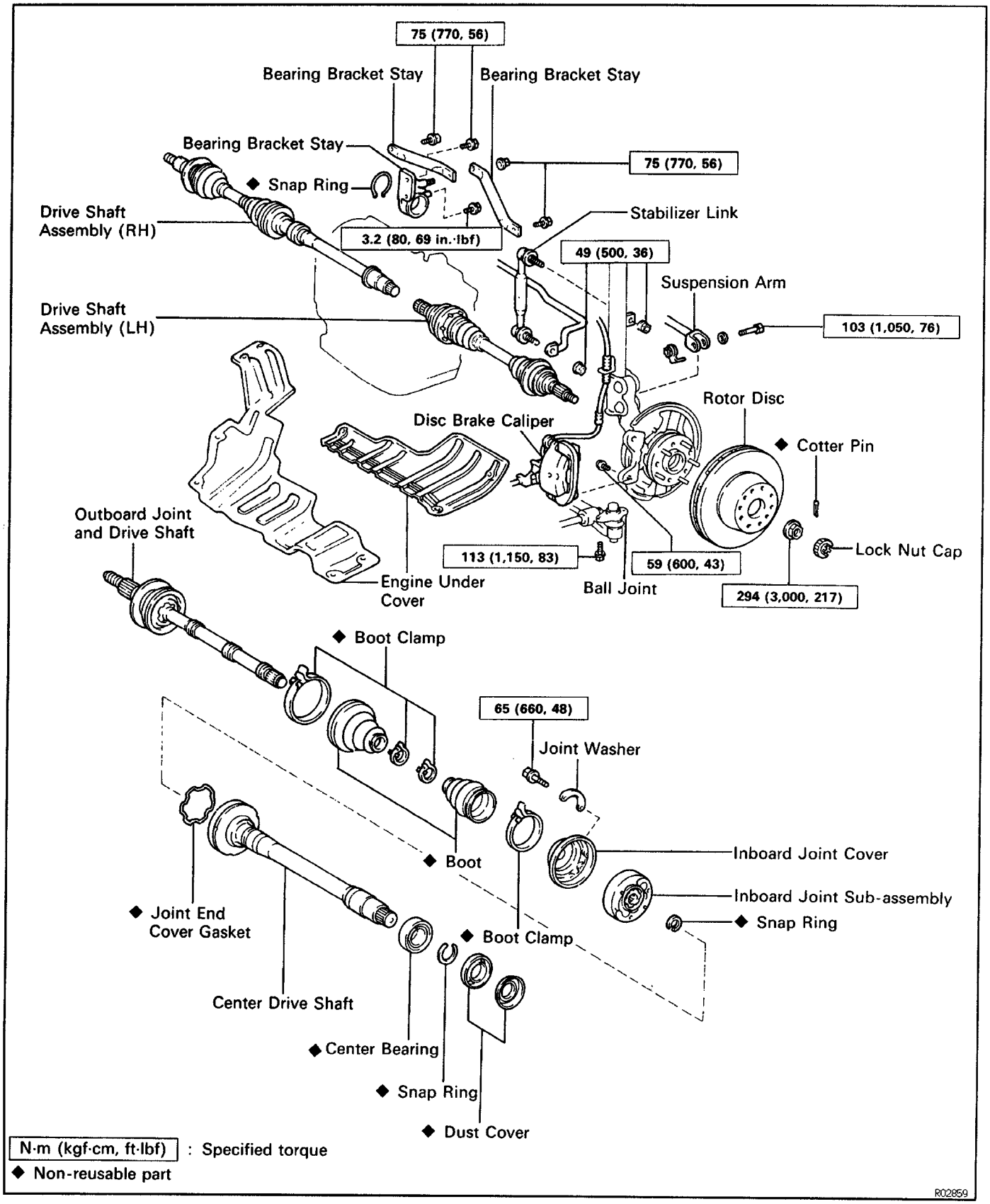
REAR DRIVE–SHAFT

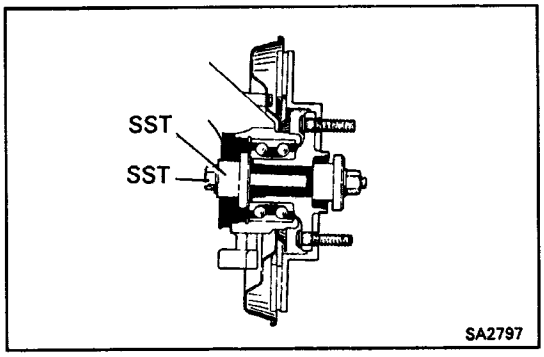
SA0CL–01

COMPONENT



SA0CM – 01

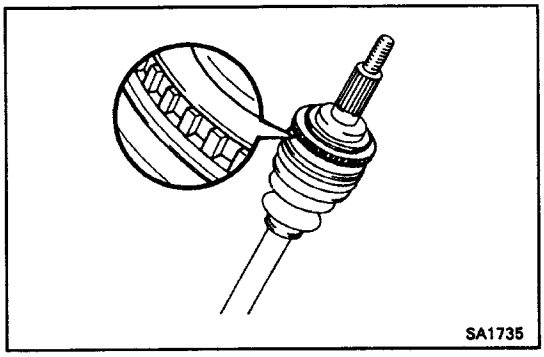
REAR DRIVE SHAFT REMOVAL



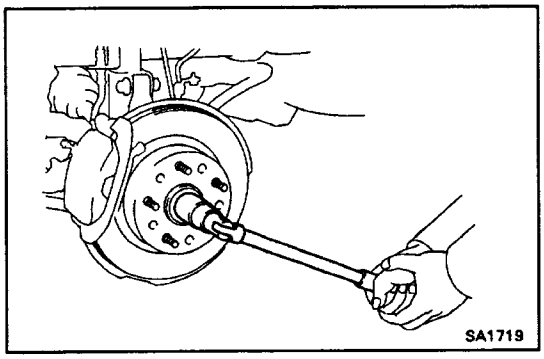
NOTICE:

- **The axle bearing could be damaged if it is subjected to the vehicle weight, such as when moving the vehicle with the drive shaft removed. Therefore, if it is absolutely necessary to place the vehicle weight on the axle bearing, first support it with SST.**

SST 09570–22010, 09608–16041 (09608–02010)

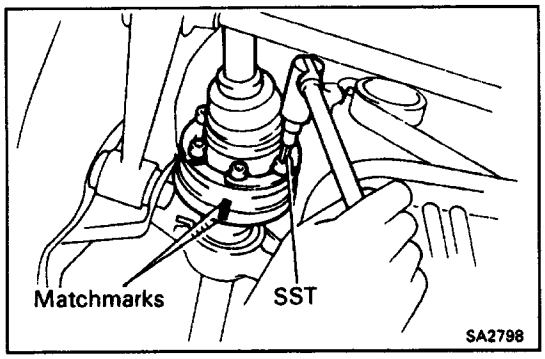


- **(w/ ABS)**
  After disconnecting the drive shaft from the axle hub, work carefully so as not to damage the sensor rotor serrations on the drive shaft.



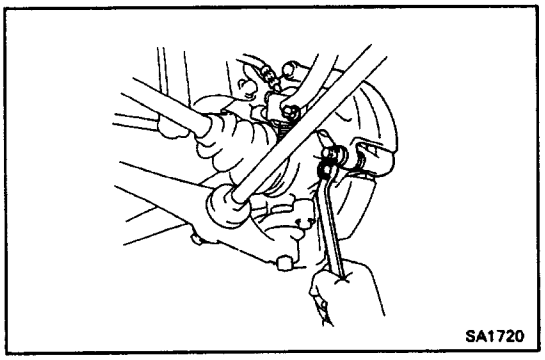
1. JACK UP VEHICLE AND REMOVE REAR WHEEL
2. REMOVE ENGINE UNDER COVER
3. DRAIN TRANSAXLE OIL
4. REMOVE COTTER PIN, LUCK NUT CAP AND BEARING LOCK NUT

(a) Remove the cotter pin and lock nut cap.
(b) With the parking brake engaged, remove the bearing lock nut.



