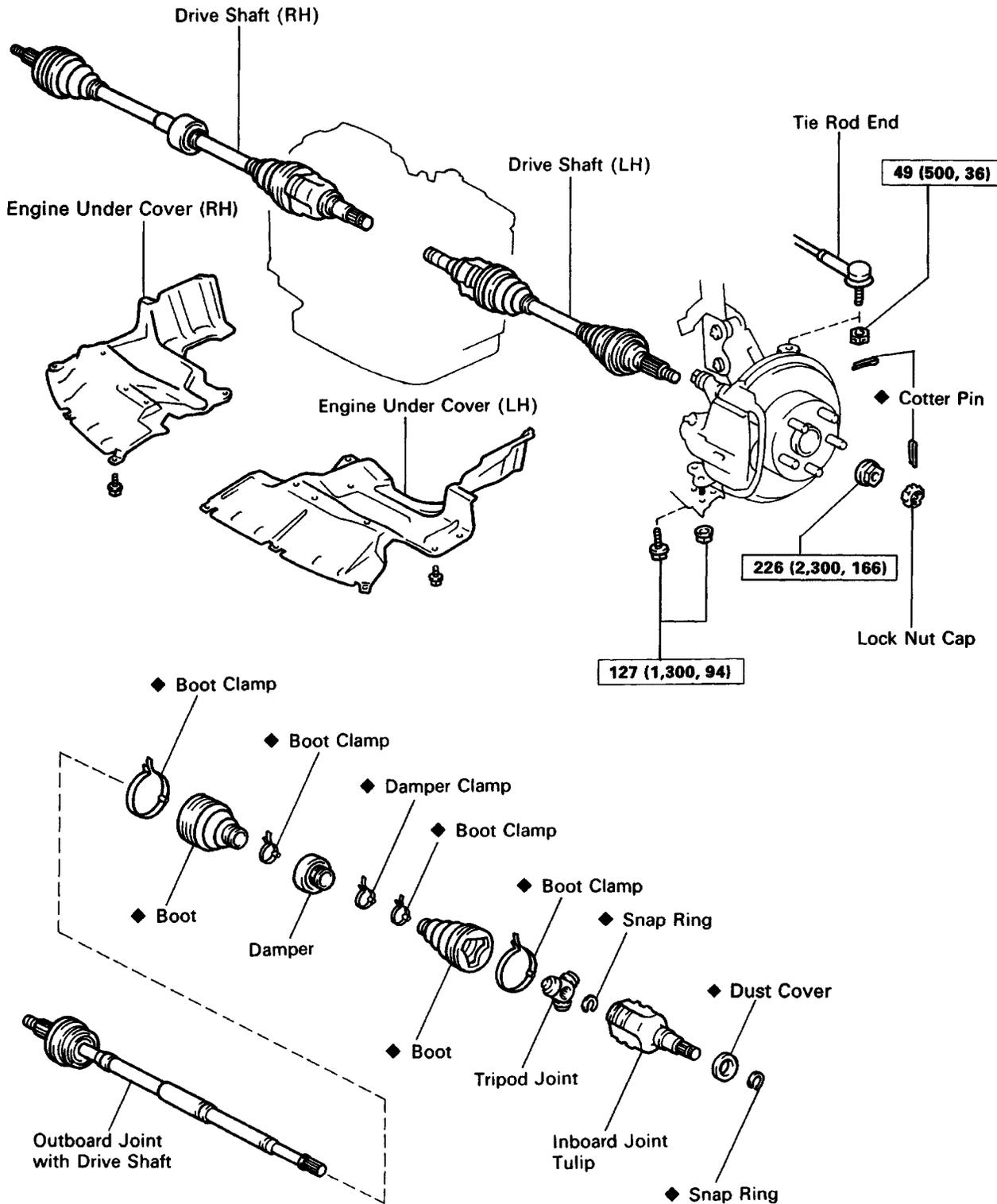


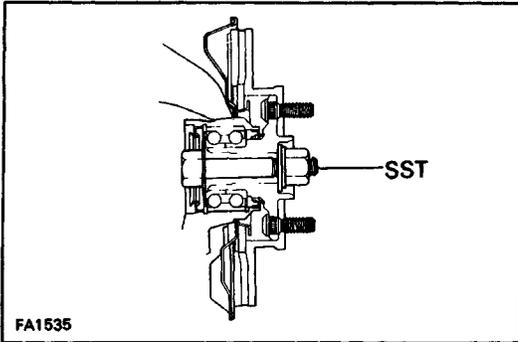
FRONT DRIVE SHAFT (2WD) COMPONENTS

4A-FE Engine

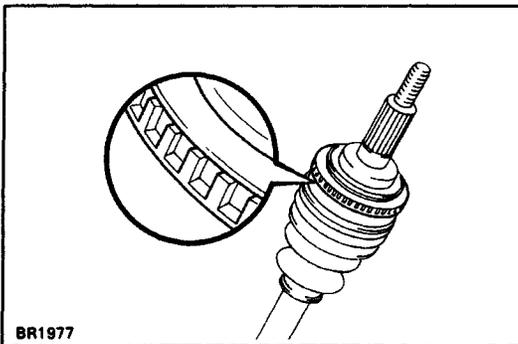


N·m (kgf·cm, ft·lbf) : Specified torque

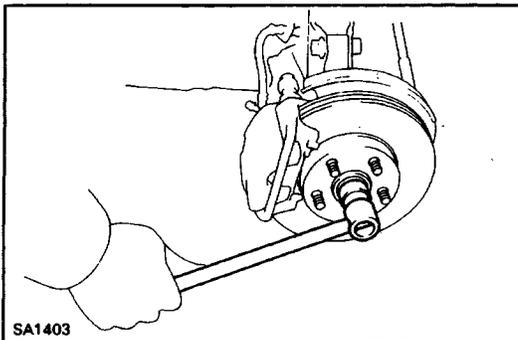
◆ Non-reusable part

**NOTICE:**

- The hub 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 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****1. REMOVE COTTER PIN, LOCK NUT CAP AND BEARING LOCK NUT**

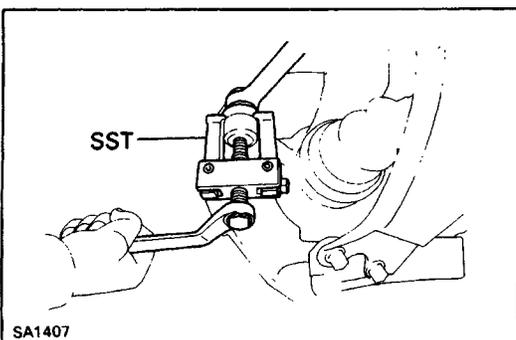
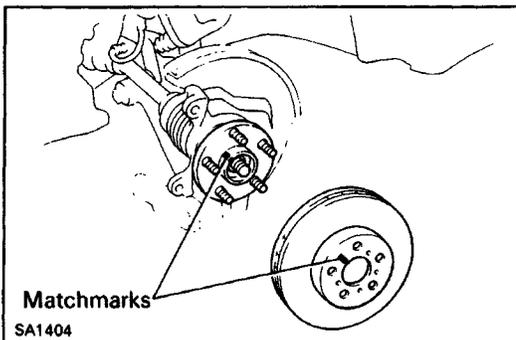
- Remove the cotter pin and lock nut cap.
- Loosen the bearing lock nut while depressing the brake pedal.

