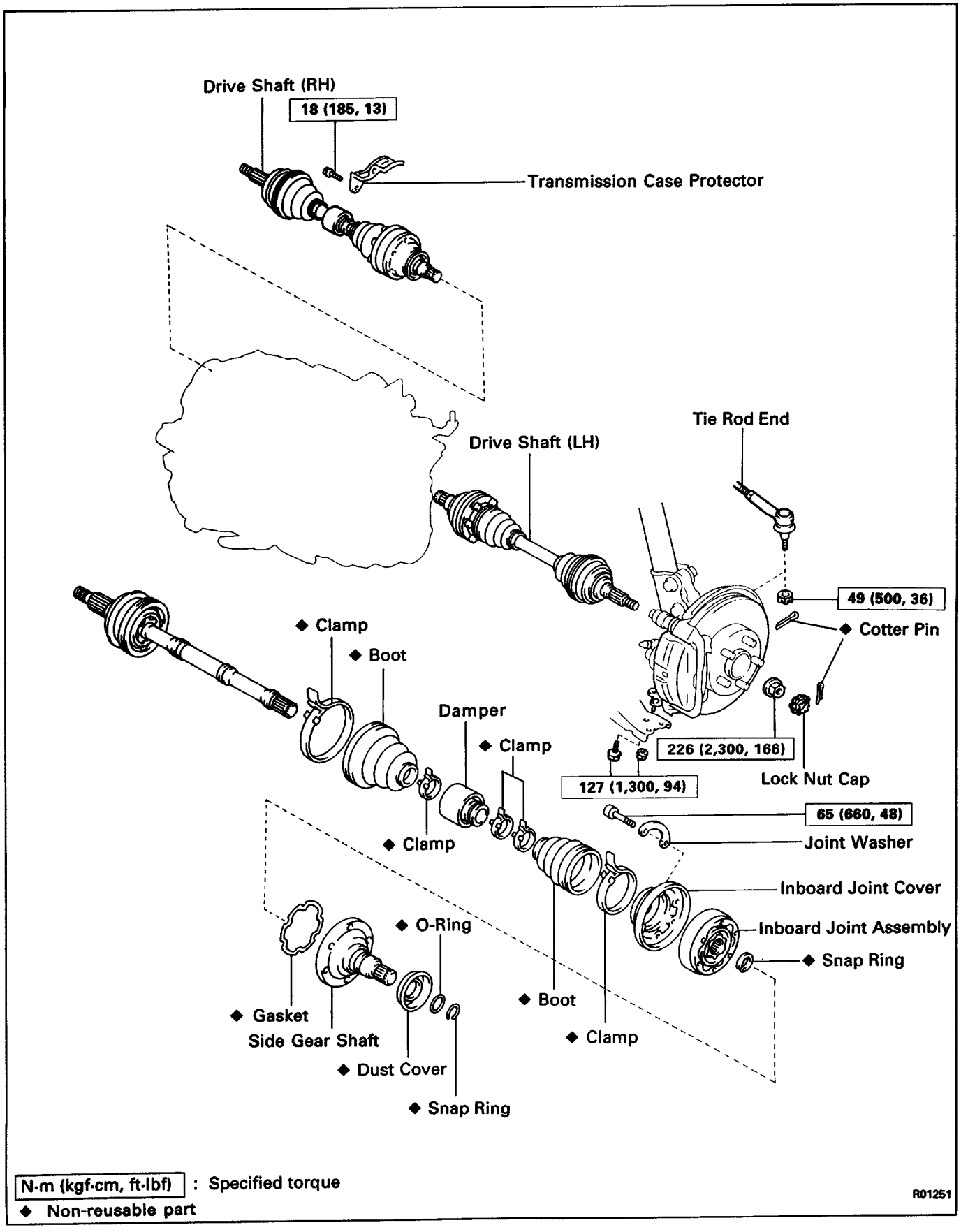
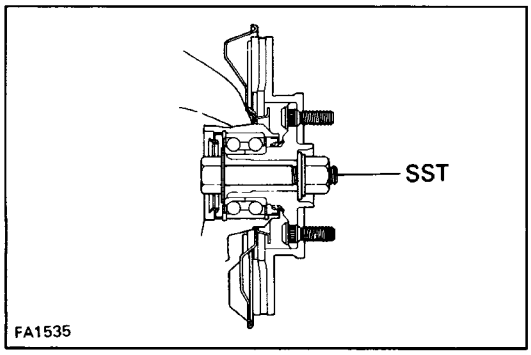
FRONT DRIVE SHAFT (4WD)

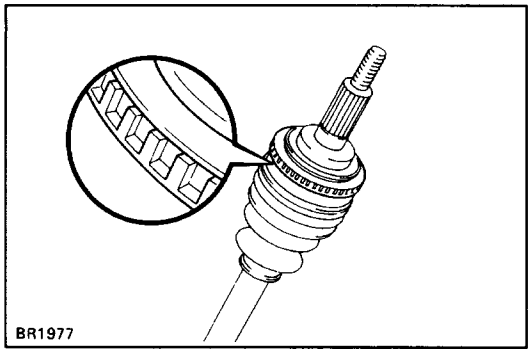
COMPONENTS



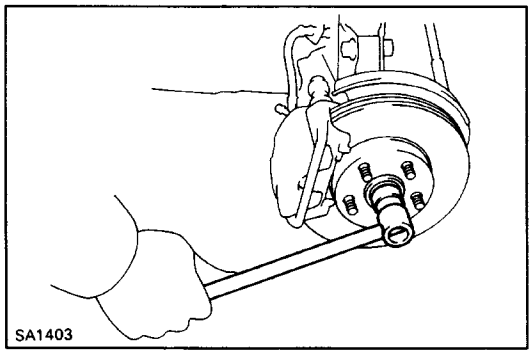


NOTICE:

- **The hub bearing could be damaged if it is subjected to the vehicle weight,such as when moving the vehi–cle with the drive shaft removed. Therefore, if it is absolutely necessary to place the vehicle weight on the hub bearing, first support it with SST.**
  SST 09608–16041 (09608–02020, 09608–02040)



- **(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.



