

DISASSEMBLY

1. CHECK RUNOUT OF COMPANION FLANGE

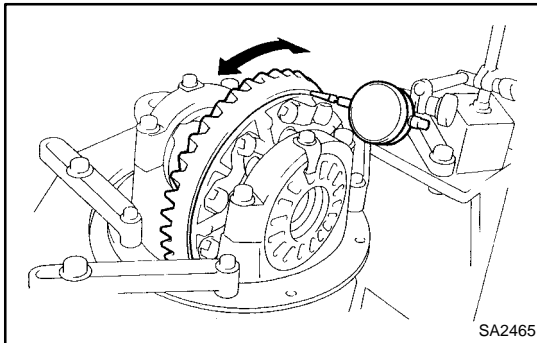
Using a dial indicator, measure the vertical and lateral runout of the companion flange.

Maximum runout:

Vertical runout: 0.10 mm (0.0039 in.)

Lateral runout: 0.10 mm (0.0039 in.)

If the runout are not within the specification, replace the companion flange.

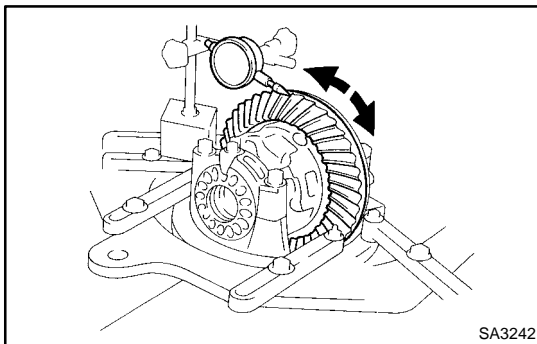


2. CHECK RING GEAR RUNOUT

Using a dial indicator, measure the ring gear runout.

Maximum runout: 0.07 mm (0.0028 in.)

If the runout is not within the specification, replace the ring gear.



3. CHECK RING GEAR BACKLASH

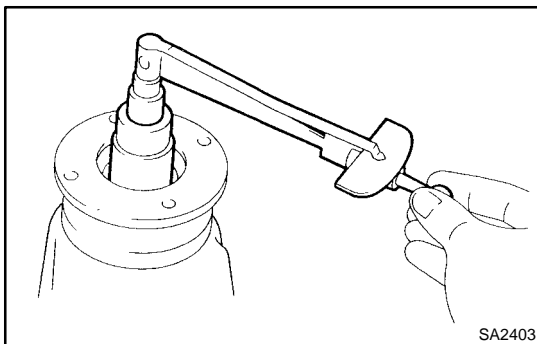
Using a dial indicator, measure the ring gear backlash.

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

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

HINT:

Before measurement, rotate the ring gear 5 times or more.



4. MEASURE DRIVE PINION PRELOAD

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

Preload (at starting):

0.5 - 0.8 N·m (5 - 8 kgf·cm, 4.3 - 6.9 in.-lbf)

5. CHECK TOTAL PRELOAD

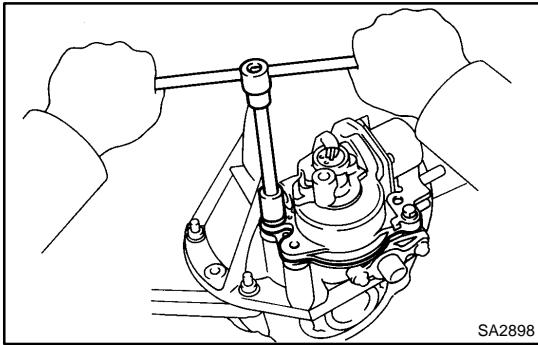
Using a torque wrench, measure the preload with the teeth of the drive pinion and ring gear in contact.

Total preload (at starting):

Drive pinion preload plus 0.4 - 0.6 N·m (4 - 6 kgf·cm, 3.5 - 5.2 in.-lbf)

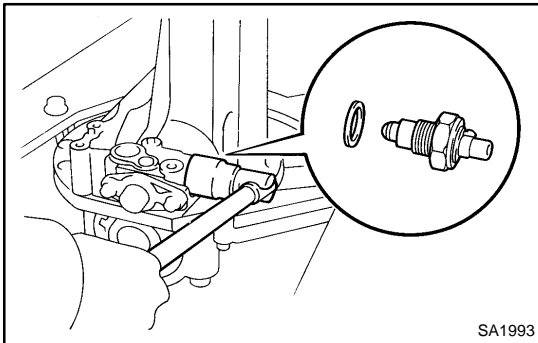
If necessary, disassemble and inspect the differential.