2. REMOVE ENGINE UNDER COVER**3. DRAIN TRANSAXLE OIL****4. REMOVE BRAKE CALIPER**

Remove the brake caliper from the steering knuckle and suspend it with wire.

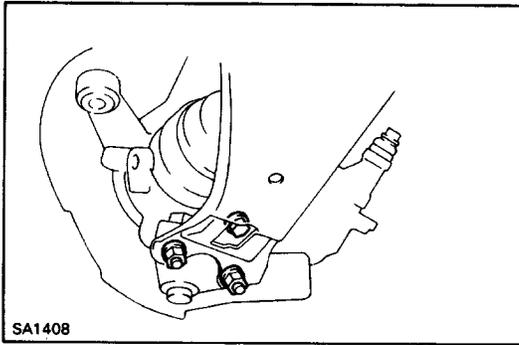
5. REMOVE ROTOR DISC

HINT: Before removing the rotor disc, place the matchmarks on the axle hub and rotor disc.

**6. DISCONNECT TIE ROD END FROM STEERING KNUCKLE**

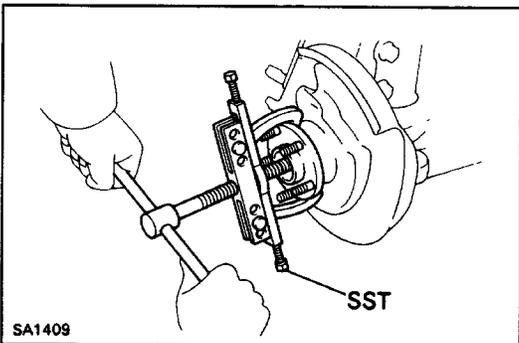
- Remove the cotter pin and nut from the steering knuckle.
- Using SST, disconnect the tie rod end from the steering knuckle.

SST 09628-62011



7. DISCONNECT LOWER ARM FROM STEERING KNUCKLE

- (a) Remove the bolt and two nuts.
- (b) Disconnect the lower arm from the steering knuckle.

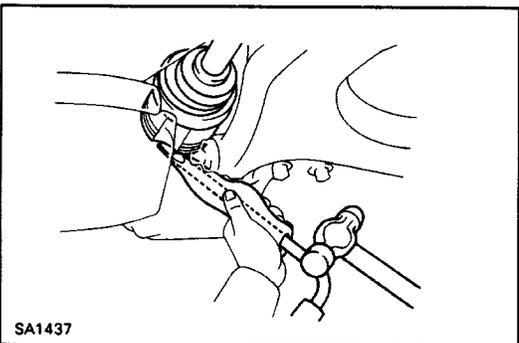


8. DISCONNECT DRIVE SHAFT FROM AXLE HUB

Using SST, disconnect the drive shaft from the steering knuckle.

NOTICE: Cover the drive shaft boot with cloth to protect it from damage.

SST 09950-20017

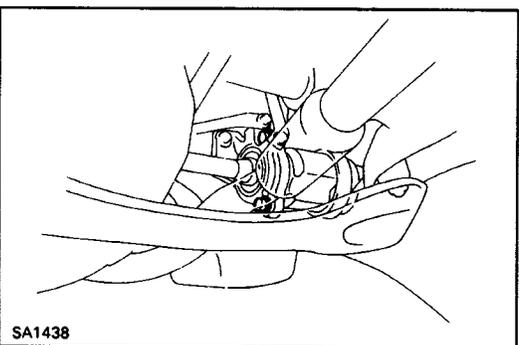


9. REMOVE LH DRIVE SHAFT

Using a hammer and hub nut wrench or an equivalent, remove the LH drive shaft.

NOTICE:

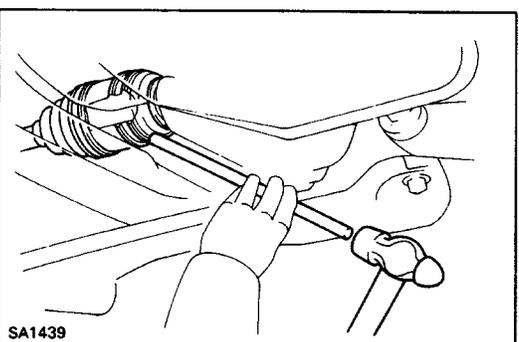
- Be careful not to damage the dust cover.
- Cover the hub nut wrench or an equivalent with cloth so as not to damage the transaxle body.



10. REMOVE RH DRIVE SHAFT

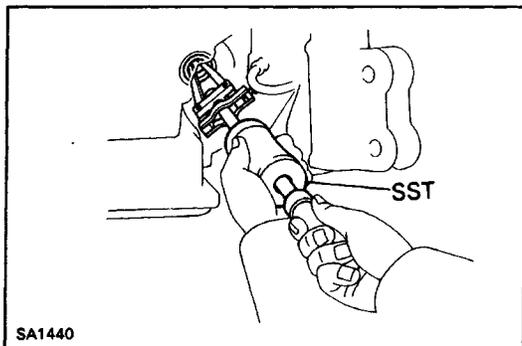
- (a) (5S-FE Engine)

Remove the two bolts of the center bearing bracket, and pull out the RH drive shaft together with the center bearing case and center drive shaft.



- (b) (4A-FE Engine)

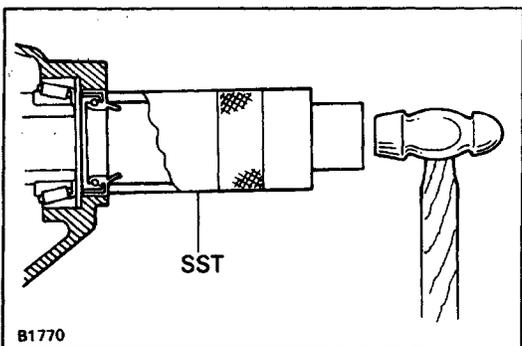
Using a hammer and brass bar, tap out the RH drive shaft.



REPLACEMENT OF OIL SEAL

1. REMOVE OIL SEAL

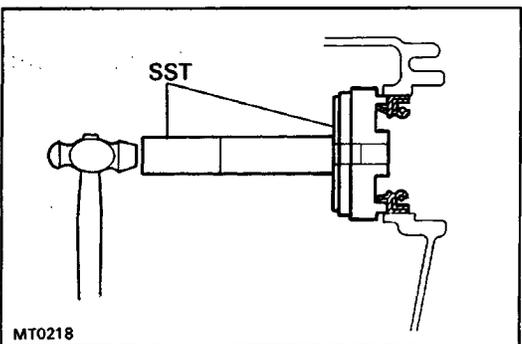
Using SST, pull out the oil seal.
SST 09308-00010



2. INSTALL NEW OIL SEAL

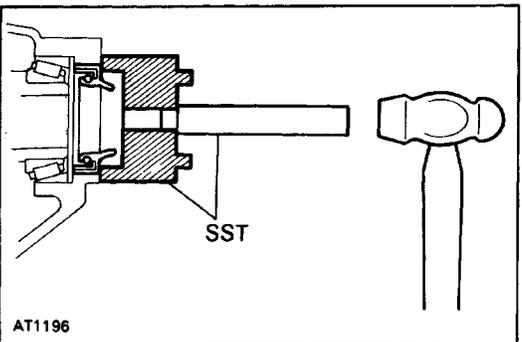
(M/T w/5S-FE Engine)

Using SST and a hammer, tap in a new oil seal.
SST 09316-60010 (09316-00010)
HINT: Coat the oil seal lip with MP grease.

