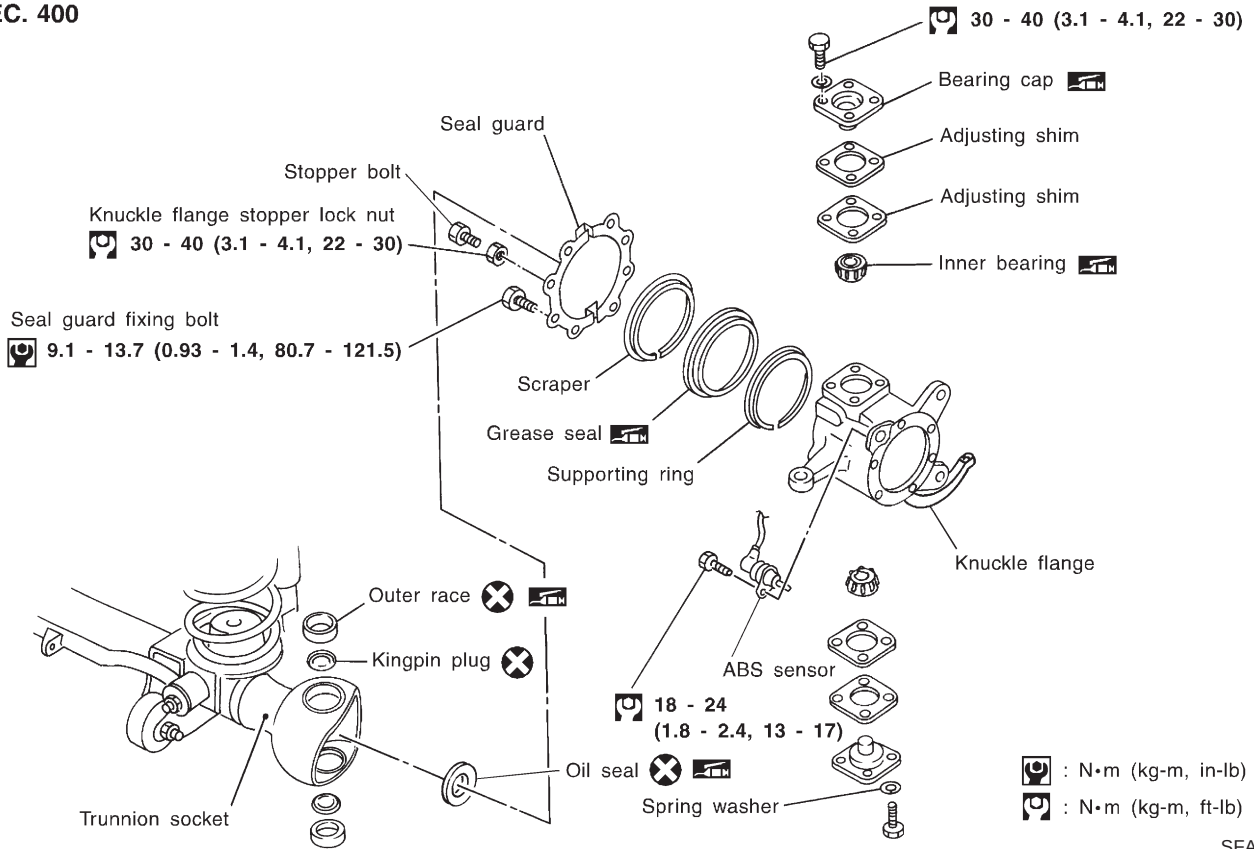
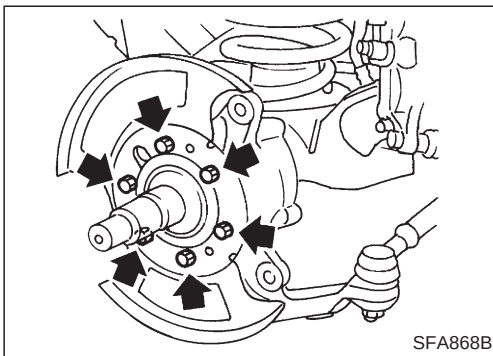


