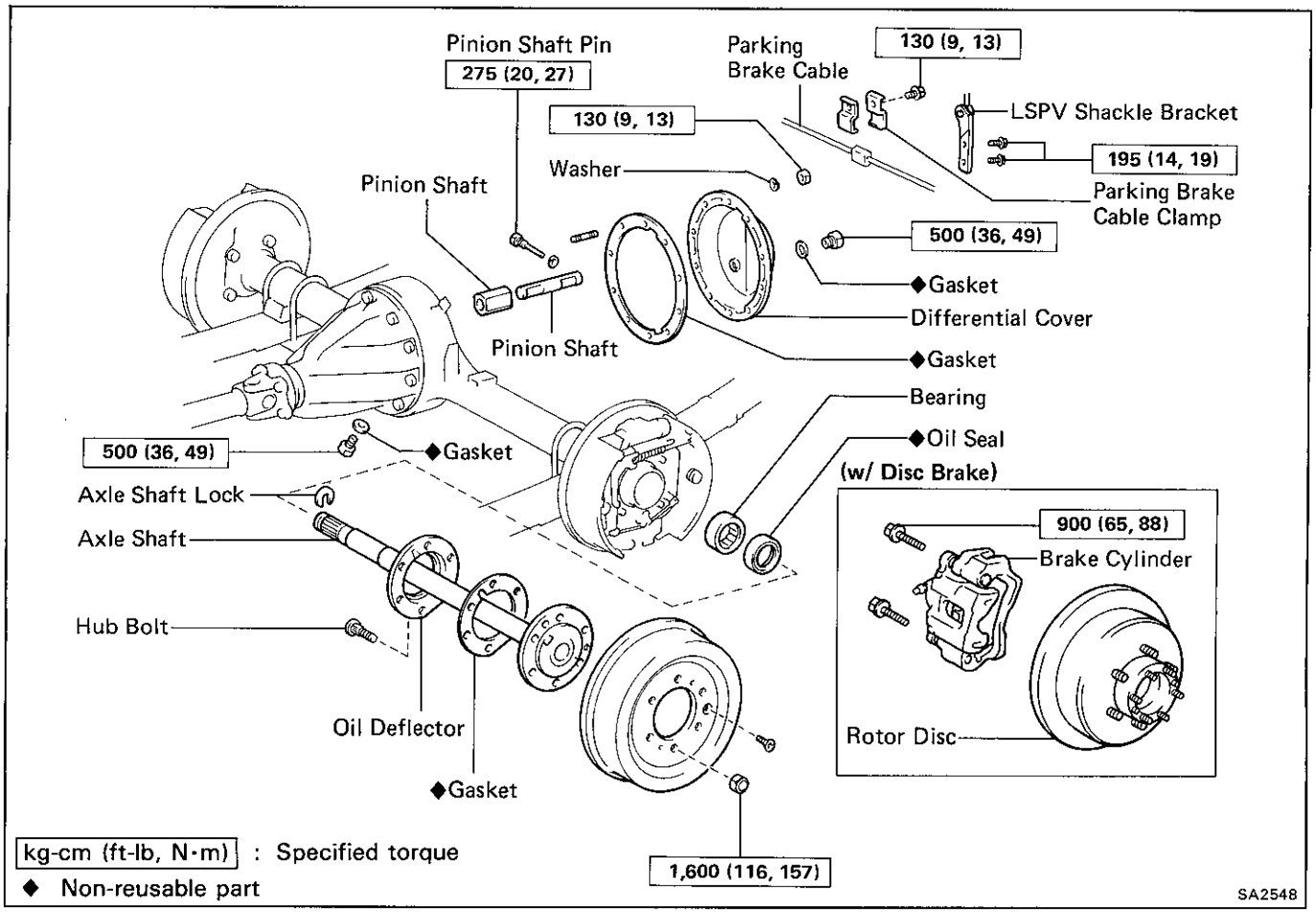
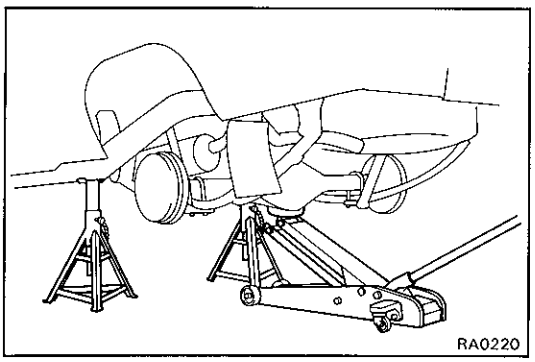
REAR AXLE SHAFT
(Semi-Floating Type)
COMPONENTS



