2906E–01

OVERHAUL

HINT:

COMPONENTS: See page 29–35

1. REMOVE REAR WHEEL

2. REMOVE PROPELLER SHAFT ASSY (SHORT BODY TYPE) (See page 30–4)

3. REMOVE PROPELLER SHAFT ASSY (LONG BODY TYPE) (See page 30–4)

4. REMOVE REAR AXLE HOUSING FILLER PLUG

5. REMOVE REAR AXLE HOUSING DRAIN PLUG

6. REMOVE REAR DISC BRAKE CALIPER ASSY LH (See page 32–73)

SST 09023–00100

7. REMOVE REAR DISC BRAKE CALIPER ASSY RH

HINT:

Remove the RH side by the same procedures with the LH side.

SST 09023–00100

8. REMOVE REAR DISC (See page 32–73)

9. REMOVE REAR DISC

HINT:

Remove the RH side by the same procedures with the LH side.

10. REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING (See page 33–15)

11. REMOVE PARKING BRAKE SHOE RETURN TENSION SPRING

HINT:

Remove the RH side by the same procedures with the LH side.

12. REMOVE PARKING BRAKE SHOE STRUT COMPRESSION SPRING (See page 33–15)

13. REMOVE PARKING BRAKE SHOE STRUT COMPRESSION SPRING

HINT:

Remove the RH side by the same procedures with the LH side.

14. REMOVE PARKING BRAKE SHOE STRUT LH (See page 33–15)

15. REMOVE PARKING BRAKE SHOE STRUT RH

HINT:

Remove the RH side by the same procedures with the LH side.

16. REMOVE PARKING BRAKE SHOE (See page 33–15)

17. REMOVE PARKING BRAKE SHOE

HINT:

Remove the RH side by the same procedures with the LH side.

18. SEPARATE SPEED SENSOR REAR LH (See page 32–88)

19. SEPARATE SPEED SENSOR REAR RH

HINT:

Remove the RH side by the same procedures with the LH side.

20. SEPARATE PARKING BRAKE CABLE ASSY NO.3 (See page 33–15)

21. SEPARATE PARKING BRAKE CABLE ASSY NO.2

HINT:

Remove the parking brake cable assy No.3 by the same procedures with the parking brake cable assy No.3.

22. REMOVE REAR AXLE SHAFT W/BACKING PLATE (See page 30–40)

23. REMOVE REAR AXLE SHAFT W/BACKING PLATE

HINT:

Remove the RH side by the same procedures with the LH side.

24. REMOVE REAR AXLE SHAFT LH OIL SEAL (See page 30–40)

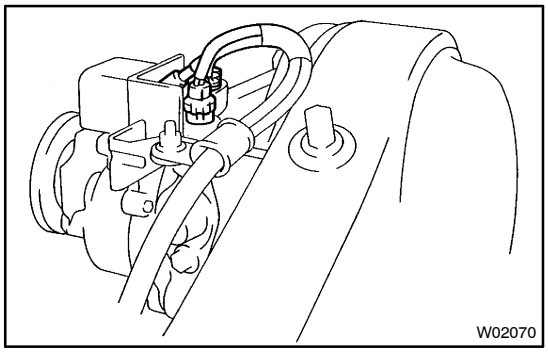
SST 09308–00010

25. REMOVE REAR AXLE SHAFT RH OIL SEAL

HINT:

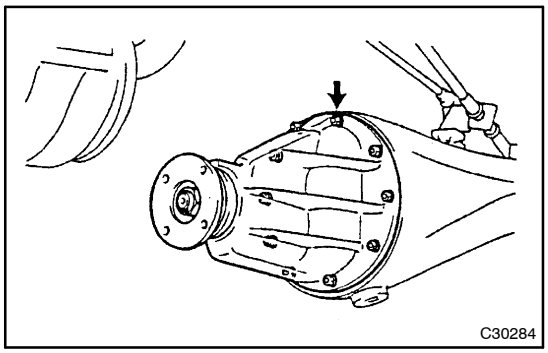
Remove the RH side by the same procedures with the LH side.

SST 09308–00010



26. SEPARATE CONNECTOR (W/ DIFF. LOCK)

(a) Remove the differential lock actuator connector.



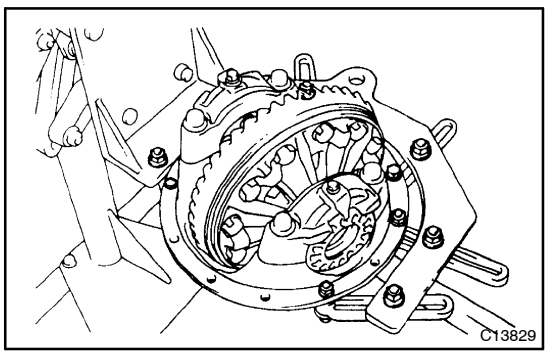
27. REMOVE DIFFERENTIAL CARRIER ASSY REAR

(a) Remove the 10 nuts and differential carrier assy.

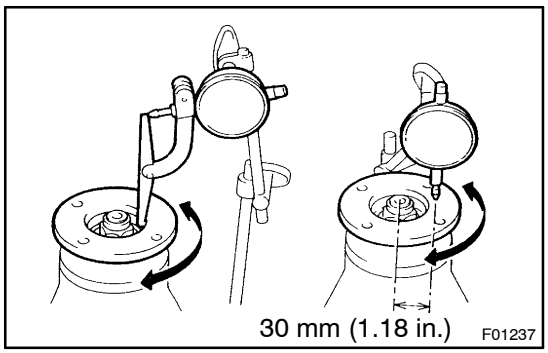
NOTICE:

Be careful not to damage the removal surface.

28. REMOVE REAR DIFFERENTIAL CARRIER GASKET



29. FIX DIFFERENTIAL CARRIER ASSY REAR



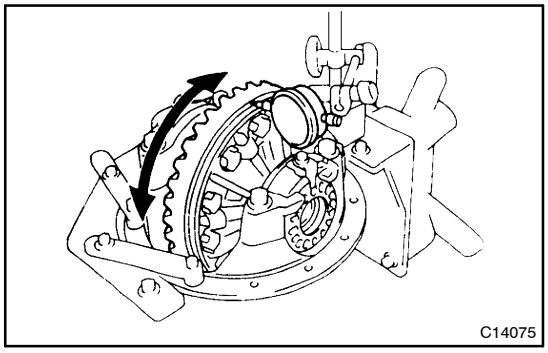
30. INSPECT RUNOUT OF REAR DRIVE PINION COMPANION FLANGE SUB–ASSYREAR

(a) Using a dial indicator, measure the runout of the companion flange vertically and horizontally.

Maximum runout:

Vertical runout: 0.10 mm (0.0039 in.)

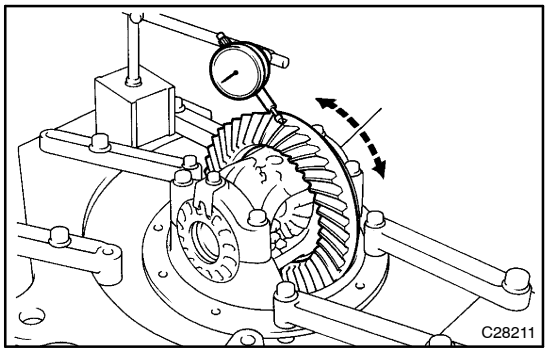
Lateral runout: 0.10 mm (0.0039 in.)



31. INSPECT RUNOUT OF DIFFERENTIAL RING GEAR

(a) Using a dial indicator, check the runout of the ring gear.
Maximum runout: 0.07 mm (0.0028 in.)

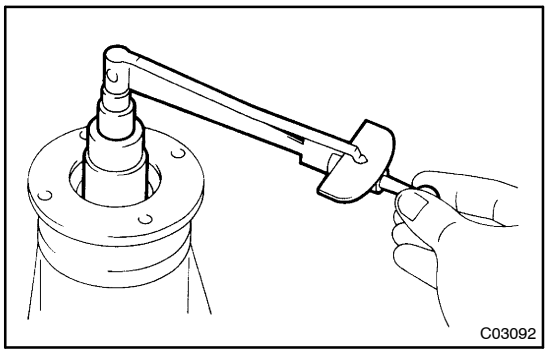
If the runout is greater than the maximum, replace the ring gear with new one.



32. INSPECT DIFFERENTIAL RING GEAR BACKLASH

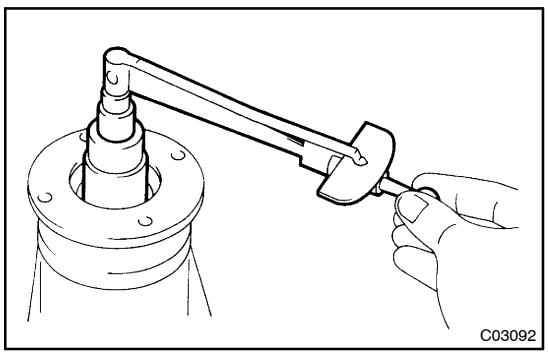
(a) Using a dial indicator, check the backlash of the ring gear.
Backlash: 0.13 – 0.18 mm (0.0051 – 0.0071 in.)

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



33. INSPECT DIFFERENTIAL DRIVE PINION PRELOAD

(a) Using a torque wrench, measure the preload of backlash between the drive pinion and ring gear.
Preload (at starting):
0.56 – 0.85 N·m (6 – 9 kgf·cm, 4.9 – 7.5 in.·lbf)

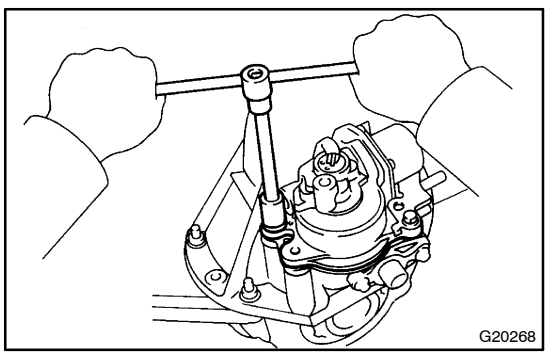


34. INSPECT TOTAL PRELOAD

(a) Using a torque wrench, measure the preload with the teeth ring gear in contact.

(b) Using a torque wrench, measure the total preload.
Total preload (at starting):
Drive pinion preload plus 0.39 – 0.59 N·m (4 – 6 kgf·cm, 3.4 – 5.2 in.·lbf)

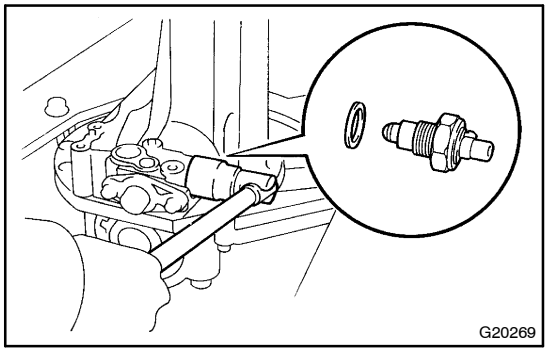
If mecessary, disassemble and inspect the differetial.



35. REMOVE DIFFERENTIAL LOCK SHIFT ACTUATOR (W/ DIFF. LOCK)

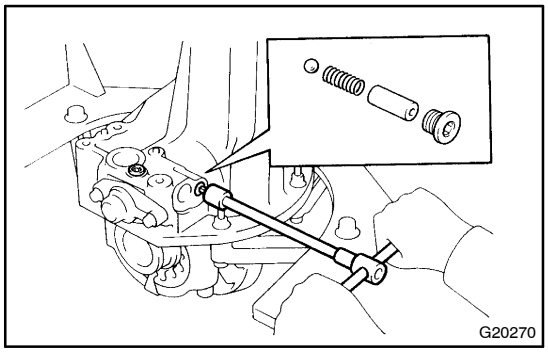
(a) Remove the 4 bolts and actuator from the differential caririer.

(b) Remove the O–ring.



36. REMOVE TRANSFER INDICATOR SWITCH NO.2 (W/ DIFF. LOCK)

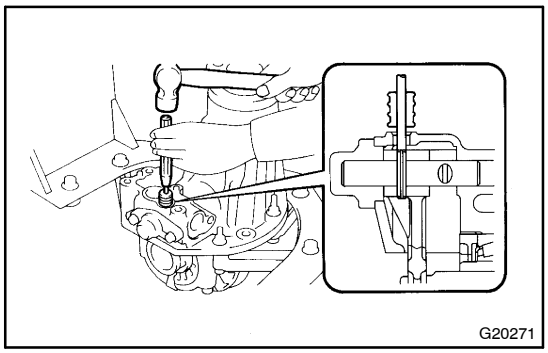
(a) Remove the indicator switch and gasket.



