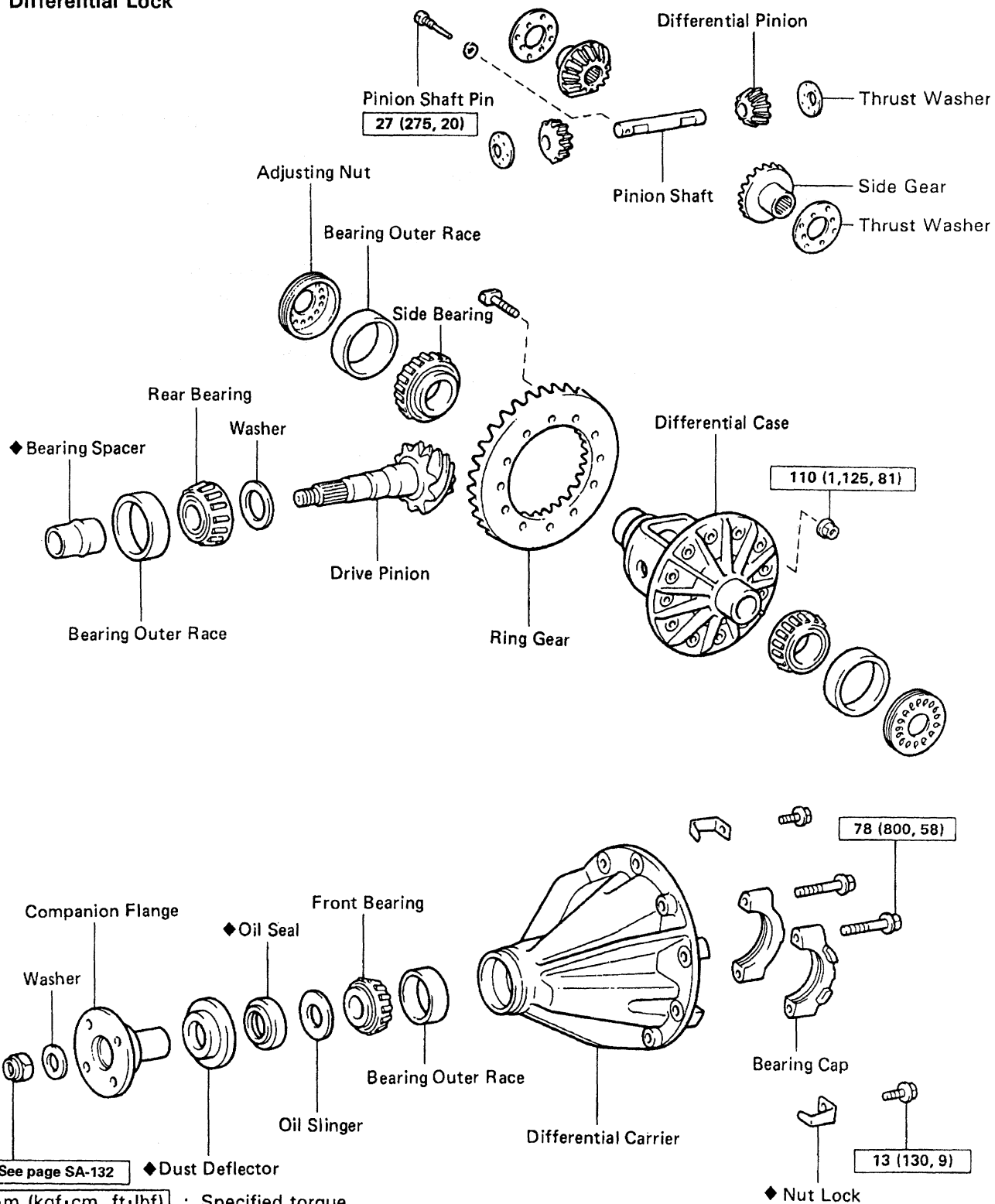


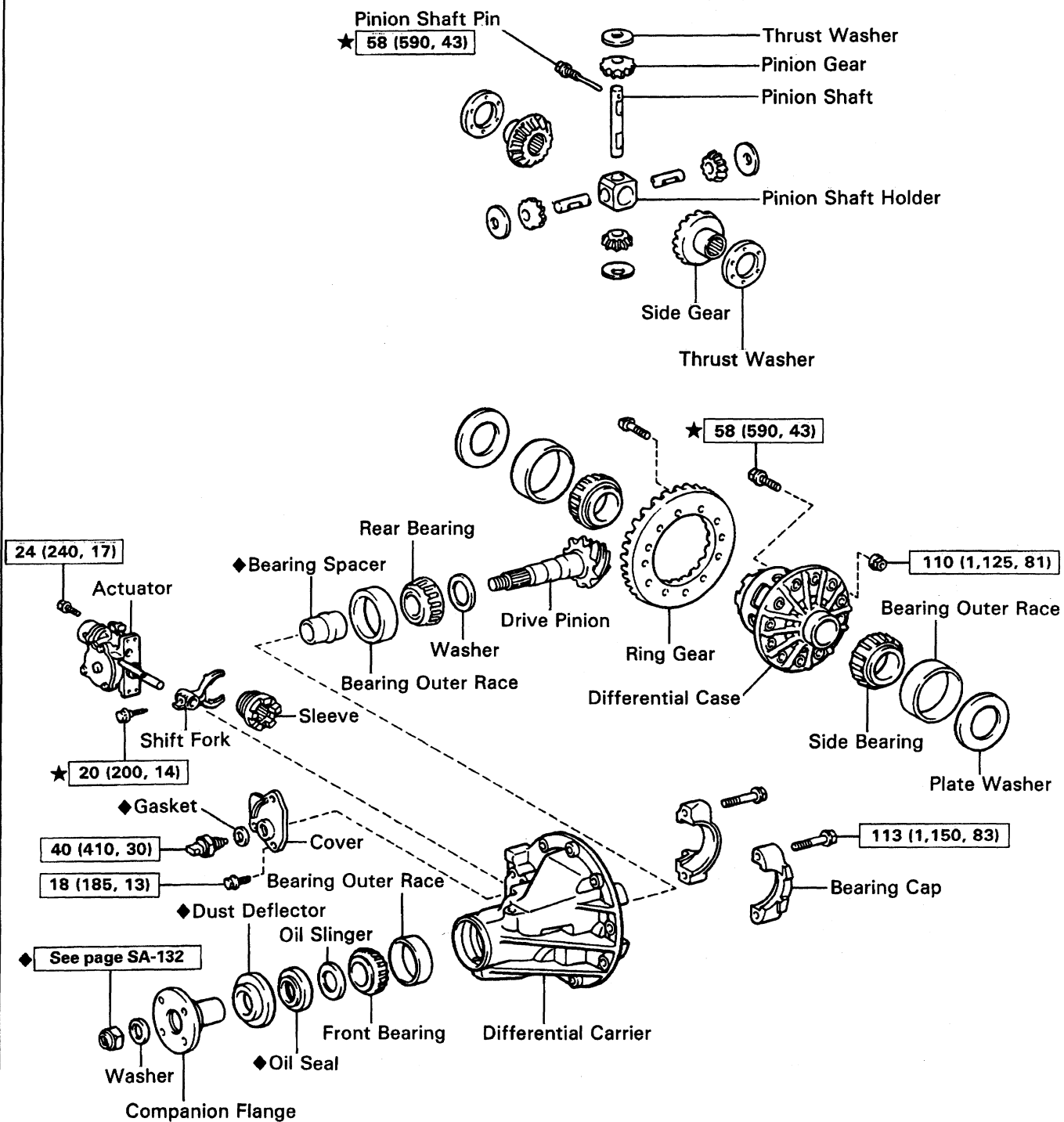
DIFFERENTIAL CARRIER COMPONENTS

SA183-01

w/o Differential Lock



w/ Differential Lock



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

◆ Non-reusable part

★ Precoated part

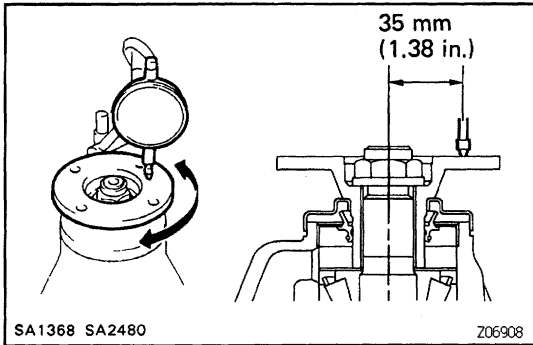
DIFFERENTIAL CARRIER INSPECTION

1. CHECK RUNOUT OF COMPANION FLANGE

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

Maximum vertical runout:

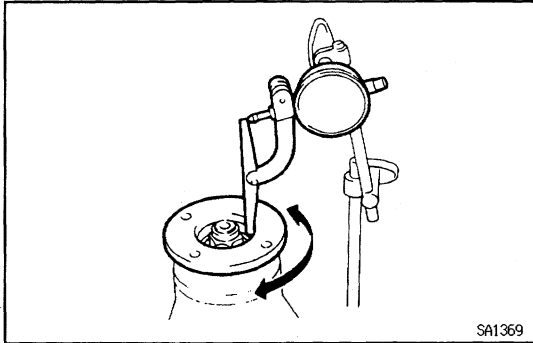
0.10 mm (0.0039 in.)



Maximum lateral runout:

0.10 mm (0.0039 in.)

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

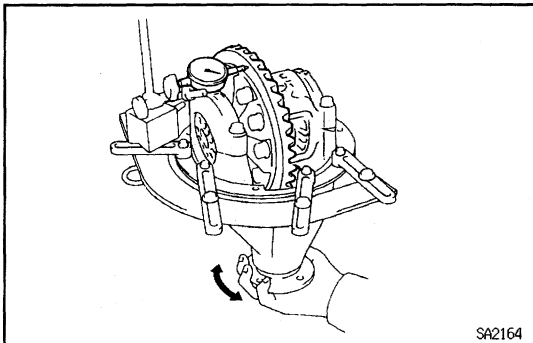


2. CHECK RING GEAR RUNOUT

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

Maximum runout:

0.10 mm (0.0039 in.)



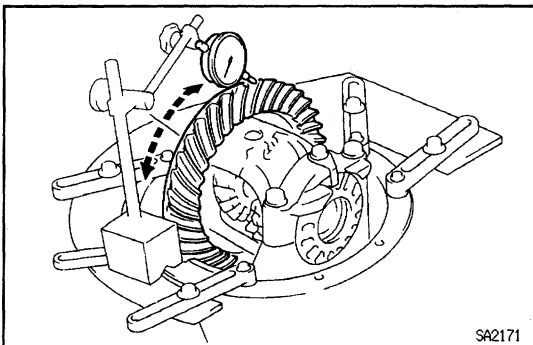
3. CHECK RING GEAR BACKLASH

If the backlash is not within specification, adjust the side bearing preload or repair as necessary.

Backlash:

0.15–0.20 mm (0.0059–0.0079 in.)

HINT: Perform the measurements at 3 or more positions around the circumference of the ring gear.

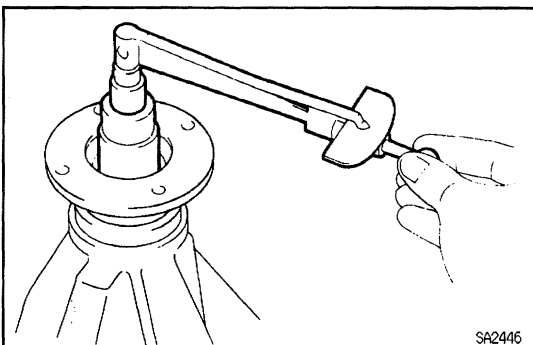


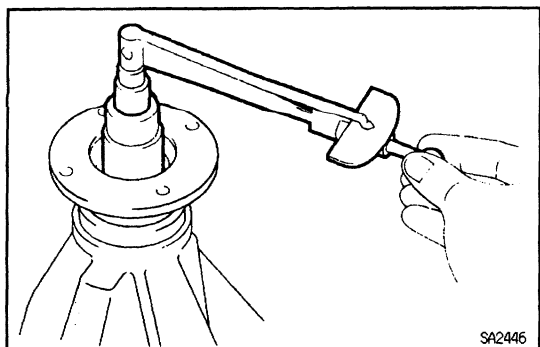
4. MEASURE DRIVE PINION PRELOAD

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

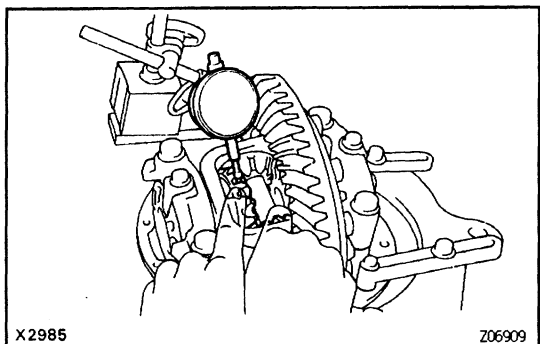
Preload at starting:

0.7 – 1.0 N·m (7–10 kgf·cm, 6.1–8.7 in.·lbf)





Using a torque wrench, measure the total preload.
 Total preload (at starting):
 1n addition to drive pinion preload.
 w/o Differential lock
 0.4–0.6 N–m (4–6 kgf–cm, 3.5–5.2 in.–lbf)
 w/ differential lock
 0.3–0.7 N–m (3–7 kgf–cm, 2.6–6.1 in.–lbf)
 If necessary, disassemble and inspect a differential.



