DISASSEMBLY

SA0SD–02

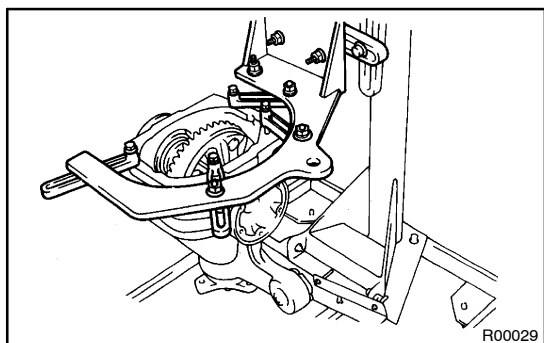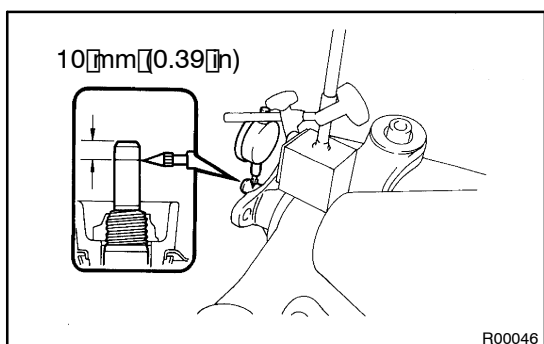## 1. REMOVE DIFFERENTIAL CARRIER COVER

(a) Remove the 8 bolts from the carrier cover.

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

(c) Remove the breather plug from the differential carrier cover.

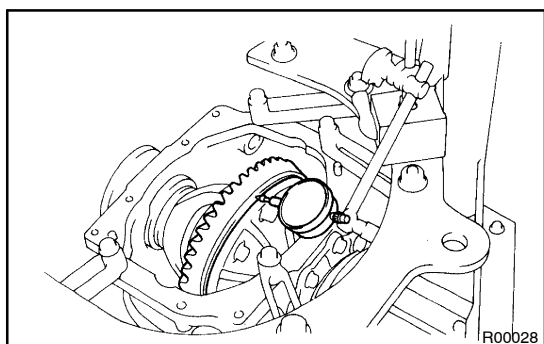## 2. SET DIFFERENTIAL CARRIER TO OVERHAUL STAND ETC., AS SHOWN

10 mm (0.39 in)

3. CHECK RUNOUT OF DRIVE PINION SHAFT

Using a dial indicator, measure the runout of the drive pinion shaft at a position 10 mm (0.39 in.) away from the end of the shaft.

Maximum runout: 0.08 mm (0.0031 in.)

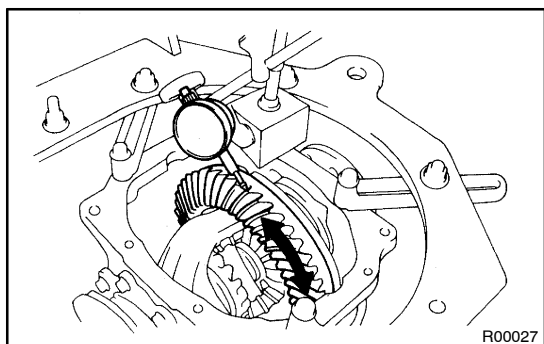If the runout is greater than the maximum, replace the drive pinion and ring gear.

4. 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 drive pinion, ring gear and differential case.

## 5. CHECK RING GEAR BACKLASH

Using a dial indicator, measure the backlash of the ring gear at 3 points at least and check that the average value is within the specification.

Backlash: 0.08 – 0.13 mm (0.0031 – 0.0051 in.)

NOTICE:

The difference between the maximum and minimum measured values must be less than 0.05 mm (0.0020 in.).

If the backlash is not within the specification, adjust the backlash (See page SA–73).

R00054
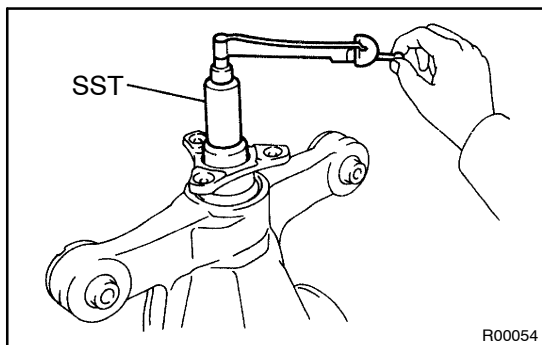
6. MEASURE DRIVE PINION PRELOAD

Using SST and a torque wrench, measure the preload using the backlash of 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)

HINT:

For vehicles which have run less than 8,000 km (5,000 miles), the preload may be large.