REMOVAL OF FRONT DRIVE SHAFT

(See page SA–33)

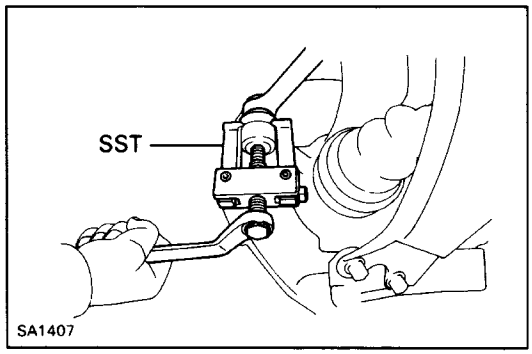
1. REMOVE FRONT WHEELS

2. REMOVE COTTER PIN, LOCK NUT CAP AND LOCK NUT

(a) Remove the cotter pin and lock nut cap.

(b) Loosen the bearing lock nut while depressing the brake pedal.

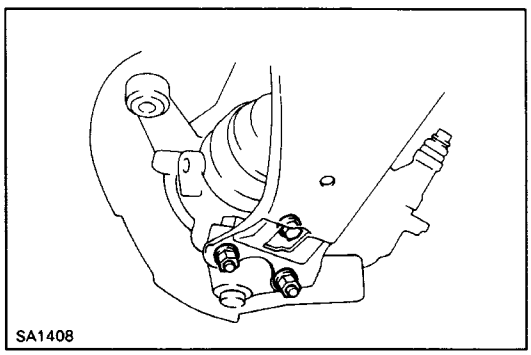
(c) Remove the bearing lock nut.



3. DISCONNECT TIE ROD END

(a) Remove the cotter pin and nut from the tie rod end.

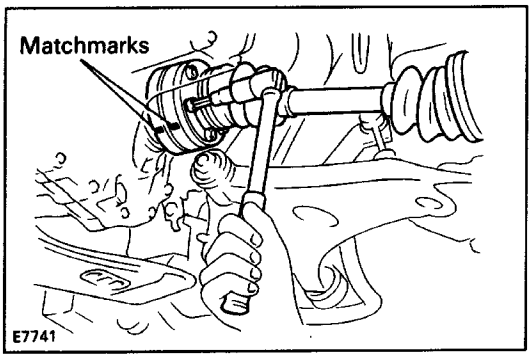
(b) Using SST, disconnect the tie rod end from the steering knuckle.
SST 09628–62011



4. DISCONNECT STEERING KNUCKLE FROM LOWER ARM

Remove the bolt and two nuts and disconnect the steer–ing knuckle from the lower arm.

5. DRAIN TRANSAXLE OIL



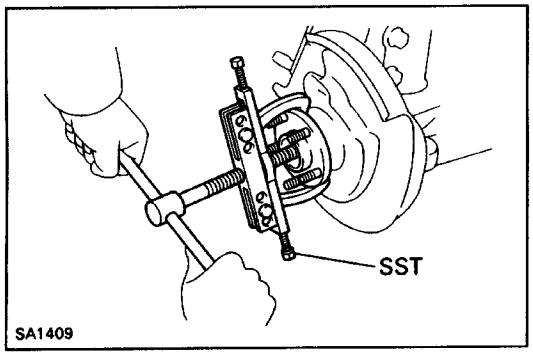
6. REMOVE DRIVE SHAFT

(a) Place the matchmarks on the drive shaft and side gear shaft.

NOTICE: Do not use a punch to mark the match–marks.

Use paint, etc.

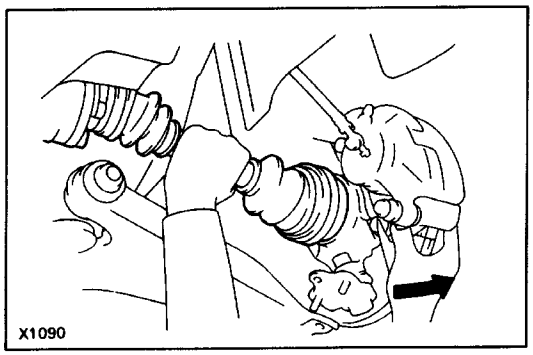
(b) Using SST, loosen the six hexagon bolts while de–pressing the brake pedal.
SST 09043–88010



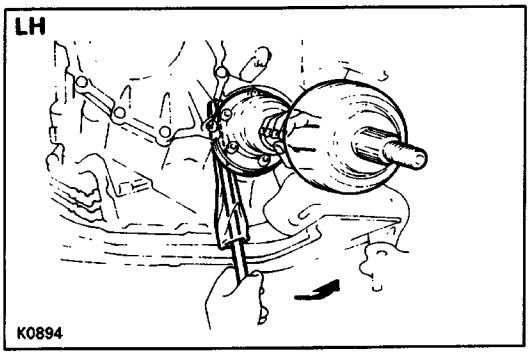
(c) Using SST," disconnect the drive shaft from the steering knuckle.
SST 09950–20017

NOTICE:

- **Before removing the drive shaft, wrap vinyl tape around the threads of the drive shaft to prevent damaging the oil seal.**
- **Cover the drive shaft boot with cloth to protect it from damage.**



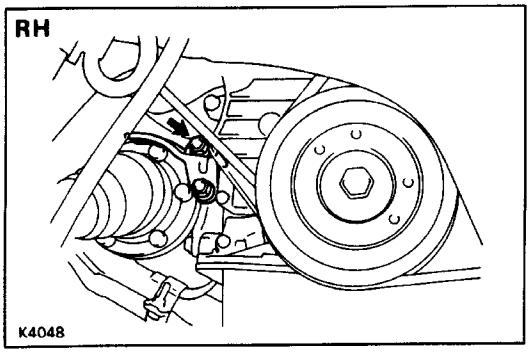
(d) Push the front axle carrier towards the outside of the vehicle, and separate the drive shaft from the steer–
ing knuckle.



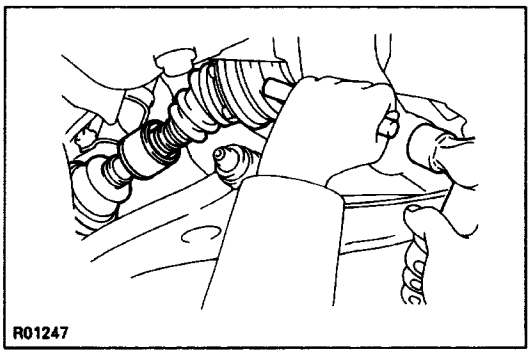
(e) (LH drive shaft)
Using a hub nut wrench or equivalent, pry out the LH drive shaft.