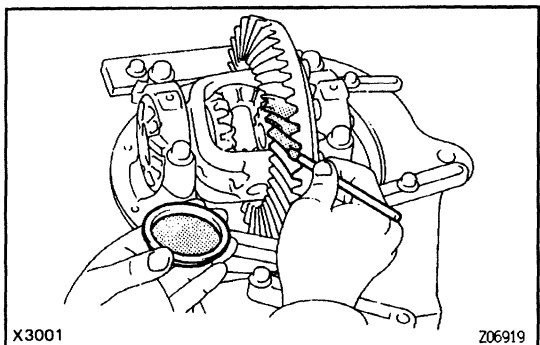
5. CHECK SIDE GEAR BACKLASH

Measure the side gear backlash while holding 1 pinion gear toward the case.

Standard backlash:

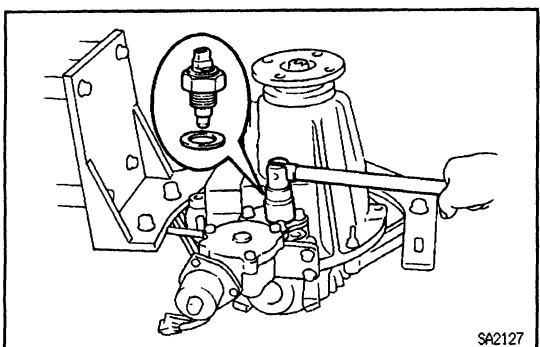
0.02–0.20 m m (0.0008–0.0079 in.)

If the backlash is out of specification, install the correct thrust washers. (See page [SA-124](#))



6. CHECK TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION

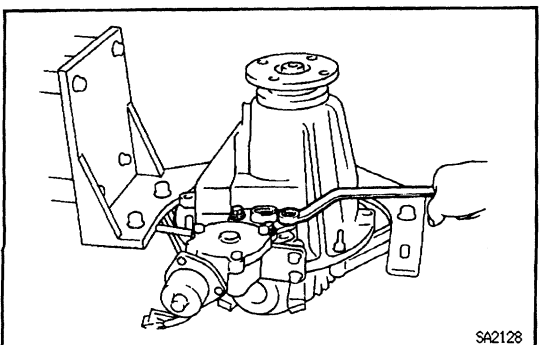
(See page [SA-131](#))



DIFFERENTIAL CARRIER DISASSEMBLY

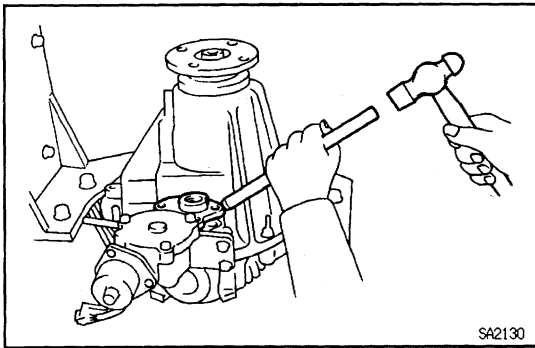
(See page [SA-110](#))

1. (w/ DIFFERENTIAL LOCK) REMOVE INDICATOR SWITCH

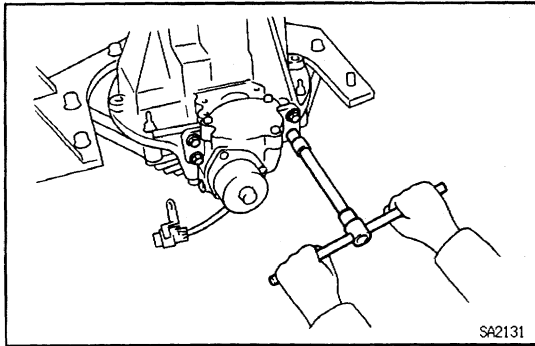


2. (w/ DIFFERENTIAL LOCK) REMOVE COVER

(a) Remove the 3 bolts.

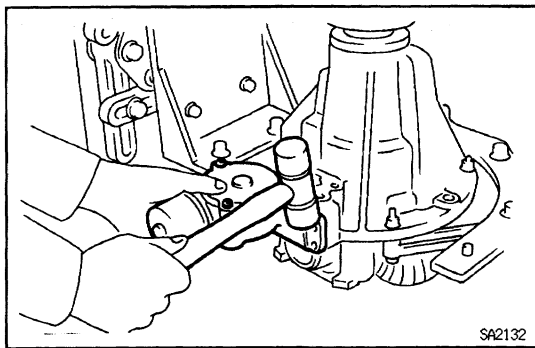


(b) Using a brass bar and hammer, remove the cover.

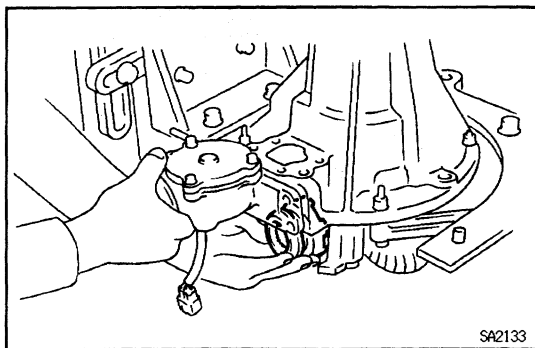


3. (w/ DIFFERENTIAL LOCK) REMOVE SLEEVE

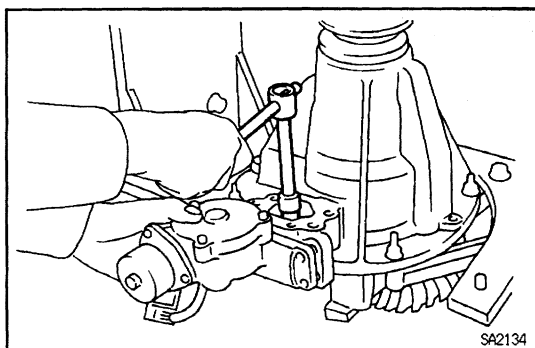
(a) Remove the 4 bolts.



(b) Using a plastic hammer, tap off the actuator.



(c) Pull the actuator, remove the sleeve.

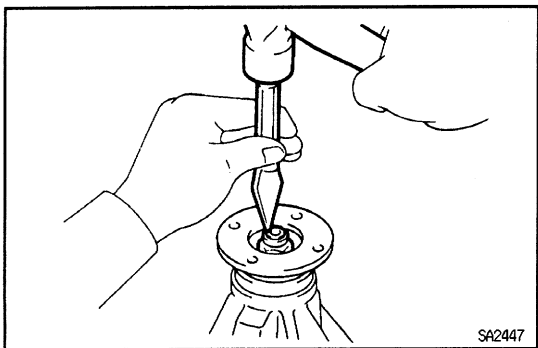


4. (w/ DIFFERENTIAL LOCK) REMOVE ACTUATOR AND SHIFT AND SHIFT FORK

(a) Remove the shift fork shaft bolt.

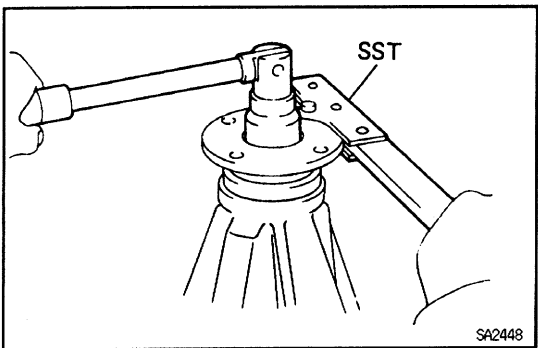


(b) Pull out the actuator, remove the shift fork.



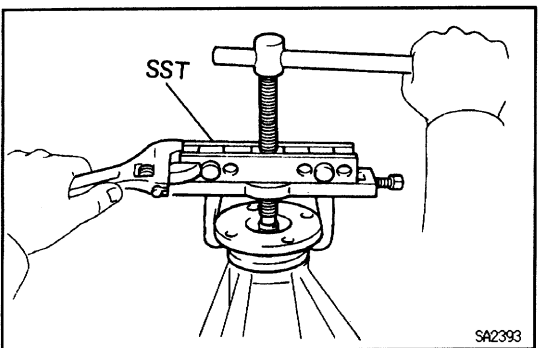
5. REMOVE COMPANION FLANGE

(a) Using a chisel and hammer, unstake the nut.



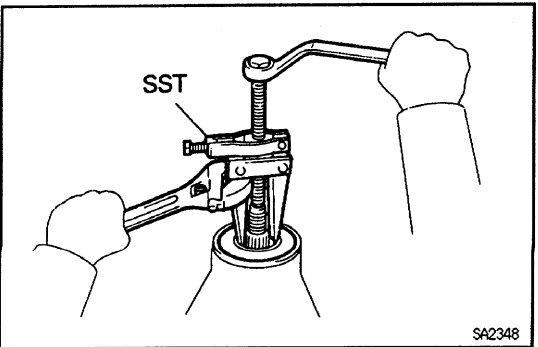
(b) Using SST to hold the flange, remove the nut and plate washer.

SST 09330-00021



(c) Using SST, remove the companion flange.

SST 09950-20017

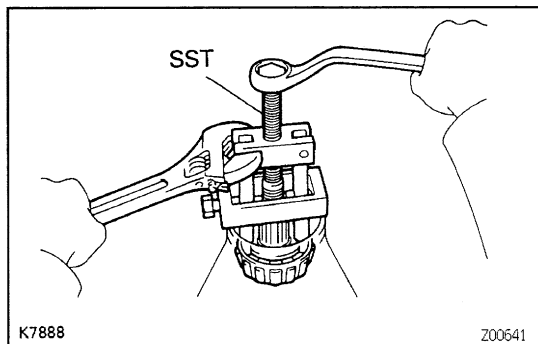


6. REMOVE OIL SEAL AND OIL SLINGER

(a) Using SST, remove the oil seal from the differential carrier.

SST 09308-10010

(b) Remove the oil slinger.

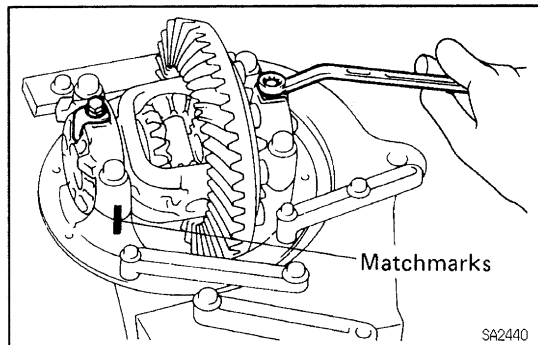


7. REMOVE FRONT BEARING

Using SST, remove the front bearing from the drive pinion.

SST 09556 - 22010

If the front bearing is damaged or worn, replace the bearing.

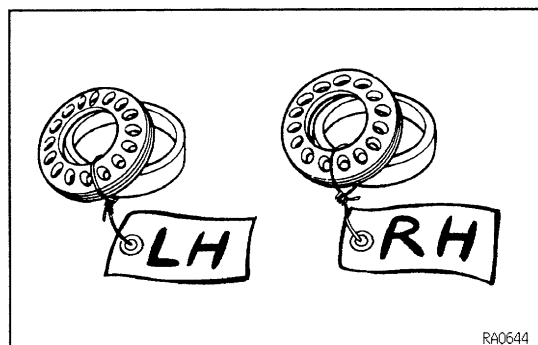


8. REMOVE DIFFERENTIAL CASE ASSEMBLY

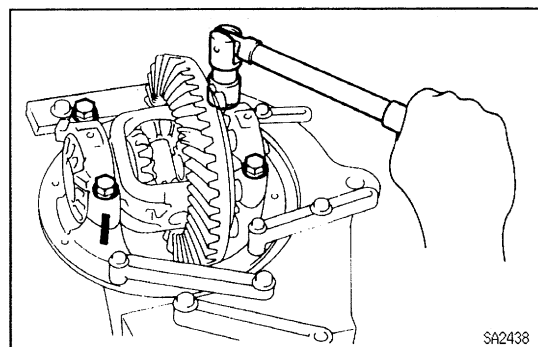
(w/o DIFFERENTIAL LOCK)

(a) Place the matchmarks on the bearing cap and differential carrier.