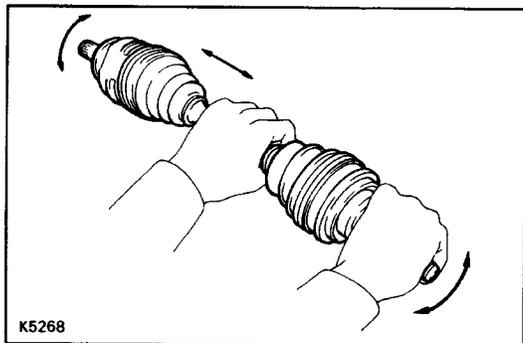


(M/T w/4A-FE Engine, A/T)

(a) Using SST and a hammer, tap in a new LH oil seal.
SST 09350-32014 (09351-32111, 09351-32130)
HINT: Coat the oil seal lip with MP grease.



(b) Using SST and a hammer, tap in a new RH oil seal.
SST 09350-32014 (09351-32130, 09351-32150)
HINT: Coat the oil seal lip with MP grease.



DISASSEMBLY OF FRONT DRIVE SHAFT

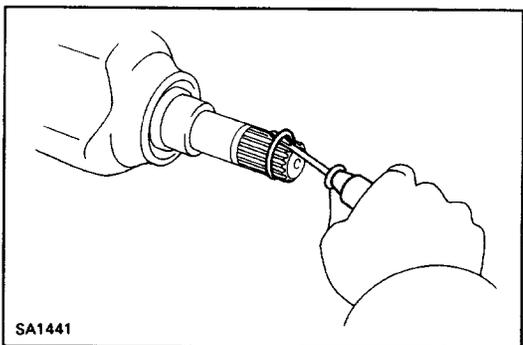
(See page SA-17)

1. CHECK DRIVE SHAFT

- Check to see that there is no play in the outboard joint.
- Check to see that the inboard joint slides smoothly in the thrust direction.
- Check to see that there is no remarkable play in the radial direction of the inboard joint.
- Check for damage to boots.

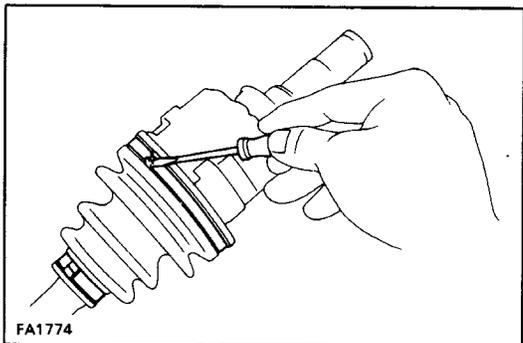
2. (EXCEPT RH DRIVE SHAFT w/5S-FE ENGINE)

REMOVE SNAP RING FROM INBOARD JOINT SHAFT



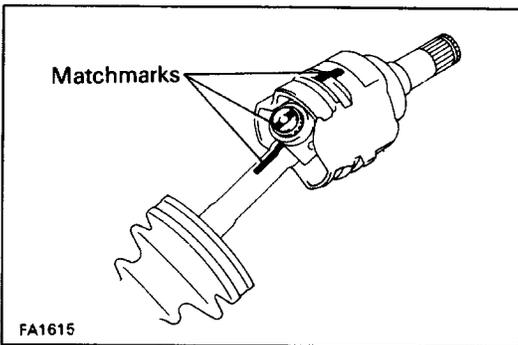
3. REMOVE INBOARD JOINT BOOT CLAMPS

- Using a screwdriver, remove the two boot clamps.
- Slide the inboard joint boot toward the outboard joint.



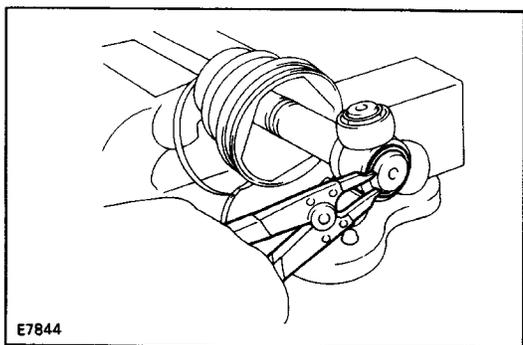
4. REMOVE INBOARD JOINT TULIP OR CENTER DRIVE SHAFT

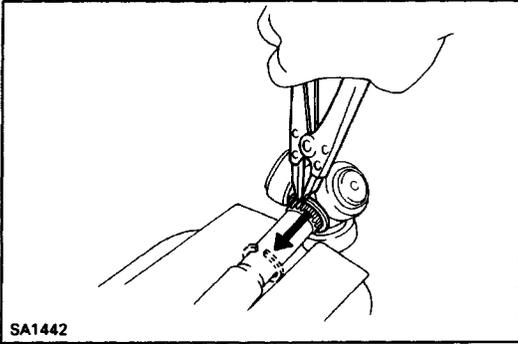
- Place the matchmarks on the tripod and inboard joint tulip or center drive shaft.
NOTICE: Do not punch the marks.
- Remove the inboard joint tulip or center drive shaft from the drive shaft.



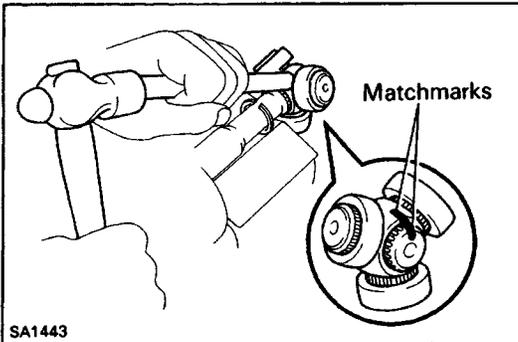
5. REMOVE TRIPOD JOINT

- Using a snap ring expander, remove the snap ring.



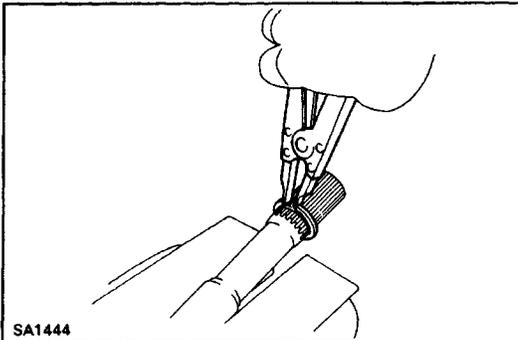


(b) Using a snap ring expander, temporarily slide the snap ring toward the outboard joint side.



(c) Place the matchmarks on the drive shaft and tripod.
 (d) Using a brass bar and a hammer, remove the tripod joint from the drive shaft.

