

REAR AXLE AND SUSPENSION

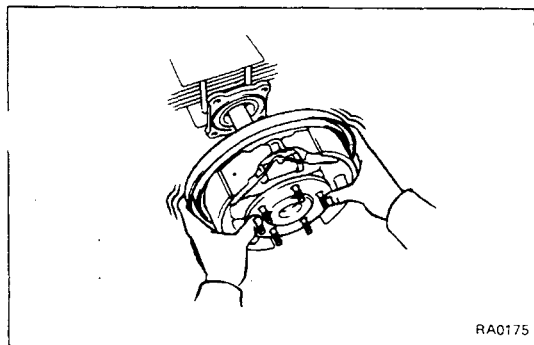
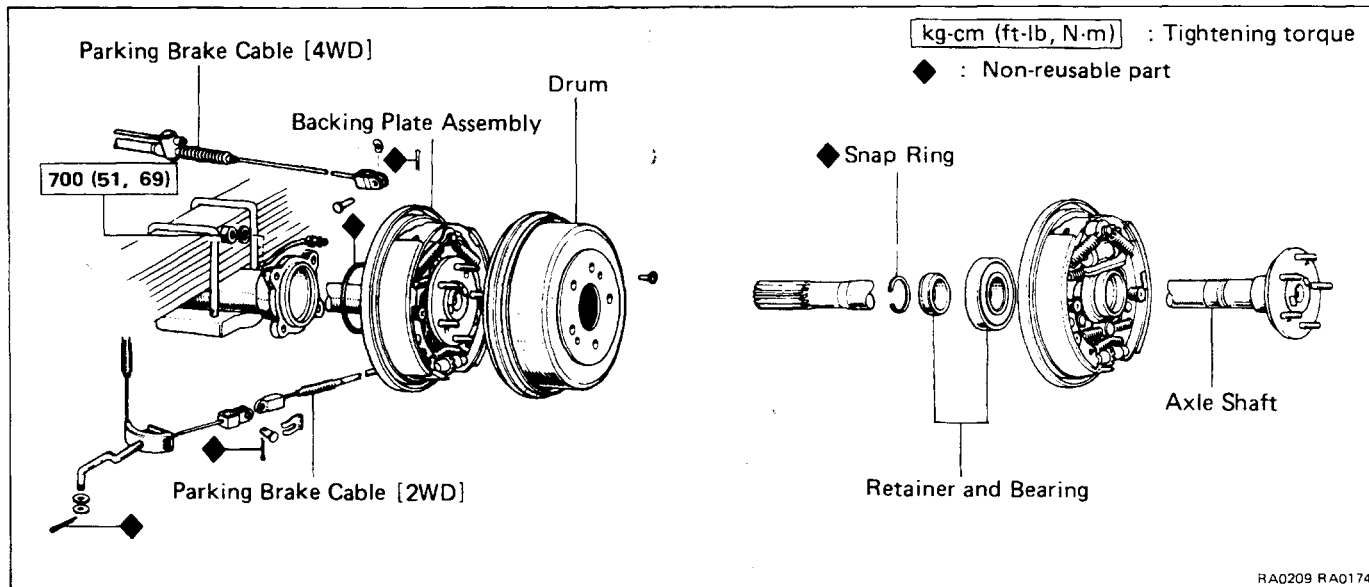
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DIFFERENTIAL	RA-6
LEAF SPRING TYPE REAR SUSPENSION	RA-20
Leaf Spring and Shock Absorber	RA-20

TROUBLESHOOTING

Problem	Possible cause	Remedy	Page
Oil leak from rear axle	Oil seals worn or damaged	Replace oil seal	RA-3
	Bearing retainer loose	Replace retainer	RA-3
	Rear axle housing cracked	Repair as necessary	
Oil leak from pinion shaft	Oil level too high or wrong grade	Drain and replace oil	RA-7
	Oil seal worn or damaged	Replace oil seal	RA-6
	Companion flange loose or damaged	Tighten or replace flange	RA-6
Noises in rear axle	Oil level low or wrong grade	Drain and replace oil	
	Excessive backlash between pinion and ring or side gear	Check backlash	RA-8
	Ring, pinion or side gears worn or chipped	Inspect gears	RA-8
	Pinion shaft bearing worn	Replace bearing	RA-9
	Axle shaft bearing worn	Replace bearing	RA-3
	Differential bearing loose or worn	Tighten or replace bearings	RA-10
Bottoming	Vehicle overloaded	Check loading	
	Shock absorber worn out	Replace shock absorber	RA-20
	Springs weak	Replace spring	RA-20

A01289

REAR AXLE SHAFT COMPONENTS



REMOVAL OF REAR AXLE SHAFT

1. REMOVE WHEEL AND BRAKE DRUM
2. DISCONNECT BRAKE TUBE AND PARKING BRAKE CABLE
3. REMOVE FOUR BACKING PLATE MOUNTING NUTS
4. REMOVE SNAP RING

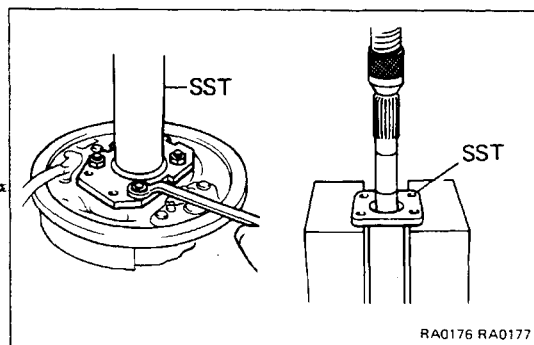
5. REMOVE REAR AXLE SHAFT FROM BACKING PLATE

(a) Attach SST to the backing plate.

SST 09521-25011

(b) Press out the rear axle shaft from the backing plate.

CAUTION: When pulling out the rear axle, be careful not to damage the oil seal.



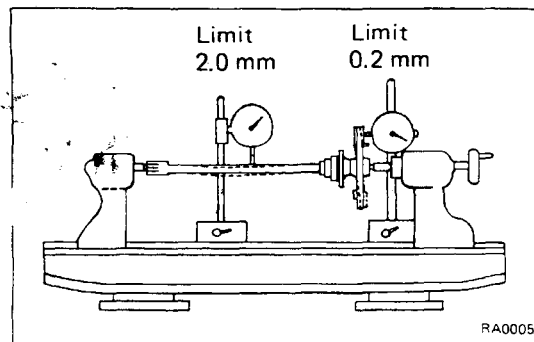
INSPECTION AND REPAIR OF REAR AXLE SHAFT COMPONENTS

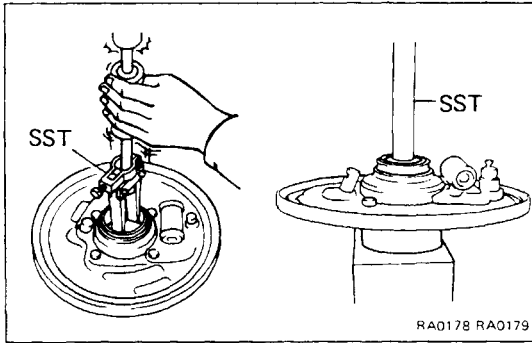
1. INSPECT REAR AXLE SHAFT AND FLANGE FOR WEAR, DAMAGE OR RUNOUT

Maximum shaft runout: 2.0 mm (0.079 in.)

Maximum flange runout: 0.2 mm (0.008 in.)

If the rear axle shaft or flange is damaged or worn, or if runout is greater than maximum, replace the rear axle shaft.



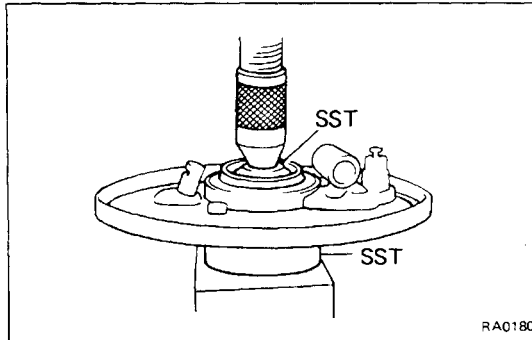


2. INSPECT OUTER OIL SEAL

- (a) Check for damage.
- (b) Check the oil seal lip for wear or damage.

3. IF NECESSARY, REPLACE OUTER OIL SEAL

- (a) Using SST, remove the oil seal.
SST 09308-00010
- (b) Using SST, install a new oil seal.
SST 09608-30011

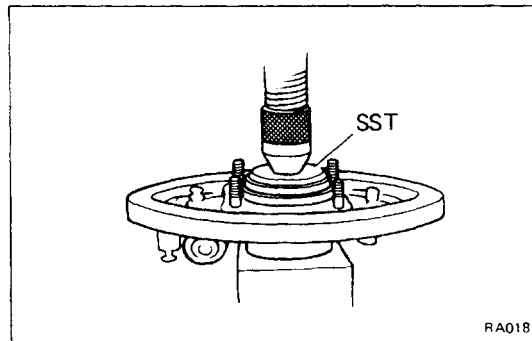


4. INSPECT REAR AXLE BEARING

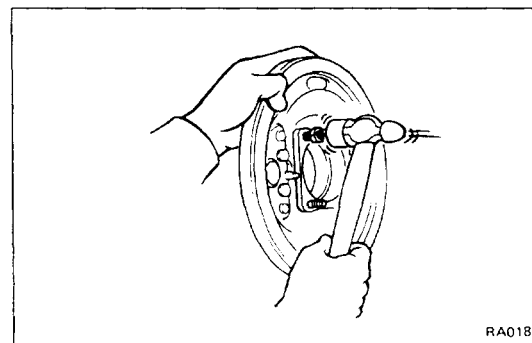
Check for wear or damage.

5. IF NECESSARY, REPLACE REAR AXLE BEARING

- (a) Remove the bearing oil seal.
- (b) Using SST, press out the bearing.
SST 09228-44010 and 09608-30011



- (c) Using SST, press in a new bearing.
SST 09515-30010 and 09608-35013
- (d) Install a new oil seal.



6. INSPECT BEARING CASE

Check for wear or damage.

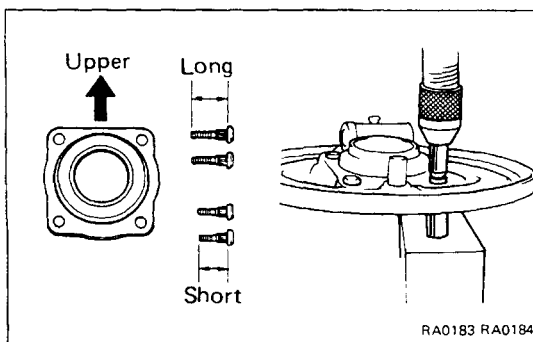
7. IF NECESSARY, REPLACE BEARING CASE

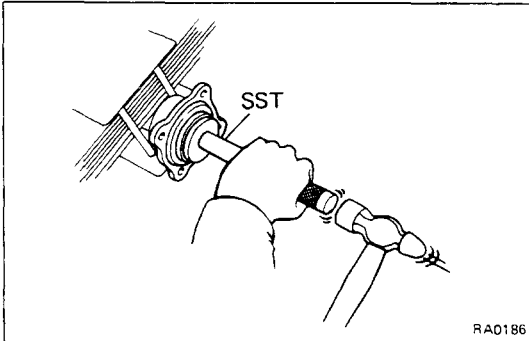
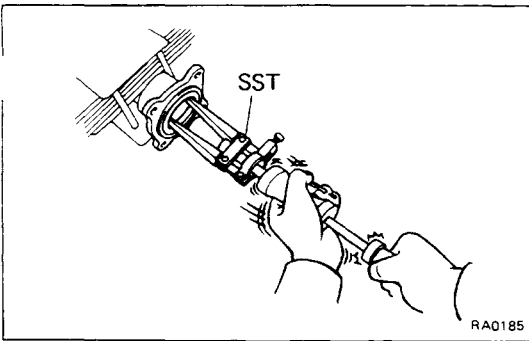
- (a) Remove the oil seal and bearing.
- (b) Install nuts to the serration bolts.
- (c) Using a hammer, tap out the serration bolts and remove the bearing case.