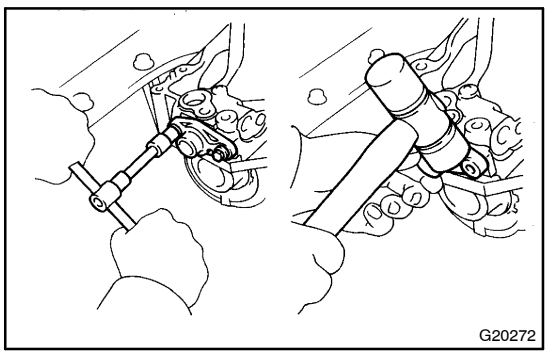
37. REMOVE REAR DIFFERENTIAL LOCK SHIFT FORK SHAFT (W/ DIFF. LOCK)

(a) Using a 6 mm hexagon wrench, remove the 2 screw plugs.

(b) Remove the spring sear, spring and ball.



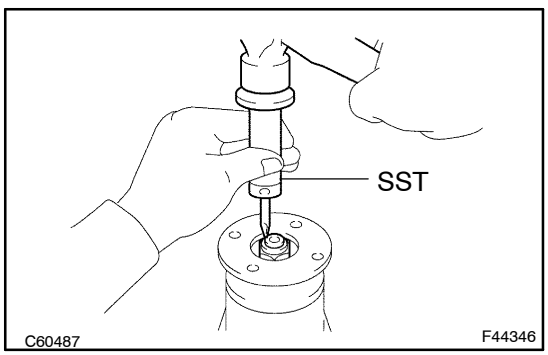
(c) Using a 5 mm pin punch and hammer, remove the slotted pin.



(d) Remove the 2 bolts from the shaft retainer.

(e) Using a plastic hammer, remove the shaft retainer.

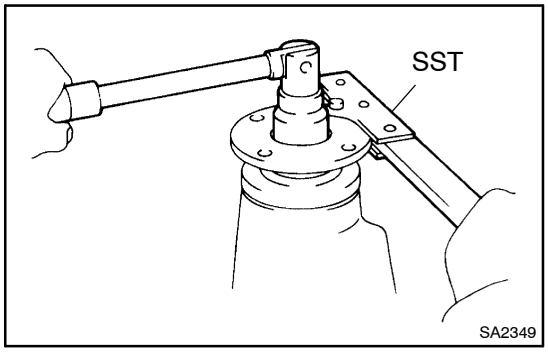
(f) Remove the shift fork shaft.



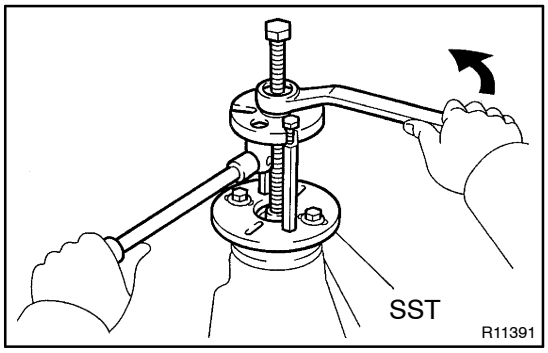
38. REMOVE REAR DRIVE PINION NUT

(a) Using SST and a hammer, loosen the staked part of the nut.

SST 09930–00010

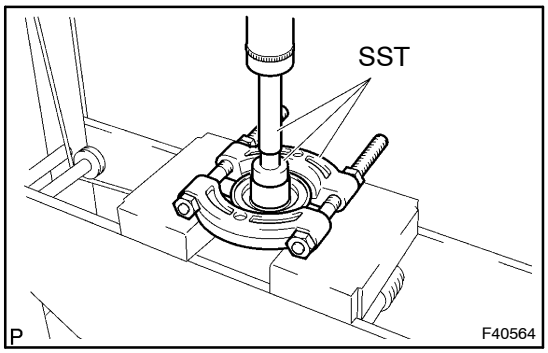


(b) Using SST to hold the drive pinion companion flange, remove the nut.
SST 09330–00021



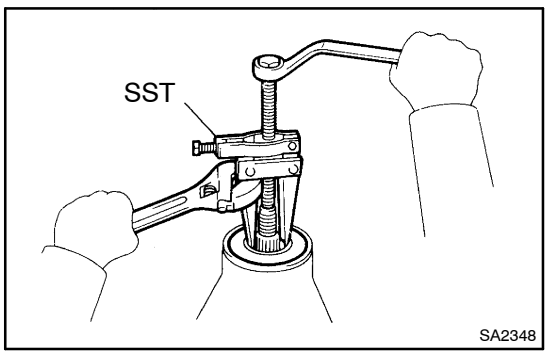
39. REMOVE REAR DRIVE PINION COMPANION FLANGE SUB–ASSYREAR

(a) Using SST, remove the drive pinion companion flange.
SST 09950–30012 (09951–03010, 09953–03010, 09954–03010, 09955–03030, 09956–03030)



40. REMOVE REAR DIFFERENTIAL DUST DEFLECTOR

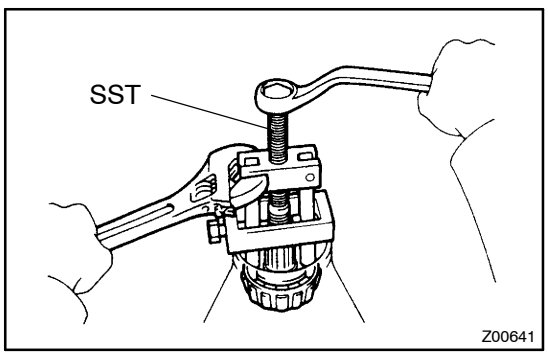
(a) Using SST and a press, remove the dust deflector.
SST 09950–60010 (09951–00380), 09950–70010 (09951–07150), 09950–00020



41. REMOVE REAR DIFFERENTIAL CARRIER OIL SEAL

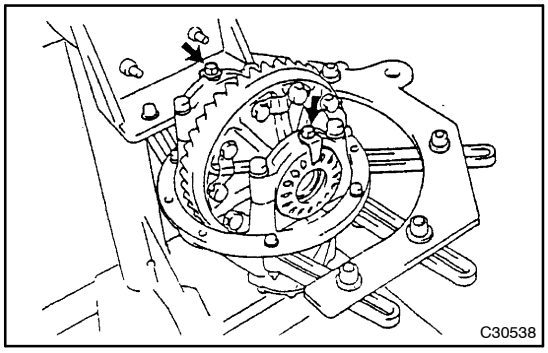
(a) Using SST, remove the oil seal from the differential carrier.
SST 09308–10010

42. REMOVE REAR DIFFERENTIAL DRIVE PINION OIL SLINGER



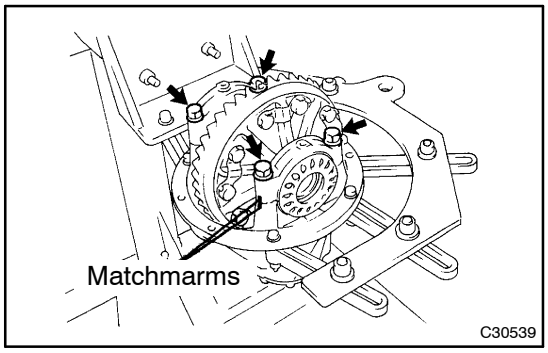
43. REMOVE REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

(a) Using SST, remove the drive pinion tapered roller bearing (inner) from the drive pinion.
SST 09556–22010



44. REMOVE REAR DIFFERENTIAL BEARING ADJUSTING NUT LOCK

(a) Remove the 2 bolts and 2 rear differential bearing adjust locks.

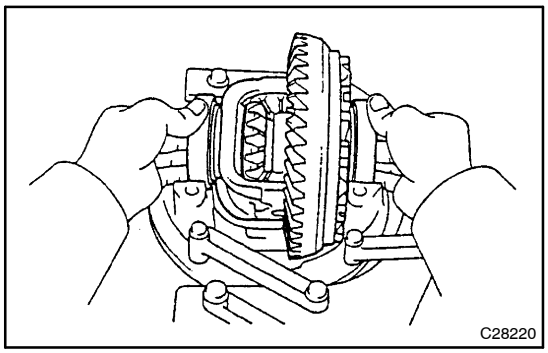


45. REMOVE DIFFERENTIAL CASE ASSY

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

(b) Remove the 4 bolts and 2 differential bearing caps.

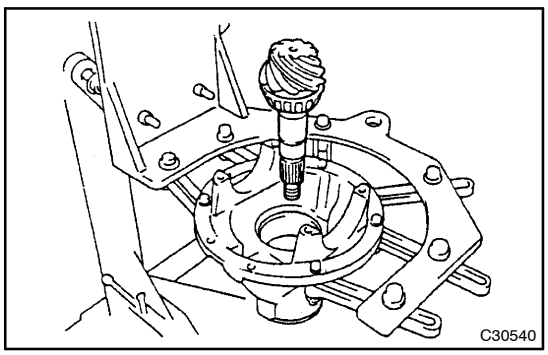
(c) Remove the 2 adjusting nuts.



(d) Remove the rear differential case sub–assy and 2 case bearings from the differential carrier.

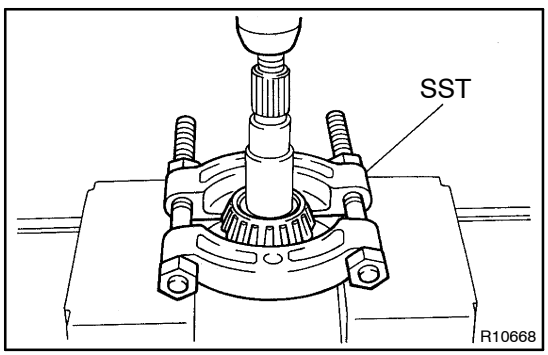
HINT:

Tag the 2 case bearings outer races to show the location for reassembling.



46. REMOVE DIFFERENTIAL DRIVE PINION

(a) Remove the differential drive pinion and bearing spacer from the differential carrier.



47. REMOVE REAR DRIVE PINION REAR TAPERED ROLLER BEARING

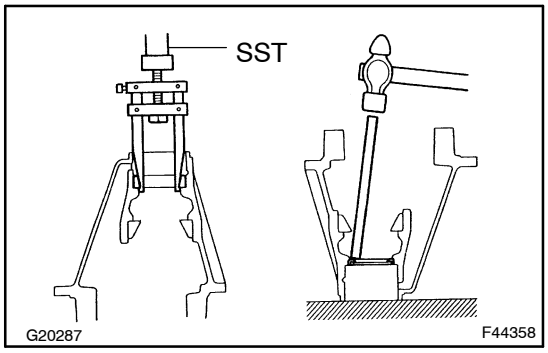
(a) Using SST and a press, remove the drive pinion tapered roller bearing (inner) from the drive pinion.

SST 09950–00020

HINT:

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

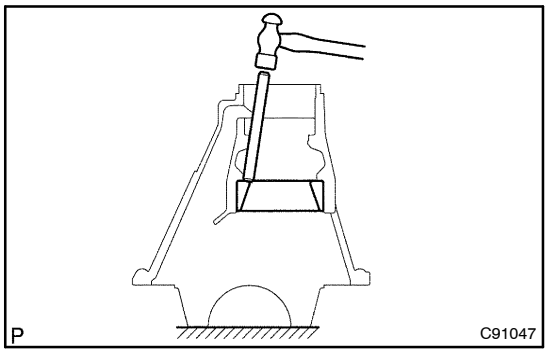
48. REMOVE REAR DIFFERENTIAL DRIVE PINION PLATE WASHER



49. REMOVE REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

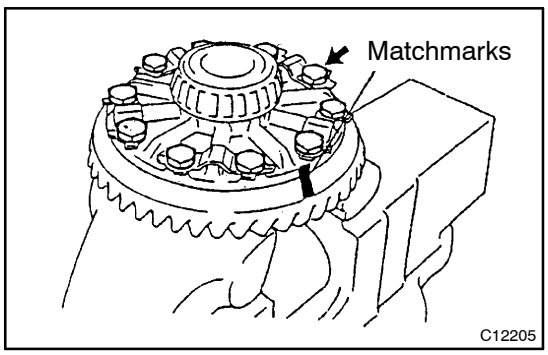
(a) Using a SST, remove the front tapered roller bearing (outer) from the carrier.
SST 09308–00010

(b) Using a brass bar and a hammer, remove the oil storage ring from the carrier.



50. REMOVE REAR DRIVE PINION REAR TAPERED ROLLER BEARING

(a) Using a brass bar and a hammer, remove the rear tapered roller bearing (outer) from the carrier.