NOTICE:

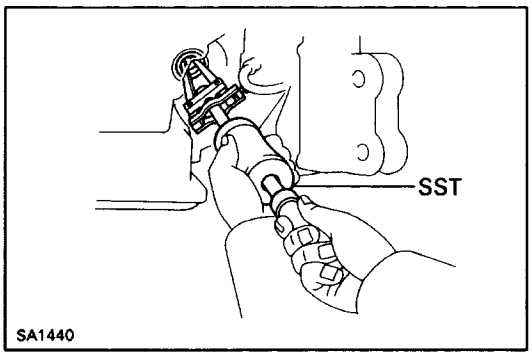
- **Be careful not to damage the dust cover.**
- **Cover the hub nut wrench or an equivalent with cloth so as not to damage the transaxle body.**



(f) Remove the two bolts and transmission case pro–tector.



(g) Using a brass bar and hammer, drive out the drive shaft.



ON–VEHICLE REPLACEMENT OF SIDE GEAR SHAFT OIL SEAL

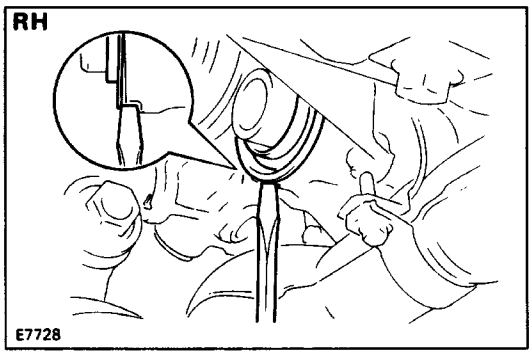
1. REMOVE DRIVE SHAFT

(See page SA–33)

2. REMOVE LH OIL SEAL

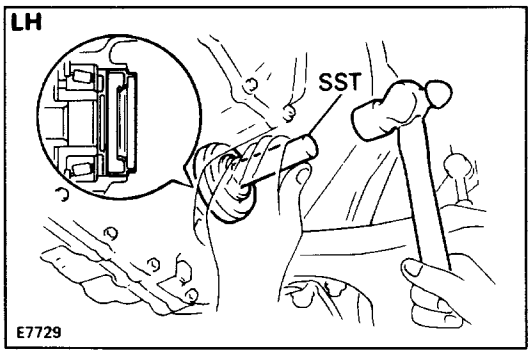
Using SST, drive out the oil seal from the case.

SST 09308–00010



3. REMOVE RH OIL SEAL

Using a screwdriver, remove the oil seal as shown.

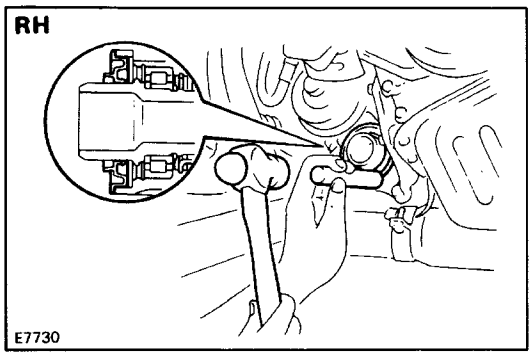


4. INSTALL LH OIL SEAL

Using SST and hammer, tap in a new oil seal.

SST 09223–15010

HINT: Coat the oil seal lip with M P grease.



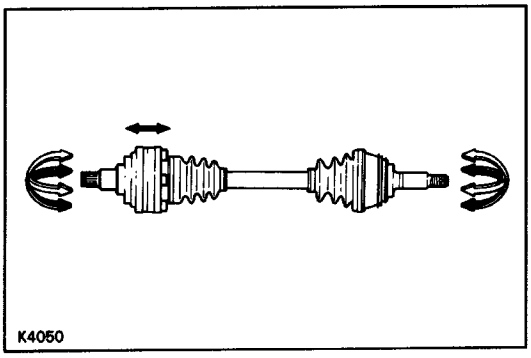
5. INSTALL RH OIL SEAL

Using a brass bar and hammer, tap in a new oil seal.

HINT: Coat the oil seal lip with M P grease.

6. INSTALL DRIVE SHAFT

(See page SA–44)


K4050

DISASSEMBLY OF FRONT DRIVE SHAFT

(See page SA–33)

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.

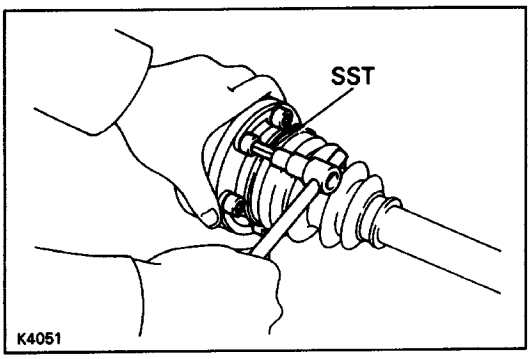
(c) Check to see that there is no remarkable play in the radial direction of the inboard joint.

(d) Check for damage to boots.

2. DISCONNECT SIDE GEAR SHAFT

(a) Using SST, remove the six hexagon bolts and the three washers.
SST 09043–88010

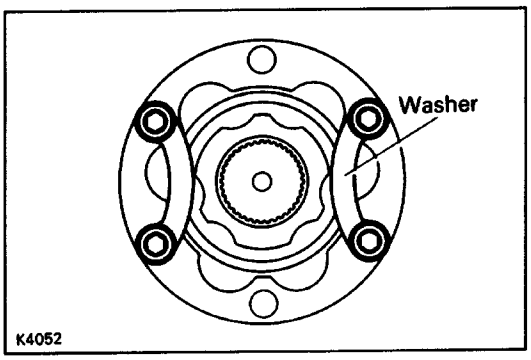
(b) Disconnect the side gear shaft from the drive shaft.