- (d) Position the backing plate on the new bearing case and, using two sockets, press in the serration bolts.

NOTE: Position the flat side of the bearing case and the two long serration bolts at the upper side of the backing plate.

- (e) Install a new bearing and oil seal.





8. INSPECT OIL SEAL FOR WEAR OR DAMAGE

If the seal is damaged or worn, replace it.

9. IF NECESSARY, REPLACE OIL SEAL FROM AXLE HOUSING

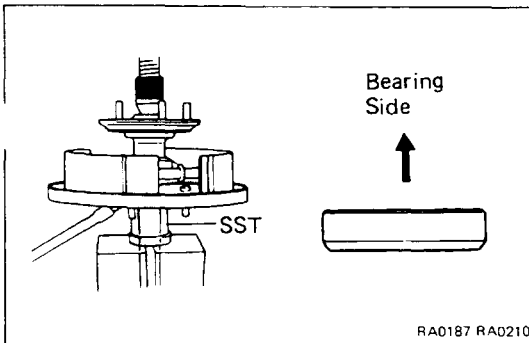
(a) Using SST, remove the oil seal.

SST 09308-00010

(b) Apply MP grease to the oil seal.

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

SST 09608-30011



INSTALLATION OF REAR AXLE SHAFT

(See page RA-3)

1. INSTALL REAR AXLE SHAFT IN BACKING PLATE

(a) Apply MP grease to the oil seal.

(b) Insert the backing plate and bearing retainer on the rear axle shaft.

(c) Using SST, press the rear axle shaft into the backing plate.

SST 09515-30010

(d) Using snap ring pliers, install the snap ring.

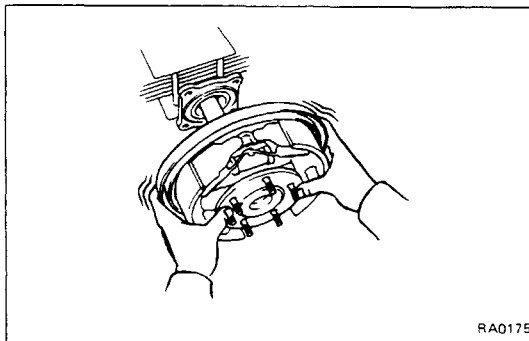
2. INSTALL REAR AXLE IN HOUSING

Install the rear axle with four nuts.

Torque: 700 kg-cm (51 ft-lb, 69 N·m)

NOTE:

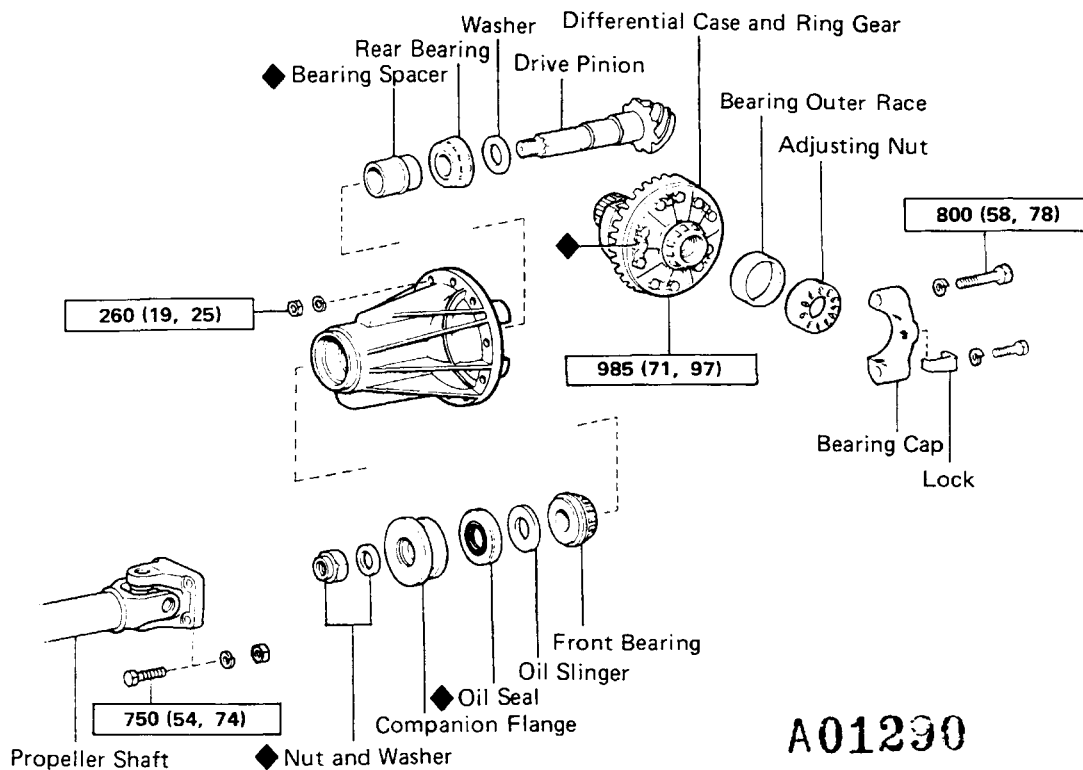
- Be careful not to damage the oil seal.
- When inserting the axle shaft, be careful not to hit or deform the oil deflector inside the axle housing.



3. CONNECT BRAKE TUBE AND PARKING BRAKE CABLE

4. INSTALL BRAKE DRUM AND WHEEL

DIFFERENTIAL COMPONENTS



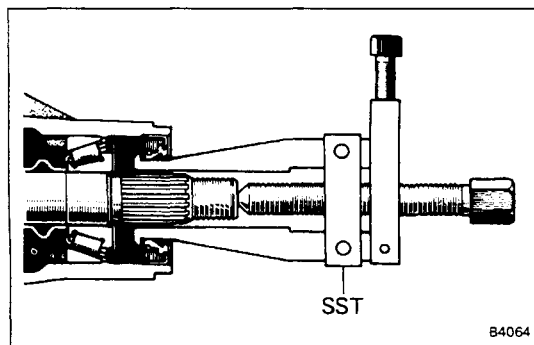
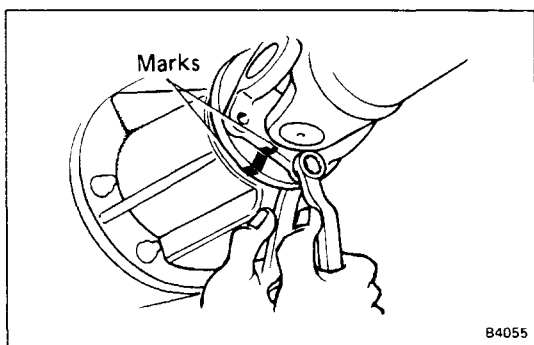
kg-cm (ft-lb, N·m) : Tightening torque

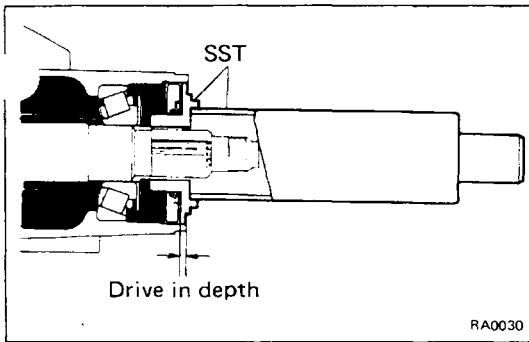
◆ : Non-reusable part

RA0188

ON-VEHICLE REPLACEMENT OF OIL SEAL

- 1. DISCONNECT PROPELLER SHAFT FROM DIFFERENTIAL**
 - (a) Place alignment marks on the flanges.
 - (b) Remove the four bolts and nuts.
- 2. REMOVE COMPANION FLANGE**
(See step 7 on page RA-9)
- 3. REMOVE OIL SEAL AND OIL SLINGER**
 - (a) Using SST, remove the oil seal from the housing.
SST 09308-10010
 - (b) Remove the oil slinger.
- 4. REMOVE FRONT BEARING AND BEARING SPACER**
(See step 9 on page RA-9)
- 5. INSTALL NEW BEARING SPACER AND FRONT BEARING** (See step 9 on page RA-17)





6. INSTALL OIL SLINGER AND NEW OIL SEAL

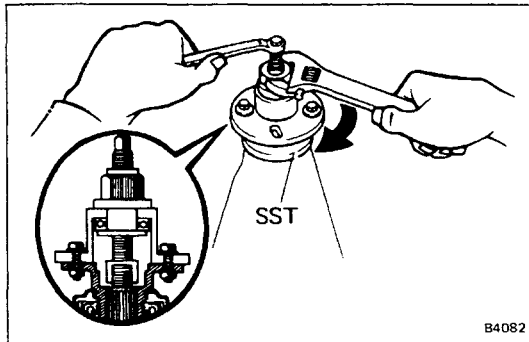
- Install the oil slinger facing as shown.
- Using SST, drive in a new oil seal as shown.

SST 09554-30011

Oil seal drive in depth:

1/2 ton	1.5 mm (0.059 in.)
1 ton, C&C and 4WD	1.0 mm (0.039 in.)

- Apply MP grease to the oil seal lip.



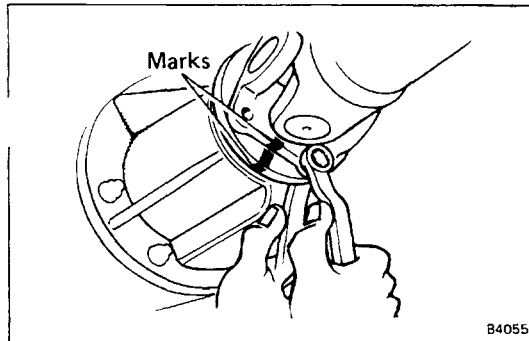
7. INSTALL COMPANION FLANGE

(See step 11 on page RA-17)

8. ADJUST FRONT BEARING PRELOAD

(See step 12 on page RA-18)

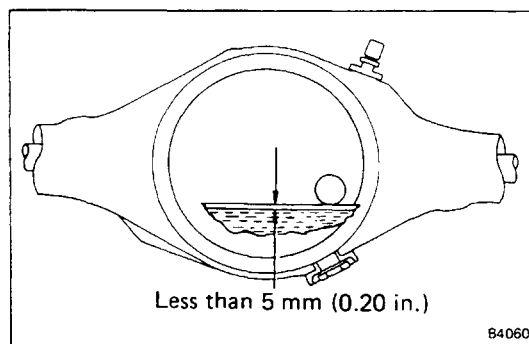
9. STAKE DRIVE PINION NUT



10. CONNECT PROPELLER SHAFT FLANGE TO COMPANION FLANGE

- Align the marks on the flanges and connect the flanges with four bolts and nuts.
- Torque the four bolts and nuts.

Torque: 750 kg-cm (54 ft-lb, 74 N·m)



11. CHECK DIFFERENTIAL OIL LEVEL

Fill with hypoid gear oil if necessary.