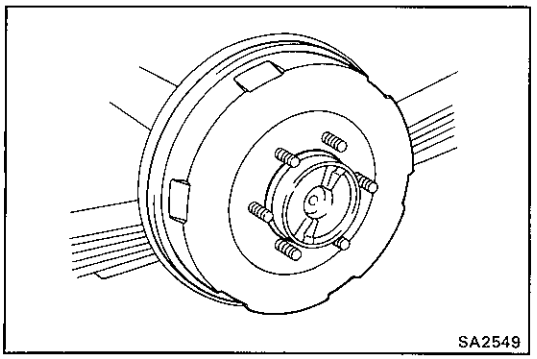


REMOVAL OF REAR AXLE SHAFT

1. JACK UP AND SUPPORT VEHICLE

(a) Jack up and support the frame on stands.

(b) Hold the rear axle housing with a jack.

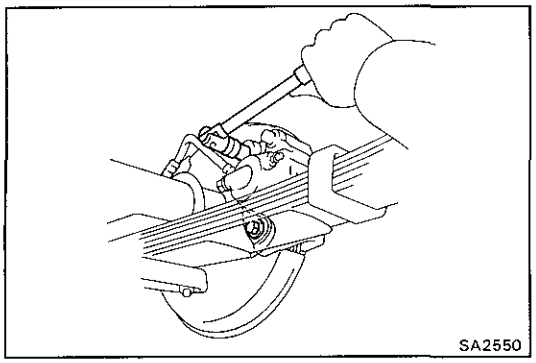


2. (w/ DRUM BRAKE)
REMOVE WHEEL AND BRAKE DRUM

(a) Remove the wheel.

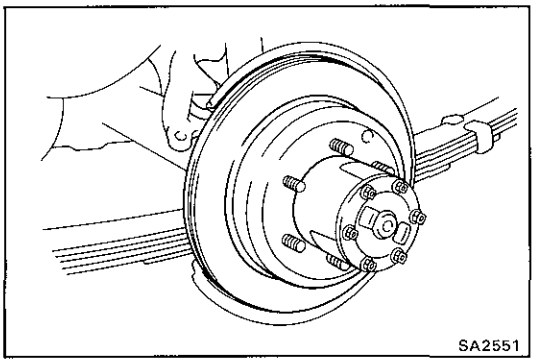
(b) Remove the screw from the drum.

(c) Remove the drum from the axle hub.

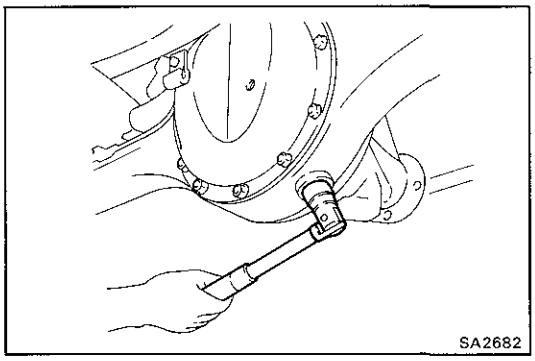

SA2550

3. **(w/ DISC BRAKE)**
REMOVE WHEEL AND ROTOR DISC

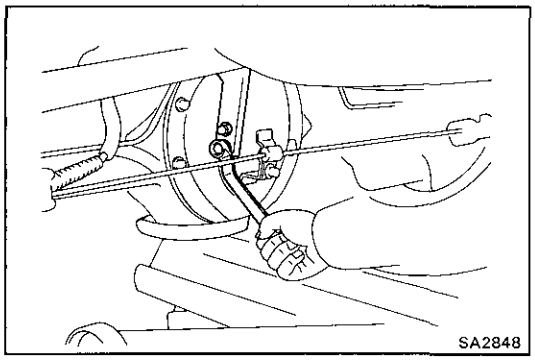
(a) Remove the two bolts and the brake cylinder with the torque plate from the rear axle carrier.


