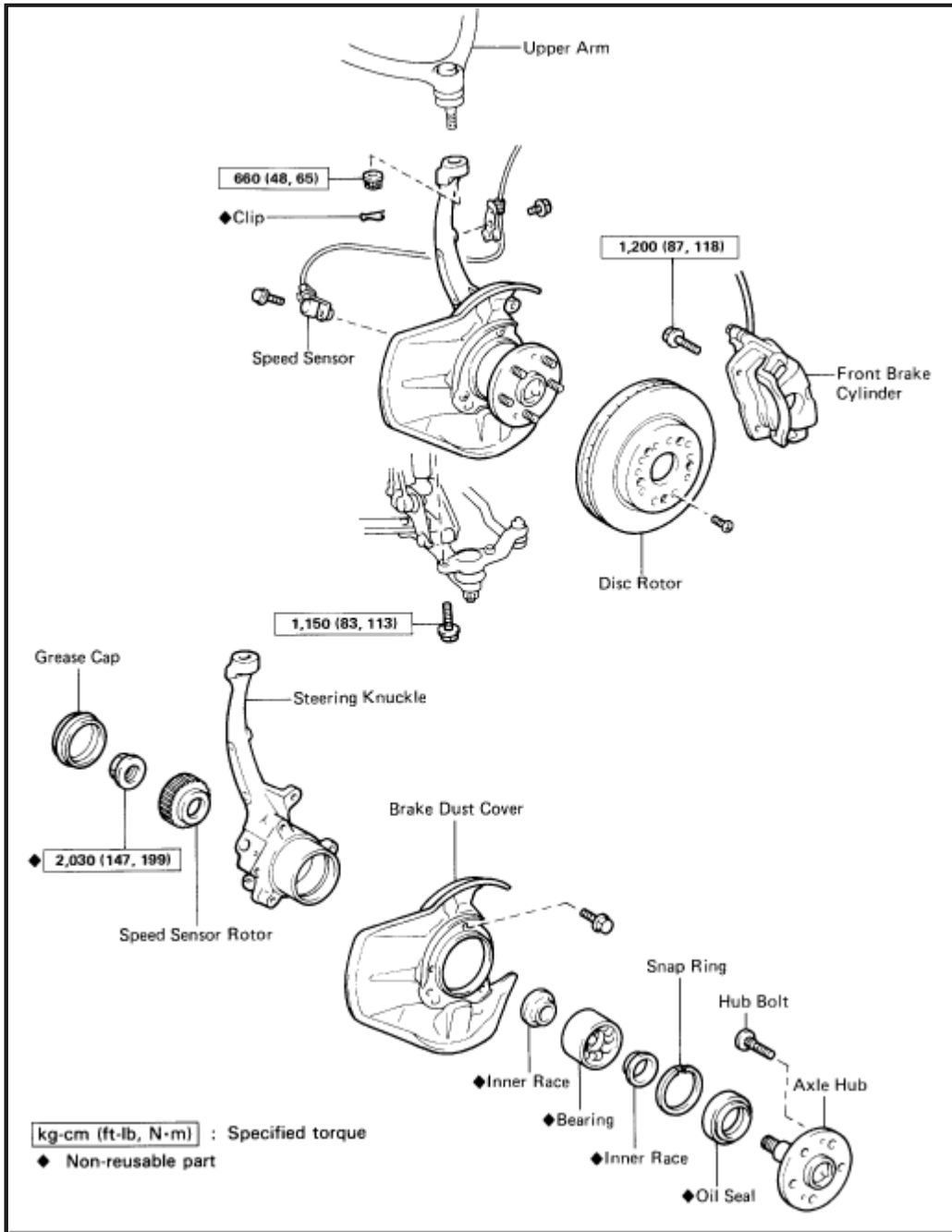


1991 Lexus LS 400 V8-4.0L (1UZ-FE)

Vehicle Level → Steering and Suspension → Suspension → Wheel Hub → Service and Repair → Front ←

Front

Notes

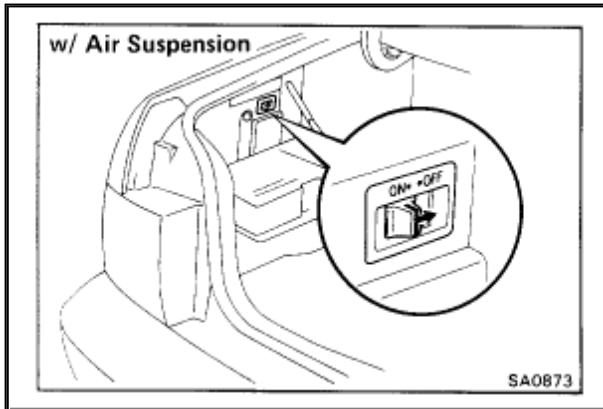


Zoom

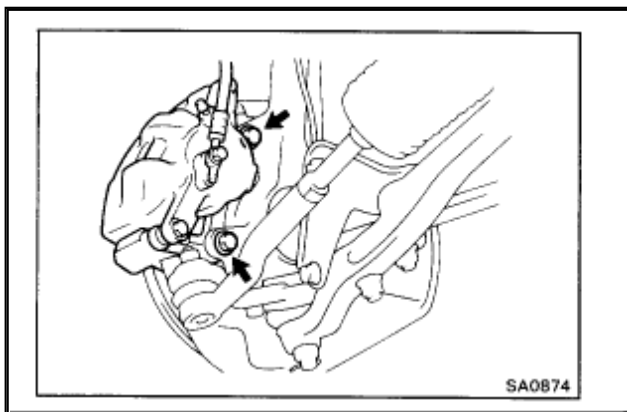
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## Front Axle Hub Components