Hypoid gear oil: API GL-5

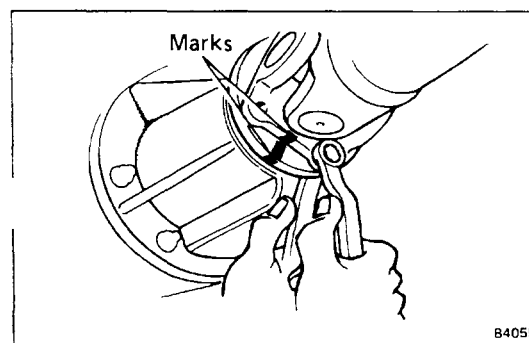
Above -18°C (0°F) SAE 90

Below -18°C (0°F)

SAE 80W or 80W-90

Capacity:

1/2 ton	1.7 liters (1.8 US qts, 1.5 Imp. qts)
1 ton and C&C	1.8 liters (1.9 US qts, 1.6 Imp. qts)
4WD	2.2 liters (2.3 US qts, 1.9 Imp. qts)



REMOVAL OF DIFFERENTIAL

(See page RA-6)

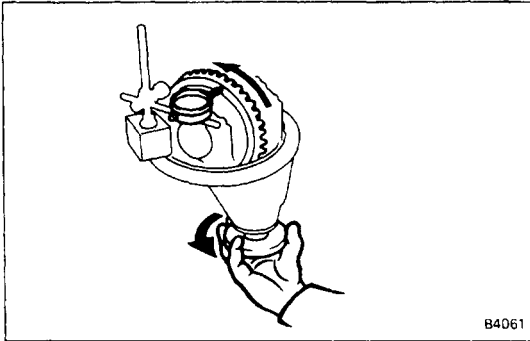
- REMOVE DRAIN PLUG AND DRAIN DIFFERENTIAL OIL
- REMOVE REAR AXLE SHAFT (See page RA-3)
- DISCONNECT PROPELLER SHAFT FROM DIFFERENTIAL (See page RA-6)
- REMOVE DIFFERENTIAL CARRIER ASSEMBLY

DISASSEMBLY OF DIFFERENTIAL

(See page RA-6)

NOTE: If the differential is noisy, perform the following pre-inspection before disassembly to determine the cause of the noise.

If the differential has severe problems, disassemble and repair it as necessary.

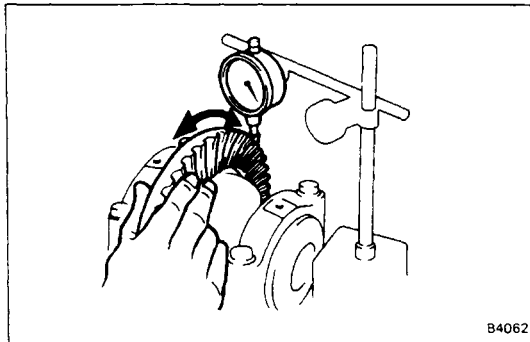


1. CHECK RING GEAR RUNOUT

If the runout is greater than maximum, install a new ring gear.

Maximum runout:

1/2 ton	0.07 mm (0.0028 in.)
1 ton, C&C and 4WD	0.10 mm (0.0039 in.)



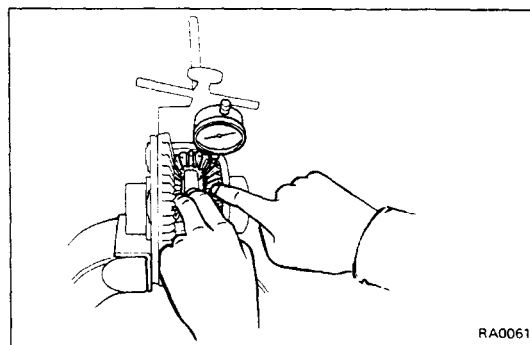
2. CHECK RING GEAR BACKLASH

If the backlash is not within specifications, adjust the side bearing preload or repair as necessary. (See step 5 on page RA-14)

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

3. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION (See step 6 on page RA-16)

Note the tooth contacting position.



4. CHECK SIDE GEAR BACKLASH

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

Standard backlash:

0.05 — 0.20 mm (0.0020 — 0.0079 in.)

If the backlash is not within specification, install the proper thrust washers.

5. MEASURE DRIVE PINION PRELOAD

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

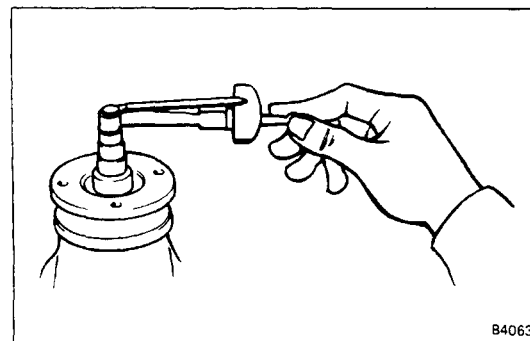
Preload:

1/2 ton

6 — 10 kg-cm (5.2 — 8.7 in.-lb, 0.6 — 1.0 N·m)

1 ton, C&C and 4WD

9 — 13 kg-cm (7.8 — 11.3 in.-lb, 0.9 — 1.3 N·m)



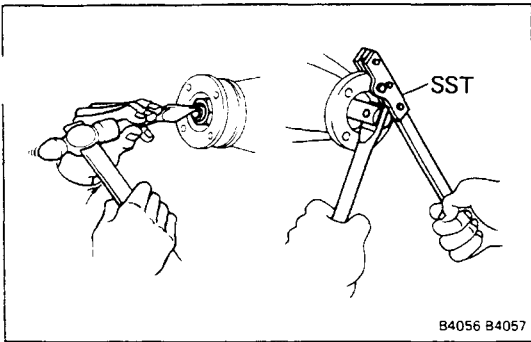
6. CHECK TOTAL PRELOAD

Using a torque meter, measure the total preload.

Total preload: In addition to drive pinion preload

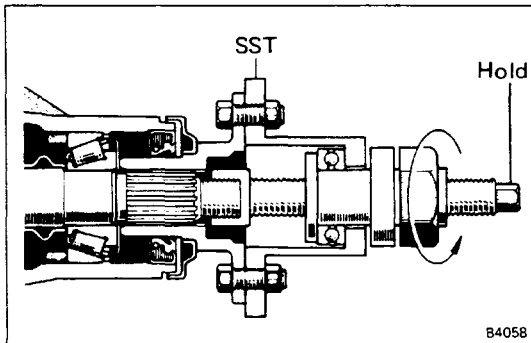
4 — 6 kg-cm

(3.5 — 5.2 in.-lb, 0.4 — 0.6 N·m)

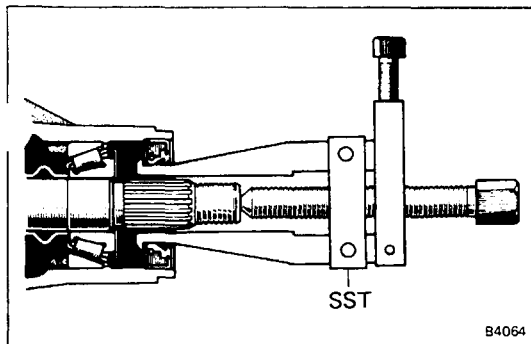


7. REMOVE COMPANION FLANGE

- Using a hammer and chisel, loosen the staked part of the nut.
- Using SST to hold the flange, remove the nut.
SST 09330-00020

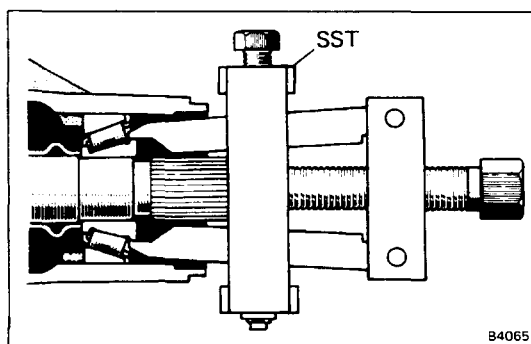


- Using SST, remove the companion flange.
SST 09557-22022



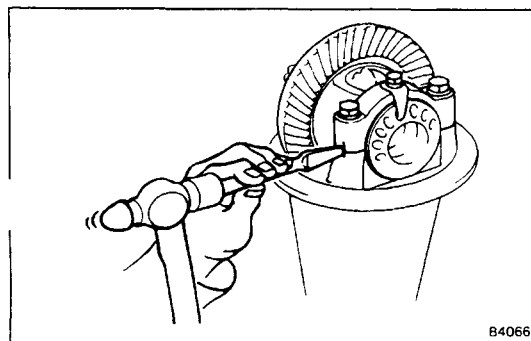
8. REMOVE OIL SEAL AND OIL SLINGER

- Using SST, remove the oil seal from the housing.
SST 09308-10010
- Remove the oil slinger.



9. REMOVE FRONT BEARING AND BEARING SPACER

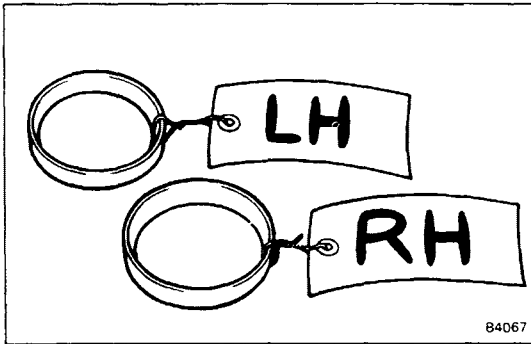
- Using SST, remove the front bearing from the drive pinion.
SST 09556-30010
- Remove the bearing spacer.
If the front bearing is damaged or worn, replace the bearing.



10. REMOVE DIFFERENTIAL CASE AND RING GEAR

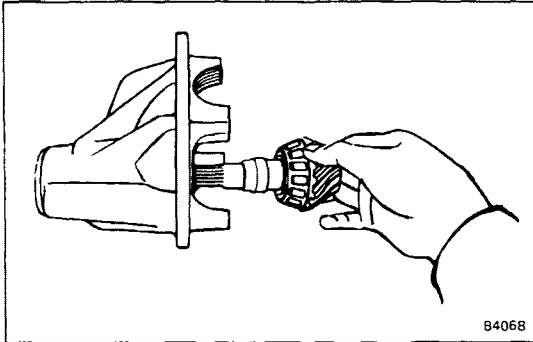
- Place alignment marks on the bearing cap and differential carrier.
- Remove the two adjusting nut locks.
- Remove the two bearing caps and two adjusting nuts.
- Remove the bearing outer races.
- Remove the differential case from the carrier.

NOTE: Tag the disassembled parts to show the location for reassembly.



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11. REMOVE DRIVE PINION FROM DIFFERENTIAL CARRIER



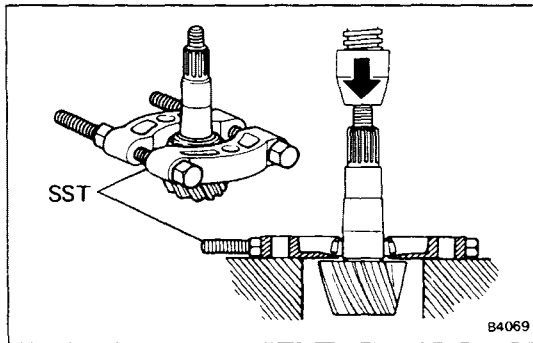
B4068

INSPECTION AND REPLACEMENT OF DIFFERENTIAL COMPONENTS

1. REPLACE DRIVE PINION REAR BEARING

- (a) Using a press and SST, pull out the rear bearing from the drive pinion.

