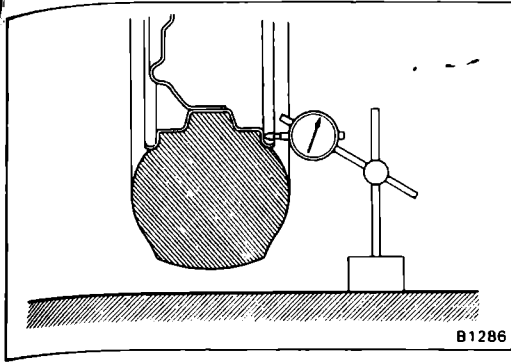


REAR AXLE AND SUSPENSION

	Page
TROUBLESHOOTING	RA-2
REAR WHEEL ALIGNMENT	RA-3
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REAR SUSPENSION (2WD)	RA-50
Rear Shock Absorber	RA-51
Suspension Arm	RA-55
Strut Rod	RA-55
Stabilizer Bar	RA-56
REAR SUSPENSION (4WD)	RA-57
Rear Shock Absorber	RA-58
Suspension Arm and Strut Rod	RA-58
Stabilizer Bar	RA-58

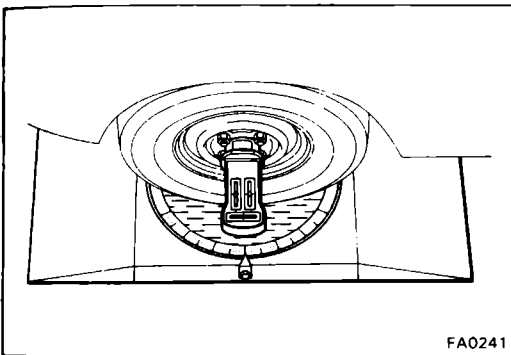
TROUBLESHOOTING

Problem	Possible cause	Remedy	Page
Wanders/pulls	Tires worn or improperly inflated	Replace tires or inflate to proper pressure	FA-3
	Wheel alignment incorrect	Check wheel alignment	RA-3
	Wheel bearing worn	Replace wheel bearing	RA-5, 12
	Rear suspension parts loose or broken	Tighten or replace suspension parts	
Bottoming	Vehicle overloaded	Check loading	
	Shock absorbers worn out	Replace shock absorbers	RA-50, 57
	Springs weak	Replace springs	RA-50, 57
Sways/pitches	Tires improperly inflated	Inflate tires to proper pressure	FA-3
	Stabilizer bar bent or broken	Inspect stabilizer bar	RA-50, 57
	Shock absorber worn out	Replace shock absorber	RA-50, 57
Abnormal tire wear	Tire improperly inflated	Inflate tires to proper pressure	FA-3
	Shock absorber worn out	Replace shock absorbers	RA-50, 57
	Alignment incorrect	Check camber and toe-in	RA-3
	Suspension parts worn	Replace suspension parts	RA-50, 57

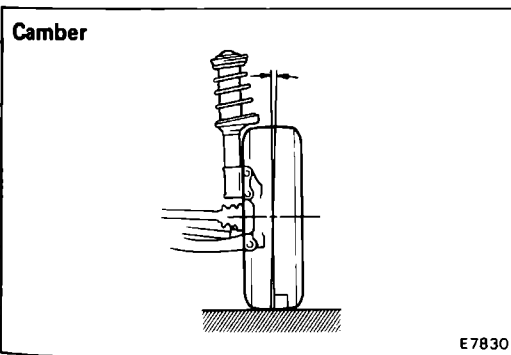


REAR WHEEL ALIGNMENT

1. **MAKE FOLLOWING CHECKS AND CORRECT ANY PROBLEMS**
 - (a) Check that the tires for wear, size and proper inflation. (See page FA-3)
 - (b) Check the rear wheel bearings for looseness.
 - (c) Check the wheel runout.
Lateral runout: Less than 1.0 mm (0.039 in.)
 - (d) Check the rear suspension for looseness.
2. **MEASURE VEHICLE HEIGHT**
(See page FA-3)



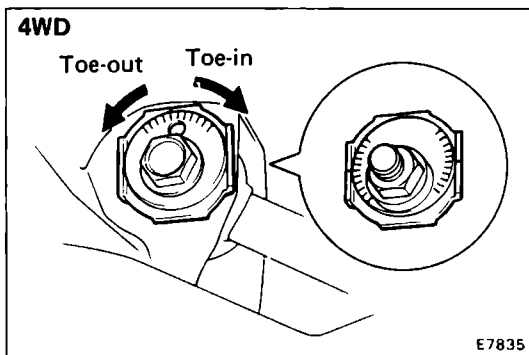
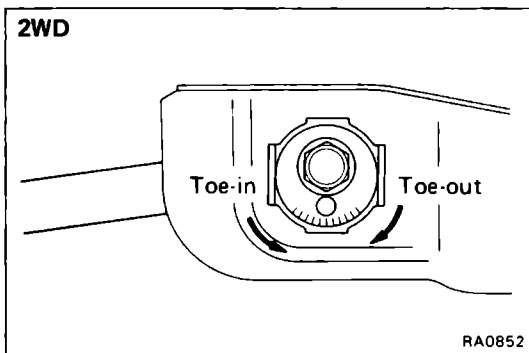
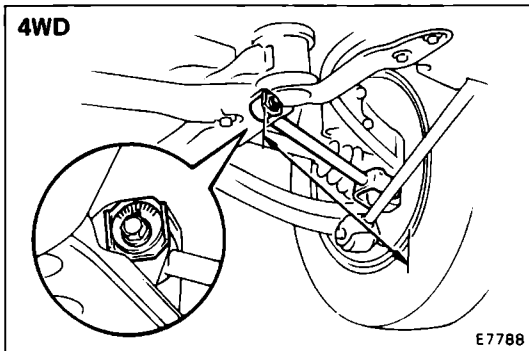
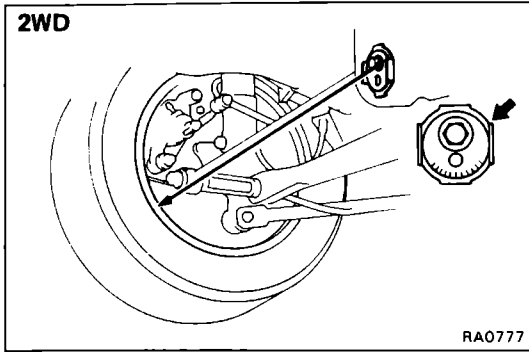
3. **INSTALL WHEEL ALIGNMENT EQUIPMENT**
Follow the specific instructions of the equipment manufacturer.



Camber

4. **CHECK CAMBER**
Camber: Inspection standard $-45' \pm 45'$
Left-right error 30'
Camber is not adjustable. If measurement is not within specification, inspect and replace the suspension parts as necessary.

5. **INSPECT TOE-IN**
(See step 8 on page FA-5)
Toe-in: Inspection STD 5 ± 2 mm (0.197 in. \pm 0.08 in.)
If toe-in is not within specification adjust by the cam.



6. ADJUST TOE-IN (See step 8 on page FA-5)

- (a) Measure the distance between each wheel disc and corner of the cam bracket and confirm that both are the same.

Left-right error: Less than 3 mm (0.12 in.)

If the left-right error is greater than 3 mm (0.12 in.) adjust following the procedures below.

- If the toe-in is out of the standard toward toe-out side, lengthen the shorter arm by the cam.
- If the toe-in is out of the standard toward toe-in side, shorten the longer arm by the cam.

- (b) Measure the toe-in.

Toe-in: Adjustment STD 5 ± 1 mm (0.19 ± 0.04 in.)

If the left-right error is within specifications but the overall toe-in is not, lengthen or shorten both arms an equal amount by turning the two cams in the opposite direction, until the adjustment standard is obtained.

NOTE:

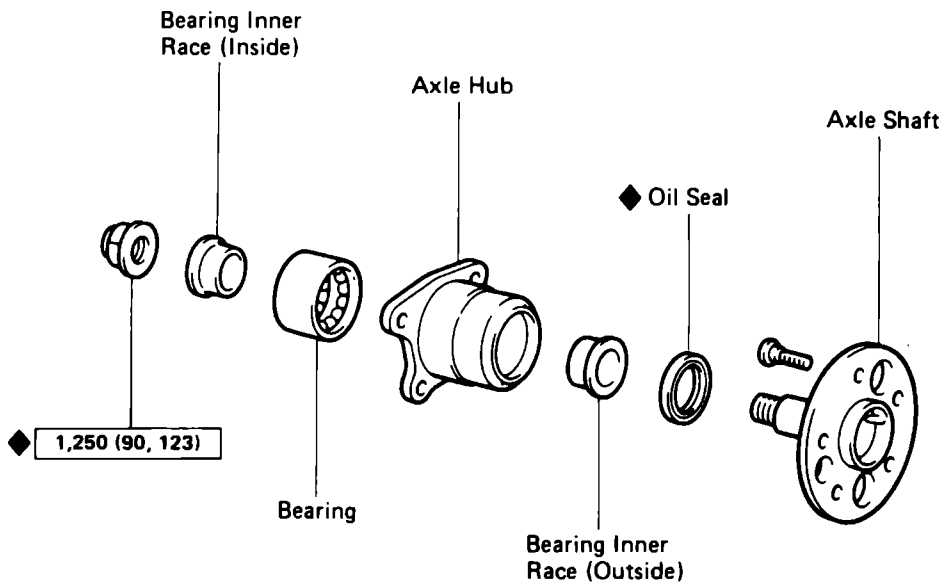
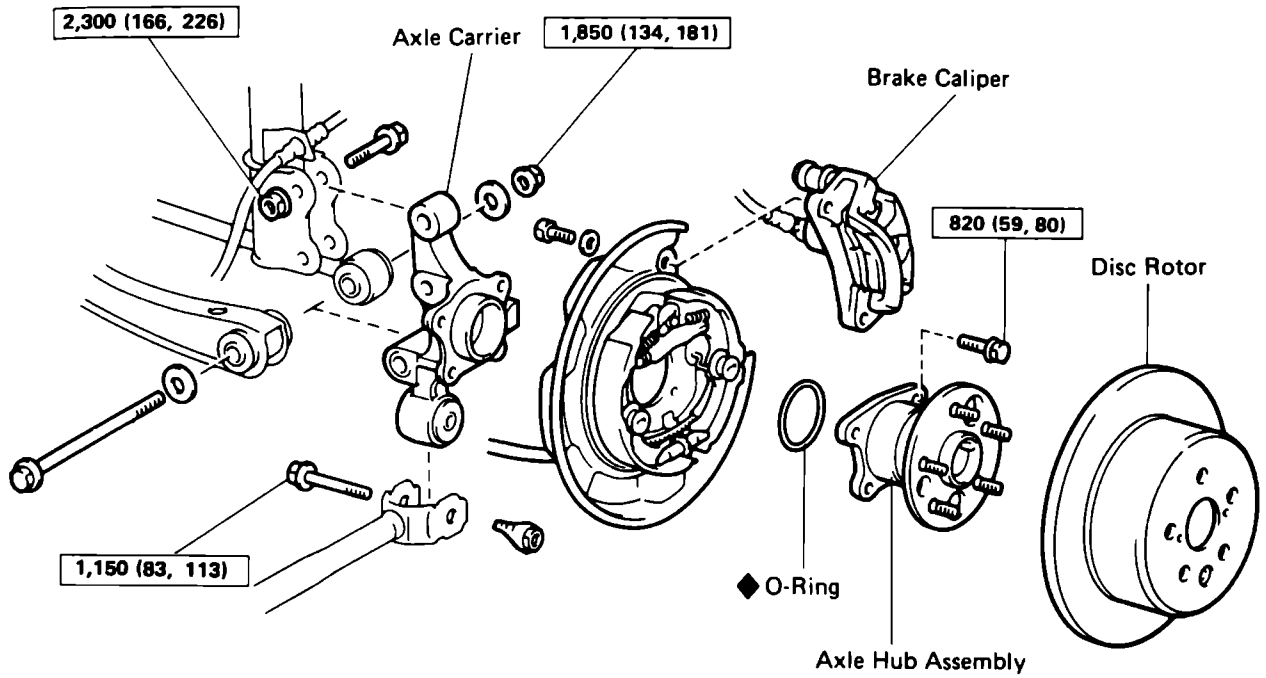
(2WD)

The toe-in will change about 1.5 mm (0.059 in.) with each graduation of the cam (one side).

(4WD)

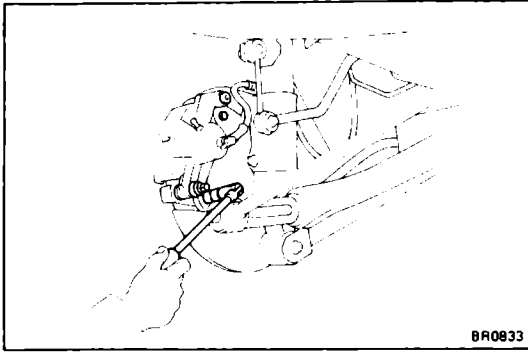
The toe-in will change about 4.2 mm (0.17 in.) with each graduation of the cam (one side).

REAR AXLE HUB AND CARRIER (2WD) COMPONENTS



kg-cm (ft-lb, N-m) : Specified torque

◆ Non-reusable part



INSPECTION OF AXLE HUB BEARING

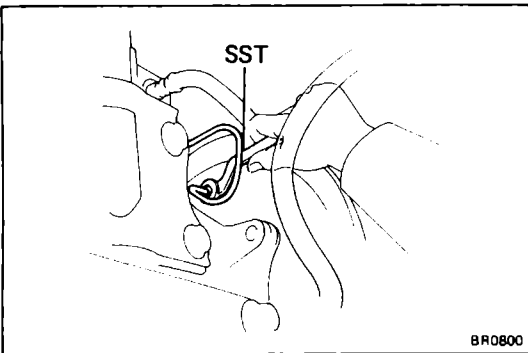
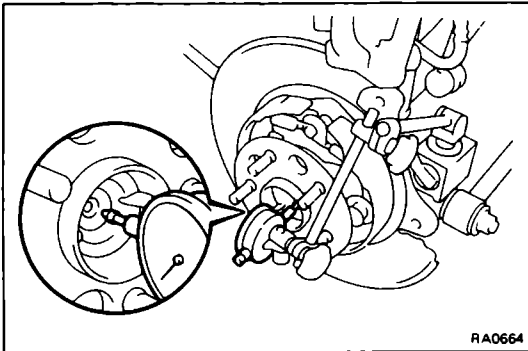
1. REMOVE WHEEL
2. (DISC BRAKE TYPE)
REMOVE DISC BRAKE CALIPER
3. ROTATE BRAKE DRUM OR DISC ROTOR
4. CHECK BEARING PLAY IN AXIAL DIRECTION

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

Rotate the drum or disc rotor by hand, if the movement is not smooth and free, replace the axle hub bearing.

Limit: 0.05 mm (0.0020 in.)

If not within specification, disassembly and inspection the axle hub assembly.



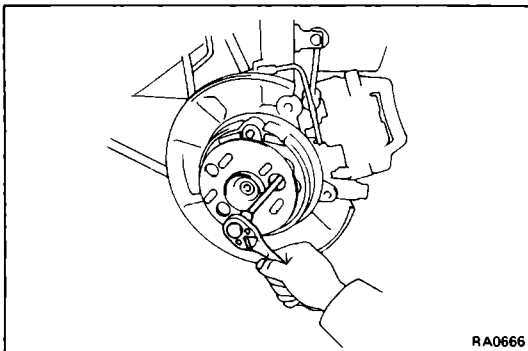
REMOVAL OF REAR AXLE HUB AND CARRIER

1. REMOVE BRAKE DRUM OR DISC ROTOR
2. (DRUM BRAKE TYPE)
DISCONNECT BRAKE TUBE FROM BACKING PLATE

Using SST, disconnect the brake tube from the backing plate.

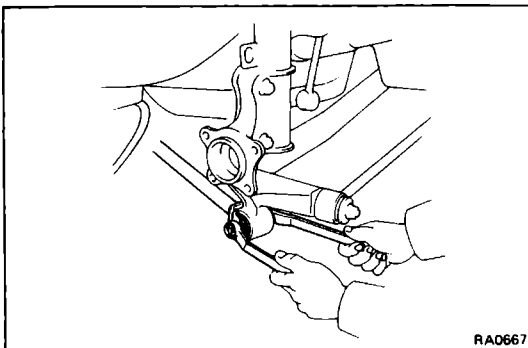
SST 09751-36011

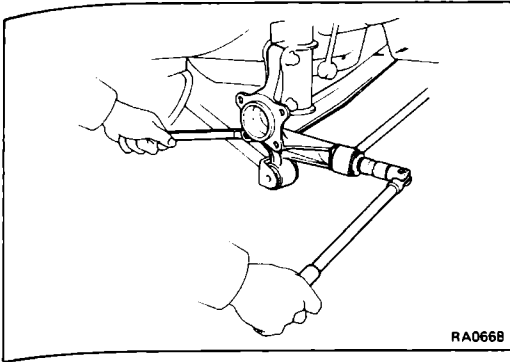
3. REMOVE REAR AXLE HUB
 - (a) Remove the four axle hub and carrier mounting bolts.
 - (b) Remove the axle hub and brake assembly.
 - (c) Remove the O-ring from the axle carrier.



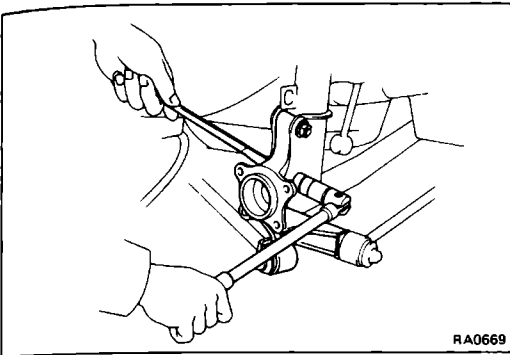
4. REMOVE REAR AXLE CARRIER

(a) Remove the strut rod mounting bolt and nut from the axle carrier.

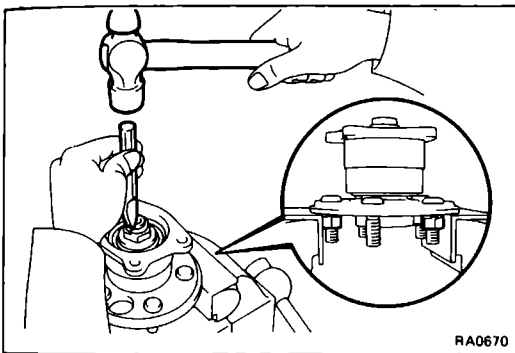




- (b) Remove the No.1 and No.2 suspension arm mounting bolt and nut from the axle carrier.



- (c) Remove the two axle carrier mounting bolts and nuts from the shock absorber.

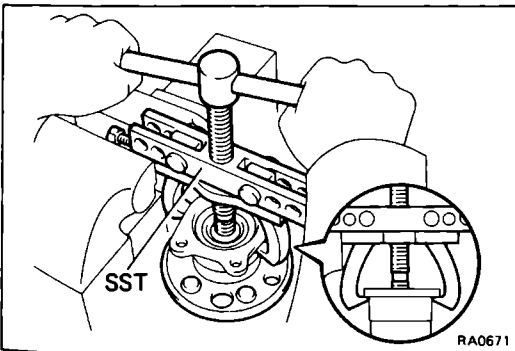


REPLACEMENT OF REAR AXLE HUB AND BEARING

(See page RA-5)

1. REMOVE NUT

- (a) Using a hammer and chisel, unseat the nut.
- (b) Remove the nut.



2. REMOVE AXLE SHAFT FROM AXLE HUB

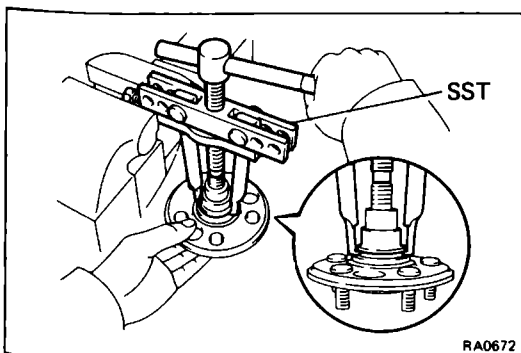
Using SST, push the rear axle shaft off the rear axle hub.
SST 09950-20017

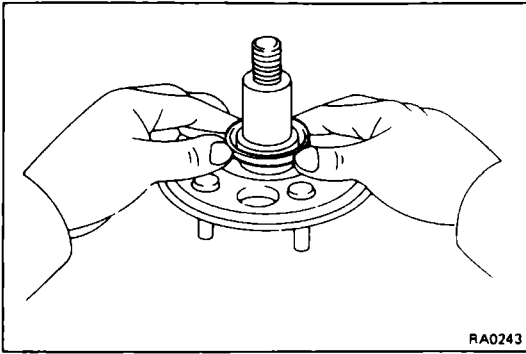
3. REMOVE BEARING INNER RACE (INSIDE)

4. REMOVE BEARING INNER RACE (OUTSIDE)

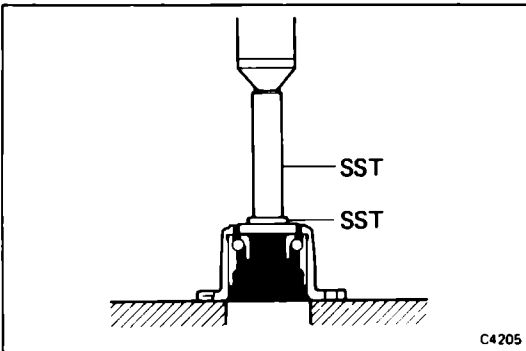
Using SST, pull off the bearing inner race (outside) from the axle shaft.

SST 09950-20017





5. REMOVE OIL SEAL



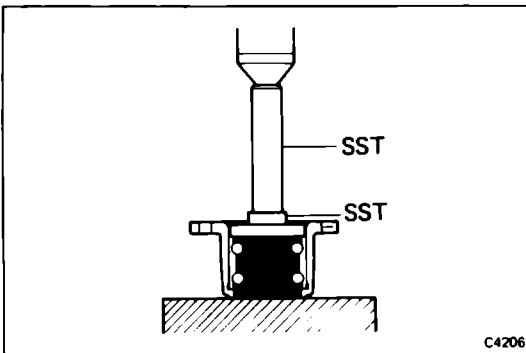
6. REMOVE BEARING

(a) First, install the inner race (outside) of the bearing to be removed.

(b) Using SST, press out the bearing.

SST 09550-10012 (09552-10010, 09558-10010)

CAUTION: Always replace the bearing as an assembly.

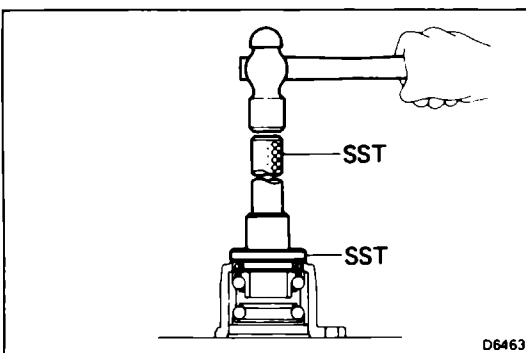


7. INSTALL BEARING

(a) Apply MP grease around the outer race of a new bearing.

(b) Using SST, press the bearing into the axle hub.

SST 09550-10012 (09552-10010, 09554-10010)



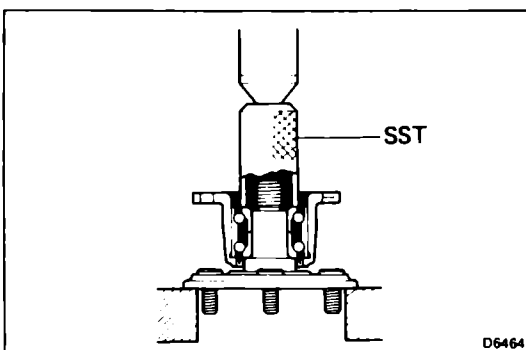
8. INSTALL OIL SEAL

(a) Install a new bearing inner race (outside).

(b) Using SST, drive a new oil seal into the axle hub.

SST 09550-10012 (09552-10010, 09554-10010)

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

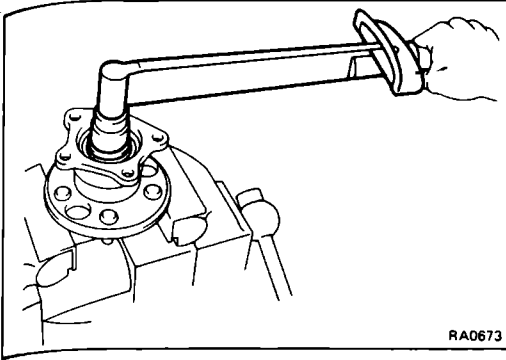


9. INSTALL AXLE SHAFT

(a) Install a new bearing inner race (inside).

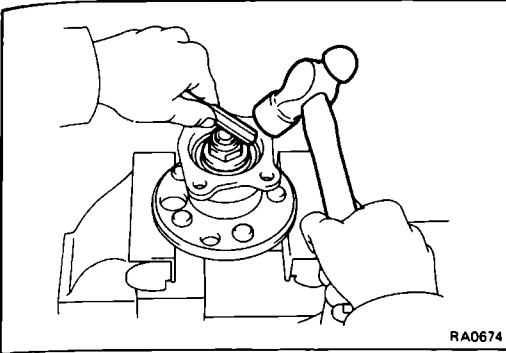
(b) Using SST, press the inner races onto the axle shaft.

SST 09636-20010

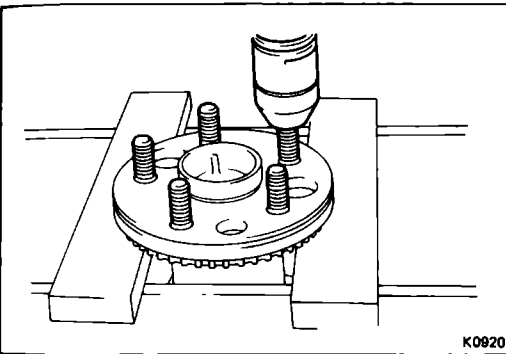


(c) Torque the nut.

Torque: 1,250 kg-cm (90 ft-lb, 123 N·m)



(d) Stake the nut.



(w/ A.B.S.)