FRONT AXLE — Knuckle Flange

SEC. 400



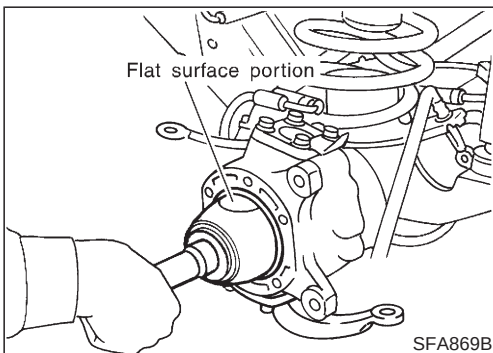
SFA867B



Removal

Drain differential oil completely prior to removal.

1. Remove baffle plate and knuckle spindle.



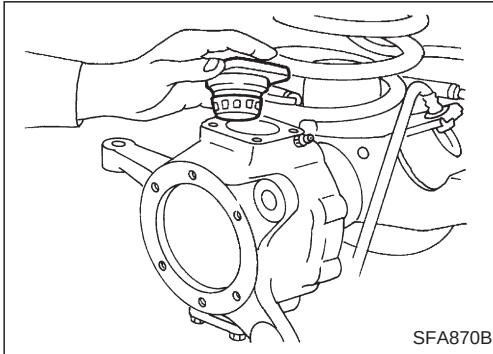
2. Draw out drive shaft.

Draw out to remove the drive shaft in the axial direction with the flat surface facing up.

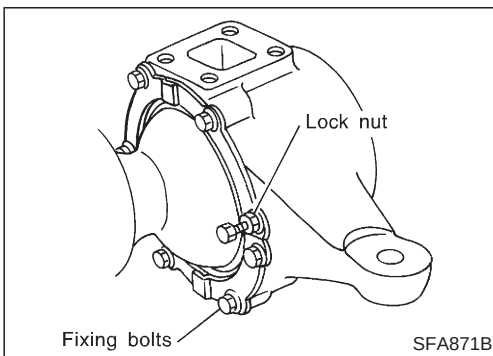
FRONT AXLE — Knuckle Flange

Removal (Cont'd)

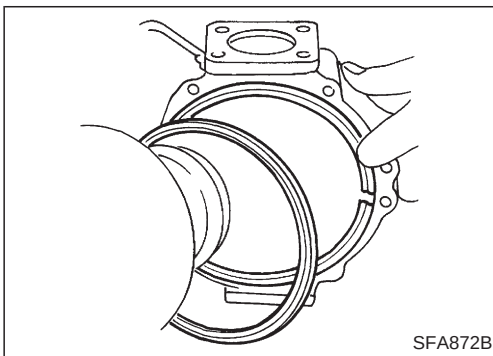
3. Disconnect tie-rod ends.
Refer to ST section.



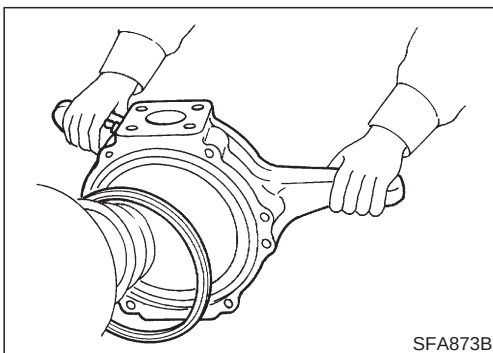
4. Remove upper and lower bearing caps with inner bearing and O-ring.