SA2551

(b) Remove the rotor disc from the axle shaft.

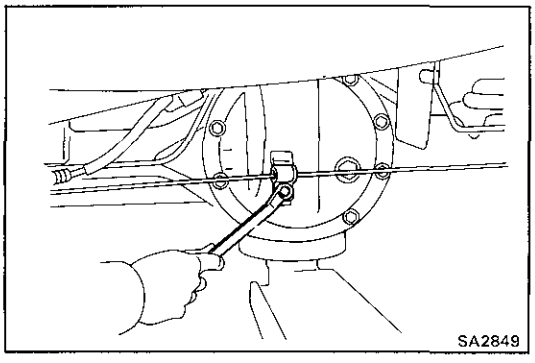

SA2682

4. **REMOVE DRAIN PLUG AND DRAIN DIFFERENTIAL OIL**


SA2848

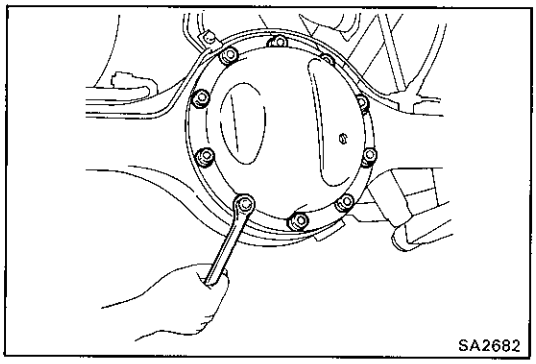
5. ***REMOVE LSPV SHACKLE BRACKET***

Remove two bolts and the shackle bracket from the differential cover.


SA2849

6. **REMOVE PARKING BRAKE CABLE CLAMP**

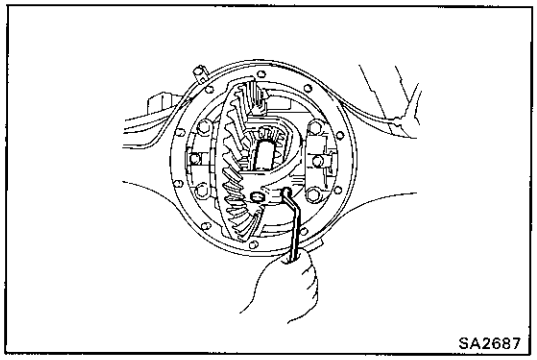
Remove the bolt and the clamp from the differential cover.



7. REMOVE DIFFERENTIAL COVER

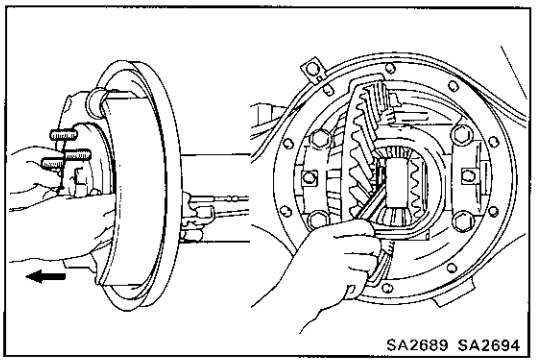
(a) Remove the ten nuts and washers.

(b) Remove the differential cover with the gasket.



8. REMOVE PINION SHAFT AND SPACER

(a) Remove the pinion shaft pin from the differential.



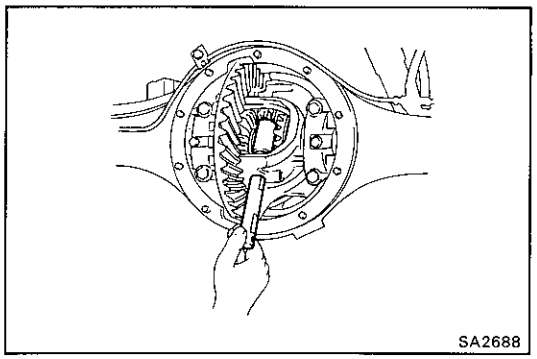
(b) Measure the thrust clearance between the axle shaft and spacer.

Maximum clearance: 0.5 mm (0.020 in.)