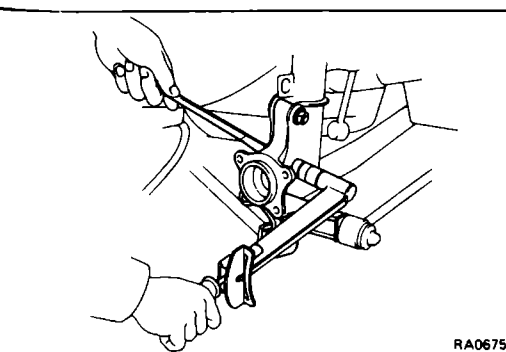
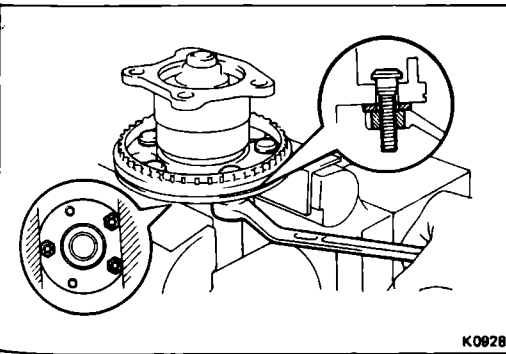
REPLACEMENT OF REAR AXLE HUB BOLT

1. REMOVE HUB BOLT

Using a press, press out the hub bolt.

2. INSTALL HUB BOLT

Using a washer and nut, install a new hub bolt.



INSTALLATION OF REAR AXLE HUB AND CARRIER

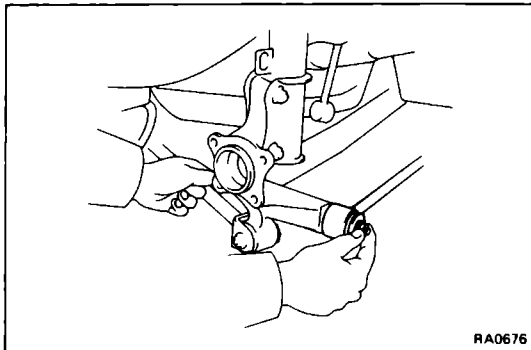
(See page RA-5)

1. INSTALL REAR AXLE CARRIER

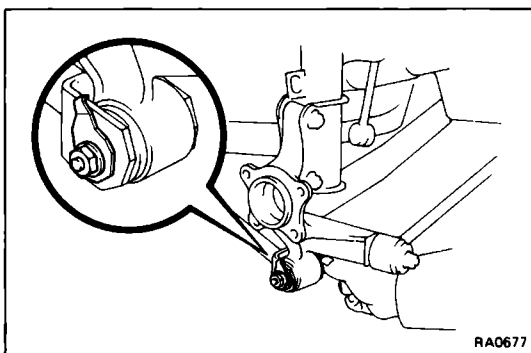
(a) Place the axle carrier in position.

(b) Install and torque the axle carrier mounting bolts and nuts to the shock absorber.

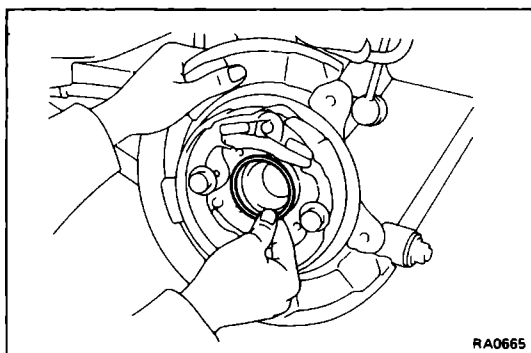
Torque: 2,300 kg-cm (166 ft-lb, 226 N·m)



- (c) Temporarily install the No. 1 and No. 2 suspension arm mounting bolt and nut to the axle carrier.

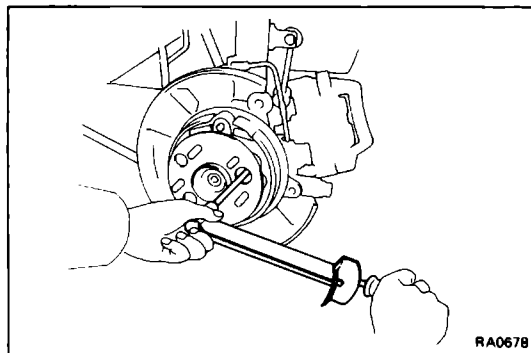


- (d) Temporarily install the strut rod mounting bolt and nut to the axle carrier.



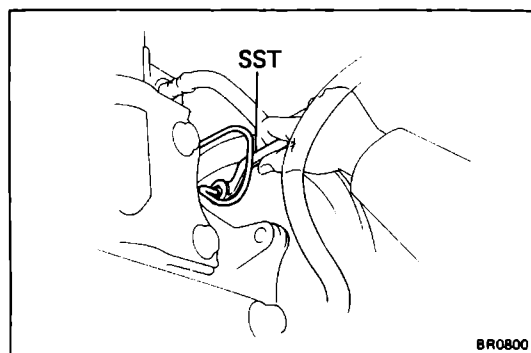
2. INSTALL REAR AXLE HUB

- (a) Install a new O-ring to the axle carrier.



- (b) Install the axle hub and rear brake assembly with the four bolts. Torque the bolts.

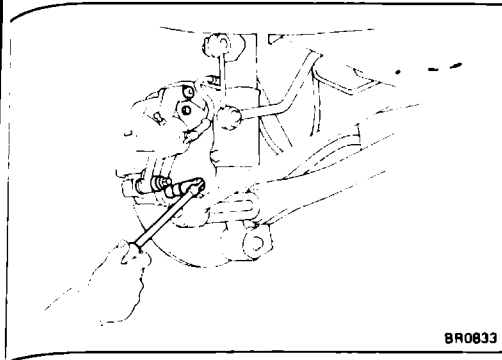
Torque: 820 kg-cm (59 ft-lb, 80 N·m)



3. (DRUM BRAKE TYPE) CONNECT BRAKE TUBE

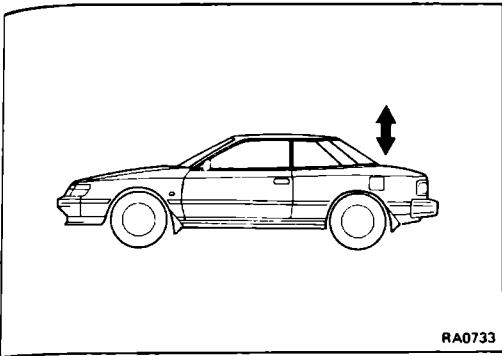
Using SST, connect the brake tube to the axle carrier.
SST 09751-36011

4. INSTALL BRAKE DRUM OR DISC ROTOR



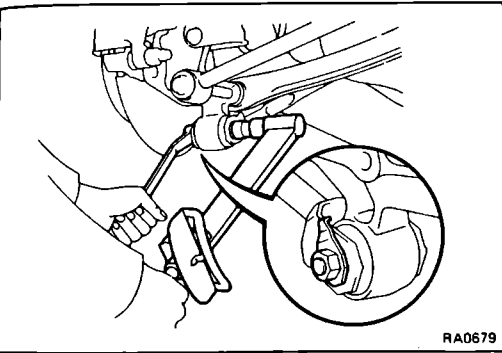
BR0833

5. (DISC BRAKE TYPE)
INSTALL BRAKE CALIPER
TORQUE: 475 Kg-cm (34 ft-lb, 47 N·m)
6. BLEED BRAKE SYSTEM
(See page BR-7)
7. INSTALL WHEEL



RA0733

8. TORQUE EACH MOUNTING BOLTS AND NUTS
 - (a) Remove the stands and bounce the vehicle to stabilize the suspension.

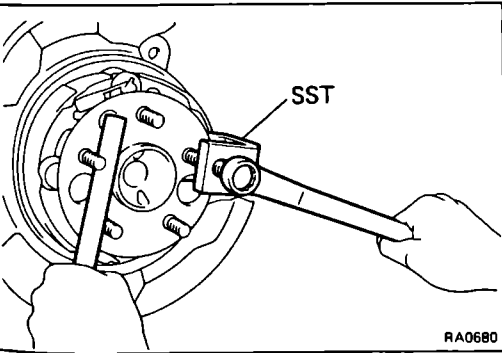


RA0679

- (b) Torque the mount bolts and nuts with the vehicle weight on the suspension.

Torque: 1,150 kg-cm (83 ft-lb, 113 N·m) Strut rod
1,850 kg-cm (134 ft-lb, 181 N·m) Suspension arm

9. CHECK REAR WHEEL ALIGNMENT
(See page RA-3)

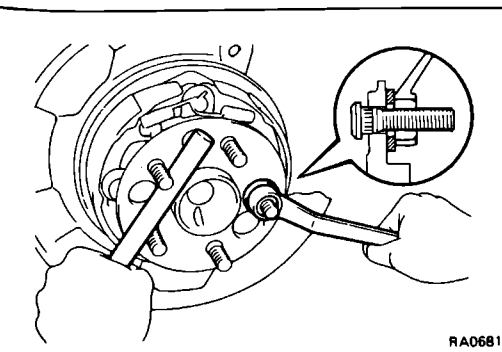


RA0680

(w/o A.B.S.)
REPLACEMENT OF REAR AXLE HUB BOLT

1. REMOVE DISC ROTOR OR BRAKE DRUM
2. REMOVE HUB BOLT

Using SST, remove the hub bolt.
SST 09650-17011

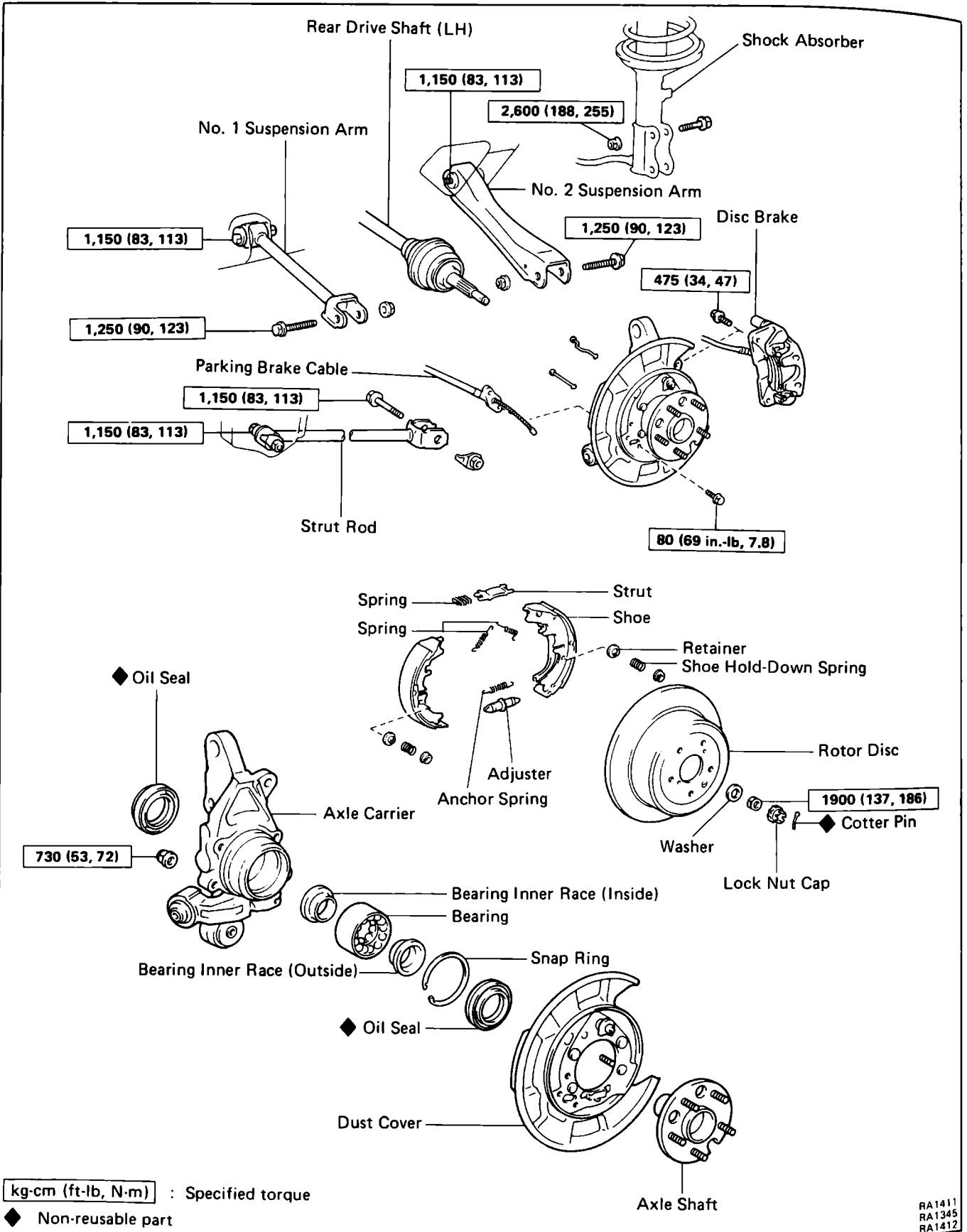


RA0681

3. INSTALL HUB BOLT
Using a washer and nut(10 mm), install the new hub bolt.
 4. INSTALL BRAKE DRUM OR DISC ROTOR
 - (a) Install the brake drum or disc rotor.
 - (b) (Disc brake type)
Install the brake caliper.
- Torque: 475 kg-cm (34 ft-lb, 47 N·m)

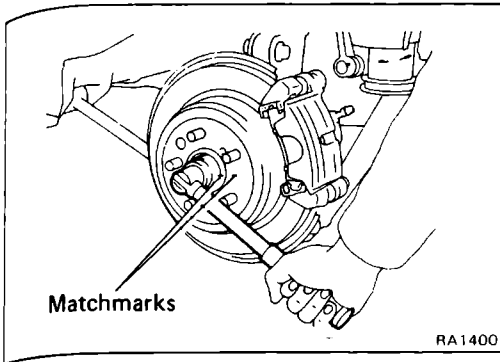
REAR AXLE HUB AND CARRIER (4WD)

COMPONENTS

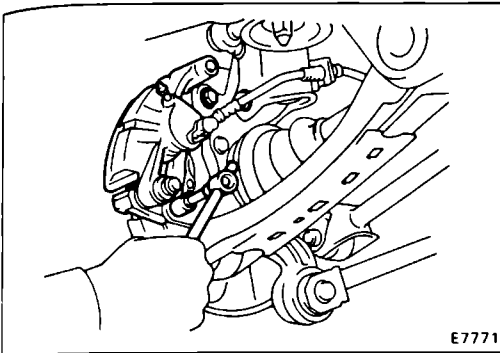


REMOVAL OF REAR AXLE HUB AND CARRIER

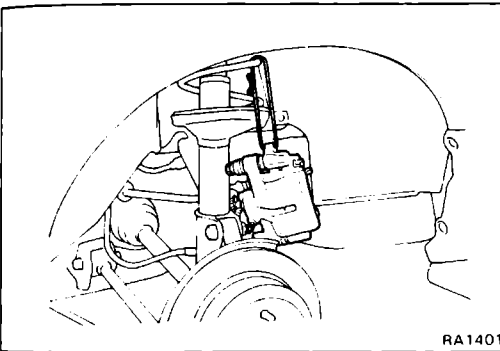
(See page RA-12)

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

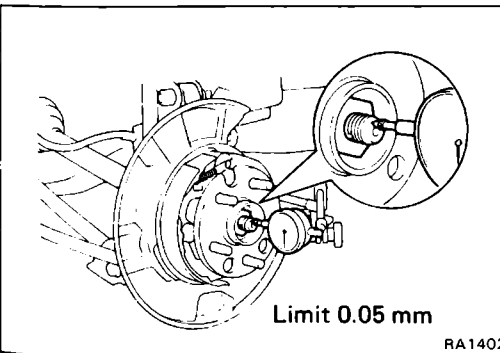
- (a) Remove the cotter pin and bearing lock nut cap.
- (b) With the parking brake engaged, remove the bearing lock nut.

**2. DISCONNECT PARKING BRAKE CABLE****3. REMOVE BRAKE CALIPER**

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

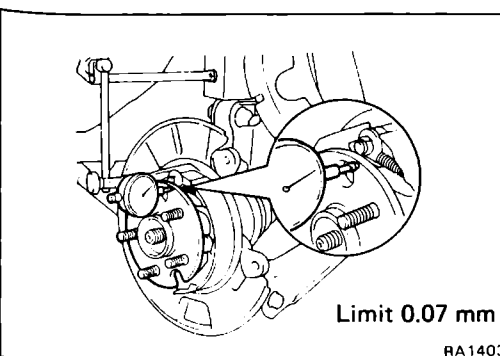
**4. REMOVE ROTOR DISC**

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

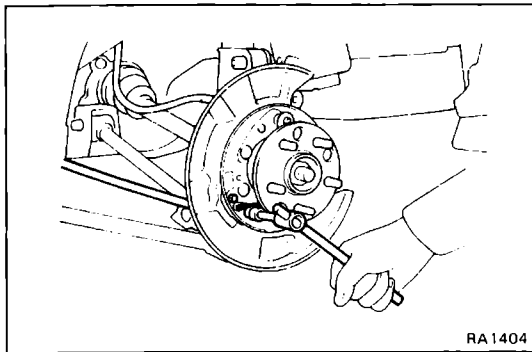
**5. CHECK BEARING PLAY IN AXIAL DIRECTION**

Bearing play: 0.05 mm (0.0020 in.) or less

If the bearing play is greater than the maximum, replace the bearing.

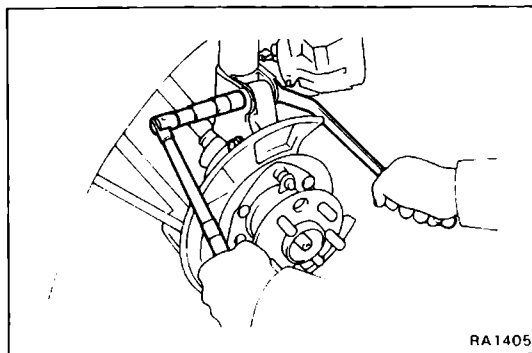
**6. CHECK AXLE SHAFT FLANGE RUNOUT**

Maximum flange runout: 0.07 mm (0.0028 in.) or less



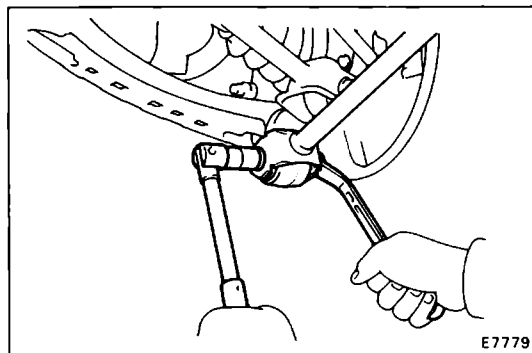
7. REMOVE PARKING BRAKE ASSEMBLY
(See page RA-12)

8. REMOVE PARKING BRAKE CABLE

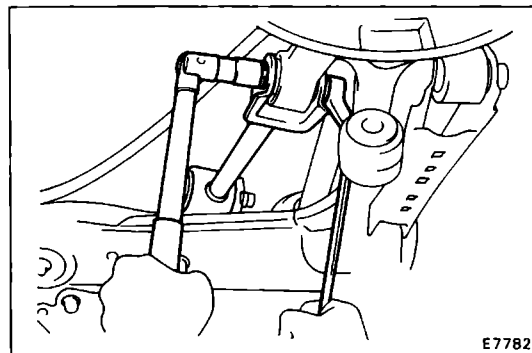


9. REMOVE AXLE CARRIER WITH AXLE HUB

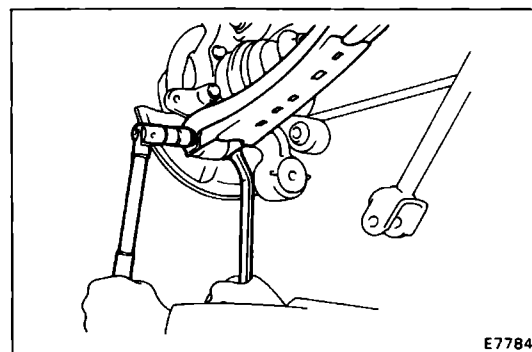
(a) Remove the two axle carrier set nuts and two bolts.



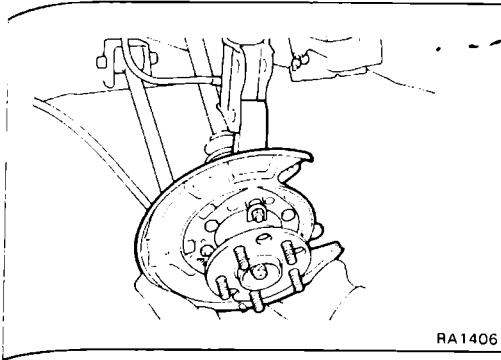
(b) Disconnect the strut rod from the axle carrier.



(c) Disconnect the No. 1 suspension arm from the axle carrier.

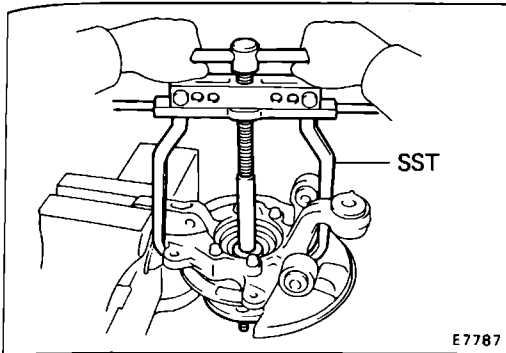


(d) Disconnect the No. 2 suspension arm from the axle carrier.



(e) Remove the axle carrier with axle hub.

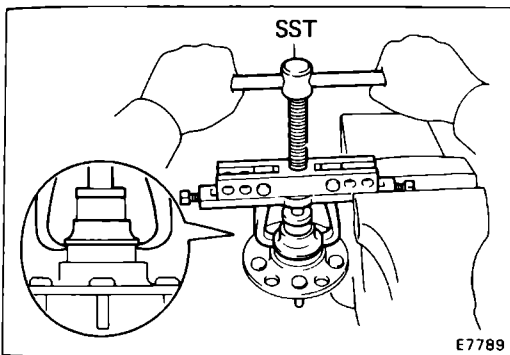
CAUTION: Cover the drive shaft boot with cloth to protect it from damage.



REPLACEMENT OF AXLE HUB AND BEARING

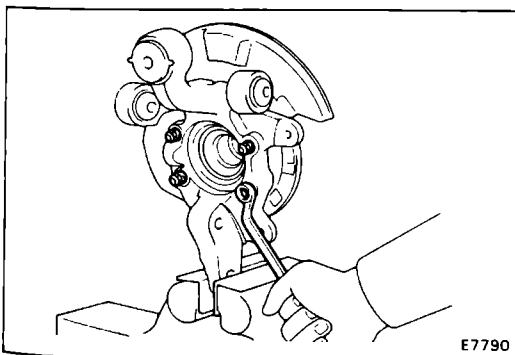
1. REMOVE AXLE SHAFT FROM AXLE HUB

Using SST, push the axle shaft off the axle hub.
SST 09950-20017

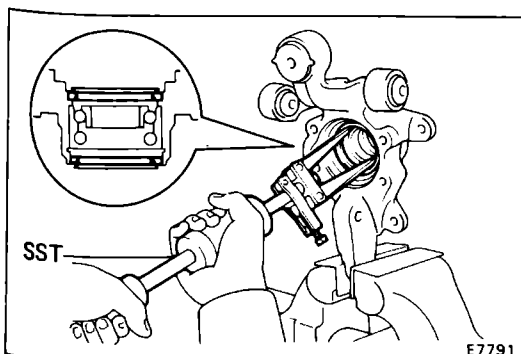


2. REMOVE BEARING INNER RACE (OUTSIDE) FROM AXLE SHAFT

Using SST, pull off the bearing inner race (outside) from the axle shaft.

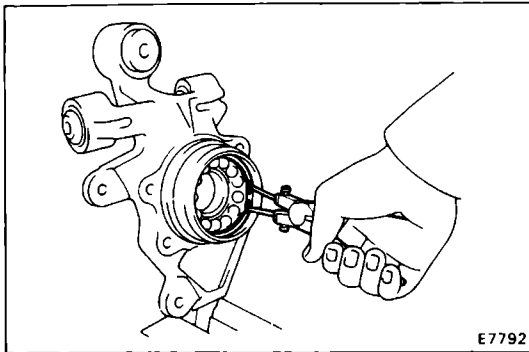


3. REMOVE DUST COVER



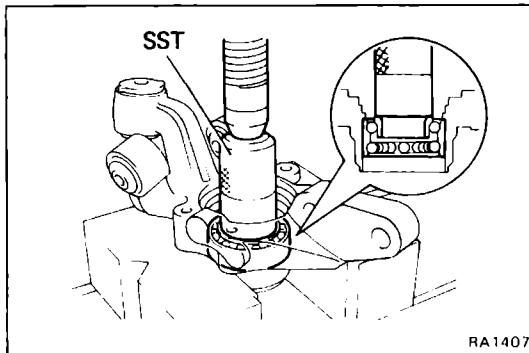
4. REMOVE INNER AND OUTER OIL SEAL

Using SST, remove the oil seal from the axle carrier.
SST 09308-00010



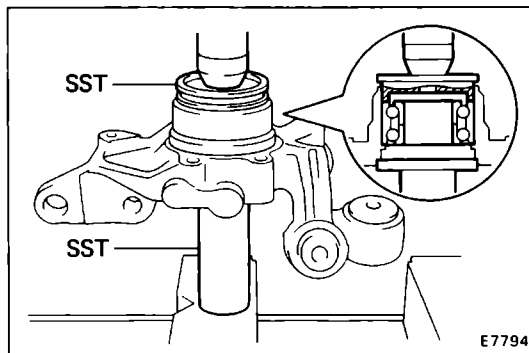
5. REMOVE HOLE SNAP RING

Using snap ring pliers, remove the hole snap ring from the axle carrier.



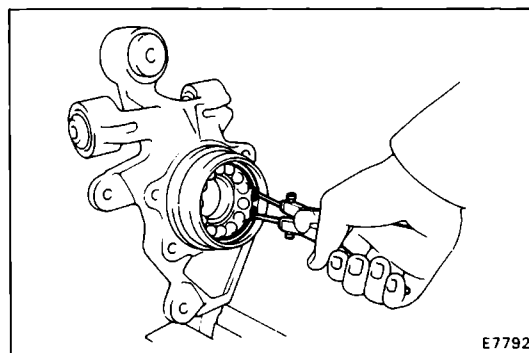
6. REMOVE BEARING

Using SST, press out the bearing from the axle carrier.
SST 09636-20010



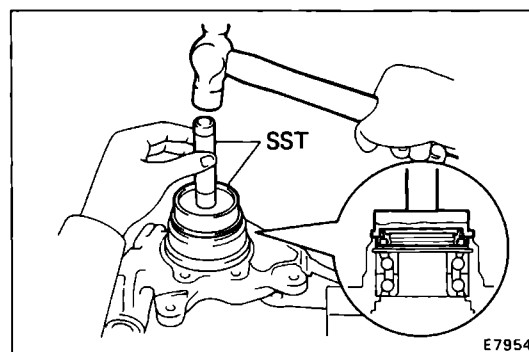
7. INSTALL BEARING

Using SST, press the bearing into the axle hub.
SST 09309-36010, 09608-32010



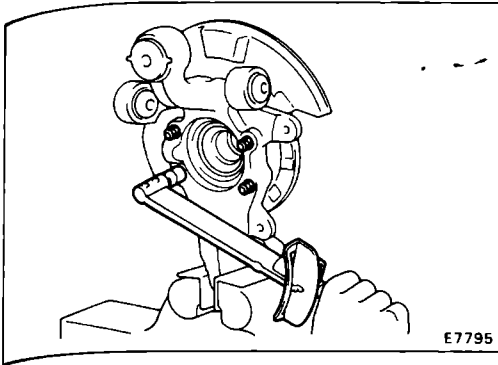
8. INSTALL HOLE SNAP RING

Using pliers, install a hole snap ring into the rear axle carrier.