5. Remove seal guard fixing bolts.



6. Remove seal guard.
Separate scraper, grease seal and supporting ring from knuckle flange.

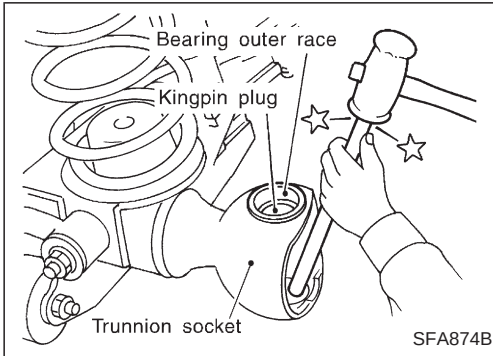


7. Remove knuckle flange, supporting ring, grease seal and scraper from axle case.

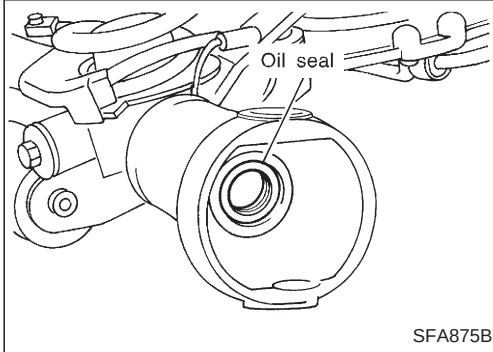
FRONT AXLE — Knuckle Flange

Removal (Cont'd)

8. Remove bearing outer race and kingpin plug.



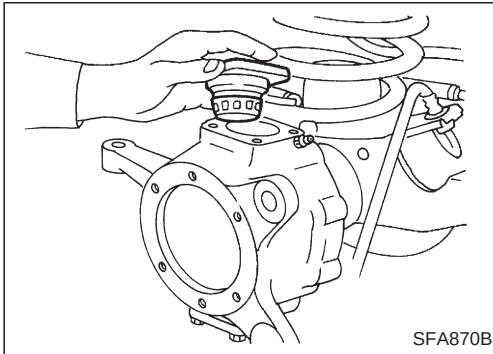
9. Remove oil seal from axle shaft.



Inspection

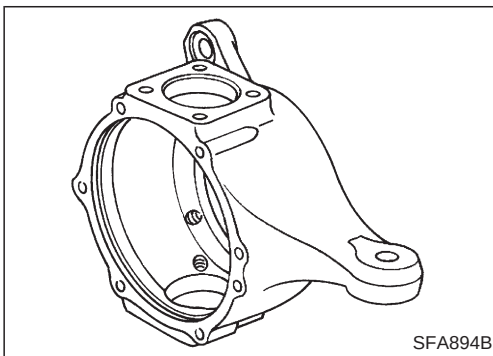
KNUCKLE FLANGE BEARING CAP

Replace knuckle flange bearing if it is worn, pitted or corroded.



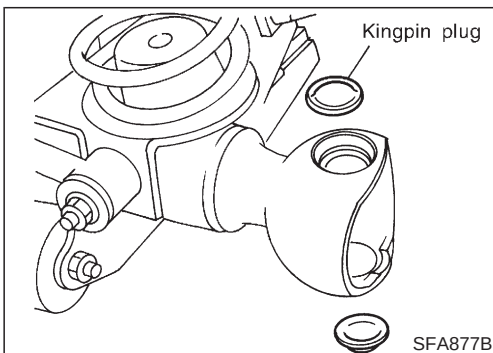
KNUCKLE FLANGE

Replace knuckle flange if it is cracked.



