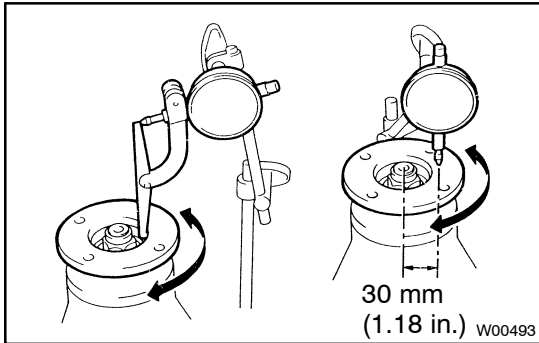


## DISASSEMBLY

1. SET DIFFERENTIAL CARRIER TO OVERHAUL STAND ETC.

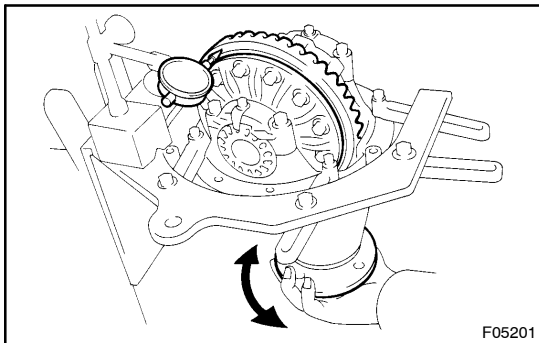


2. CHECK RUNOUT OF COMPANION FLANGE

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

**Maximum runout: 0.10 mm (0.0039 in.)**

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

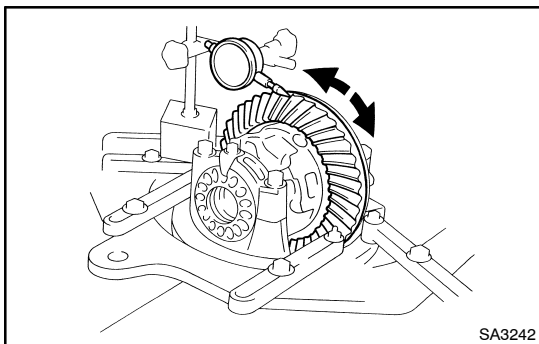


3. CHECK RING GEAR RUNOUT

Using a dial indicator, measure the ring gear runout.

**Maximum runout: 0.05 mm (0.0020 in.)**

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



4. CHECK RING GEAR BACKLASH

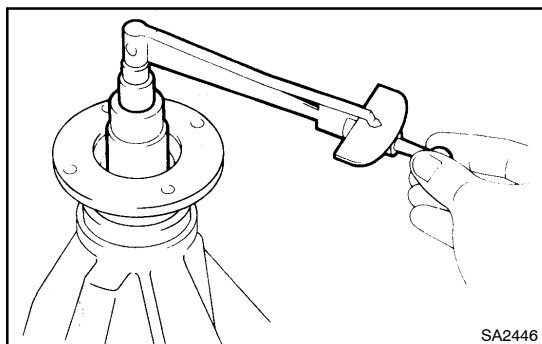
Using a dial indicator, measure the ring gear backlash.

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

HINT:

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

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

**5. MEASURE DRIVE PINION PRELOAD**

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

**Preload (at starting):**

**0.64 – 0.92 N·m (6.5 – 9.4 kgf·cm, 5.6 – 8.2 in·lbf)**

**6. 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):**

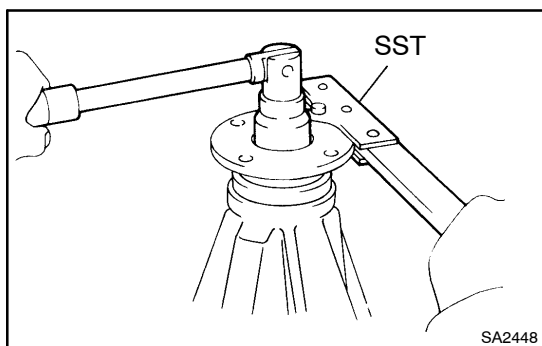
**Drive pinion preload plus**

**0.38 – 0.63 N·m (3.9 – 6.5 kgf·cm, 3.4 – 5.6 in·lbf)**

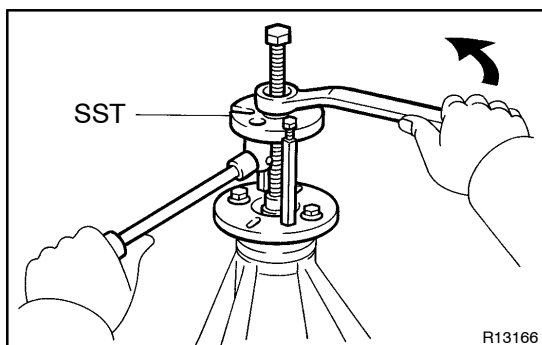
If necessary, disassemble and inspect the differential.