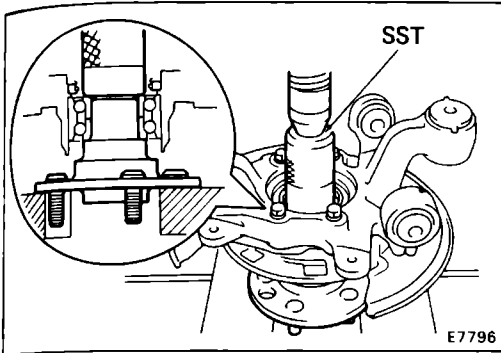


9. INSTALL OUTER OIL SEAL

- (a) Using SST, drive in a new oil seal to the axle carrier.
SST 09608-30012 (09608-04020), 09608-32010
- (b) Apply MP grease to the oil seal lip.

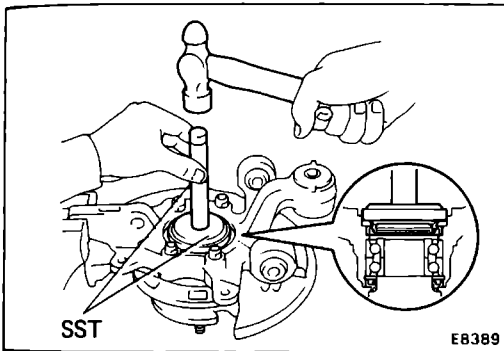


10. INSTALL DUST COVER



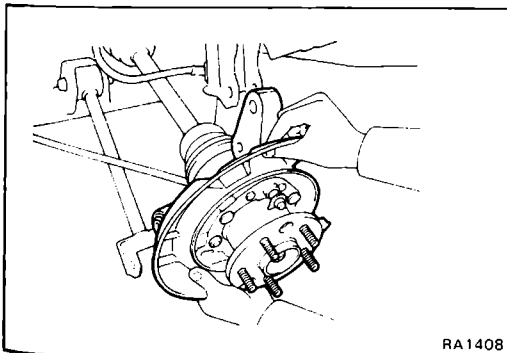
11. INSTALL AXLE SHAFT

Using SST, install the axle shaft to the axle carrier.
SST 09636-20010



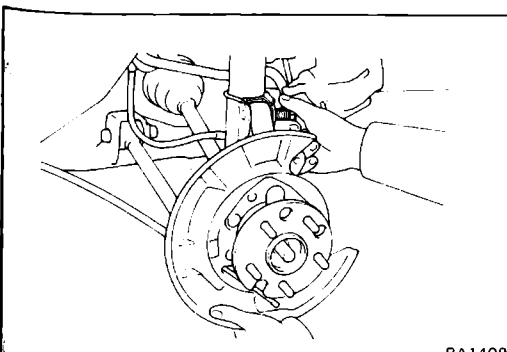
12. INSTALL INNER OIL SEAL

- (a) Using SST, drive in a new oil seal to the axle carrier.
SST 09608-30012 (09608-04020, 09608-04110)
- (b) Apply MP grease to the oil seal lip.



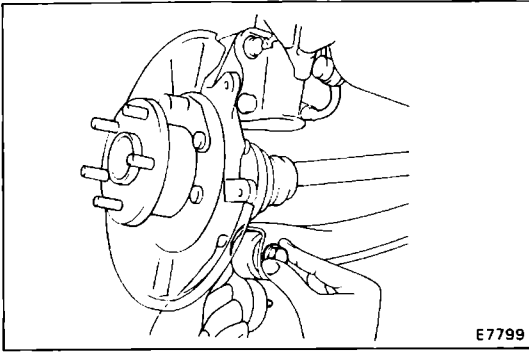
13. INSTALL AXLE CARRIER WITH AXLE HUB

- (a) Install the axle carrier with axle hub.

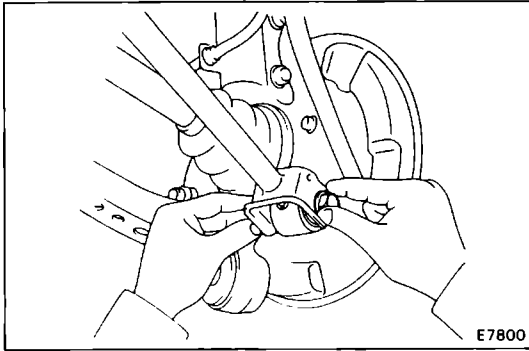


- (b) Install the axle carrier with axle hub.
 - (1) Place the rear axle carrier to the shock absorber's lower bracket.
 - (2) Install the two set bolts and two nuts.
 - (3) Torque the nuts.

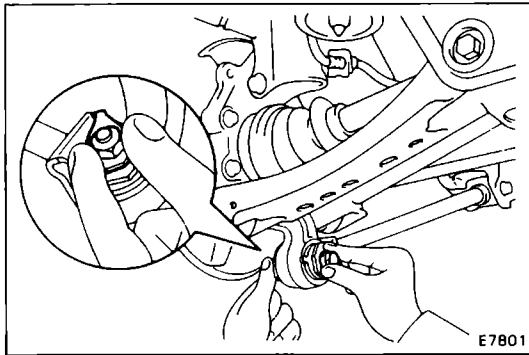
Torque: 2,600 kg-cm (188 ft-lb, 255 N·m)



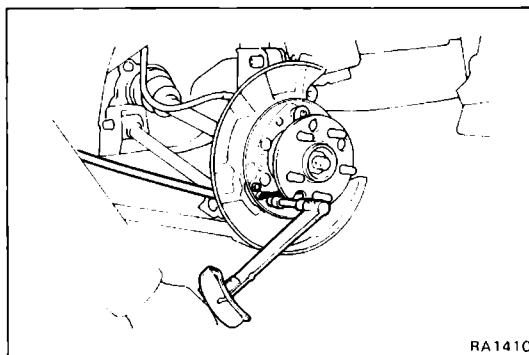
- (c) Temporarily connect the No. 2 suspension arm to the axle carrier.



- (d) Temporarily connect the No. 1 suspension arm to the axle carrier.

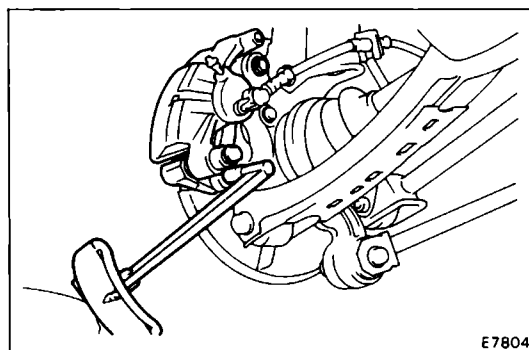


- (e) Temporarily connect the strut rod to the axle carrier.



14. INSTALL PARKING BRAKE CABLE

15. INSTALL PARKING BRAKE ASSEMBLY (See page RA-12)

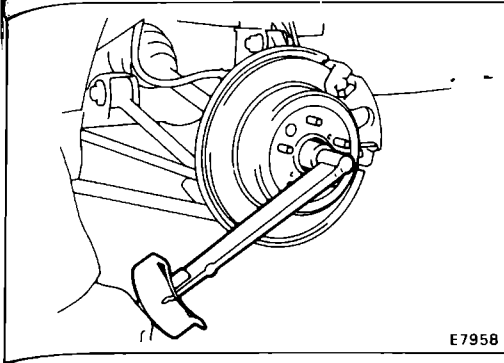


16. INSTALL ROTOR DISC

NOTE: Align the matchmarks on the axle hub and rotor disc.

17. INSTALL BRAKE CALIPER

Torque: 475 kg-cm (34 ft-lb, 47 N·m)

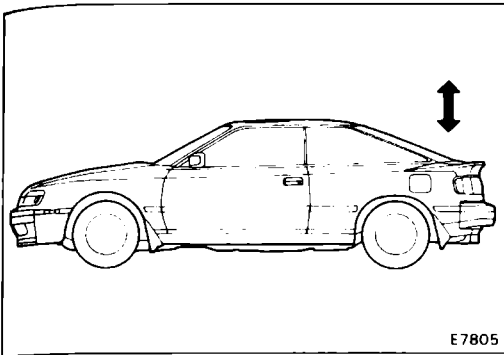


18. INSTALL PLATE WASHER, BEARING LOCK NUT, BEARING LOCK NUT CAP AND NEW COTTER PIN

- (a) Install the plate washer and lock nut.
- (b) With the parking brake engaged, and tighten the nut.

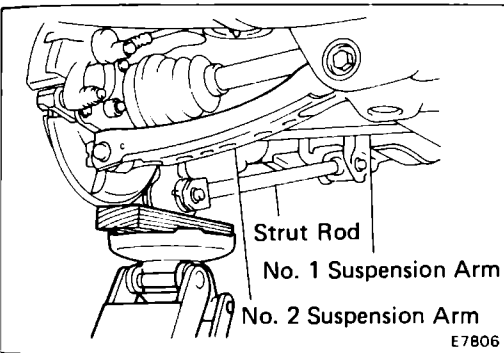
Torque: 1,900 kg-cm (137 ft-lb, 186 N·m)

- (c) Install the lock nut cap and a new cotter pin.



19. INSTALL WHEELS AND LOWER VEHICLE

- (a) Install the wheel.
- (b) Remove the stands and bounce the vehicle up and down to stabilize the suspension.



20. TORQUE AXLE CARRIER MOUNTING BOLTS

Torque the axle carrier mounting bolts with the vehicle weight on the suspension.

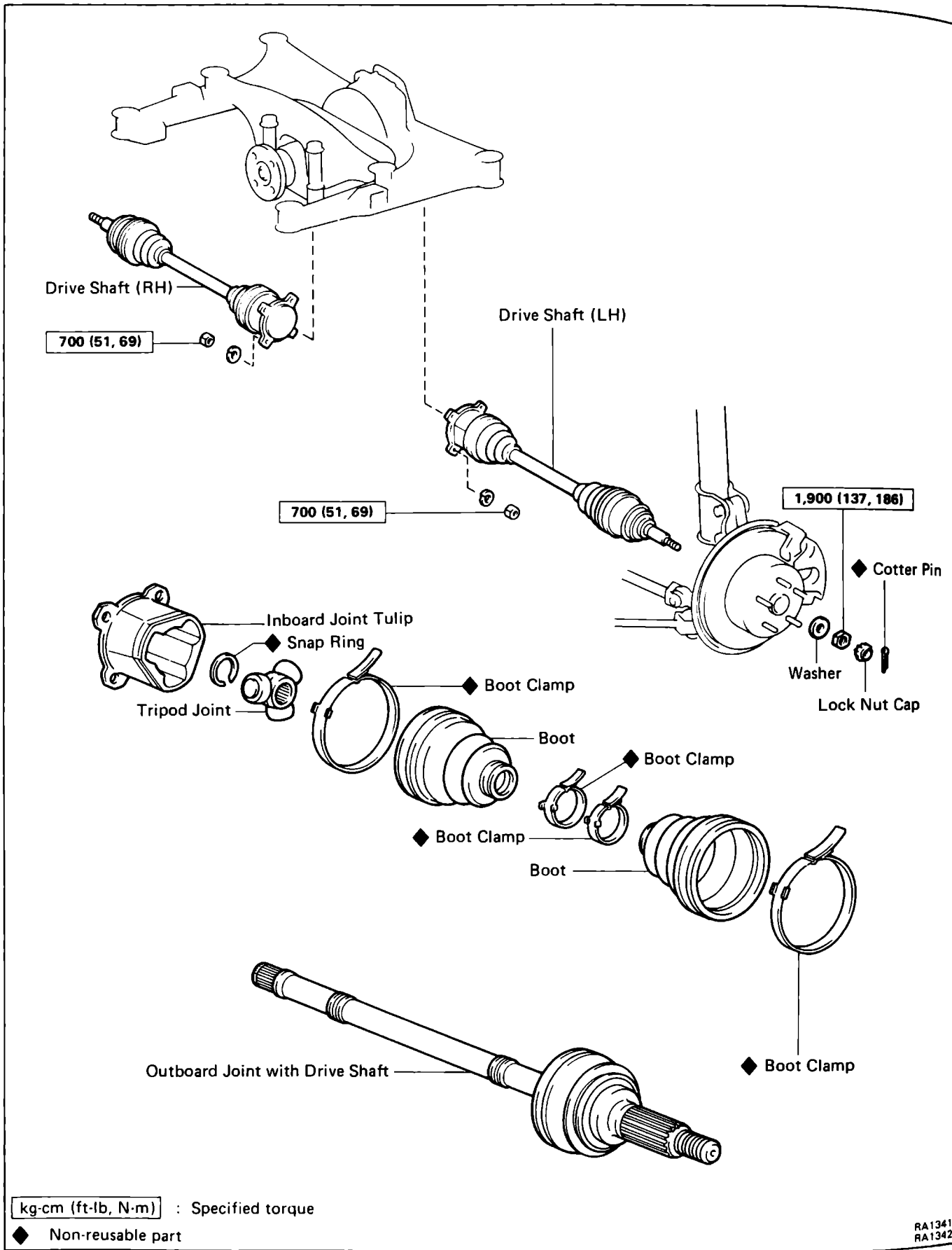
Torque: Strut rod × Axle carrier
1,150 kg-cm (83 ft-lb, 113 N·m)

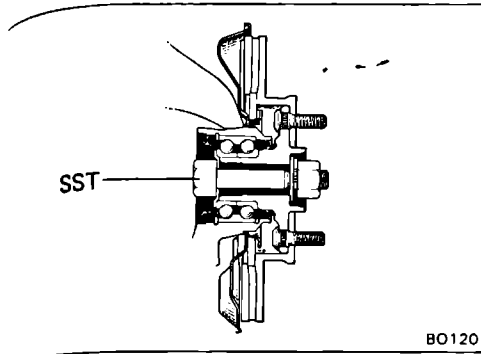
No. 1 and No. 2 suspension arm × Axle carrier
1,250 kg-cm (90 ft-lb, 123 N·m)

21. BLEED BRAKE SYSTEM

22. CHECK REAR WHEEL ALIGNMENT
 (See page RA-3)

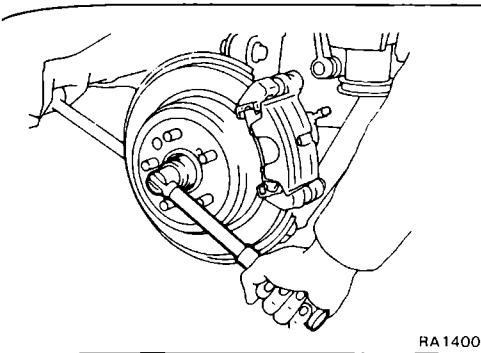
REAR DRIVE SHAFT (4WD) COMPONENTS





CAUTION: 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)

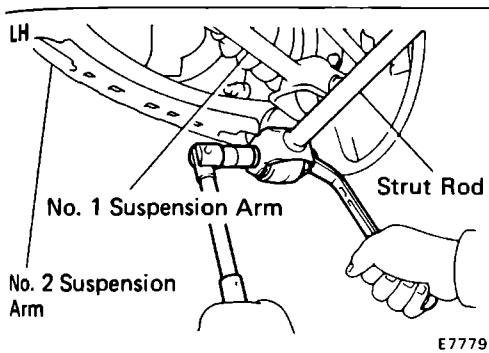


REMOVAL OF REAR DRIVE SHAFT

(See page RA-20)

1. 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.



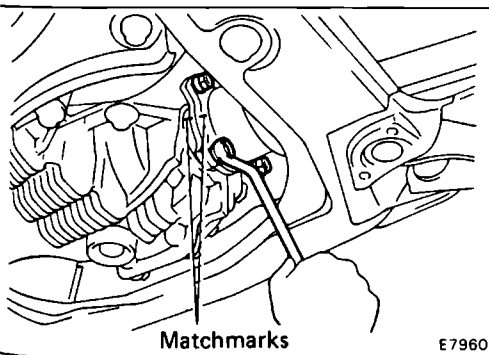
2. (LH Drive Shaft)

DISCONNECT STRUT ROD, NO. 1 AND NO. 2 SUSPENSION ARM FROM AXLE CARRIER

3. REMOVE DRIVE SHAFT

NOTE: Be careful not to damage the boots.

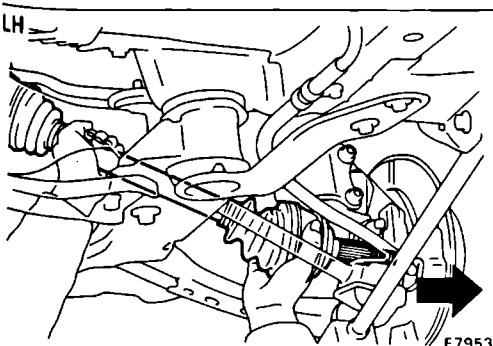
- (a) Place matchmarks on the inboard joint tulip and the side gear shaft flange.
- (b) Loosen four nuts holding the drive shaft to the side gear shaft.
- (c) Disconnect the drive shaft from the side gear shaft.



- (d) Remove the drive shaft from the axle carrier.

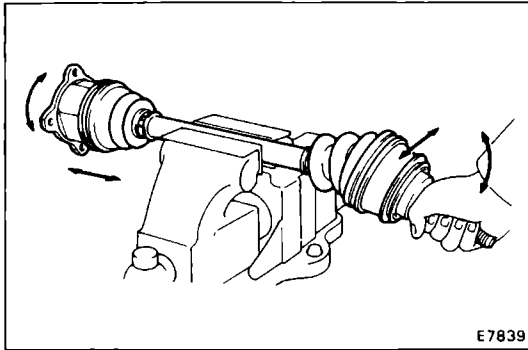
NOTE: (LH Drive Shaft)

Push the axle carrier towards the outside of vehicle, and separate the drive shaft from the axle carrier.



DISASSEMBLY OF REAR DRIVE SHAFT

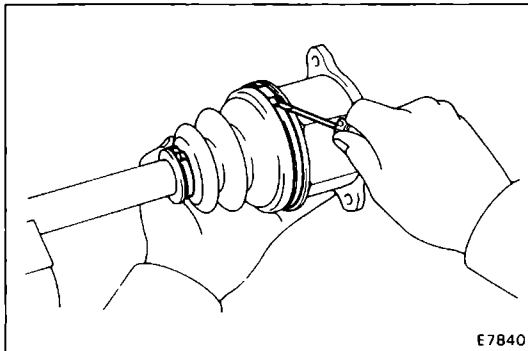
(See page RA-20)



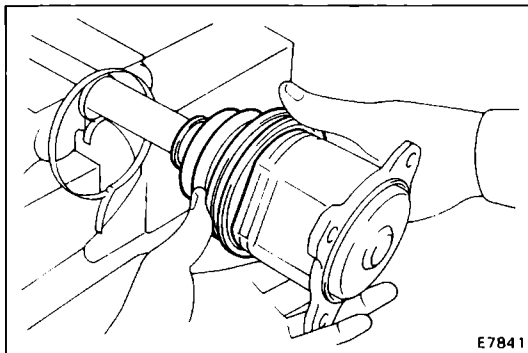
E7839

1. CHECK DRIVE SHAFT

- (a) Check to see that there is no play in the inboard and outboard joints.
- (b) Check to see that the inboard joint slide 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 the damage of boot.

2. REMOVE INBOARD JOINT BOOT CLAMPS

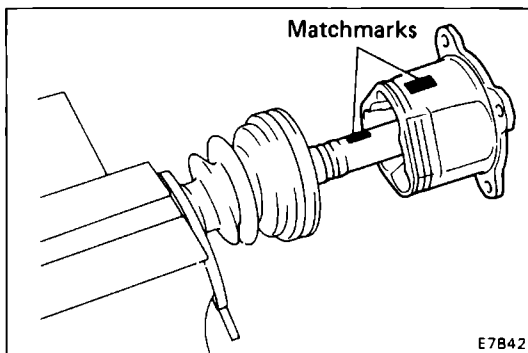
E7840

3. REMOVE INBOARD JOINT BOOT FROM INBOARD JOINT TULIP

E7841

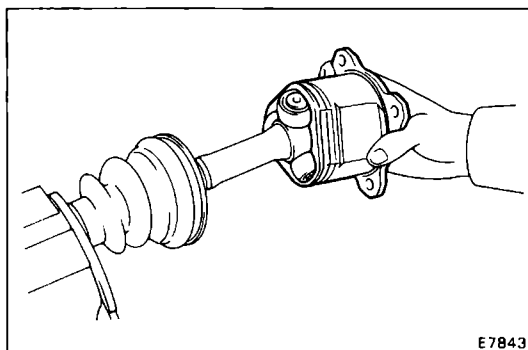
4. REMOVE INBOARD JOINT TULIP FROM DRIVE SHAFT

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

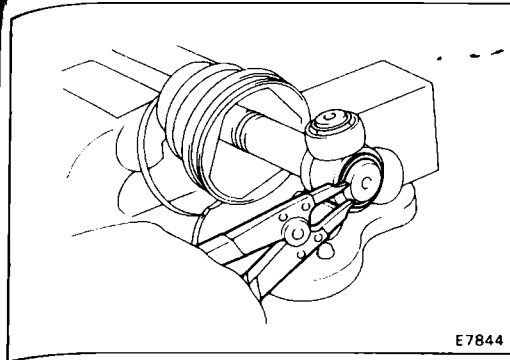
CAUTION: Do not punch the marks.

E7842

- (b) Remove the inboard joint tulip from the drive shaft.

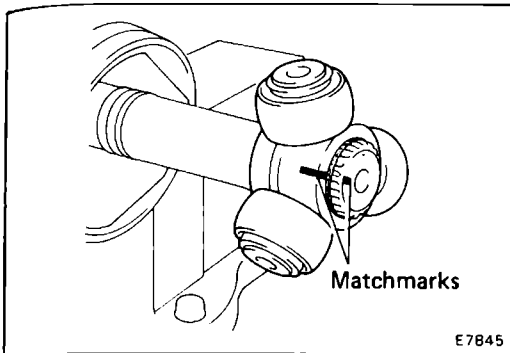


E7843

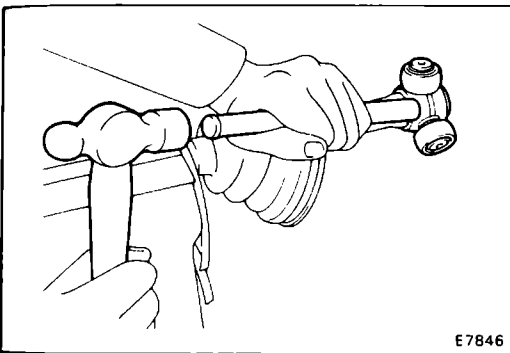


5. REMOVE TRIPOD JOINT

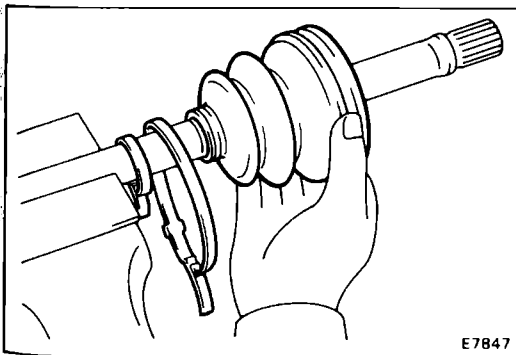
(a) Using snap ring pliers, remove the snap ring.



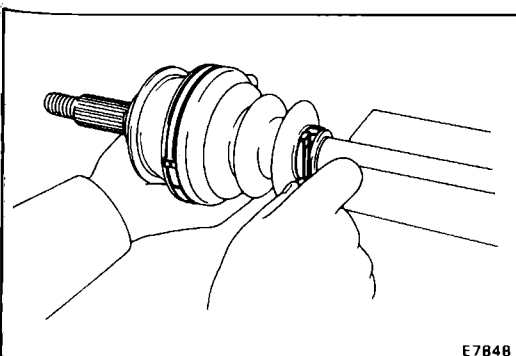
(b) Place matchmarks on the shaft and the tripod.



(c) Using a hammer and brass bar, drive out the tripod joint from the drive shaft.



6. REMOVE INBOARD JOINT BOOT AND CLAMPS

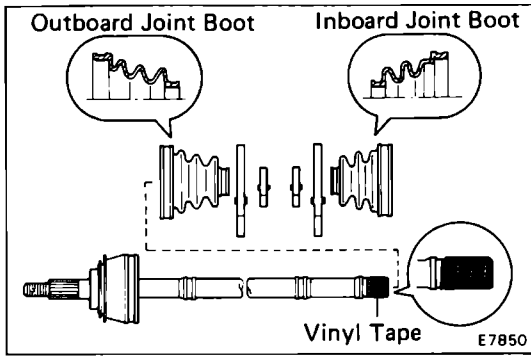


7. REMOVE OUTBOARD JOINT BOOT

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

(b) Remove the boot from the outboard joint.

CAUTION: Do not disassemble the outboard joint.



ASSEMBLY OF REAR DRIVE SHAFT

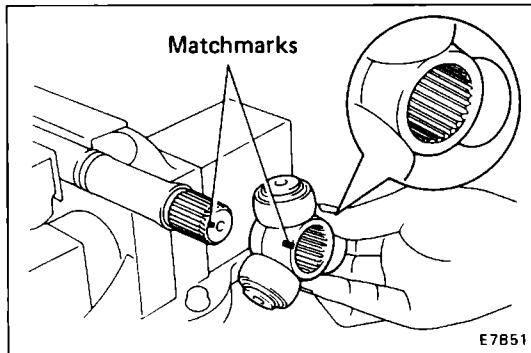
(See page RA-20)

1. TEMPORARILY INSTALL BOOTS AND NEW BOOT CLAMPS

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

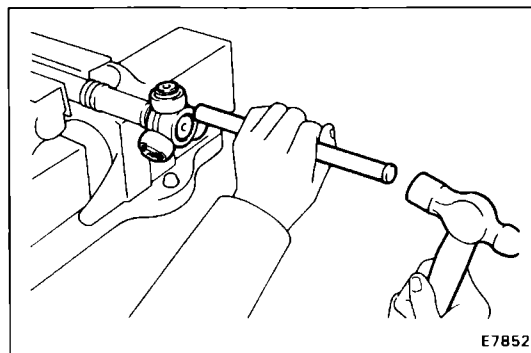
NOTE: Before installing the boot, wrap vinyl tape around the spline of the shaft to prevent damaging the boot.