K4051

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

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

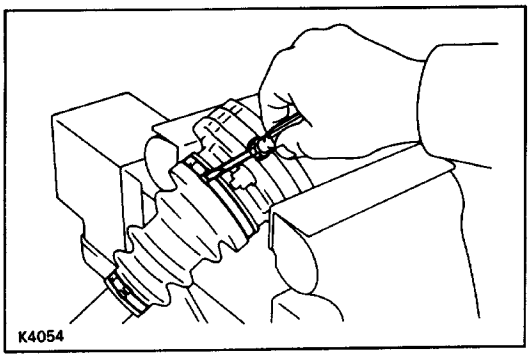


K4052

3. REMOVE BOOT CLAMPS

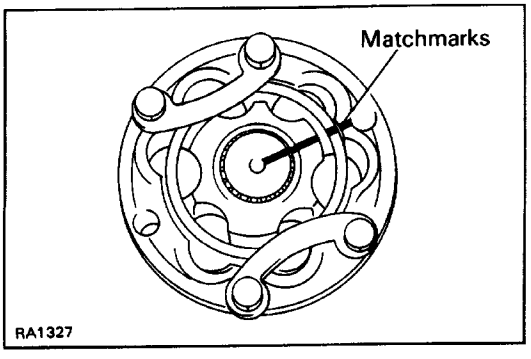
(a) Using a screwdriver, remove the four boot clamps from the inboard joint and outboard joint.

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

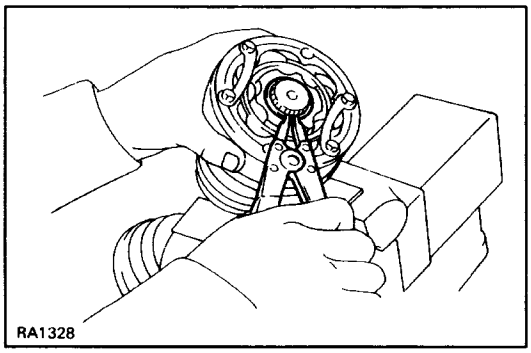

K4054

4. DISASSEMBLE INBOARD JOINT

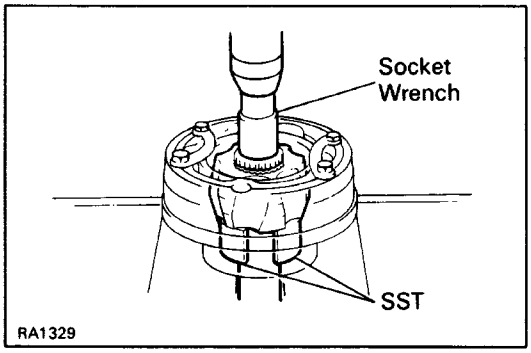
(a) Place the matchmarks on the inboard joint and drive shaft.



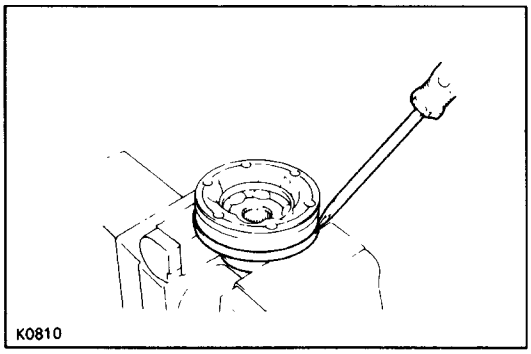
RA1327



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

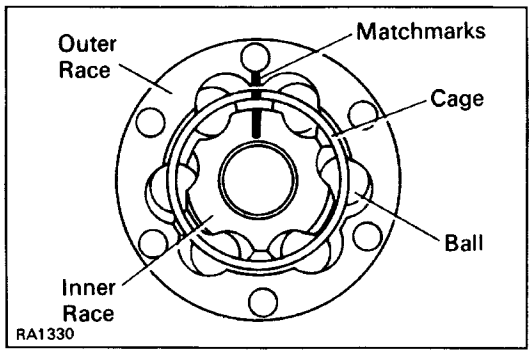


(c) Using SST, a socket wrench and a press, remove the
inboard joint from the drive shaft.
SST 09726–10010 (09726–00030)
(d) Remove the four bolts and two washers from the inboard joint.

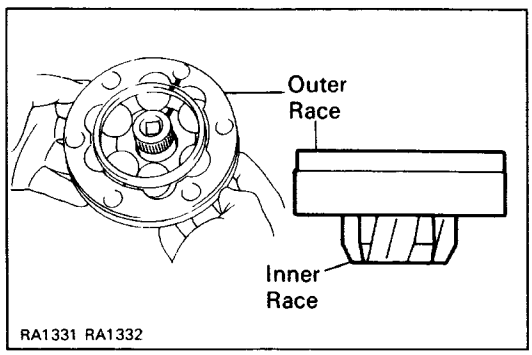


(e) Using a screwdriver, unstake the inboard joint cover.
(f) Using a screwdriver, pry out the inboard joint from the inboard joint cover.

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

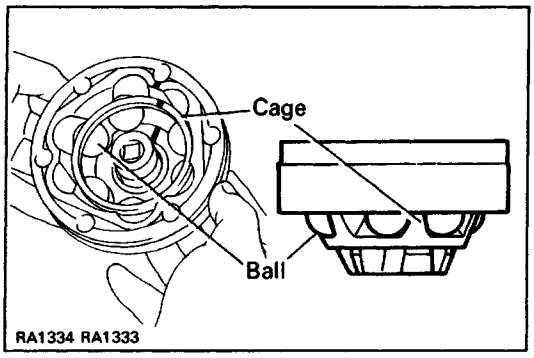


HINT: Should the joint become disassembled, re–assemble it in the way shown.

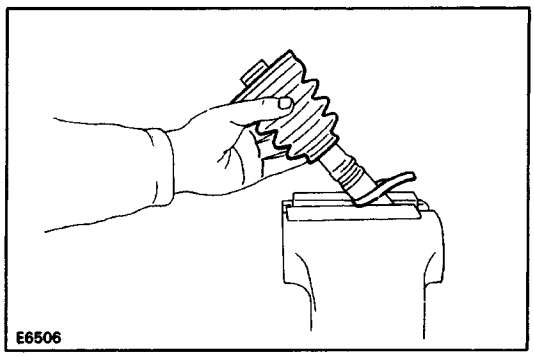


SERVICE HINT

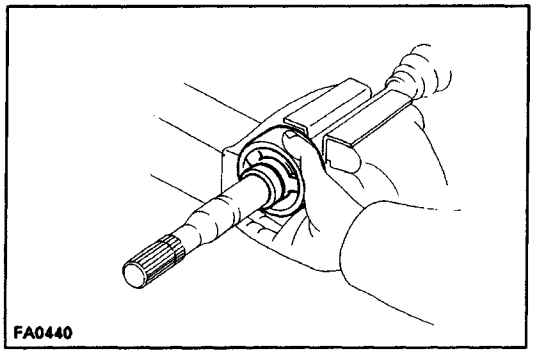
(a) Align the matchmarks placed before disassembly.
(b) Install the spark plug wrench into the inner race.
(c) Lift the outer race and cage, and insert the six balls.



