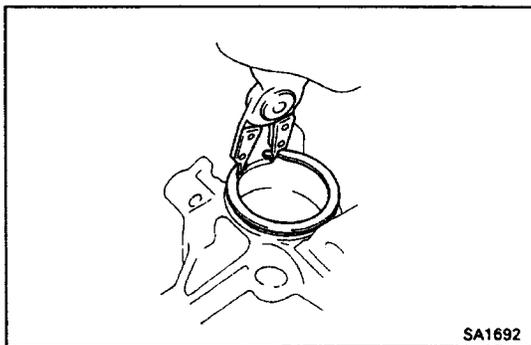
## FRONT AXLE HUB ASSEMBLY

SA081-01

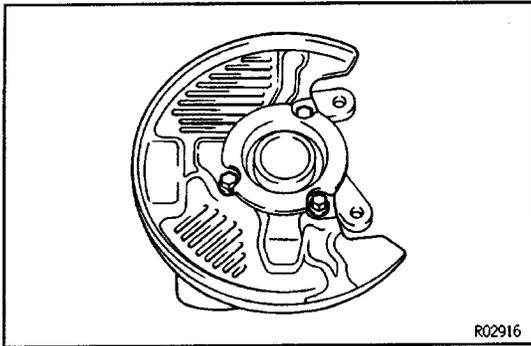
### 1. INSTALL HUB BEARING

- (a) Using SST, install a new axle hub bearing.

SST 09608-30012 (09608-04070)



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



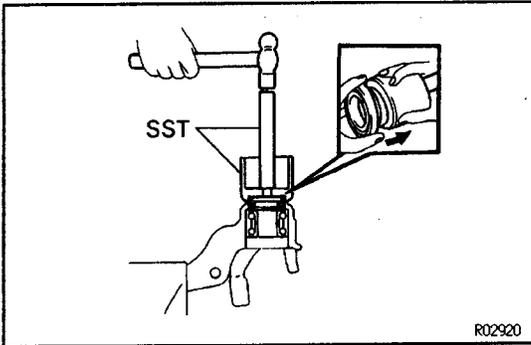
R02916

## 2. INSTALL DISC BRAKE DUST COVER

HINT: Apply liquid sealer or sealant the dust cover and steering knuckle connection before assemble.

- (a) Install the dust cover in place.
- (b) Using a torx driver, install and torque the four bolts.

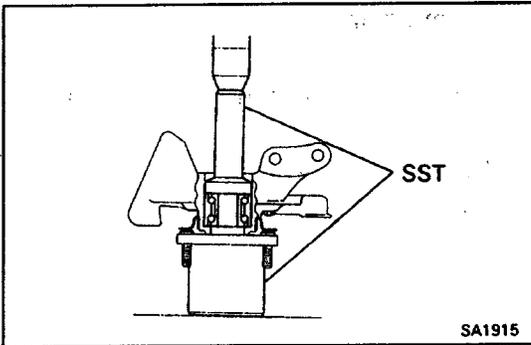
**Torque: 8.3 N-m (85 kgf-cm, 74 ft-lbf)**



R02920

## 3. INSTALL OIL SEAL

- (a) Rotate and insert the side lip of a new oil seal into the SST.
- (b) Using SST, drive the oil seal into the steering knuckle.  
SST 09608-30012 (09608-04020),  
09649-17010
- (c) Apply MP grease to the oil seal lip.



SA1915

## 4. INSTALL AXLE HUB

- (a) Coat the MP grease to the oil seal lip.
- (b) Install the bearing outer and inner race into the axle bearing.
- (c) Using SST, install the axle hub to the steering knuckle.  
SST 09608-34012 (09608-04020)

- (d) (w/ ABS)

Install the speed sensor rotor.

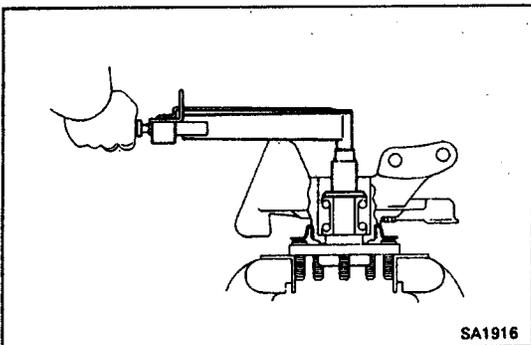
**NOTICE: Take care to not scratch the serrations of speed sensor rotor.**