Temporarily install the boots and new clamps to the drive shaft.

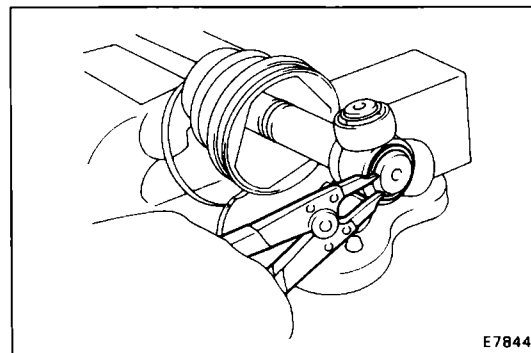


2. INSTALL TRIPOD JOINT

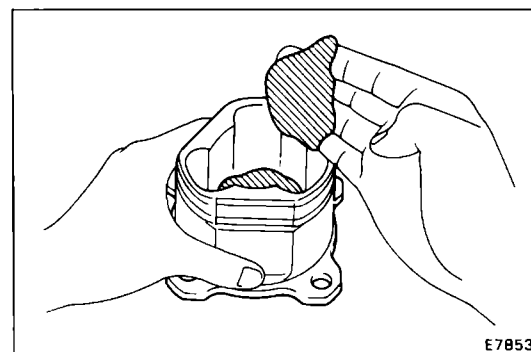
(a) Align the matchmarks placed before remove.



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



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

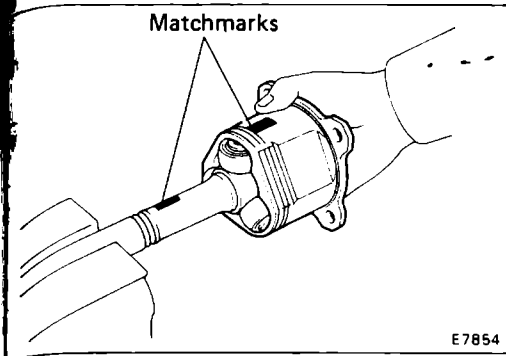


3. INSTALL INBOARD JOINT TULIP TO DRIVE SHAFT

(a) Pack in the grease to the inboard tulip.

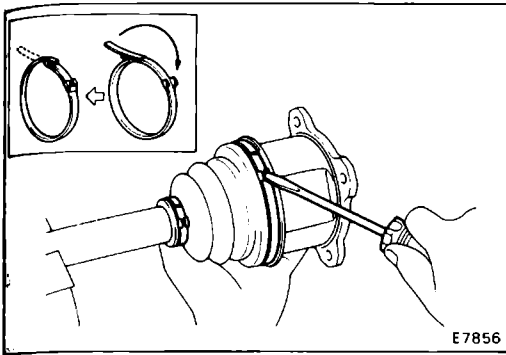
NOTE: Use the grease supplied in the boot kit.

Grease capacity: 215 g (0.48 lb)



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

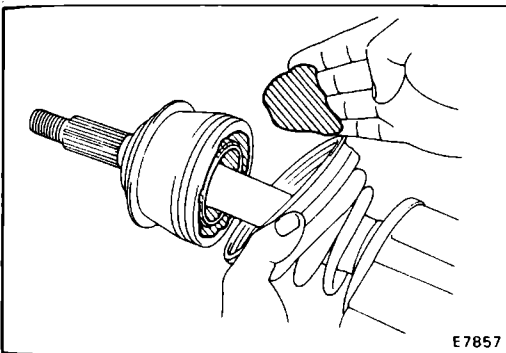
5. INSTALL INBOARD JOINT BOOT TO INBOARD JOINT TULIP



6. INSTALL INBOARD JOINT BOOT CLAMPS

CAUTION: The clamps of the outboard joint are smaller than those of the inboard joint.

- (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.



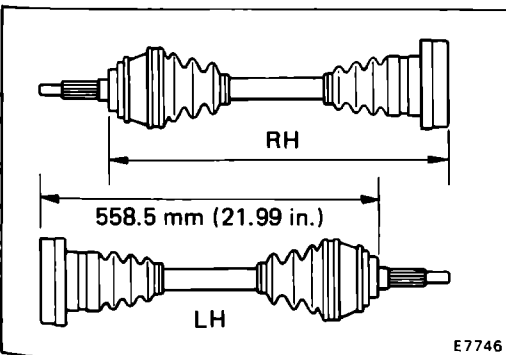
7. INSTALL OUTBOARD JOINT BOOT

- (a) Before install the boot, back in grease.

NOTE: Use the grease supplied in the boot kit.

Grease capacity: 120 g (0.26 lb)

- (b) Install the boot to the outboard joint.

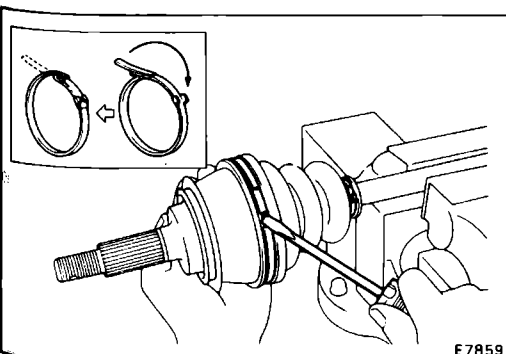


8. INSTALL OUTBOARD JOINT BOOT CLAMPS

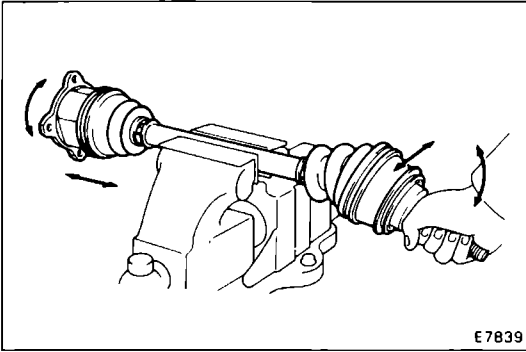
- (a) Be sure the boot is on the shaft groove.

- (b) Be sure that the boot is not stretched or contracted when drive shaft is at standard length.

Drive shaft length: 558.5 mm (21.99 in.)

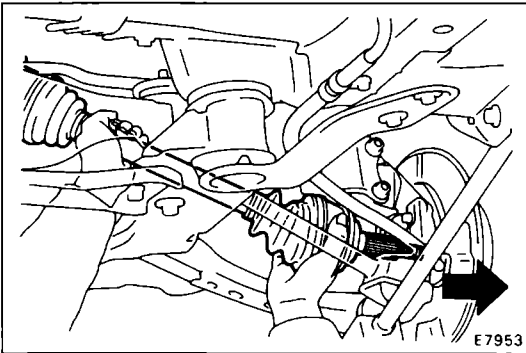


- (c) Using screwdriver, bend the band and lock it as shown in the illustration.



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 side smoothly in the thrust direction.



INSTALLTION OF REAR DRIVE SHAFT

(See page RA-20)

1. INSTALL DRIVE SHAFT

NOTE: Be careful not to damage the boots.

- (a) Install the drive shaft to the axle carrier.

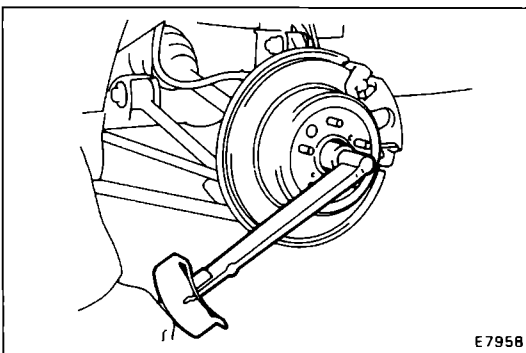
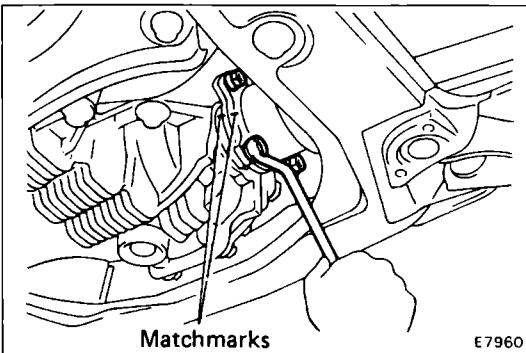
NOTE: (LH Drive Shaft)

Push the rear axle carrier towards the outside vehicle and connect the drive shaft to the axle carrier.

- (b) Align the matchmarks on the inboard joint tulip and the side gear shaft flange.

- (c) Connect the drive shaft to the side gear shaft.

Torque: 700 kg-cm (51 ft-lb, 69 N·m)



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

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

Torque: 1,900 kg-cm (137 ft-lb, 186 N·m)

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

3. (LH Drive Shaft) TEMPORARILY CONNECT STRUT ROD, NO. 1 AND NO. 2 SUSPENSION ARM TO AXLE CARRIER

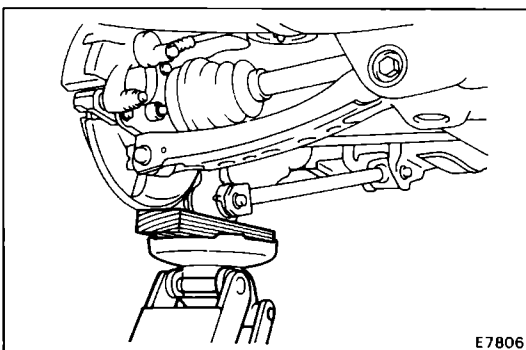
4. TORQUE AXLE CARRIER MOUNTING BOLTS (See step 19, 20 on page RA-12)

Torque: Strut rod × Axle carrier

1,150 kg-cm (83 ft-lb, 113 N·m)

No. 1 and No. 2 Suspension arm × Axle carrier

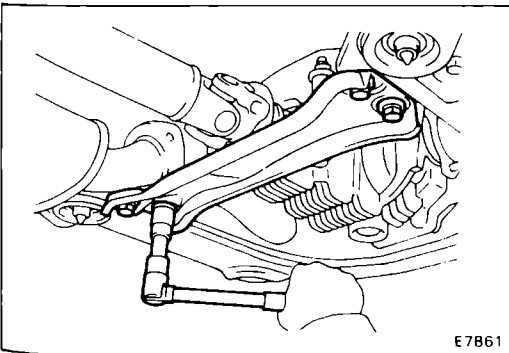
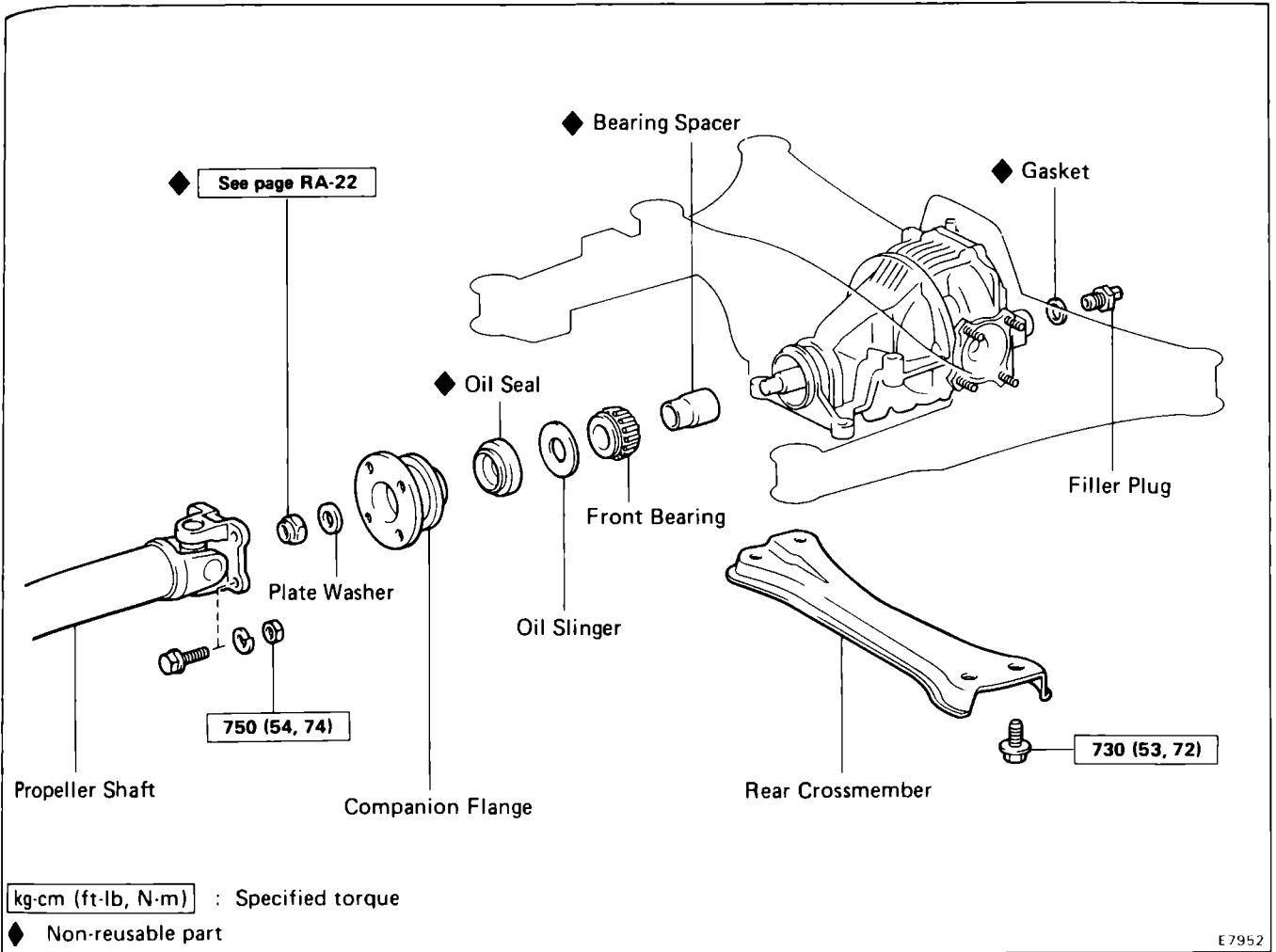
1,250 kg-cm (90 ft-lb, 123 N·m)



5. CHECK REAR WHEEL ALIGNMENT (See page RA-3)

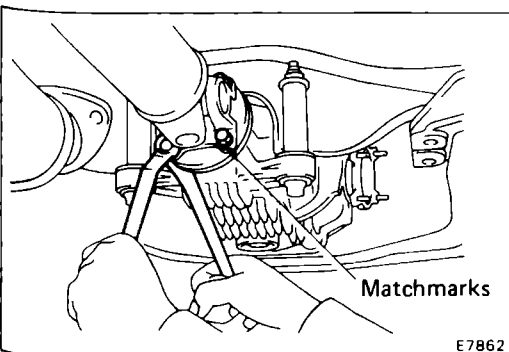
DIFFERENTIAL (4WD)

On-Vehicle Repair



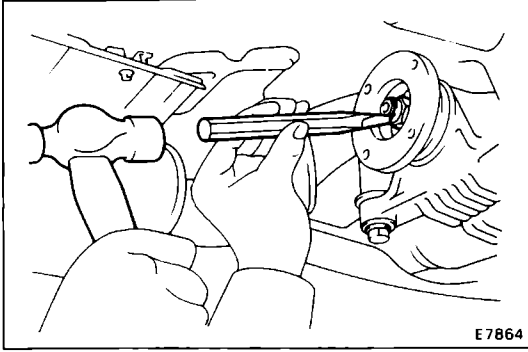
REPLACEMENT OF FRONT OIL SEAL

1. REMOVE REAR CROSSMEMBER



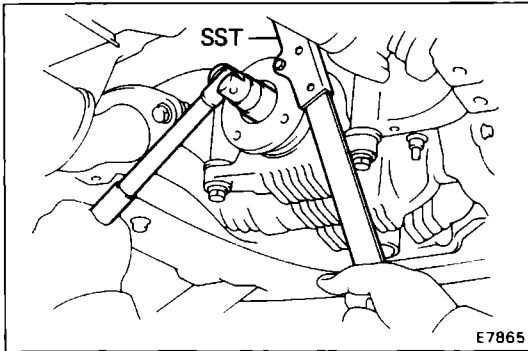
2. DISCONNECT PROPELLER SHAFT

- (a) Place the matchmarks on the both flanges.
- (b) Remove the four bolts, washers and nuts.
- (c) Disconnect the propeller shaft from the differential.



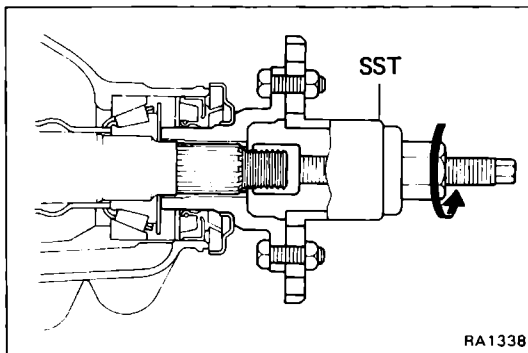
3. REMOVE COMPANION FLANGE

- (a) Using a hammer and chisel, loosen the staked part of the nut.

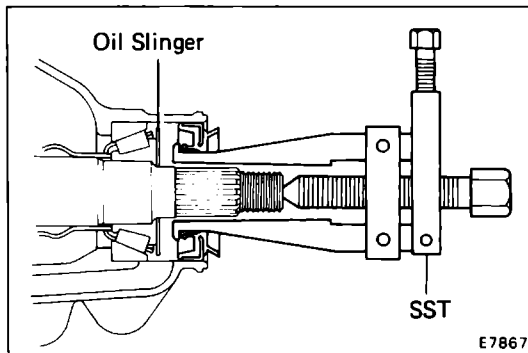


- (b) Using SST to hold the flange, remove the nut.
SST 09330-00021

- (c) Remove the plate washer.



- (d) Using SST, remove the companion flange.
SST 09557-22022

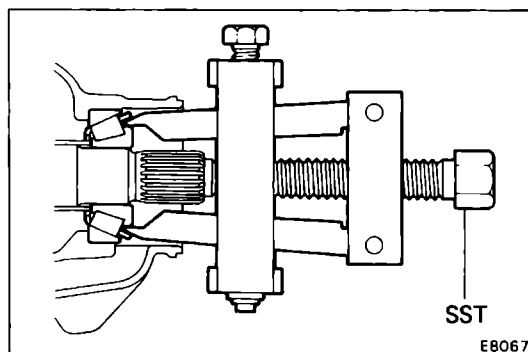


4. REMOVE FRONT OIL SEAL AND OIL SLINGER

- (a) Using SST, remove the front oil seal.

SST 09308-10010

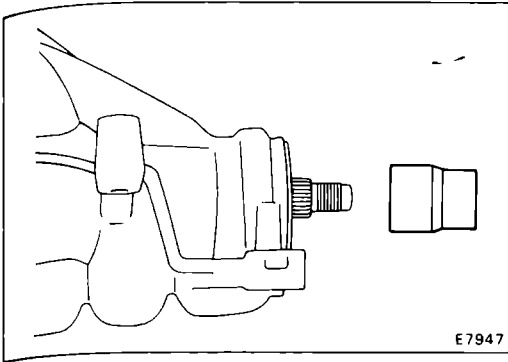
- (b) Remove the oil slinger.



5. REMOVE FRONT BEARING AND BEARING SPACER

- (a) Using SST, remove the front bearing.

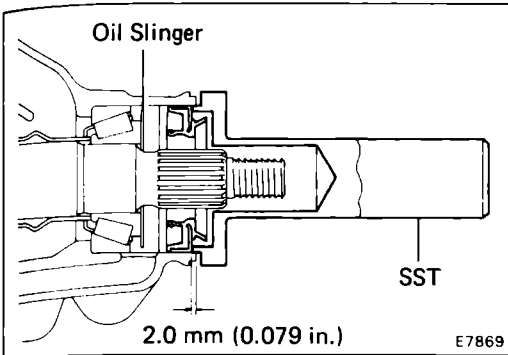
SST 09556-22010



(b) Remove the bearing spacer.

6. INSTALL NEW BEARING SPACER AND FRONT BEARING

- (a) Install a new bearing spacer on the shaft.
- (b) Install the front bearing on the shaft.



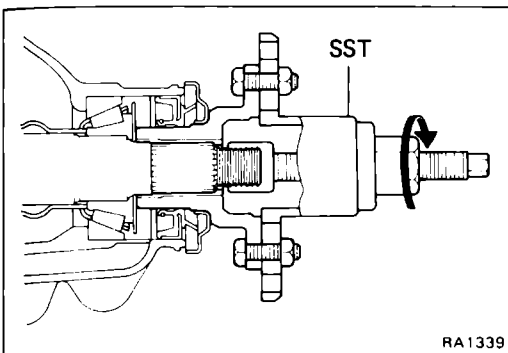
7. INSTALL OIL SLINGER AND NEW OIL SEAL

- (a) Install the oil slinger on the shaft.
- (b) Using SST, drive in a new oil seal.

SST 09554-22010

Oil seal drive in depth: 2.0 mm (0.079 in.)

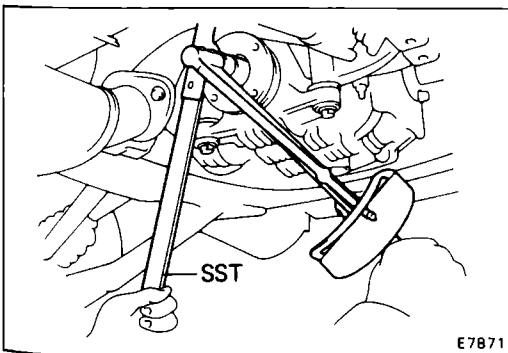
- (c) Apply MP grease to the oil seal lip.



8. INSTALL COMPANION FLANGE

- (a) Using SST, install the companion flange.

SST 09557-22022



- (b) Install the plate washer.

- (c) Coat the threads of a new nut with gear oil.

- (d) Using SST to hold the flange, tighten the nut.

SST 09330-00021

Torque: 1,100 kg-cm (80 ft-lb, 108 N·m)

9. CHECK DRIVE PINION BEARING PRELOAD

Using a torque wrench, measure the preload of the back-lash between the drive pinion and ring gear.

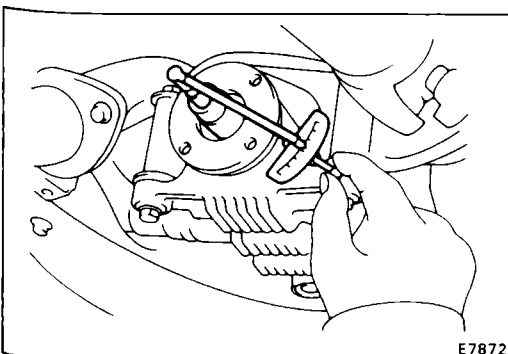
Preload (at starting):

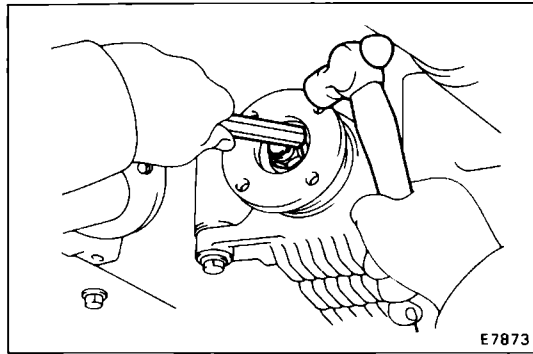
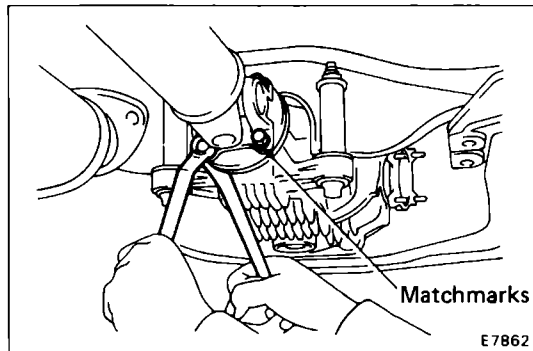
New bearing	10 — 16 kg-cm (8.7 — 13.9 in.-lb, 1.0 — 1.6 N·m)
Reused bearing	5 — 8 kg-cm (4.3 — 6.9 in.-lb, 0.5 — 0.8 N·m)

- If preload is greater than specification, replace the bearing spacer.
- If preload is less than specification, retighten the nut 130 kg-cm (9 ft-lb, 13 N·m) at a time until the specified preload is reached.

If the maximum torque is exceed while retightening the nut, replace the bearing spacer and repeat the preload procedure. Do not back off the pinion nut to reduce the preload.

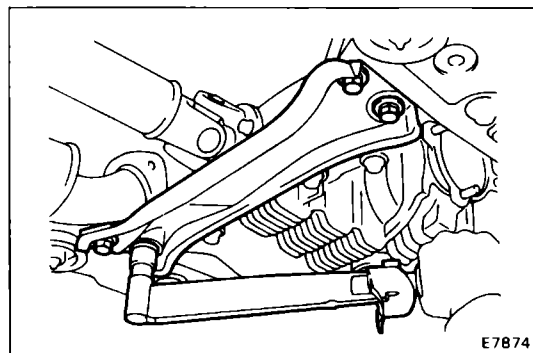
Maximum torque: 2,400 kg-cm (174 ft-lb, 235 N·m)



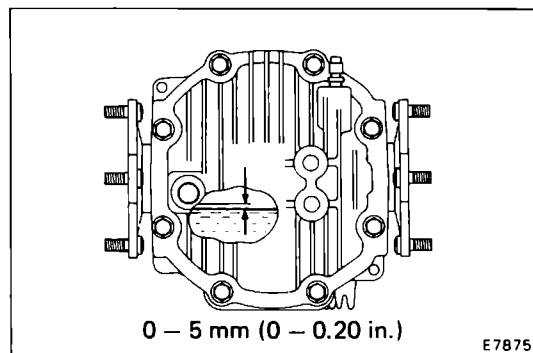
**10. STAKE DRIVE PINION NUT****11. CONNECT PROPELLER SHAFT**

- (a) Align the matchmarks on the flanges and connect the propeller shaft with the four bolts, washers and nuts.
- (b) Torque the bolts and nuts.