SST   09229−55010

Maximum preload (at starting):

1.8 N·m (18 kgf·cm, 16.0 in.·lbf)

7. CHECK TOTAL PRELOAD

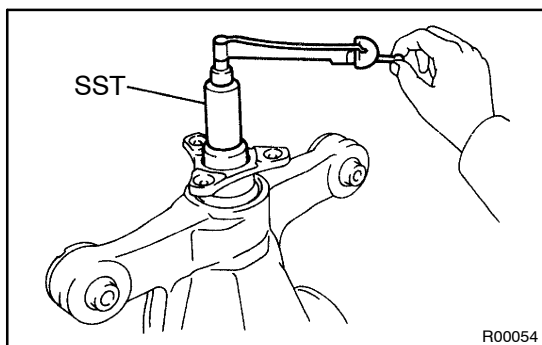Using SST and a torque wrench, measure the preload with the teeth of the drive pinion and ring gear in contact.

SST   09229−55010

Total preload (at starting):

Drive pinion preload plus

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

If necessary, disassemble and inspect the differential.

R00054

8. CHECK PINION GEAR BACKLASH

Using a dial indicator, measure the pinion gear backlash with holding one side gear toward the case.

Maximum: 0.15 mm (0.0059 in.)

NOTICE:

Differential gears should be able to rotate.

If the backlash is not within the specification, install the correct thrust washer (See page SA−73).

9. CHECK TOOTH CONTACT PATTERN

(See page SA−73)

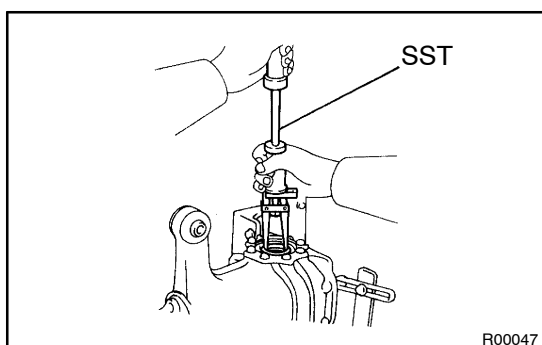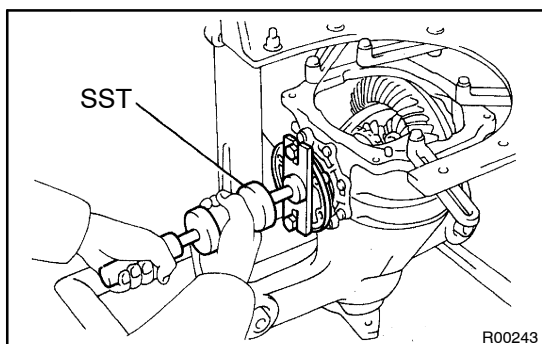## 10. REMOVE SIDE GEAR SHAFTS

(a)   Using SST, remove the 2 side gear shafts.

SST   09520−24010

NOTICE:

Be careful not to damage the oil seal.

(b)   Using screwdriver, remove the 2 snap rings from the side gear shafts.
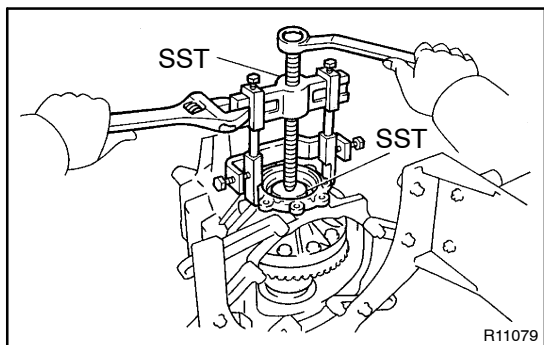

R00243

11. REMOVE SIDE GEAR SHAFT OIL SEALS
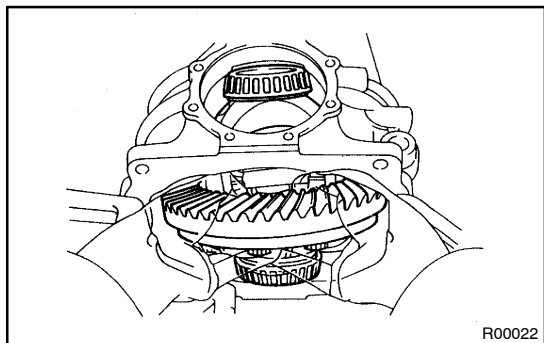
Using SST, remove the 2 oil seals.

SST   09308−00010

12. REMOVE DIFFERENTIAL CARRIER RETAINERS

(a)   Remove the 16 bolts.