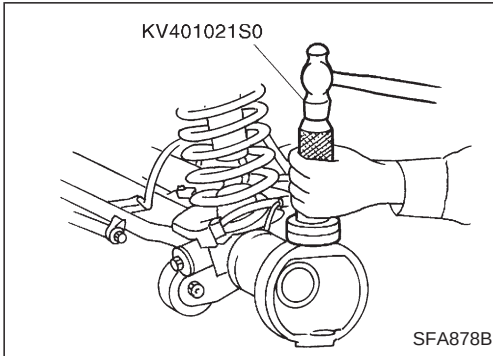
Installation

1. Check kingpin plug for damage before installing. If damaged, use a new one.

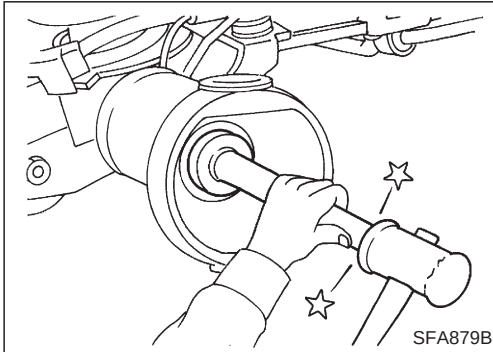


FRONT AXLE — Knuckle Flange

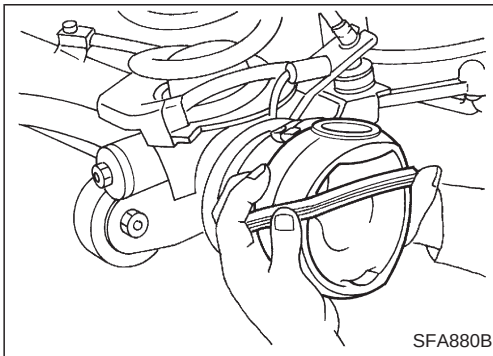
Installation (Cont'd)



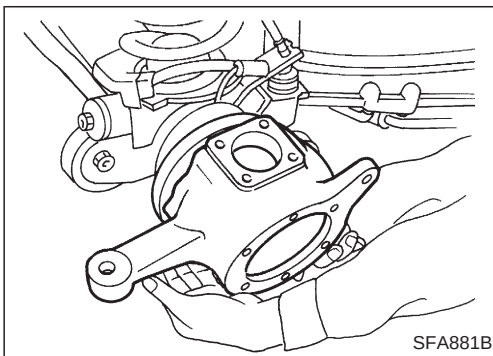
2. Using Tool, place bearing outer race in trunnion socket.



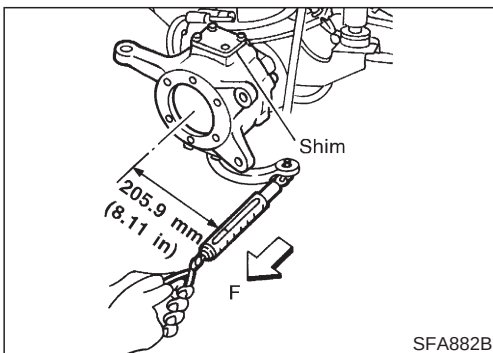
3. Install oil seal with tool.



4. Place scraper, grease seal and supporting ring in axle case. Grease lip and circumference seals in axle case.



5. Apply recommended grease around trunnion socket spherical area, then place knuckle flange in trunnion socket.

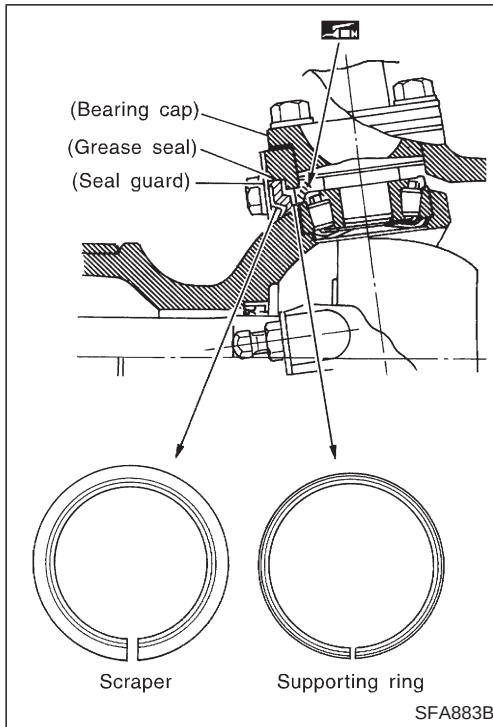


6. Adjust rotating force of knuckle flange (at hinge pin) to 4.9 to 14.7 N (0.5 to 1.5 kg, 1.1 to 3.3 lb) range by adding or removing upper and lower shims of same thickness. This adjustment must be made without installing grease seal and axle shaft.