(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 they fit tightly with the inner race.

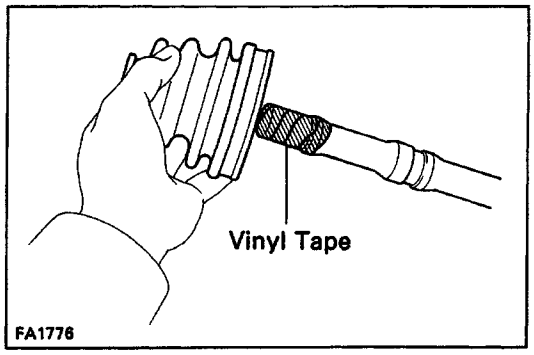


5. REMOVE INBOARD JOINT BOOT



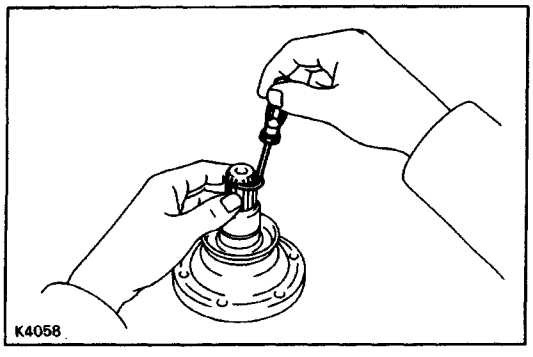
6. REMOVE DAMPER

(a) Using a screwdriver, remove the damper clamp.
(b) Slide out the damper.



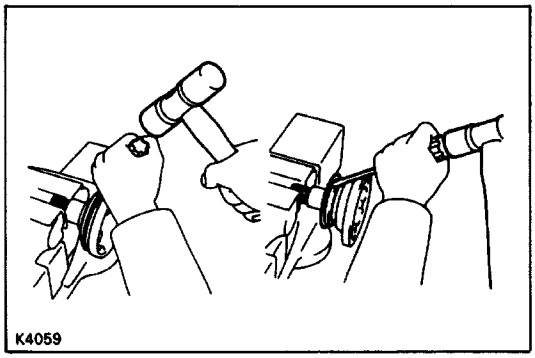
7. REMOVE OUTBOARD JOINT BOOT

NOTICE: Do not disassemble the outboard Joint.



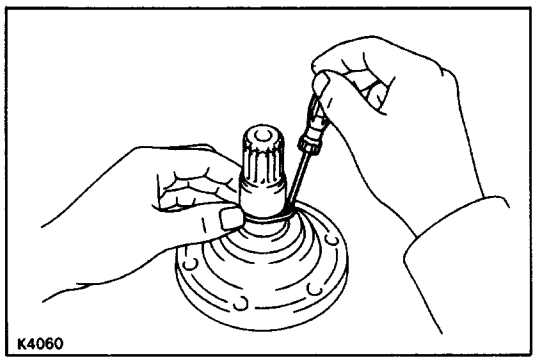
8. REPLACE SIDE GEAR SHAFT SNAP RING

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



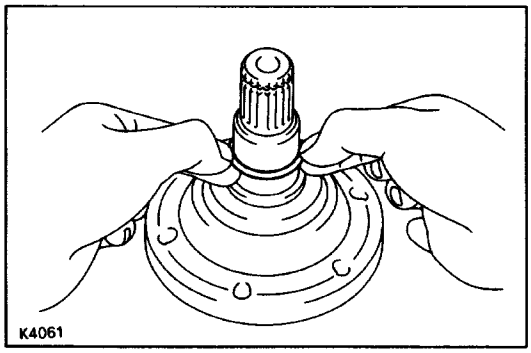
9. REMOVE DUST COVER FROM SIDE GEAR SHAFT

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



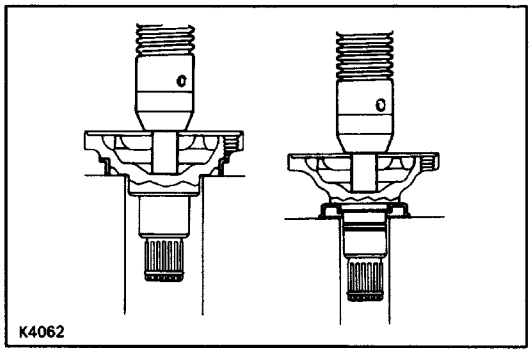
10. REPLACE SIDE GEAR SHAFT O–RING

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



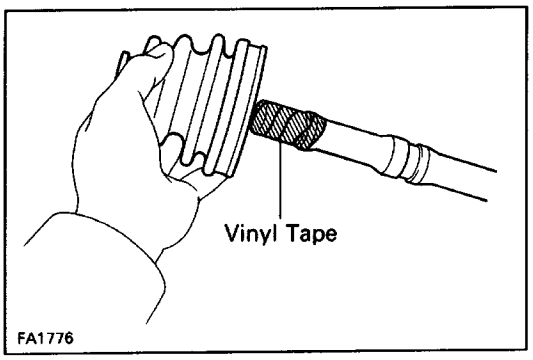
(b) Coat O–ring with MP grease.

(c) Install a new O–ring.



11. INSTALL DUST COVER TO SIDE GEAR SHAFT

Using a press, install a new dust cover.



ASSEMBLY OF FRONT DRIVE SHAFT

(See page SA–33)

1. TEMPORARILY NEW OUTBOARD JOINT BOOT AND NEW BOOT CLAMPS

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

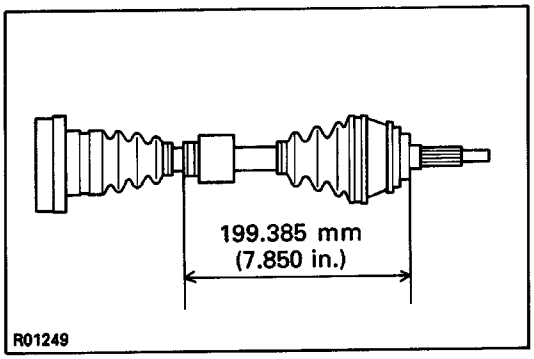
NOTICE: The boot and clamp of the outboard joint are smaller than those of the inboard joint.