5. LOOSEN SIX BOLTS HOLDING DRIVE SHAFT TO DIFFERENTIAL SIDE GEAR SHAFT OR CENTER DRIVE SHAFT

(a) Place the rnatchmarks on the drive shaft and side gear shaft.
NOTICE: Do not punch the marks.
Use paint, etc.
(b) With the parking brake engaged, using SST, loosen the six hexagon bolts.
SST 09923–00020



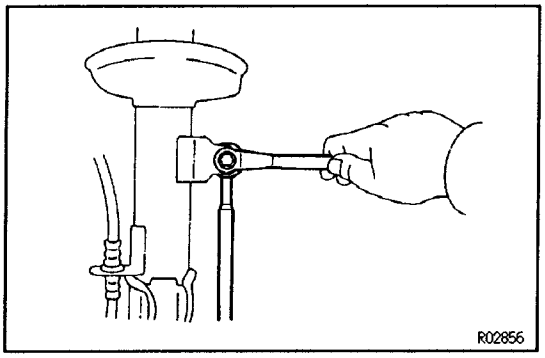
HINT: Do not remove the bolts, finger tighten them not to drop down the drive shaft.

6. REMOVE BRAKE CALIPER

Remove the brake caliper from the axle carrier anc suspend it with wire.

7. REMOVE ROTOR DISC

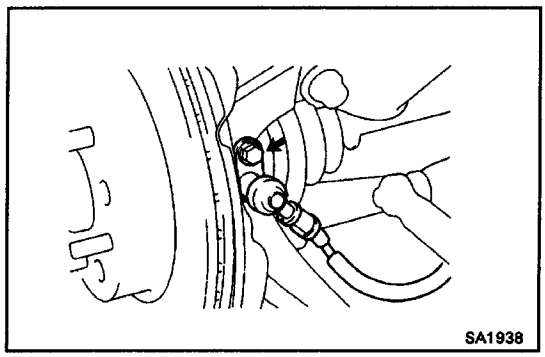
HINT: Before removing the rotor disc, place match–marks on the axle shaft and rotor disc.



8. DISCONNECT STABILIZER LINK

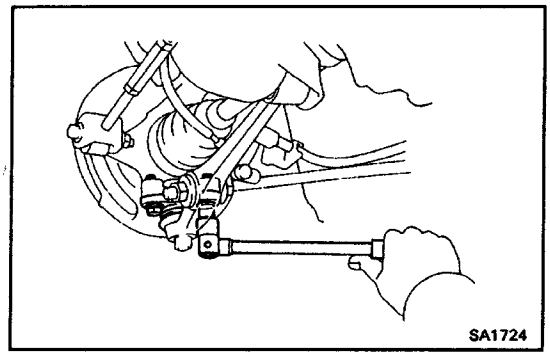
Remove the nut and disconnect the stabilizer links.

HINT: If the ball joint stud turns together with the nut, use a hexagon wrench 5 mm (0.197 in.) to hold the stud.



9. (w/ ABS)
REMOVE SPEED SENSOR FROM AXLE CARRIER

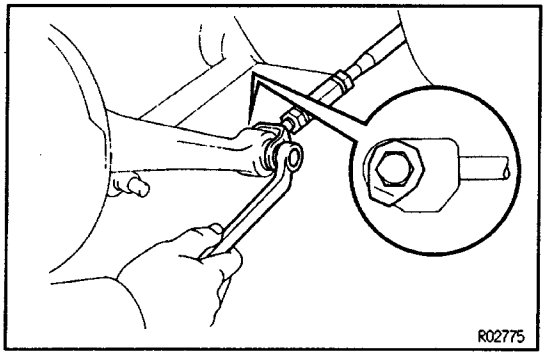
Remove the bolt and pull out the speed sensor.



10. DISCONNECT LOWER ARM FROM REAR AXLE CARRIER

(a) Remove the two bolts holding the ball joint to the lower arm.

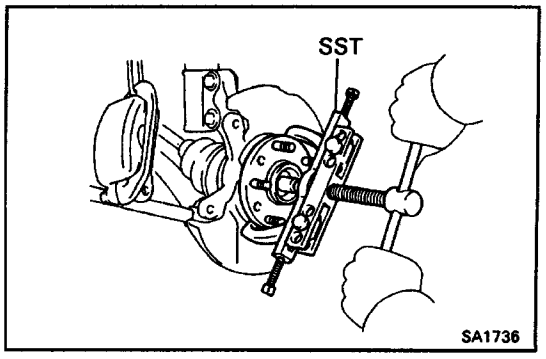
(b) Disconnect the lower arm.



11. DISCONNECT SUSPENSION ARM

(a) Remove the suspension arm mounting nut and bolt, disconnect the suspension arm from the rear axle carrier.

(b) Similarly disconnect the other side.



12. DISCONNECT DRIVE SHAFT FROM AXLE CARRIER

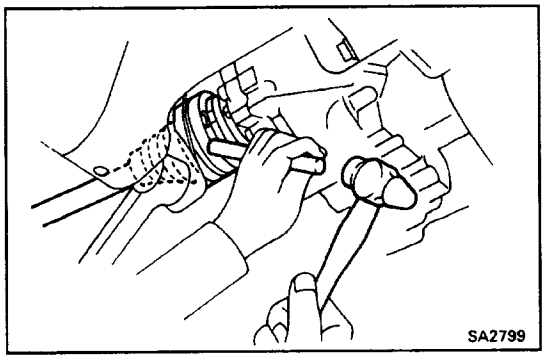
Using SST, disconnect the drive. shaft from the axle carrier.

SST 09950–20017

NOTICE:

- **Cover the drive shaft boot with cloth to protect it from damage.**

- **(w/ ABS)**
- **Be careful not to damage the sensor rotor of the drive shaft.**

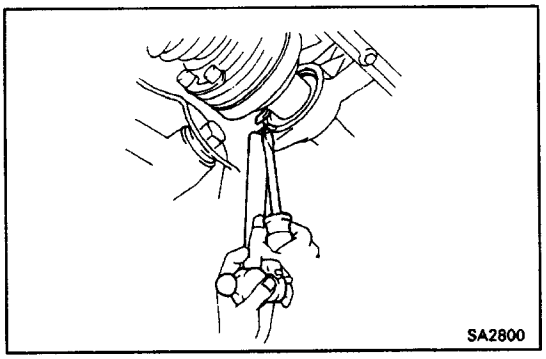


13. REMOVE LH DRIVE SHAFT

Using a hammer and brass bar, drive out the drive shaft from the transaxle.

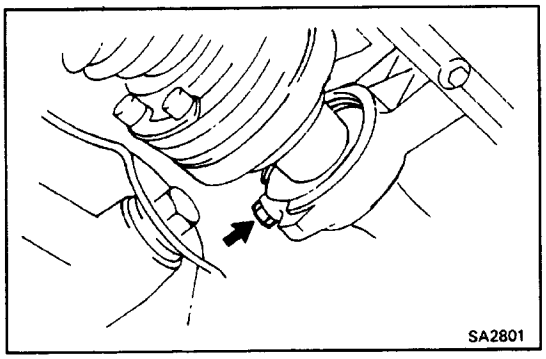
NOTICE:

- **Be careful not to damage the side gear shaft.**
- **Be careful not to damage the differential side oil seal.**



14. REMOVE RH DRIVE SHAFT

(a) Using a hammer and screwdriver, remove the snap ring from the bearing bracket.

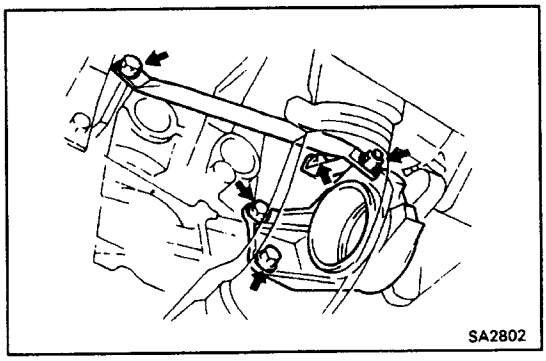


(b) Remove the bolt from the bearing bracket.

(c) Remove the RH drive shaft with center drive shaft.

NOTICE: Be careful not to damage the differential side oil seal.