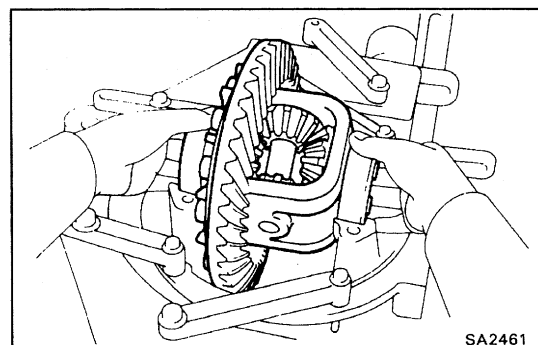
(b) Remove the 2 adjusting nut locks.



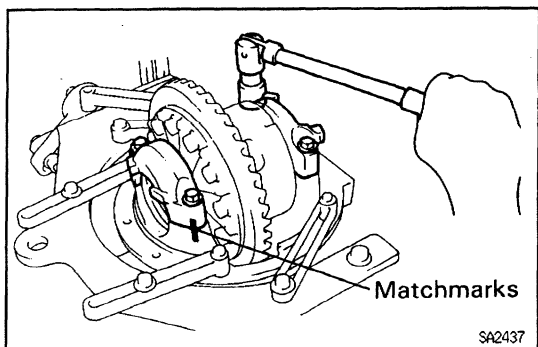
HINT: Tag the disassembled parts to show the location for reassembly.



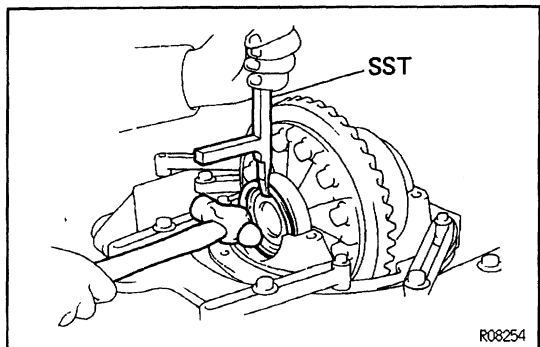
(c) Remove the 2 bearing caps and 2 adjusting nuts.



(d) Remove the differential case with bearing outer races from the carrier.

**(w/ DIFFERENTIAL LOCK)**

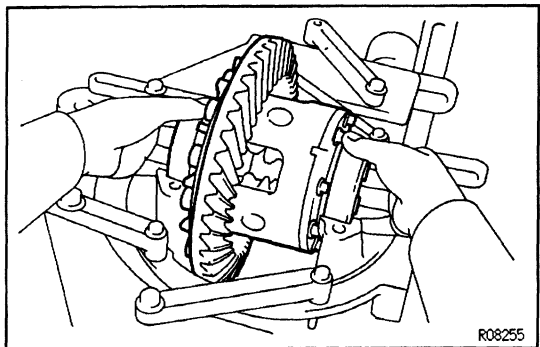
- (a) Place matchmarks on the bearing cap and differential carrier.
- (b) Remove the 4 bolts and the 2 bearing caps.



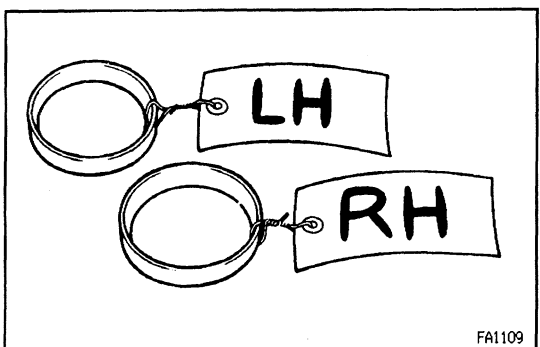
- (c) Using SST, remove the plate washer.

SST 09504-2210

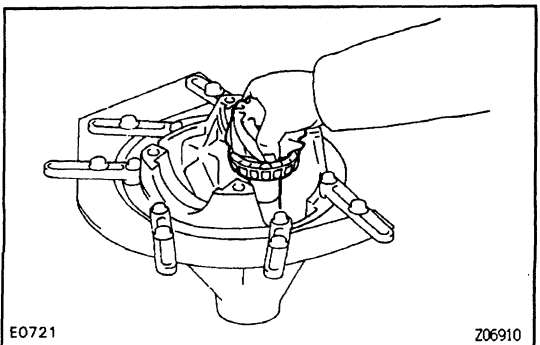
HINT: Measure the plate washer thickness and note it.



- (d) Remove the differential case with the side bearing outer races from the differential carrier.

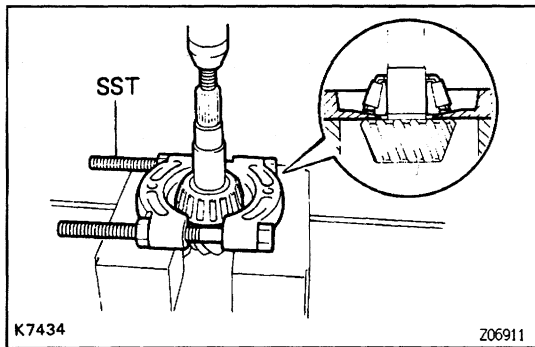


HINT: Tag the bearing outer races to show the location for reassembly.



9. REMOVE DRIVE PINION AND BEARING SPACER FROM DIFFERENTIAL CARRIER

- (a) Remove the drive pinion with the rear bearing.
- (b) Remove the bearing spacer.



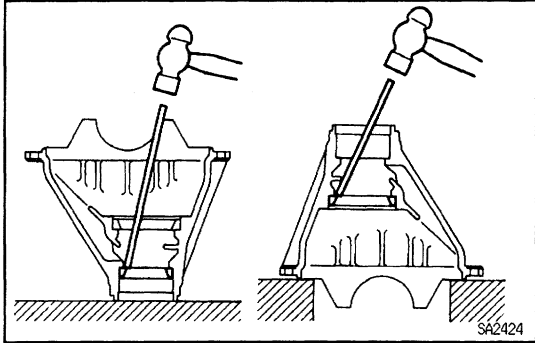
10. REMOVE DRIVE PINION REAR BEARING

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

SST 09950-00020

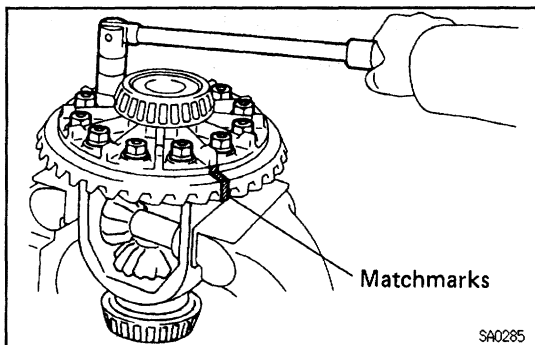
HINT: If the drive pinion or ring gear are damaged, replace them as a set.

(b) Remove the plate washer from the drive pinion.



11. REMOVE FRONT AND REAR BEARING OUTER RACES

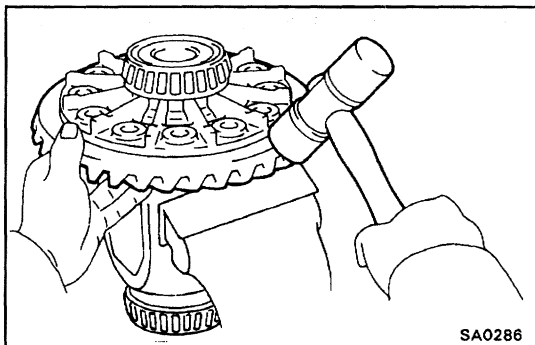
Using a hammer and brass bar, drive out the outer race.



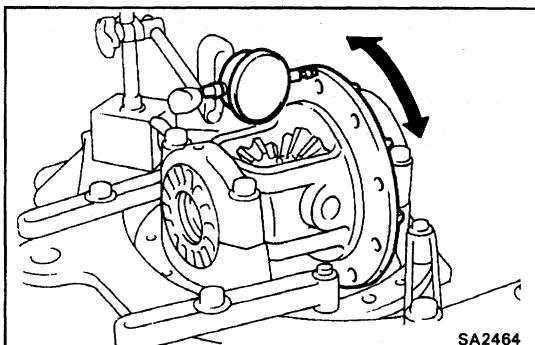
12. REMOVE RING GEAR

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

(b) Remove the ring gear set nuts and bolts.



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



13. CHECK DIFFERENTIAL CASE RUNOUT

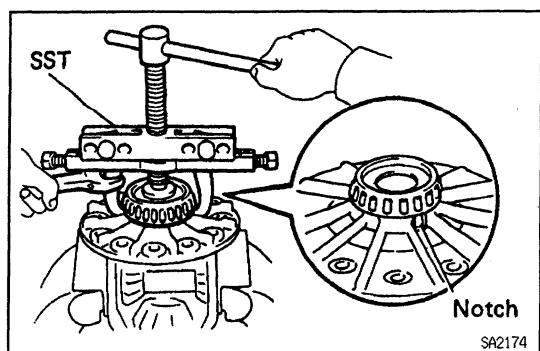
(a) Install the differential case in the differential carrier and tighten the adjusting nut just to where there is no play in the bearing.

(b) Using a dial indicator, measure the differential case runout.

Maximum case runout:

0.07 mm (0.0028 in.)

(c) Remove the differential case.



14. REMOVE SIDE BEARING FROM DIFFERENTIAL CASE

(w/o DIFFERENTIAL LOCK)

Using SST, remove the side bearing from the differential case.

SST 09950-20017

(w/ DIFFERENTIAL LOCK)

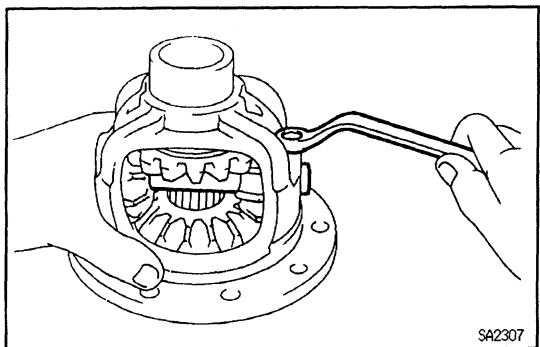
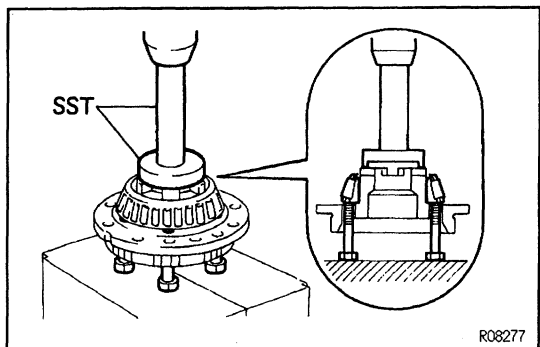
(a) Using SST, remove the side bearing (ring gear side).

HINT: Fix the claws of SST to the notches in the differential case.

(b) Using 4 bolts and SST, remove the side bearing (cover side).

HINT: Fix the claws of SST to the notches in the differential case.

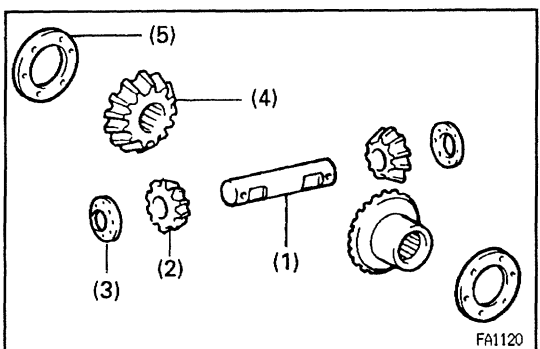
SST 09550-10012 (09252-10010, 09557-10010)



15. DISASSEMBLE DIFFERENTIAL CASE

(w/o DIFFERENTIAL LOCK)

(a) Remove the pinion shaft pin.