If necessary, select the spacer.

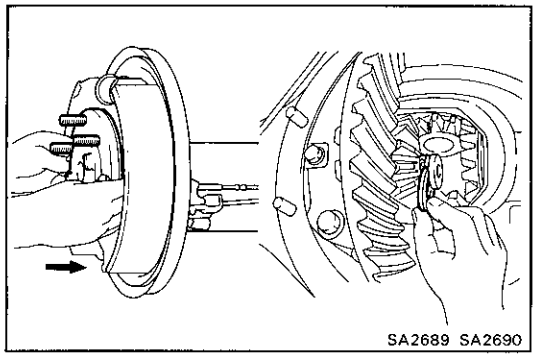
Spacer thickness

Thickness mm (in.)
29.0 (1.142)
29.4 (1.157)
29.8 (1.173)
30.2 (1.189)
30.6 (1.205)



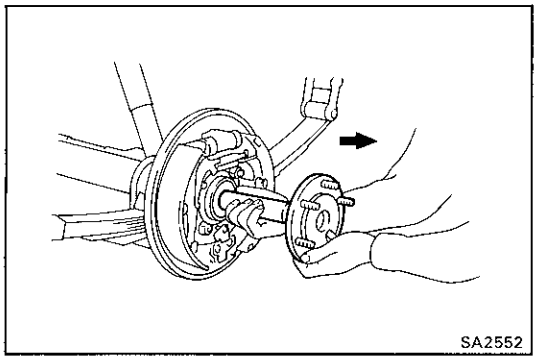
(c) Remove the pinion shaft and spacer.

HINT: When the pinion shaft is removed, the pinion gear and washer will come off also.



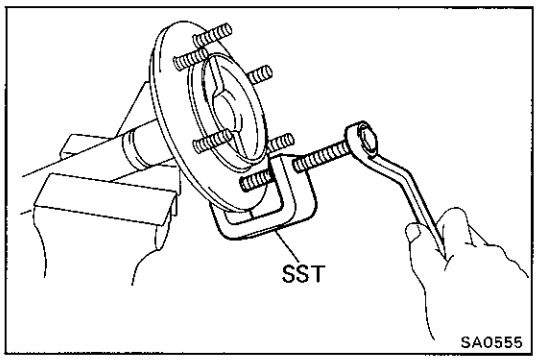
9. REMOVE AXLE SHAFT LOCK

Push the axle shaft to the differential side and remove the axle shaft lock.



10. REMOVE AXLE SHAFT

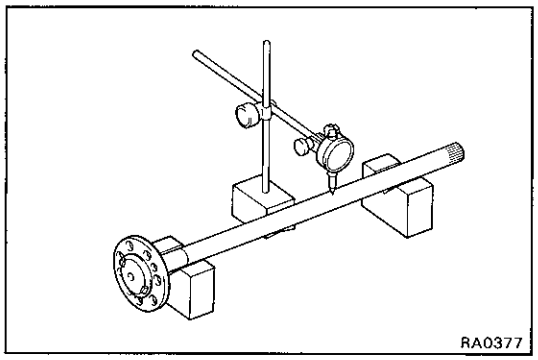
NOTICE: When pulling out the axle shaft, be careful not to damage the oil seal.



11. REMOVE HUB BOLT OIL DEFLECTOR

Using SST, remove the hub bolts, oil deflector and the gasket.

SST 09650-17011



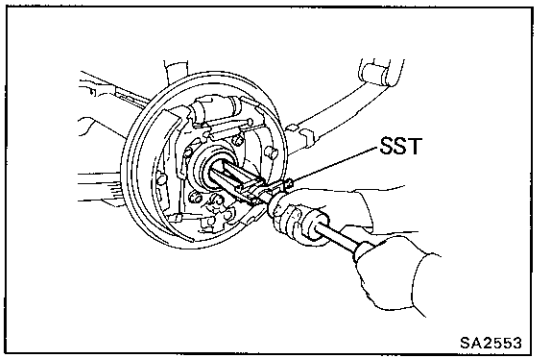
INSPECTION AND REPLACEMENT OF REAR AXLE SHAFT COMPONENTS

1. INSPECT REAR AXLE SHAFT

(a) Check for wear or damage.