R00047

(b) Using SST, remove the 2 carrier retainers and washers.
SST 09950–40011, (09951–04020, 09952–04010, 09953–04030, 09954–04010, 09955–04060, 09957–04010, 09958–04010), 09950–60010 (09951–00450)
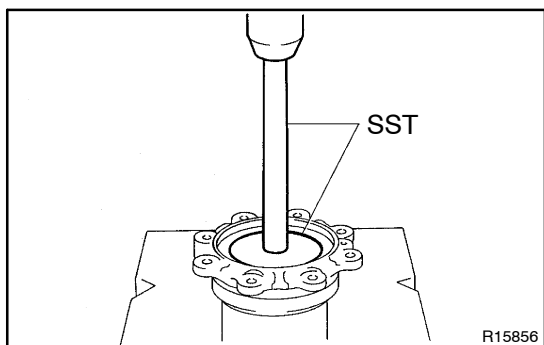
13. REMOVE DIFFERENTIAL CASE
Take the differential case out of the carrier with lifting the ring gear side, as shown in the illustration.

14. REMOVE O–RINGS FROM DIFFERENTIAL CARRIER RETAINERS
Using a screwdriver, remove the 2 O–rings from the differential carrier retainers.

15. REMOVE SIDE BEARING OUTER RACES AND ADJUSTING PLATE WASHERS
Using SST and a press, remove the 2 outer races and adjusting plate washers.
SST 09950–60020 (09951–00710), 09950–70010 (09951–07150)

16. REMOVE DRIVE PINION, SPACER AND COMPANION FLANGE
(a) Using a chisel and hammer, loosen the staked part of the nut.
(b) Using SST, remove the nut.
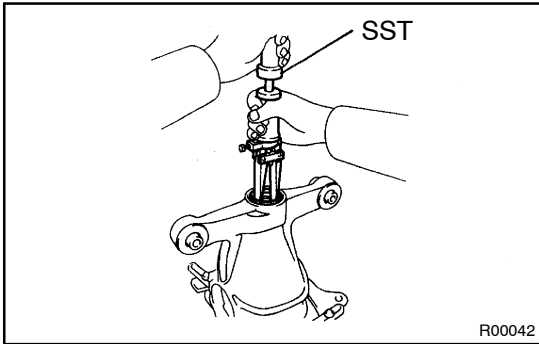SST 09229–55010, 09330–00021
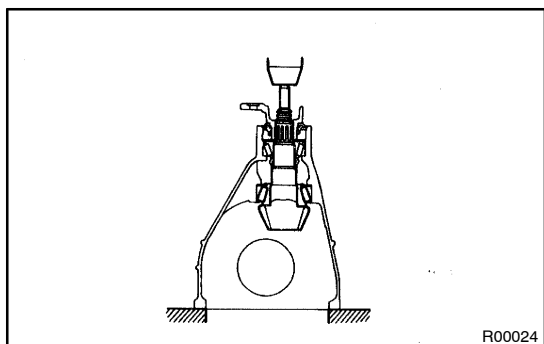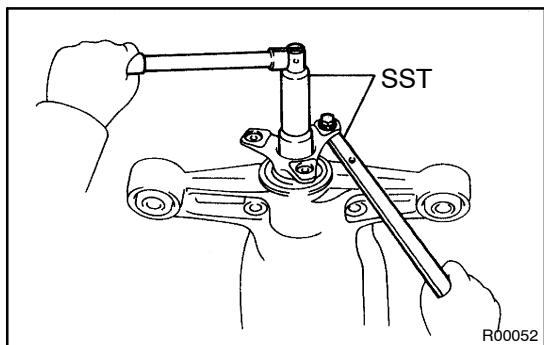
(c) Using a press, remove the drive pinion with the rear bearing and remove the companion flange.
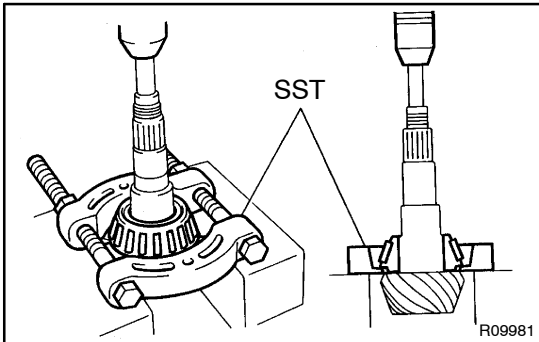**NOTICE:**
Be careful not to drop the drive pinion.
(d) Remove the spacer from the drive pinion.
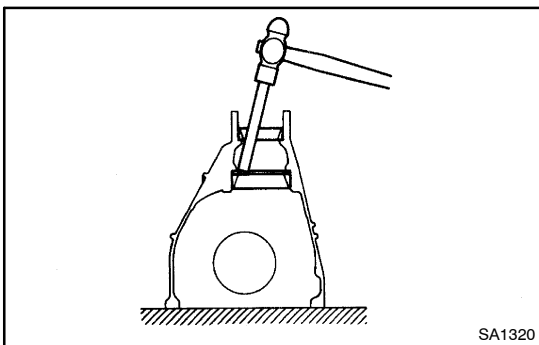
R00042