6. CHECK TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION (See page [SA-103](#))



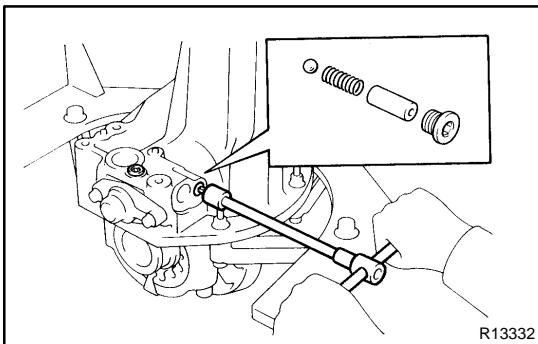
**7. w/ DIFF. LOCK:
REMOVE ACTUATOR**

- (a) Remove the bolt and actuator from the differential carrier.
- (b) Remove the O-ring.



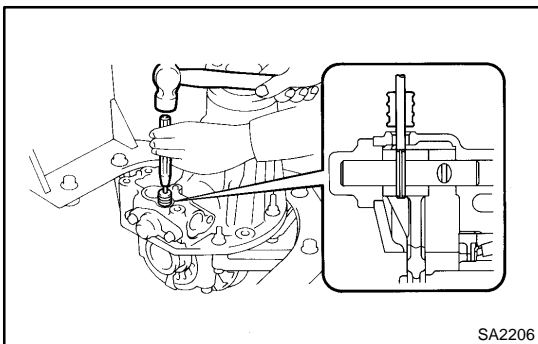
**8. w/ DIFF. LOCK:
REMOVE INDICATOR SWITCH**

Remove the indicator switch and gasket.

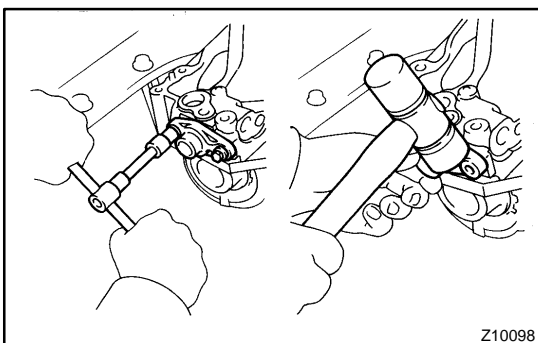


**9. w/ DIFF. LOCK:
REMOVE SHIFT FORK SHAFT**

- (a) Using a hexagon wrench, remove the 2 straight screw plugs.
- (b) Remove the spring seat, compression spring and ball.



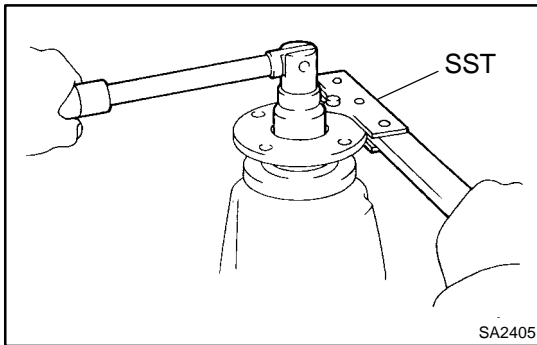
- (c) Using a pin punch and hammer, remove the slotted spring pin.



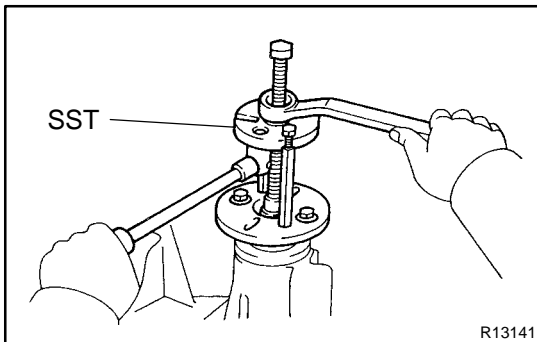
- (d) Remove the 2 bolts from the shaft retainer.
- (e) Using a plastic hammer, remove the shaft retainer.
- (f) Remove the shift fork shaft.