Torque: 750 kg-cm (54 ft-lb, 74 N·m)

**12. INSTALL REAR CROSSMEMBER**

Torque: 730 kg-cm (53 ft-lb, 72 N·m)

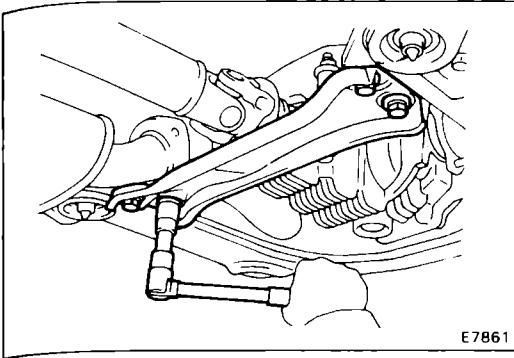
**13. CHECK OIL LEVEL**

Oil grade : API GL-5 hypoid gear oil

Viscosity : Above –18°C (0°F) SAE 90

Below –18°C (0°F) SAE 80W-90

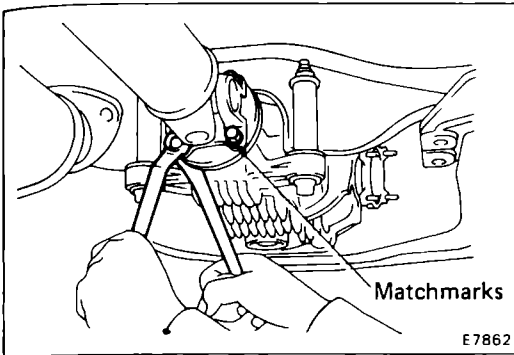
Capacity : 1.1 liters (1.2 US qts, 1.0 Imp.qts)



REMOVAL OF DIFFERENTIAL

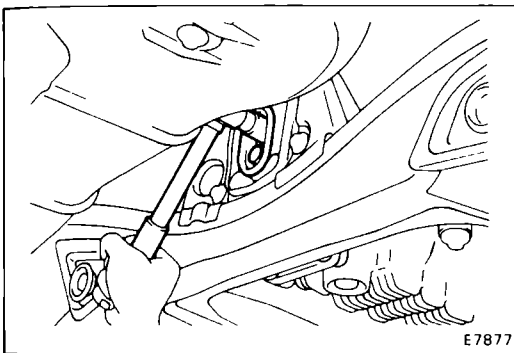
(See page RA-27)

1. DRAIN DIFFERENTIAL OIL
2. REMOVE DRIVE SHAFTS (See page RA-20)
3. REMOVE REAR CROSSMEMBER



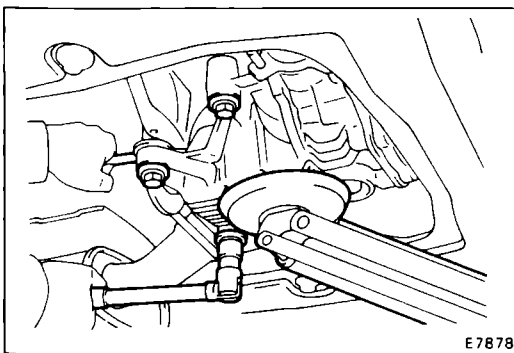
4. DISCONNECT PROPELLER SHAFT

- (a) Place the matchmarks on the both flanges.
- (b) Remove the four bolts, washers and nuts.
- (c) Disconnect the propeller shaft from the differential.

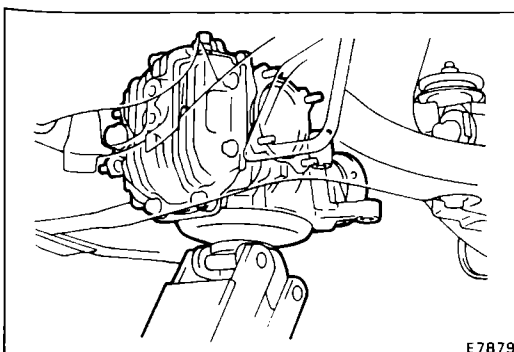


5. REMOVE DIFFERENTIAL

- (a) Jack up the differential slightly.
- (b) Remove the two bolts.

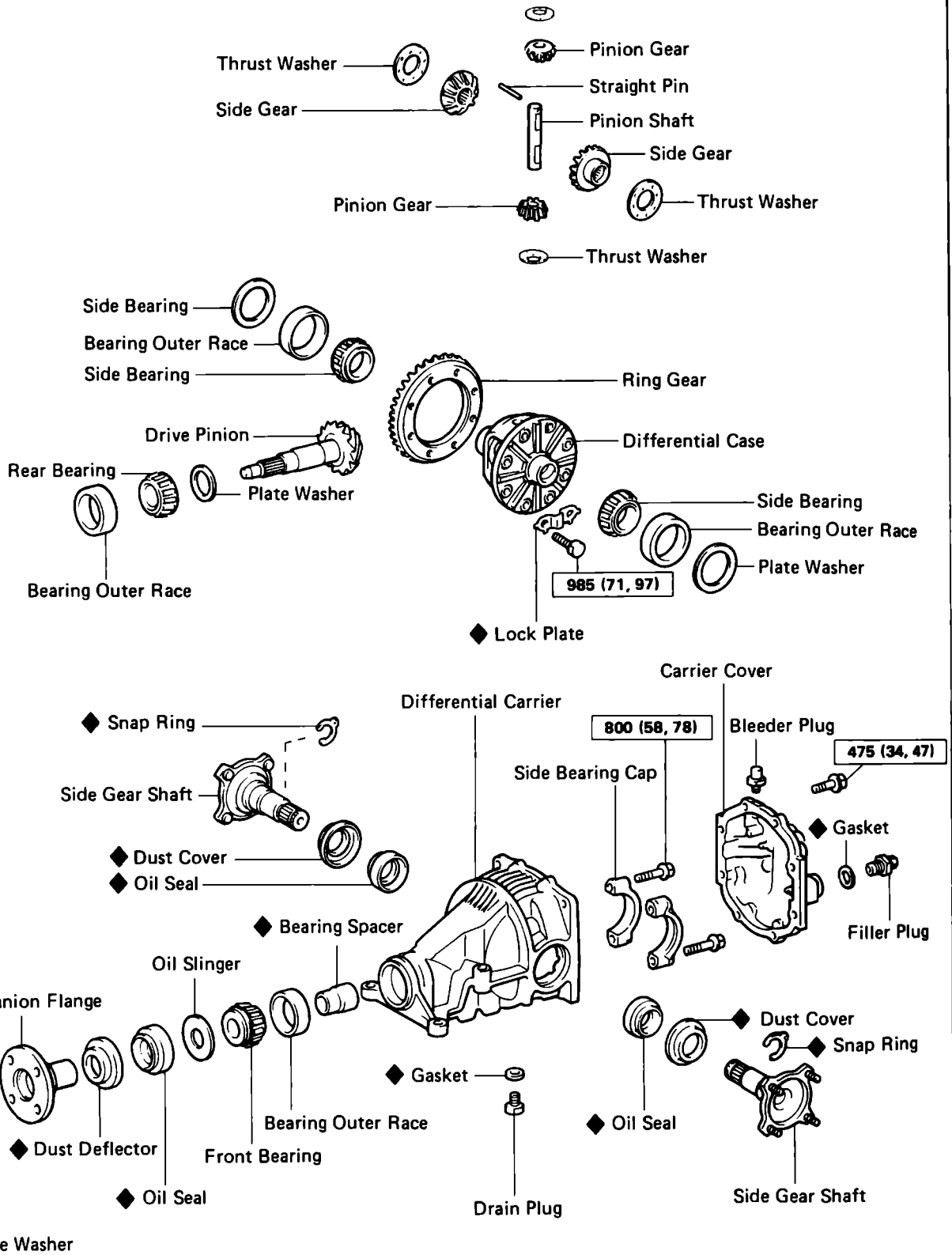


- (c) Remove the four nuts and bolts.



- (d) Remove the differential from the body.

DIFFERENTIAL CARRIER



See page RA-39

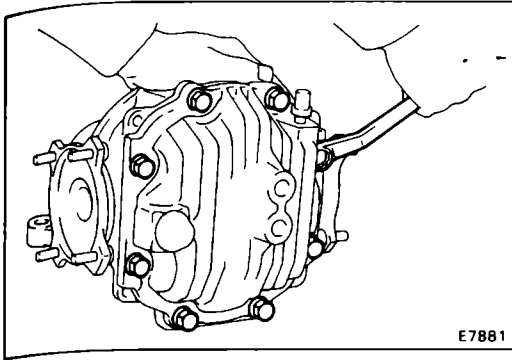
kg-cm (ft-lb, N.m) : Specified torque

◆ Non-reusable part

PRE-INSPECTION OF DIFFERENTIAL CARRIER

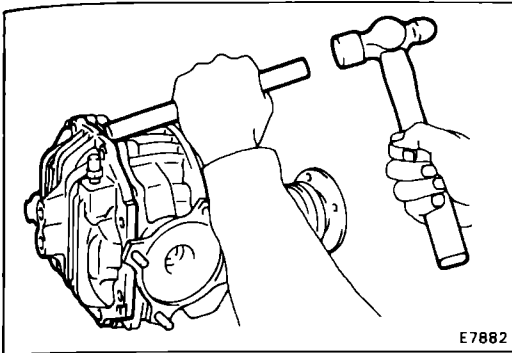
1. REMOVE DIFFERENTIAL CARRIER COVER

(a) Remove the eight bolts.



E7881

(b) Using a brass bar and hammer, separate the cover and carrier.



E7882

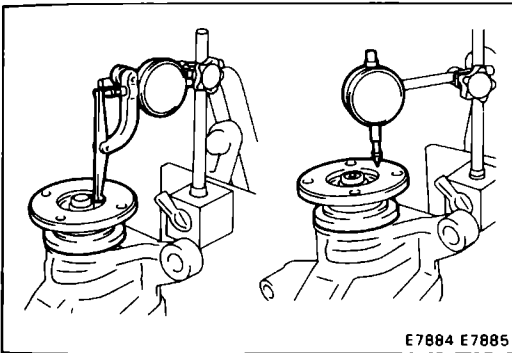
2. CHECK COMPANION FLANGE RUNOUT

Using a dial indicator, measure the lateral and radial runout of the companion flange.

Maximum lateral runout: 0.10 mm (0.039 in.)

Maximum radial runout: 0.10 mm (0.039 in.)

If the runout is greater than the maximum, replace the companion flange.



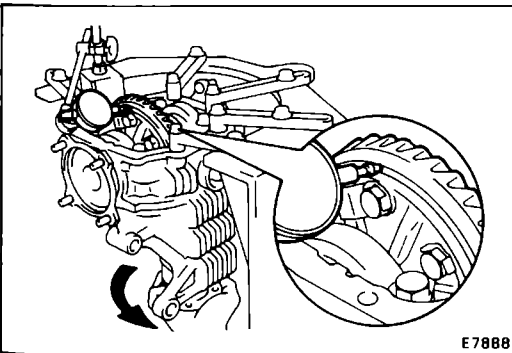
E7884 E7885

3. CHECK RING GEAR RUNOUT

Using a dial indicator, measure the runout of the ring gear.

Maximum runout: 0.07 mm (0.0028 in.)

If the runout is greater than the maximum, replace the ring gear.



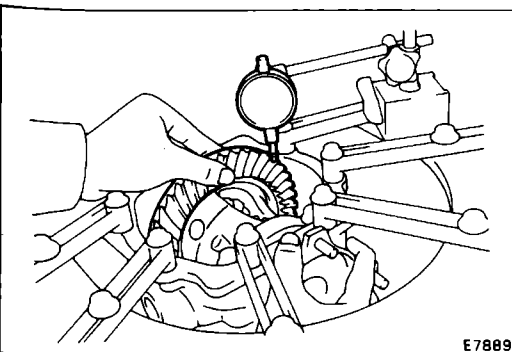
E7888

4. CHECK RING GEAR BACKLASH

Using a dial indicator, check the backlash of the ring gear.

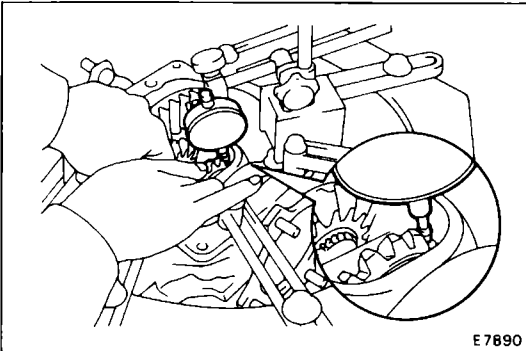
Backlash: 0.13 — 0.18 mm (0.0051 — 0.0071 in.)

If the backlash is not within specification, adjust the side bearing preload.



E7889

5. CHECK TOOTH CONTACT (See page RA-38)

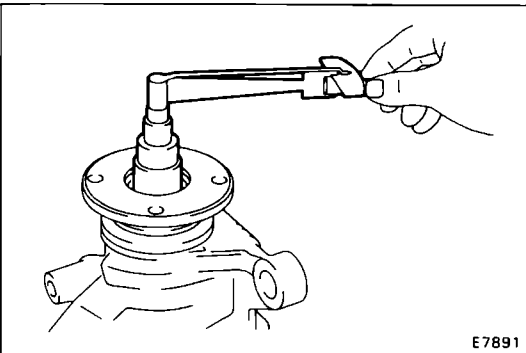


6. CHECK SIDE GEAR BACKLASH

Using a dial indicator, check the backlash of the side gear while holding one pinion gear toward the differential case.

Backlash: 0.05 – 0.20 mm (0.0020 – 0.0079 in.)

If the backlash is not within specification, install the side gear thrust washers of different thickness.



7. MEASURE DRIVE PINION PRELOAD

Using a torque wrench, measure the preload of the backlash between the drive pinion and ring gear.

Preload (at starting):

5 – 8 kg-cm (4.3 – 6.9 in.-lb, 0.5 – 0.8 N·m)

8. CHECK TOTAL PRELOAD

Using a torque wrench, measure the total preload.

Total preload (at starting):

In addition to drive pinion preload

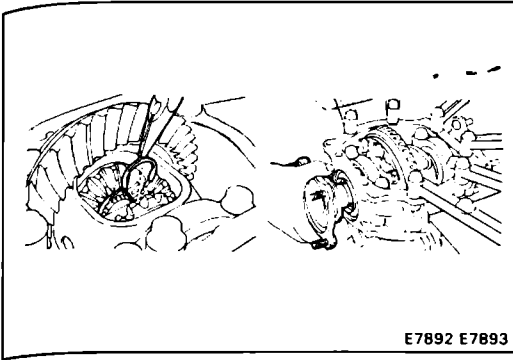
5 – 8 kg-cm (4.3 – 6.9 in.-lb, 0.5 – 0.8 N·m)

If necessary disassembly and inspect a differential.

DISASSEMBLY OF DIFFERENTIAL CARRIER

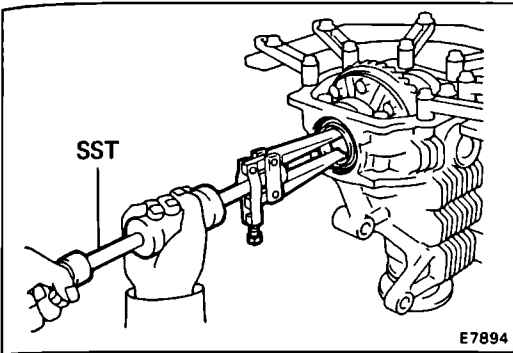
1. REMOVE SIDE GEAR SHAFTS

- (a) Remove the two shaft snap rings.
- (b) Remove the two side gear shafts.



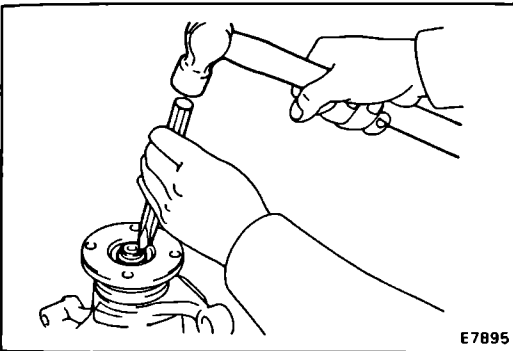
2. REMOVE SIDE GEAR SHAFT OIL SEALS

- Using SST, remove the two oil seals from the housing.
SST 09308-00010

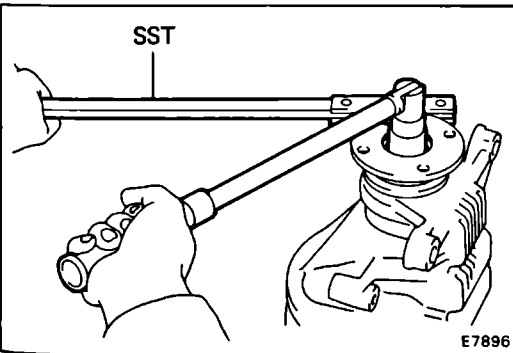


3. REMOVE COMPANION FLANGE

- (a) Using a hammer and chisel, loosen the staked part of the nut.

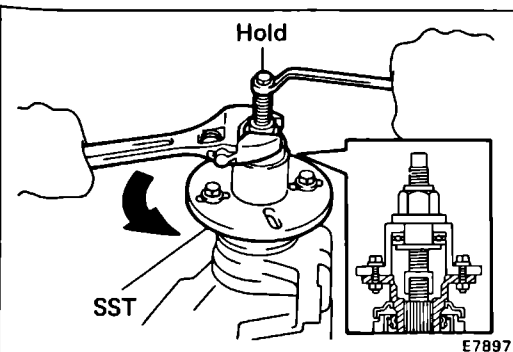


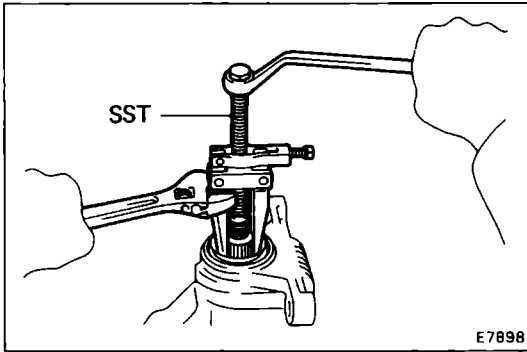
- (b) Using SST to hold the flange, remove the nut.
SST 09330-00021



- (c) Remove the plate washer.

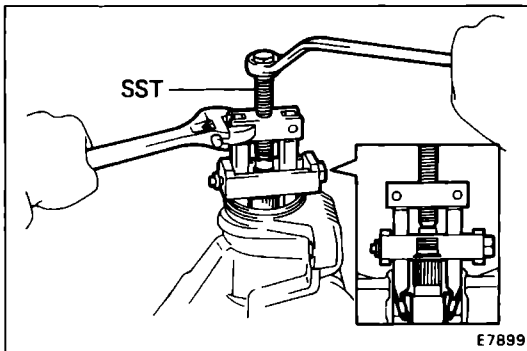
- (d) Using SST, remove the companion flange.
SST 09557-22022





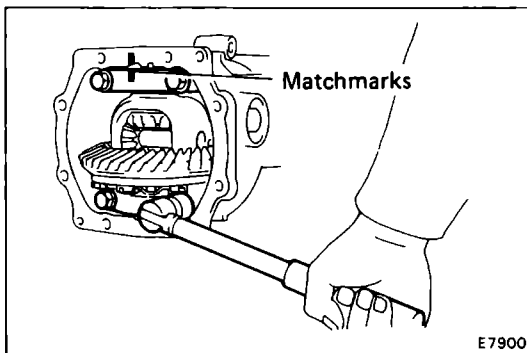
4. REMOVE FRONT OIL SEAL AND OIL SLINGER

- (a) Using SST, remove the oil seal from the housing.
SST 09308-10010
- (b) Remove the oil slinger.



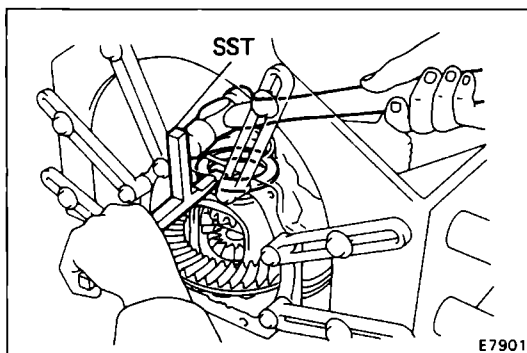
5. REMOVE FRONT BEARING AND BEARING SPACER

- (a) Using SST, remove the bearing from the housing.
SST 09556-22010
- (b) Remove the bearing spacer.



6. REMOVE DIFFERENTIAL CASE

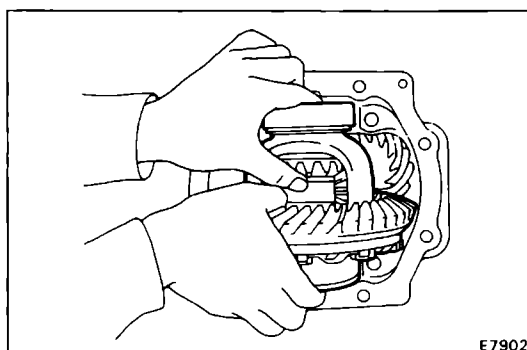
- (a) Place matchmarks on the bearing cap and differential carrier.
- (b) Remove the two bearing caps.



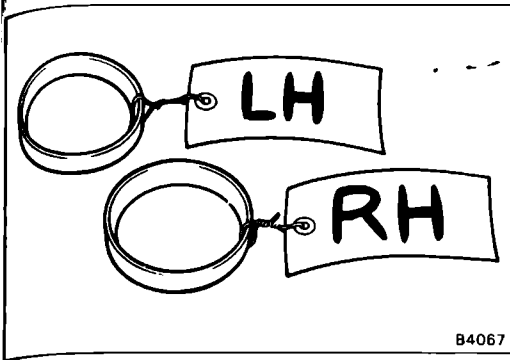
- (c) Using SST, remove the two side bearing preload adjusting plate.

SST 09504-22011

NOTE: Measure the adjusting plate washer and note the thickness.

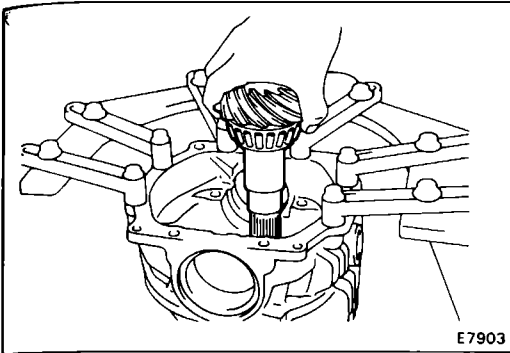


- (d) Remove the differential case and bearing outer race from the carrier.



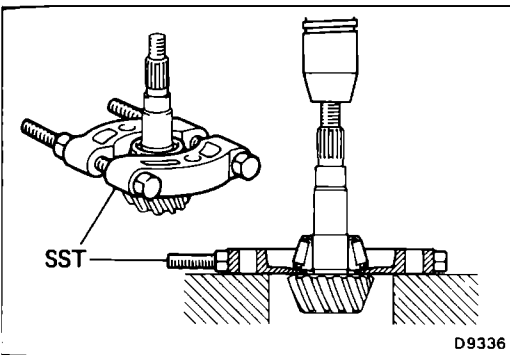
B4067

NOTE: Tag the bearing outer races to show the location for reassembly.



E7903

7. REMOVE DRIVE PINION FROM DIFFERENTIAL CARRIER



D9336

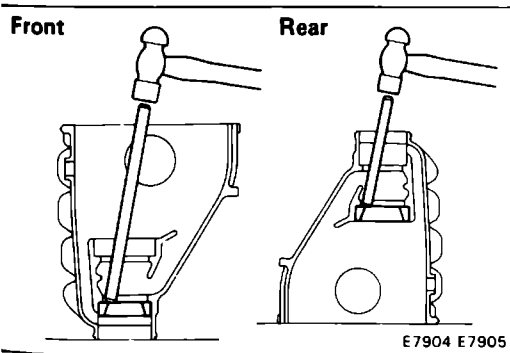
8. REMOVE DRIVE PINION REAR BEARING

(a) Using SST and a press, remove the bearing from the drive pinion.

SST 09950-00020

NOTE: If the drive pinion or ring gear are damaged replace them a set.

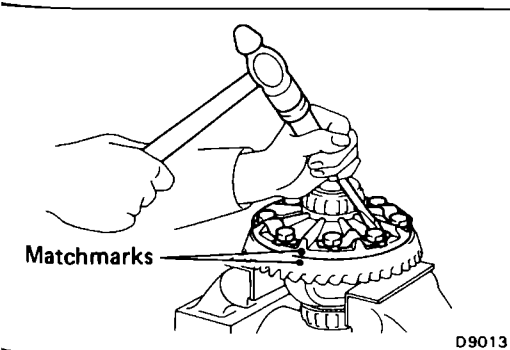
(b) Remove the plate washer.



E7904 E7905

9. REMOVE FRONT AND REAR BEARING OUTER RACES

Using a hammer and brass bar, drive out the outer races from the carrier.

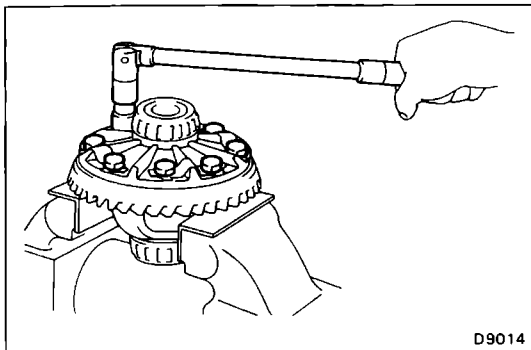


D9013

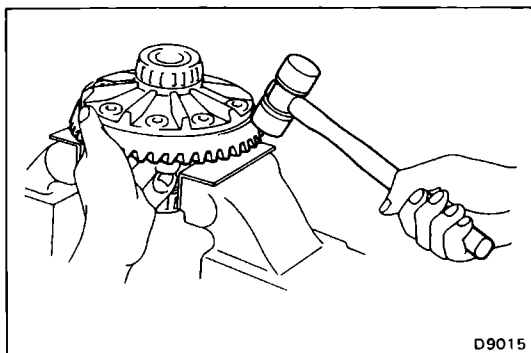
10. REMOVE RING GEAR

(a) Place the matchmarks on the ring gear and differential case.

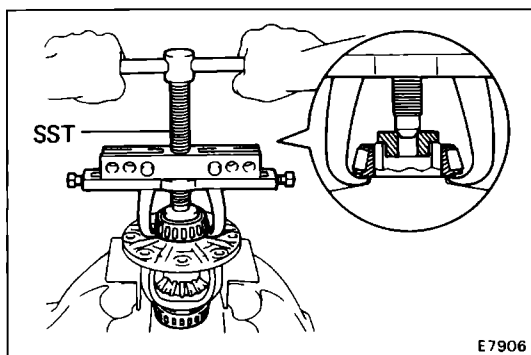
(b) Unscrew the lock plates.