HINT: If it is hard to remove the bearing, use a bras: bar and hammer and the drive flange end of the drive shaft.



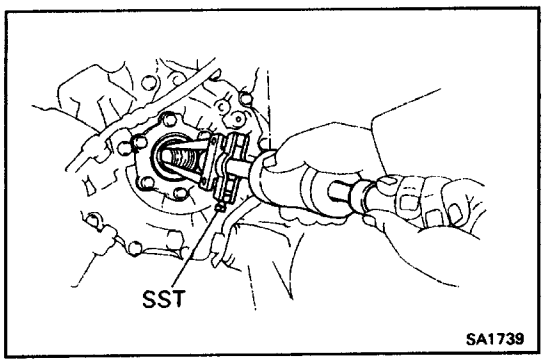
15. REMOVE DRIVE SHAFT BEARING BRACKET ANC BEARING BRACKET STAY

(a) Remove the nut, two bolts and the two bearing bra cket stays from the bearing bracket and engine.

(b) Remove the two bolts and the bearing bracket fron the engine.

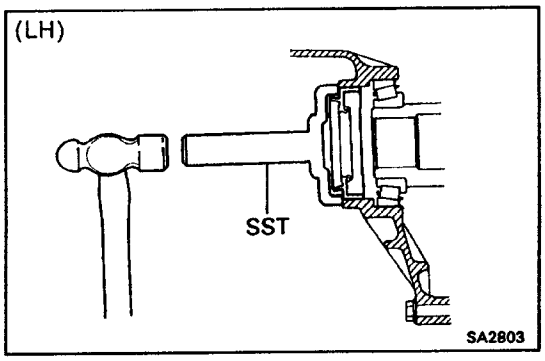
SA0CN–01

OIL SEAL REPLACEMENT



1. REMOVE OIL SEALS

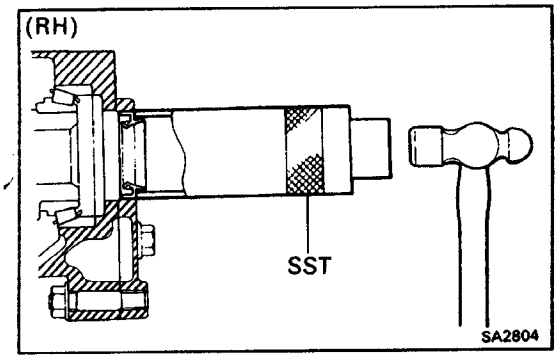
Using SST, drive out the oil seals.
SST 09308–00010



2. INSTALL NEW OIL SEAL

(a) (L H)

Using SST and hammer, tap in a new LH oil seal.
SST 09223–15010

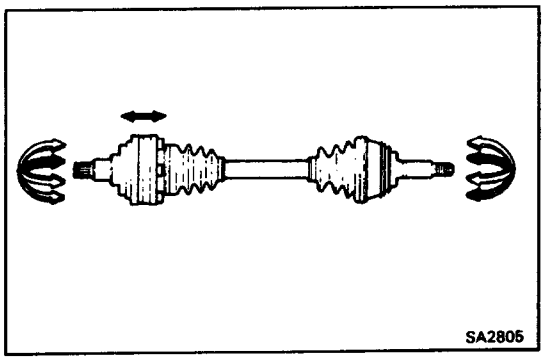


(b) (R H)

Using SST and hammer, tap in a new RH oil seal.
SST 09316–60010 (09316–00010)

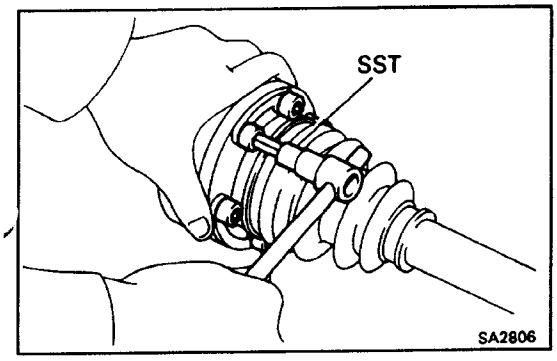
SA0CP–01

REAR DRIVE SHAFT DISASSEMBLY



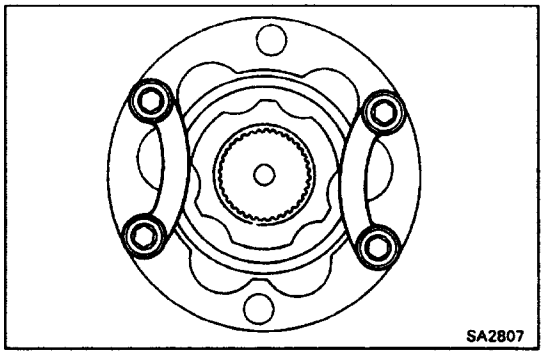
1. CHECK DRIVE SHAFT

(a) Check to see that there is no play in the outboard joint.
(b) Check to see that the inboard joint slides smoothly in the thrust direction.
(c) Check to see that there is no remarkable play in the radial direction of the inboard joint.
(d) Check for damage to boots.



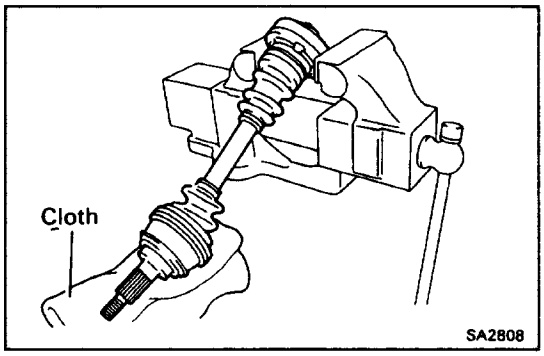
2. DISCONNECT SIDE GEAR SHAFT

(a) Using SST, remove the six hexagon bolts and the three washers.
SST 09923–00020
(b) Disconnect the side gear shaft from the drive shaft.



(c) Use bolts, nuts and washers to keep the inboard joint together.

NOTICE: Tighten the bolts by hand to avoid scratching the flange surface.

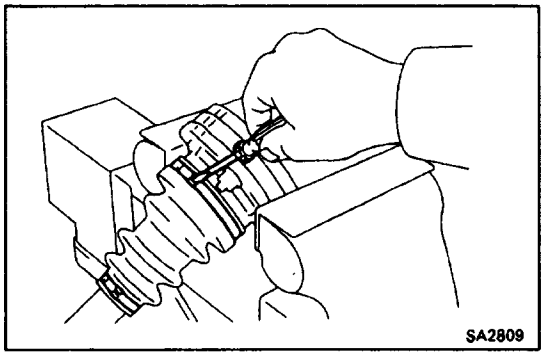


3. REMOVE INBOARD JOINT AND BOOT CLAMPS

(a) Mount the inboard joint sub–assembly in a vise.

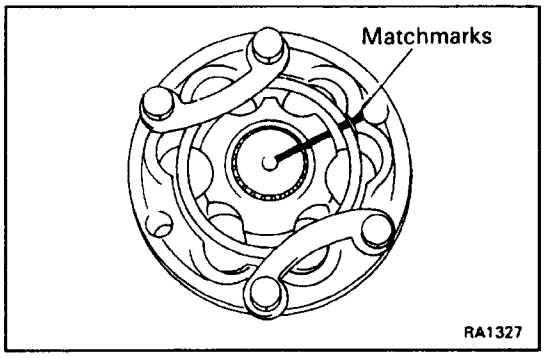
HINT:

- Use a set of soft jaws in the vise to protect the inboard joint sub–assembly.
- Cover the outboard joint side dust cover with cloth to protect in from damage.



(b) Using a screwdriver, remove the two inboard joint boot clamps.

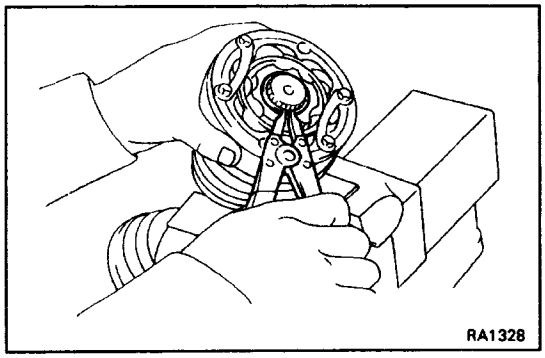
(c) Remove the inboard joint boot from the inboard joint cover.