### REMOVAL OF STEERING KNUCKLE WITH AXLE HUB

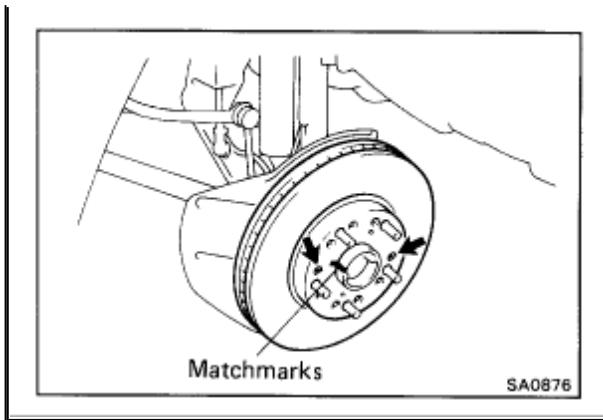
[Zoom](#)[Sized for Print](#)

1. (w/ AIR SUSPENSION) MOVE HEIGHT CONTROL ON/OFF SWITCH IN LUGGAGE COMPARTMENT TO "OFF"
2. JACK UP VEHICLE, REMOVE FRONT WHEEL

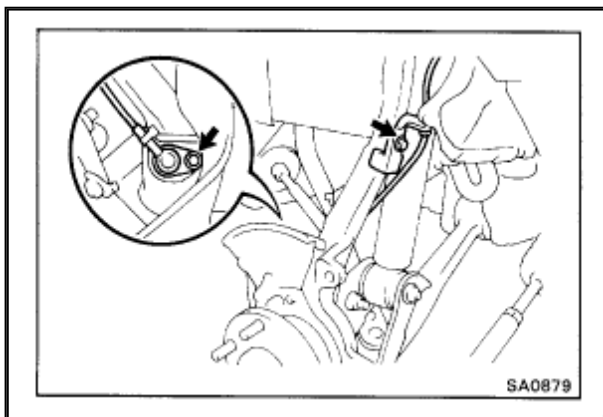
[Zoom](#)[Sized for Print](#)

3. REMOVE FRONT BRAKE CYLINDER AND DISC ROTOR
  - (a) Remove the two bolts and remove the brake cylinder from the steering knuckle.
  - (b) Hang up the brake cylinder using wire, etc.

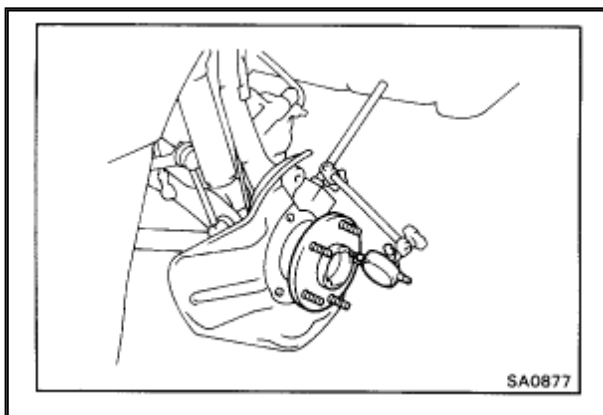


[Zoom](#)[Sized for Print](#)

- (c) Place matchmarks on the disc rotor and axle hub.
- (d) Remove the two screws and remove the disc rotor.

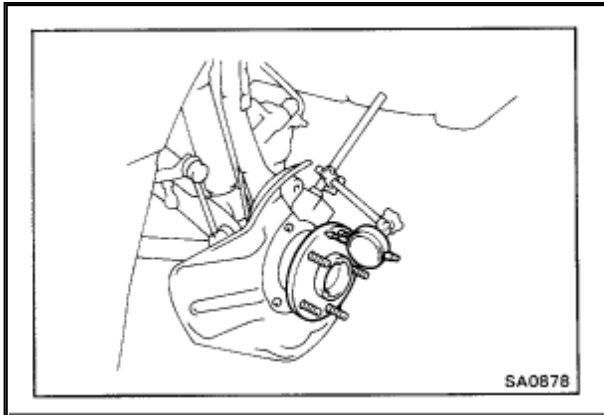
[Zoom](#)[Sized for Print](#)

#### 4. REMOVE SPEED SENSOR FROM STEERING KNUCKLE

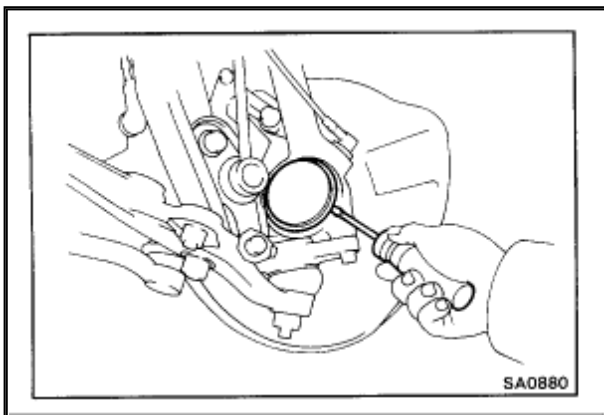


[Zoom](#)[Sized for Print](#)