(c) Remove the eight bolts and four lock plates.



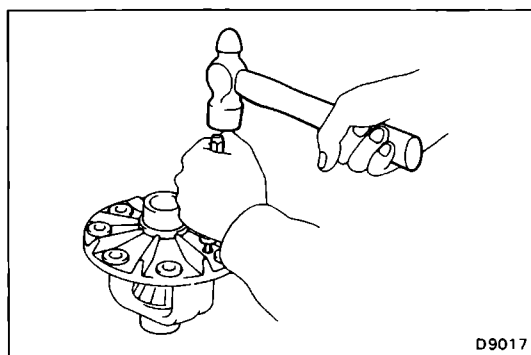
(d) Using a plastic hammer, tap on the ring gear to separate it from differential case.



11. REMOVE SIDE BEARINGS

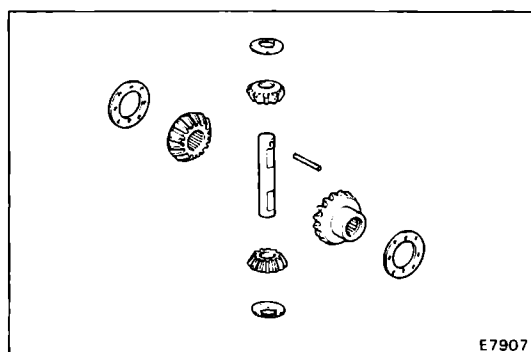
Using SST, remove the two side bearings from differential case.

SST 09950-20017



12. DISASSEMBLE DIFFERENTIAL CASE

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



(b) Remove the following parts from differential case:

- Pinion shaft
- Two pinion gears
- Two side gears
- Four thrust washers

ASSEMBLY OF DIFFERENTIAL CARRIER

1. ASSEMBLE DIFFERENTIAL CASE

(a) Install the thrust washers to the side gears.

(b) Install the side gears with thrust washers and pinion gears with thrust washers.

(c) Install the pinion shaft.

(d) Check the side gear backlash.

Measure the side gear backlash while holding one pinion gear toward the case.

Backlash: 0.05 – 0.20 mm (0.0020 – 0.0079 in.)

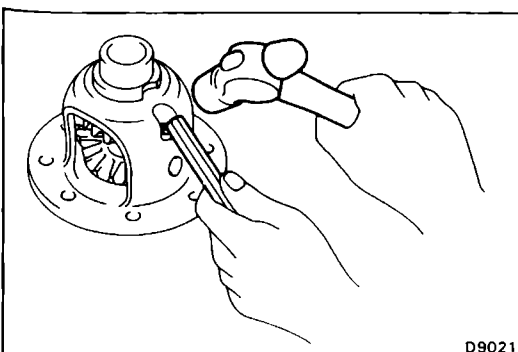
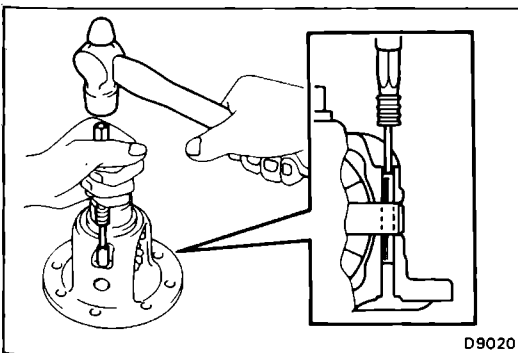
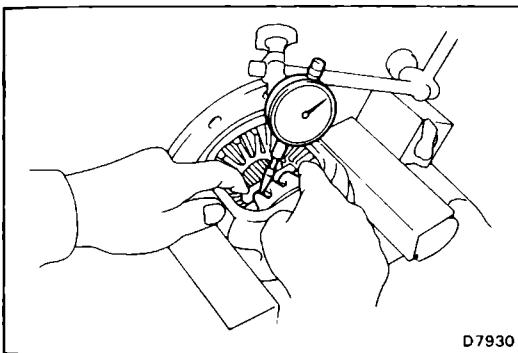
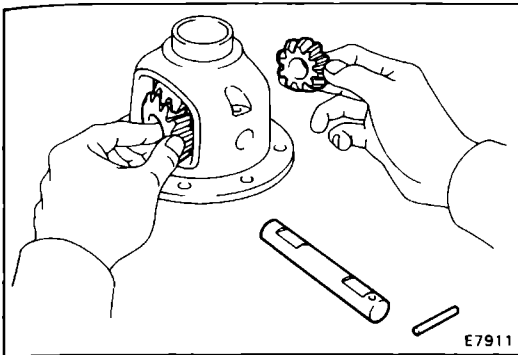
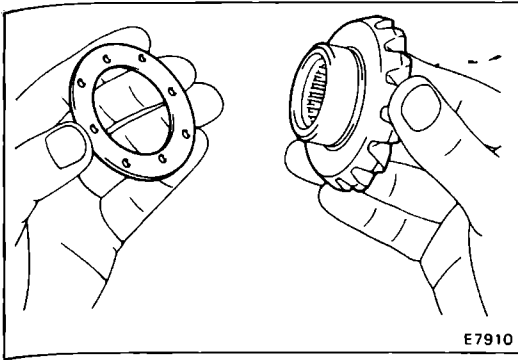
If the backlash is not within specification, install the side gear thrust washers of different thickness.

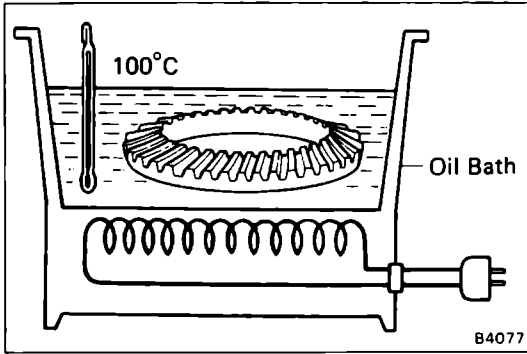
Thrust washer thickness		mm (in.)
0.95	(0.0374)	1.10 (0.0433)
1.00	(0.0394)	1.15 (0.0453)
1.05	(0.0413)	1.20 (0.0472)

NOTE: Use washers of same thickness on both the right and left sides.

(e) Using a hammer and punch, drive in the straight pin through the case and hole in the pinion shaft.

(f) Stake the case.





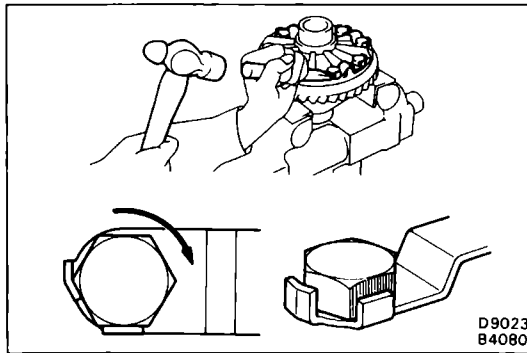
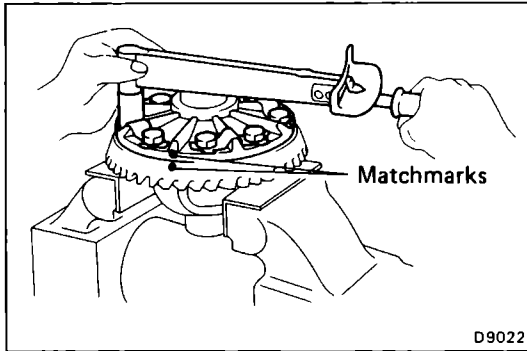
2. INSTALL RING GEAR ON DIFFERENTIAL CASE

- (a) Clean the contact surface of the differential case.
- (b) Heat the ring gear to about 100°C (212°F) in an oil bath.

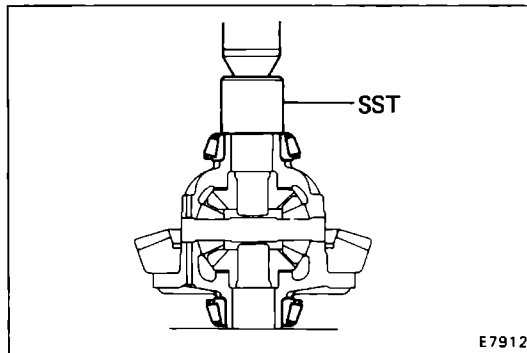
CAUTION: Do not heat the ring gear above 110°C (230°F).

- (c) Clean the contact surface of the ring gear with cleaning solvent.
- (d) Then quickly install the ring gear on the differential case.
- (e) Align the matchmarks on the ring gear and differential case.
- (f) Temporarily install the lock plates and set bolts.
- (g) After the ring gear cools down enough, tighten the set bolts uniformly and a little at a time.

Torque: 985 kg-cm (71 ft-lb, 97 N·m)



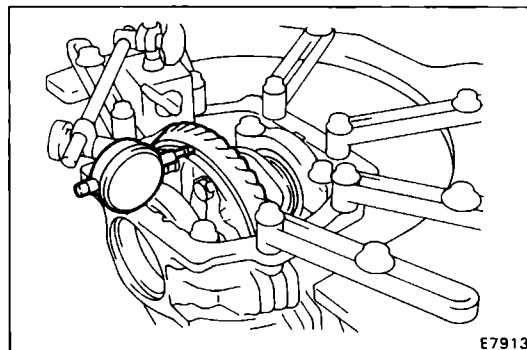
- (g) Using a hammer and drift punch, stake the lock plates.
- NOTE:** Stake one claw flush with the flat surface of the nut. For the claw contacting the protruding portion of the nut, stake only the half on the tightening side.



3. INSTALL SIDE BEARINGS

Using a press and SST, drive in the side bearings into the differential case.

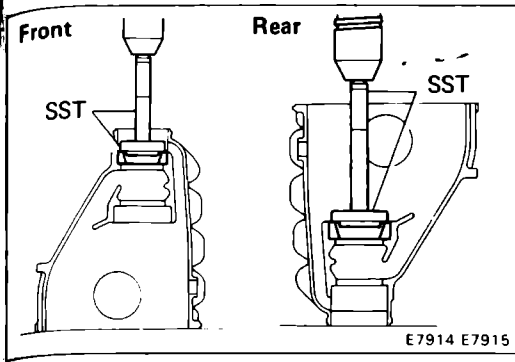
SST 09710-22020 (09710-01030)



4. CHECK RING GEAR RUNOUT

- (a) Install the differential case onto the carrier and install the plate washers to where there is no play in the bearing. (See page RA-42)
- (b) Install bearing caps. (See page RA-44)
- (c) Using a dial indicator, measure the runout of ring gear.

Maximum runout: 0.07 mm (0.0028 in.)



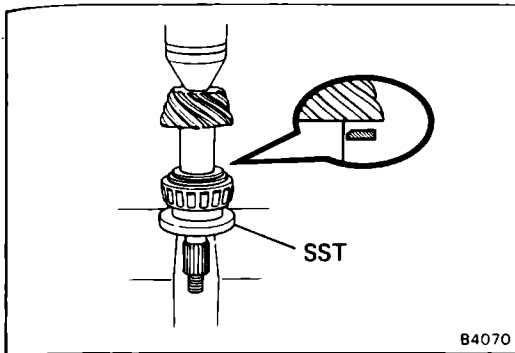
5. INSTALL FRONT AND REAR BEARING OUTER RACES

Using a press and SST, drive in the front and rear bearing outer races.

SST 09608-30012

Front (09608-04020 and 09608-00060)

Rear (09608-04020 and 09608-04100)

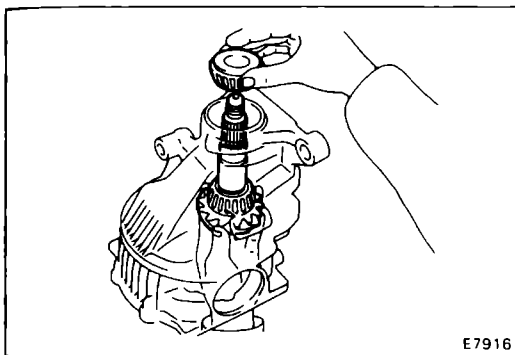


6. INSTALL REAR BEARING TO DRIVE PINION

(a) Install the plate washer on the drive pinion with the chamfered end facing toward the pinion gear.

(b) Using a press and SST, install the rear bearing onto the drive pinion.

SST 09506-30012

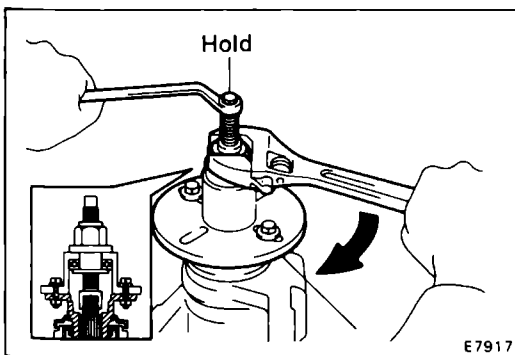


7. TEMPORARILY ADJUST DRIVE PINION PRELOAD

(a) Install the following parts:

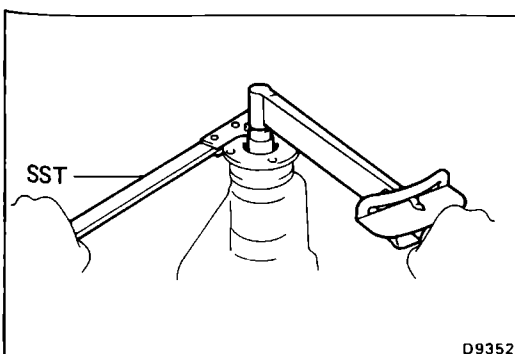
- Drive pinion
- Front bearing

NOTE: Assemble the spacer, oil slinger and oil seal after adjusting the gear contact pattern.



(b) Install the companion flange with SST.

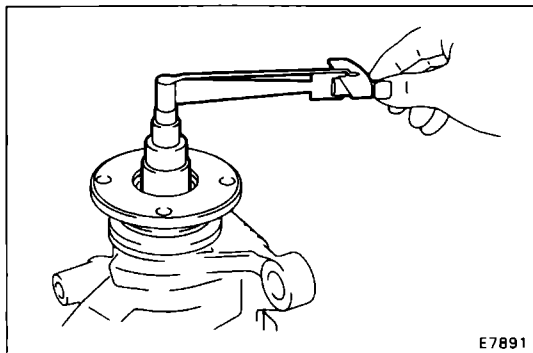
SST 09557-22022



(c) Adjusting the drive pinion preload by tightening the companion flange nut.

Using SST to hold the flange, tighten the nut.

SST 09330-00021



E7891

(d) Using a torque meter, measure the preload.

Preload (at starting)

New bearing

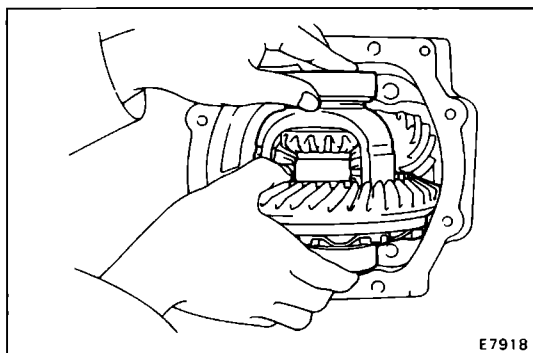
12 — 19 kg-cm

(10.4 — 16.5 in.-lb, 1.2 — 1.9 N·m)

Reused bearing

6 — 10 kg-cm

(5.2 — 8.7 in.-lb, 0.6 — 1.0 N·m)

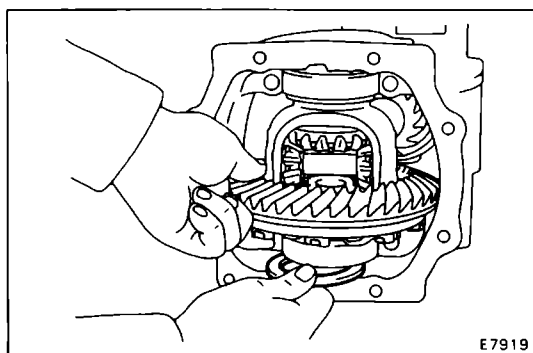


E7918

8. INSTALL DIFFERENTIAL CASE IN CARRIER

(a) Place the bearing outer races on their respective bearings. Make sure the left and right outer races are not interchanged.

(b) Install the differential case in the carrier.

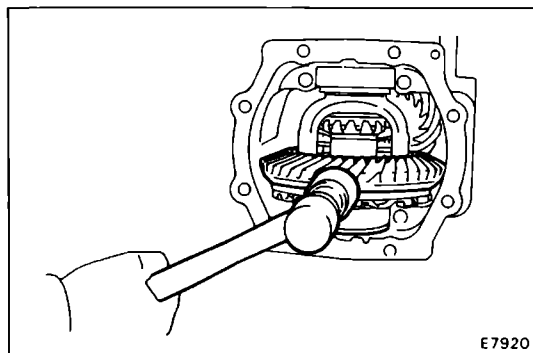


E7919

9. ADJUST RING GEAR BACKLASH

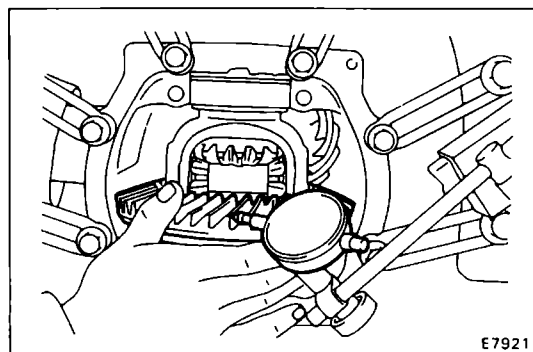
(a) Install only the plate washer on the ring gear back side.

NOTE: Insure that the ring gear has backlash.



E7920

(b) Snug down the washer and bearing by tapping on the ring gear with a plastic hammer.

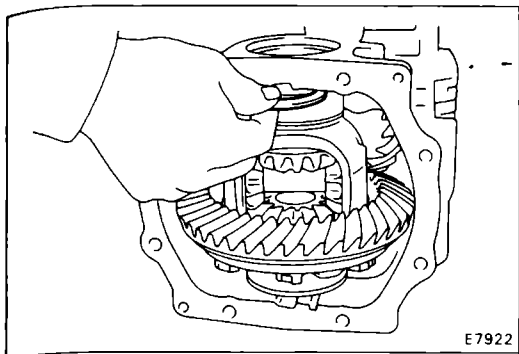


E7921

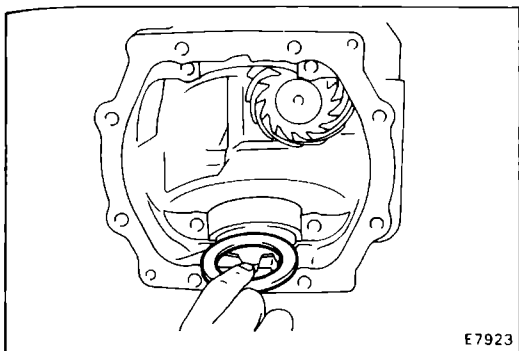
(c) Using a dial indicator, measure the backlash.

(d) Select a ring gear back side plate washer so that the backlash is 0.13 mm (0.0051 in.).

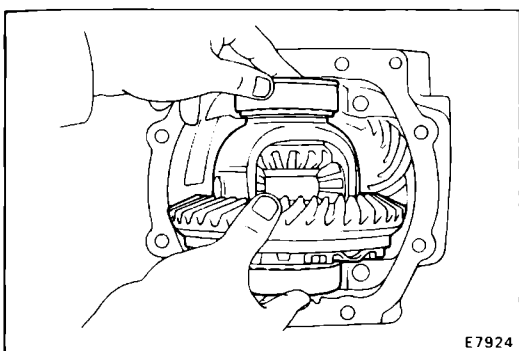
(See table on page RA-44)



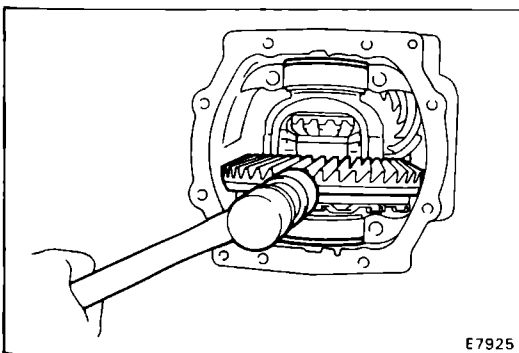
- (e) Select a ring gear teeth side washer with a thickness which eliminates any clearance between the outer race and case.



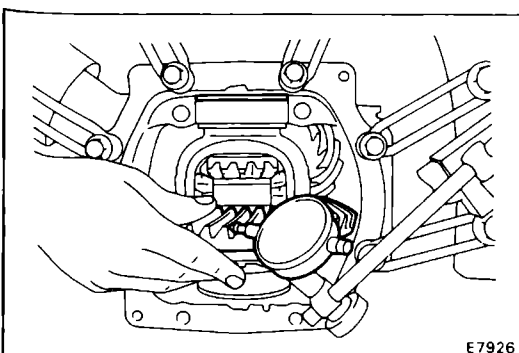
- (f) Remove the plate washer and differential case.
- (g) Install the plate washer into the ring gear back side.



- (h) Place the other plate washer onto the differential case together with the outer race, and install the differential case with the outer race into the carrier.



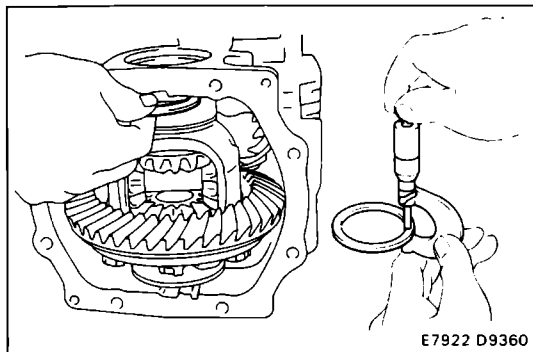
- (i) Using a plastic hammer, snug down the washer and bearing by tapping the ring gear.



- (j) Using a dial indicator, measure the ring gear backlash.
Backlash: 0.13 – 0.18 mm (0.0051 – 0.0071 in.)
- (k) If not within the specification, adjust by either increasing or decreasing the number of washers on both sides by an equal amount.

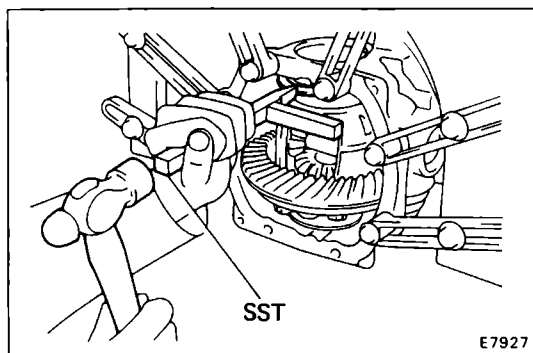
NOTE: There should be no clearance between the plate washer and case.

Insure that there is ring gear backlash.



10. ADJUST SIDE BEARING PRELOAD

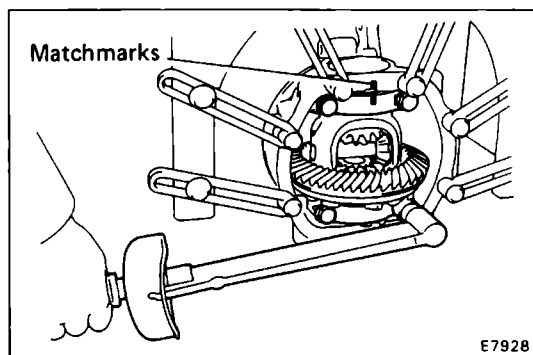
- (a) Remove the ring gear teeth side plate washer and measure the thickness.



- (b) Install a new plate washer of 0.06 – 0.09 mm (0.0024 – 0.0035 in.) thicker than the removed washer.

NOTE: Select a washer which can be pressed in 2/3 of the way by finger.

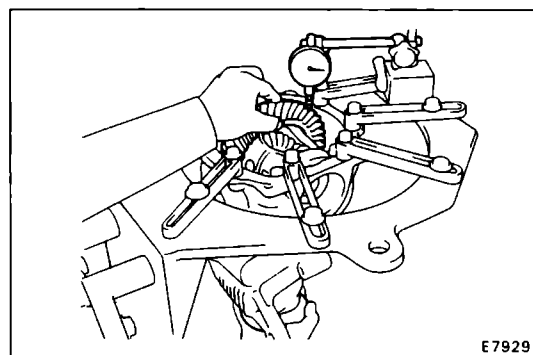
- (c) Using a hammer and SST, tap in the side washer.
SST 09504-22011



- (d) Install the side bearing caps.

NOTE: Align the matchmarks on the cap and carrier.

Torque: 800 kg-cm (58 ft-lb, 78 N-m)



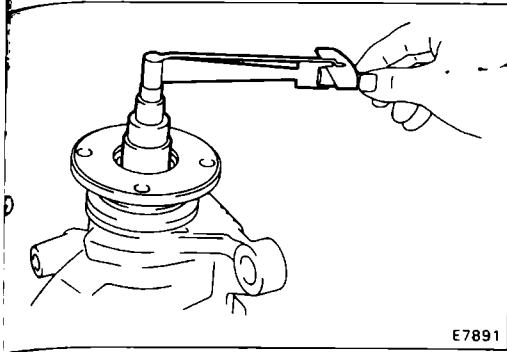
- (e) Recheck the ring gear backlash.

Backlash: 0.13 – 0.18 mm (0.0051 – 0.0071 in.)

- (f) If not within the standard, adjust by either increasing or decreasing the washers on both sides by equal amount.

NOTE: The backlash will change about 0.02 mm (0.0008 in.) with 0.03 mm (0.0012 in.) alteration of the side washer.