HINT:

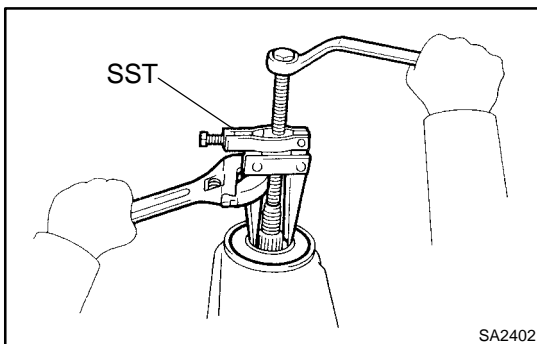
Pull out the shift fork shaft with a screwdriver turned round.

**10. REMOVE COMPANION FLANGE**

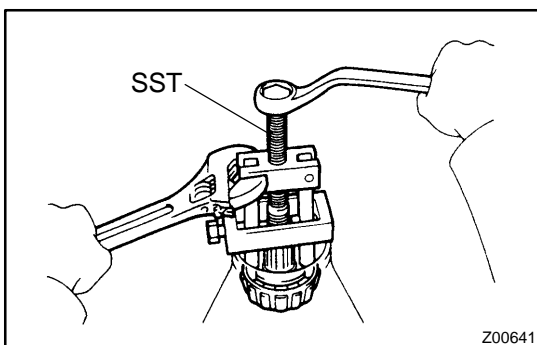
- (a) Using a chisel and hammer, unstake the nut.
- (b) Using SST to hold the flange, remove the nut.
SST 09330-00021



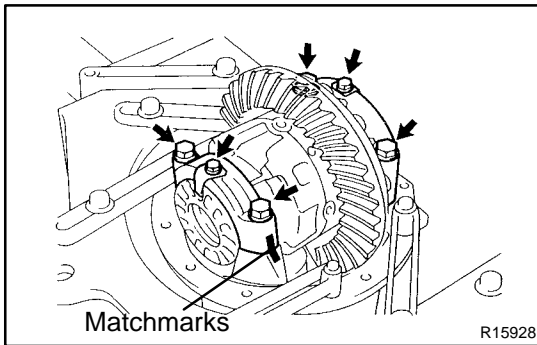
- (c) Using SST, remove the companion flange.
SST 09950-30012 (09951-03010, 09953-03010, 09954-03010, 09955-03030, 09956-03030)

**11. 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.

**12. REMOVE FRONT BEARING**

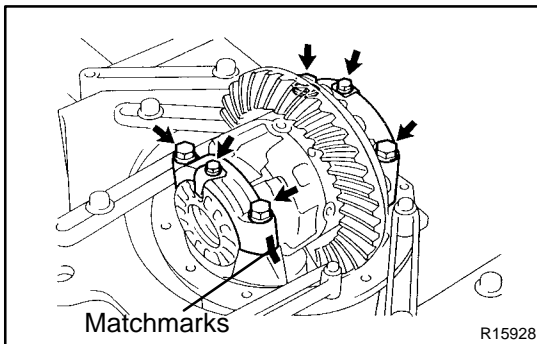
- Using SST, remove the front bearing from the drive pinion.
SST 09556-22010

**13. w/o Diff. lock:****REMOVE DIFFERENTIAL CASE**

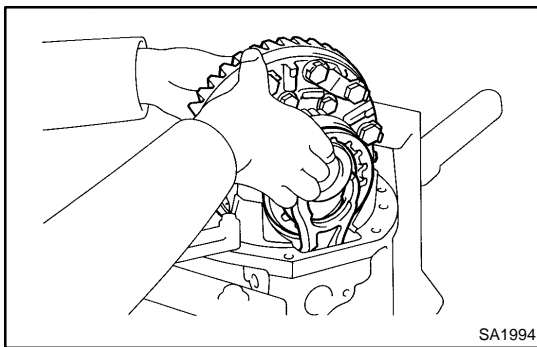
- (a) Place matchmarks on the bearing cap and differential carrier.
- (b) Remove the 2 adjusting nut locks.
- (c) Remove the 4 bolts and 2 bearing caps.
- (d) Remove the 2 adjusting nuts.
- (e) Remove the differential case with the side bearing outer races from the differential carrier.

HINT:

Tag the disassembled parts to show the location for reassembly.