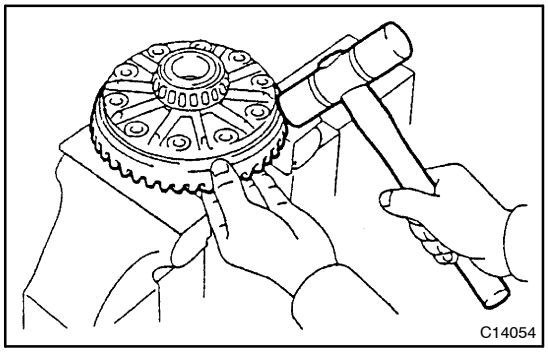


51. REMOVE DIFFERENTIAL RING GEAR

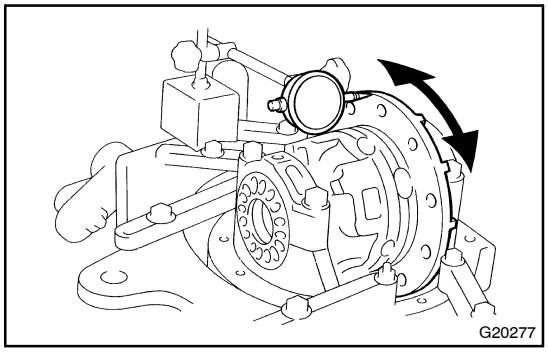
(a) Place matchmarks on the ring gear and differential case.

(b) Using a screwdriver and a hammer, unstake the lock plates.

(c) Remove the 10 ring gear set bolts and 5 lock plates.



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


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52. INSPECT DIFFERENTIAL CASE ASSY RUNOUT

HINT:

It will be done only when it exceeds the limit at the ring gear runout check.

(a) Install the rear differential case bearing to the differential case.

(b) Install the differential case to the differential carrier.

(c) Install the 2 bearing caps and 4 bolts to the differential carrier.

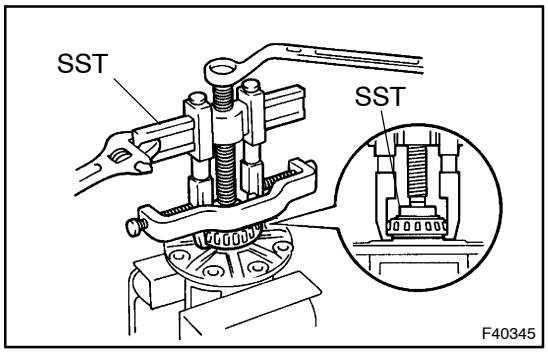
Torque: 85 N·m (867 ft·lbf, 63 ft·lbf)

(d) Inspect the differential case runout.

Maximum runout: 0.07 mm (0.0028 in.)

(e) Remove the differential case.

(f) Remove the rear differential case bearing.

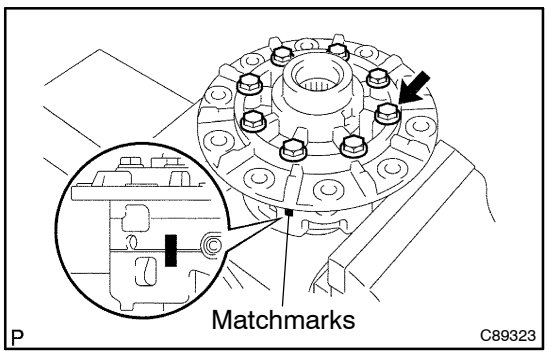


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53. REMOVE REAR DIFFERENTIAL CASE BEARING

(a) Using SST, remove the rear differential case 2 bearings from the differential case.

SST 09950–40011 (09951–04020, 09952–04010, 09953–04030, 09954–04010, 09955–04061, 09957–04010, 09958–04011), 09950–60010 (09951–00360)

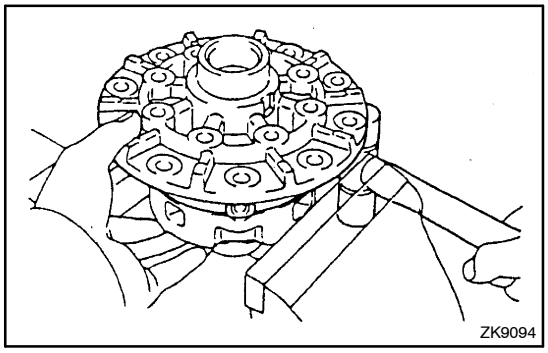


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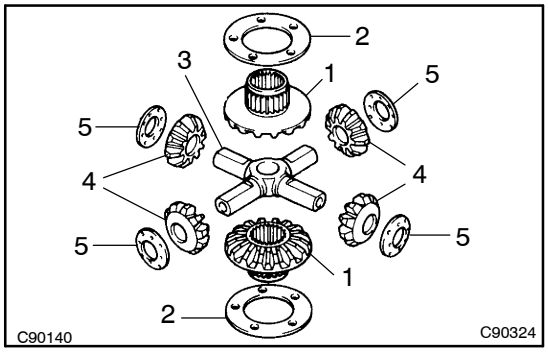
54. DISASSEMBLE DIFFERENTIAL CASE (4 PINION DIFFERENTIAL, W/ DIFF. LOCK)

(a) Place matchmarks on the LH and RH cases.

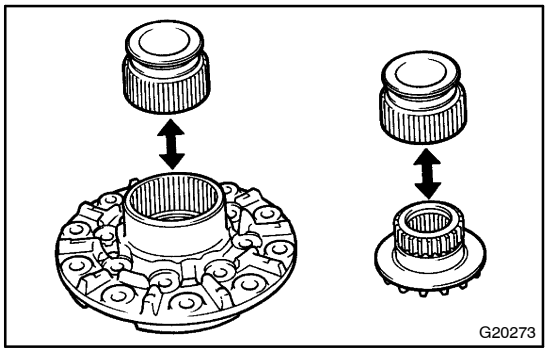
(b) Remove the 8 bolts.


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(c) Using a plastic hammer, separate the LH and RH case.



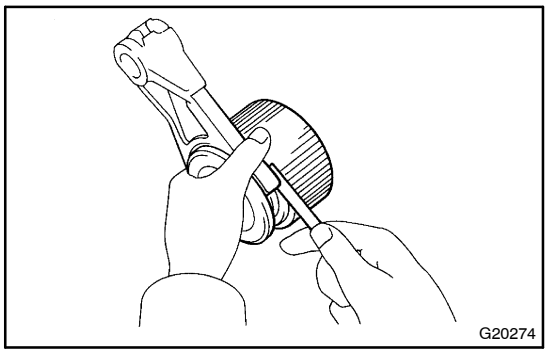
(d) Remove theres parts from the differential case.
(1) Side gear (2 pieces)
(2) Side gear thrust washer (2 pieces)
(3) Spider
(4) Pinion gear (4 pieces)
(5) Pinion gear thrust washer (4 pieces)



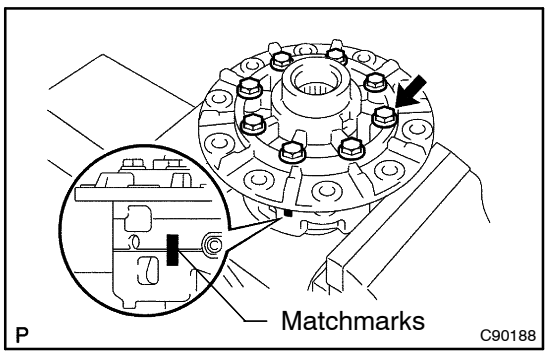
55. INSPECT REAR DIFFERENTIAL LOCK SLEEVE (W/ DIFF. LOCK)

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

(b) Install the side gear to the sleeve and check that it moves smoothly.

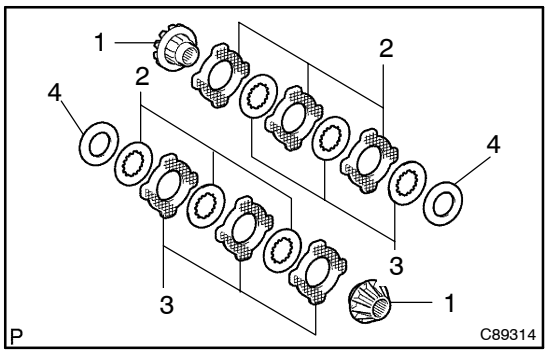


(c) Using a feely gauge, measure the clearance between the shift fork and sleeve.

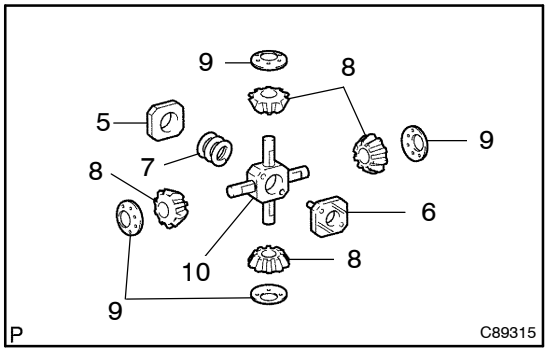


56. DISASSEMBLE DIFFERENTIAL CASE (W/LSD DIFFERENTIAL)

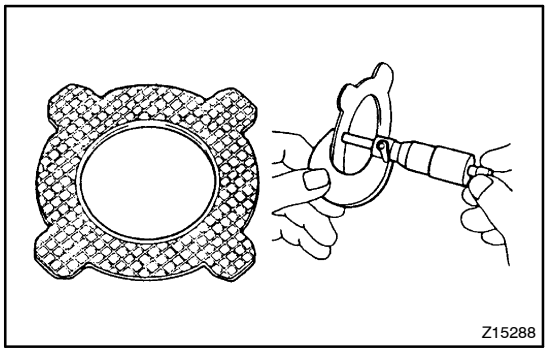
(a) Place matchmarks on the LH and RH cases.



(b) Remove the theres parts from the differential case.
(1) Side gear (2 pieces)
(2) Side gear thrust washer No.1 (6 pieces)
(3) Clutch plate (6 pieces)
(4) Side gear thrust washer (2 pieces)



(5) Spring retainer RH
(6) Spring retainer LH
(7) Compression spring
(8) Differential pinion gear (4 pieces)
(9) Pinion gear thrust washer (4 pieces)
(10) Spider



57. INSPECT REAR DIFFERENTIAL SIDE GEAR THRUST NO.1 WASHER (W/LSD DIFFERENTIAL)

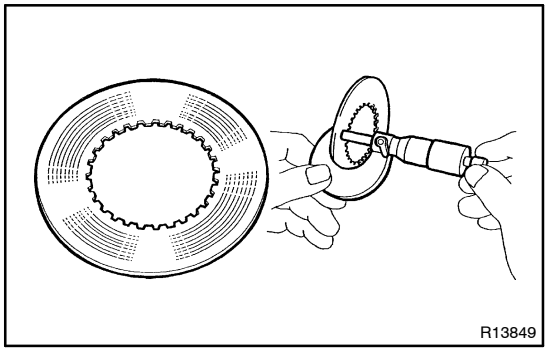
(a) Using a micrometer, measure that the contact surface of the thrust washer is even and check that no bare metal is showing.

Standard thickness:
1.77 – 1.86 mm (0.0697 – 0.0732 in.)

If necessary, replace the thrust washers.

HINT:

If replacing the thrust washer, also replace the clutch plate that contacts with it.

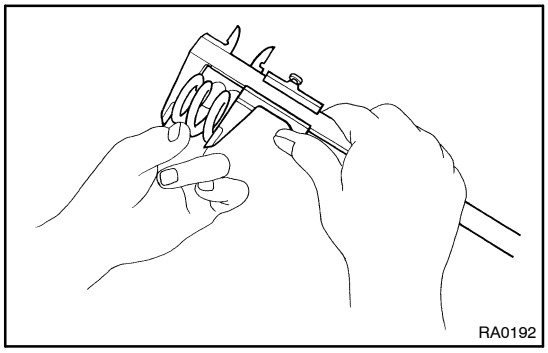


58. INSPECT CLUTCH PLATE (W/LSD DIFFERENTIAL)

(a) Using a micrometer, measure the contact surface of the clutch plate and check that there is no abnormal wear.

Standard thickness:
1.57 – 1.63 mm (0.0618 – 0.0642 in.)

If necessary, replace the clutch plate.



59. INSPECT COMPRESSION SPRING (W/LSD DIFFERENTIAL)

(a) Using a vernier caliper, measure the free length of the spring.

Free length: 27.11 mm (1.067 in.)

60. INSPECT DIFFERENTIAL PINION AND SIDE GEAR

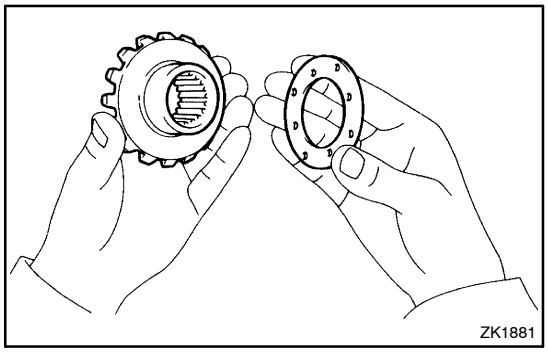
(a) Check that no damage is identified on the differential pinion and differential side gear.