Washer thickness		mm (in.)
2.21 – 2.23	(0.0870 – 0.0878)	2.72 – 2.74 (0.1071 – 0.1079)
2.24 – 2.26	(0.0882 – 0.0890)	2.75 – 2.77 (0.1083 – 0.1091)
2.27 – 2.29	(0.0894 – 0.0902)	2.78 – 2.80 (0.1094 – 0.1102)
2.30 – 2.32	(0.0906 – 0.0913)	2.81 – 2.83 (0.1106 – 0.1114)
2.33 – 2.35	(0.0917 – 0.0925)	2.84 – 2.86 (0.1118 – 0.1126)
2.36 – 2.38	(0.0929 – 0.0937)	2.87 – 2.89 (0.1130 – 0.1138)
2.39 – 2.41	(0.0941 – 0.0949)	2.90 – 2.92 (0.1142 – 0.1150)
2.42 – 2.44	(0.0953 – 0.0961)	2.93 – 2.95 (0.1154 – 0.1161)
2.45 – 2.47	(0.0965 – 0.0972)	2.96 – 2.98 (0.1165 – 0.1173)
2.48 – 2.50	(0.0976 – 0.0984)	2.99 – 3.01 (0.1177 – 0.1185)
2.51 – 2.53	(0.0988 – 0.0996)	3.02 – 3.04 (0.1189 – 0.1197)
2.54 – 2.56	(0.1000 – 0.1008)	3.05 – 3.07 (0.1201 – 0.1209)
2.57 – 2.59	(0.1012 – 0.1020)	3.08 – 3.10 (0.1213 – 0.1220)
2.60 – 2.62	(0.1024 – 0.1031)	3.11 – 3.13 (0.1224 – 0.1232)
2.63 – 2.65	(0.1035 – 0.1043)	3.14 – 3.16 (0.1236 – 0.1244)
2.66 – 2.68	(0.1047 – 0.1055)	3.17 – 3.19 (0.1248 – 0.1256)
2.69 – 2.71	(0.1059 – 0.1067)	3.20 – 3.22 (0.1260 – 0.1268)



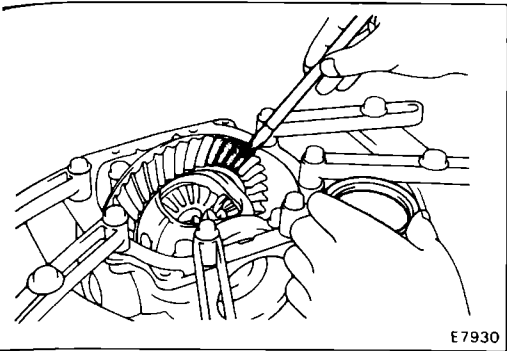
11. MEASURE TOTAL PRELOAD

Using a torque wrench, measure the total preload.

Total preload (at starting):

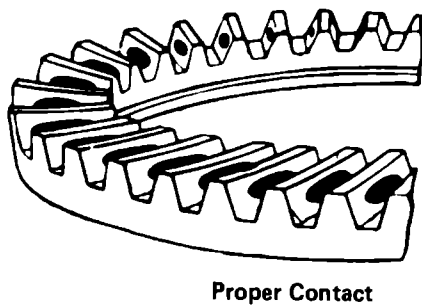
Add drive pinion preload

3 – 5 kg-cm (2.6 – 4.3 in.-lb, 0.3 – 0.5 N-m)

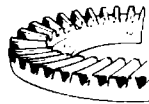


12. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION

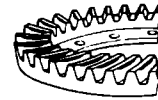
- (a) Coat 3 or 4 teeth at three different positions on the ring gear with red lead.
- (b) Hold the companion flange firmly and rotate the ring gear in both directions.
- (c) Inspect the tooth contact.



Heel Contact

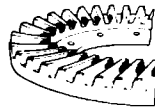


Face Contact



Select an adjusting shim that will bring the drive pinion closer to the ring gear.

Toe Contact

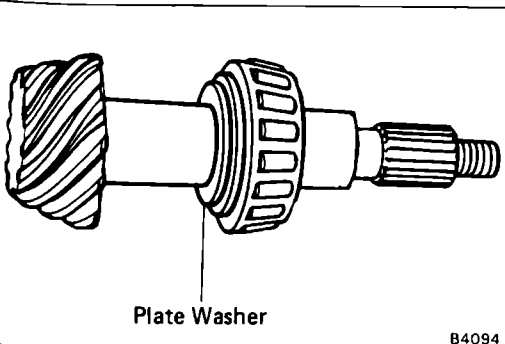


Flank Contact



Select an adjusting shim that will shift the drive pinion away from the ring gear.

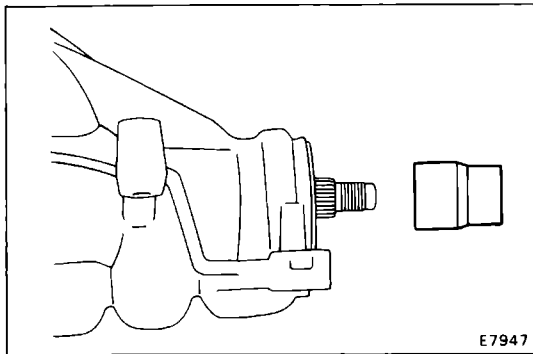
E6909
B4093 E6910



If the teeth are not contacting properly, use the following chart to select a proper washer for correction.

Thickness		mm (in.)	
2.27	(0.0894)	2.51	(0.0988)
2.30	(0.0906)	2.54	(0.1000)
2.33	(0.0917)	2.57	(0.1012)
2.36	(0.0929)	2.60	(0.1024)
2.39	(0.0941)	2.63	(0.1035)
2.42	(0.0953)	2.66	(0.1047)
2.45	(0.0965)	2.69	(0.1059)
2.48	(0.0976)		

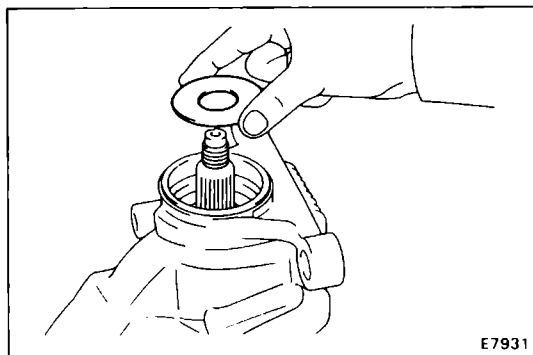
B4094



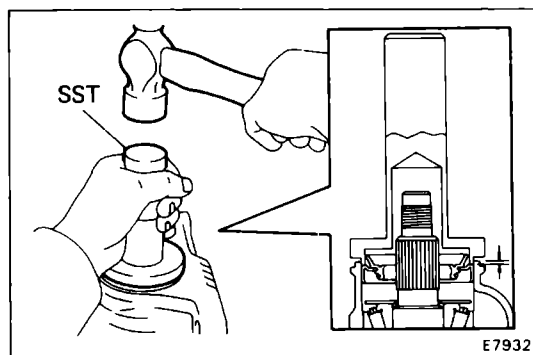
13. REMOVE COMPANION FLANGE
(See step 3 on page RA-35)

14. REMOVE FRONT BEARING
(See step 5 on page RA-36)

15. INSTALL NEW BEARING SPACER AND FRONT BEARING
(a) Install a new bearing spacer on the drive pinion.
(b) Install the front bearing on the drive pinion.



16. INSTALL OIL SLINGER



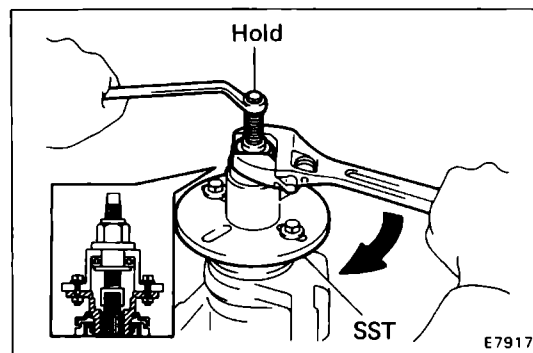
17. INSTALL NEW OIL SEAL

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

SST 09554-22010

Oil seal drive in depth: 2.0 mm (0.079 in.)

(b) Apply MP grease to oil seal lip.



18. INSTALL COMPANION FLANGE

(a) Using SST, install the companion flange on the shaft.

SST 09557-22022

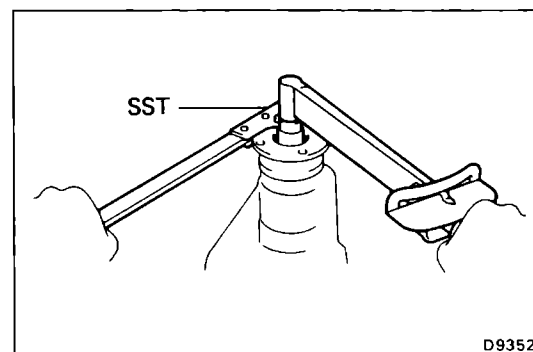
(b) Install the plate washer.

(c) Coat the threads of a new nut with gear oil.

(d) Using SST to hold the flange, tighten the nut.

SST 09330-00021

Torque: 1,100 kg-cm (80 ft-lb, 108 N·m)



19. CHECK DRIVE PINION BEARING PRELOAD

Using a torque wrench, measure the preload of the backlash between the drive pinion and ring gear.

Preload (at starting):

New bearing	10 – 16 kg-cm (8.7 – 13.9 in.-lb, 1.0 – 1.6 N·m)
Reused bearing	5 – 8 kg-cm (4.3 – 6.9 in.-lb, 0.5 – 0.8 N·m)

- If preload is greater than specification, replace the bearing spacer.
- If preload is less than specification, retighten the nut 130 kg-cm (9 ft-lb, 13 N·m) at a time until the specified preload is reached.

If the maximum torque is exceed while retightening the nut, replace the bearing spacer and repeat the preload procedure. Do not back off the pinion nut to reduce the preload.

Maximum torque: 2,400 kg-cm (174 ft-lb, 235 N·m)

20. CHECK TOTAL PRELOAD

Total preload (at starting):

Add drive pinion preload	
3 – 5 kg-cm (2.6 – 4.3 in.-lb, 0.3 – 0.5 N·m)	

21. CHECK RING GEAR BACKLASH

Using a dial indicator, check the backlash of the ring gear.

Backlash: 0.13 – 0.18 mm (0.0051 – 0.0071 in.)

If the backlash is not within specification, adjust the side bearing preload.

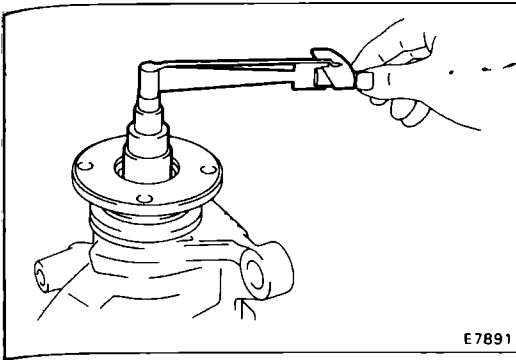
22. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION (See page RA-45)

23. CHECK COMPANION FLANGE RUNOUT

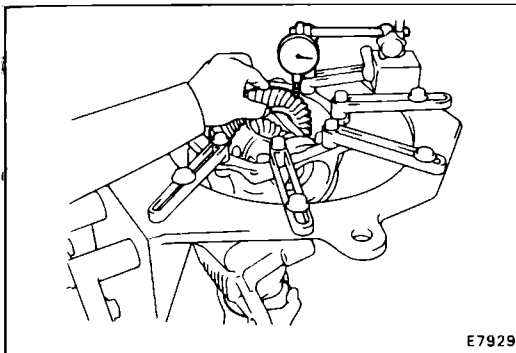
Using a dial indicator, measure the lateral and radial runout of the companion flange.

Maximum lateral runout:	0.10 mm (0.0039 in.)
Maximum radial runout:	0.10 mm (0.0039 in.)

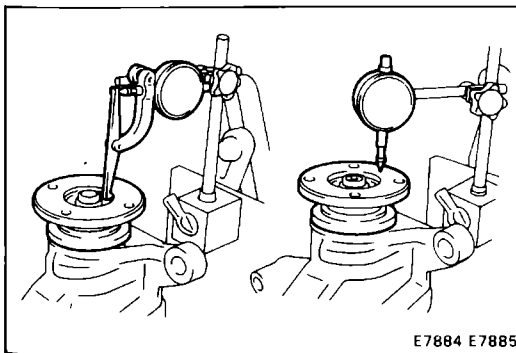
24. STAKE DRIVE PINION NUT



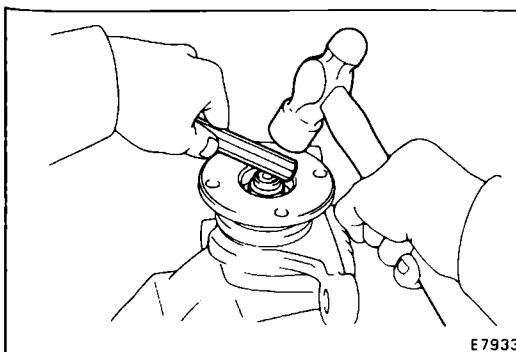
E7891



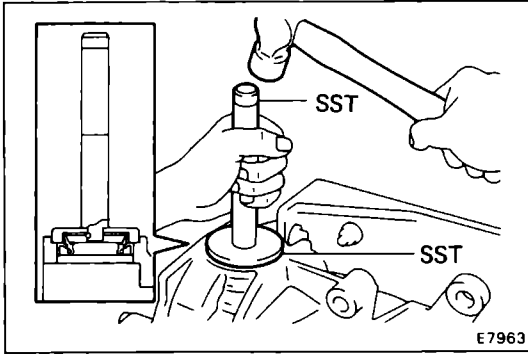
E7929



E7884 E7885



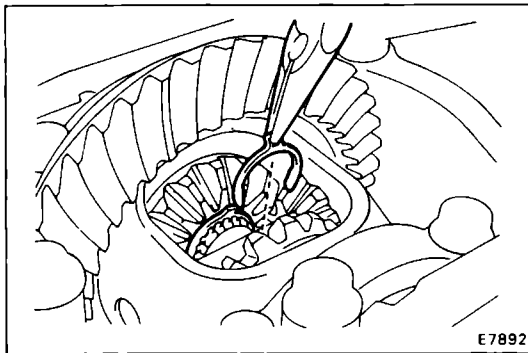
E7933

**25. INSTALL NEW SIDE GEAR SHAFT OIL SEALS**

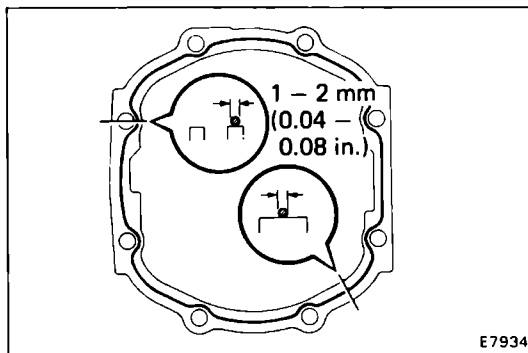
- (a) Using SST, drive in two new oil seals until they are flush with the carrier end surface.

SST 09550-22011 (09550-00020 and 09550-00031)

- (b) Coat the oil seal lips with MP grease.

**26. INSTALL SIDE GEAR SHAFTS**

- (a) Install the two side gear shafts to the differential case.
- (b) Install two new shaft snap rings to the side gear shafts.

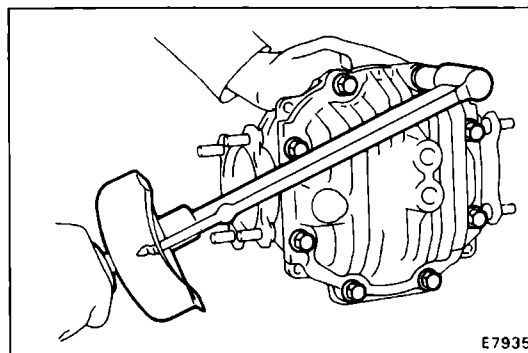
**27. INSTALL DIFFERENTIAL CARRIER COVER**

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

- (b) Apply seal packing to the carrier.

Seal packing: Part No. 08826-00090, THREE BOND 1281 or equivalent

NOTE: Install the carrier cover within 3 minutes after applying seal packing.

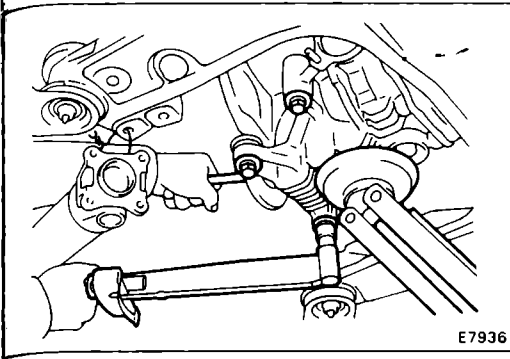


- (c) Install and tighten the eight set bolts.

Torque: 475 kg-cm (34 ft-lb, 47 N-m)

INSTALLATION OF DIFFERENTIAL

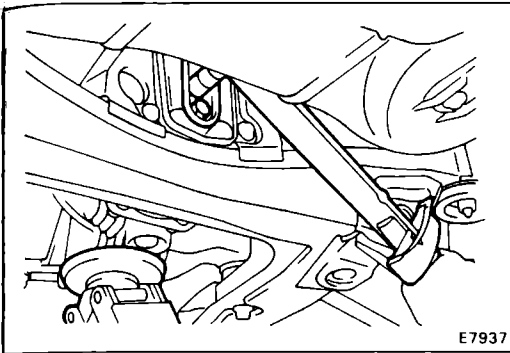
(See page RA-27)



1. INSTALL DIFFERENTIAL

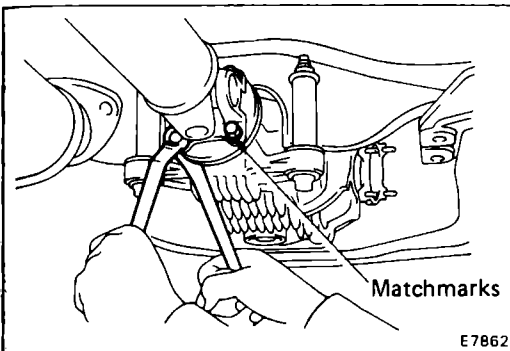
- (a) Position the differential and torque the four bolts and nuts.

Torque: 970 kg-cm (70 ft-lb, 95 N·m)



- (b) Install and torque the two bolts.

Torque: 1,500 kg-cm (108 ft-lb, 147 N·m)

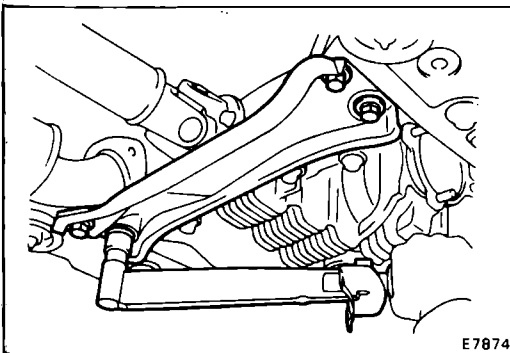


2. CONNECT PROPELLER SHAFT

- (a) Align the matchmarks on the flanges and connect the flanges with four bolts, nuts and washers.

- (b) Torque the four bolts and nuts.

Torque: 750 kg-cm (54 ft-lb, 74 N·m)



3. INSTALL REAR CROSSMEMBER

Install the rear crossmember with four bolts.

Torque: 730 kg-cm (53 ft-lb, 72 N·m)

4. CONNECT DRIVE SHAFTS (See page RA-20)

5. FILL DIFFERENTIAL WITH GEAR OIL

- (a) Install the drain plug with new gasket.

Torque: 500 kg-cm (36 ft-lb, 49 N·m)

- (b) Fill the differential with gear oil.

Oil grade: API GL-5 hypoid gear oil

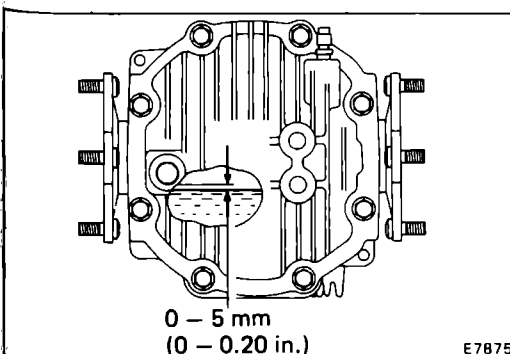
Viscosity: Above -18°C (0°F) SAE 90

Below -18°C (0°F) SAE 80W-90

Capacity: 1.1 liters (1.2 US qts, 1.0 Imp.qts)

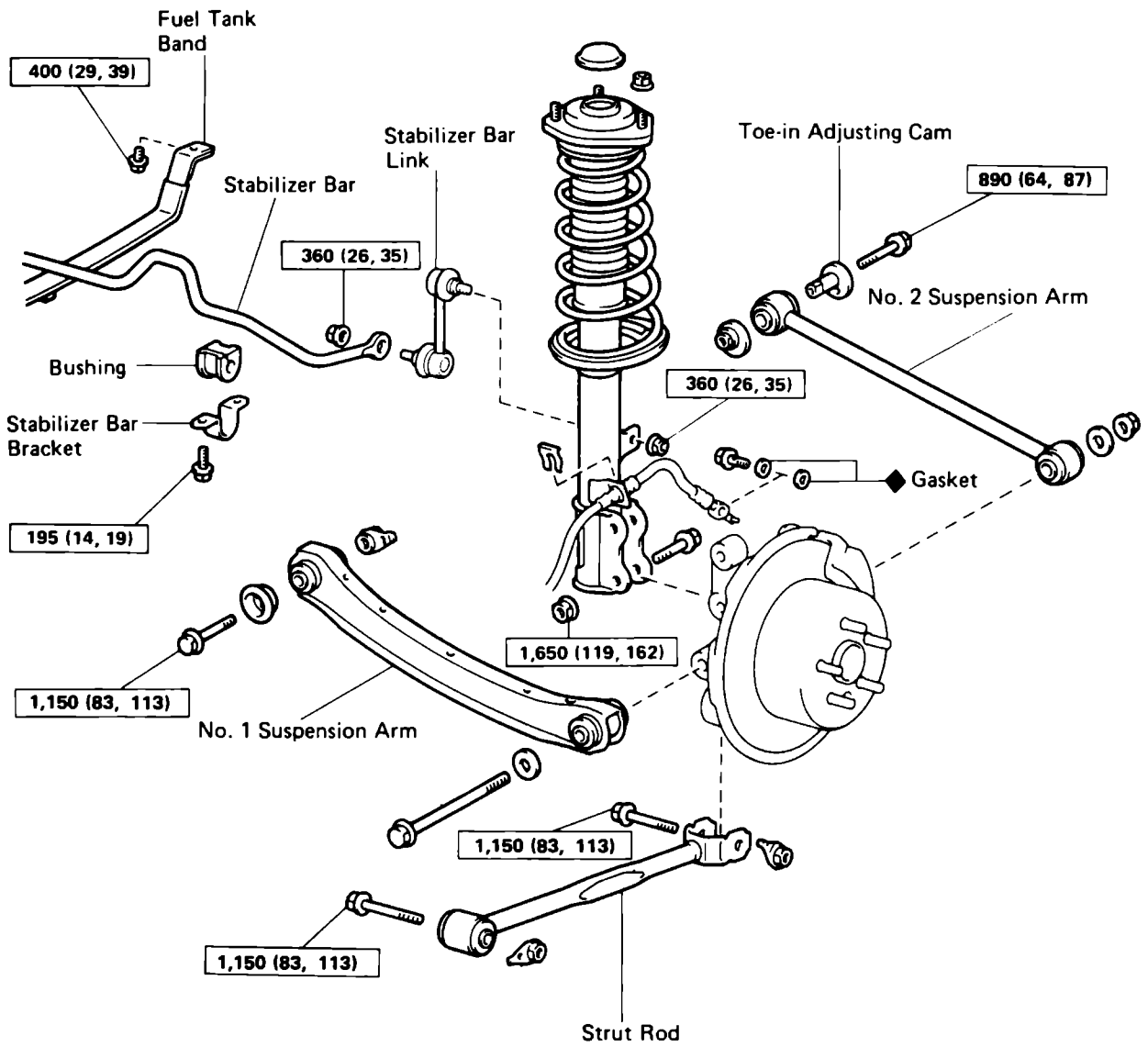
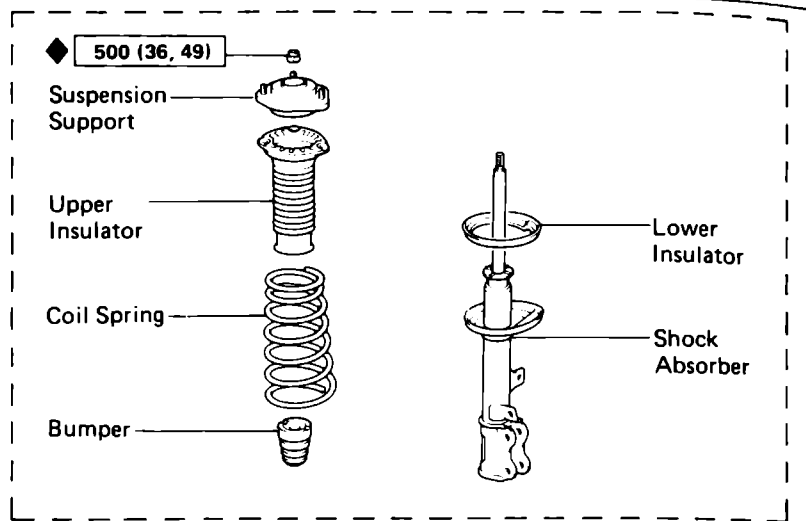
- (c) Install the filler plug with new gasket.

Torque: 400 kg-cm (29 ft-lb, 39 N·m)



REAR SUSPENSION (2WD)

COMPONENTS



kg-cm (ft-lb, N·m) : Specified torque

◆ Non-reusable part

Rear Shock Absorber

(See page RA-50)

REMOVAL OF REAR SHOCK ABSORBER

1. (LIFT-BACK)
REMOVE SPEAKER GRILLE
(COUPE)
REMOVE SUSPENSION SERVICE HOLE COVER

2. REMOVE BRAKE HOSE FROM SHOCK ABSORBER
(Drum brake type)
 - (a) Using SST, disconnect the brake tube from the backing plate.