Temporarily install a new inboard joint boot and clamps.

2. (RH DRIVE SHAFT)

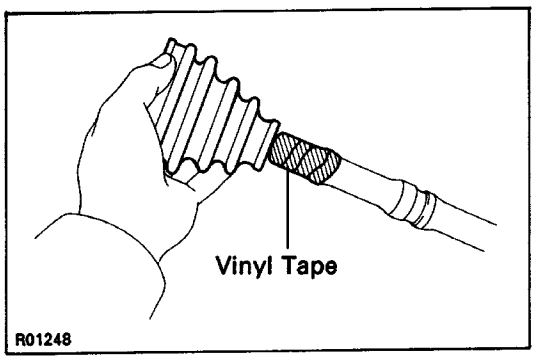
TEMPORARILY INSTALL DAMPER AND NEW DAMPER CLAMP

HINT: Fix the clamp position in line with the groove of the drive shaft.



3. TEMPORARILY INSTALL NEW INBOARD JOINT BOOT AND NEW BOOT CLAMPS

Temporarily install a new boot and boot clamps to the drive shaft.

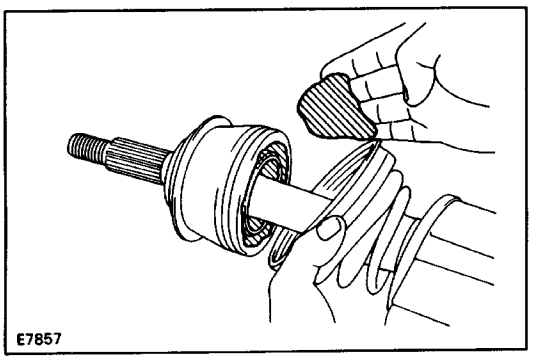


4. INSTALL BOOT TO OUTBOARD JOINT

Before assembling the boots, pack in grease.

HINT: Use the grease supplied in the boot kit.

Grease capacity: 120 g (0.26 lb)



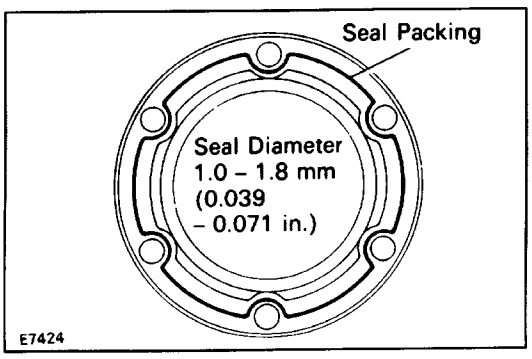
5. INSTALL INBOARD JOINT COVER

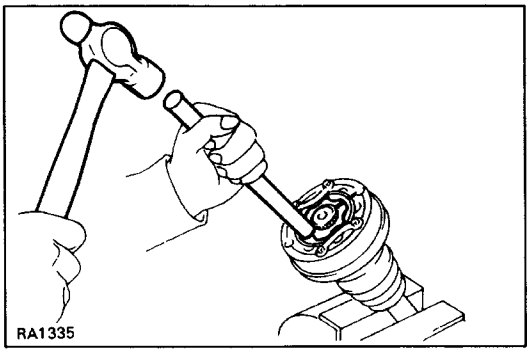
(a) Clean contacting surfaces of any residual packing material using gasoline or alcohol.

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

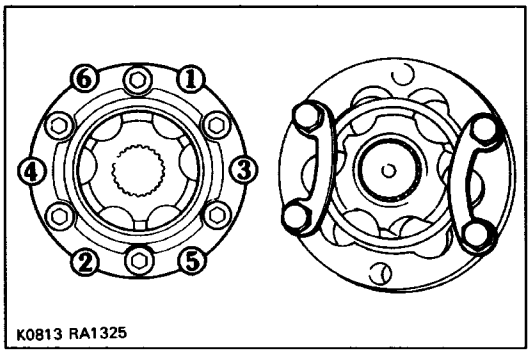
Seal packing: Part No.08826–00801, THREE BOND 1121 or equivalent

HINT: Avoid applying an excess amount to the surface.



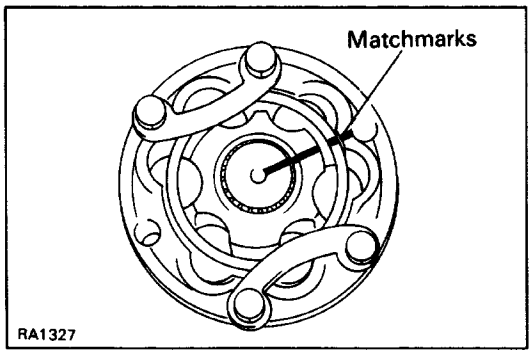


(c) Align the bolt holes of the cover with those of the inboard joint, then insert the hexagon bolts.
(d) Using a hammer and brass bar, tap the rim of the inboard joint cover into place. Do this in the order shown, and repeat several times.



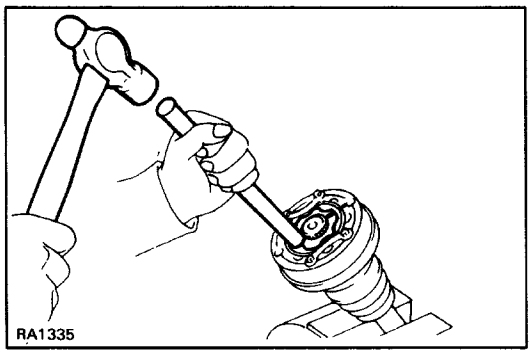
(e) Use bolts, nuts and washers to keep the inboard joint together.

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



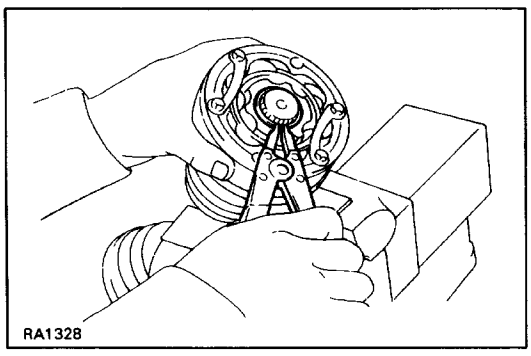
6. ASSEMBLE INBOARD JOINT

(a) Align the matchmarks placed before disassembly.