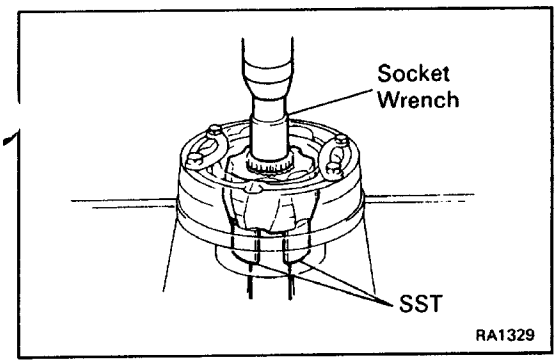
4. DISASSEMBLE INBOARD JOINT

(a) Place matchmarks on the inboard joint and drive shaft.

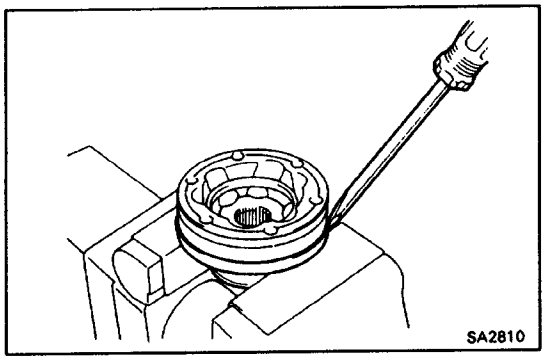
NOTICE: Do not punch marks.



(b) Using a snap ring expander, remove the snap ring.

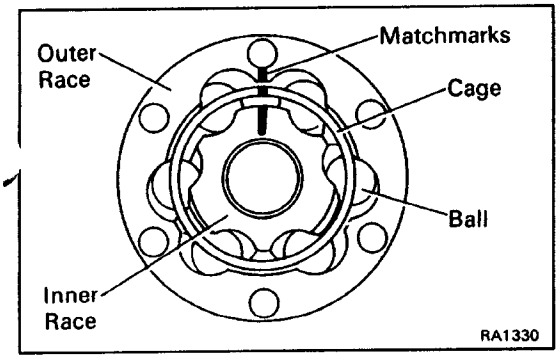


(c) Using SST, a socket wrench and a press, remove the inboard joint from the drive shaft.
SST 09726–10010 (09726–00030)
(d) Remove the bolts, nuts and washers from the inboard joint.

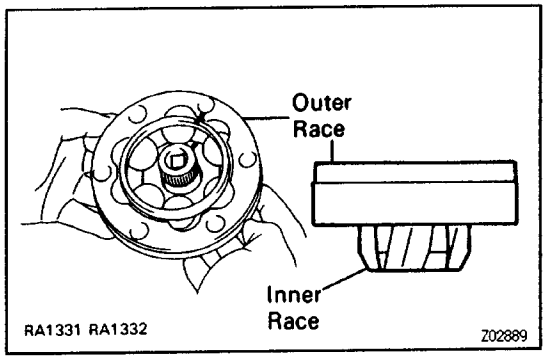


(e) Using a screwdriver, unstake the inboard joint cover.
(f) Using a screwdriver, pry out the inboard joint from the inboard joint cover.

NOTICE: When lifting the inboard joint, hold onto the inner race and outer race.

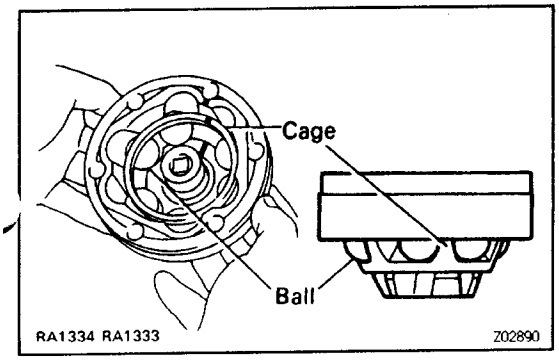


HINT: Should the joint become disassembled, reassemble it in the way shown.

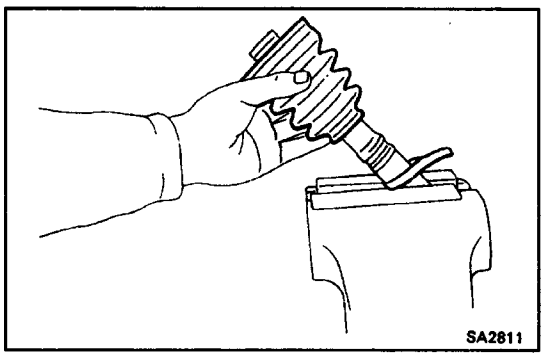


SERVICE HINT

(a) Align the matchmarks place before disassembly.
(b) Insert the spark plug wrench into the inner race.
(c) Lift the outer race and cage, and insert the six balls.

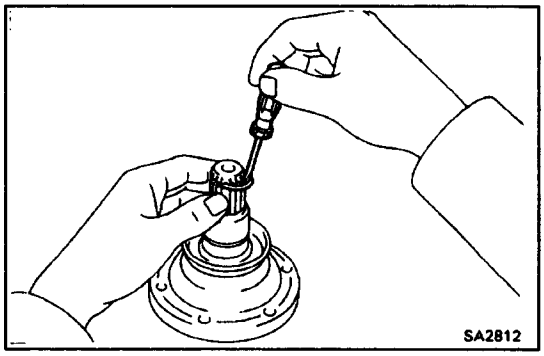


(d) Jiggle the outer race and cage as shown to place the balls in their respective grooves.
(e) Lower the outer race and cage so that fit tightly with the inner race.



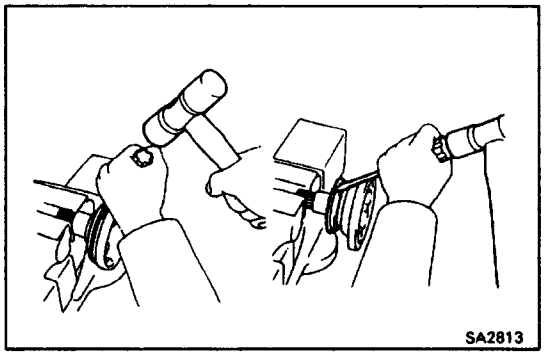
5. REMOVE BOOTS

Remove boots of the inboard joint and outboard joint.



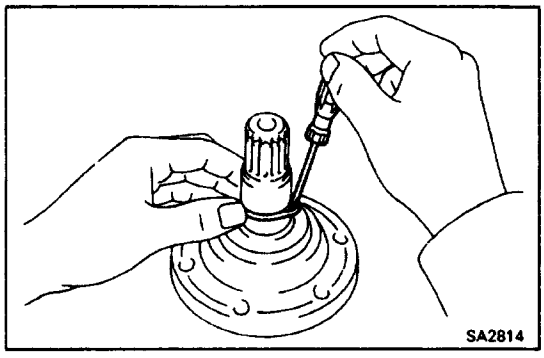
6. REPLACE SIDE GEAR SHAFT SNAP RING

(a) Using a screwdriver, pry out the snap ring.
(b) Using a snap ring expander, install a new snap ring.



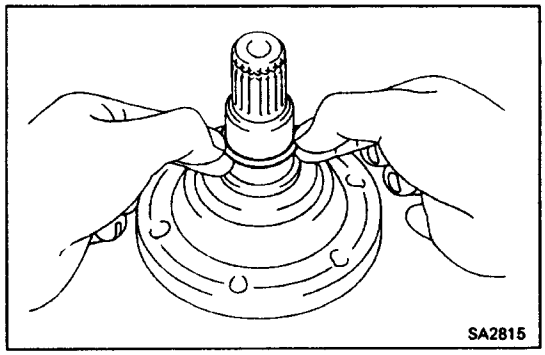
7. REMOVE DUST COVER FROM SIDE GEAR SHAFT

Using a screwdriver and hammer, tap out the dust cover.