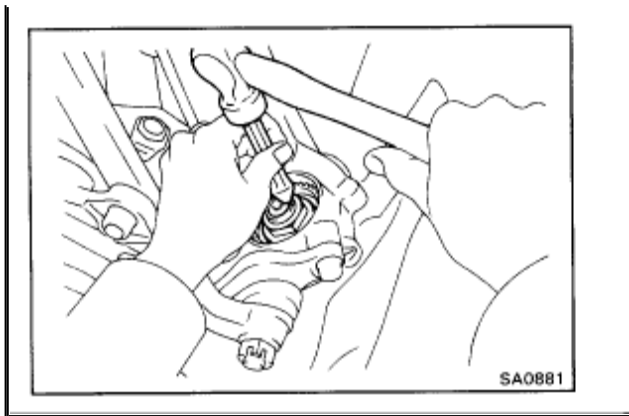
5. CHECK BACKLASH IN BEARING SHAFT DIRECTION Place the dial indicator near the center of the axle hub and check the backlash in the bearing shaft direction. **Maximum: 0.05 mm (0.0020 in.)** If greater than the specified maximum, replace the bearing.

[Zoom](#)[Sized for Print](#)

6. CHECK AXLE HUB DEVIATION Using a dial indicator, check the deviation at the surface of the axle hub outside the hub bolt. **Maximum: 0.05 mm (0.0020 in.)** If greater than the specified maximum, replace the axle hub.

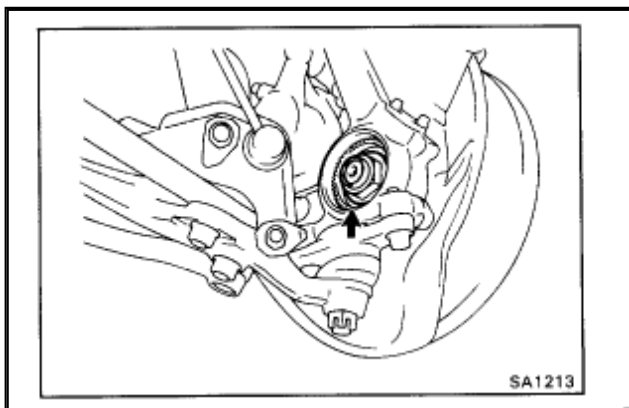
[Zoom](#)[Sized for Print](#)

7. LOOSEN AXLE SHAFT NUT **HINT:** When removing the axle hub from the steering knuckle, loosen the nut before hand.
- (a) Using a screwdriver, remove the grease cap from the steering knuckle.

[Zoom](#)[Sized for Print](#)

- (b) Using a chisel and hammer, release the nut caulking.
- (c) Install the disc rotor to the axle hub. Install the brake cylinder with two bolts to the steering knuckle.

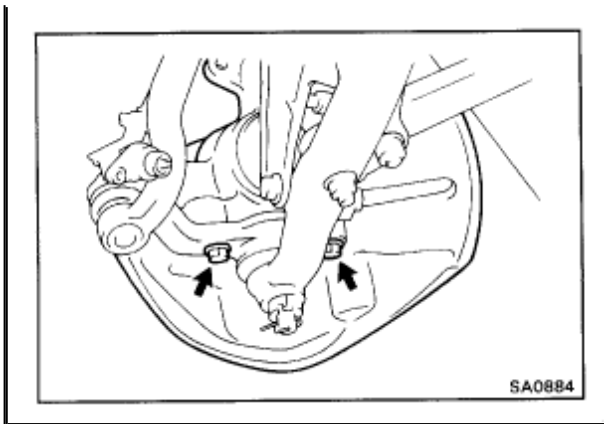
**Torque: 1,200kg-cm (87 ft-lb, 118 Nm)**

[Zoom](#)[Sized for Print](#)

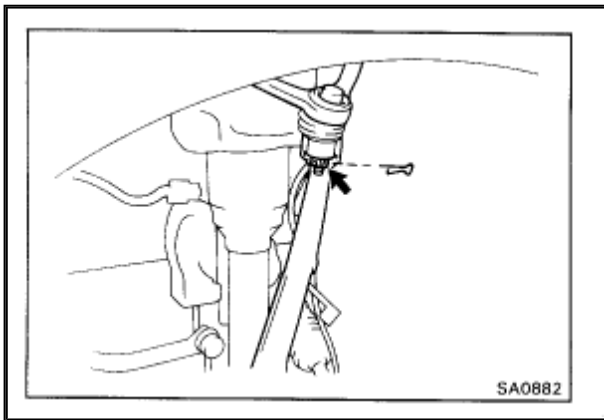
- (d) While applying the brakes, loosen the nut.

**HINT:** Remove the brake cylinder and disc rotor.



[Zoom](#)[Sized for Print](#)

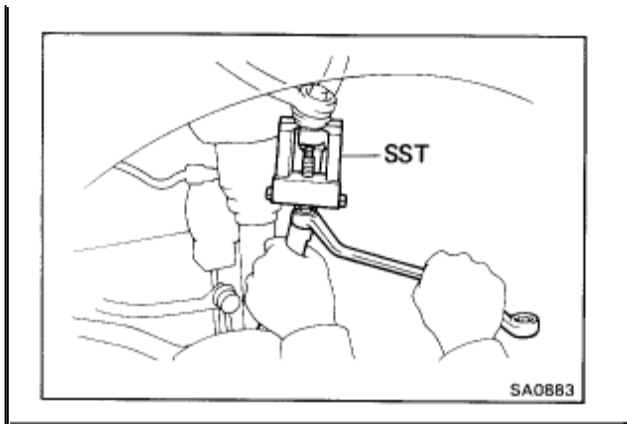
8. REMOVE STEERING KNUCKLE FROM LOWER BALL JOINT Remove the two bolts and remove the steering knuckle from the lower ball joint.