(b) Check the runout of axle shaft.

Maximum runout: 0.8 mm (0.031 in.)



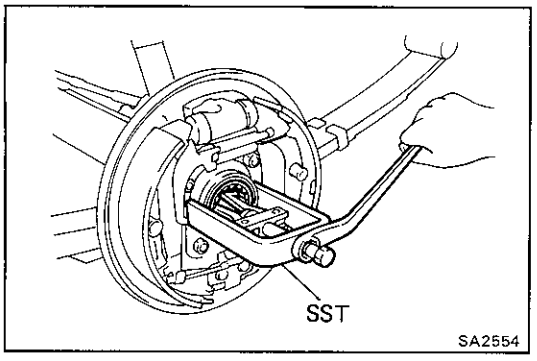
2. INSPECT OIL SEAL AND BEARING FOR WEAR OR DAMAGE

If the oil seal and bearing is damaged or worn, replace the oil seal and bearing.

3. REPLACE OIL SEAL AND BEARING

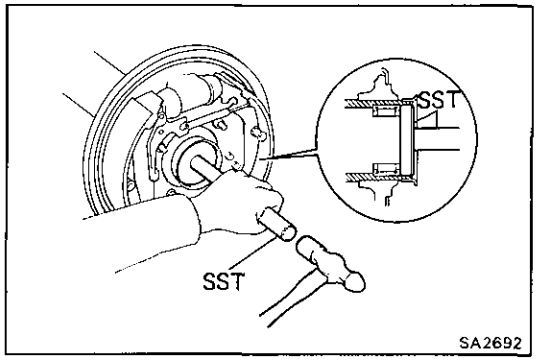
(a) Using SST, remove the oil seal.

SST 09308-00010



(b) Using SST, remove the bearing.

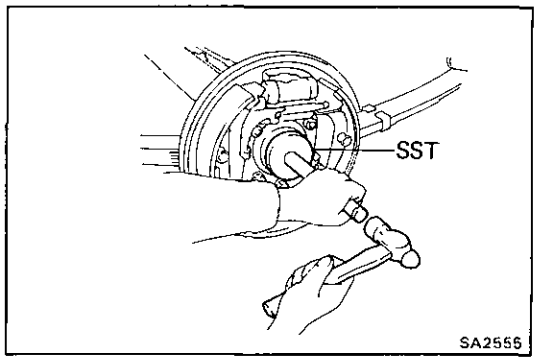
SST 09514-35011



(c) Apply MP grease to the bearing.

(d) Using SST, drive in a new bearing.

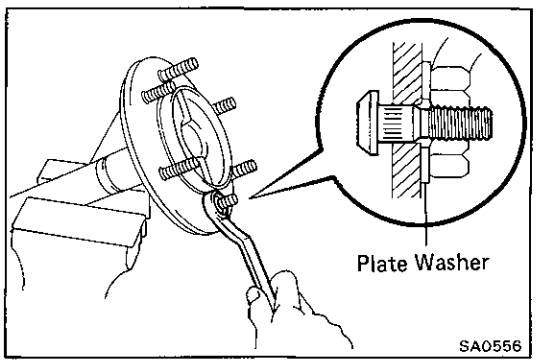
SST 09608-20012 (09608-03020, 09608-03060)



(e) Using SST, drive in a new oil seal.

SST 09608-20012 (09608-03020, 09608-03060)

(f) Apply MP grease to the oil seal lip.



INSTALLATION OF REAR AXLE SHAFT

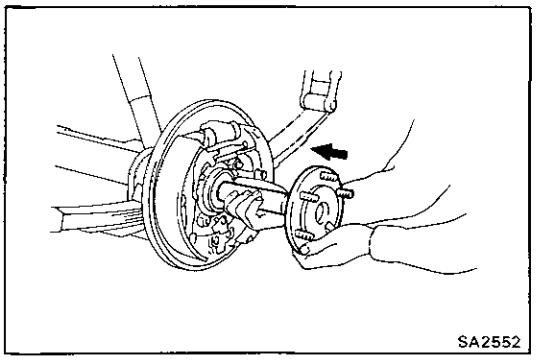
(See page SA-108)

1. INSTALL OIL DEFLECTOR AND HUB BOLT

(a) Install a new gasket and the oil deflector.