If the differential pinion and/or differential side gear is damaged, replace the differential.

61. INSPECT DIFFERENTIAL CASE

(a) Check that no damaged is differential case.

If the differential case is damaged, replace the differential case.

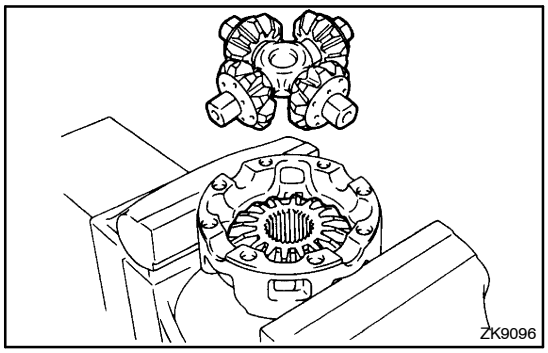


62. INSTALL DIFFERENTIAL CASE ASSY (4 PINION DIFFERENTIAL, W/ DIFF. LOCK)

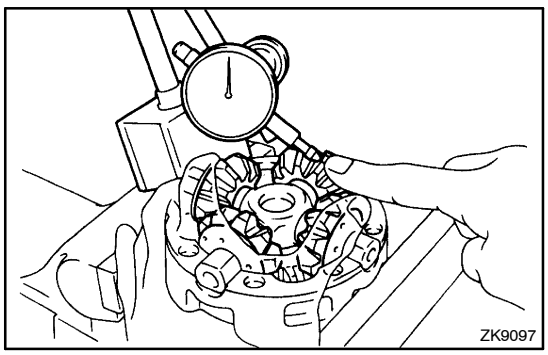
(a) Install the rear differential side gear thrust washer to the rear differential side gear.

(b) Install the rear differential pinion thrust washer and rear differential pinion to the rear differential spider.

(c) Fix the differential case RH.



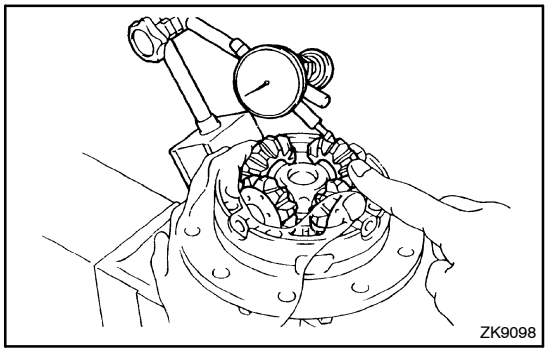
(d) Install the rear differential side gear and rear differential spider to the differential case RH.



(e) Using a dial indicator, measure the differential case RH side backlash while holding pinion toward the case.

Backlash: 0.05 – 0.20 mm (0.002 – 0.008 in.)

(f) Remove the rear differential spider from the differential case RH.



(g) Install the rear differential side gear and rear differential spider to the differential case LH.

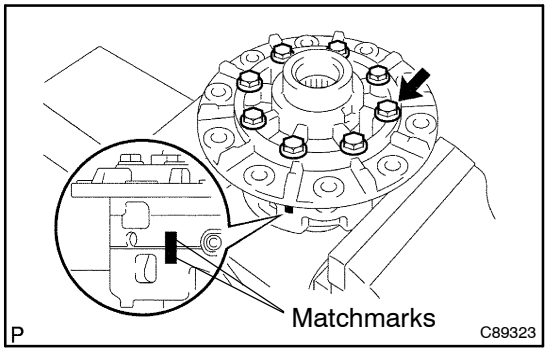
(h) Using a dial indicator, measure the differential case LH side backlash while holding pinion toward the case.

Backlash: 0.05 – 0.20 mm (0.002 – 0.008 in.)

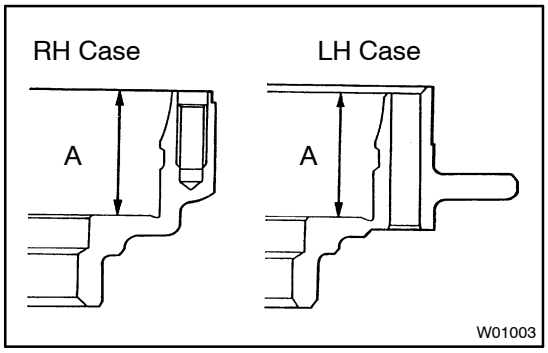
If the backlash is not within the specification, install the 2 side gear thrust washers with different thickness.

Thrust washer thickness:

Thickness mm (in.)	Thickness mm (in.)
0.9 (0.0354)	1.2 (0.0472)
1.0 (0.0394)	1.3 (0.0512)
1.1 (0.0433)	–

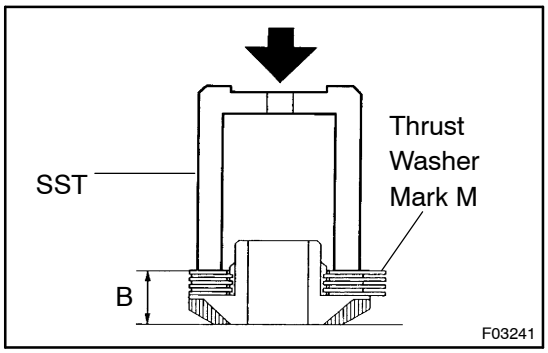


(i) Align the matchmarks and assemble the RH and LH cases.
(j) Using a plastic hammer, install the differential case.
(k) Install the 8 bolts.
Torque: 47 N·m (480 kgf·cm, 35 ft·lbf)



63. INSTALL DIFFERENTIAL CASE ASSY (W/LSD DIFFERENTIAL)

(a) Measure the differential case dimension ”A”, as shown in the illustration.



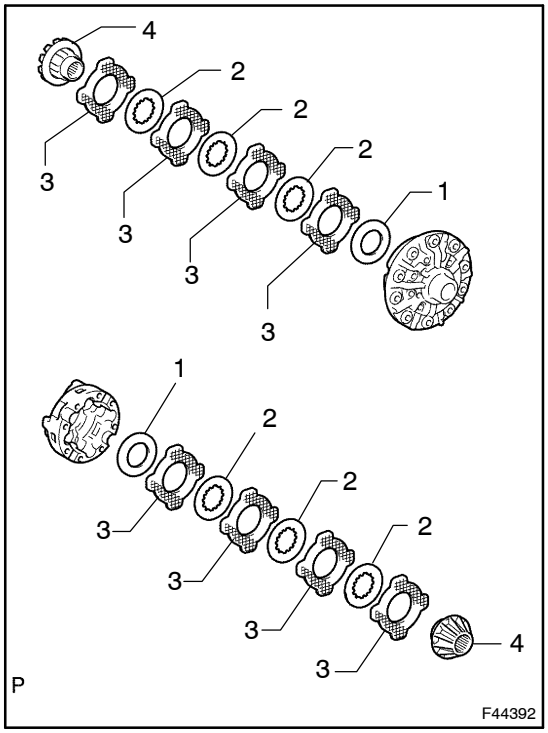
(b) Install the thrust washers (face their fine side to the side gear) and clutch plates on the side gear.

HINT:
install the new thrust washer (Mark M) instead of the thrust washers (Mark B–L) to the differential case side.

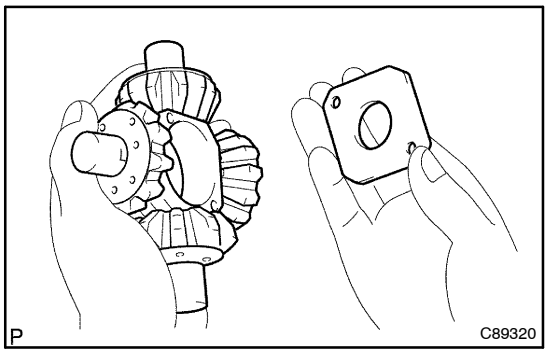
(c) Using SST to press down the thrust washers and clutch plates with about pressure of 10 kgf (22 lbf), measure dimension ”B” as shown in the illustration.
SST 09649–17010

(d) Referring to the following slection, select the proper adjusting shim.
Adjusting shim thickness =
A – B – 16.175 mm (0.63681 in.)
Adjust washer thickness:

Thickness mm (in.)	Thickness mm (in.)
0.15 (0.0059)	020 (0.0059)
0.25 (0.0098)	0.30 (0.0118)
0.35 (0.0138)	–

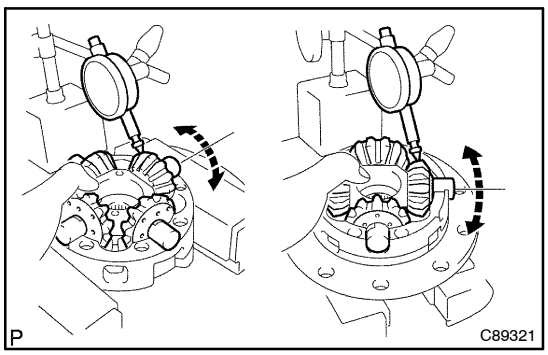


(1) Side gear thrust washer
(2) Side gear thrust washer No.1
(3) Clutch plate
(4) Side gear



(e) Install the 4 pinion gears and thrust washers to the spider.
(f) Align the spring RH retainer holes with the spider knock pins and install the RH retainer.
(g) Install the pinion gear and spider to the differential RH case.

HINT:
Install the spider to the RH case tightly and don't move the spring retainer.



(h) Using a dial indicator, measure the side gear backlash while hold the side gear and spider.
Backlash: 0.05 – 0.20 mm (0.0020 – 0.0079 in.)

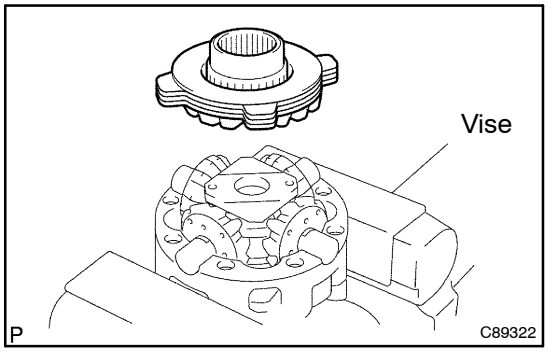
HINT:
- Measure at all 4 locations.
- Measure the backlash at the LH case and at the RH case.

If the backlash is not within the specification, install a adjusting shim of a different thickness.

(i) Reinstall the spider and spring RH retainer to the differential RH case.

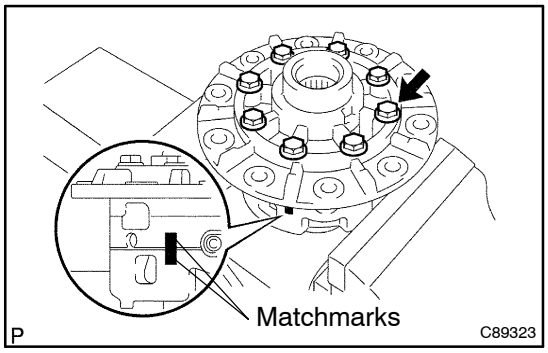
HINT:
Install the spider to the RH case tightly and don't move the spring retainer.

(j) Install the compression spring and spring LH retainer.

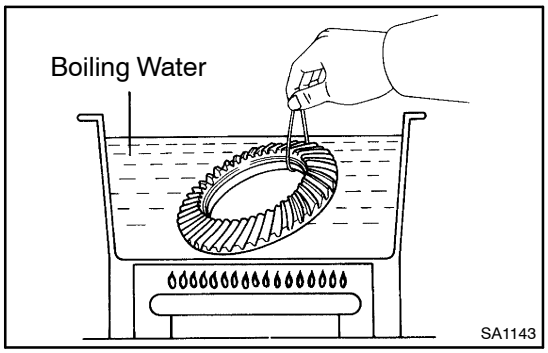


(k) Install the side gear, thrust washers and clutch plates.
(l) Align the matchmarks and assemble the RH and LH cases.

HINT:
Be careful not to drop the side gear and check the pinion and side gear alignment.