**7. CHECK TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION (See page SA-147)****8. REMOVE COMPANION FLANGE**

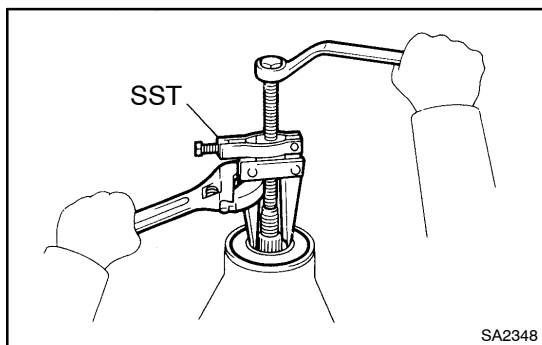
(a) Using a chisel and hammer, unstake the nut.



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

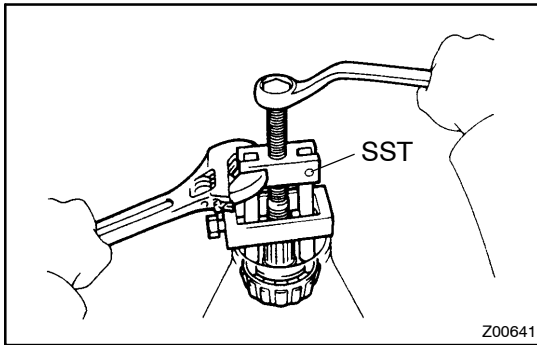


(c) Using SST, remove the companion flange.  
SST 09950-30011 (09951-03010, 09953-03010  
09954-03010, 09955-03030, 09956-03040)

**9. REMOVE OIL SEAL AND OIL SLINGER**

(a) Using SST, remove the oil seal from the differential carrier.  
SST 09308-10010

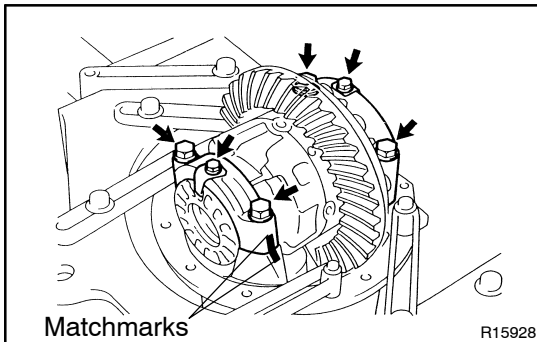
(b) Remove the oil slinger.

**10. 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.

**11. REMOVE DIFFERENTIAL CASE**

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

(b) Remove the 2 bolts and 2 adjusting nut locks.

(c) Remove the 4 bolts, 2 bearing caps and adjusting nuts.

HINT:

Tag the disassembled parts to show the location for reassembly.

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

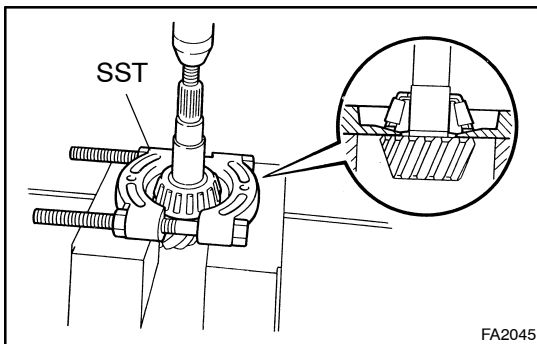
HINT:

Tag the disassembled parts to show the location for reassembly.

**12. REMOVE DRIVE PINION AND BEARING SPACER**

(a) Remove the drive pinion with the rear bearing.

(b) Remove the bearing spacer.

**13. REMOVE DRIVE PINION REAR BEARING**

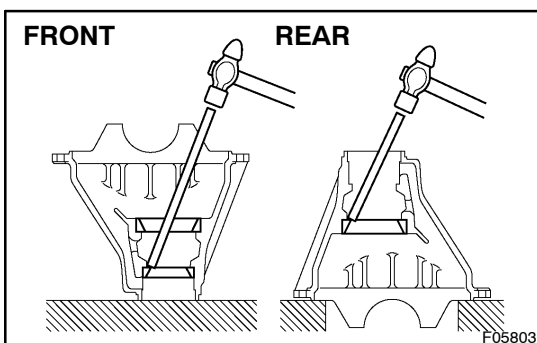
(a) Using SST and a press, remove the rear bearing from the drive pinion.