(b) Install the plate washer on the hub bolt as shown, in the illustration then tighten the nut to install the hub bolts.

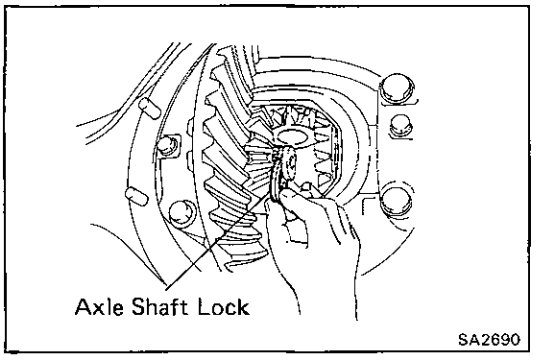
(c) Remove the nut.



2. INSTALL REAR AXLE SHAFT IN AXLE HOUSING

Insert the axle shaft into the housing.

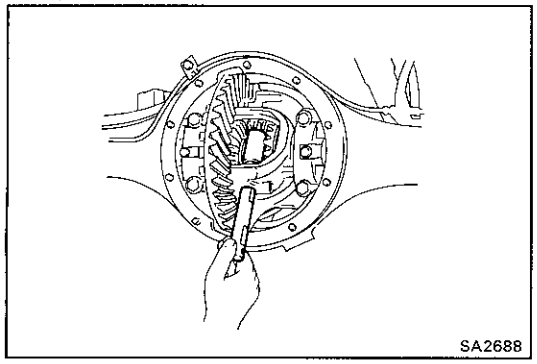
NOTICE: When inserting the axle shaft, be careful not to damage the oil seal.



3. INSTALL AXLE SHAFT LOCK

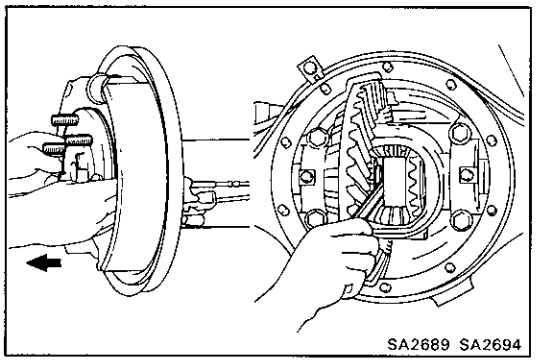
(a) Install the axle shaft lock to axle shaft.

(b) Pull the axle shaft fully toward the outer side of the vehicle.


SA2688

4. INSTALL PINION SHAFT AND PINION SHAFT SPACER

(a) Install the spacer and the pinion shaft to the differential.


SA2689 SA2694

(b) Pull the axle shaft to outside.

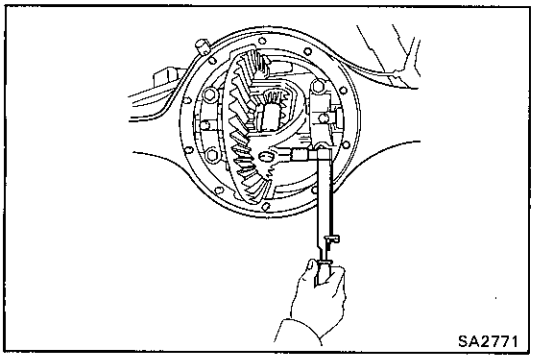
(c) Measure the thrust clearance between the axle shaft and spacer.

Maximum clearance: 0.5 mm (0.020 in.)

If necessary, select the spacer.

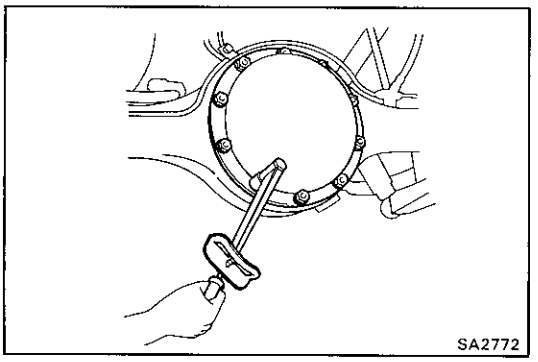
Spacer thickness

Thickness	mm (in.)
29.0 (1.142)	
29.4 (1.157)	
29.8 (1.173)	
30.2 (1.189)	
30.6 (1.205)	


SA2771

(d) Install the pinion shaft pin.