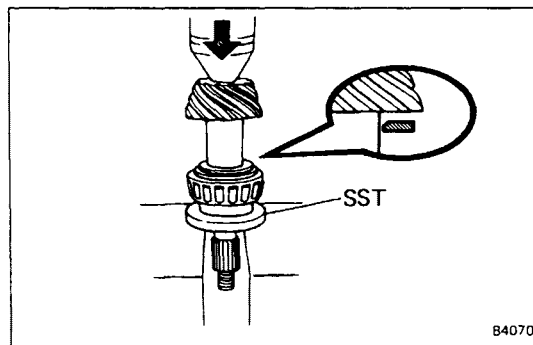
SST 09950-00020



B4069

- (b) Install the washer on the drive pinion with the chamfered end facing the pinion gear.
 (c) Using a press and SST, press the reused washer and new rear bearing on the drive pinion.

SST 09506-30011

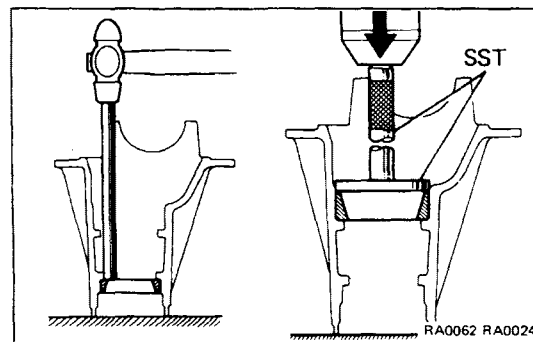


B4070

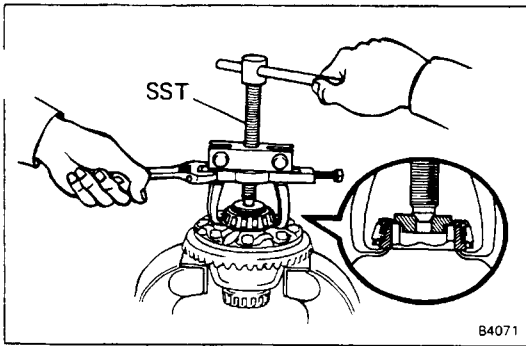
2. REPLACE DRIVE PINION FRONT AND REAR BEARING OUTER RACE

- (a) Using a hammer and driver, drive out the outer race.
 (b) Using a press and SST, drive in a new outer race.

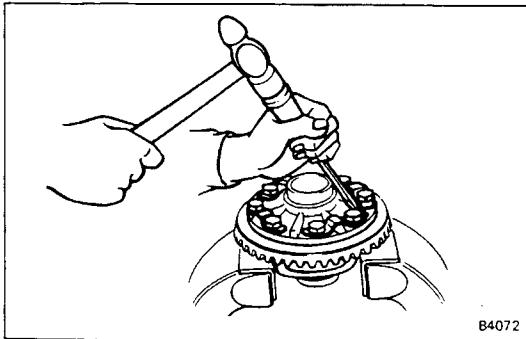
SST 09608-30011



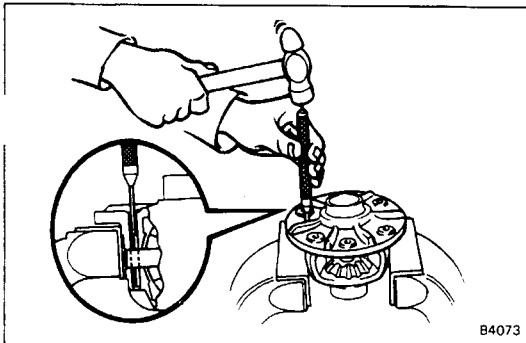
RA0062 RA0024



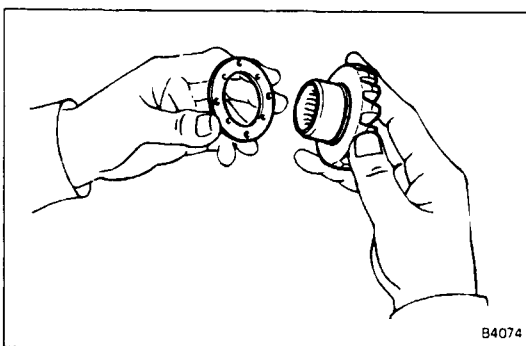
- 3. REMOVE SIDE BEARINGS FROM DIFFERENTIAL CASE**
Using SST, pull the side bearing from the differential case.
SST 09950-20015



- 4. REMOVE RING GEAR**
- Remove the ring gear set bolts and lock plates.
 - Place alignment marks on the ring gear and differential case.
 - Using plastic or copper hammer, tap on the ring gear to separate it from the differential case.



- 5. DISASSEMBLE DIFFERENTIAL CASE**
Using a hammer and punch, drive out the straight pin. Remove the pinion shaft, two pinion gears, two side gears and two thrust washers.



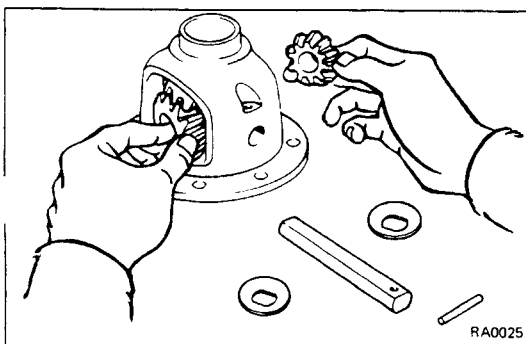
- 6. ASSEMBLE DIFFERENTIAL CASE**
- Install the proper thrust washers and side gears.
- Using the table below, select thrust washers which will ensure that the backlash is within specification. Try to select washers of the same size for both sides.

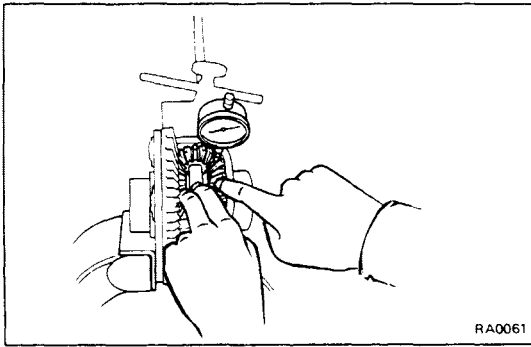
Standard backlash: 0.05 — 0.20 mm
(0.0020 — 0.0079 in.)

Thrust washer thickness

1/2 ton		1 ton, C & C and 4WD	
Thickness	mm (in.)	Thickness	mm (in.)
1.0	(0.039)	1.6	(0.063)
1.1	(0.043)	1.7	(0.067)
1.2	(0.047)	1.8	(0.071)
1.3	(0.051)		

Install thrust washers and side gears in the differential case.

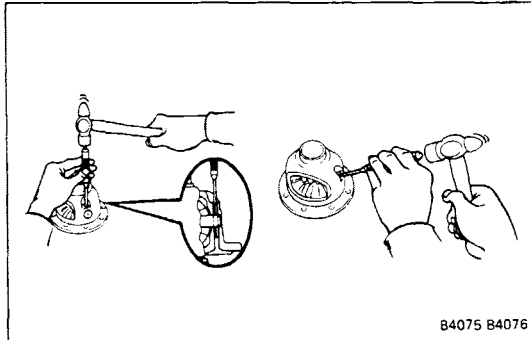




- (b) Check the side gear backlash.
Measure the side gear backlash while holding one pinion gear toward the case.

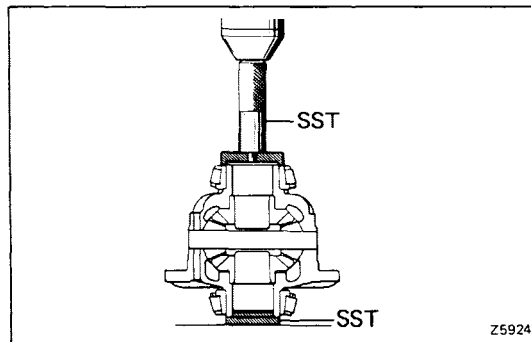
Standard backlash: 0.05 — 0.20 mm
(0.0020 — 0.0079 in.)

If the backlash is not within specification, install a thrust washer of different thickness.



- (c) Install the straight pin.

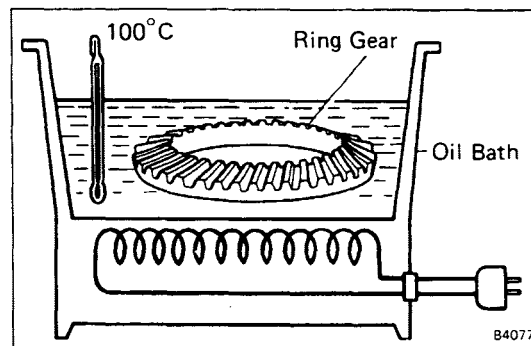
- Using the hammer and punch, drive the straight pin through the case and hole in the pinion shaft.
- Stake the pin and differential case.



7. INSTALL SIDE BEARINGS

Using a press and SST, press the side bearings on the differential case.

SST 09608-30011



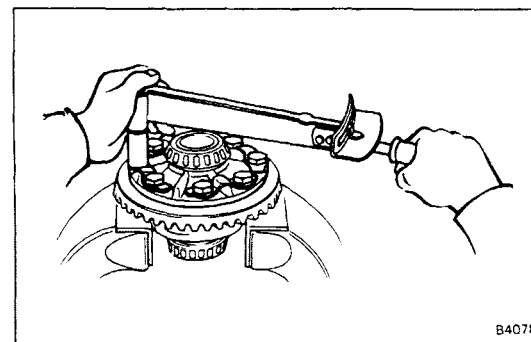
8. INSTALL RING GEAR ON DIFFERENTIAL CASE

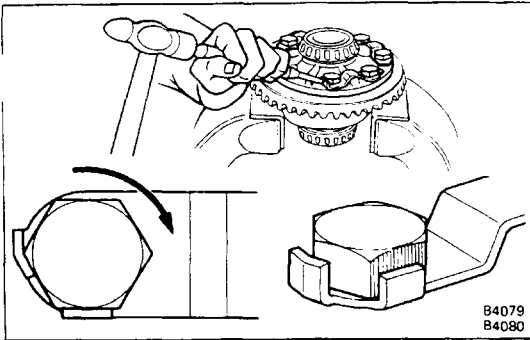
- (a) Clean the contact surface of the differential case.
(b) Heat the ring gear to about 100°C (212°F) in an oil bath.

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

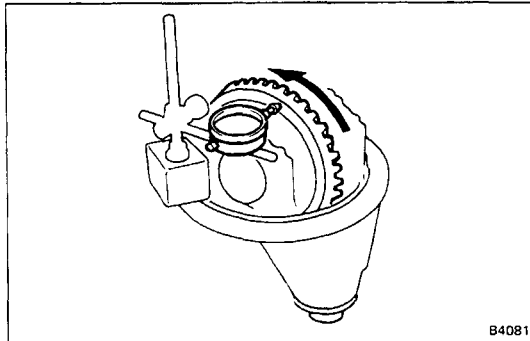
- (c) Clean the contact surface of the ring gear with cleaning solvent.
(d) Then quickly install the ring gear on the differential case.
(e) Align the marks on the ring gear and differential case.
(f) Coat the ring gear set bolts with gear oil.
(g) Install the lock plates and set bolts. Tighten the set bolts uniformly and a little at a time. Torque the bolts.