(b) Remove the following parts:

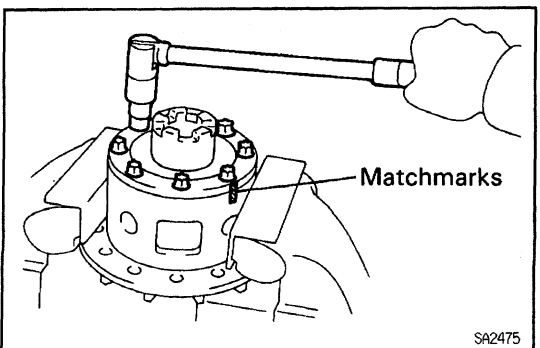
(1) Pinion shaft

(2) Pinion gears

(3) Pinion gear thrust washers

(4) Side gears

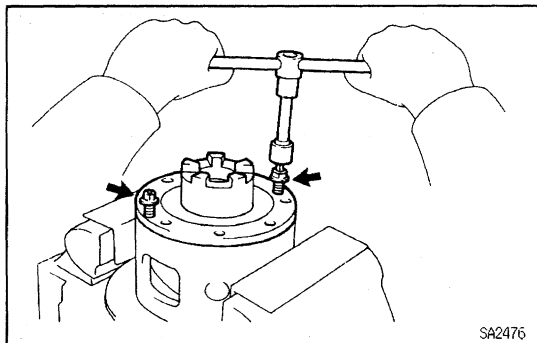
(5) Side gear thrust washers



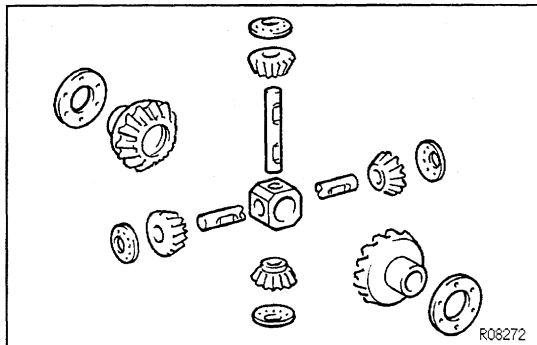
(w/ DIFFERENTIAL LOCK)

(a) Place matchmarks on the case and cover.

(b) Using a torx socket wrench (09044-00020), remove the 5 set bolts and 3 pinion shaft pins.

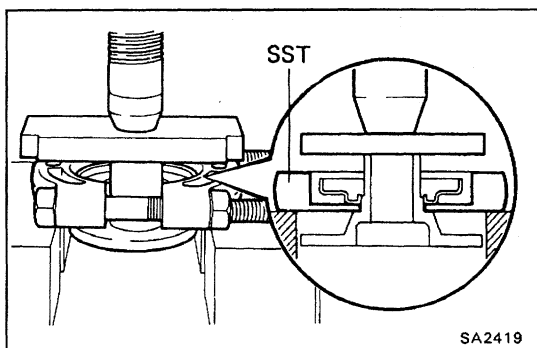


(c) Using 2 cover- installation bolts, separate the cover and case.



(d) Remove the following parts from the case.

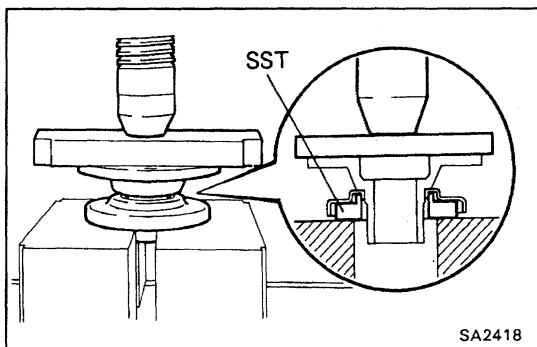
- Side gear (2 pieces)
- Side gear thrust washer (2 pieces)
- Pinion gear (4 pieces)
- Pinion thrust washer (4 pieces)
- Pinion shaft (3 pieces)
- Pinion shaft holder



COMPANION FLANGE DUST DEFLECTOR REPLACEMENT

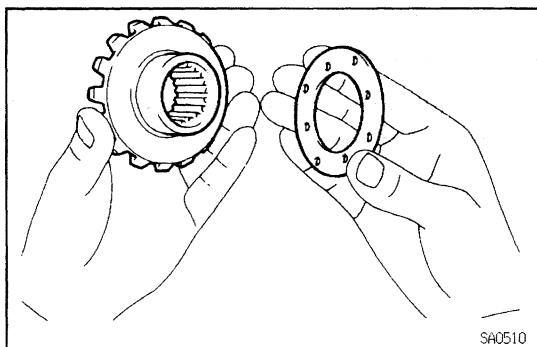
1. REMOVE DUST DEFLECTOR

Using SST and a press, remove the dust deflector.
SST 09950-00020



2. INSTALL NEW DUST DEFLECTOR

Using SST and a press, install the new dust deflector.
SST 09726 - 40010



DIFFERENTIAL CARRIER ASSEMBLY

(See page [SA-110](#))

1. (w/o DIFFERENTIAL LOCK)

ASSEMBLE DIFFERENTIAL CASE

(a) Install the proper thrust washer and side gears.

Using the table below, select the thrust washers which will ensure that the backlash is within specification.

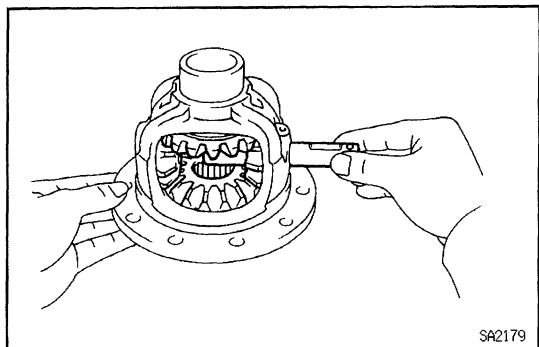
Try to select washers of the same size for both sides.

Standard backlash:

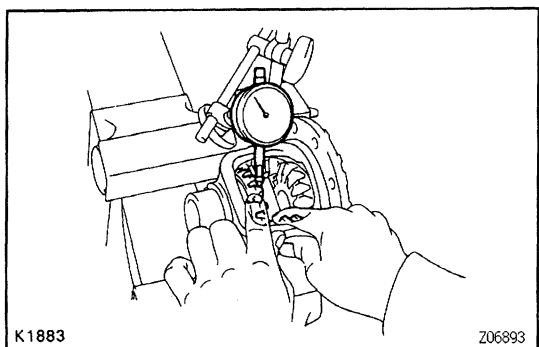
0.02–0.20 mm (0.0008–0.0079 in.)

Thrust washer thickness:

Thickness mm (in.)	Thickness mm (in.)
1.60 (0.0630)	1.90 (0.0748)
1.75 (0.0689)	2.05 (0.0807)



- (b) Install the side gears with the thrust washers, pinion gears, pinion gear thrust washers and pinion shaft.
HINT: Align the hole for the pinion shaft and the differential case hole.

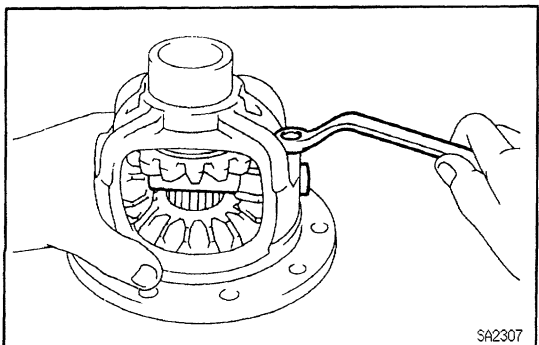


- (c) Using a dial indicator, measure the side gear backlash while holding 1 pinion gear toward the case.

Standard backlash:

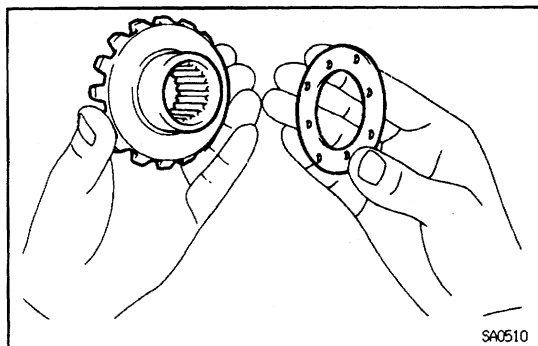
0.02–0.20 mm (0.0008–0.0079 in.)

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



- (d) install the pinion shaft pin.

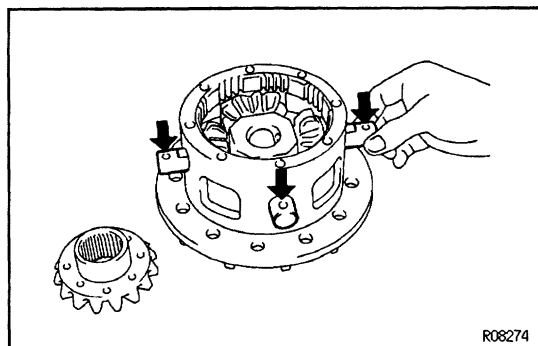
Torque: 27 N·m (275 kgf·cm, 20 ft·lbf)



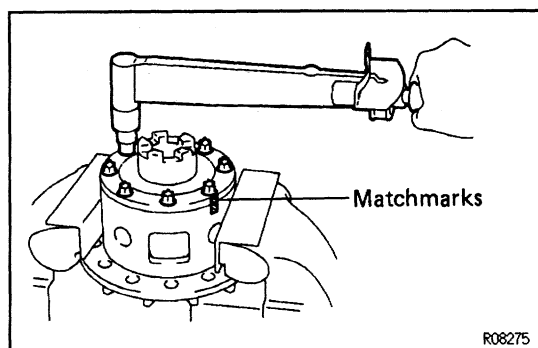
2. (w/ DIFFERENTIAL LOCK)

MEASURE SIDE GEAR BACKLASH

- (a) Apply gear oil to each part.
- (b) Install the thrust washer to the side gear.
- (c) Install the thrust washer to the pinion.

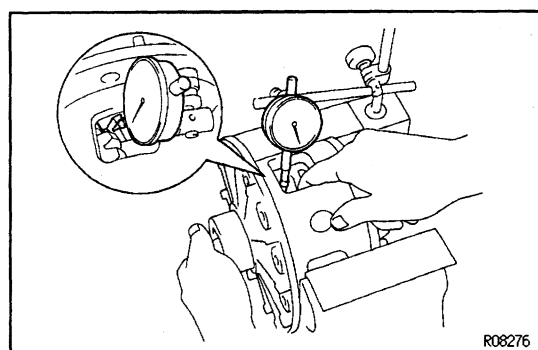


- (d) Install the side gear into the case.
- (e) Install the holder into the case.
- (f) Install the 4 pinion gears.
- (g) Align the pinion shaft hole and case pinion shaft pin hole, and install the pinion shaft.
- (h) Install the side gear to the cover.



- (i) Align the matchmarks, install the case and cover.
- (j) Using a torx socket wrench (09044-00020), torque the 5 bolts and 3 pinion shaft pins.

Torque: 58 N-m (590 kgf•cm, 43 ft-lbf)



- (k) Holding the side gear, measure the backlash.

Backlash: 0.02–0.20 mm (0.0008 – 0.0079 in.)

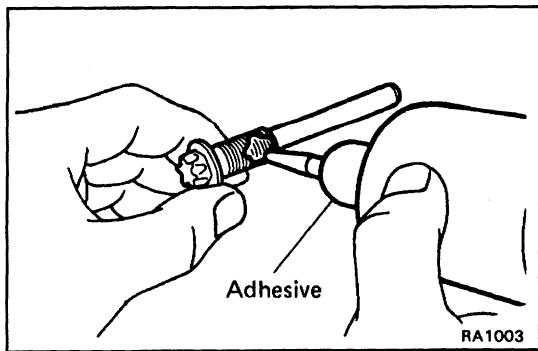
HINT: Measure at all 4 locations.

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

Thrust washer thickness:

Thickness mm (in.)	Thickness mm (in.)
1.60 (0.0630)	1.90 (0.0748)
1.75 (0.0689)	2.05 (0.0807)

- (l) After measuring backlash, remove the 5 set bolts and 3 pinion shaft pins.

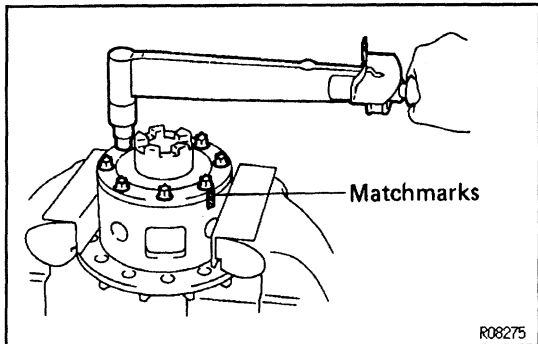


3. (w/ DIFFERENTIAL LOCK)

ASSEMBLE DIFFERENTIAL CASE

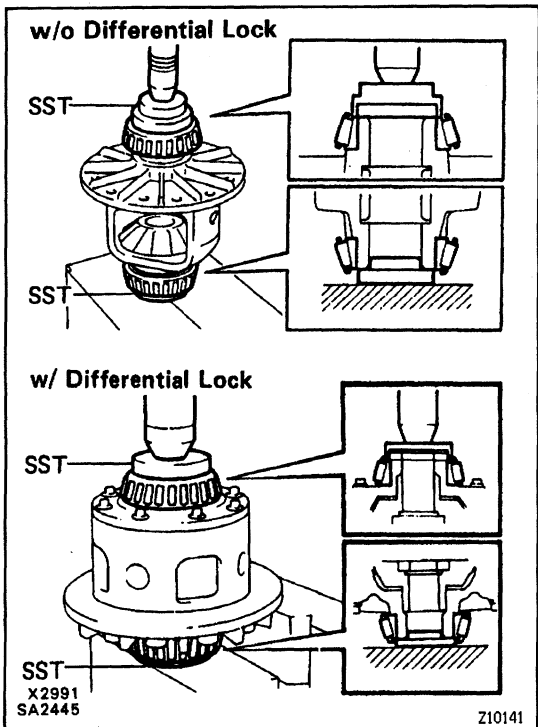
- Clean the thread of the bolts, pinion shaft pins, case and cover with the white gasoline.
- Coat the threads of the bolts and pinion shaft pins with adhesive.