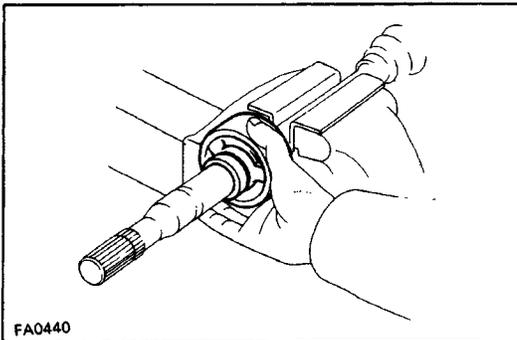
NOTICE: Do not tap the roller.



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

6. REMOVE INBOARD JOINT BOOT

Slide out the inboard joint boot.

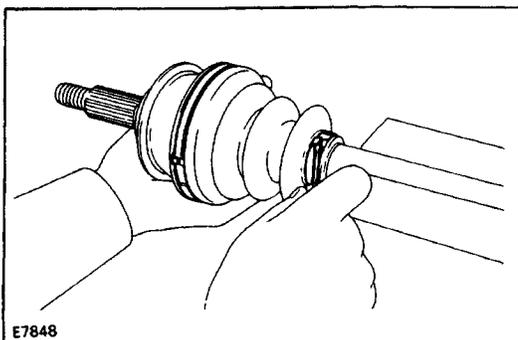


7. (RH DRIVE SHAFT w/4A-FE ENGINE)

REMOVE DAMPER

(a) Using a screwdriver, remove the damper clamp.

(b) Slide out the damper.

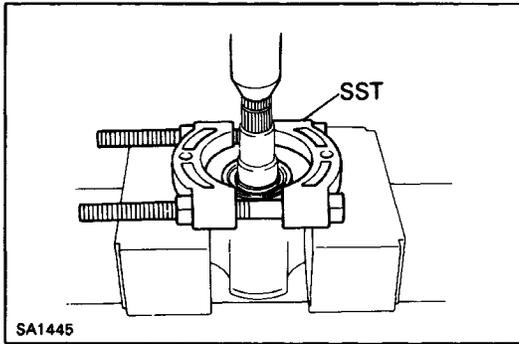


8. REMOVE OUTBOARD JOINT BOOT

(a) Using a screwdriver, remove the two boot clamps of the outboard joint boot.

(b) Slide out the boot from the outboard joint.

NOTICE: Do not disassemble the outboard joint.

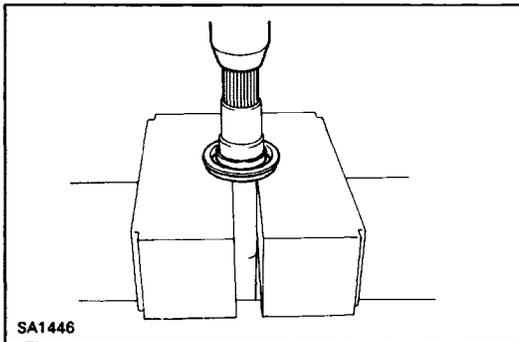


9. REMOVE DUST COVER

(Except RH Drive Shaft w/5S-FE Engine)

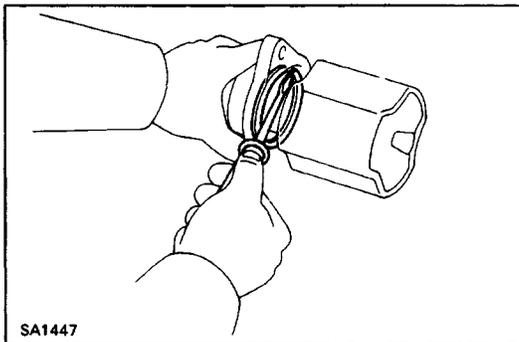
Using SST and a press, press out the dust cover from the inboard joint tulip.

SST 09950-00020



(RH Drive Shaft w/5S-FE Engine)

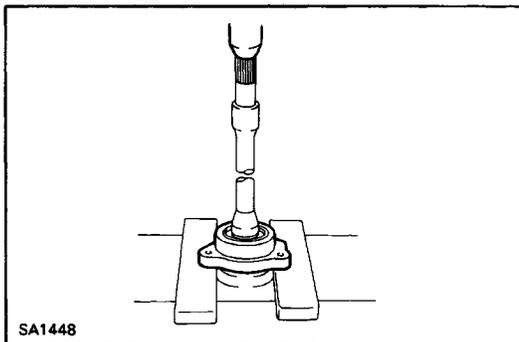
Using a press, press out the dust cover from the center drive shaft.



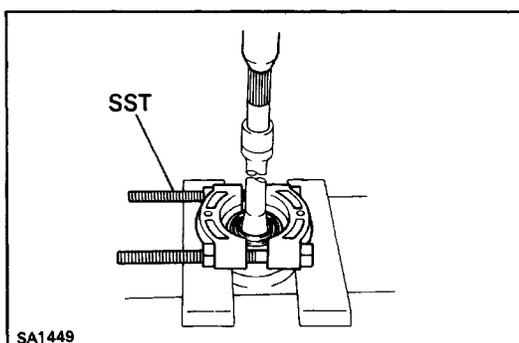
10. (RH DRIVE SHAFT w/5S-FE ENGINE)

DISASSEMBLE CENTER DRIVE SHAFT

(a) Using a screwdriver, remove the snap ring.

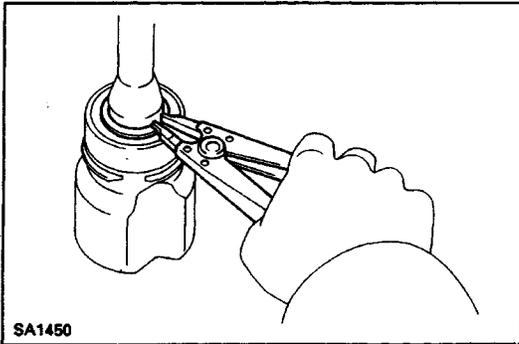


(b) Using a press, press out the bearing case.

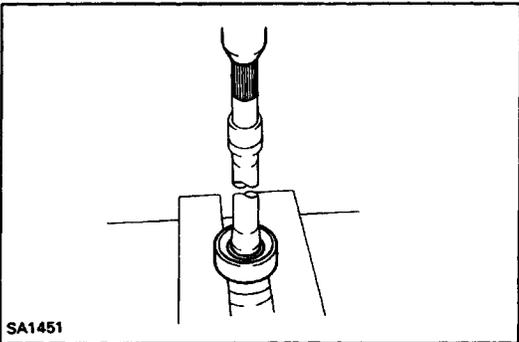


(c) Using SST and a press, press out the dust cover.

SST 09950-00020

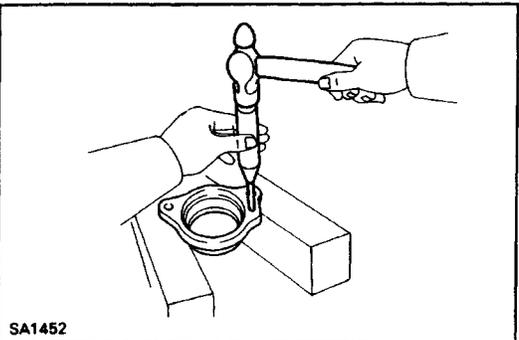


(d) Using a snap ring expander, remove the snap ring.