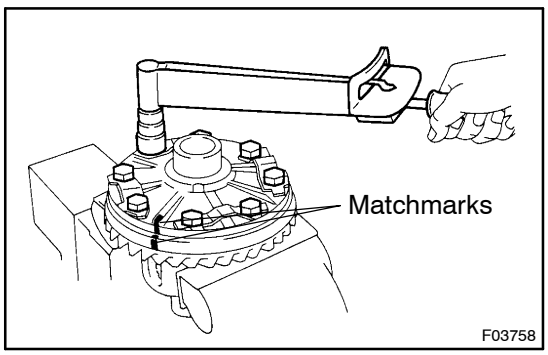


(m) Tighten the 8 bolts uniformly, a little at a time.
Torque: 47 N·m (480 kgf·cm, 35 ft·lbf)



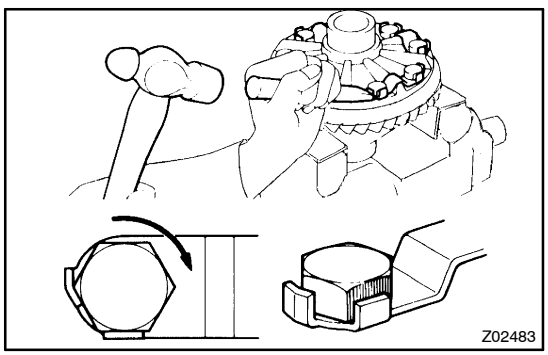
64. INSTALL DIFFERENTIAL RING GEAR

(a) Clean the contact surfaces of the differential case and ring gear.
(b) Heat the ring gear approx. 100°C (212°F)in the boiling water.
(c) Carefully take the ring gear out of the boiling water.
(d) After the moisture on the ring gear has completely evaporated, quickly install the ring gear to the differential case.



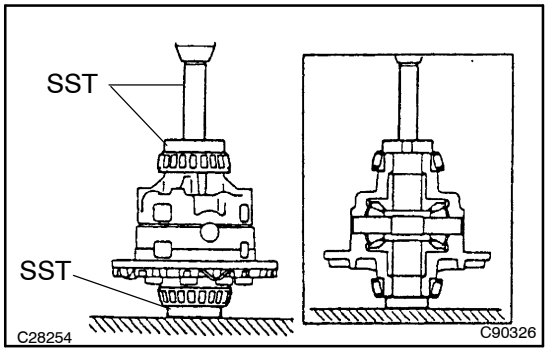
(e) Align the matchmarks on the ring gear and differential case.
(f) Temporarily install 5 new lock plates and 10 bolts.
(g) After the ring gear cools down enough, torque the 8 bolts uniformly at a time.
Torque: 97 N·m (985 kgf·cm, 71 ft·lbf)

HINT:
Tighten the bolts in diagonal order little by little over several times.



(h) Using a chisel and a hammer, stake the 5 lock plates.

HINT:
Stake one claw so that it is flush with the flat surface of the bolt. For the claw contacting the protruding portion of the bolt, stake only the half on the tightening side.



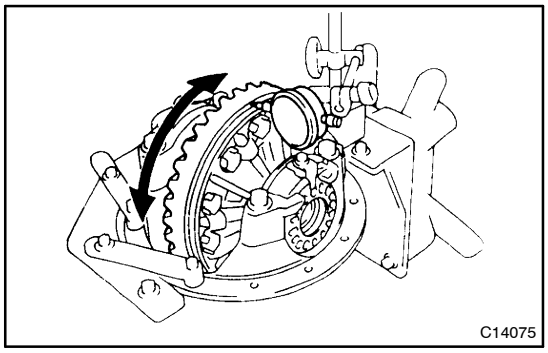
65. INSTALL REAR DIFFERENTIAL CASE BEARING

(a) Using SST and a press, install the bearing on the differential case.(4 pinion, w/ LSD)

SST 09950–60010 (09951–00430, 09951–00480, 09951–00470, 09951–00550), 09950–70010 (09951–07150)

(b) Using SST and a press, install the bearing on the differential case.(w/ Diff. lock)

SST 09950–60010, 09950–70010 (09951–07150, 09951–00560, 09951–00570)



66. INSPECT DIFFERENTIAL RING GEAR RUNOUT

(a) Install the differential case on the carrier, and install the 2 adjusting nut so that there is no play in the bearing.

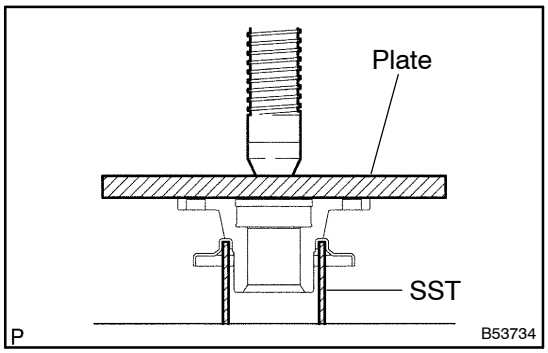
(b) Install the 2 bearing caps with the 4 bolts.

Torque: 85 N·m (870 kgf·cm, 63 ft·lbf)

(c) Using a dial indicator, measure the runout of the ring gear.

Maximum runout: 0.07 mm (0.0028 in.)

(d) Remove the 2 bearing caps, 2 adjusting nuts and differential case.



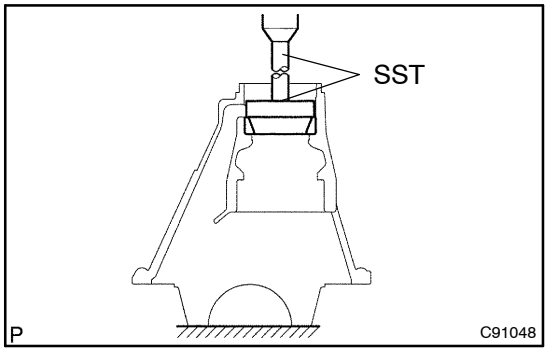
67. INSTALL REAR DIFFERENTIAL DUST DEFLECTOR

(a) Using a press, install the dust deflector.

NOTICE:

Be careful not to damage the dust deflector.

SST 09636–20010

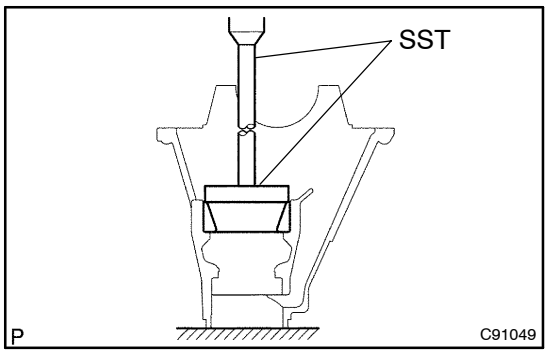


68. INSTALL REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

(a) Using a brass bar and a hammer, install the oil storage ring.

(b) Using SST and a press, install the tapered roller bearing (outer) to the carrier.

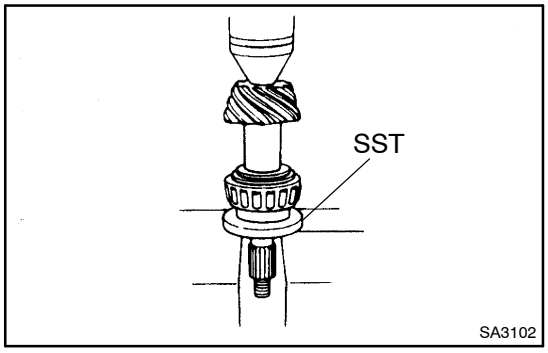
SST 09316–60011 (09316–00011, 09316–00021)



69. INSTALL REAR DRIVE PINION REAR TAPERED ROLLER BEARING

(a) Using SST and a press, install the tapered roller bearing (outer) to the carrier.

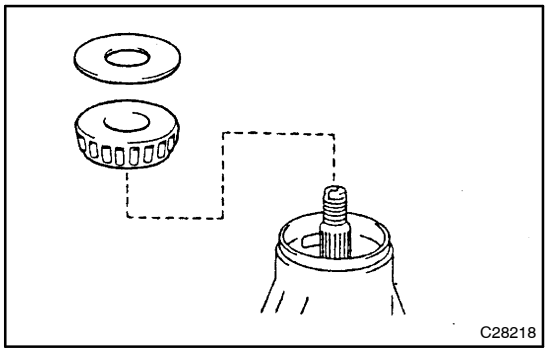
SST 09316–60011 (09316–00041, 09316–00011)



70. INSTALL REAR DRIVE PINION REAR TAPERED ROLLER BEARING

(a) Install the plate washer on the drive pinion.

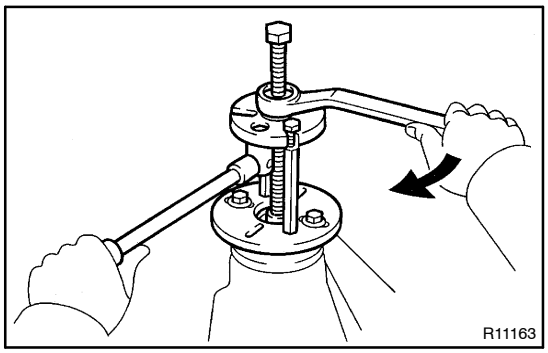
(b) Using SST and a press, install the tapered roller bearing (inner) onto the drive pinion.
SST 09506–30012



71. ADJUST DIFFERENTIAL DRIVE PINION PRELOAD

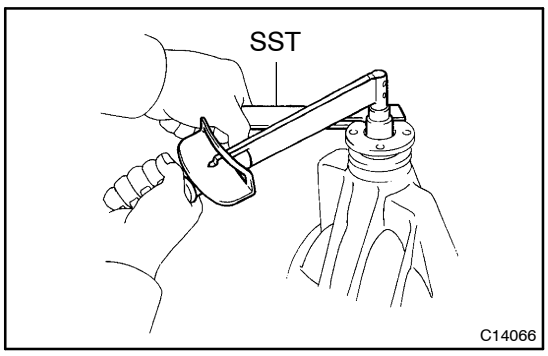
(a) Install the drive pinion, rear drive pinion tapered roller bearing and rear differential drive oil slinger.

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



(b) Using SST, install the drive pinion companion flange.
SST 09950–30012 (09951–03010, 09953–03010, 09954–03010, 09955–03030, 09956–03030), 09330–00021 (09330–00030)

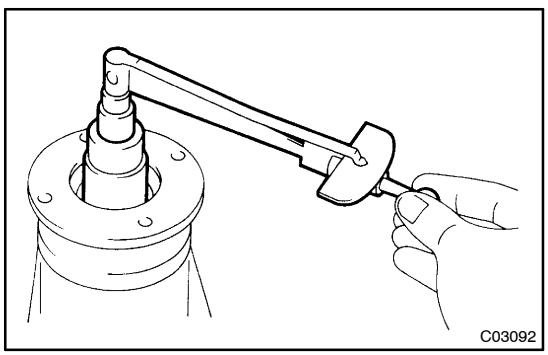
(c) Coat the threads of the nut with hypoid gear oil LSD.



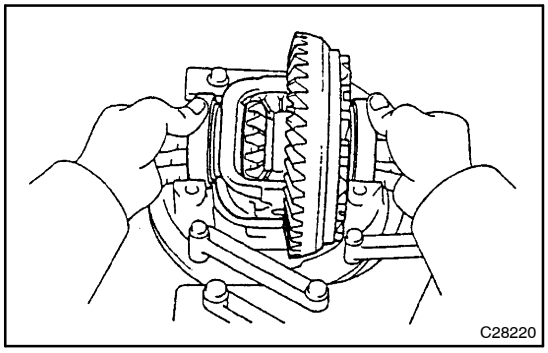
(d) Using SST to hold the drive pinion companion flange, torque the nut.
Torque: 370 N·m (3,770 kgf·cm, 273 ft·lbf) or less

NOTICE:

- **As there is no spacer, torque a little at a time, being careful not to overtighten it.**
- **Apply hypoid gear oil LSD of the nut.**



(e) Using a torque wrench, measure the preload.
Preload (at starting):
New bearing:
1.05 – 1.64 N·m (10.7 – 16.7 kgf·cm, 9.3 – 14.5 in.·lbf)
Reused bearing:
0.56 – 0.85 N·m (5.7 – 8.7 kgf·cm, 5.0 – 7.5 in.·lbf)

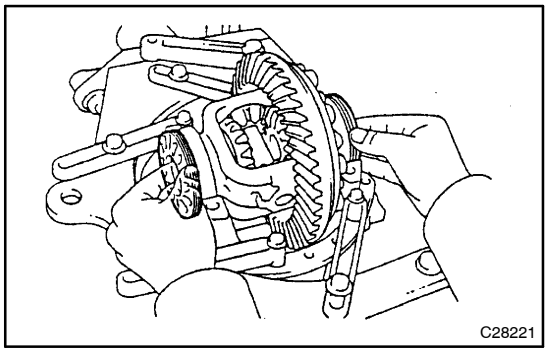


72. INSTALL DIFFERENTIAL CASE ASSY

(a) Place the 2 bearing outer races on their respective bearings.