Adhesive: Part No. 08833-00070, THREE BOND 1324 or equivalent



- Align the matchmarks, install the case and cover.
- Using a torx socket wrench (09044-00020), torque the 5 bolts and 3 pinion shaft pins.

Torque: 58 N-m (590 kgf-cm. 43 ft-lbf)



4. INSTALL SIDE BEARINGS

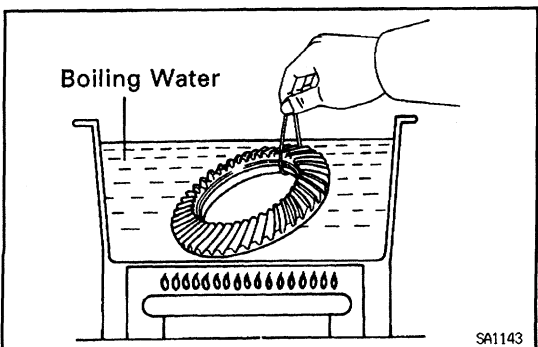
Using a press and SST, install the side bearings on the differential case.

SST w/o Differential lock: 09315-00021

09550-10012(09558-10010)

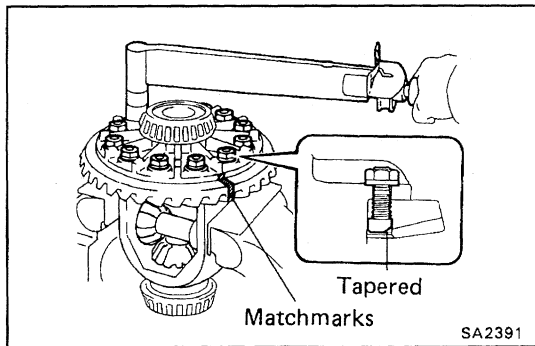
w/ Differential lock: 09550-60010

09550 -10012(09558 -10010)



5. INSTALL RING GEAR ON DIFFERENTIAL CASE

- Clean the contact surfaces of the differential case and ring gear.
- Heat the ring gear to about 100 °C (212 °F) in boiling water.
- After the moisture on the ring gear has completely evaporated, quickly install the ring gear to the differential case.



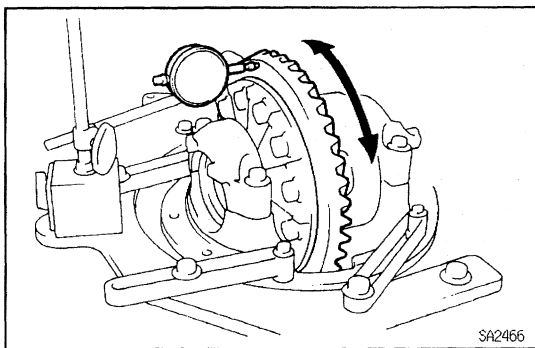
- (d) Align the matchmarks on the ring gear and differential case.
- (e) Temporarily install the set bolts and nuts so that the bolt holes in the ring gear and differential case are not misaligned.

NOTICE:

- Install the bolts so that the tapered part of the bolt is on the ring gear side.
- The ring gear set nuts should not tighten until the ring gear has cooled sufficiently.

- (f) After- the ring gear cools down enough, tighten the set bolts uniformly and a little at a time.

Torque: 110 N-m (1,125 kgf-cm, 81 ft-lbf)

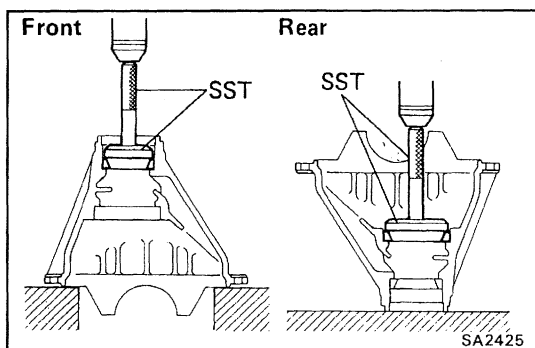
**6. CHECK RING GEAR RUNOUT**

- (a) Install the differential case onto the carrier and tighten the adjusting nut just to where there is no play in the bearings.
- (b) Check the ring gear runout.

Maximum runout:

0.10 mm (0.0039 in.)

- (c) Remove the differential case.

**7. INSTALL DRIVE PINION FRONT AND REAR BEARING OUTER RACES**

Using SST and a press, install the outer races.

Front side:

SST 09608 - 35014 (09608 - 06020, 09608 - 06110)

Rear side:

SST 09608-35014 (09608-06020, 09608-06180)

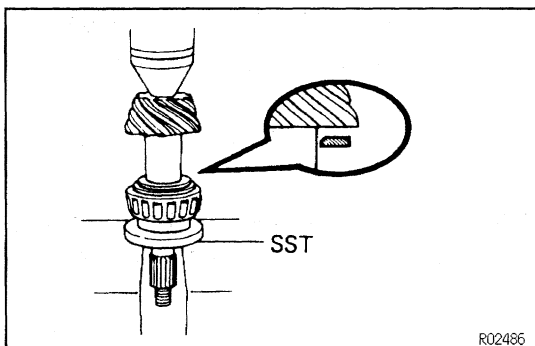
8. INSTALL DRIVE PINION REAR BEARING

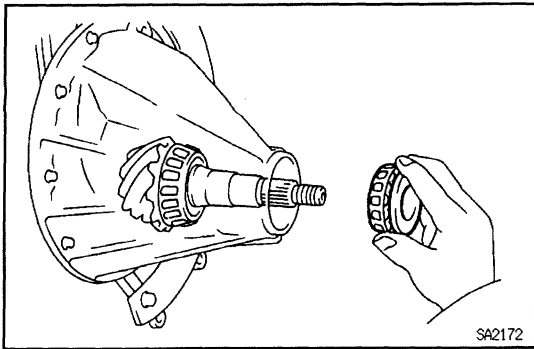
- (a) Install the washer on the drive pinion with the chamfered end facing the pinion gear.

HINT: First fit a washer with the same thickness as the washer which was removed, then after checking the tooth contact pattern, replace the washer with one of a different thickness if necessary.

- (d) Using a press and SST, press in the rear bearing onto the drive pinion.

SST 09506 - 35010



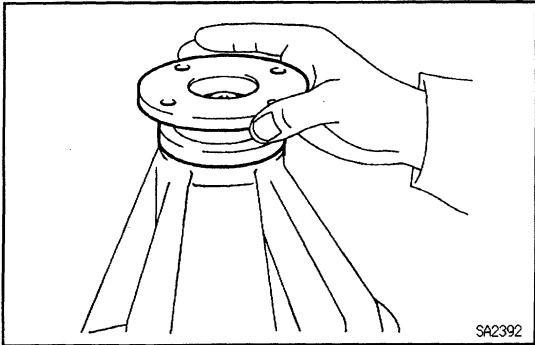


9. TEMPORARILY ADJUST DRIVE PINION PRELOAD

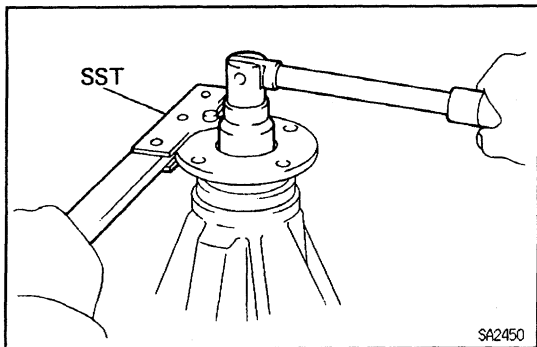
- (a) Install the drive pinion and front bearing.

HINT: Assemble the spacer and oil seal after adjusting the gear contact pattern.

- (b) Install the oil slinger.



- (c) Install the companion flange and plate washer.



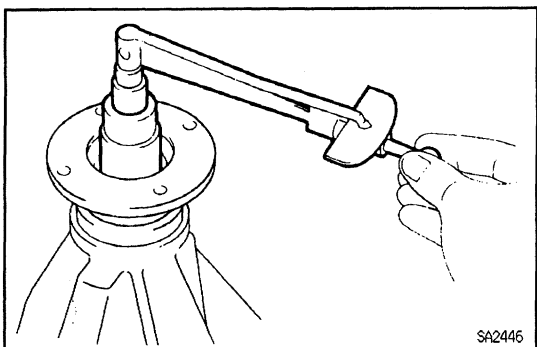
- (d) Adjust the drive pinion preload by tightening the companion flange nut.

Using SST to hold the flange, tighten the nut.

SST 09330-00021

NOTICE:

- Coat the nut and screw of the drive pinion with gear oil.
- As there is no spacer, tighten a little at a time, being careful not to overtighten.



- (e) Using a torque wrench, measure the preload.

Preload (starting):

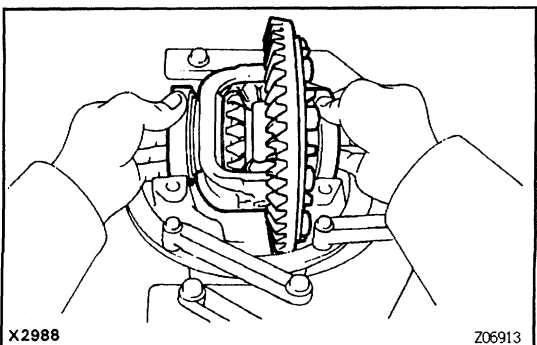
New bearing

1.3–2.0 N·m (13–20 kgf·cm, 11.3–17.4 in.-lbf)

Reused bearing

0.7–1.0 N·m (7–10 kgf·cm, 6.1–5.7 in.-lbf)

HINT: Measure the total preload after first turning the bearing clockwise and counterclockwise several times to snug down the bearing.



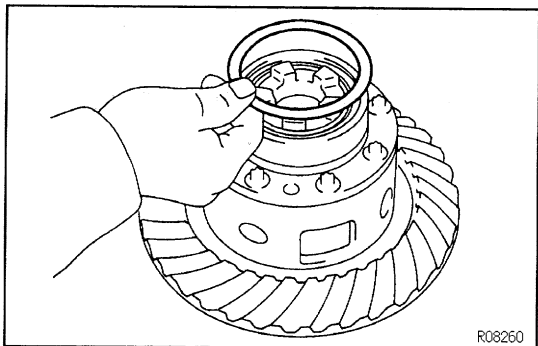
10. INSTALL DIFFERENTIAL CASE IN CARRIER

(w/o DIFFERENTIAL LOCK)

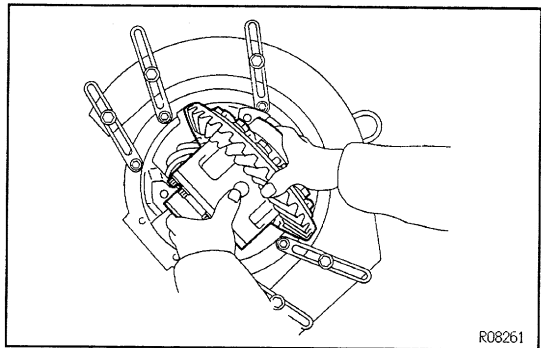
- (a) Place the bearing outer races on their respective bearings. Make sure the left and right outer races are not interchanged.

- (b) Install the case in the carrier.

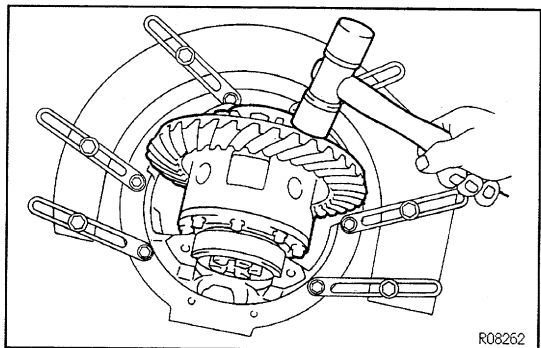
HINT: Make sure that there is backlash between the ring gear and drive pinion.

**(w/ DIFFERENTIAL LOCK)**

- (a) Place the bearing outer races on their respective bearings. Make sure the left and right races are not interchanged.
- (b) Install the assembled plate washer onto the side bearing.