[Zoom](#)[Sized for Print](#)

9. REMOVE STEERING KNUCKLE FROM UPPER BALL JOINT

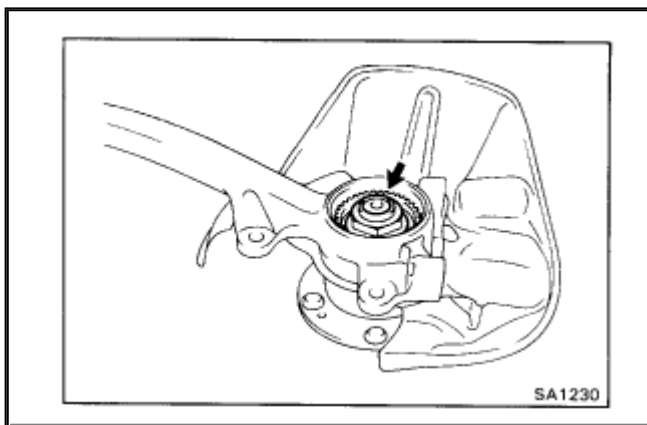
- (a) Release the clip and remove the nut.



[Zoom](#)[Sized for Print](#)

- (b) Using SST, remove steering knuckle from upper ball joint. **SST 09628-62011** .

#### 10. REMOVE STEERING KNUCKLE WITH AXLE HUB

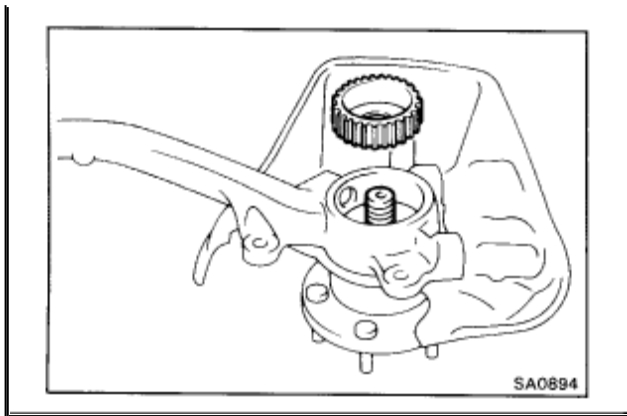
[Zoom](#)[Sized for Print](#)

### DISASSEMBLY OF FRONT AXLE HUB

#### 1. REMOVE NUT AND SPEED SENSOR ROTOR

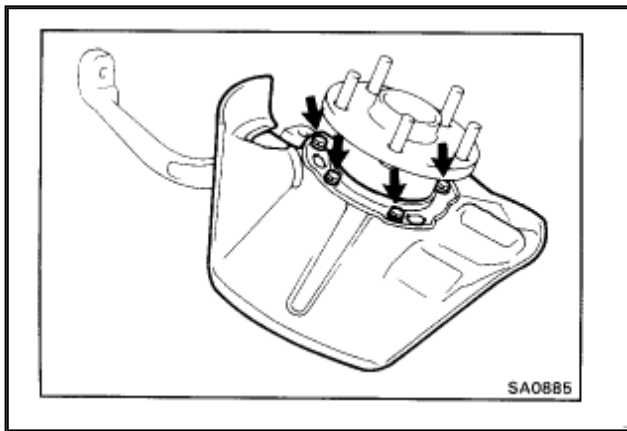
- (a) Remove the nut.



[Zoom](#)[Sized for Print](#)

(b) Remove the speed sensor rotor.

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

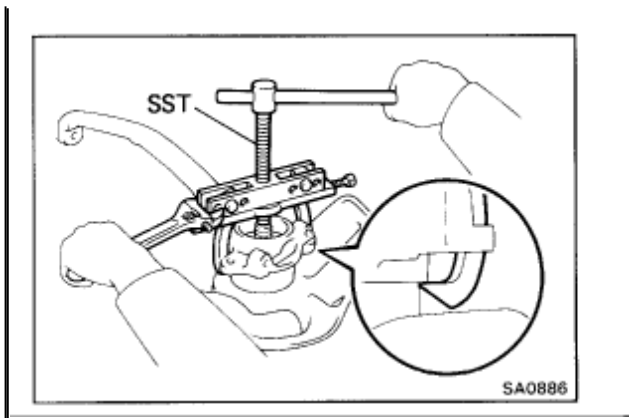
[Zoom](#)[Sized for Print](#)

## 2. REMOVE AXLE SHAFT FROM STEERING KNUCKLE

(a) Remove the four bolts and shift the brake dust cover towards the hub side (outside).