- (e) (w/o ABS)

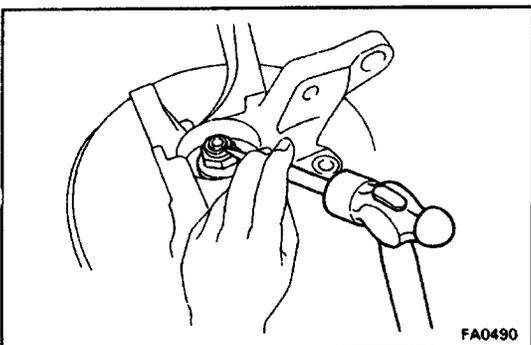
Install the bearing inner spacer.

- (f) Install and torque a new axle hub lock nut.

**Torque: 123 N-m (1,250 kgf-cm, 90 ft-lbf)**

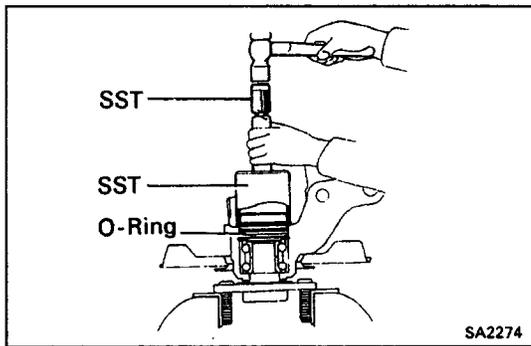


SA1916



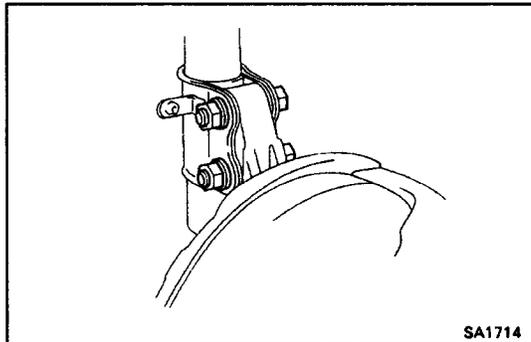
FA0490

- (g) Using a hammer and punch, stake the nut.



### 5. INSTALL HUB GREASE CAP

Using SST, install the hub grease cap.  
SST 09608-30012 (09608-04020),  
09649-17010



## FRONT AXLE HUB INSTALLATION

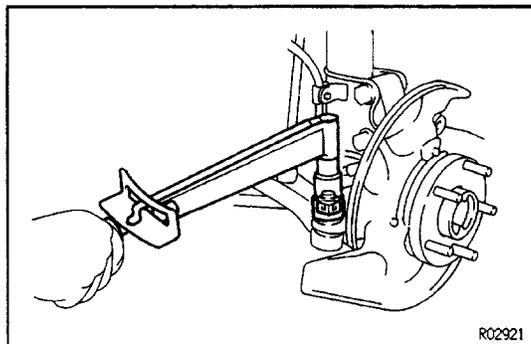
SA082-01

### 1. INSTALL STEERING KNUCKLE TO SHOCK ABSORBER

(a) Connect the steering knuckle to the shock absorber lower bracket with the two washers and bolts.

HINT: Install the two bolts from the rear side.

(b) Temporarily install the washer and new nuts.

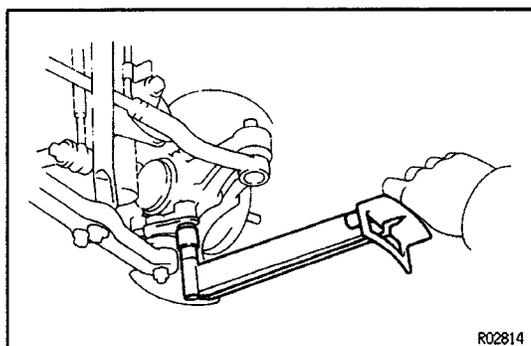


### 2. CONNECT TIE ROD END TO STEERING KNUCKLE

Torque the castle nut and secure it with a new cotter pin.

HINT: If the hole in the ball joint is not aligned with the grooves of the nut, tighten the nut until they match.