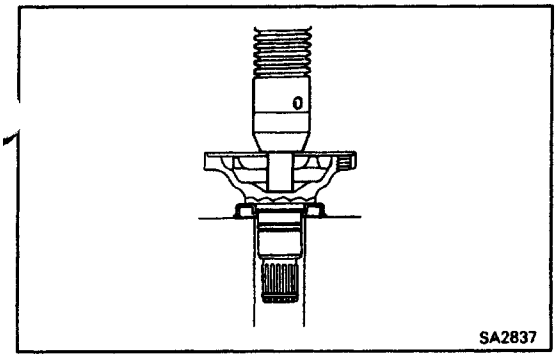


8. REPLACE SIDE GEAR SHAFT O–RING

(a) Using a screwdriver, remove the O–ring.

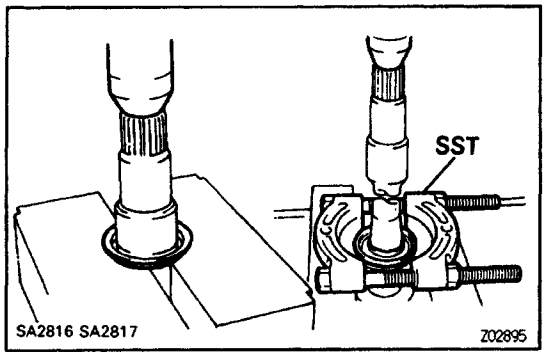


(b) Coat O–ring with MP grease.
(c) Install a new 0–ring.



9. INSTALL DUST COVER TO SIDE GEAR SHAFT

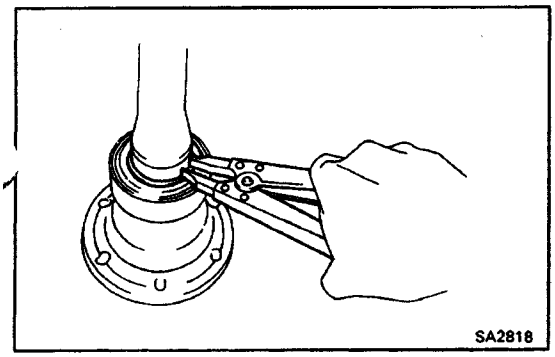
Using a press, install a new dust cover.



10. REMOVE DUST COVER FROM CENTER DRIVE SHAFT

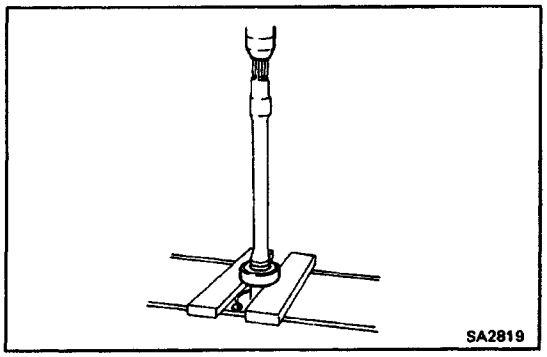
Using SST and press, remove the dust cover from the inboard joint.

SST 09950–00020

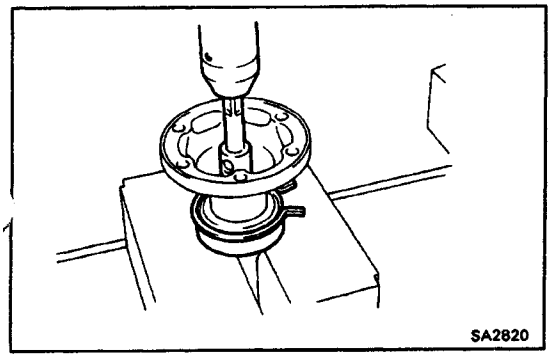


11. REMOVE BEARING FROM CENTER DRIVE SHAFT

(a) Using a snap ring expander, remove the snap ring from the inboard joint.



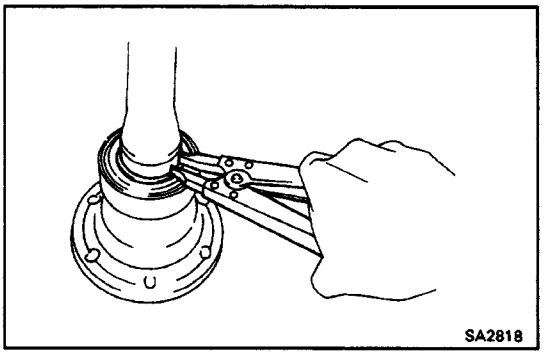
(b) Using a press, press out the bearing from the inboard joint.



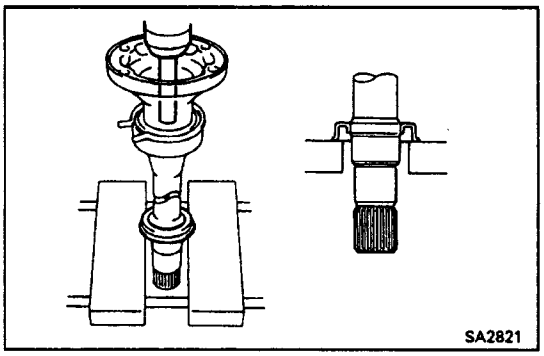
12. INSTALL BEARING TO CENTER DRIVE SHAFT

(a) Install a new snap ring to the center drive shaft.

(b) Using a press and extension bar, press in a new bearing.

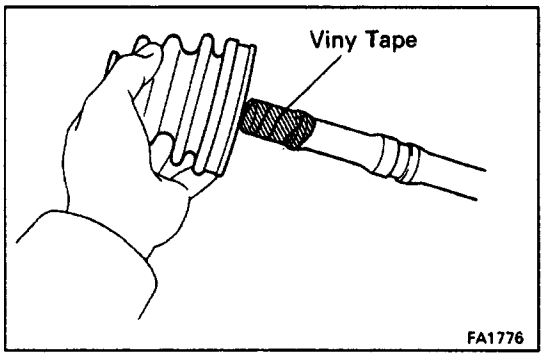


(c) Using a snap ring expander, install a new snap ring.



13. INSTALL DUST COVER TO CENTER DRIVE SHAFT

Using a press, press in a new dust cover to the inboard joint.



SA0CQ–01

REAR DRIVE SHAFT ASSEMBLY

1. TEMPORARILY INSTALL NEW BOOTS AND NEW BOOT CLAMP

HINT: Before installing the boot, wrap vinyl tape around the spline of the shaft to prevent damaging the boot.

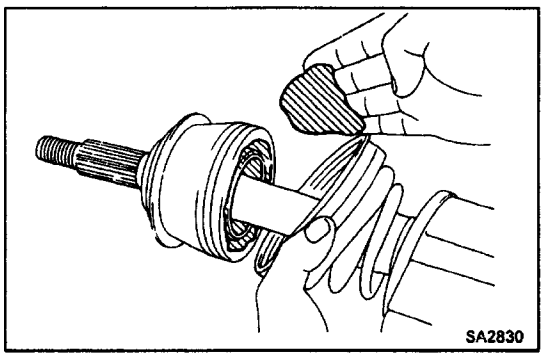
NOTICE: The boot and clamp of the outboard joint are smaller than those of the inboard joint. Temporarily install the two boots and four new clamps to the outboard joint and inboard joint.

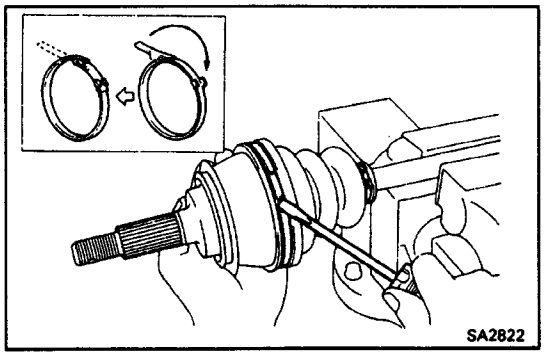
2. INSTALL BOOT TO OUTBOARD JOINT

(a) Before assembling the boots, pack in grease.

HINT: Use the grease supplied in the boot kit.