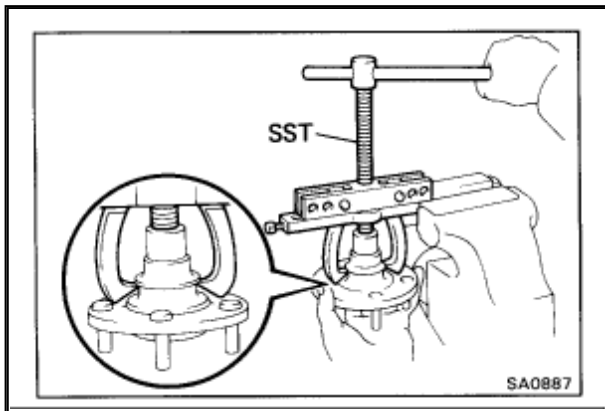




Zoom

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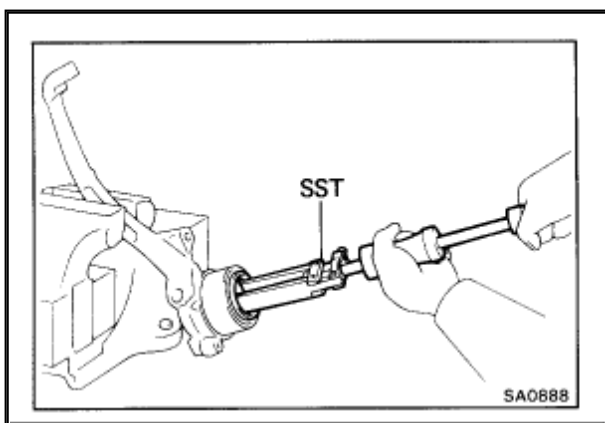
- (b) Using SST, remove axle shaft from steering knuckle. **SST 09950-20017** .



Zoom

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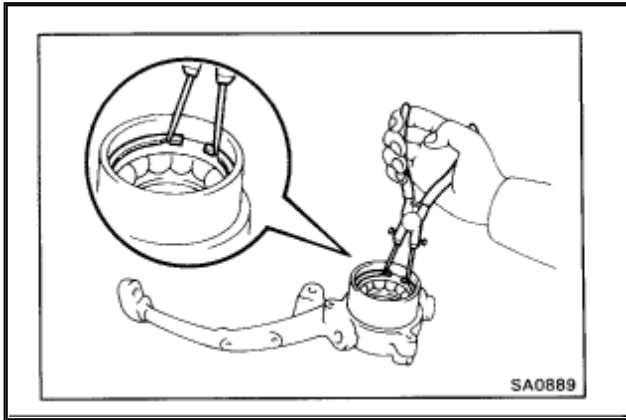
3. REMOVE INNER RACE (OUTSIDE) FROM AXLE SHAFT Using SST, remove the inner race from the axle shaft. **SST 09950-20017** .



Zoom

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4. REMOVE OIL SEAL Using SST, remove oil seal from steering knuckle. **SST 09308-00010** .

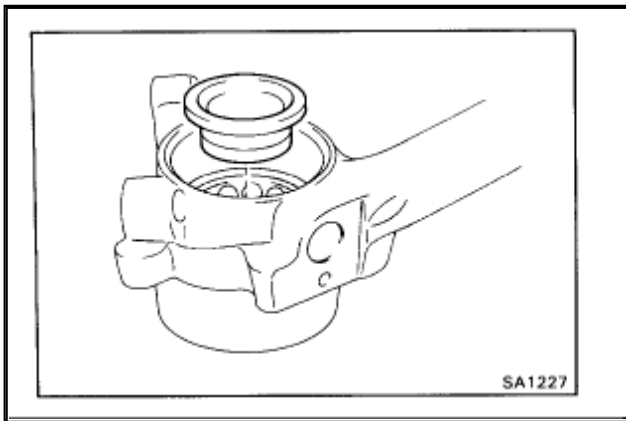


Zoom

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5. REMOVE BEARING FROM STEERING KNUCKLE

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

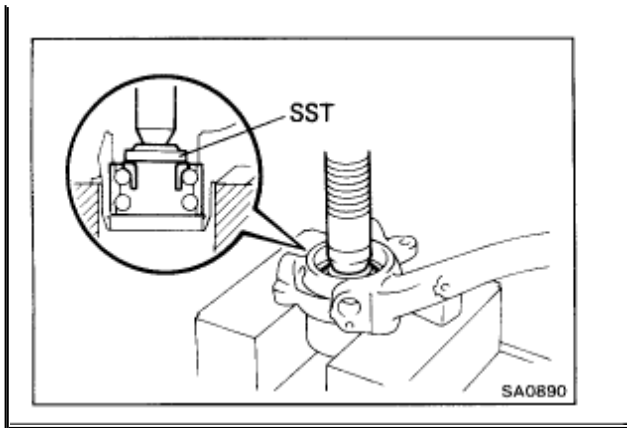


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- (b) Place the inner race above the bearings on the inner side.

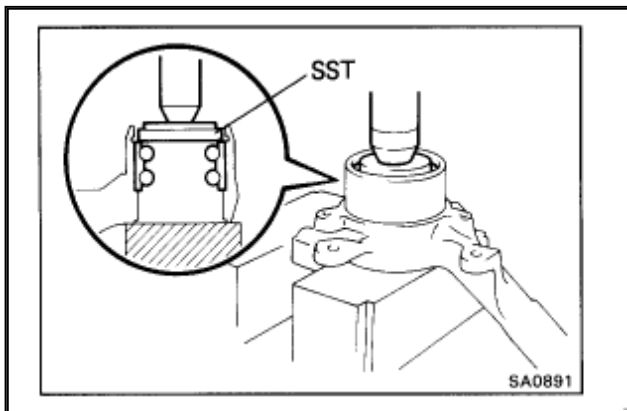




Zoom

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- (c) Using SST and press, remove the bearing from the steering knuckle. **SST 09608-35014 (09608-06100)** .