Torque: 985 kg-cm (71 ft-lb, 97 N·m)





(h) 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.

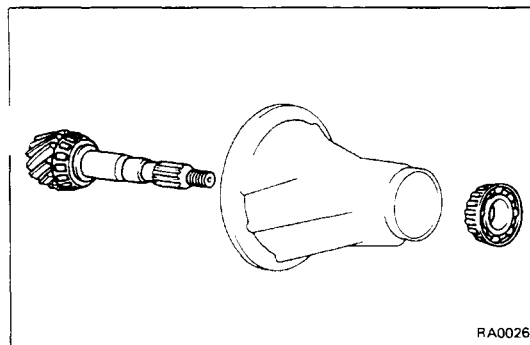


(i) Check the ring gear runout.

Maximum runout:

1/2 ton	0.07 mm (0.0028 in.)
1 ton, C&C and 4WD	0.10 mm (0.0039 in.)

Install the differential case onto the carrier and tighten the adjusting nut just to where there is no play in the bearing.



ASSEMBLY OF DIFFERENTIAL

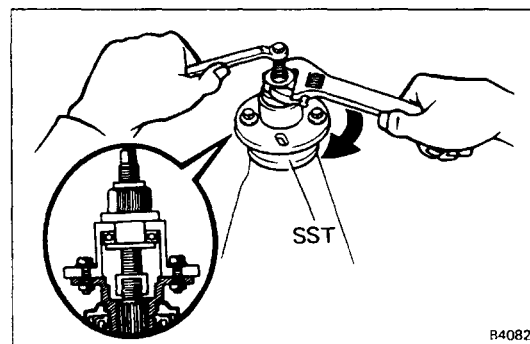
(See page RA-6)

1. TEMPORARILY ADJUST DRIVE PINION PRELOAD

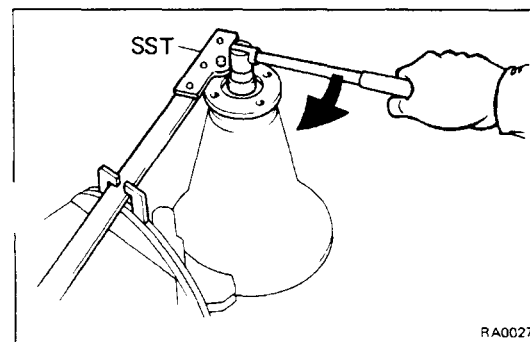
(a) Install the following parts.

- 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

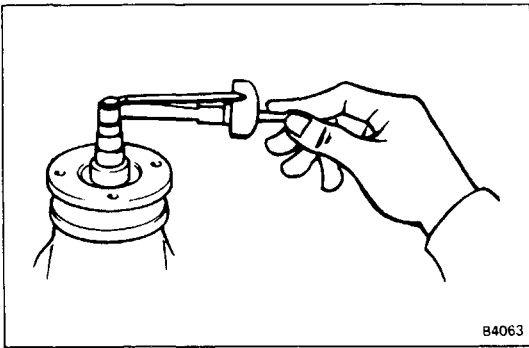


(c) Adjust the drive pinion preload by tightening the companion flange nut.

Using SST to hold the flange, tighten the nut.

SST 09330-00020

CAUTION: As there is no spacer, tighten a little at a time, being careful not to overtighten.



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

Preload:

New bearing

1/2 ton

12 — 19 kg-cm (10.4 — 16.5 in.-lb, 1.2 — 1.9 N·m)

1 ton, C&C and 4WD

19 — 26 kg-cm (16.5 — 22.6 in.-lb, 1.9 — 2.5 N·m)

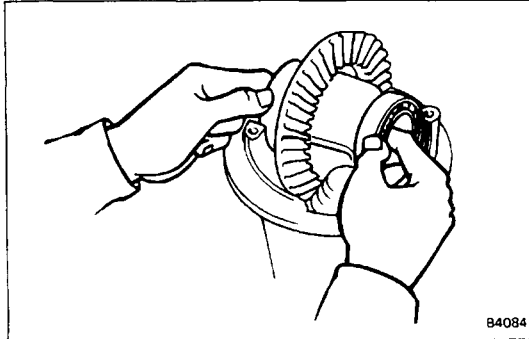
Reused bearing

1/2 ton

6 — 10 kg-cm (5.2 — 8.7 in.-lb, 0.6 — 1.0 N·m)

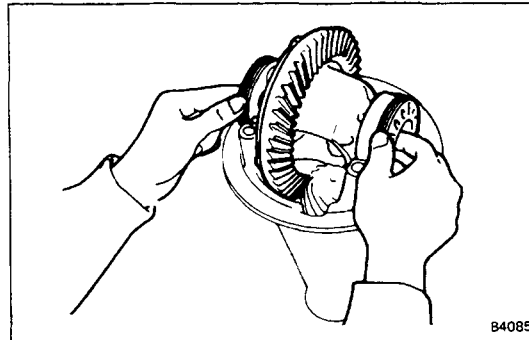
1 ton, C&C and 4WD

9 — 13 kg-cm (7.8 — 11.3 in.-lb, 0.9 — 1.3 N·m)



2. INSTALL DIFFERENTIAL CASE IN CARRIER

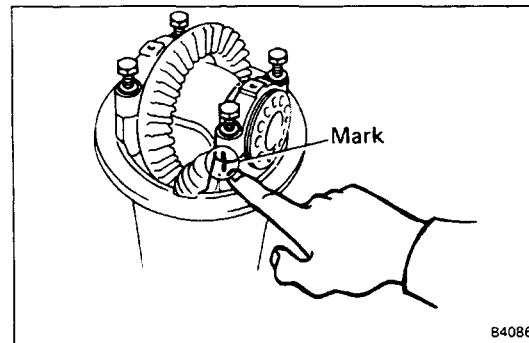
- (a) Place the bearing outer races on their respective bearings. Make sure the left and right outer races are not interchanged.
- (b) Install the case in the carrier.



3. INSTALL ADJUSTING NUTS

Install the adjusting nuts on their respective carrier, making sure the nuts are threaded properly.

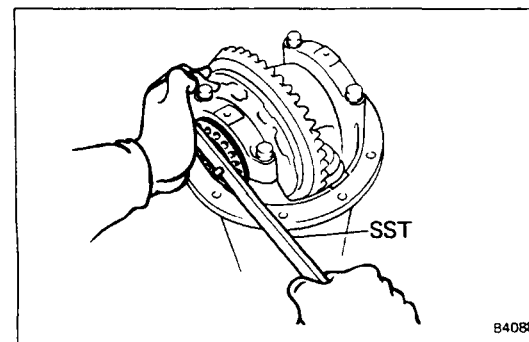
NOTE: Make sure that there is backlash between the ring gear and drive pinion.



4. INSTALL BEARING CAPS

Align the marks on the cap and carrier. Screw in the two bearing cap bolts two or three turns and press down the bearing cap by hand.

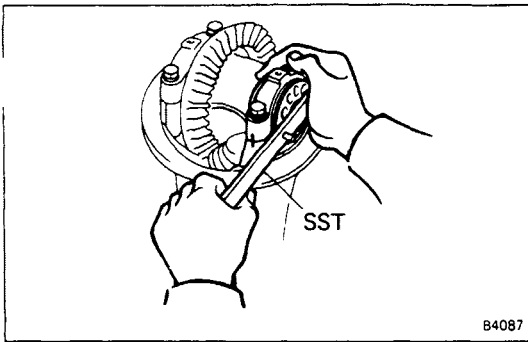
NOTE: If the bearing cap does not fit tightly on the carrier, the adjusting nuts is not threaded properly. Reinstall the adjusting nuts if necessary.



5. ADJUST SIDE BEARING PRELOAD

- (a) Tighten the bearing cap bolts until the spring washers are slightly compressed.
- (b) Using SST, tighten the adjusting nut on the ring gear side until the ring gear has a backlash of about 0.2 mm (0.008 in.).

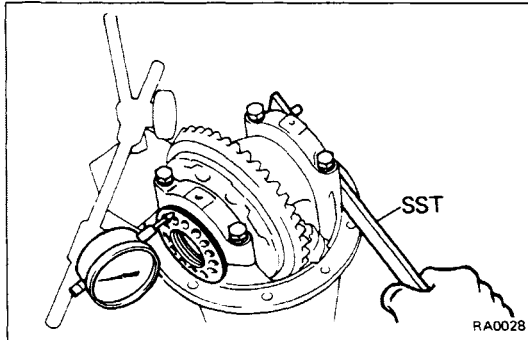
SST 09504-00011



(c) Using SST, firmly tighten the adjusting nut on the drive pinion side.

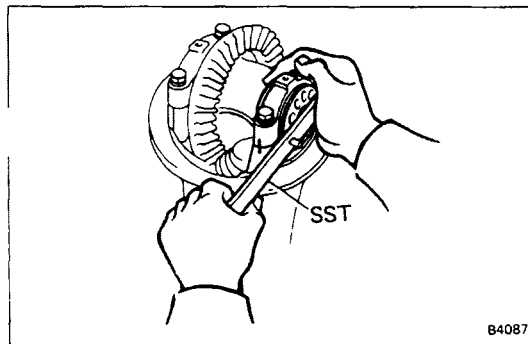
(d) Check the ring gear backlash.

If tightening the adjusting nut creates ring gear backlash, loosen the nut so that backlash is eliminated.

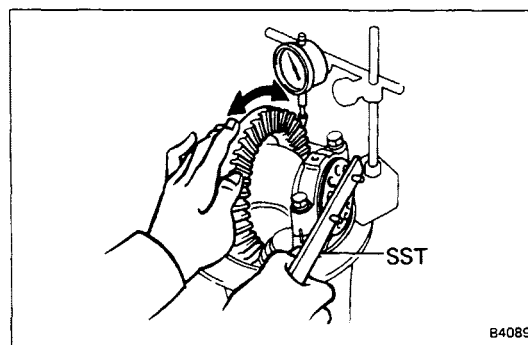


(e) Place a dial indicator on the top of the bearing cap on the ring gear side.

(f) Adjust the side bearing for zero preload by tightening the other adjusting nut until the pointer on the indicator begins to move.



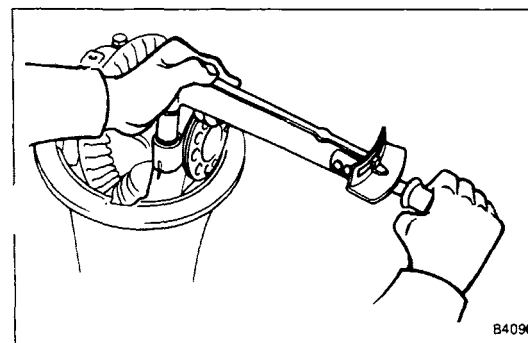
(g) Tighten the adjusting nut 1 — 1½ notches from the zero preload position.



(h) Using a dial indicator, adjust the ring gear backlash until it is within specification.

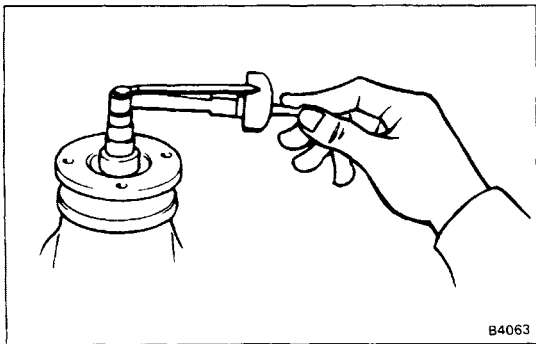
Backlash: 0.13 — 0.18 mm (0.0051 — 0.0071 in.)