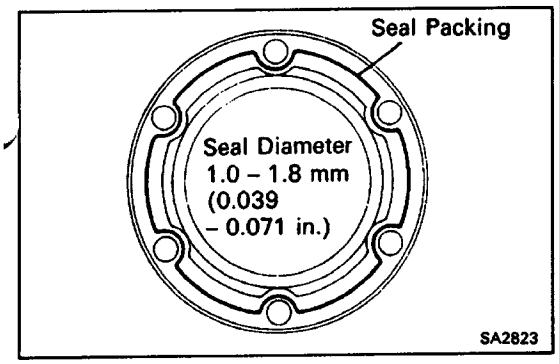
Grease capacity:
120–130 g (0.26–0.29 lb)
Grease color:
Black





(b) Install a new two boot clamps to the outboard joint boot.

(c) Bend the boot clamp and lock it as shown.



3. INSTALL INBOARD JOINT COVER

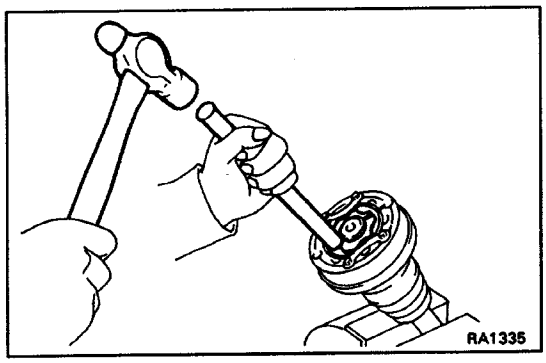
(a) Clean contacting surfaces of any residual packing material using gasoline or alcohol.

(b) Apply seal packing to the inboard joint cover as shown.

Seal packing:

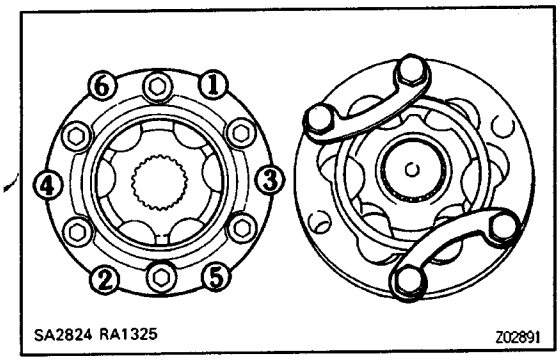
Part No. 08826–00801, THREE BOND 1121 or equivalent

HINT: Avoid applying an excess amount to the sur–face.



(c) Align the bolt holes of the cover with those of the inboard joint, then insert the hexagon bolts.

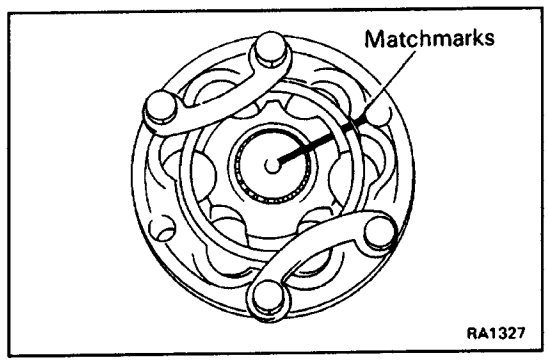
(d) Using a hammer and brass bar, tap the rim of the inboard joint cover into place.



(e) Do this in the order shown, and repeat several time.

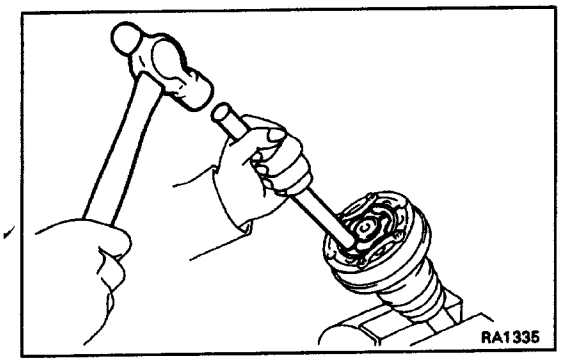
(f) Use bolts, nuts and washers to keep the inboard joint together.

NOTICE: Tighten the bolts by hand to avoid scratching the flange surface.



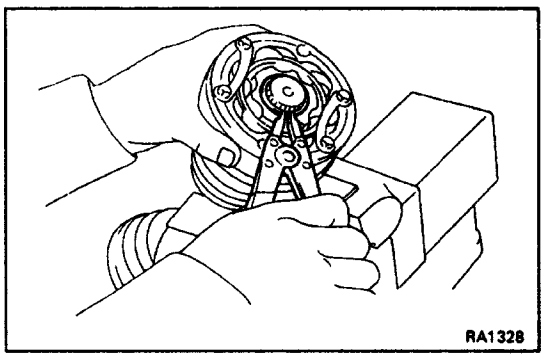
4. ASSEMBLE INBOARD JOINT

(a) Align the matchmarks placed before disassembly.

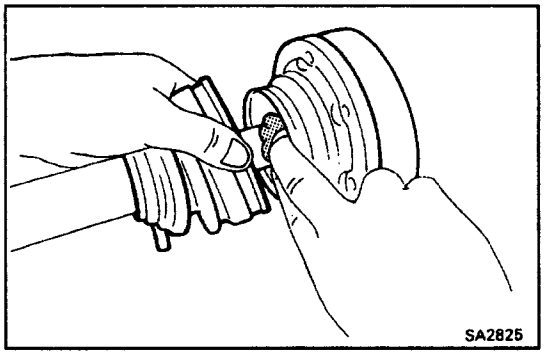


(b) Using a brass bar and hammer, tap the inboard joint onto the drive shaft.

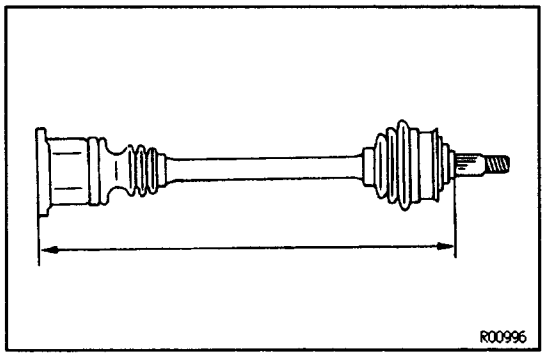
NOTICE: Make sure that the brass bar is touching the inner race, and not the cage.



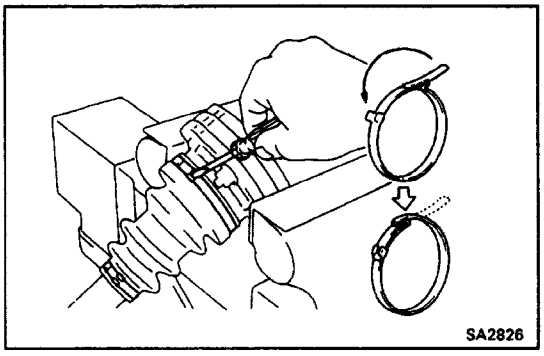
(c) Using a snap ring expander, install a new snap ring.



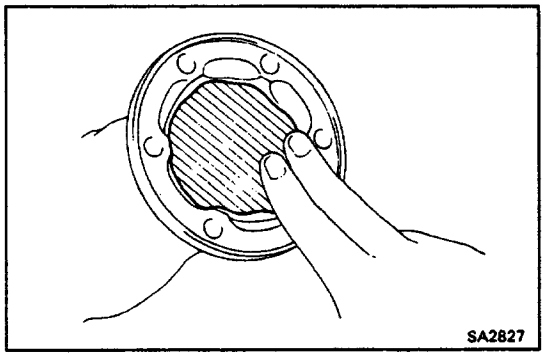
(d) Pack in grease to the inboard tulip and boot.
HINT: Use the grease supplied in the boot kit.
Grease capacity:
90–100 g (0.20–0.22 lb)
Grease color:
Black



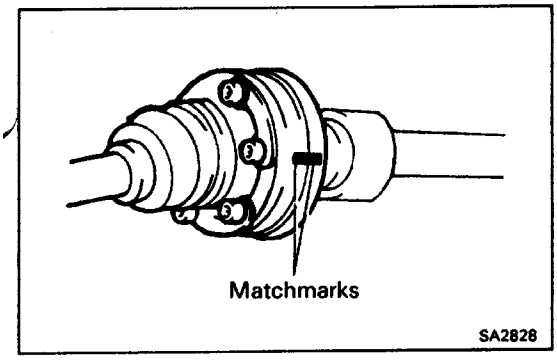
(e) Be sure the boot is on the shaft groove.
(f) Insure that the boot is no stretched or contracted when the drive shaft is at standard length.
Drive shaft length:
389.7±5.0 mm (15.343±0.197 in.)