Zoom

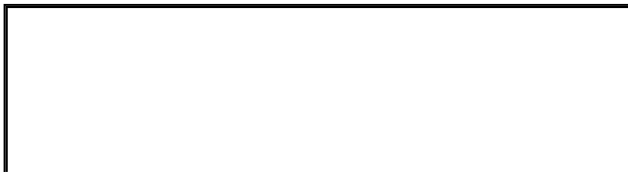
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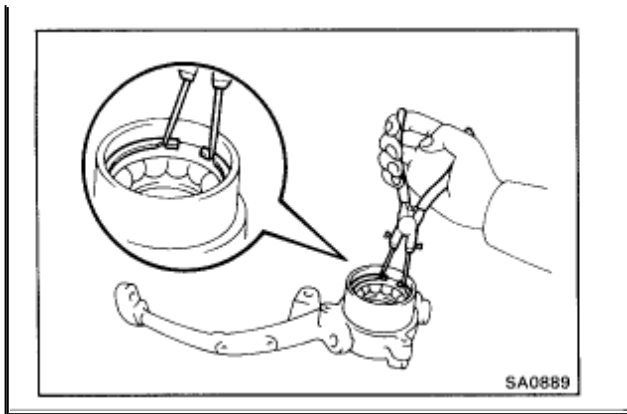
## ASSEMBLY OF FRONT AXLE HUB

### 1. INSTALL BEARING

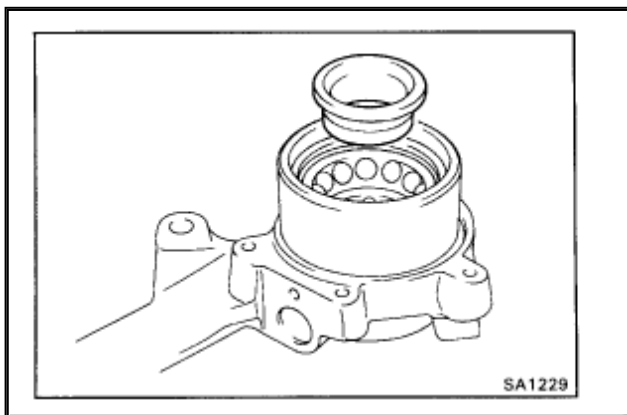
- (a) Using SST, install new bearing to steering knuckle. **SST 09608-35014 (09608-06200)** .

**NOTICE:** If the inner race and balls come loose from the bearing outer race, be sure to install them on the same side as before.



[Zoom](#)[Sized for Print](#)

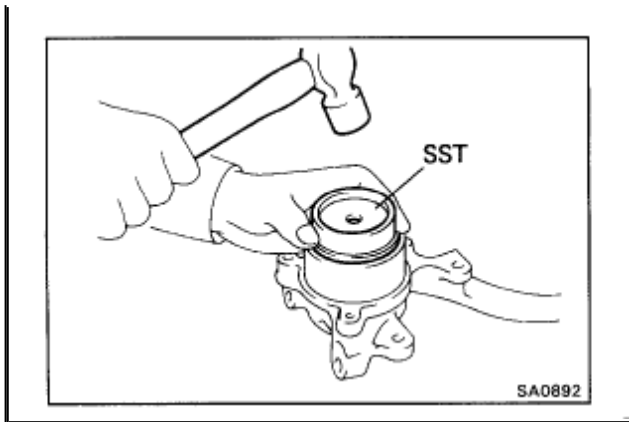
(b) Using snap ring pliers, install the snap ring.

[Zoom](#)[Sized for Print](#)

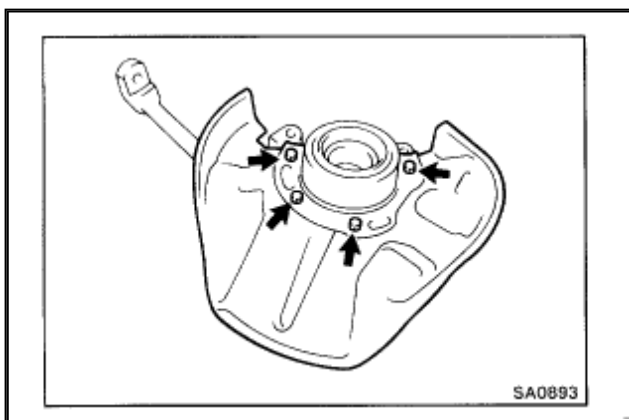
## 2. INSTALL OIL SEAL

(a) Install inner race (outside).



[Zoom](#)[Sized for Print](#)

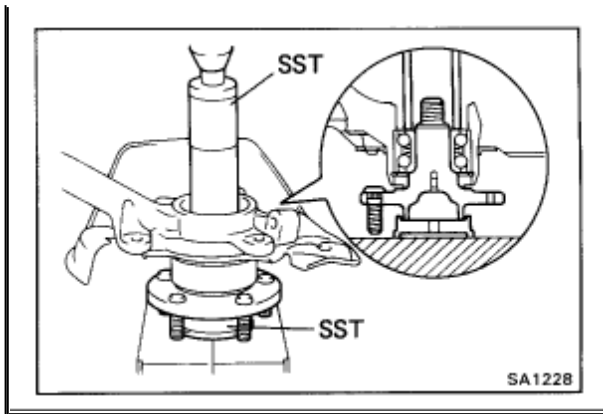
- (b) Using SST, press in new oil seal until it is flush with end surface of steering knuckle. **SST 09608-32010** .