Torque: 275 kg-cm (20 ft-lb, 27 N·m)

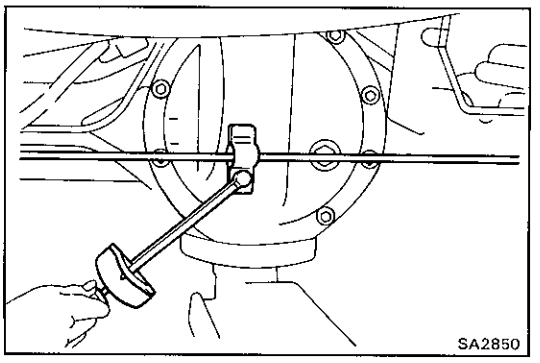

SA2772

5. INSTALL DIFFERENTIAL COVER

(a) Install a new gasket and differential cover to the axle housing.

(b) Install the ten washer and nuts.

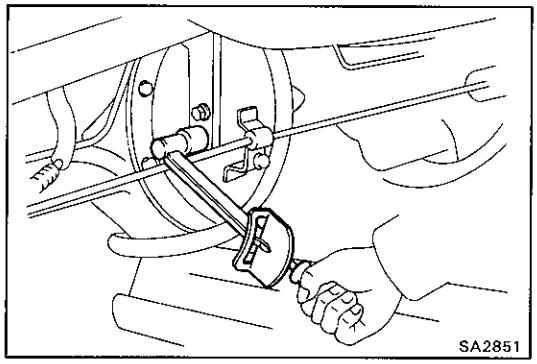
Torque: 130 kg-cm (9 ft-lb, 13 N·m)


SA2850

6. INSTALL PARKING BRAKE CABLE CLAMP

Install the clamp of parking brake cable to the differential cover with the bolt.

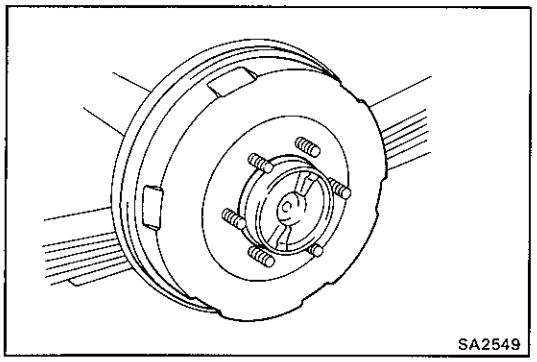
Torque: 130 kg-cm (9 ft-lb, 13 N·m)


SA2851

7. **INSTALL LSPV SHACKLE BRACKET**

Install the shackle bracket to differential cover with the two bolts.

Torque: 195 kg-cm (14 ft-lb, 19 N·m)

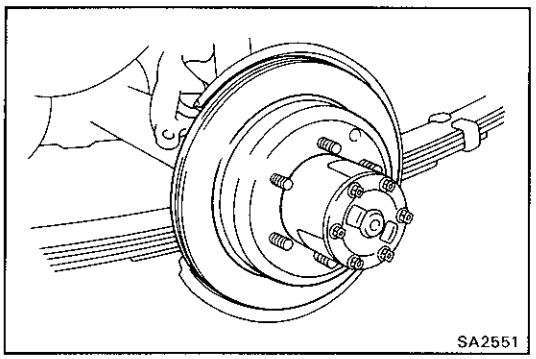

SA2549

8. **(w/ DRUM BRAKE)**
INSTALL BRAKE DRUM AND WHEEL

(a) Install the drum to the axle shaft.

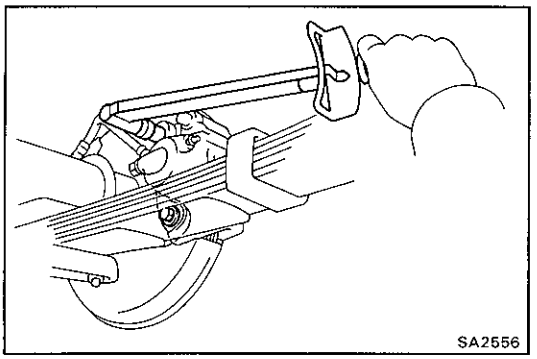
(b) Install the screw to the drum.