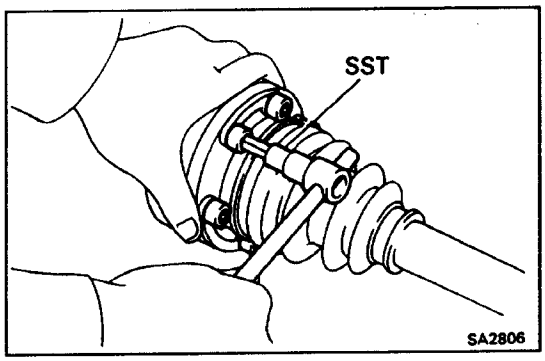
(g) Bend the boot clamp and lock it as shown.



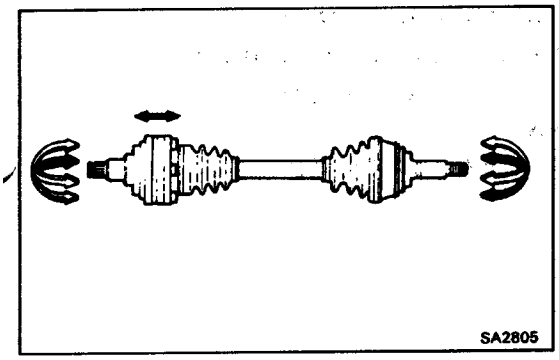
5. INSTALL SIDE GEAR SHAFT
(a) Pack in grease to the side gear shaft.
HINT: Use the grease supplied in the boot kit.
Grease capacity:
43–53 g (0.09–0.12 lb)
Grease color:
Black
(b) Remove the two washers and four bolts from the drive shaft.



(c) Align the matchmarks placed before remove, and install the side gear shaft or center drive shaft and a new gasket to the inboard joint sub–assembly.



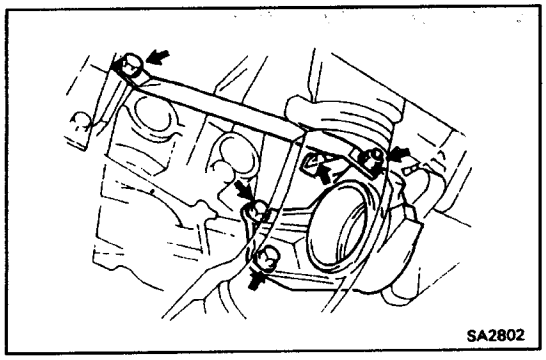
(d) Using SST, temporarily tighten the six hexagon bolts with three washers.
SST 09923–00020



6. CHECK DRIVE SHAFT

(a) Check to see that the there is no play in the inboard joint and outboard joint.

(b) Check to see that the inboard slide smoothly in the thrust direction.



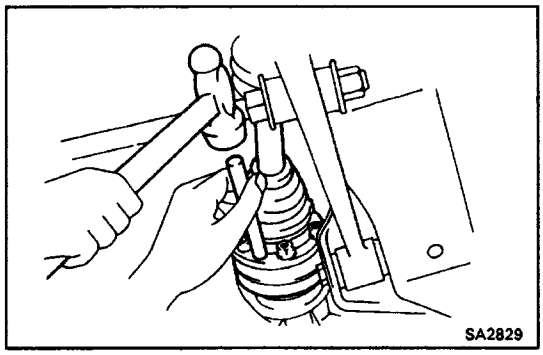
REAR DRIVE SHAFT INSTALLATION

SA0CR–01

1. INSTALL DRIVE SHAFT BEARING BRACKET AND BEARING BRACKET STAY

(a) Install the bearing bracket to the engine with the two bolts.
Torque: 64 N–m (650 kgf–cm, 47 ft–lbf)

(b) Install the two bearing bracket stays to the engine and bearing bracket with the two bolts and the nut.
Torque:
Bolt 75 N–m (770 kgf–cm, 56 ft–lbf)
Nut 75 N–m (770 kgf–cm, 56 ft–lbf)



2. INSTALL LH DRIVE SHAFT

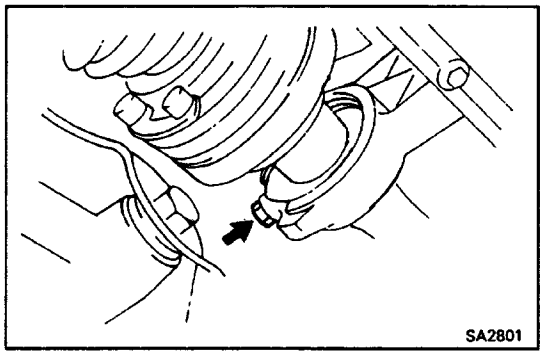
(a) Apply the oil seal lip with MP grease.

(b) Using a brass bar and hammer, drive in the drive shaft until it makes contact with the pinion shaft.

NOTICE: Be careful not to damage the boots.

HINT:

- Before installing the drive shaft, set the snap ring opening side facing downward.
- Whether or not the drive shaft is making contact with the pinion shaft can be known by sound or feeling when driving it in.



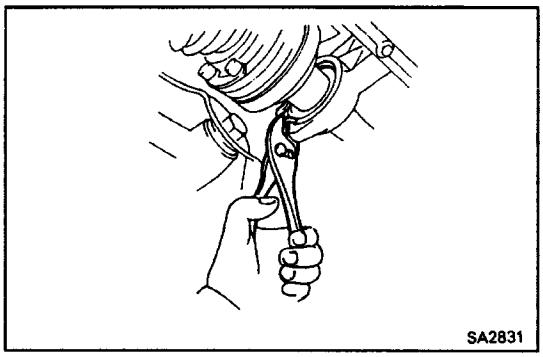
3. INSTALL RH DRIVE SHAFT

(a) Apply MP grease to the transaxle oil lip.

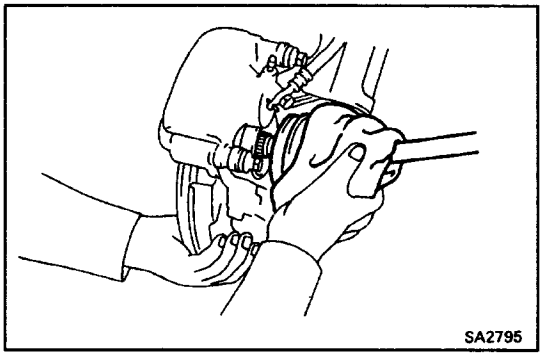
(b) Insert the center drive shaft with the RH drive shaft to the transaxle through the bearing bracket.

(c) Install the bolt to the bearing bracket.

Torque: 32 N–m (320 kgf–cm, 24 ft–lbf)



(d) Using pliers, install a new snap ring to the bearing bracket

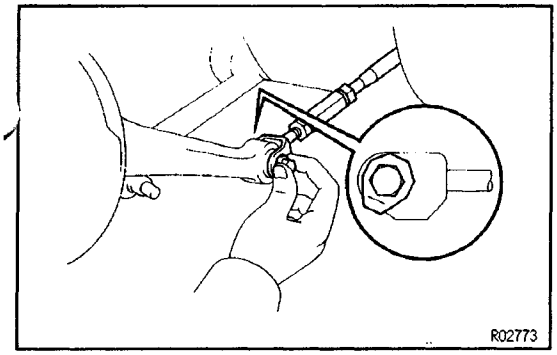


4. CONNECT OUTBOARD JOINT SIDE OF DRIVE SHAFT

Connect the outboard joint side of the drive shaft to the axle shaft.