17. REMOVE OIL SEAL
Using SST, remove the oil seal.
SST   09308–00010
18. REMOVE OIL SLINGER AND FRONT BEARING

R09981

19. REMOVE REAR BEARING FRONT DRIVE PINION
Using SST and a press, remove the rear bearing from the drive pinion.
SST   09950–00020

SA1320

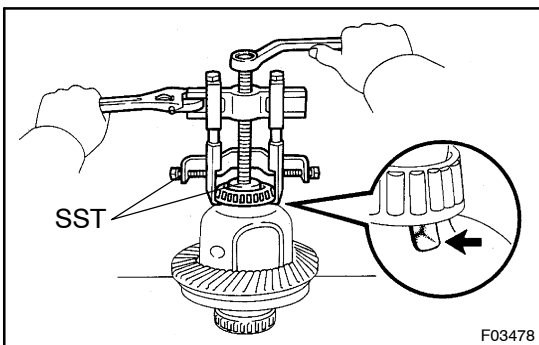**20. REMOVE FRONT AND REAR BEARING OUTER RACES AND ADJUSTING PLATE WASHER**
Using a brass bar and hammer, remove the front and rear races and plate washer.
NOTICE:
**Do not remove the outer race except when replacing the bearings.**
HINT:
Measure the washer and note the thickness for reassembly.


F03478

21. REMOVE SIDE BEARINGS
Using SST, remove the 2 side bearings from the differential case.
SST   09950–40011, (09951–04020, 09952–04010, 09953–04030, 09954–04010, 09955–04060, 09957–04010, 09958–04010), 09950–60010 (09951–00450)

Matchmarks

R11085
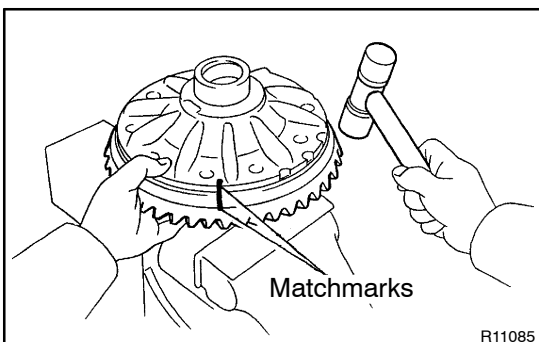
22. REMOVE RING GEAR
(a) Place matchmarks on the ring gear and differential case.
(b) Remove the 10 ring gear set bolts.
(c) Using a plastic hammer, tap on the ring gear to separate it from the differential case.

SA1279
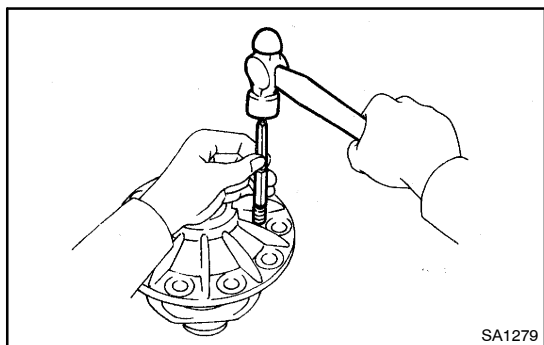
23. DISASSEMBLE DIFFERENTIAL CASE

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

(b) Remove these parts from the differential case:

- Pinion gear shaft
- 2 pinion gears
- 2 pinion gear thrust washers
- 2 side gears
- 2 side gear thrust washers