NOTE: The backlash is adjusted by turning the left and right adjusting nuts equal amounts. For example, loosen the nut on the left side one notch and tighten the nut on the right side one notch.



(i) Torque the bearing cap bolts.

Torque: 800 kg-cm (58 ft-lb, 78 N·m)



(j) Recheck the ring gear backlash.

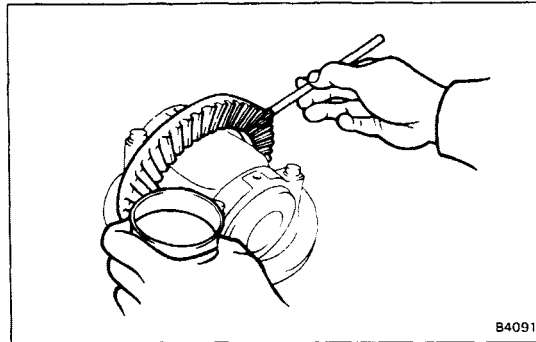
(k) Using a torque meter, measure the total preload.

Total preload:

In addition to drive pinion preload

4 — 6 kg-cm (3.5 — 5.2 in.-lb, 0.4 — 0.6 N·m)

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

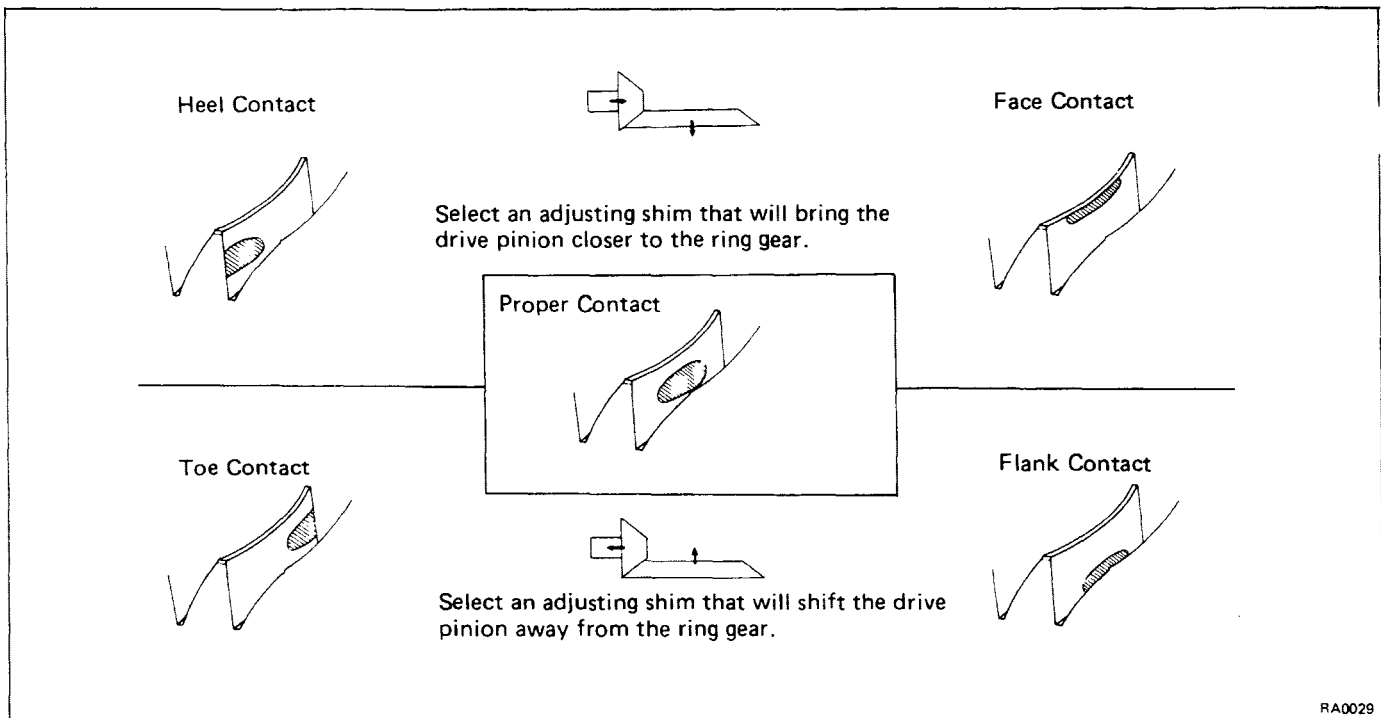


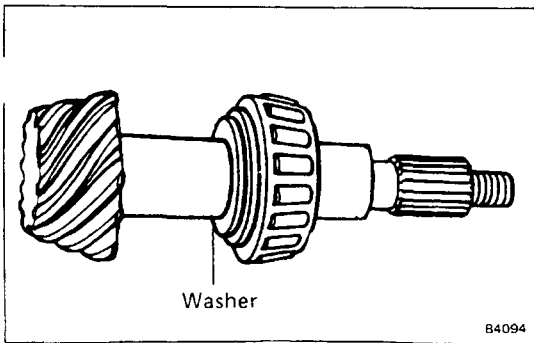
6. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION

(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 pattern.

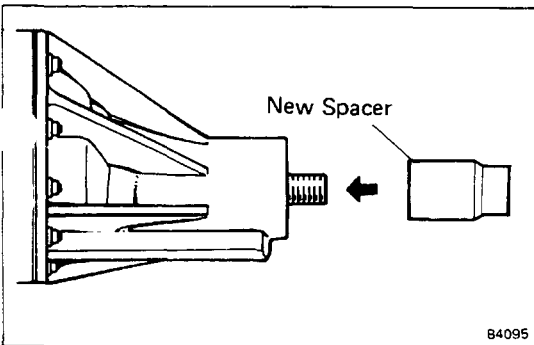




If the teeth are not contacting properly, use the following chart to select a proper washer for correction.

Washer thickness

1/2 ton		1 ton, C&C and 4WD	
Thickness	mm (in.)	Thickness	mm (in.)
2.24	(0.0882)	1.70	(0.0669)
2.27	(0.0894)	1.73	(0.0681)
2.30	(0.0906)	1.76	(0.0693)
2.33	(0.0917)	1.79	(0.0705)
2.36	(0.0929)	1.82	(0.0717)
2.39	(0.0941)	1.85	(0.0728)
2.42	(0.0953)	1.88	(0.0740)
2.45	(0.0965)	1.91	(0.0752)
2.48	(0.0976)	1.94	(0.0764)
2.51	(0.0988)	1.97	(0.0776)
2.54	(0.1000)	2.00	(0.0787)
2.57	(0.1012)	2.03	(0.0799)
2.60	(0.1024)	2.06	(0.0811)
2.63	(0.1035)	2.09	(0.0823)
2.66	(0.1047)	2.12	(0.0835)
2.69	(0.1059)	2.15	(0.0846)
2.72	(0.1071)	2.18	(0.0858)
		2.21	(0.0870)
		2.24	(0.0882)
		2.27	(0.0894)
		2.30	(0.0906)
		2.33	(0.0917)



7. REMOVE COMPANION FLANGE

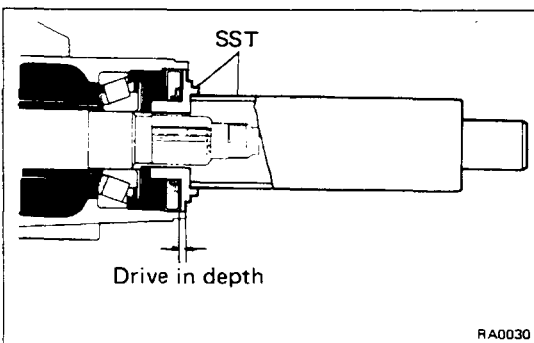
(See step 7 on page RA-9)

8. REMOVE FRONT BEARING

(See step 9 on page RA-9)

9. INSTALL NEW BEARING SPACER AND FRONT BEARING

- Install a new bearing spacer on the shaft.
- Install the front bearing on the shaft.



10. INSTALL OIL SLINGER AND NEW OIL SEAL

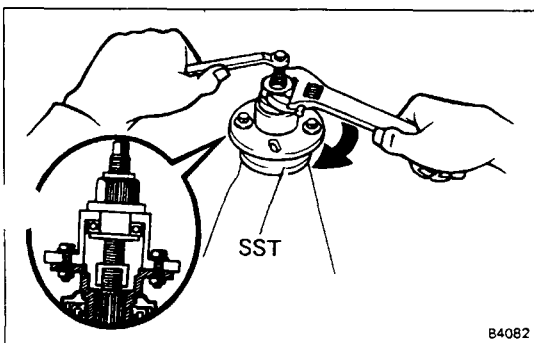
- Install the oil slinger facing as shown.
- Using SST, drive in a new oil seal as shown.

SST 09554-30011

Oil seal drive in depth:

- | | |
|--------------------|--------------------|
| 1/2 ton | 1.5 mm (0.059 in.) |
| 1 ton, C&C and 4WD | 1.0 mm (0.039 in.) |

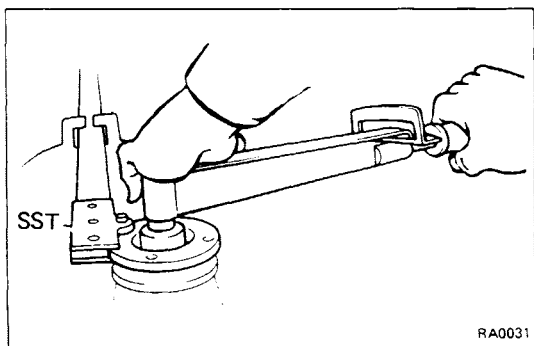
- Apply MP grease to the oil seal lip.



11. INSTALL COMPANION FLANGE

- Install the companion flange with SST.

SST 09557-22022



RA0031

(b) Coat the threads of a new nut with MP grease.

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

SST 09330-00020

Torque:

1/2 ton

1,100—2,400 kg-cm (80—173 ft-lb, 108—235 N·m)

1 ton, C&C and 4WD

2,000—3,500 kg-cm (145—253 ft-lb, 197—343 N·m)

12. ADJUST DRIVE PINION PRELOAD

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

Preload:

New bearing

1/2 ton

12—19 kg-cm (10.4—16.5 in.-lb, 1.2—1.9 N·m)

1 ton, C&C and 4WD

19—26 kg-cm (16.5—22.6 in.-lb, 1.9—2.5 N·m)

Reused bearing

1/2 ton

6—10 kg-cm (5.2—8.7 in.-lb, 0.6—1.0 N·m)

1 ton, C&C and 4WD

9—13 kg-cm (7.8—11.3 in.-lb, 0.9—1.3 N·m)

(a) If preload is greater than specification, replace the bearing spacer.

(b) 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 exceeded 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:

1/2 ton

2,400 kg-cm (174 ft-lb, 235 N·m)

1 ton, C&C and 4WD

3,500 kg-cm (253 ft-lb, 343 N·m)

13. CHECK DEVIATION OF COMPANION FLANGE

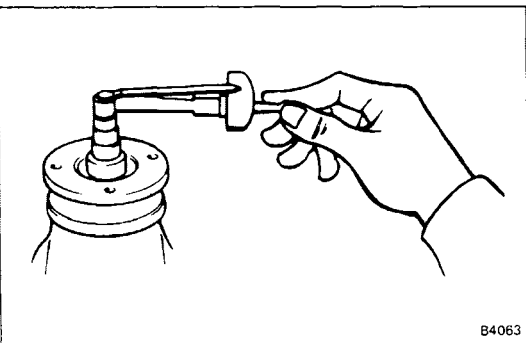
Maximum longitudinal deviation:

0.10 mm (0.0039 in.)