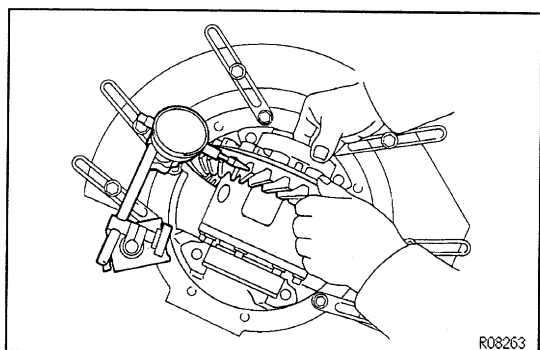
- (c) Install the differential case in the carrier.



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

HINT: If it is difficult to install the differential case into the carrier, replace the plate washer with a thinner one.

However, select a plate washer that allows no clearance between it and the carrier.

**11. (w/ DIFFERENTIAL LOCK)****ADJUST RING GEAR BACKLASH**

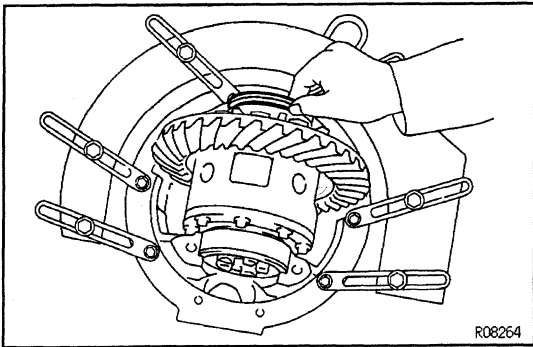
- (a) Hold the side bearing of the ring gear side and measure the backlash.

Backlash (reference): 0.15 mm (0.0059 in.)

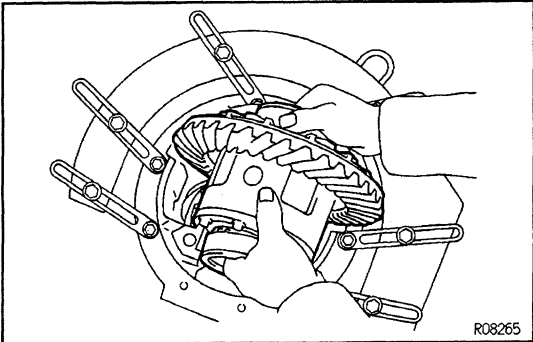
- (b) Select a case cover side plate washer using the backlash as reference.

Side plate washer thickness:

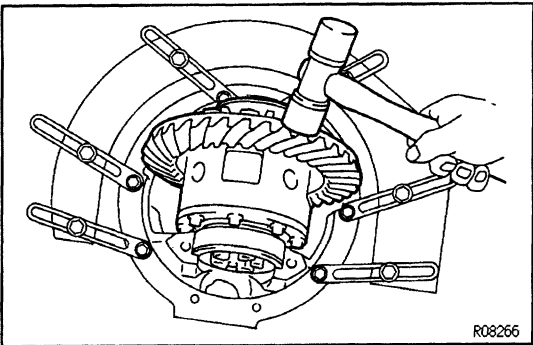
Mark	Thickness mm (in.)	Mark	Thickness mm 0 n.)	Mark	Thickness mm 0 n.)	Mark	Thickness mm 0 (in.)
1	2.67 (0.1051)	7	2.85 (0.1122)	13	3.03 (0.1193)	19	3.21 (0.1264)
2	2.70 (0.1063)	8	2.88 (0.1134)	14	3.06 (0.1205)	20	3.24 (0.1276)
3	2.73 (0.1075)	9	2.91 (0.1146)	15	3.09 (0.1217)	21	3.27 (0.1287)
4	2.76 (0.1087)	10	2.94 (0.1157)	16	3.12 (0.1228)	22	3.30 (0.1299)
5	2.79 (0.1098)	11	2.97 (0.1169)	17	3.15 (0.1240)	23	3.33 (0.1311)
6	2.82 (0.1110)	12	3.00 (0.1181)	18	3.18 (0.1252)		



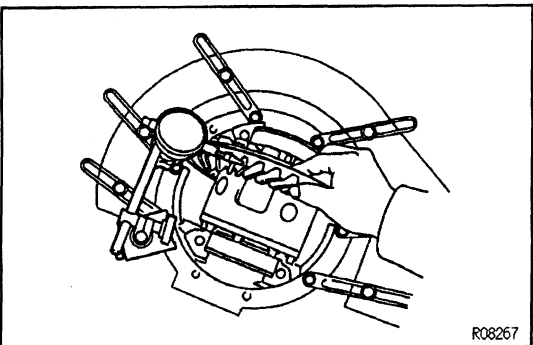
- (c) Select a ring gear side plate washer of a thickness which eliminates any clearance between the plate washer and carrier.



- (d) Remove the plate washers and differential carrier.
 (e) Install the plate washer into the lower part of the carrier.
 (f) Place the plate washer onto the differential case together with the outer race, and install the differential case with the outer race into the carrier.



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



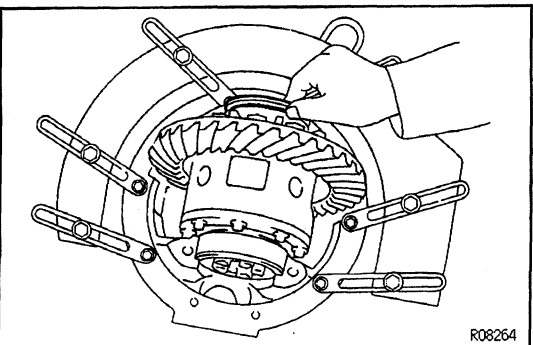
- (h) Measure the ring gear backlash.

Backlash: 0.15 – 0.20 mm (0.0059 – 0.0079 in.)

If not within specification, adjust by either increasing or decreasing the number of washers on both sides by an equal amount.

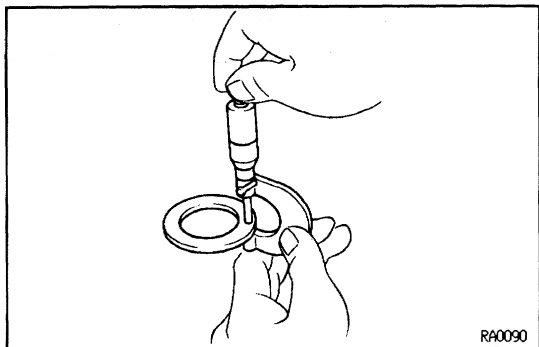
HINT: There should be no clearance between the plate washer and case.

Insure that there is ring gear backlash.

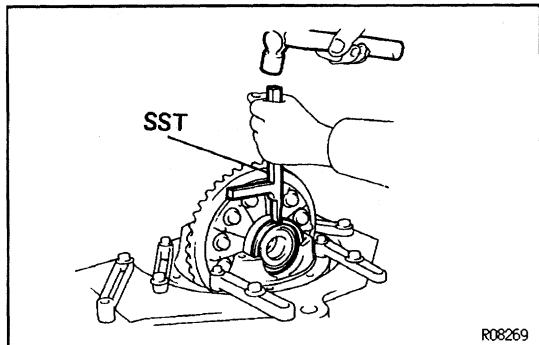


12. (w/ DIFFERENTIAL LOCK) ADJUST SIDE BEARING PRELOAD

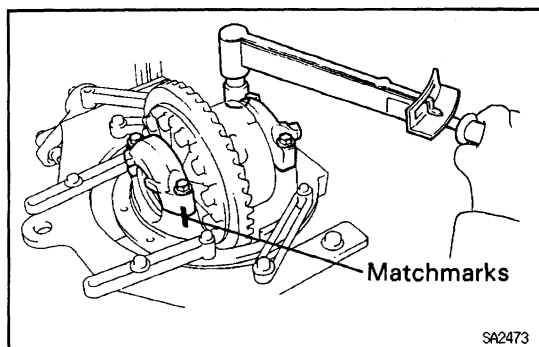
- (a) After adjustment with the backlash as reference, remove the ring gear side plate washer.



- (b) Measure the thickness of the removed plate washer.
- (c) Install a new thicker washer of 0.06 – 0.09 mm (0.0024 – 0.0035 in.) than the washer removed.
HINT: Select a washer which can be pressed in 2/3 of the way with finger.

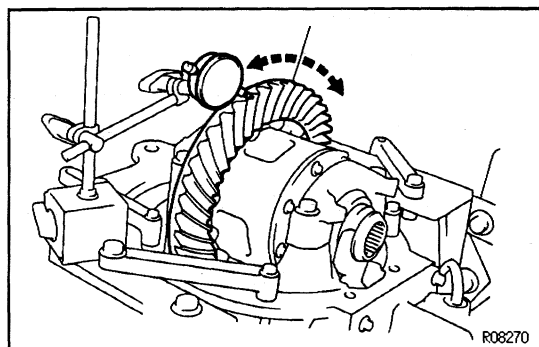


- (d) Using SST, tap in the plate washer.
SST 08504-22010:



- (e) Align the matchmarks on the cap and carrier.
- (f) Tighten the 4 bearing cap bolts to the specified torque.

Torque: 113 N-m (1,150 kgf-cm, 83 ft-lbf)



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

Backlash: 0.15 – 0.20 mm (0.0059 – 0.0079 in.)

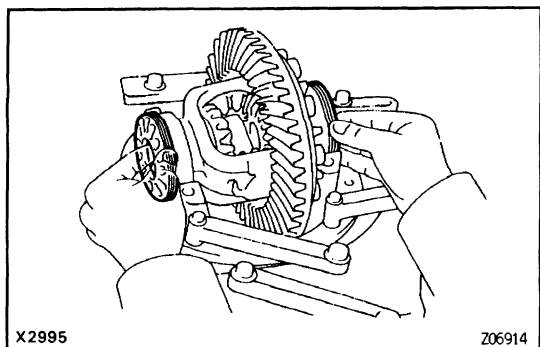
If not within standard, follow the procedure listed below.

If backlash is greater than specification:

Replace the cover side washer with a thicker washer. When doing so replace the ring gear side plate washer with one having a thickness equalling the amount the cover side plate washer thickness was decreased.

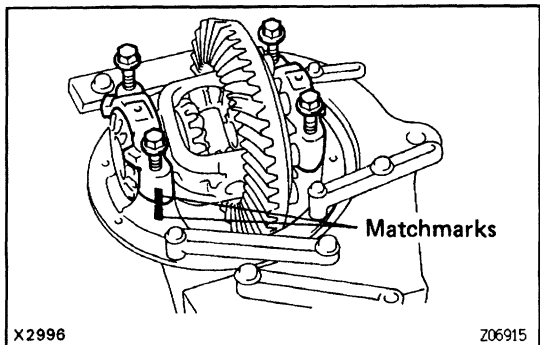
If backlash is less than specification:

Replace the cover side washer with a thicker washer. When doing so replace the ring gear side plate washer with one having a thickness equalling the amount the cover side plate washer thickness was increased.



13. (w/o DIFFERENTIAL LOCK) INSTALL ADJUSTING NUTS

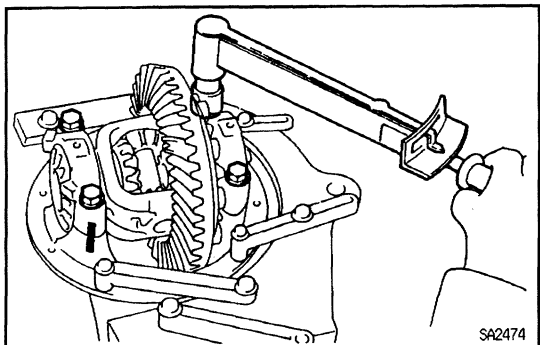
Install the adjusting nuts on the carrier, making sure the nuts are threaded properly.



14. (w/o DIFFERENTIAL LOCK) INSTALL BEARING CAPS

Align the matchmarks on the cap and carrier. Screw in the 2 bearing cap bolts 2 or 3 turns and press down the bearing cap by hand.

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



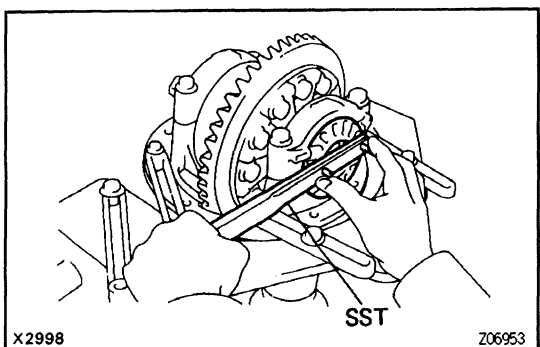
15. (w/o DIFFERENTIAL LOCK) ADJUST SIDE BEARING PRELOAD

(a) Torque the 4 bearing cap bolts to the specified torque, then loosen them to the point where the adjusting nuts can be turned by SST.