(c) Install the wheel.


SA2551

9. **(w/ DISC BRAKE)**
INSTALL ROTOR DISC AND WHEEL

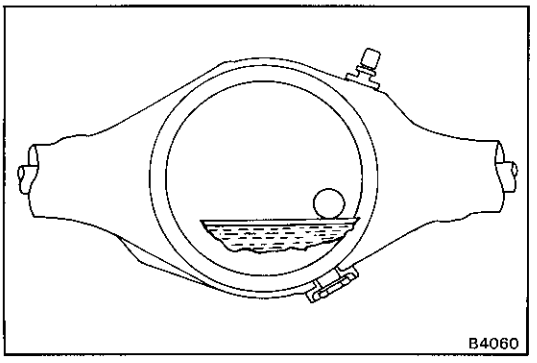
(a) Install the rotor disc to the axle shaft.


SA2556

(b) Install the brake cylinder with the torque plate to the rear axle carrier with the two bolts.

Torque: 900 kg-cm (65 ft-lb, 88 N·m)

(c) Install the wheel.

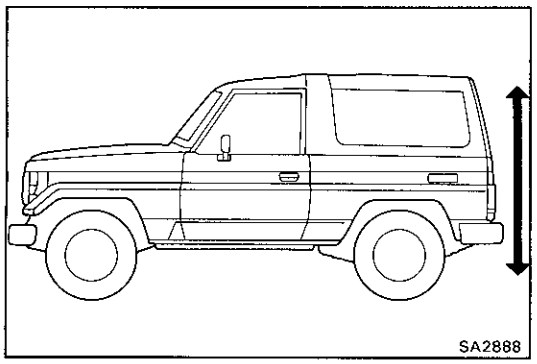

B4060

10. **FILL DIFFERENTIAL WITH GEAR OIL**

Oil type: API GL-5

Viscosity: Above −18°C (0°F) SAE 90
Below −18°C (0°F) SAE 80W or 80W-90

Capacity: 2.5 liters (2.6 US qts, 2.2 Imp. qts)

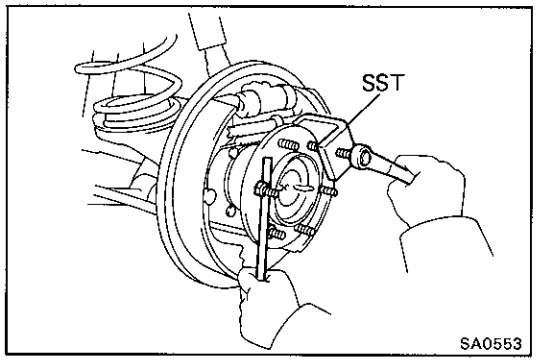


11. LOWER VEHICLE

(a) Lower the vehicle.

(b) Bounce the vehicle up and down to stabilize the suspension.

REPLACEMENT OF REAR HUB BOLT



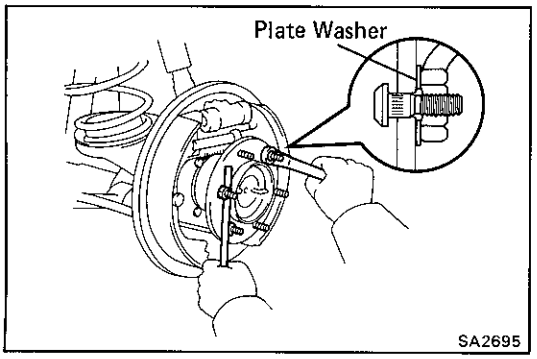
1. JACK UP SUPPORT VEHICLE

2. REMOVE REAR WHEEL AND BRAKE DRUM OR DISC ROTOR

3. REMOVE HUB BOLT

Using SST, remove the hub bolts.

SST 09650-17011



4. INSTALL HUB BOLT

Hold the axle shaft, using washers and nuts, install new hub bolts.

5. INSTALL BRAKE DRUM OR DISC ROTOR AND REAR WHEEL

6. LOWER VEHICLE