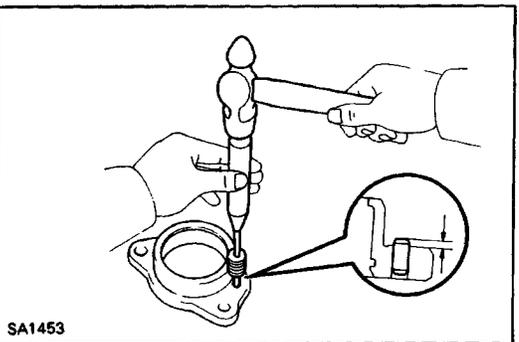


(e) Using a press, press out the bearing.

(f) Remove the snap ring.



(g) Using a punch and a hammer, tap out the straight pin.



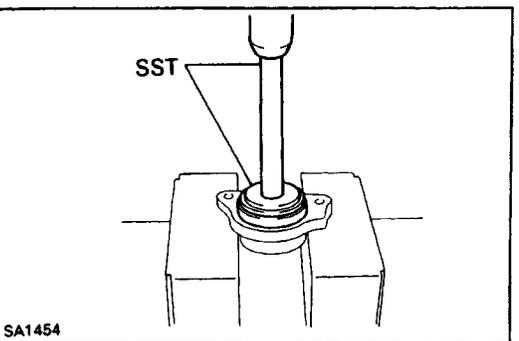
ASSEMBLY OF FRONT DRIVE SHAFT

(See page SA-17)

1. (RH DRIVE SHAFT w/5S-FE ENGINE)

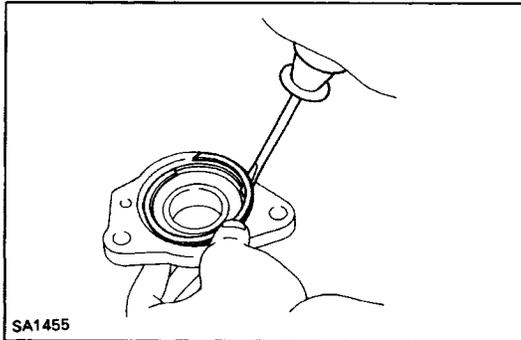
ASSEMBLE CENTER DRIVE SHAFT

(a) Install the straight pin into the bearing case.

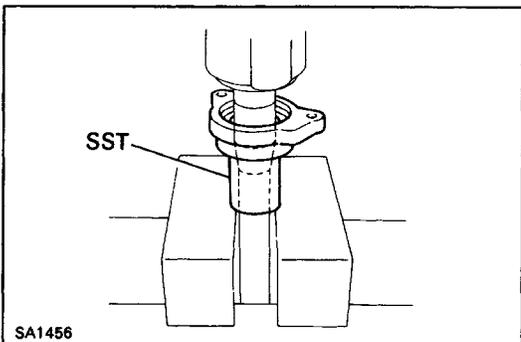


(b) Using SST and a press, press the new bearing into the bearing case.

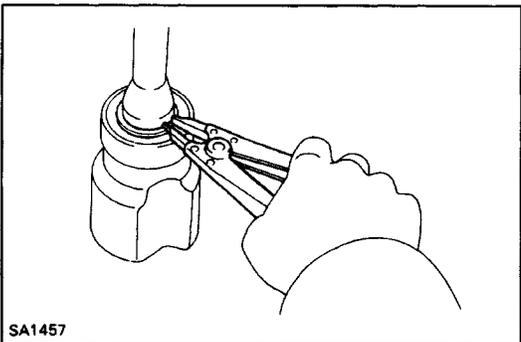
SST09608-12010(09608-00020, 09608-00060)



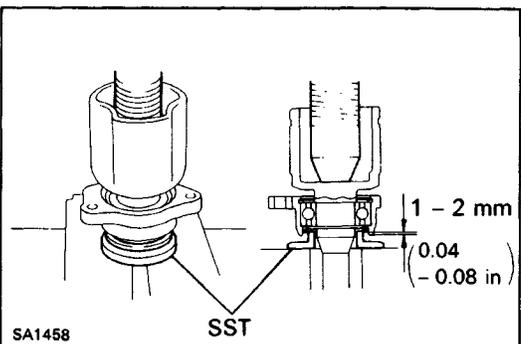
(c) Using a screwdriver, install a new snap ring.



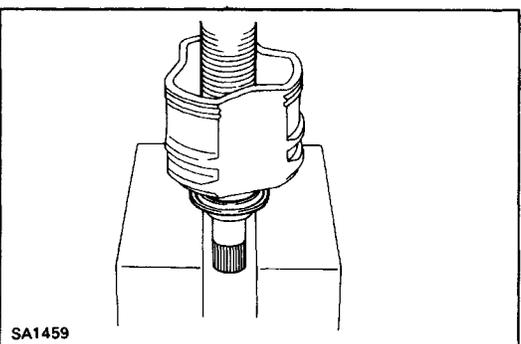
(d) Using SST and a press, install the bearing case assembly to the center drive shaft.
SST 09710-30020 (09710-03140)



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

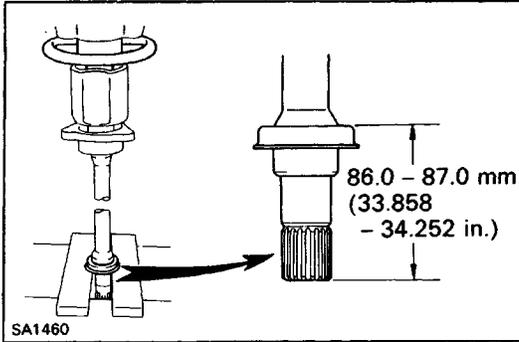


(f) Using SST and a press, press into a new dust cover.
SST 09506-35010
HINT: The clearance between the dust cover and the bearing should be kept in the ranges shown in the illustration.



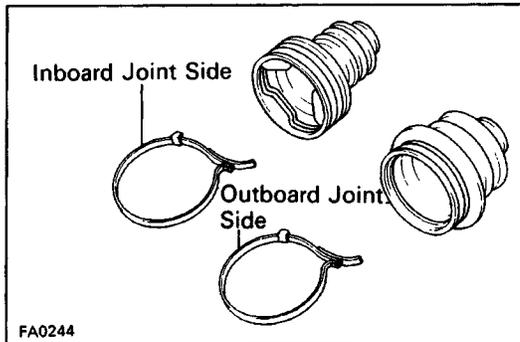
2. INSTALL DUST COVER (Except RH Drive Shaft w/ 5S-FE Engine)

Using a press, press into a new dust cover.



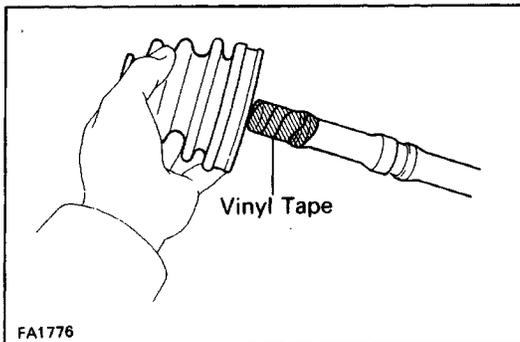
(RH Drive Shaft w/5S-FE Engine)

Using a press, press in a new dust cover until the distance from the tip of the center drive shaft to the dust cover reaches the specification as shown in the illustration.