SST 09504-00011

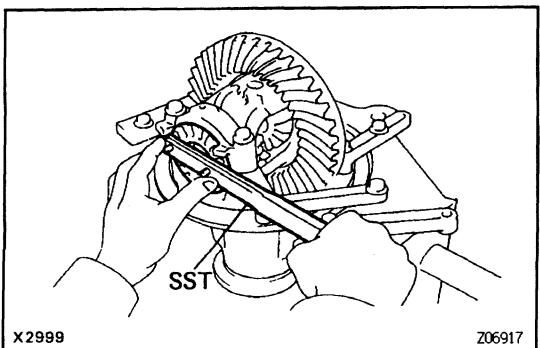
Torque: 78 N-m (800 kgf-cm, 58 ft-lbf)

(b) Fully tighten the 4 bearing cap bolts by hand.



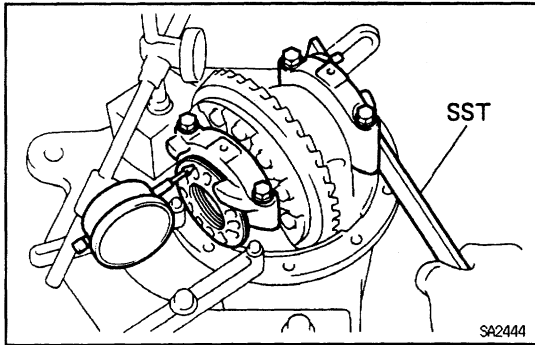
(c) Using SST, torque the adjusting nut on the ring gear side until the ring has a backlash of about 0.2 mm (0.008 in.).

SST 09504-00011

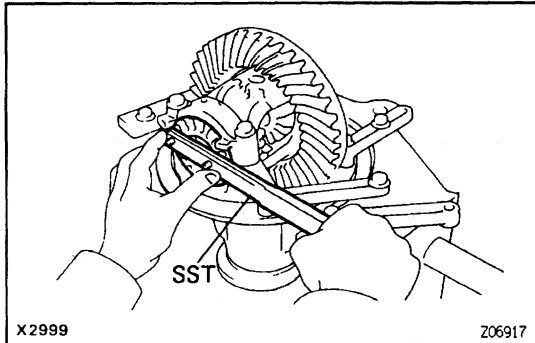


(d) While turning the ring gear, use SST to fully tighten the adjusting nut on the drive pinion side. After the bearings are settled, loosen the adjusting nut on the drive pinion side.

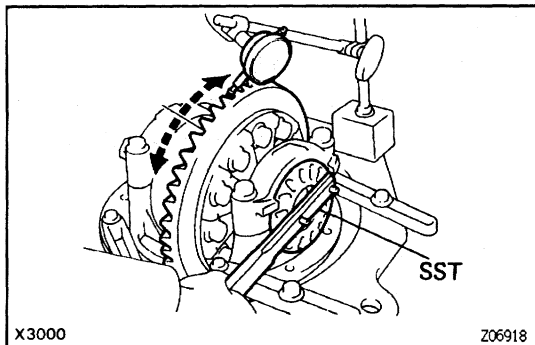
SST 09504-00011



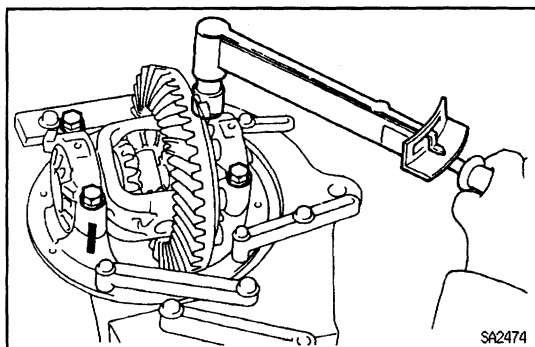
- (e) Place a dial indicator on the top of the adjusting nut on the ring gear side.
- (f) Adjust the side bearing for zero preload by tightening the other adjusting nut until the pointer on the indicator begins to move.



- (g) Torque the adjusting nut 1–1.5 notches from the zero preload position.



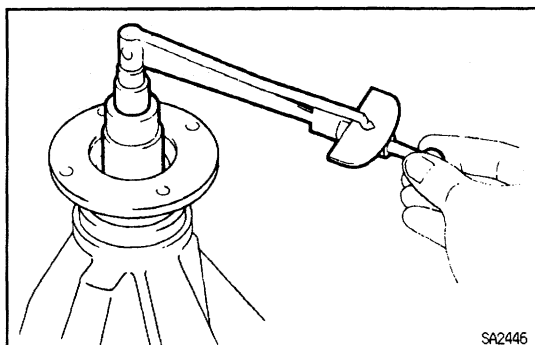
- (h) Using a dial indicator, adjust the ring gear backlash until it is within specification.
Backlash:
0.15–0.20 mm to 0.0059–0.0079 in.?
HINT: The backlash is adjusted by turning the left and right adjusting nuts equal amounts. For example, loosen the nut on the left side one notch and torque the nut on the right side one notch.



- (i) Torque the bearing cap bolts.
Torque: 78 N·m (800 kgf·cm, 58 ft·lbf)

- (j) Recheck the ring gear backlash.

Backlash:
0.15–0.20 mm (0.0059–0.0079 in.)



16. MEASURE TOTAL PRELOAD

Using a torque meter, measure the total preload.

Total preload (starting):

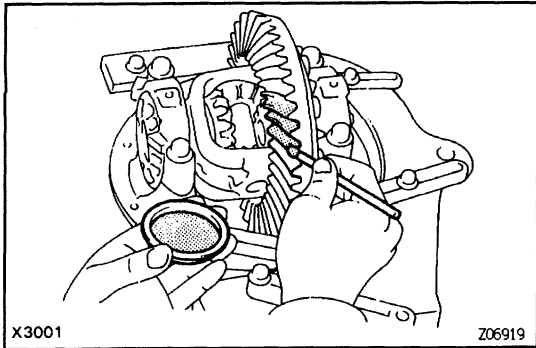
Add drive pinion preload

w/o Differential lock

0.4–0.6 N·m (4–6 kgf·cm, 3.5–5.2 in.·lbf)

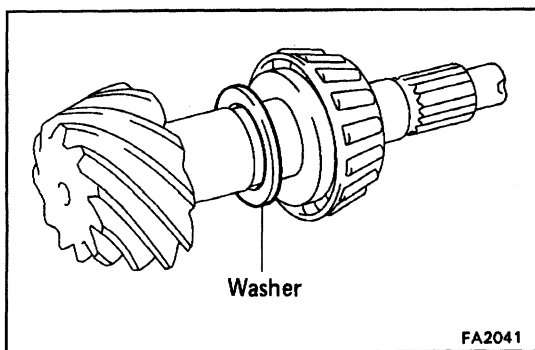
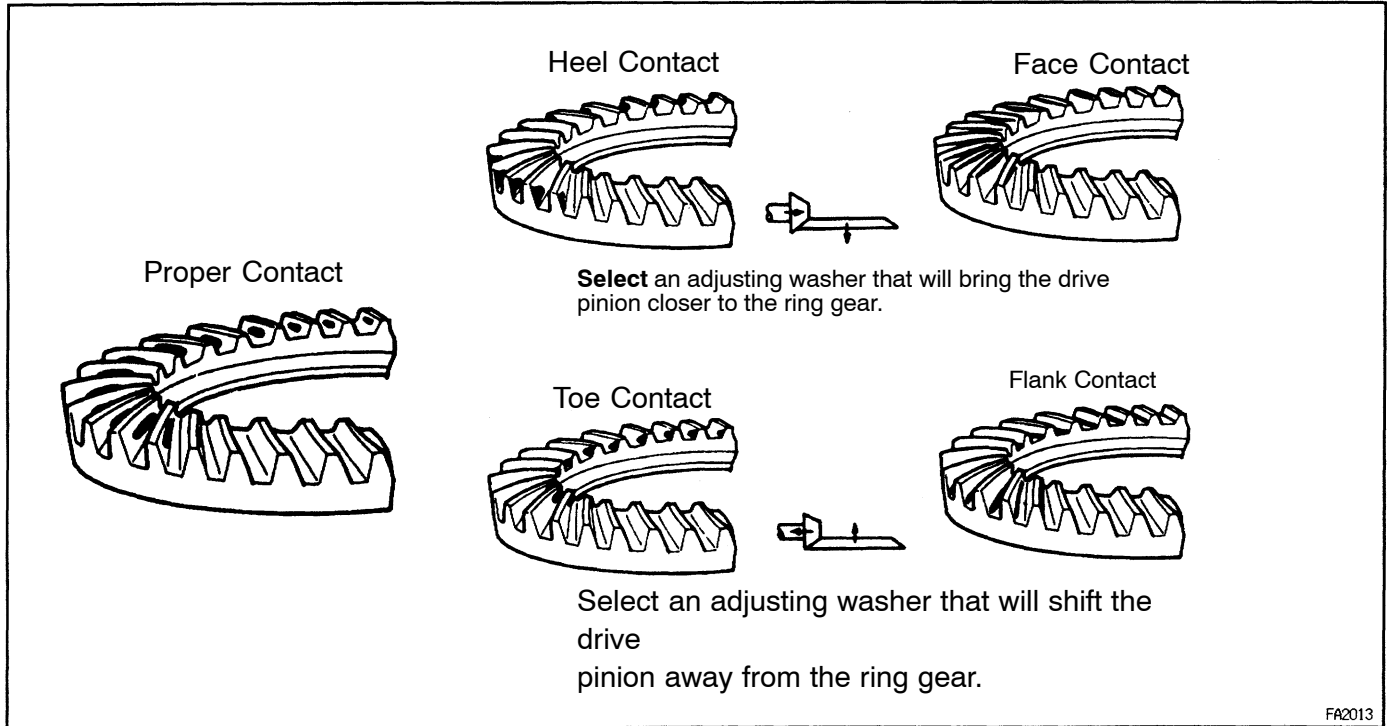
w/ Differential lock

0.3–0.7 N·m (3–7 kgf·cm, 2.6–6.1 in.·lbf)



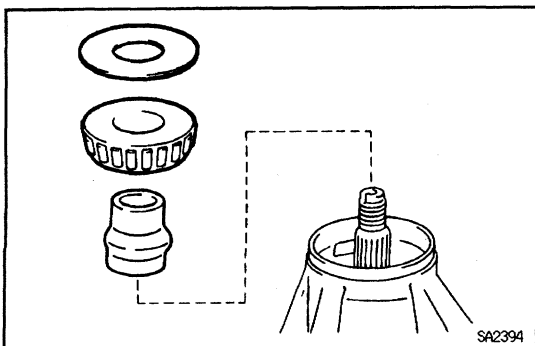
17. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION

- Coat 3 or 4 teeth at 3 different positions on the ring gear with red lead.
- Turn the companion flange, pin both directions to inspect the ring gear for proper tooth contact.



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

Thickness mm (in.)	Thickness mm (in.)
1.05 (0.0413)	1.35 (0.0531)
1.10 (0.0433)	1.40 (0.0551)
1.15 (0.0453)	1.45 (0.0571)
1.20 (0.0472)	1.50 (0.0591)
1.25 (0.0492)	1.55 (0.0610)
1.30 (0.0512)	



18. REMOVE COMPANION FLANGE

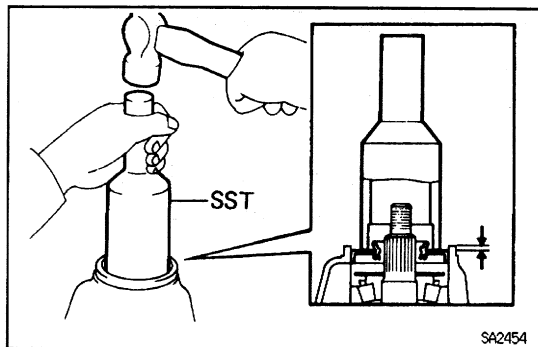
(SEE PAGE [SA-115](#))

19. REMOVE OIL SLINGER AND FRONT BEARING

(SEE PAGE [SA-115](#))

20. INSTALL NEW BEARING SPACER AND FRONT BEARING

- Install a new bearing spacer on the shaft.
- Install the front bearing and oil slinger.