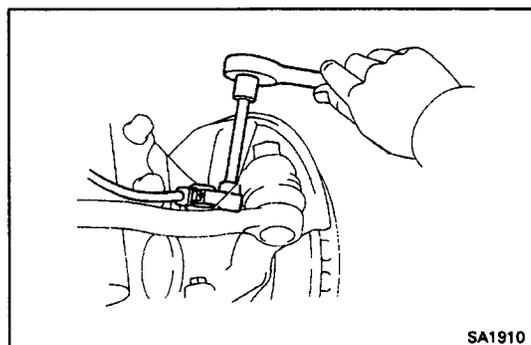
**Torque: 49 N-m (500 kgf-cm, 36 ft-lbf)**



### 3. TORQUE STEERING KNUCKLE TO BALL JOINT

Install and torque the two bolts.

**Torque: 80 N-m (820 kgf-cm, 59 ft-lbf)**



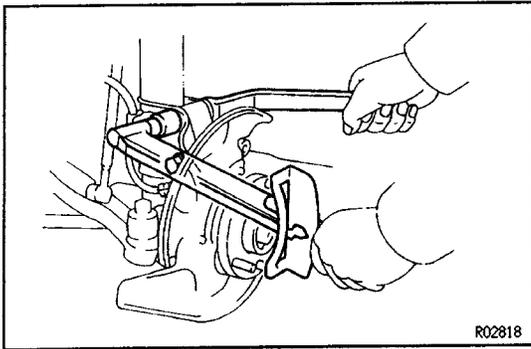
### 4. (w/ ABS)

#### INSTALL SPEED SENSOR

Install the speed sensor in place, then install and torque toe bolt.

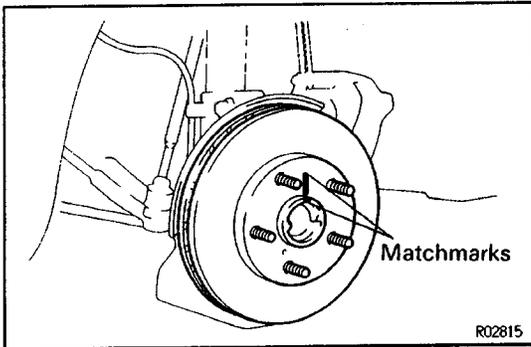
HINT: Before installing, check that there is no ferric chip of foreign material on the sensor tip.

**Torque: 7.8 N-m (80 kgf-cm, 69 in.-lbf)**



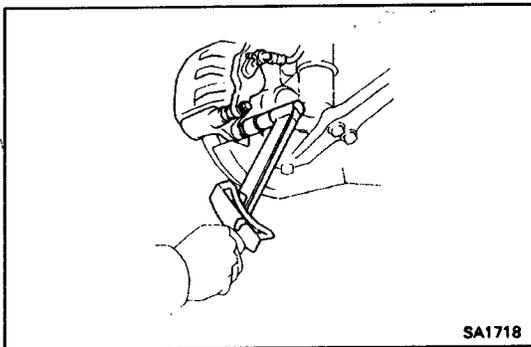
### 5. TORQUE STEERING KNUCKLE TO SHOCK ABSORBER

Torque: 173 N-m (1,760 kgf-cm, 127 ft-lbf)



### 6. INSTALL ROTOR DISC TO AXLE HUB

HINT: Before removing the rotor disc, place the matchmarks on the axle hub and rotor disc.



### 7. INSTALL DISC BRAKE CALIPER TO STEERING KNUCKLE

Install and torque the two bolts.

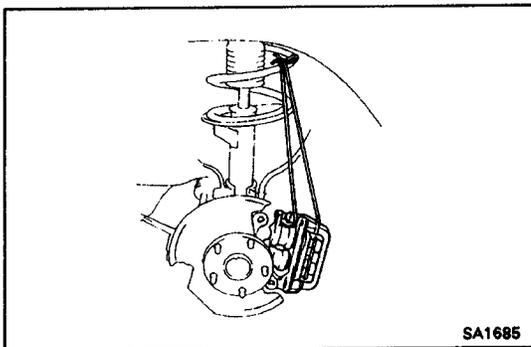
Torque: 88 N-m (900 kgf-cm, 66 ft-lbf)

### 8. INSTALL FRONT WHEEL AND LOWER VEHICLE

Torque: 103 N-m (1,050 kgf-cm, 76 ft-lbf)

### 9. CHECK FRONT WHEEL ALIGNMENT

(See page SA-3)