SST 09751-36011

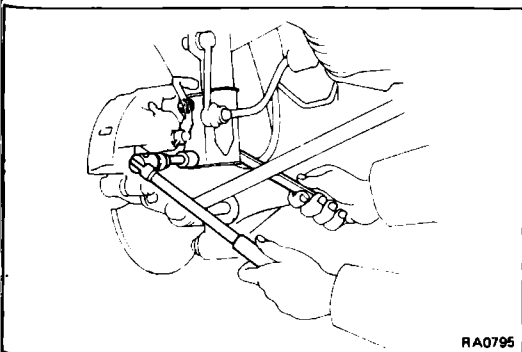
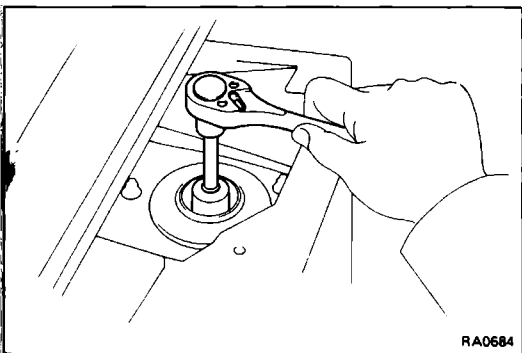
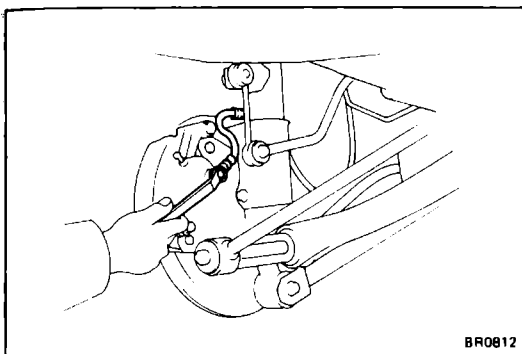
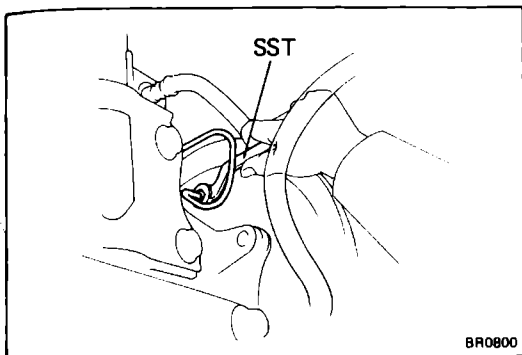
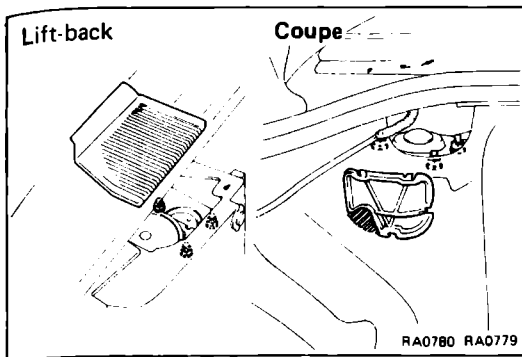
 - (b) Remove the clip and E-ring from the shock absorber.
 - (c) Remove the brake hose and tube from the shock absorber.
 (Disc brake type)
 - (a) Remove the union bolts and two gasket and disconnect the brake hose from the brake cylinder.
 - (b) Remove the clip and E-ring from the shock absorber.
 - (c) Remove the brake hose from the shock absorber.

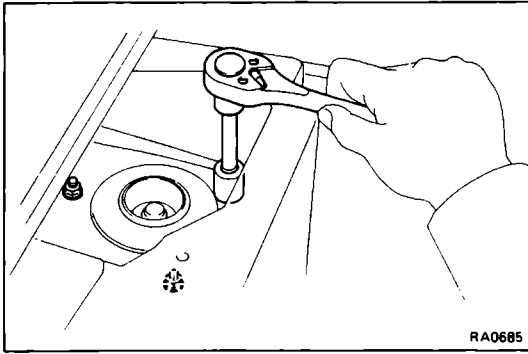
3. LOOSEN NUT HOLDING SUSPENSION SUPPORT TO SHOCK ABSORBER
 - (a) Remove the cover from the suspension support.
 - (b) Loosen the nut.

CAUTION: Do not remove the nut.

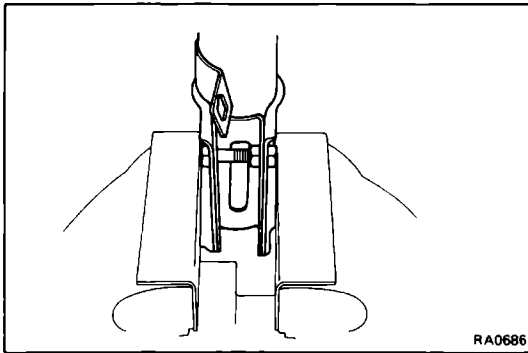
4. DISCONNECT STABILIZER BAR LINK FROM SHOCK ABSORBER

5. DISCONNECT AXLE CARRIER FROM SHOCK ABSORBER
Remove the axle carrier mounting bolts and nuts and disconnect the shock absorber absorber.



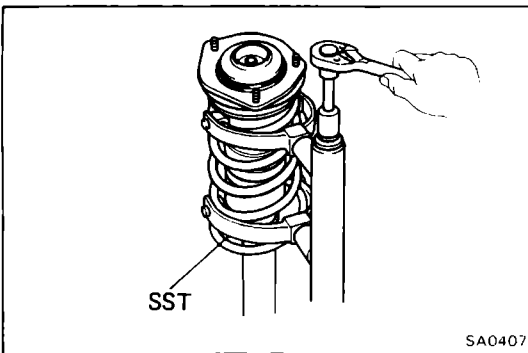


- 6. REMOVE SHOCK ABSORBER ASSEMBLY FROM BODY**
Remove the three shock absorber mounting nuts from the body and remove the shock absorber assembly.

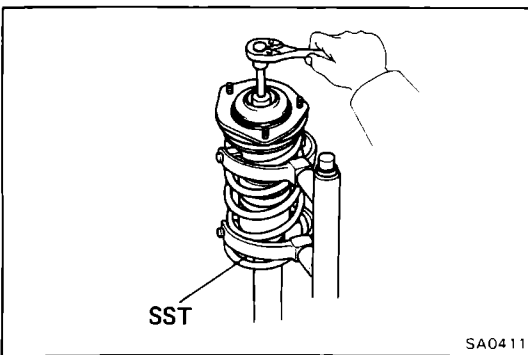


7. REMOVE COIL SPRING

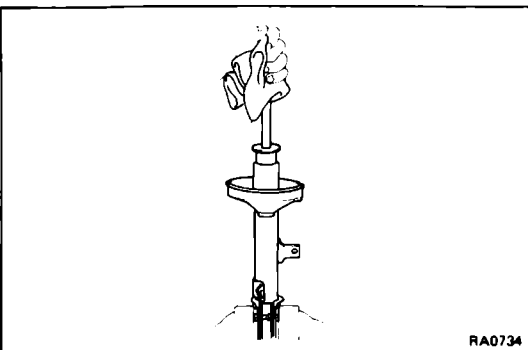
- (a) Mount the shock absorber in a vise.



- (b) Using SST, compress the coil spring.
SST 09727-22032 or 09727-30020

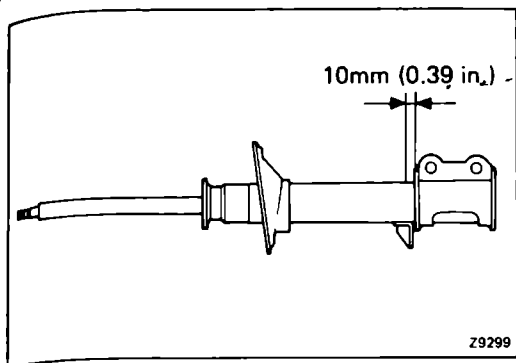


- (c) Remove the nut.
(d) Remove the suspension support, coil spring, upper insulator, bumper, and lower insulator.



8. INSPECT OPERATION OF SHOCK ABSORBER

- (a) While pushing the piston rod, check that the pull throughout the stroke is even, and there is no abnormal resistance or noise.
(b) Push the piston rod in fully and release it. Check that it returns at a constant speed throughout.

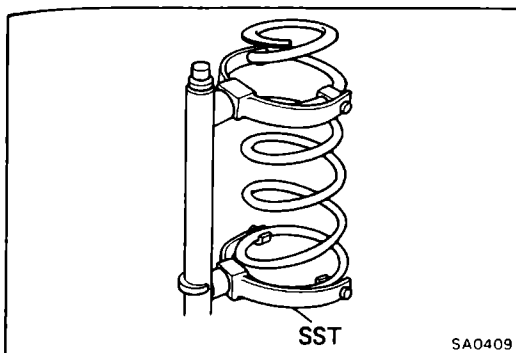


9. DISCARD SHOCK ABSORBER

Before discarding the absorber, drill a hole 2 - 3 mm (0.079 - 0.118 in.) in diameter at the location shown in the figure to release the gas inside.

CAUTION:

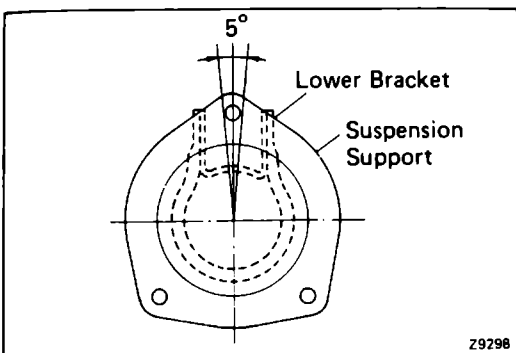
- When drilling, chips may fly out, so work carefully.
- The gas is colorless, odorless, and non-poisonous.



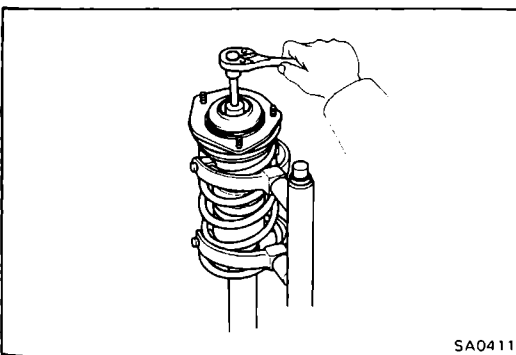
INSTALLATION OF REAR SHOCK ABSORBER

1. INSTALL SPRING BUMPER, INSULATOR, COIL SPRING , AND SUSPENSION SUPPORT

- (a) Mount the shock absorber in a vise.
- (b) Using SST, compress the coil spring.
SST 09727-22032 or 09727-30020
- (c) Install the lower insulator to the shock absorber.
- (d) Align the coil spring end with the lower seat hollow and install the coil spring.
- (e) Install the spring bumper to the shock absorber piston rod.
- (f) Install the upper insulator.
- (g) Align the suspension support with the piston rod and install it.
- (h) Align the suspension support with the shock absorber lower bracket as shown.



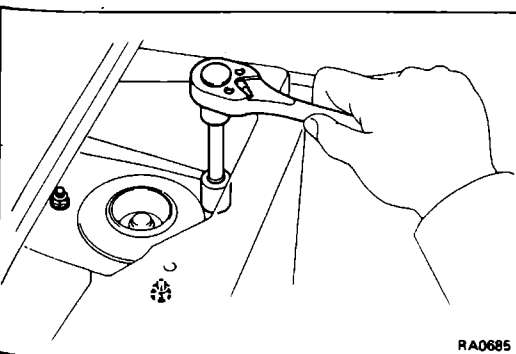
- (i) Temporarily install a new nut.

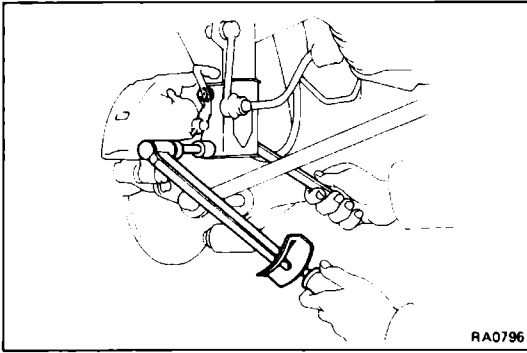


2. CONNECT SHOCK ABSORBER TO BODY

Connect the shock absorber with the three nuts. Torque the nuts.

Torque: 320 kg-cm (23 ft-lb, 31 N.m)



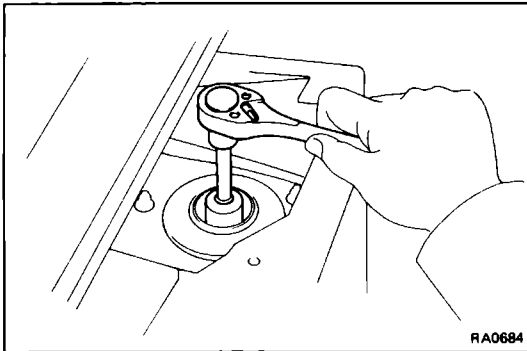


- 3. INSTALL SHOCK ABSORBER TO AXLE CARRIER**
Install the shock absorber with the two bolts and nuts. Torque the nuts.

Torque: 1,650 kg-cm (119 ft-lb, 162 N·m)

- 4. CONNECT STABILIZER BAR LINK TO SHOCK ABSORBER**

Torque: 360 kg-cm (26 ft-lb, 35 N·m)

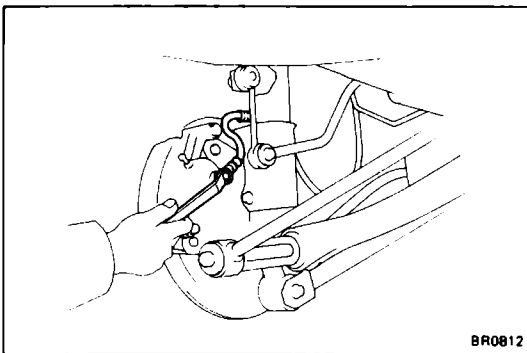


- 5. TORQUE SHOCK ABSORBER HOLDING NUT**

(a) Torque the nut.

Torque: 500 kg-cm (36 ft-lb, 49 N·m)

(b) Install the dust cover on the suspension support.



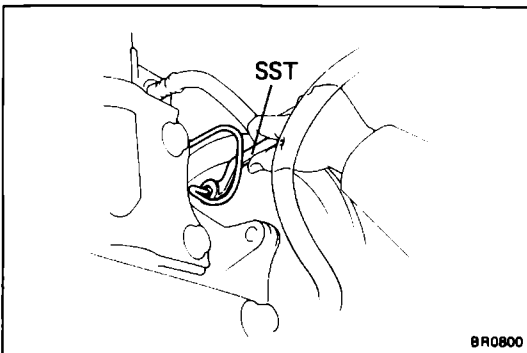
- 6. INSTALL BRAKE HOSE AND TUBE**

(Disc brake type)

(a) Connect brake hose to the shock absorber and install the clip.

(b) Connect the brake hose to the brake caliper with the union bolt and two new gaskets.

Torque: 310 kg-cm (22 ft-lb, 30 N·m)



(Drum brake type)

(a) Connect the brake hose to the shock absorber and install the E-ring and clip.

(b) Using SST, connect the brake tube to the backing plate.

SST 09751-36011

Torque: 155 kg-cm (11 ft-lb, 15 N·m)

- 7. (LIFT-BACK)
INSTALL SPEAKER GRILLE
(COUPE)**

INSTALL SUSPENSION SERVICE HOLE COVER

- 8. FILL BRAKE RESERVOIR WITH BRAKE FLUID AND BLEED BRAKE SYSTEM**
(See page BR-7)

- 9. CHECK WHEEL ALIGNMENT**
(See page RA-3)

Suspension Arm

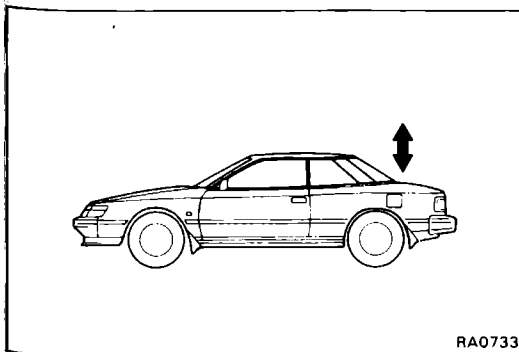
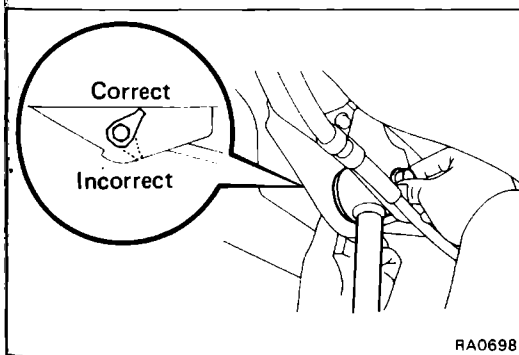
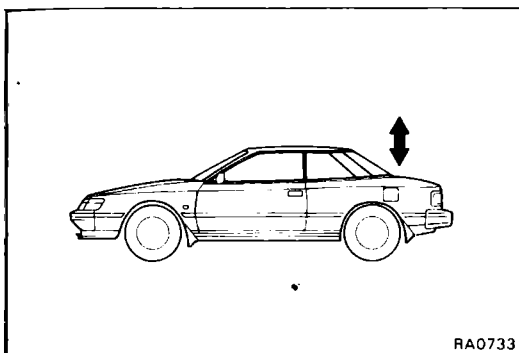
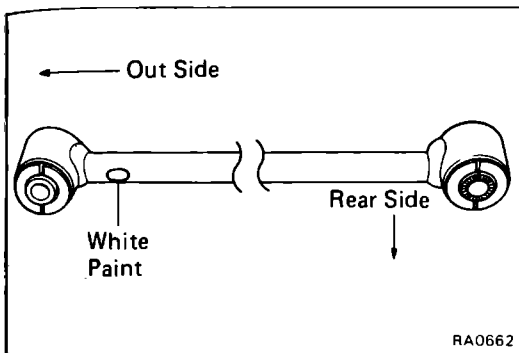
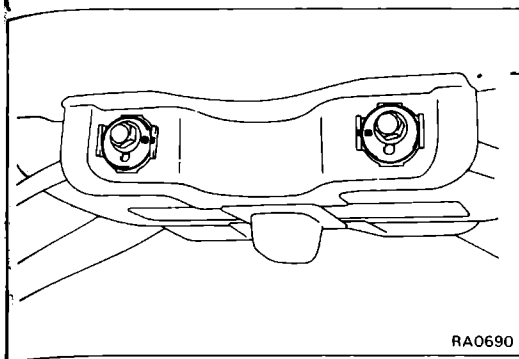
REMOVAL AND INSTALLATION OF SUSPENSION ARM

Remove and install the parts as shown on page RA-50.
(MAIN POINT OF REMOVAL SUSPENSION ARM)

- Place the matchmarks to the adjusting cam and body.

(MAIN POINT OF INSTALLATION SUSPENSION ARM)

- Install the bushing with the slit side towards the rear. The right and left suspension arms have been stamped with a "R" and "L" respectively for identification.
- Temporarily connect the No.1 suspension arm to the body with the bolt, plate and nut.
- Install the bushing with slit side towards the rear. Then install the suspension arm with the small white spot towards the outside of the vehicle.
- Place the No.2 suspension arm in position.
- Temporarily install the cam and bolt to the body.
- Align the matchmarks to the cam and body.
- Temporarily install the bolt and nut, connect the No.1 and No.2 suspension arms to the axle carrier.
- Torque the installation bolt with the vehicle weight on the suspension.
(See page RA-50)
- Check rear wheel alignment.
(See page RA-3)

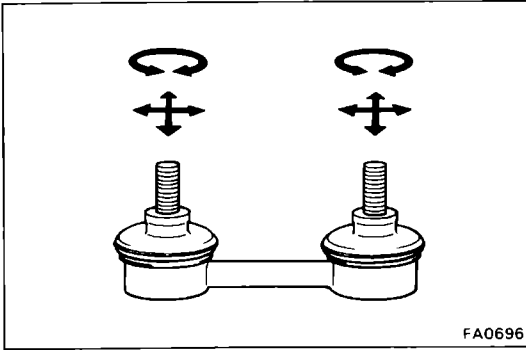


Strut Rod

REMOVAL AND INSTALLATION OF STRUT ROD

Remove and install the parts as shown on page RA-50.
(MAIN POINT OF INSTALLATION STRUT ROD)

- Position the strut rod to the body and temporarily install the bolt and nut.
- Be sure the lip of the nut is resting on the flange of the bracket.
- Temporarily connect the strut rod with the bolt and nut.
- Be sure the lip of the nut is resting on the flange of the bracket.
- Torque the installation bolt with the vehicle weight on the suspension.
(See page RA-50)
- Check rear wheel alignment.
(See page RA-3)



Stabilizer Bar

REMOVAL AND INSTALLATION OF STABILIZER BAR

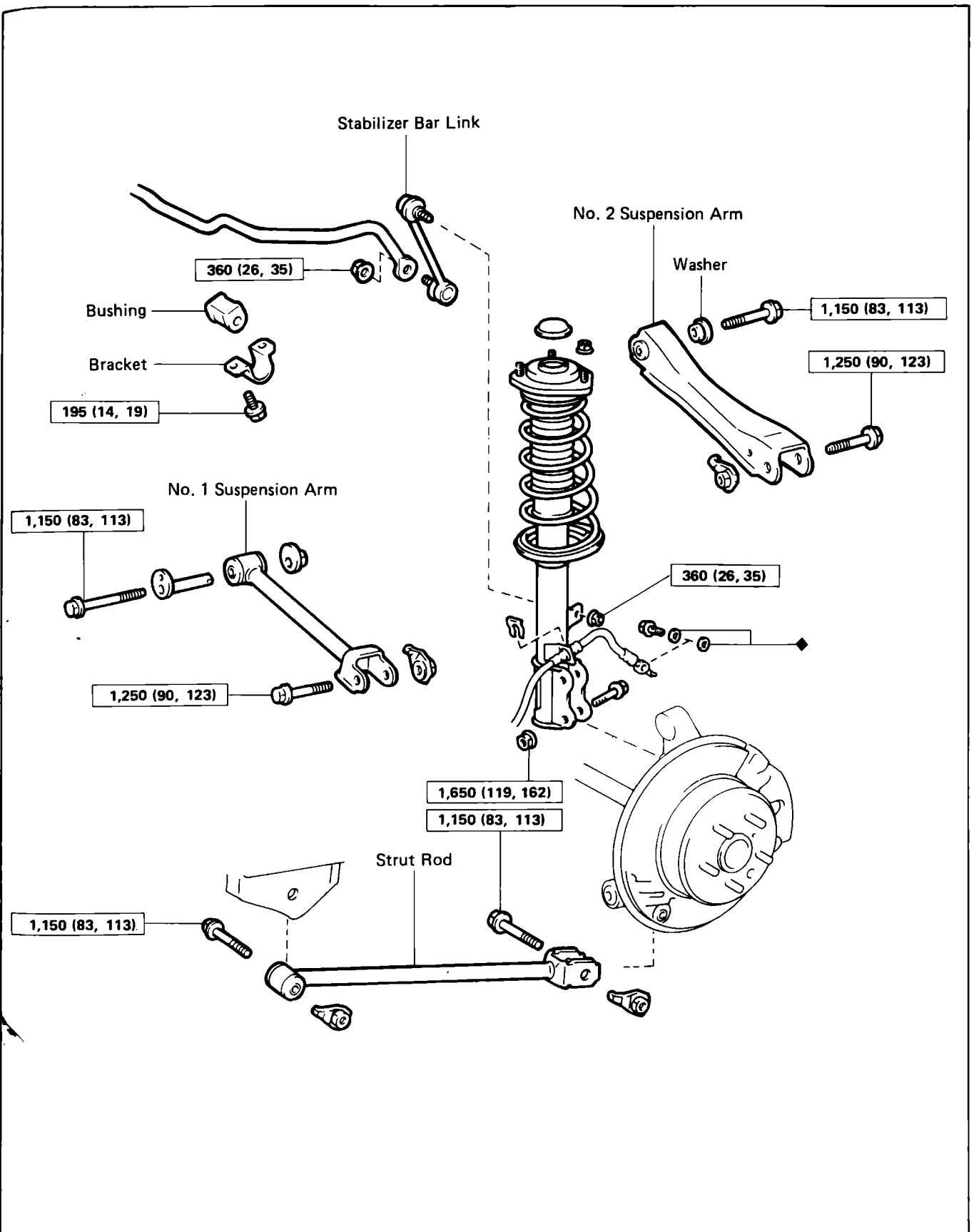
Remove and install the parts as shown on page RA-50.

INSPECT STABILIZER BAR LINK

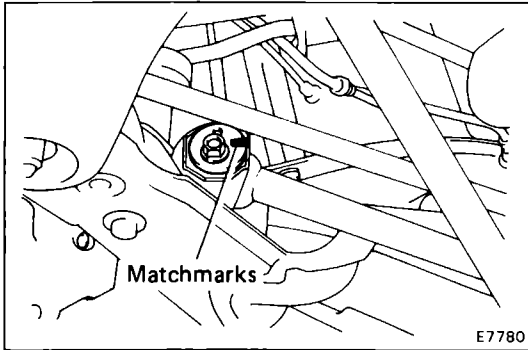
- Move the ball joint arm in all directions, if the movement is not smooth and free, replace the stabilizer bar link.

REAR SUSPENSION (4WD)

COMPONENTS



kg-cm (ft-lb, N-m) : Specified torque



Rear Shock Absorber

(See page RA-51)

Suspension Arm and Strut Rod

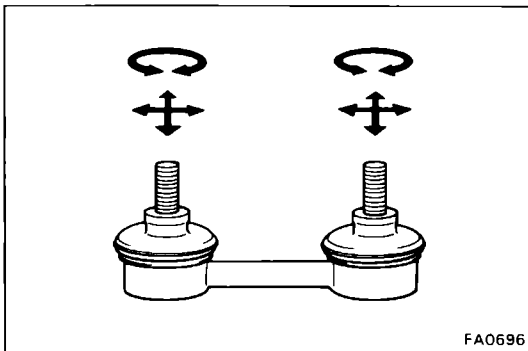
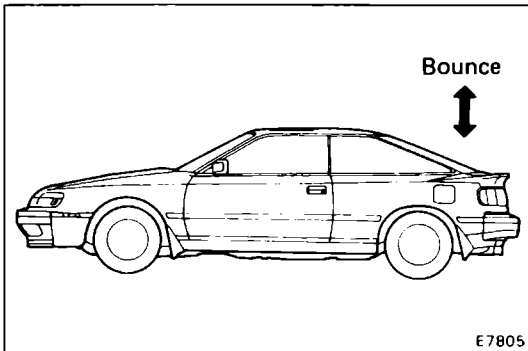
REMOVAL AND INSTALLATION OF SUSPENSION ARM AND STRUT ROD

Remove and install the parts as shown on page RA-57.
(MAIN POINT OF REMOVAL SUSPENSION ARM AND STRUT ROD)

- Place matchmarks on the adjusting cam and body. (No.2 suspension arm only)

(MAIN POINT OF INSTALLATION SUSPENSION ARM AND STRUT ROD)

- Place the suspension arm or the strut rod in position.
- Temporarily install the bolt to the body and the axle carrier.
- Bounce the vehicle up and down to stabilize the suspension arm or strut rod.
- Align the matchmarks on the cam and body. (No. 2 suspension arm only)
- Torque the installation bolt with the vehicle weight on the suspension. (See page RA-57)
- Check rear wheel alignment. (See page RA-3)



Stabilizer Bar

REMOVAL AND INSTALLATION OF STABILIZER BAR

Remove and install the parts as shown on page RA-57.

INSPECT STABILIZER BAR LINK

Move the ball joint stud in all directions, if the movement is not smooth and free, replace the stabilizer link.