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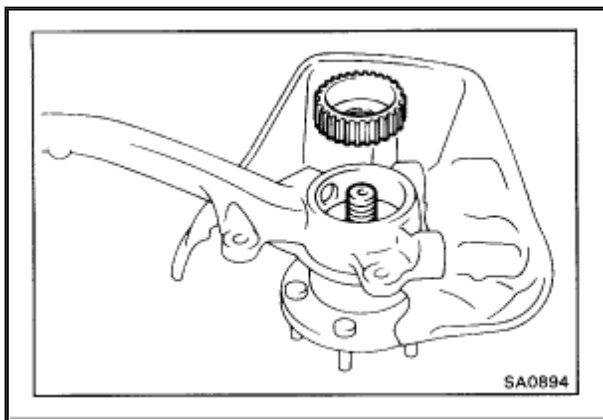
### 3. INSTALL AXLE HUB TO STEERING KNUCKLE

- (a) Install brake dust cover to steering knuckle with four bolts.

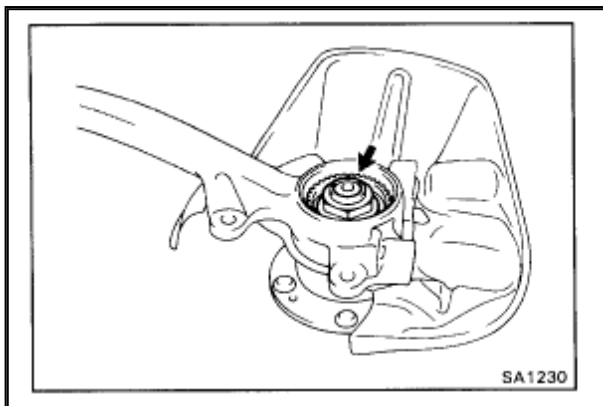


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- (b) Using SST and press, install axle hub to steering knuckle. **SST 09608-32010, 09608-35014 (09608-06040)** .

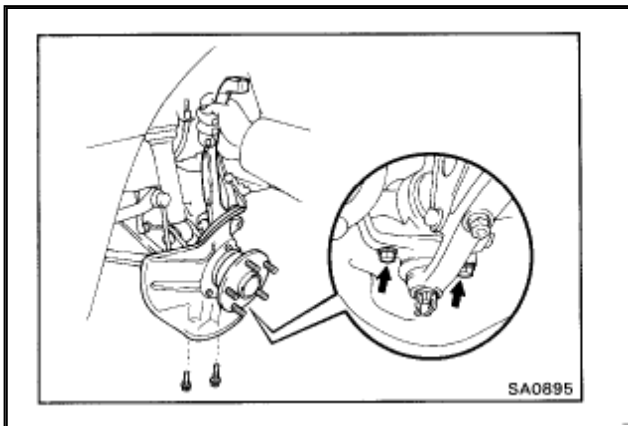
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4. **INSTALL SPEED SENSOR ROTOR NOTICE:** Do not scratch the serrations of the speed sensor rotor.



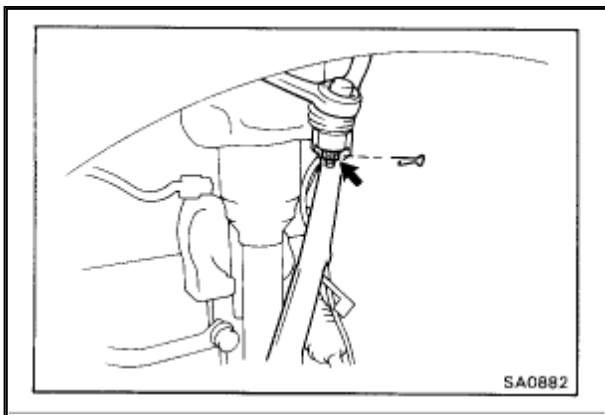
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5. **TEMPORARILY TIGHTEN NUT** Install a new nut to the axle hub and temporarily tighten it by hand. **HINT:** After installing the steering knuckle to the vehicle, tighten the nut to the specified torque.

[Zoom](#)[Sized for Print](#)

## INSTALLATION OF STEERING KNUCKLE WITH AXLE HUB

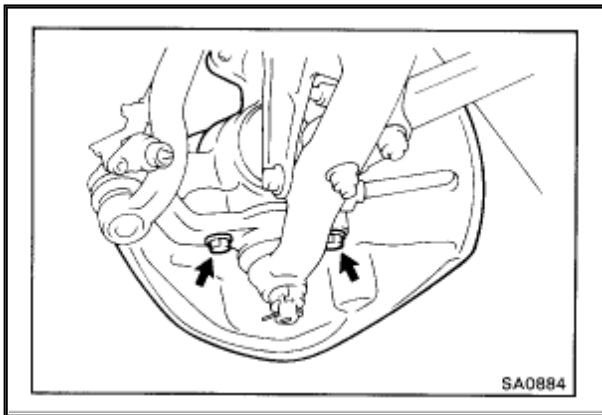
1. **INSTALL STEERING KNUCKLE**
  - (a) Install steering knuckle to lower ball joint and temporarily tighten the two bolts.

[Zoom](#)[Sized for Print](#)

- (b) Install steering knuckle to upper arm and torque the nut.