**14. w/ Diff. lock:****REMOVE DIFFERENTIAL CASE**

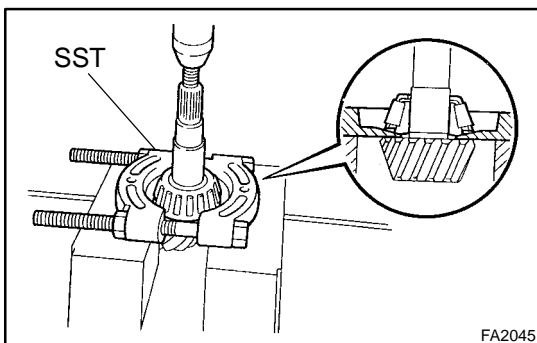
- (a) Place matchmarks on the bearing cap and differential carrier.
- (b) Remove the 2 adjusting nut locks.
- (c) Remove the 4 bolts and 2 bearing caps.



- (d) Remove the differential case with side bearing outer races, adjusting nut and sleeve from the differential carrier.
- (e) Remove the shift fork.

15. REMOVE DRIVE PINION AND BEARING SPACER

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

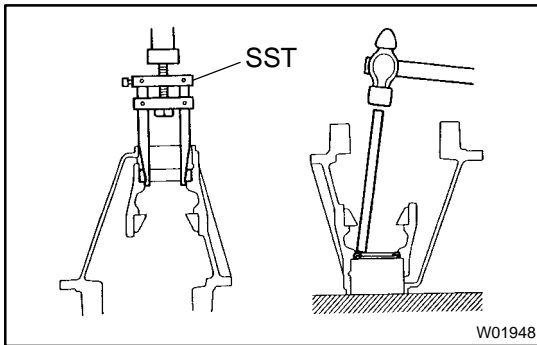
**16. REMOVE DRIVE PINION REAR BEARING**

- (a) Using SST and a press, remove the bearing from the drive pinion.
SST 09950-00020

HINT:

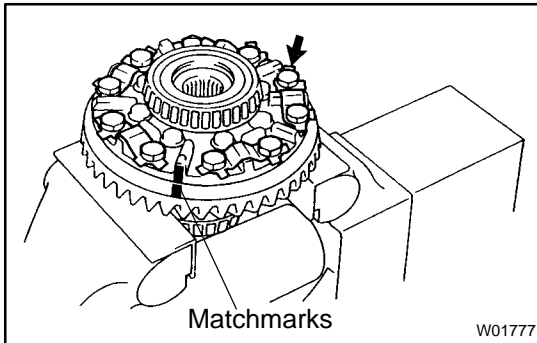
If the drive pinion or ring gear are damaged, replace them as a set.

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



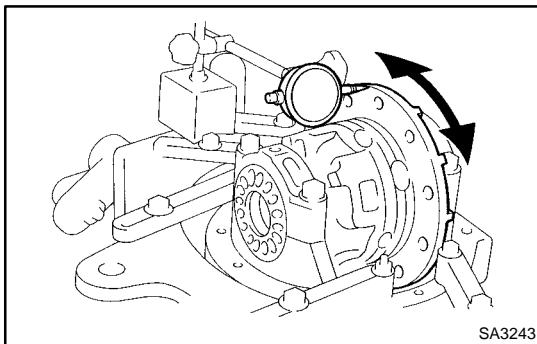
17. REMOVE FRONT AND REAR BEARING OUTER RACES AND OIL STORAGE RING

- Using SST, remove the front bearing outer race.
SST 09308-00010
- Using a brass bar and hammer, remove the oil storage ring.
- Using a brass bar and hammer, remove the rear bearing outer race.



18. REMOVE RING GEAR

- Place matchmarks on the ring gear and differential case.
- Using a screwdriver and hammer, unstick the 5 lock plates.
- Remove the 10 ring gear set bolts and 5 lock plates.
- Using a plastic hammer, tap on the ring gear to separate it from the differential case.



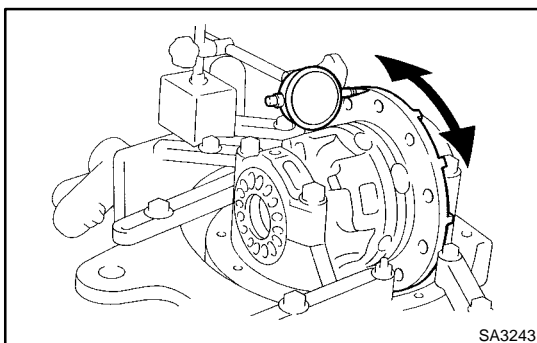
19. w/o Diff. lock:

CHECK DIFFERENTIAL CASE RUNOUT

- Place the bearing outer races on their respective bearings. Check that the left and right outer races are not interchanged.
- Install the differential case in the differential carrier.
- When there is no play left in the side bearings, install the plate washers.
- Align the matchmarks on the bearing cap and differential carrier.
- Install and uniformly tighten the 4 bearing cap bolts in several passes.
- Using a dial indicator, measure the differential case runout.