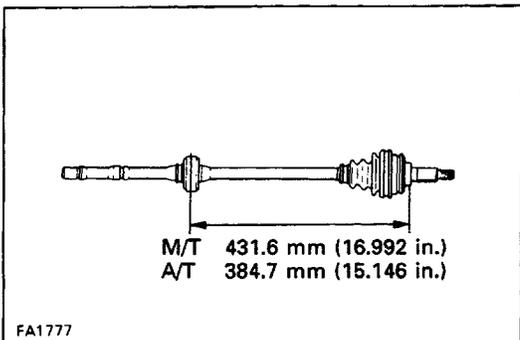
3. TEMPORARILY INSTALL OUTBOARD JOINT BOOT AND NEW BOOT CLAMPS

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



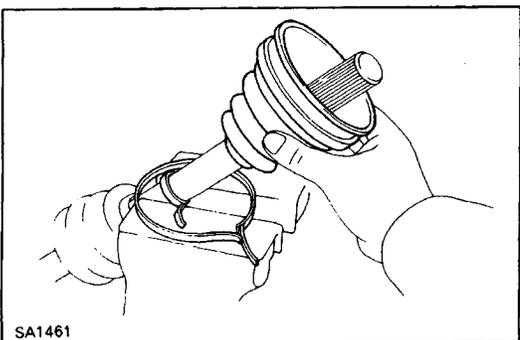
Temporarily install the boot and two new boot clamps for the outboard joint to the drive shaft.

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



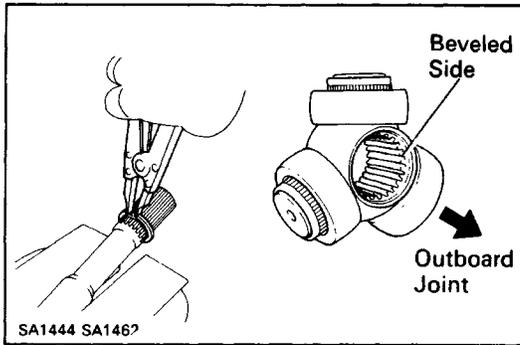
4. (RH DRIVE SHAFT w/4A-FE ENGINE) TEMPORARILY INSTALL DAMPER AND NEW DAMPER CLAMP

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



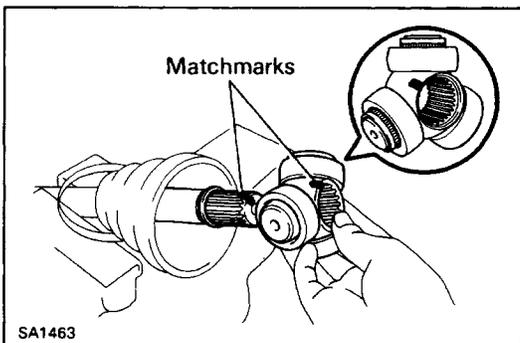
5. TEMPORARILY INSTALL INBOARD JOINT BOOT AND NEW BOOT CLAMPS

Temporarily install the boot and two new boot clamps for the inboard joint to the drive shaft.

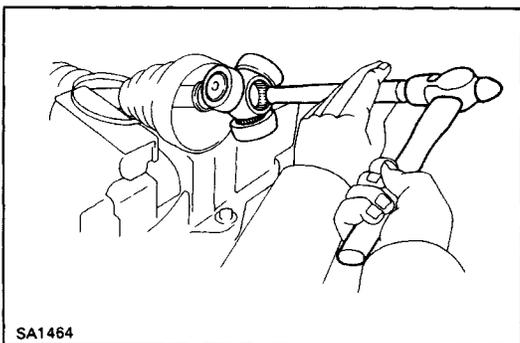


6. INSTALL TRIPOD JOINT

- (a) Using a snap ring expander, install a new snap ring.
- (b) Place the beveled side of the tripod joint axial spline toward the outboard joint.

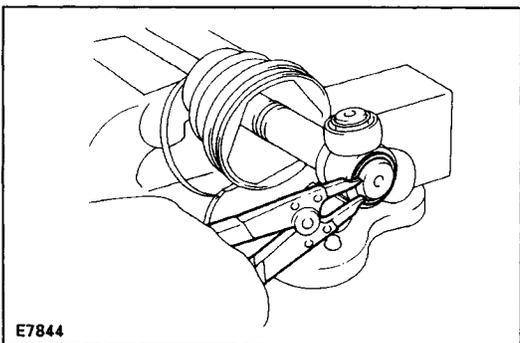


- (c) Align the matchmarks placed before remove.

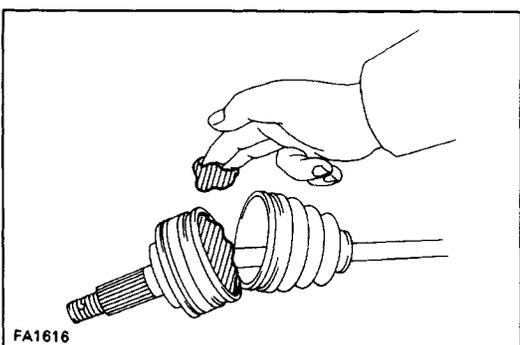


- (d) Using a brass bar and hammer, tap in the tripod joint to the drive shaft.

NOTICE: Do not tap the roller.



- (e) Using a snap ring expander, install a new snap ring.



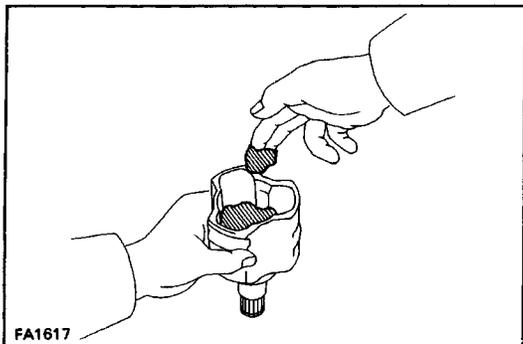
7. INSTALL BOOT TO OUTBOARD JOINT

Before assembling the boot, fill grease into the outboard joint and boot.

HINT: Use the grease supplied in the boot kit.

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

Grease color: Black



8. INSTALL INBOARD JOINT TULIP OR CENTER DRIVE SHAFT TO FRONT DRIVE SHAFT

- (a) Pack in the grease to the boot and inboard joint tulip or center drive shaft.

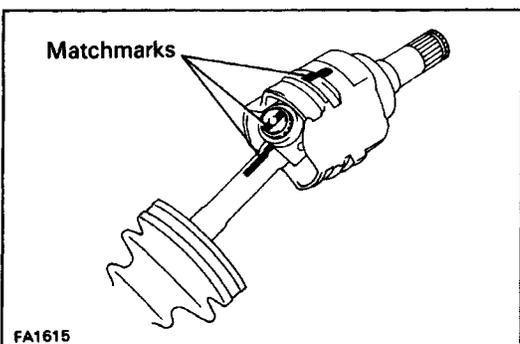
HINT: Use the grease supplied in the boot kit.