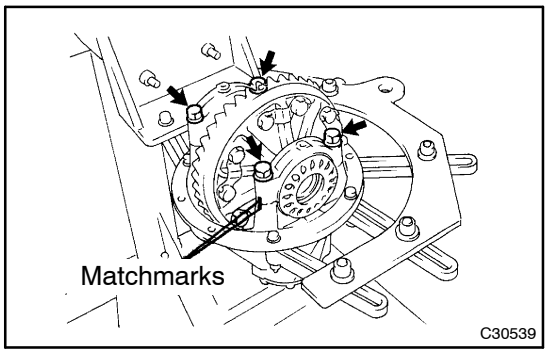
HINT:

Make sure the right and left races are not interchanged.



73. INSTALL REAR DIFFERENTIAL BEARING ADJUSTING NUT

(a) Install the 2 adjusting nuts on the carrier, making sure the nuts are threaded properly.



74. INSPECT AND ADJUST ADJUST BACKLASH DIFFERENTIAL RING GEAR AND DIFFERENTIAL DRIVE PINION

(a) Align the matchmarks on the cap and carrier.

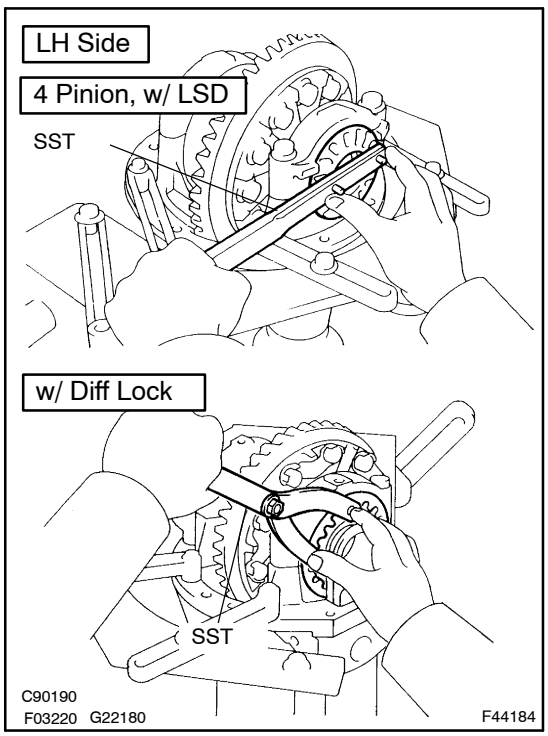
(b) Install the right and left bearing caps with the 4 bolts.

Torque: 85 N·m (870 kgf·cm, 63 ft·lbf)

HINT:

If the bearing cap does fit tightly on the carrier, the adjusting nuts are not threaded properly.

Reinstall the adjusting nuts if necessary.



(c) 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. (4 pinion, w/LSD)

SST 09504–00011

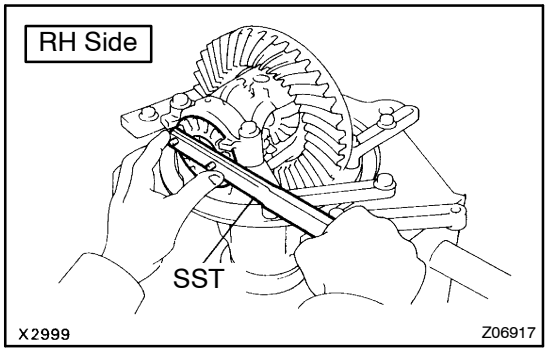
Torque: 85 N·m (870 kgf·cm, 63 ft·lbf)

(d) 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. (w/ Diff Lock)

SST 09960–10010 (09962–01000, 09963–00700)

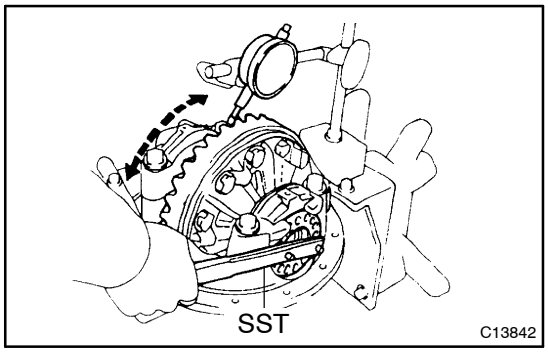
Torque: 85 N·m (870 kgf·cm, 63 ft·lbf)

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



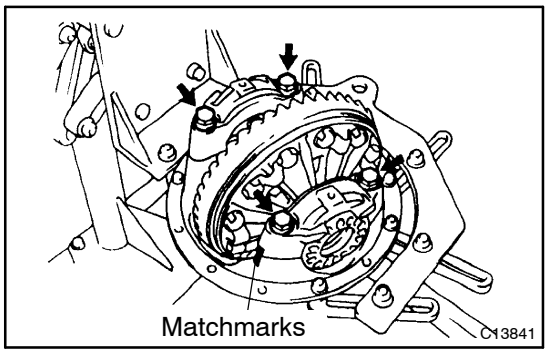
(f) While turning the ring gear, use the SST to fully tighten the adjusting nut on the drive pinion side.
After the bearings as settled, loosen the adjusting nut on the drive pinion side.

(g) Using SST, torque the adjusting nut 1 – 1.5 notches from the 0 preload position.

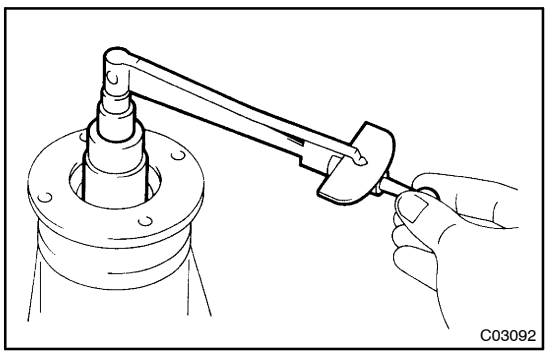


(h) Using a dial indicator, adjust the ring gear backlash until it is within the specification.
Backlash: 0.13 – 0.18 mm (0.0051 – 0.0071 in.)

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

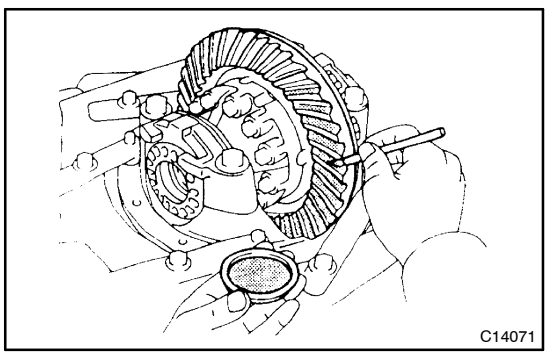


(i) Torque the bearing cap bolts.
Torque: 85 N·m (870 kgf·cm, 63 ft·lbf)



75. INSPECT TOTAL PRELOAD

(a) Using a torque wrench, measure the preload with the teeth of the drive pinion and ring gear in cotact.
Total preload (at starting):
Drive pinion preload plus
0.39 – 0.59 N·m (4 – 7 kgf·cm, 3.5 – 5.8 in.·lbf)

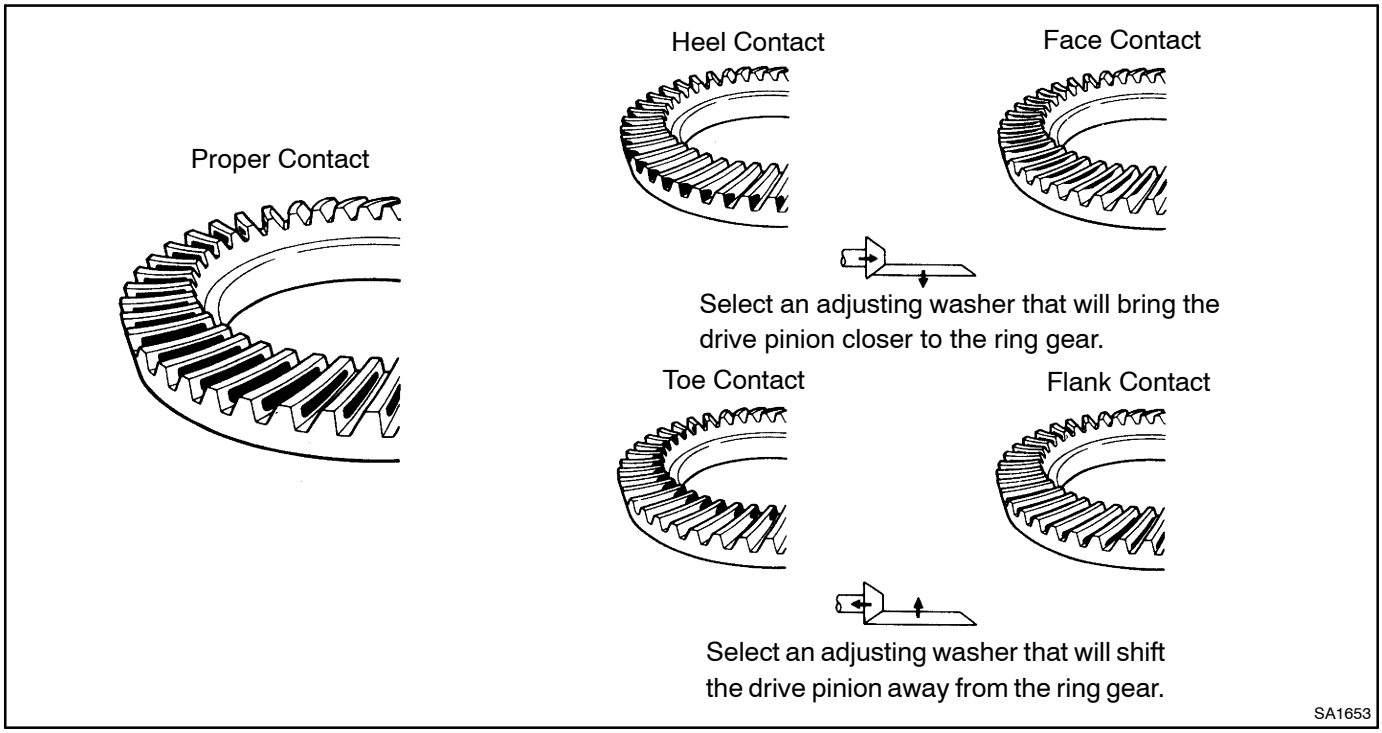


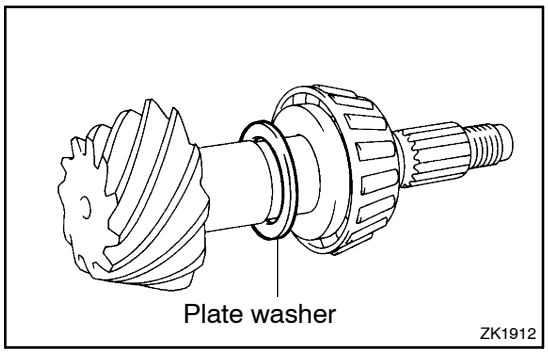
76. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION

(a) Coat 3 or 4 teeth at 3 different positions on the ring gear with red lead primer.

(b) Hold the companion flange firmly and rotate the ring gear in both directions.

(c) Inspect the tooth contact pattern.





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

Plate Washer thickness:

Thickness mm (in.)	Thickness mm (in.)
1.70 (0.0669)	2.03 (0.0799)
1.73 (0.0681)	2.06 (0.0811)
1.76 (0.0693)	2.09 (0.0823)
1.79 (0.0705)	2.12 (0.0835)
1.82 (0.0717)	2.15 (0.0846)
1.85 (0.0728)	2.18 (0.0858)
1.88 (0.0740)	2.21 (0.0870)
1.91 (0.0752)	2.24 (0.0882)
1.94 (0.0764)	2.27 (0.0894)
1.97 (0.0776)	2.30 (0.0906)
2.00 (0.0787)	2.33 (0.0917)

77. REMOVE REAR DRIVE PINION NUT

SST 09330–00021 (09330–00030)

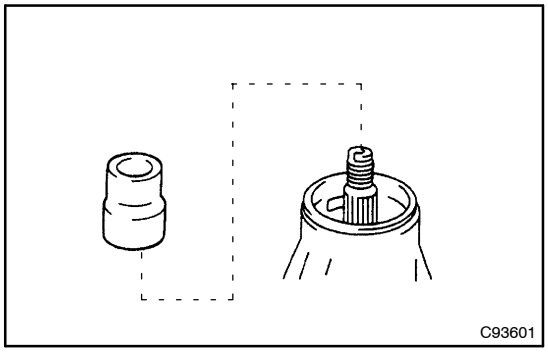
78. REMOVE REAR DRIVE PINION COMPANION FLANGE SUB–ASSYREAR

SST 09950–30012 (09951–03010, 09953–03010, 09954–03010, 09955–03030, 09956–03030)

79. REMOVE REAR DIFFERENTIAL DRIVE PINION OIL SLINGER

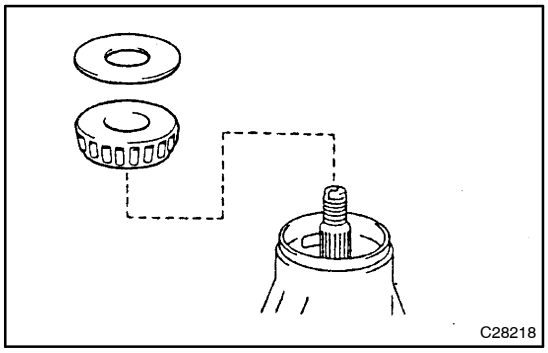
80. REMOVE REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

SST 09556–22010



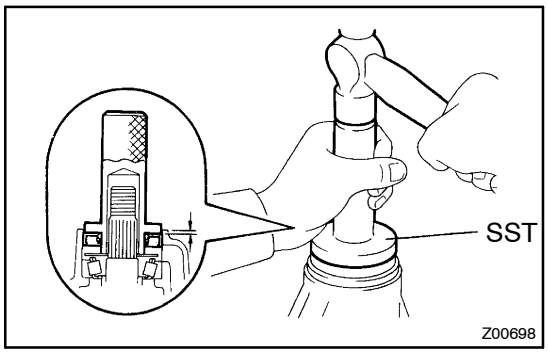
81. INSTALL REAR DIFFERENTIAL DRIVE PINION BEARING SPACER

(a) Instal a new bearing spacer to the drive pinion.