Shim thicknesses: Refer to SDS.

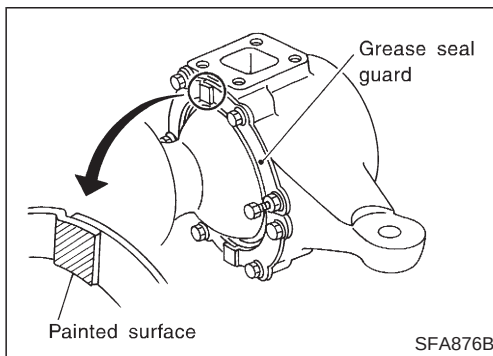
FRONT AXLE — Knuckle Flange

Installation (Cont'd)

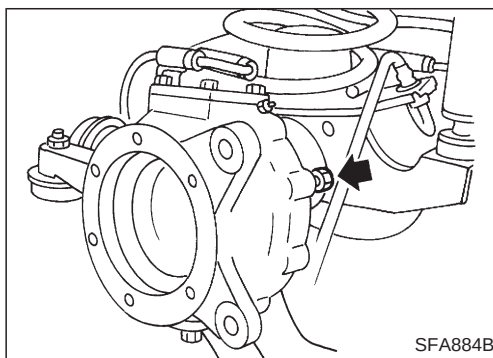


7. Install bearing cap with inner bearing and adjusting shim. Before installing seal guard, scraper, grease seal and supporting ring (as a unit), apply approx. 50 g (1.76 oz) of wheel bearing grease to perimeters shown in figure at left.

Slits located in scraper and supporting ring should point straight downward when installed.

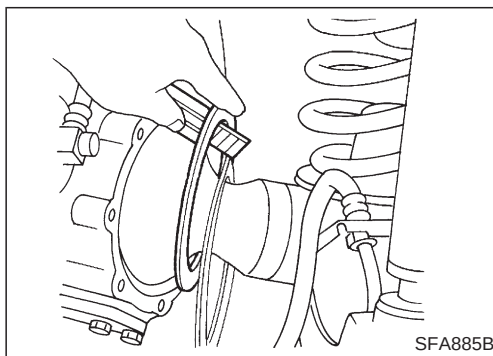


8. When installing grease seal guard, adjust so painted surface is visible.



Install knuckle flange stopper bolt and nut on stopper side of axle case.

After installing tie rod, adjust it to specified steering angle using turning radius gauge, then tighten with lock nut.



Knuckle Flange Grease Seal

To replace only knuckle flange grease seal, proceed as follows.

REMOVAL

1. Turn steering wheel to both the extreme right and left, and remove grease seal guard and scraper from knuckle flange.
2. Extract grease seal and remove it by cutting it from axle case.

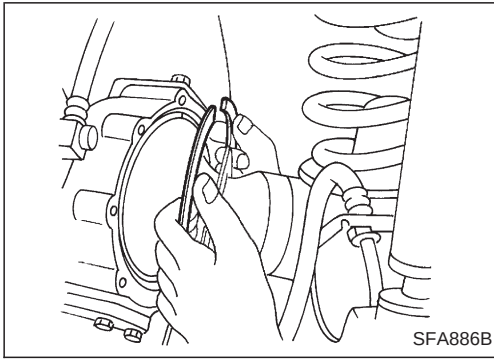
FRONT AXLE — Knuckle Flange

Knuckle Flange Grease Seal (Cont'd)