Grease capacity:

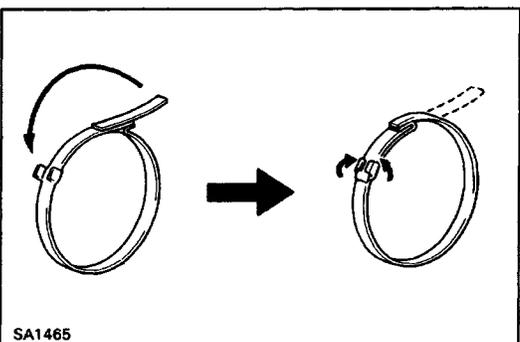
4A-FE Engine: 180 – 190 g (0.40 – 0.42 lb)

5S-FE Engine: 232 – 242 g (0.51 – 0.53 lb)

Grease color: Yellow ocher

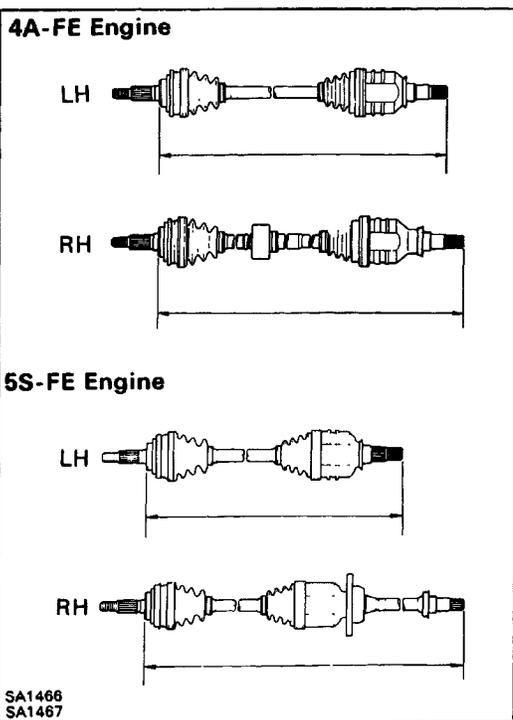


- (b) Align the matchmarks placed before remove, and install the inboard joint tulip or center drive shaft to the drive shaft.
- (c) Install the boot to the inboard joint tulip or center drive shaft.



9. 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.



- (c) Insure that the boot is not stretched or contracted when the drive shaft is at standard length.

Drive shaft standard length:

4A-FE Engine

(AIT)

L H 539.7 ± 5.0 mm (21.248 ± 0.197 in.)

R H 855.8 ± 5.0 mm (33.693 ± 0.197 in.)

(MIT)

L H 541.04 ± 5.0 mm (21.301 ± 0.197 in.)

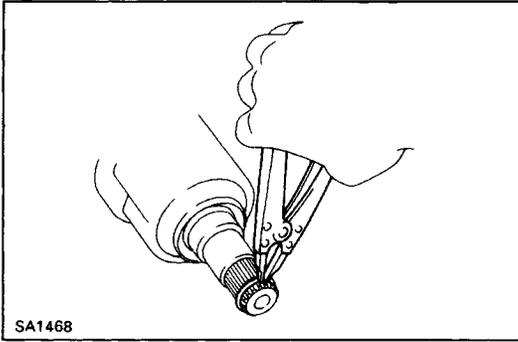
R H 862.8 ± 5.0 mm (33.968 ± 0.197 in.)

5S-FE Engine

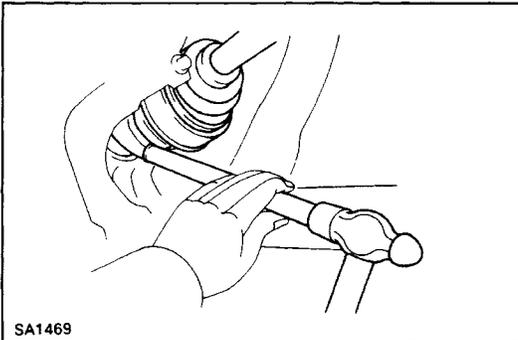
(AIT and MIT)

L H 558.7 ± 5.0 mm (21.996 ± 0.197 in.)

R H 845.2 ± 5.0 mm (33.276 ± 0.197 in.)



- (d) (Except RH Drive Shaft w/5S-FE Engine)
Using a snap ring expander, install a new snap ring.



INSTALLATION OF FRONT DRIVE SHAFT

(See page SA-17)

1. INSTALL LH DRIVE SHAFT

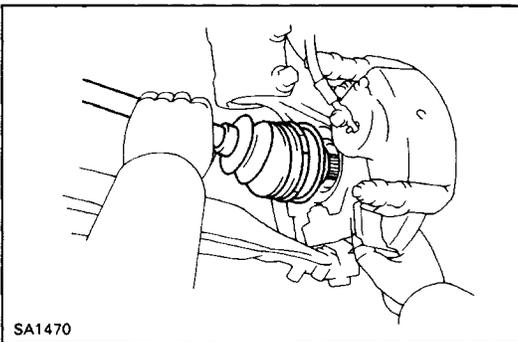
- (a) Coat the oil seal lip with MP grease.
- (b) Using a brass bar and a hammer, tap in the drive shaft until it makes contact with the pinion shaft.

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

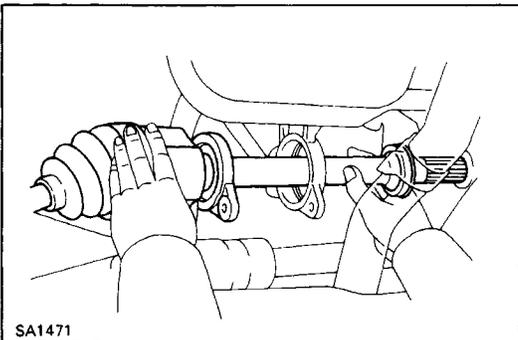
NOTICE: Be careful not to damage the boots.



2. INSTALL RH DRIVE SHAFT (5S-FE Engine)

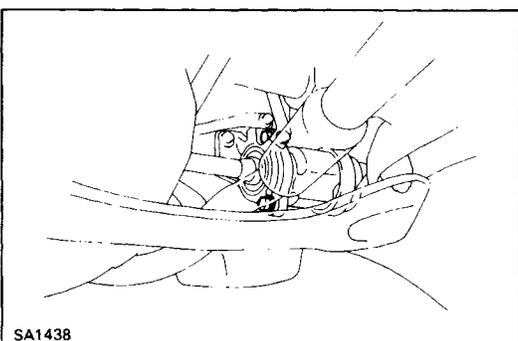
- (a) Coat the oil seal lip with MP grease.
- (b) Install the center drive shaft with the RH drive shaft to the transaxle through the bearing bracket.

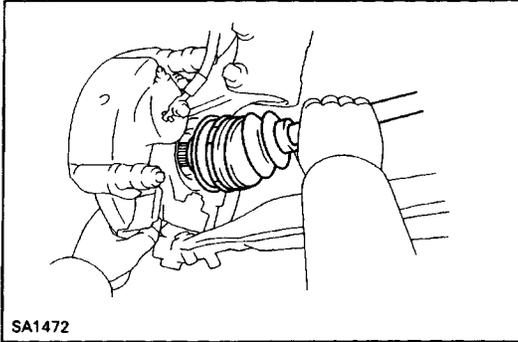
HINT: When installing the drive shaft, install so the straight pin on the center bearing case aligns with the hole on the bearing bracket.