SST 09950-00020

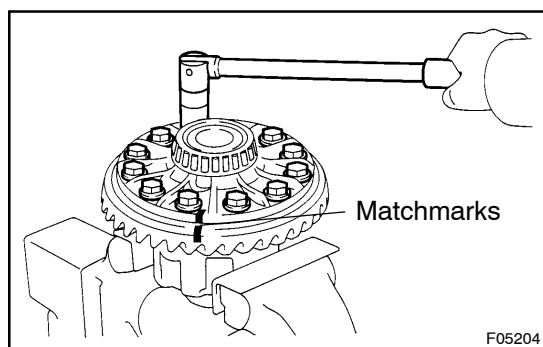
HINT:

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

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

**14. REMOVE FRONT AND REAR BEARING OUTER RACES**

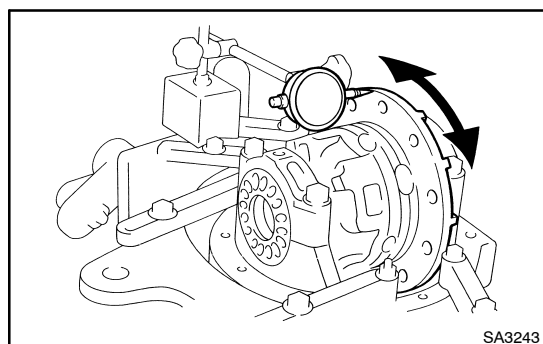
Using a brass bar and hammer, remove the outer races.

**15. REMOVE RING GEAR**

- (a) Place matchmarks on the ring gear and differential case.
- (b) Remove the 12 ring gear set bolts.
- (c) Using a plastic hammer, tap on the ring gear to remove it from the differential case.

**16. CHECK DIFFERENTIAL CASE RUNOUT**

- (a) Place the bearing outer races on their respective bearings. Check that the left and right outer races are not interchanged.
- (b) Install the differential case in the differential carrier.
- (c) Tighten the adjusting nut just to where there is no play in the bearing.
- (d) Align the matchmarks on the bearing cap and differential carrier.
- (e) Install and uniformly tighten the bearing cap bolts a little at a time.

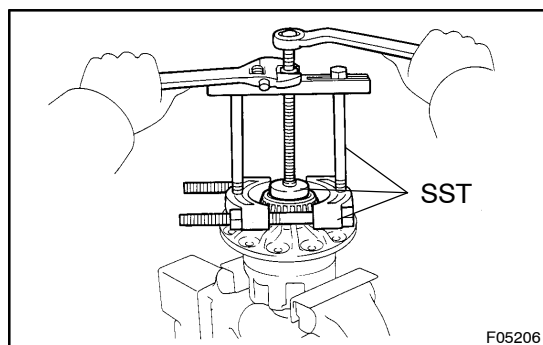


- (f) Using a dial indicator, measure the differential case runout.

**Maximum runout: 0.04 mm (0.0016 in.)**

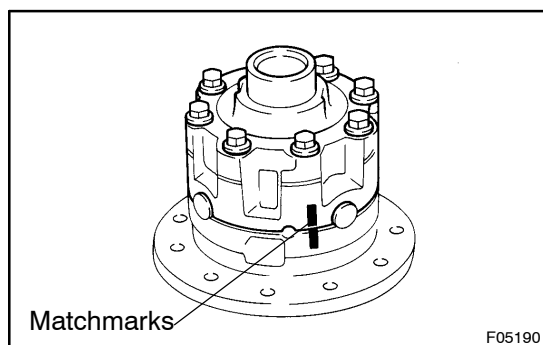
If the runout is greater than the maximum, replace the differential case and side bearings as a set.

- (g) Remove the differential case.

**17. REMOVE SIDE BEARINGS FROM DIFFERENTIAL CASE**

Using SST, remove the 2 side bearings from the differential case.

SST 09950-00020, 09950-00030,  
09950-40011 (09957-04010),  
09950-60010 (09951-00480)

**18. DISASSEMBLE DIFFERENTIAL CASE**

- (a) Place matchmarks on the LH and RH cases.
- (b) Remove the 8 bolts uniformly, a little at a time.
- (c) Using a plastic hammer, separate the LH and RH cases.

- (d) Remove the 2 side gears, 6 side gear thrust washers, 4 clutch plates, 2 spring retainers, compression spring, 4 pinion gears, 4 pinion gear thrust washers and spider from the differential case.

HINT:

- Keep the disassembled parts in order.
- If the side gear backlash has been adjusted by LEXUS dealer, adjusting shims are installed between the side gear thrust washer and the differential case.