82. INSTALL REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

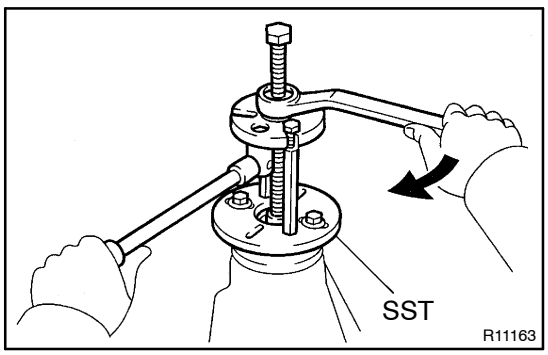
83. INSTALL REAR DIFFERENTIAL DRIVE PINION OIL SLINGER



84. INSTALL REAR DIFFERENTIAL CARRIER OIL SEAL

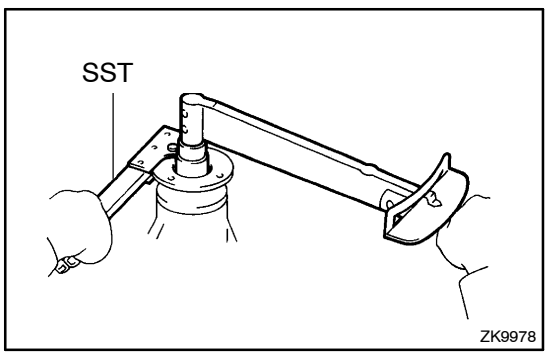
(a) Coat MP grease to the oil seal lip.

(b) Using SST and a hammer, install a new carrier oil seal.
SST 09554–30011
Oil seal drive in depth:
1.0 ± 0.45 mm (0.039 ± 0.018 in.)



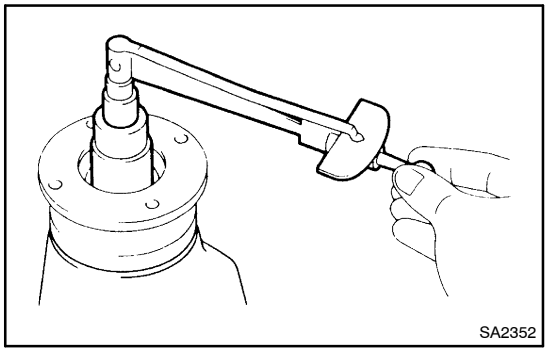
85. INSTALL REAR DRIVE PINION COMPANION FLANGE SUB–ASSYREAR

(a) Using SST, install the drive pinion companion flange on the drive pinion.
SST 09950–30012 (09951–03010, 09953–03010, 09954–03010, 09955–03030, 09956–03030),



(b) Coat the threads of a new nut with hypoid gear oil LSD.

(c) Using SST to hold the flange, torque the nut.
SST 09330–00021 (09330–00030)
Torque: 370 N·m (3,770 kgf·cm, 273 ft·lbf) or less



86. INSPECT DRIVE PINION PRELOAD

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

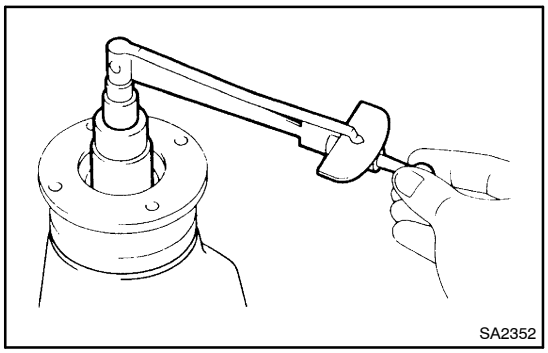
Preload (at starting):
New bearing:
1.05 – 1.64 N·m (11 – 17 kgf·cm, 9.3 – 14.5 in.·lbf)
Reused bearing:
0.56 – 0.85 N·m (6 – 9 kgf·cm, 5.0 – 7.5 in.·lbf)

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

If the preload is less than the specification, retorque the nut with 13 N·m (130 kgf·cm, 9 ft·lbf) of torque at a time until the specified preload is reached.

Torque: 370 N·m (3,770 kgf·cm, 27 ft·lbf) or less

If the maximum torque is exceeded while retightening the nut, replace the bearing spacer and repeat the preload adjusting procedure. Do not loosen the pinion nut to reduce the preload.

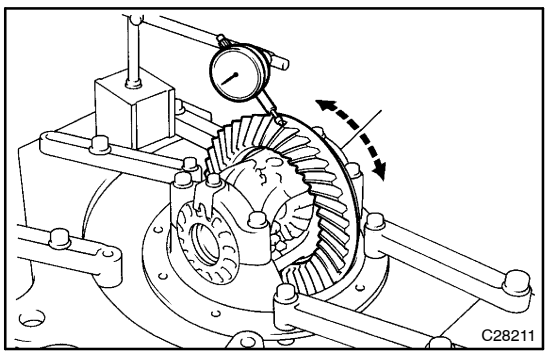


87. INSPECT TOTAL PRELOAD

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

Total preload (at starting):
Drive pinion preload plus
0.39 – 0.59 N·m (4 – 6 kgf·cm, 4.0 – 5.2 in.·lbf)

If the mecessary, disassemble and inspect the differential.

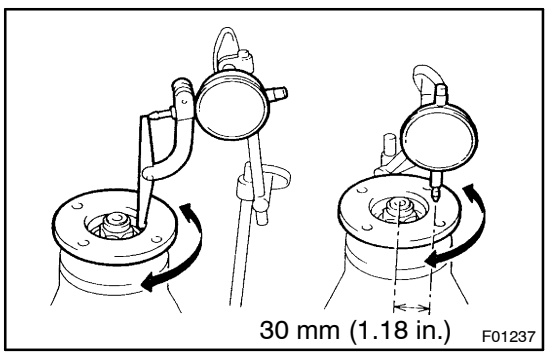


88. INSPECT DIFFERENTIAL RING GEAR BACKLASH

(a) Using a dial indicator, check the backlash of the ring gear.

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

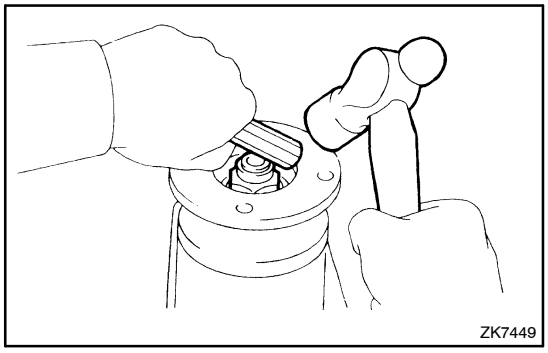
If the backlash is not within the specification, adjust the side bearing preload or repair as necessary.



89. INSPECT RUNOUT OF REAR DRIVE PINION COMPANION FLANGE SUB–ASSYREAR

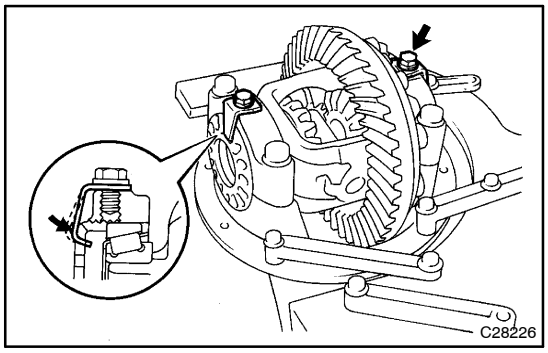
(a) Using a dial indicator, measure the runout of the drive pinion companion flange vertically and horizontally.

Maximum runout:
Vertical runout: 0.10 mm (0.0039 in.)
Lateral runout: 0.10 mm (0.0039 in.)



90. INSTALL REAR DRIVE PINION NUT

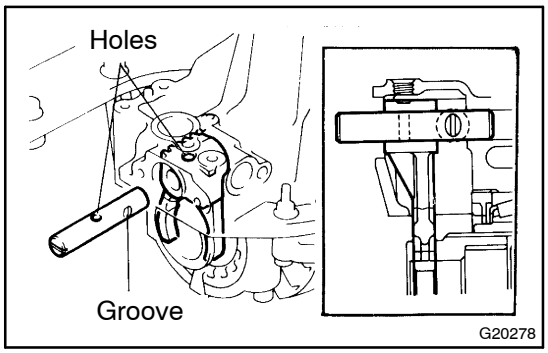
(a) Using a chisel and hammer, stake the drive pinion nut.



91. INSTALL REAR DIFFERENTIAL BEARING ADJUSTING NUT LOCK

(a) Install 2 new adjust lock on the bearing caps.
Torque: 13 N·m (130 kgf·cm, 96 ft·lbf)

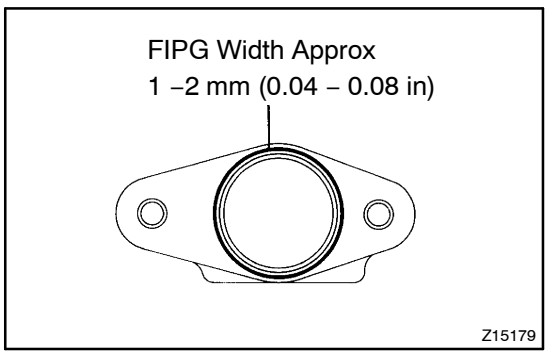
(b) After tightening belts, bend the nut locks.



92. INSTALL REAR DIFFERENTIAL LOCK SHIFT FORK (W/ DIFF. LOCK)

(a) Apply MP grease onto the outer circuit of the shaft.

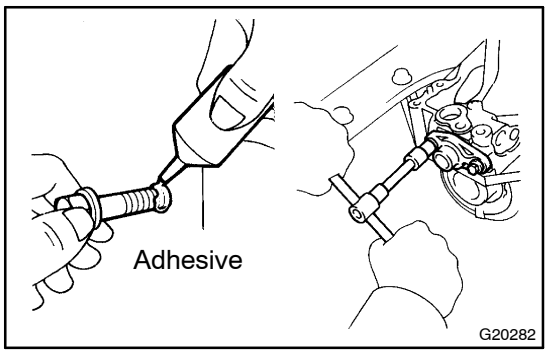
(b) Install the frok shaft to match the hole of the shift fork and that of the shift fork shaft.



(c) Remove any FIPG matenal and be careful not to drop oil shaft retainer.

(d) Apply FIPG to the carrier, as shown in the illustration.
FIPG:
Part No. 08826–00090, THREE BOND 1281 or equivalent

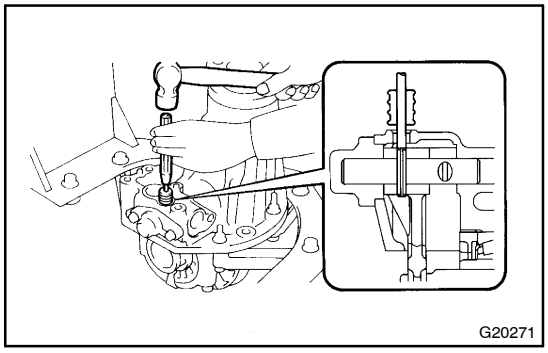
HINT:
Install the shaft retainer within 10 minutes after applying FIPG.