- (c) Install the two bolts and tighten them.

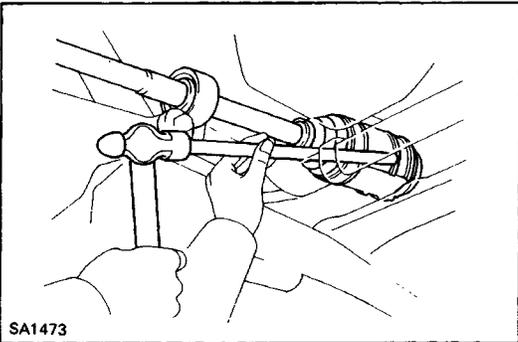
Torque: 64 N-m (650 kgf-cm, 47 ft-lbf)





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

NOTICE: Be careful not to damage the boots.



(4A-FE Engine)

- (a) Coat the oil seal lip with MP grease.
 (b) Using a brass bar and a hammer, tap in the drive shaft until it makes contact with the pinion shaft.

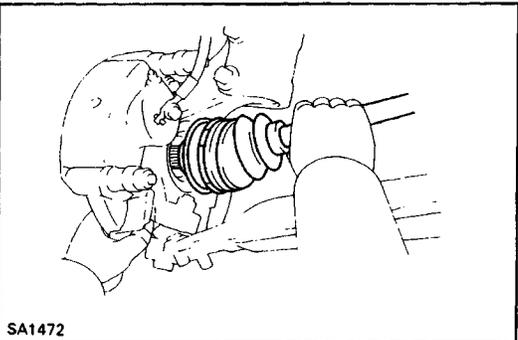
NOTICE: Be careful not to damage the boots.

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 the sound or feeling when driving it in.

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

NOTICE: Be careful not to damage the boots.

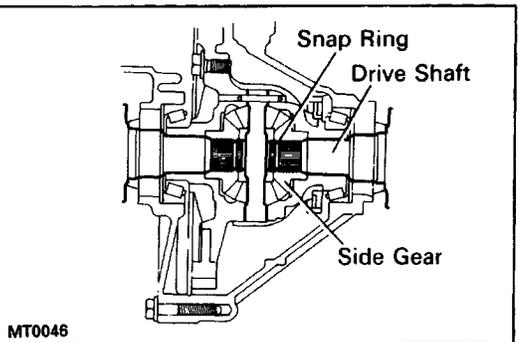


3. (EXCEPT RH DRIVE SHAFT w/5S-FE ENGINE)

CHECK INSTALLATION OF FRONT DRIVE SHAFT

- (a) Check that there is 2–3 mm (0.08–0.12 in.) of play in axial direction.
 (b) Check that the drive shaft will not come out by trying to pull it completely out by hand.

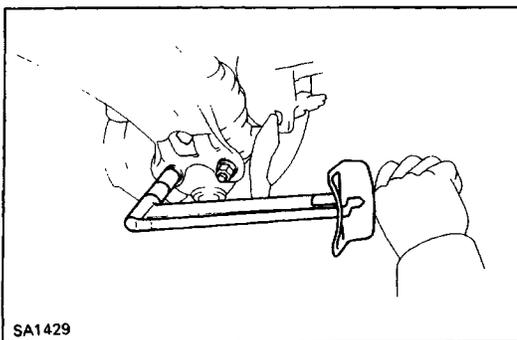
HINT: When checking pull the inboard joint so as not to damage the boots.

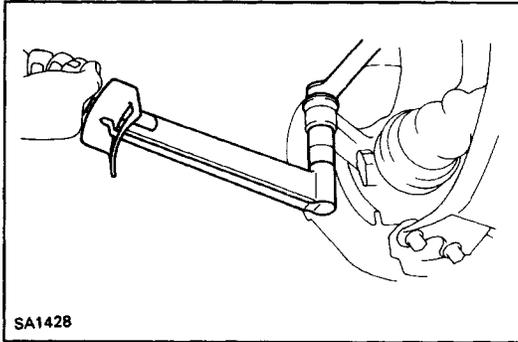


4. CONNECT LOWER ARM TO STEERING KNUCKLE

- (a) Connect the lower arm to steering knuckle.
 (b) Install and tighten the bolt and two nuts.

Torque: 127 N-m f1,300 kgf-cm, 94 ft-lbf)

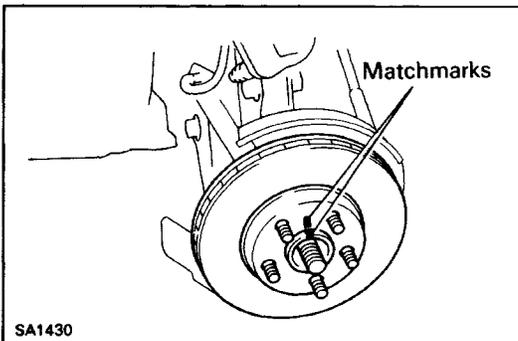




5. CONNECT TIE ROD END TO STEERING KNUCKLE

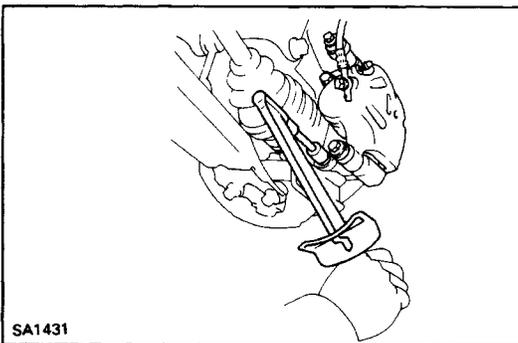
Install and torque the nut, and secure it with a new cotter pin.

Torque: 49 N-m (500 kgf-cm, 36 ft-lbf)



6. INSTALL ROTOR DISC TO AXLE HUB

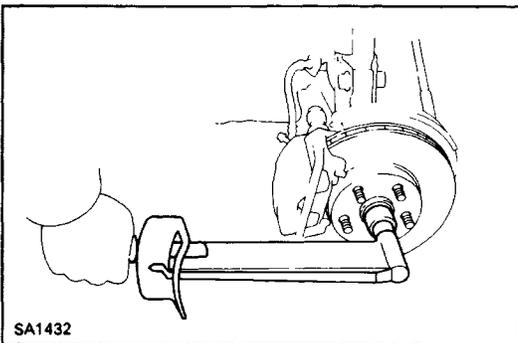
Align the matchmarks and install the rotor disc to the axle hub.



7. INSTALL BRAKE CALIPER TO STEERING KNUCKLE

Torque the two bolts.

Torque: 107 N-m (1,090 kgf-cm, 79 ft-lbf)



8. INSTALL BEARING LOCK NUT, LOCK NUT CAP AND COTTER PIN

(a) Torque the bearing lock nut while depressing the brake pedal.

Torque: 226 N-m (2,300 kgf-cm, 166 ft-lbf)

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

9. FILL TRANSAXLE OIL

M/T w/4A-FE Engine

Oil grade: API GL-4 or GL-5

Viscosity: SAE 75W-90 or soW-90

M/T w/5S-FE Engine, A/T

Fluid type: ATF DEXRON® II

10. INSTALL ENGINE UNDER COVER

11. CHECK FRONT WHEEL ALIGNMENT

(See page [SA-4](#))