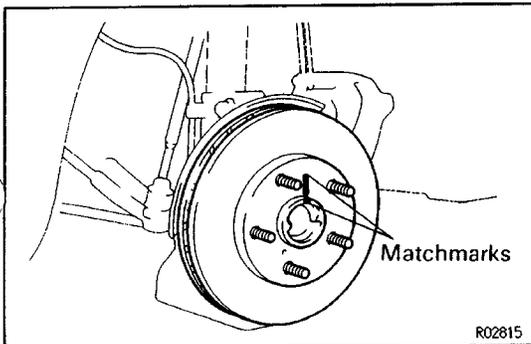
## FRONT AXLE HUB BOLT REPLACEMENT

### 1. JACK UP VEHICLE AND REMOVE FRONT WHEEL

### 2. REMOVE BRAKE CALIPER

(a) Remove the two bolts.

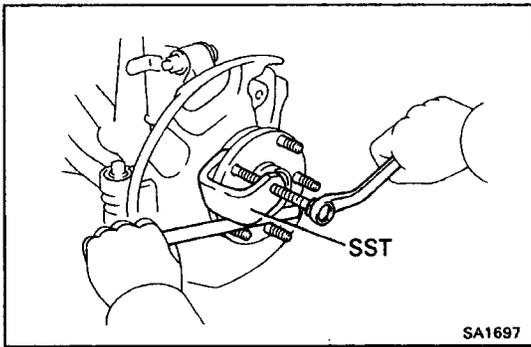
(b) Remove the brake caliper from the steering knuckle and suspend it with a wire.



### 3. REMOVE ROTOR DISC

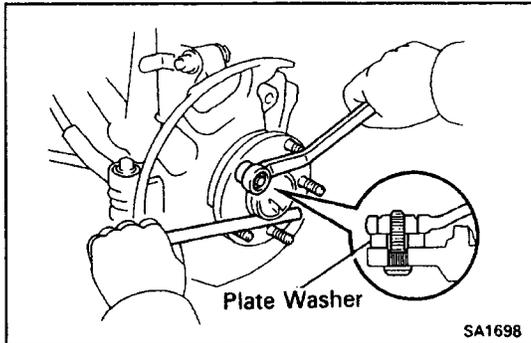
Remove the rotor disc.

HINT: Before removing the rotor disc, place the matchmarks on the axle hub and rotor disc.



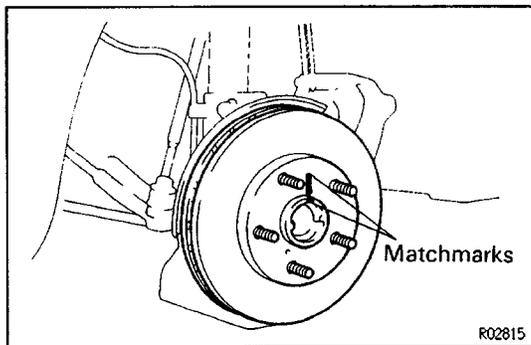
#### 4. REMOVE FRONT AXLE HUB BOLT

- (a) Align the disc brake dust cover cutting portion and axle hub bolt.
- (b) Using SST, remove the axle hub bolt.  
SST 09628-1001 1



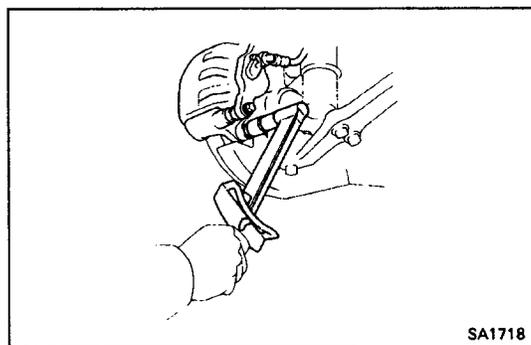
#### 5. INSTALL FRONT AXLE HUB BOLT

- (a) Install a new hub bolt from the backing plate side.
- (b) Install the suitable washer and nut.
- (c) Tighten the nut, while holding the axle hub.



#### 6. INSTALL ROTOR DISC

Align the matchmarks and install the rotor disc to the axle hub.



#### 7. INSTALL DISC BRAKE CALIPER TO STEERING KNUCKLE

Install and torque the two bolts.

Torque: 59 N-m (600 kgf-cm, 43 ft-lbf)

#### 8. INSTALL FRONT WHEEL AND LOWER VEHICLE

Torque: 103 N-m (1,050 kgf-cm, 76 ft-lbf)