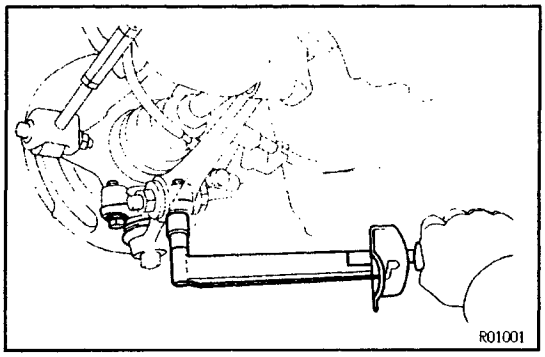
NOTICE:

- **Be careful not to damage the boots.**
- **(w/ ABS)**
  Be careful not to damage the sensor rotor of the drive shaft.



5. CONNECT SUSPENSION ARM

Temporarily connect the suspension arm to the rear axle carrier with the bolt and nut.

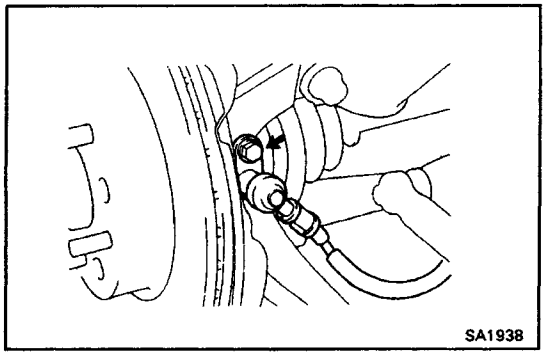


6. CONNECT BALL JOINT TO AXLE CARRIER

(a) Connect the ball joint to the axle shaft.

(b) Install and torque the two bolts.

Torque: 113 N–m (1,150 kgf–cm, 73 ft–lbf)

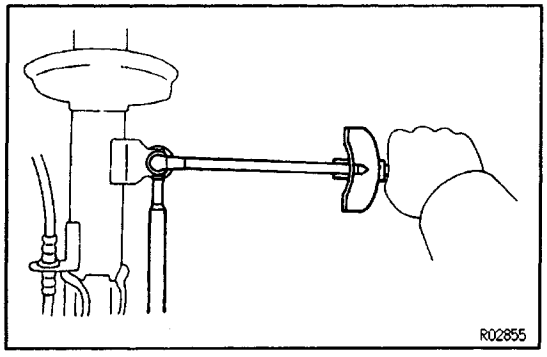


7. (w/ABS)

INSTALL SPEED SENSOR TO AXLE CARRIER

Torque: 7.4 N–m (80 kgf–cm, 69 in.–lbf)

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

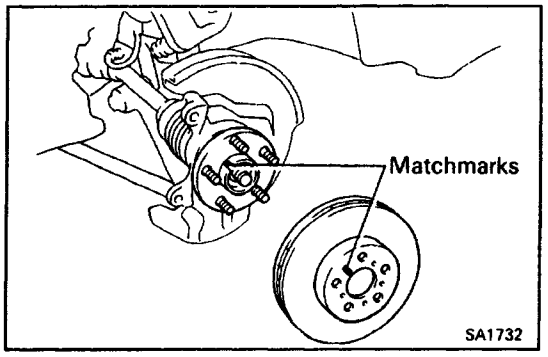


8. CONNECT STABILIZER LINK

Connect the stabilizer link, with the nut.

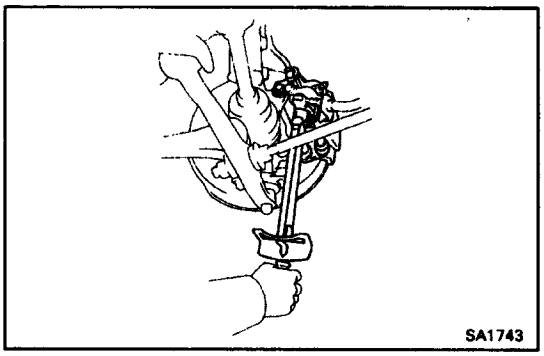
Torque: 48 N–m (500 kgf–cm, 36 ft–lbf)

HINT: If the ball joint stud together with the nut, use a hexagon wrench 5 mm (0.197 in.) to hold the stud.



9. INSTALL ROTOR DISC TO AXLE CARRIER

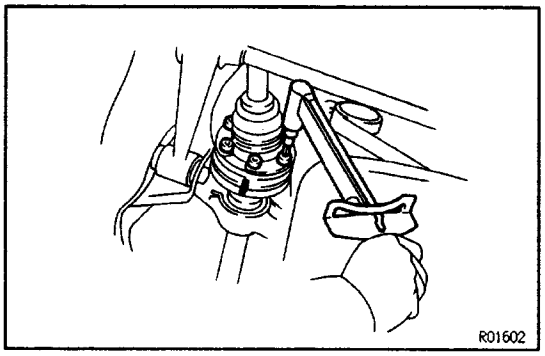
HINT: Align the matchmarks, and install the rotor the axle shaft.



10. INSTALL BRAKE CALIPER

Install the brake caliper to the axle carrier with the two bolts.

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

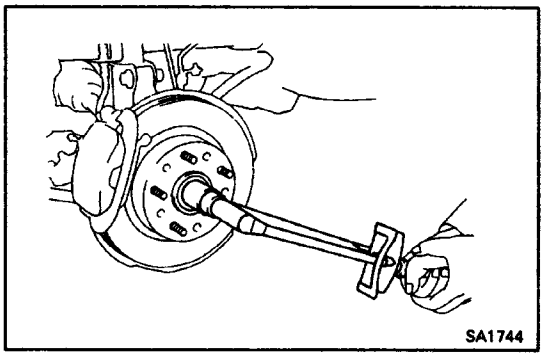


11. TIGHTEN INBOARD JOINT HOLDING SIX HEXAGON BOLTS.

With the parking brake engaged, using SST torque the six hexagon bolts.

SST 09923–00020

Torque: 65 N–m (660 kgf–cm, 217 ft–lbf)



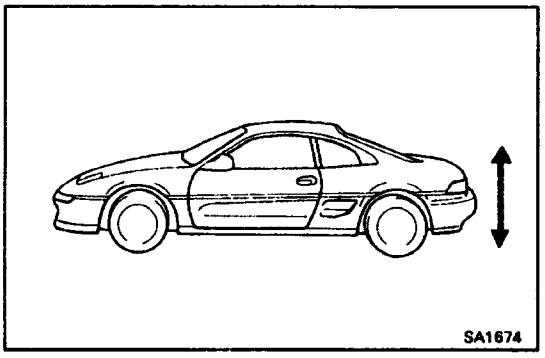
12. INSTALL BEARING, LOCK NUT CAP AND COTTER PIN

(a) Install the lock nut.

(b) With the parking brake engaged, and tighten the nut.

Torque: 284 N–m (3,000 kgf–cm, 217 ft–lbf)

(c) Install the lock nut cap, and using pliers, install a new cotter pin.

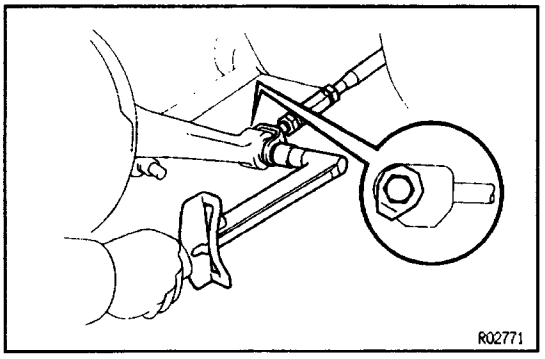


13. STABILIZE SUSPENSION

(a) Install the rear wheel and lower vehicle.

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

(b) Bounce the vehicle up and down several times to allow the suspension to settle.



14. TORQUE BOLT AND NUT

Torque the suspension arm mount bolt and nut with the vehicle load applied on the 'suspension.

Torque: 103 N–m (1.050 kgf–cm, 76 ft–lbf)

15. FILL TRANSAXLE WITH GEAR OIL

Oil grade:

API GL–4 or GL–5

Viscosity:

SAE 75W–90 or 85W–90

16. INSTALL ENGINE UNDERCOVER