**Torque: 660 kg-cm (48 ft-lb, 65 Nm)**

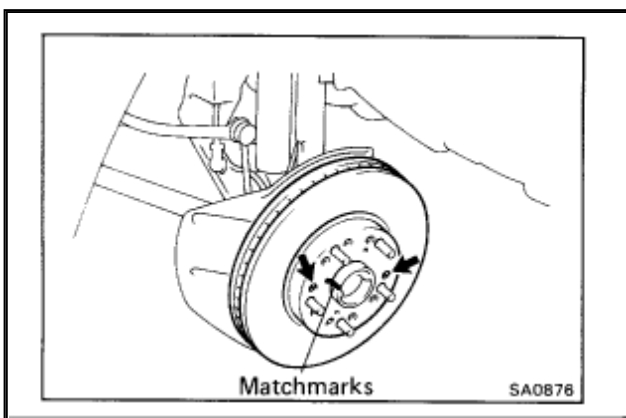
- (c) Install a new clip.



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- (d) Torque the two bolts on the lower ball joint.  
**Torque: 1,150kg-cm (83 ft-lb, 113 Nm)**



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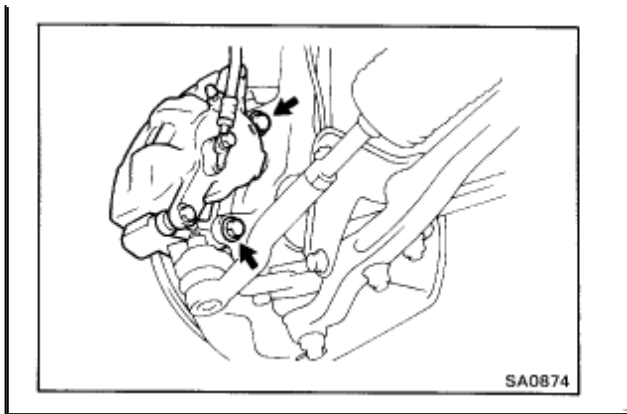
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## 2. INSTALL FRONT BRAKE DISC ROTOR AND BRAKE CYLINDER

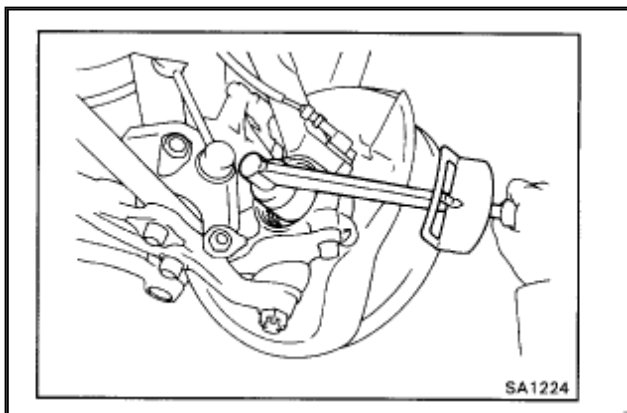
- (a) Align the matchmarks and install the disc rotor to the axle hub with two screws.





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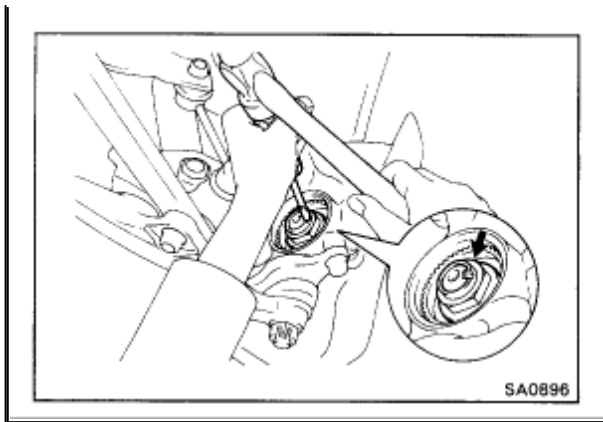
- (b) Install the brake cylinder to the steering knuckle with the two bolts.  
**Torque: 1,200 kg-cm (87 ft-lb, 118 Nm)**

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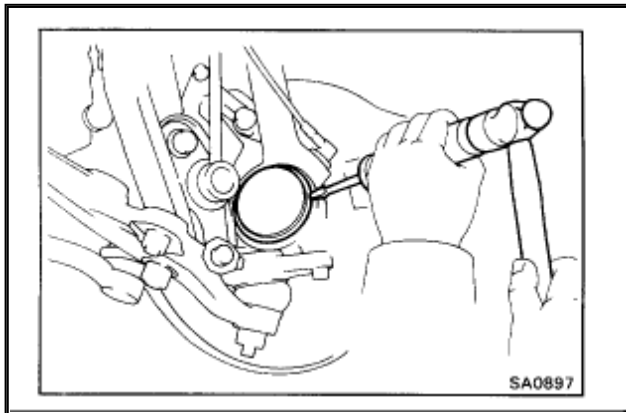
### 3. TORQUE AXLE SHAFT NUT

- (a) Torque the nut while applying the brakes.  
**Torque: 2,030 kg-cm (147 ft-lb, 199 Nm)**



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(b) Caulk the nut.

[Zoom](#)[Sized for Print](#)

(c) Install the grease cap in the steering knuckle.

**NOTICE** INSTALL SPEED SENSOR TO STEERING KNUCKLE

5. INSTALL FRONT WHEEL AND LOWER VEHICLE **Torque: 1,050 kg-cm (76 ft-lb, 103 Nm)**
6. (w/ AIR SUSPENSION) MOVE HEIGHT CONTROL ON/OFF SWITCH IN LUGGAGE COMPARTMENT TO "ON"