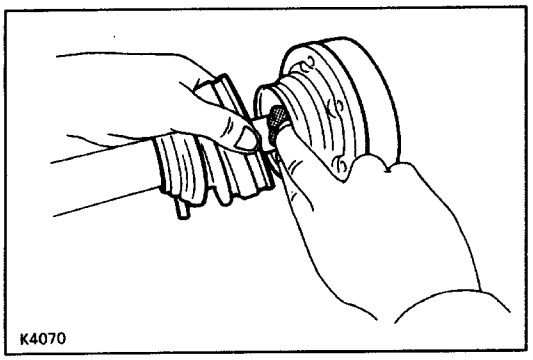


(b) Using a brass bar and hammer, tap the inboard joint onto the drive shaft.

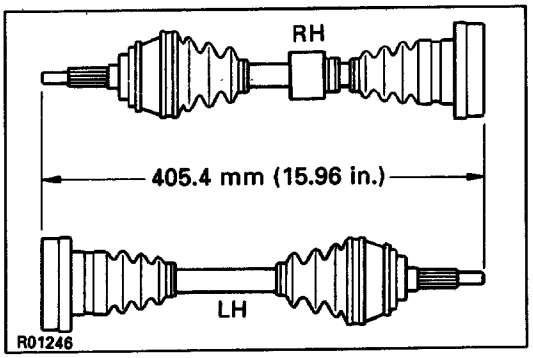
NOTICE: Make sure that the brass bar is touching the inner race, and not the cage.



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



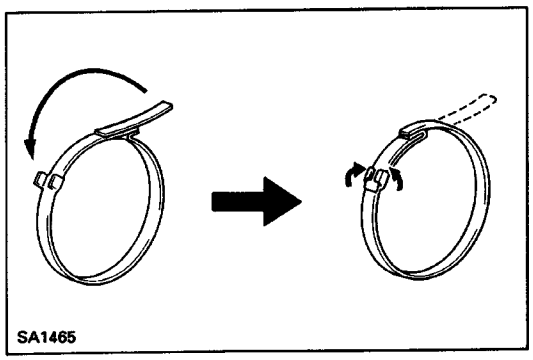
(d) Pack in grease to the inboard tulip and boot.
HINT: Use the grease supplied in the boot kit.
Grease capacity: 90 g (0.20 lb)



(e) Be sure the boot is on the shaft groove.
(f) Insure that the boot is not stretched or contracted when the drive shaft is at standard length.
Drive shaft length: 405.4 mm (15.96 in.)

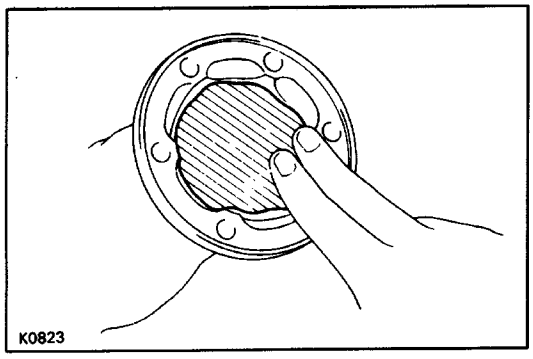
7. ASSEMBLE BOOT CLAMPS AND DAMPER CLAMP

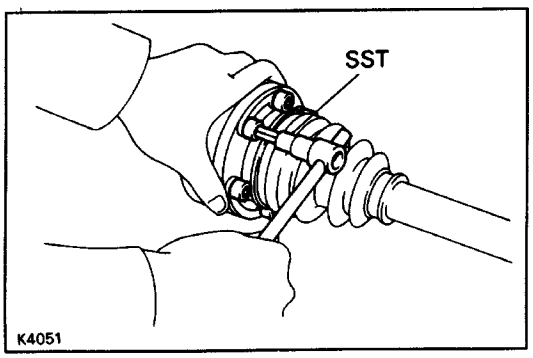
(a) Be sure the boot is on the shaft groove.
(b) Using a screwdriver, bend the band and lock it as shown in the illustration.



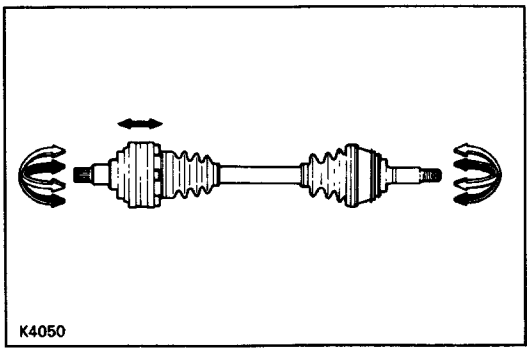
8. INSTALL SIDE GEAR SHAFT

(a) Pack in grease to the side gear shaft.
HINT: Use the grease supplied in the boot kit.
Grease capacity: 43 g (0.09 lb)
(b) Remove the two washers and four bolts from the drive shaft.





(c) Align the matchmarks and install the side gear shaft with a new gasket to the drive shaft.
(d) Using SST, finger tighten the six hexagon bolts with three washers.
SST 09043–88010



9. CHECK DRIVE SHAFT

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

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

INSTALLATION OF FRONT DRIVE SHAFT

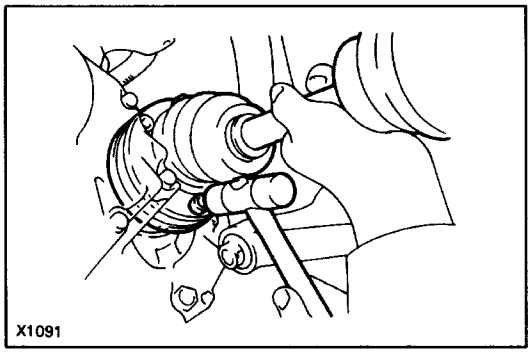
(See page SA–33)

1. INSTALL DRIVE SHAFT

(a) Temporarily install the drive shaft with a plastic hammer.