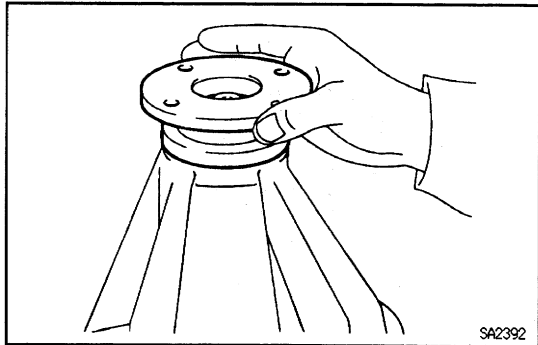
21. INSTALL NEW OIL SEAL

- (a) Using SST, drive in a new oil seal as shown.
SST 09214-76011

Oil seal drive in depth:

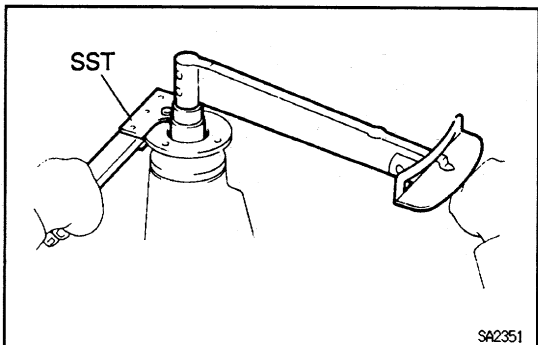
1.0 mm (0.039 in.)

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



22. INSTALL COMPANION FLANGE

- (a) Install the companion flange.



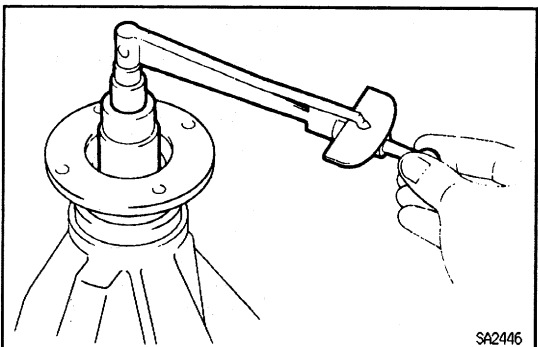
- (b) Install the washer and new nut.

HINT: Coat the threads of a new nut with gear oil.

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

SST 09330-00021

Torque: 245 N-m (2,500 kgf-cm, 181 ft-lbf)



23. ADJUST DRIVE PINION PRELOAD

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

Preload (starting):

New bearing

1.3-2.0 N-m (13-20 kgf-cm, 11.3-17.4 in.-lbf)

Reuse bearing

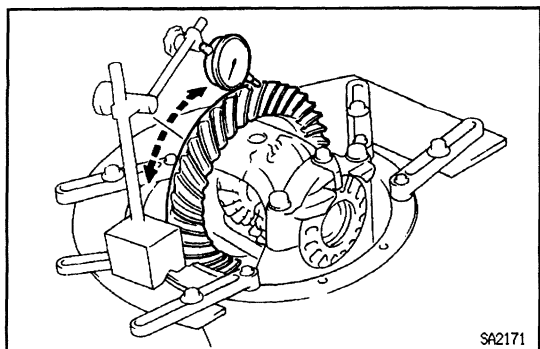
0.7 -1.0 N-m (7 -10 kgf-cm, 6.1- 8.7 in.-lbf)

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

Maximum torque:

441 N-m (4,500 kgf-cm, 326 ft-lbf)

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.

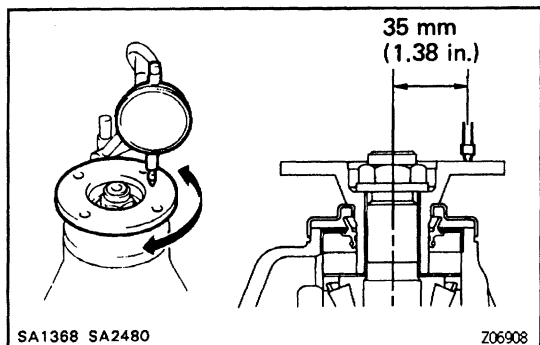
**24. RECHECK RING GEAR BACKLASH**

Using a dial indicator, measure the ring gear backlash.

Ring gear backlash:

0.15–0.20 mm (0.0059–0.0079 in.)

25. RECHECK TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION
 (See page SA -131)

**26. CHECK RUNOUT OF COMPANION FLANGE**

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

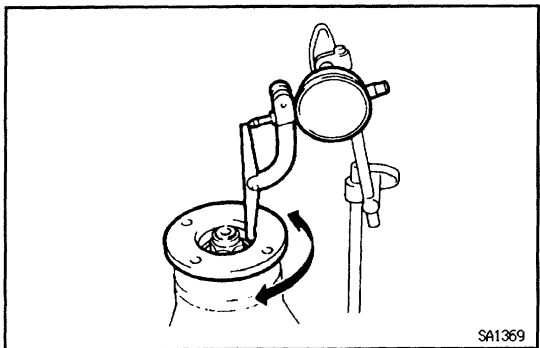
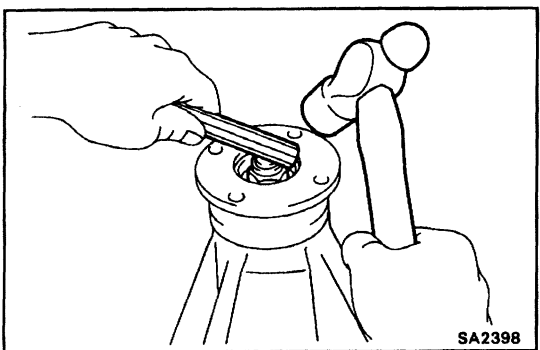
Maximum vertical runout:

0.10 mm (0.0039 in.)

Maximum lateral runout:

0.10 mm (0.0039 in.)

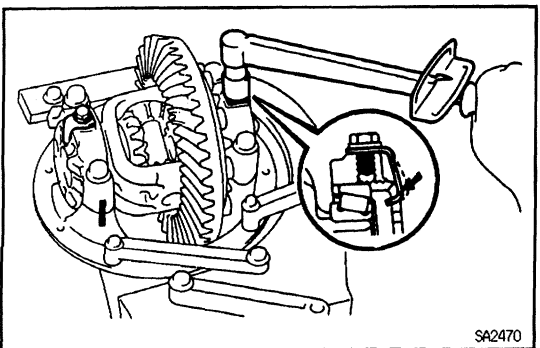
If the runout is greater than maximum, inspect the bearings.

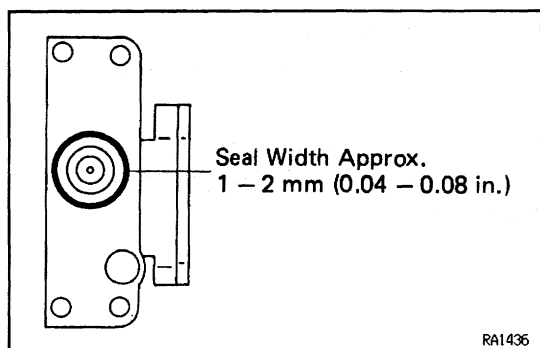
**27. STAKE DRIVE PINION NUT****28. (w/o DIFFERENTIAL LOCK)****INSTALL ADJUSTING NUT LOCKS**

- (a) Install new 2 nut locks on the bearing caps.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)

- (b) After tightening bolts, bend the nut locks.



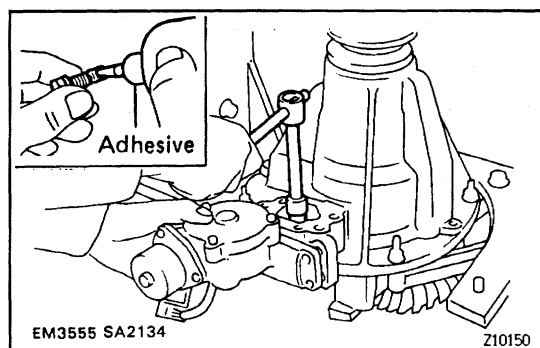
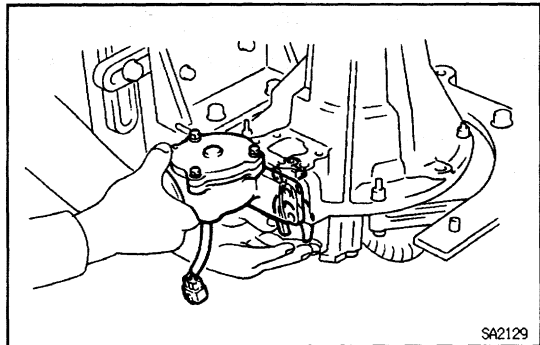
**29. (w/ DIFFERENTIAL LOCK)****INSTALL ACTUATOR, SHIFT FORK AND SLEEVE**

- (a) Clean contacting surfaces of any residual packing material using gasoline or alcohol.
- (b) Apply seal packing to the actuator.

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

HINT: Install the actuator within 10 minutes after applying seal packing.

- (c) Install the actuator to the differential and match the shift fork hole.



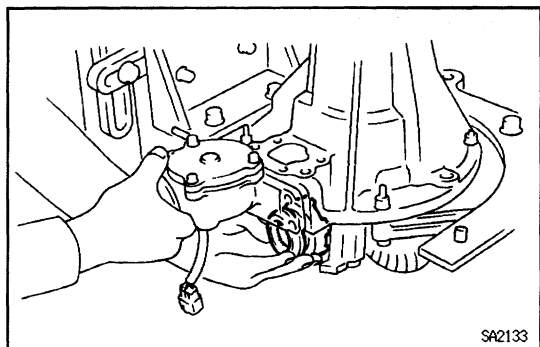
- (d) Clean the threads of set bolt and fork shaft with the white gasoline.

- (e) Coat the threads of the set bolt with adhesive.

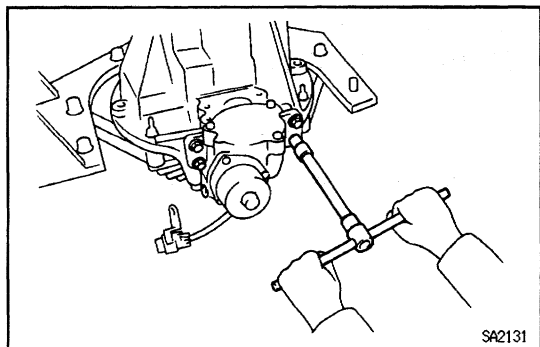
Adhesive: Part No. 08833–00070, THREE BOND 1324 or equivalent

- (f) Tighten the shift fork shaft set bolt.

Torque: 20 N–m (200 kgf–cm, 14 ft–lbf)

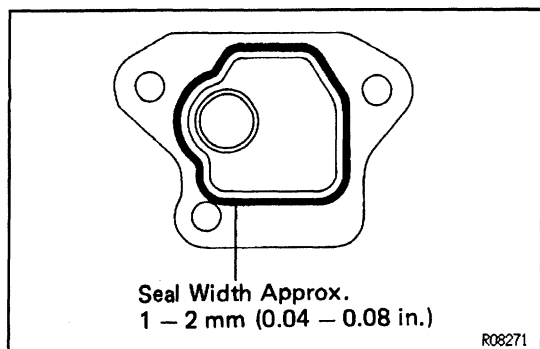


- (g) Engage the sleeve with the dog clutch of the differential case.



- (h) Tighten the 4 bolts,

Torque: 24 N–m (240 kgf–cm, 17 ft–lbf)

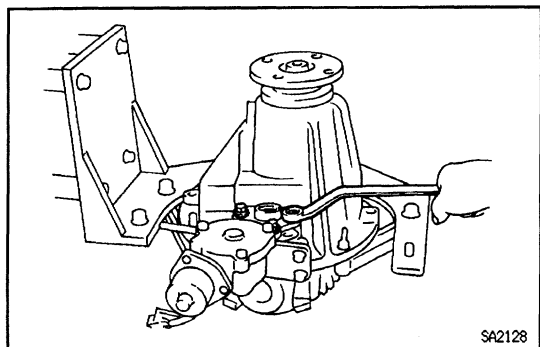


30. (w/ DIFFERENTIAL LOCK) INSTALL COVER

- (a) Clean contacting surfaces of any residual packing material using gasoline or alcohol.
- (b) Apply seal packing to the cover.

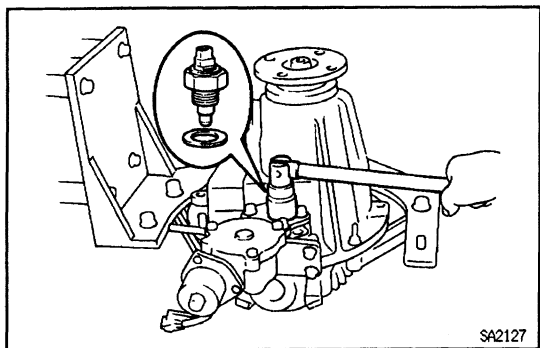
Seal packing: Part No. 08826 – 00090, THREE BOND 1281 or equivalent

HINT: Install the cover within 10 minutes after applying seal packing.



- (c) Tighten the 3 bolts.

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



31. (w/ DIFFERENTIAL LOCK) INSTALL INDICATOR SWITCH

Install the indicator switch with a new gasket.

Torque: 40 N•m (410 kgf•cm, 30 ft•lbf)