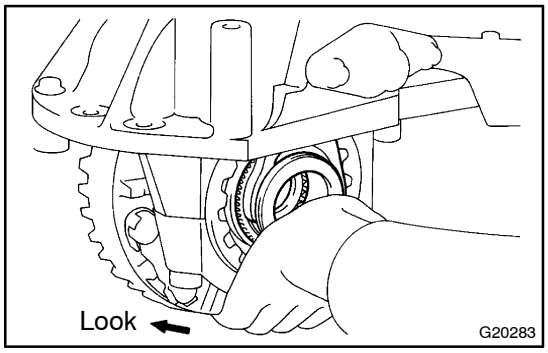
(e) Clean the threads of the bolts and retainer bolts holes with toluene or trichorethyene

(f) Apply adhesive to 2 or 3 threads of the mount bolts end
Adhesive:
Part No. 08833–00080, THREE BOND 1344, LOCTITE: 242 or equivalent

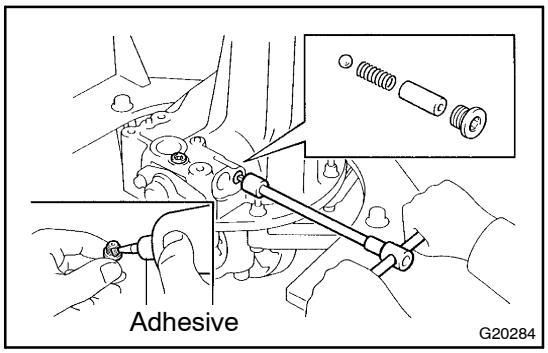
(g) Tightne the shaft retainer with the 2 bolts.
Torque: 24 N·m (240 kgf·cm, 17 ft·lbf)



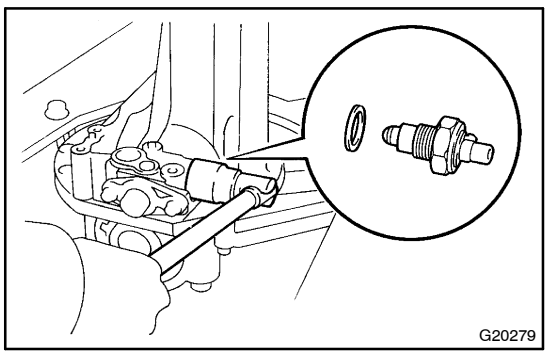
(h) Using a 5 mm pin punch and hammer, install the slotted spring pin to the shift fork.
Torque: 22 N·m (220 kgf·cm, 16 ft·lbf)



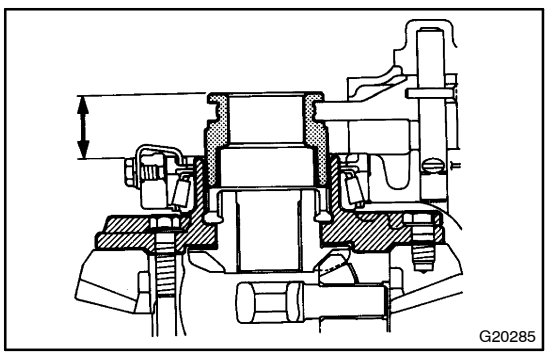
(i) Shift the deeply and keep the differential look condition.



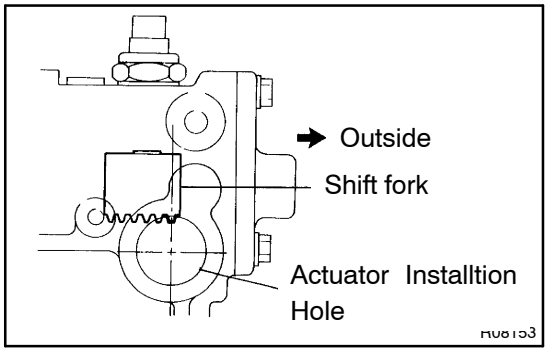
(j) Install the ball, spring and spring seat.
(k) Clean the threads of 2 plugs and plug holes with toluene or trichlorethylene.
Adhesive:
Part No. 08833–00080, THREE BOND 1344,
LOCTITE: 242 or equivalent
(l) using a 6 mm haxagon wrench, install and tighten the screw plugs.



93. INSTALL TRANSFER INDICATOR SWITCH NO.2 (W/ DIFF. LOCK)
(a) Install the indicator switch with new gasket.
Torque: 40 N·m (410 kgf·cm, 30 ft·lbf)

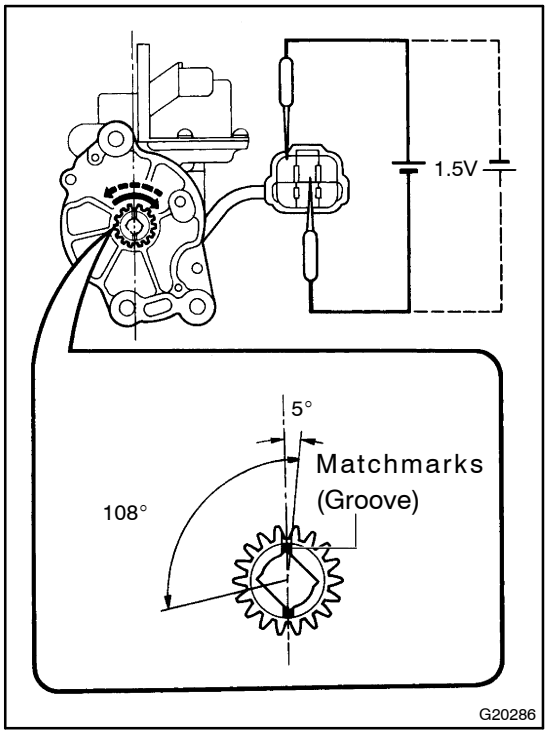


94. INSPECT REAR DIFFERENTIAL LOCK SLEEVE (W/ DIFF. LOCK)
(a) Measure distance between the sleeve and tip of the differential case when diffrerntial is free and locked respectively.
Standard distance:
LOCK: 17.44 – 18.86 mm (0.6866 – 0.7425 in.)
FREE: 32.40 – 33.90 mm (1.2756 – 1.3346 in.)



95. INSTALL DIFFERENTIAL LOCK SHIFT ACTUATOR (W/ DIFF. LOCK)

(a) Check that the outermost rack tooth of the shaift fork is virtually above the center line of the actuator installtion hole.



(b) Ensura that the matchmarks on the pinion of the actuator are in the extent between zero and 5 degrees clockwise above the center line of the actuator.

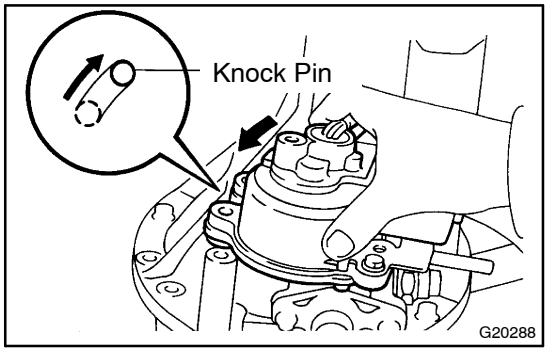
NOTICE:

- **If the matchmarks are not in this extent,rotate the pinion to be matched.**
- **Don't supply the battery positive voltage directly between terminals.**
- **If the matchmarks come to the extesion limit of the rotation don't electrifty moreover.**

(c) Install a new O–ring to the actuator.

(d) Apply a light coat of gear oil to the O–ring.

(e) Apply MP grease to the gear part.



(f) Ensure that the outer most rack tooth of the shift fork fits the matchmarks on the pinion of the actuator.

(g) Install the actuator so that the long hole on the actuator side fits with the knock pin on the camier side.

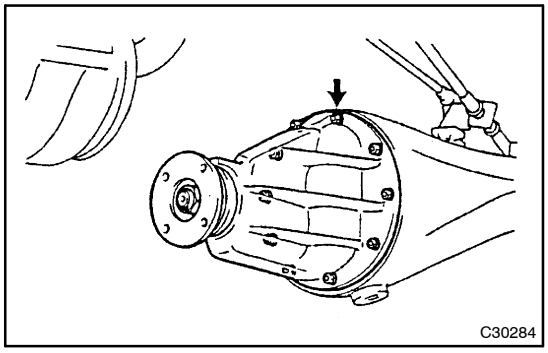
HINT:

Don't damage the O–ring of the actuator.

(h) Align the actuator with the long hole and rotate the actuator counterclockwise when the knock pin is set to the right–hand side.

(i) Install and tighten the bolts.

Torque: 20 N·m (204 kgf·cm, 15 ft·lbf)

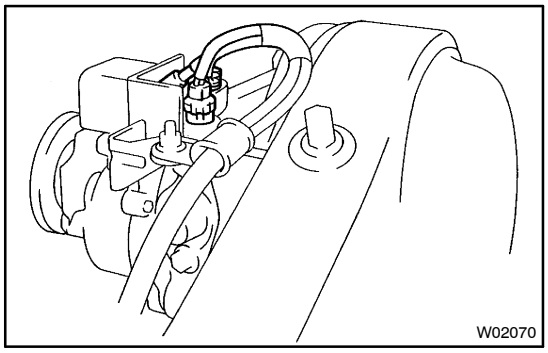


96. INSTALL DIFFERENTIAL CARRIER ASSY REAR

(a) Clean the contact surfaces of the rear differential carrier assy and rear axle housing assy.

(b) Install the rear differential carrier assy and gasket with the 10 nuts and washers.

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



97. CONNECT CONNECTOR (W/ DIFF. LOCK)

(a) Install the differential lock actuator connector.

98. INSTALL REAR AXLE SHAFT LH OIL SEAL (See page 30–40)

99. INSTALL REAR AXLE SHAFT RH OIL SEAL

HINT:

Install the RH side by the same procedures with the LH side.

100. INSTALL REAR AXLE SHAFT W/BACKING PLATE (See page 30–40)

101. INSTALL REAR AXLE SHAFT W/BACKING PLATE

HINT:

Install the RH side by the same procedures with the LH side.

102. INSTALL PARKING BRAKE CABLE ASSY NO.3 (See page 33–15)

103. INSTALL PARKING BRAKE CABLE ASSY NO.2

HINT:

Install the RH side by the same procedures with the LH side.

104. INSTALL SPEED SENSOR REAR LH (See page 32–88)

105. INSTALL SPEED SENSOR REAR RH

HINT:

Install the RH side by the same procedures with the LH side.

106. INSTALL PARKING BRAKE SHOE (See page 33–15)

107. INSTALL PARKING BRAKE SHOE

HINT:

Install the RH side by the same procedures with the LH side.

108. INSTALL PARKING BRAKE SHOE STRUT LH (See page 33–15)

109. INSTALL PARKING BRAKE SHOE STRUT RH

HINT:

Install the parking brake cable assy No.3 by the same procedures with the parking brake cable assy No.3.

110. INSTALL PARKING BRAKE SHOE STRUT COMPRESSION SPRING (See page 33–15)
111. INSTALL PARKING BRAKE SHOE STRUT COMPRESSION SPRING
HINT:
Install the RH side by the same procedures with the LH side.
112. INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING (See page 33–15)
113. INSTALL PARKING BRAKE SHOE RETURN TENSION SPRING
HINT:
Install the RH side by the same procedures with the LH side.
114. CHECK PARKING BRAKE INSTALLATION (See page 33–15)
115. INSTALL REAR DISC (See page 32–73)
116. INSTALL REAR DISC
HINT:
Install the RH side by the same procedures with the LH side.
117. INSTALL REAR DISC BRAKE CALIPER ASSY LH (See page 32–73)
SST 09023–00100
118. INSTALL REAR DISC BRAKE CALIPER ASSY RH
HINT:
Install the RH side by the same procedures with the LH side.
SST 09023–00100
119. BLEED BRAKE LINE (See page 32–4, 32–6)
120. CHECK FLUID LEVEL IN RESERVOIR (See page 32–4, 32–6)
121. CHECK BRAKE FLUID LEAKAGE (See page 32–4, 32–6)
122. REFILL DIFFERENTIAL OIL (See page 29–3)
123. INSPECT AND ADJUST DIFFERENTIAL OIL (See page 29–3)
124. INSTALL PROPELLER SHAFT ASSY (SHORT BODY TYPE) (See page 30–4)
125. INSTALL PROPELLER SHAFT ASSY (LONG BODY TYPE) (See page 30–4)
126. INSTALL REAR WHEEL
Torque: 112 N·m (1,140 kgf·cm, 83 ft·lbf)
127. INSPECT PARKING BRAKE PEDAL TRAVEL (See page 33–2)
128. ADJUST PARKING BRAKE PEDAL TRAVEL (See page 33–2)
129. CHECK ABS SPEED SENSOR SIGNAL (See page 05–671)