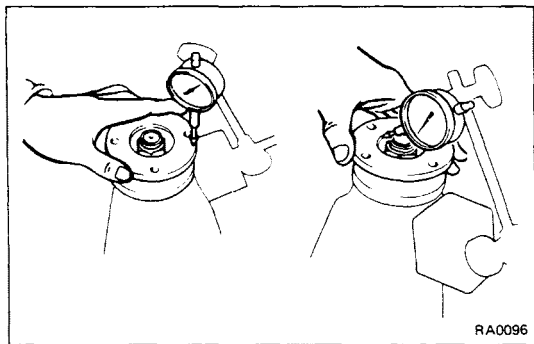
Maximum latitudinal deviation:

0.10 mm (0.0039 in.)

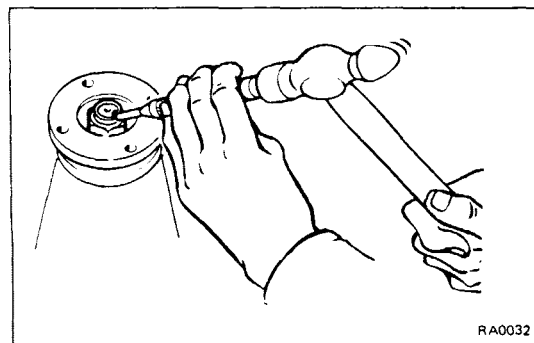
14. STAKE DRIVE PINION NUT



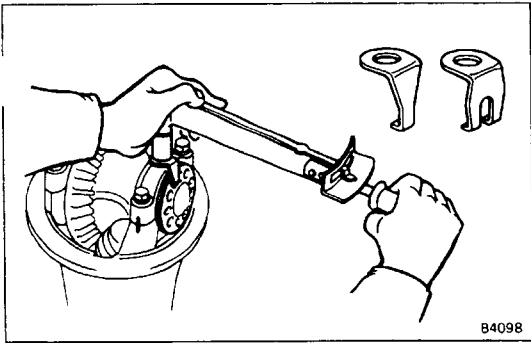
B4063



RA0096



RA0032



15. INSTALL ADJUSTING NUT LOCKS

- Select either a lock No.1 or No.2 whichever will fit the adjusting nuts.
- Install the lock on the bearing caps.

Torque: 130 kg-cm (9 ft-lb, 13 N·m)

INSTALLATION OF DIFFERENTIAL

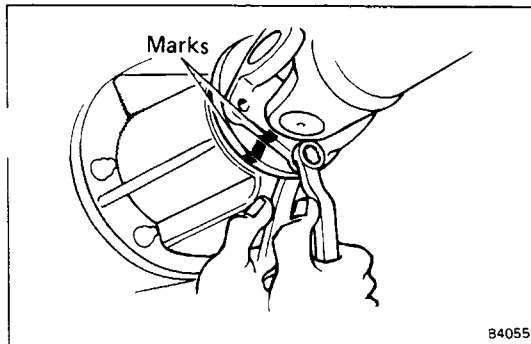
(See page RA-6)

1. INSTALL A NEW GASKET

2. INSTALL DIFFERENTIAL CARRIER ASSEMBLY

Install the differential carrier assembly in the axle and install the 10 nuts. Torque the nuts.

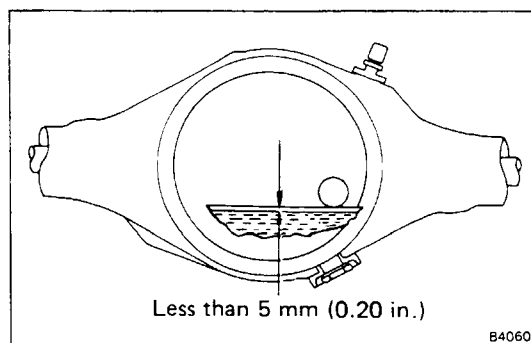
Torque: 260 kg-cm (19 ft-lb, 25 N·m)



3. CONNECT PROPELLER SHAFT FLANGE TO COMPANION FLANGE

- Align the marks on the flanges and connect the flanges with four bolts and nuts.
- Torque the bolts and nuts.

Torque: 750 kg-cm (54 ft-lb, 74 N·m)



4. INSTALL DRAIN PLUG AND FILL DIFFERENTIAL WITH GEAR OIL

Hypoid gear oil:

API GL-5

Above -18°C (0°F)

SAE 90

Below -18°C (0°F)

SAE 80W or 80W-90

Capacity:

1/2 ton

1.7 liters (1.8 US qts, 1.5 Imp.qts)

1 ton and C&C

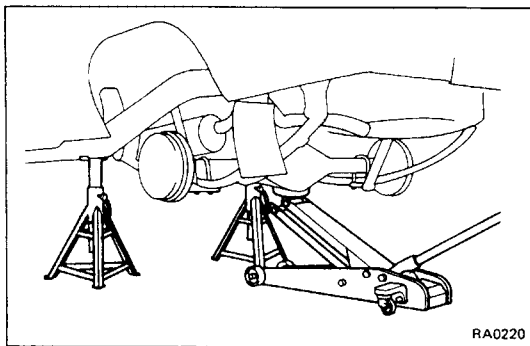
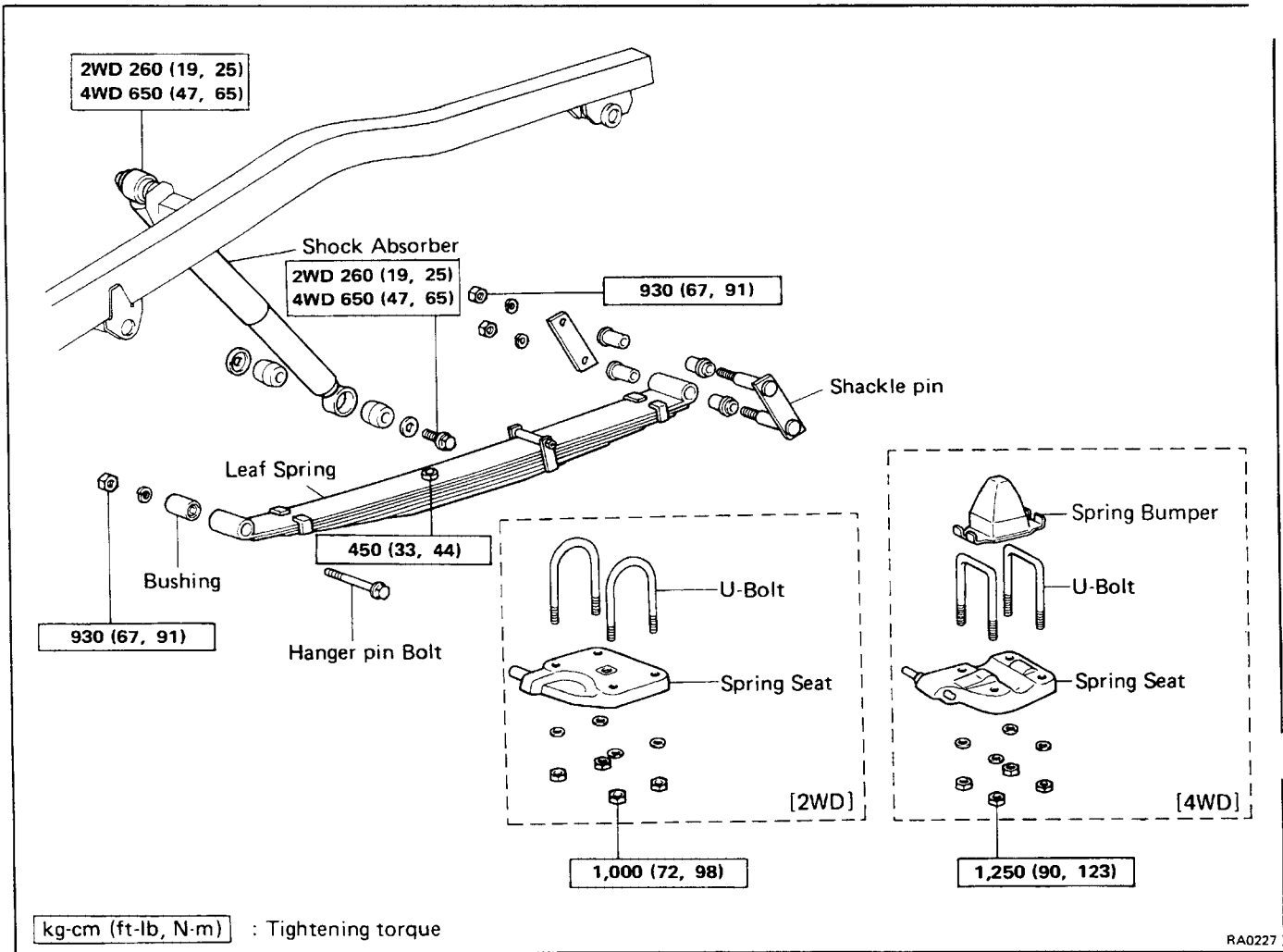
1.8 liters (1.9 US qts, 1.6 Imp.qts)

4WD

2.2 liters (2.3 US qts, 1.9 Imp.qts)

Install a filler plug.

LEAF SPRING TYPE REAR SUSPENSION

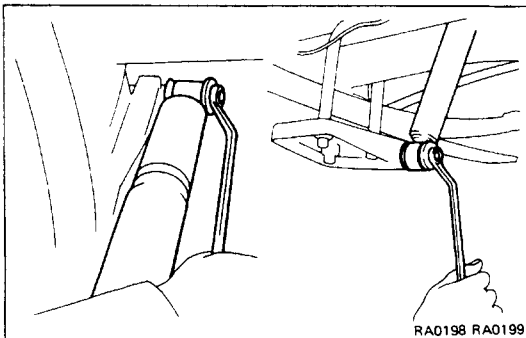


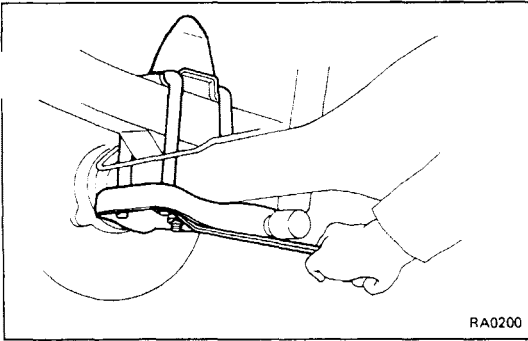
Leaf Spring and Shock Absorber REMOVAL OF LEAF SPRING AND SHOCK ABSORBER

1. JACK UP AND SUPPORT BODY

- Jack up and support the body on the stands.
- Lower the axle housing until the leaf spring tension is free, and keep it at this position.