INSTALLATION

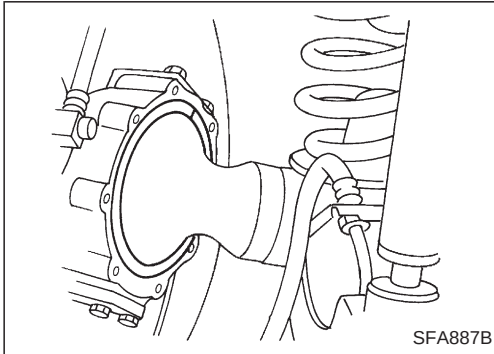
1. Cut off a part of new grease seal and fill lip portion with grease. Then insert grease seal into axle case.

Cut grease seal so that cut surface is straight.



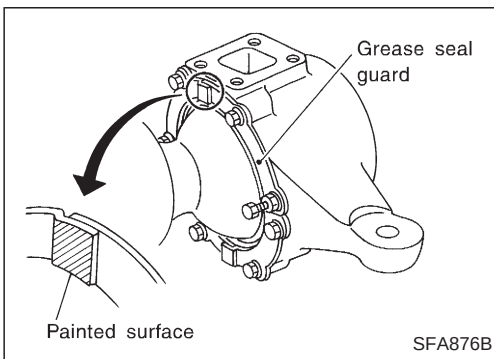
2. Apply adhesive to cut surface of grease seal. Install grease seal so that its cut surface is above knuckle flange.

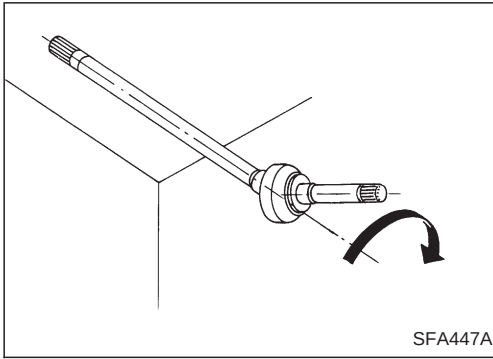
Be sure not to allow adhesive to protrude beyond cut surface of grease seal.



3. Install scraper and grease seal guard on knuckle flange. **After replacing grease seal, adjust steering wheel to specified turning angle with a turning radius gauge. Then tighten lock nut.**

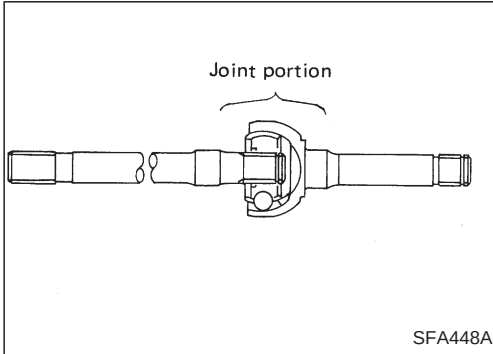
4. When installing grease seal guard, adjust so painted surface is visible.





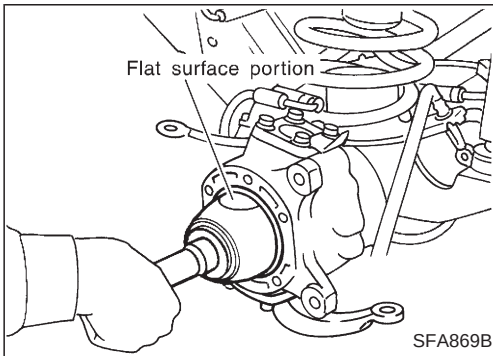
Inspection

Check wheel shaft for signs of binding when turned in a twisting motion. Also check for cracks or damage.



Installation

- Before positioning drive shaft in axle case, pack shaft joint with recommended grease. Refer to MA section ("Fluids and Lubricants", "RECOMMENDED FLUIDS AND LUBRICANTS").



- Install drive shaft.
Insert the drive shaft with the flat surface facing up.