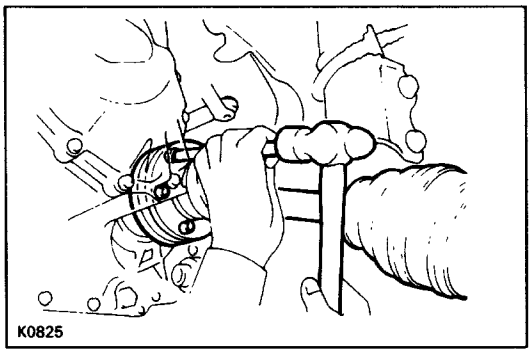
HINT: Before installing the drive shaft, set the snap ring opening side facing downward.

NOTICE: Be careful not to damage the boot, oil seal and deflector.



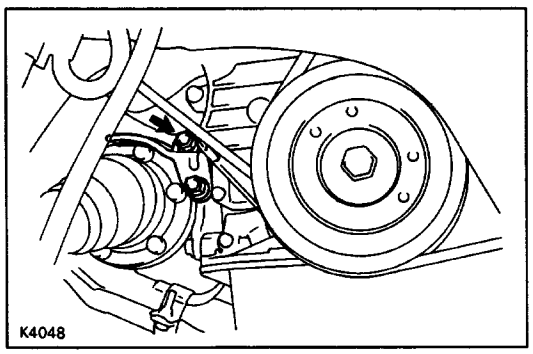
(b) Using a brass bar and hammer, tap in the hexagon bolt head of the drive shaft until it makes contact with the pinion shaft.

HINT: Whether or not the drive shaft is making contact with the pinion shaft can be known by sound or feeling when driving it in.



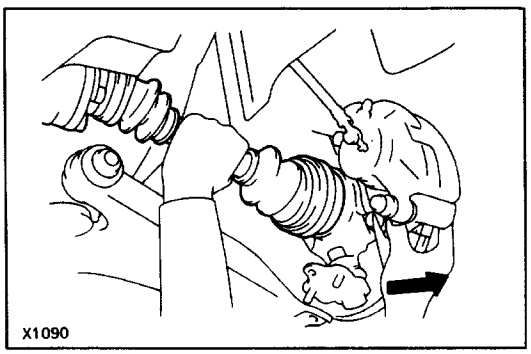
(c) Install the transmission case protector with two bolts.

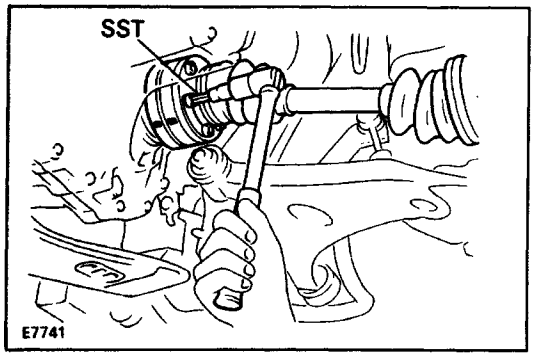
Torque: 18 N–m (185 kgf–cm, 13 ft–lbf)



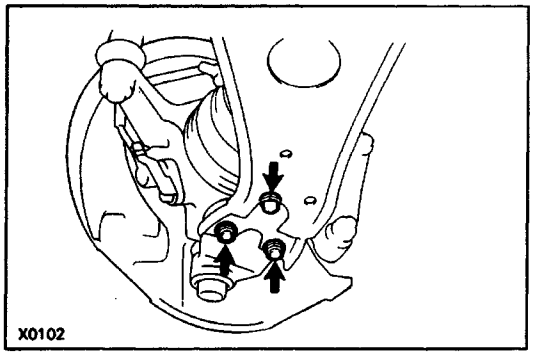
(d) Install the outboard joint side of the drive shaft to the axle hub.

NOTICE: Be careful not to damage the oil seal and boot.

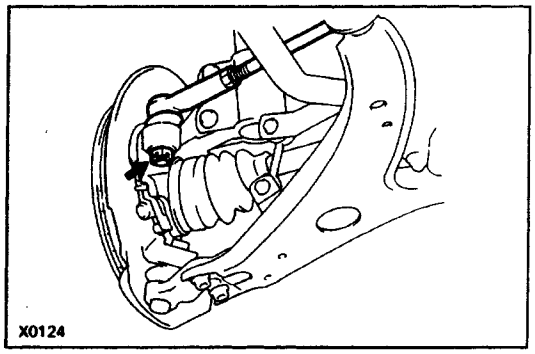




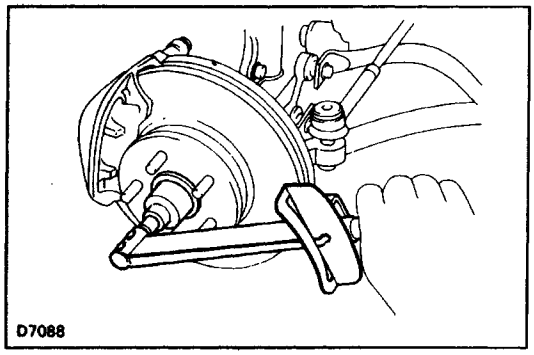
(e) Using SST, torque the six hexagon bolts while de–pressing the brake pedal.
SST 09043–88010
Torque: 65 N–m (660 kgf–cm, 48 ft–lbf)



2. CONNECT STEERING KNUCKLE TO LOWER ARM
(a) Install the steering knuckle to the lower arm.
(b) Install and torque the bolt and two nuts.
Torque: 127 N–m (1,300 kgf–cm, 94 ft–lbf)



3. CONNECT TIE ROD END TO STEERING KNUCKLE
(a) Install the tie rod end to the steering knuckle with a nut.
(b) Torque the nut.
Torque: 49 N–m (500 kgf–cm, 36 ft–lbf)
(c) Install a new cotter pin.
HINT: If the cotter pinhole does not lineup, correct by tightening the nut by the smallest amount possible.



4. INSTALL BEARING LOCK NUT, LOCK NUT CAP AND NEW COTTER PIN
(a) Install the lock nut.
(b) Torque the lock nut while depressing the brake pedal.
Torque: 226 N:m (2,300 kgf–cm, 166 ft–lbf)
(c) Install the lock nut cap, and using pliers, install a new cotter pin.

5. INSTALL FRONT WHEELS
6. FILL TRANSAXLE WITH GEAR OIL
7. CHECK FRONT WHEEL ALIGNMENT
(See page SA–3)