Maximum runout: 0.07 mm (0.0028 in.)

- Remove the differential case.



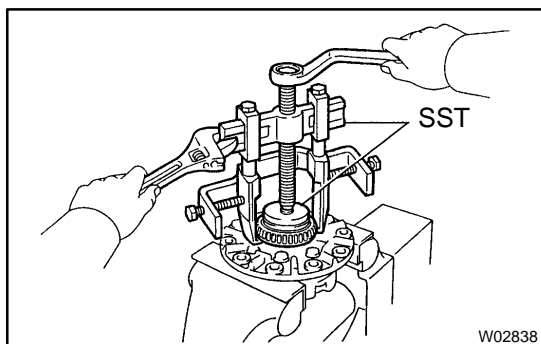
20. w/ Diff. lock:

CHECK DIFFERENTIAL CASE RUNOUT

- Install the differential case in the differential carrier and tighten the adjusting nut just to where there is no play in the bearing.
- Using a dial indicator, measure the differential case runout.

Maximum runout: 0.07 mm (0.0028 in.)

- Remove the differential case.



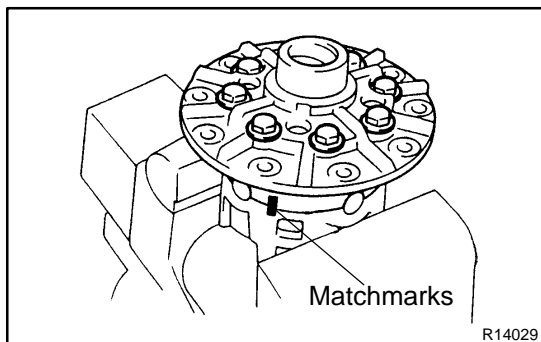
21. REMOVE SIDE BEARINGS FROM DIFFERENTIAL CASE

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

SST 09950-40011 (09951-04010, 09952-04010, 09953-04020, 09954-04010, 09955-04061, 09957-04010, 09958-04011), 09950-60010 (09951-00480), 09950-60020 (09951-00730)

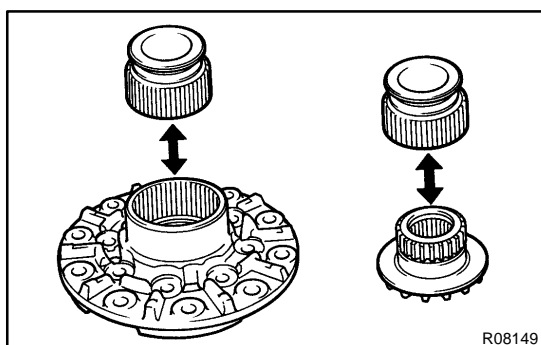
HINT:

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



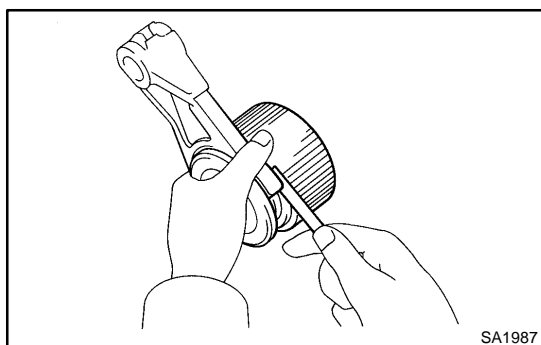
22. DISASSEMBLE DIFFERENTIAL CASE

- Place matchmarks on the LH and RH cases.
- Remove the 8 bolts uniformly, a little at a time.
- Using a plastic hammer, separate the LH and RH cases.
- Remove the 2 side gears, 2 side gear thrust washers, spider, 4 pinion gears and 4 pinion gear thrust washers.



23. w/ DIFF. LOCK: INSPECT SLEEVE

- Install the sleeve to the differential case (LH) and check that it moves smoothly.
- Install the sleeve to the side gear and check it moves smoothly.



24. w/ DIFF. LOCK: MEASURE CLEARANCE OF SHIFT FORK AND SLEEVE

Using a feeler gauge, measure the clearance between the shift fork and sleeve.

Clearance (Reference):

0.15 - 0.35 mm (0.006 - 0.014 in.)