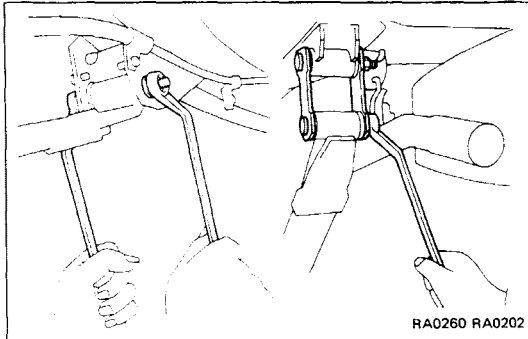
2. REMOVE SHOCK ABSORBER





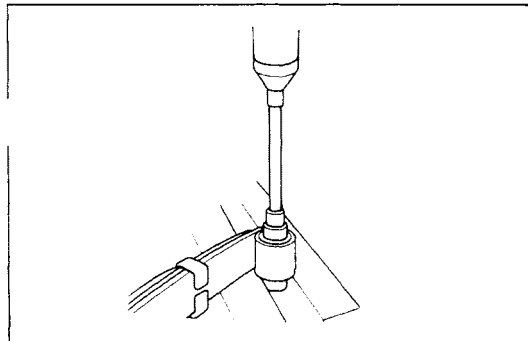
3. REMOVE U-BOLTS

- (a) Remove the U-bolt mounting nuts.
- (b) Remove the spring lower seat and pad.
- (c) Remove the U-bolt.
- (d) Remove the spring bumper. (4WD only)



4. REMOVE LEAF SPRING

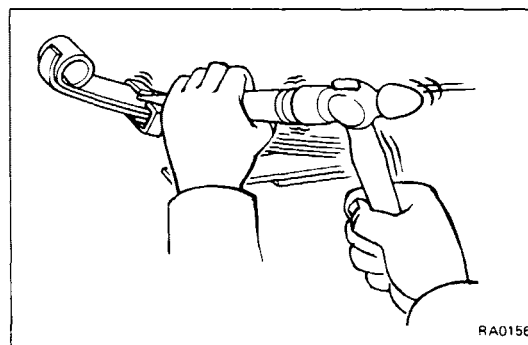
- (a) Remove the hanger pin bolt.
- (b) Disconnect the leaf from the bracket.
- (c) Remove the shackle pin mounting nuts.
- (d) Remove the shackle pin and plate and remove the leaf spring.



REPLACEMENT OF EYE BUSHING

REPLACE EYE BUSHINGS WITH PRESS

Using a press and socket wrench, replace the eye bushings.



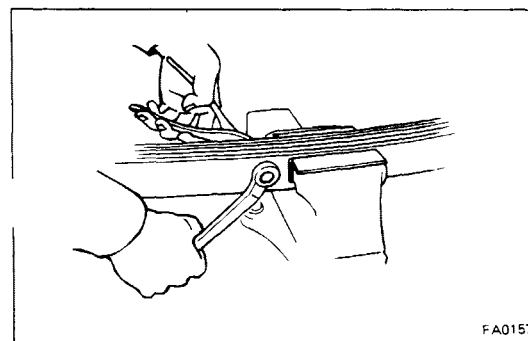
REPLACEMENT OF LEAF SPRING

1. BEND OPEN SPRING CLIP

Using a chisel, pry up the spring clip.

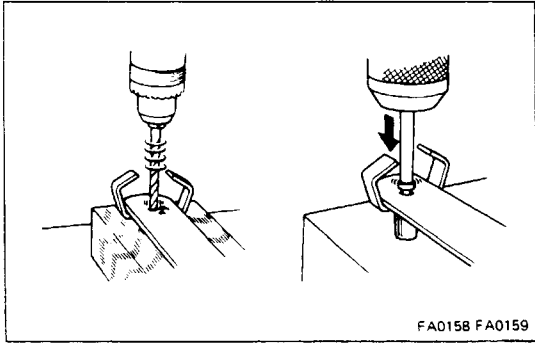
2. REMOVE CLIP BOLT (4 WD only)

Remove the clip bolt and collar from the clip



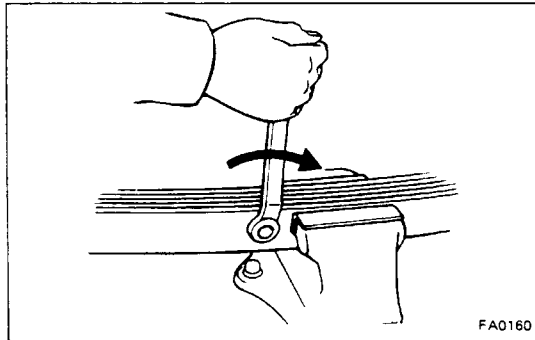
3. REMOVE CENTER BOLT

Hold the spring near the center bolt in a vise and remove the center bolt.



4. IF NECESSARY, REPLACE SPRING CLIP

- (a) Drill off the head of the rivet, and drive it out.
- (b) Install a new rivet into the holes of the spring leaf and clip. Then rivet with a press.



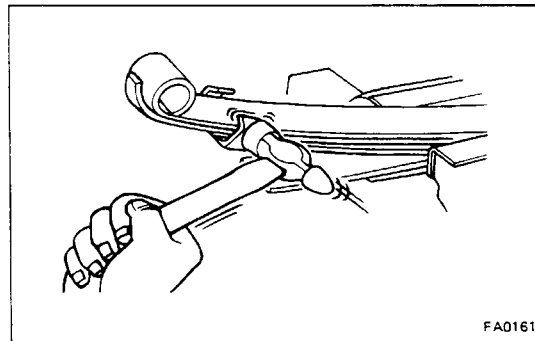
5. INSTALL SPRING CENTER BOLT

- (a) Align the leaf holes and secure the leaves with a vise.
- (b) Install and tighten the spring center bolt.

Torque: 450 kg-cm (33 ft-lb, 44 N·m)

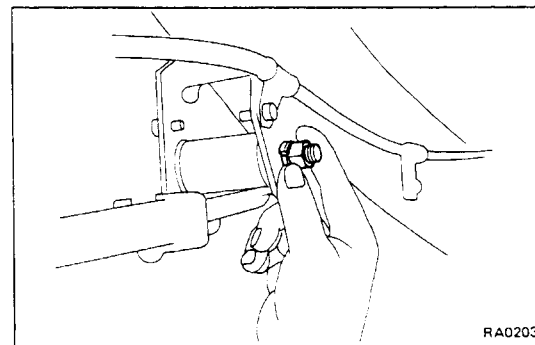
6. INSTALL CLIP BOLT (4WD only)

Position the collar and install the clip bolt.
Torque the bolt.



7. BEND SPRING CLIP

Using a hammer, bend the spring clip into position.

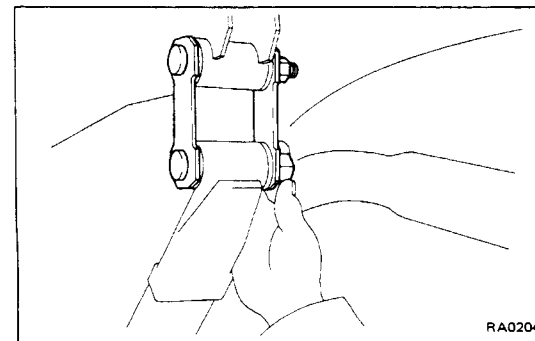


INSTALLATION OF LEAF SPRING

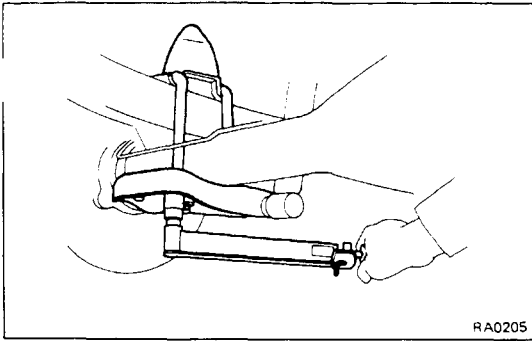
(See page RA-20)

1. INSTALL LEAF SPRING

- (a) Place the front end of leaf spring in the front bracket and install the hanger pin bolt.
- (b) Finger tighten the hanger pin nut.



- (c) Place the rear end of leaf spring in the rear bracket, and install the shackle pin.
- (d) Install the plate and finger tighten the nuts.

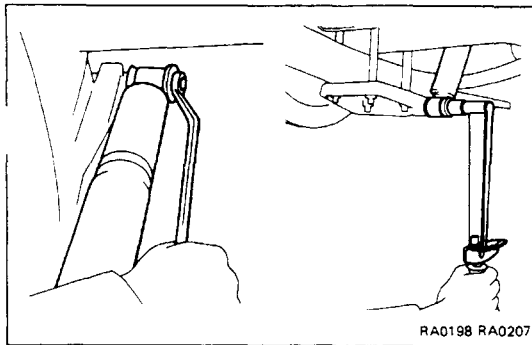
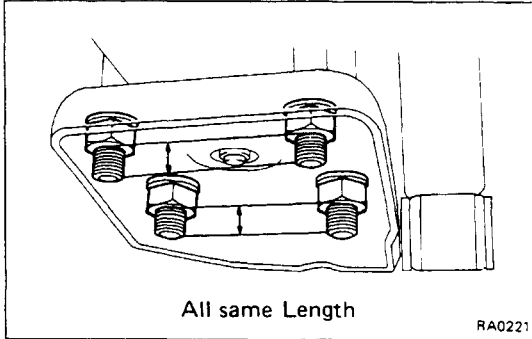


2. INSTALL U-BOLTS

- Install the spring bumper onto the leaf spring. (4WD only)
- Install the U-bolts onto the axle housing or leaf spring.
- Install the spring seat and nuts under the leaf spring or axle housing.
- Tighten the U-bolt mounting nuts.

Torque: 2WD 1,000 kg-cm (72 ft-lb, 98 N·m)
4WD 1,250 kg-cm (90 ft-lb, 123 N·m)

NOTE: Tighten the U-bolts so that the length of all the U-bolts under the spring seat are the same.



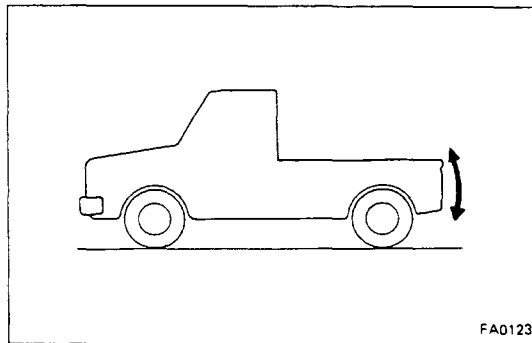
3. INSTALL REAR SHOCK ABSORBER

- Connect the shock absorber to the frame with the bolt. Tighten the bolt.

Torque: 2WD 260 kg-cm (19 ft-lb, 25 N·m)
4WD 650 kg-cm (47 ft-lb, 64 N·m)

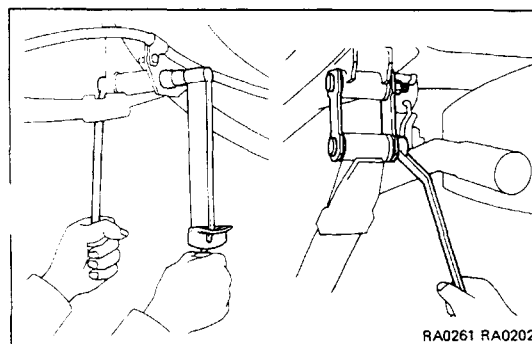
- Connect the shock absorber to the spring seat with the bolt. Tighten the bolt.

Torque: 2WD 260 kg-cm (19 ft-lb, 25 N·m)
4WD 650 kg-cm (47 ft-lb, 64 N·m)



4. STABILIZE SUSPENSION

Remove the stands and bounce the car to stabilize the suspension.



5. TIGHTEN HANGER PIN AND SHACKLE PIN

Tighten the hanger pin nut.

Torque: 930 kg-cm (67 ft-lb, 91 N·m)

Tighten the shackle pin nuts.

Torque: 930 kg-cm (67 ft-lb, 91 N·m)