

# DIFFERENTIAL CARRIER ASSY REAR (4WD)

2904P-01

## OVERHAUL

HINT:

COMPONENTS: See page 29-3.

1. REMOVE REAR WHEEL
2. REMOVE REAR DIFFERENTIAL FILLER PLUG
  - (a) Using a hexagon wrench (10 mm), remove the filler plug and gasket.
3. REMOVE REAR DIFFERENTIAL DRAIN PLUG
  - (a) Using a hexagon wrench (10 mm), remove the drain plug and gasket, drain the oil.  
**Torque: 39 N·m (398 kgf·cm, 29 ft·lbf)**
4. REMOVE PROPELLER W/CENTER BEARING SHAFT ASSY (See page 30-6)  
SST 09325-20010
5. REMOVE EXHAUST PIPE (See page 15-4)
6. SEPARATE REAR STABILIZER LINK ASSY LH (See page 27-39)
7. SEPARATE REAR STABILIZER LINK ASSY RH

HINT:

Separate the RH side by the same procedures as LH side.

8. REMOVE REAR AXLE SHAFT LH NUT (See page 30-46)
9. REMOVE REAR AXLE SHAFT RH NUT

HINT:

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

10. REMOVE REAR BRAKE DRUM SUB-ASSY
11. SEPARATE SPEED SENSOR REAR LH
12. SEPARATE SPEED SENSOR REAR RH
13. SEPARATE STRUT SET,PARKING BRAKE SHOE,LH (See page 32-41)  
SST 09703-30010
14. REMOVE FRONT BRAKE SHOE (See page 32-41)  
SST 09718-00010
15. REMOVE STRUT SET,PARKING BRAKE SHOE,LH (See page 32-41)
16. REMOVE SPRING,TENSION(FOR REAR BRAKE SHOE RETURN) (See page 32-41)
17. REMOVE REAR BRAKE SHOE (See page 32-41)  
SST 09718-00010
18. REMOVE PARKING BRAKE CABLE ASSY NO.3 (See page 33-15)
19. REMOVE PARKING BRAKE CABLE ASSY NO.2

HINT:

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

20. SEPARATE REAR BRAKE TUBE NO.4 (See page 32-41)
21. SEPARATE REAR BRAKE TUBE NO.3

HINT:

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

22. SEPARATE REAR SUSPENSION ARM ASSY NO.1 LH (See page 27-27)
23. SEPARATE REAR SUSPENSION ARM ASSY NO.1 RH

HINT:

Separate the RH side by the same procedures as LH side.

24. SEPARATE UPPER CONTROL ARM ASSY (See page 27-32)
25. REMOVE AXLE ASSY RR LH (See page 30-66)

**26. REMOVE AXLE ASSY RR RH**

HINT:

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

**27. REMOVE REAR SUSPENSION MEMBER SUB-ASSY (See page 27-32)****28. REMOVE REAR DRIVE SHAFT ASSY LH (See page 30-46)****29. REMOVE REAR DRIVE SHAFT ASSY RH**

HINT:

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

**30. REMOVE DIFFERENTIAL CARRIER ASSY REAR**

- (a) Remove the 2 rear mounting bolts.
- (b) Remove the 2 bolts, nuts and rear differential with support front side.

**31. REMOVE DIFFERENTIAL SUPPORT**

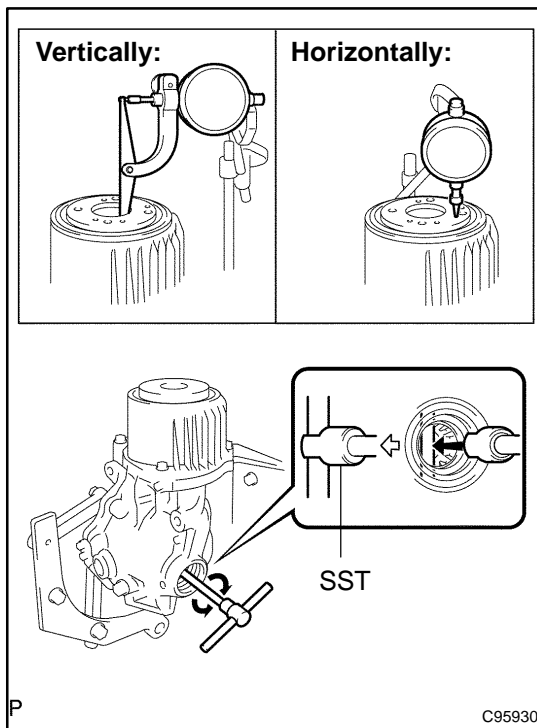
- (a) Remove the 3 bolts and differential support rear side from the differential.

**32. REMOVE REAR DIFFERENTIAL SUPPORT NO.1**

- (a) Remove the 2 bolts, nuts and differential support front side from the differential.

**33. FIX DIFFERENTIAL CARRIER ASSY REAR****34. REMOVE REAR DIFFERENTIAL DRAIN PLUG**

- (a) Using a hexagon wrench (17 mm), remove the rear differential filler plug (inspection plug) and gasket.

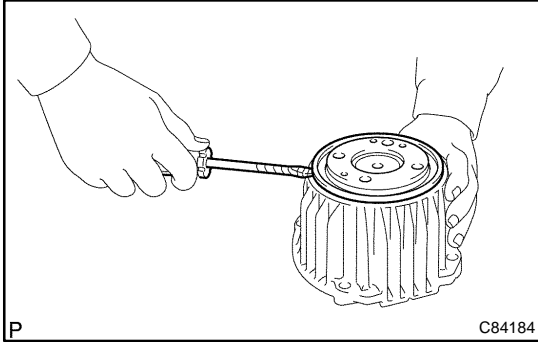
**35. INSPECT RUNOUT OF TRANSMISSION COUPLING ASSY**

- (a) Using SST and a dial indicator, measure the runout of the transmission coupling vertically.  
SST 09564-32011  
**Maximum runout: 0.05 mm (0.002 in.)**
- (b) Using SST and a dial indicator, measure the runout of the transmission coupling horizontally.  
SST 09564-32011  
**Minimum runout: 0.05 mm (0.002 in.)**

**36. REMOVE REAR DIFFERENTIAL CARRIER COVER**

- (a) Remove the 4 bolts and differential carrier cover.

**37. REMOVE TRANSMISSION COUPLING CONICAL SPRING WASHER****38. REMOVE TRANSMISSION COUPLING SPACER**

**39. REMOVE REAR DIFFERENTIAL DUST DEFLECTOR**

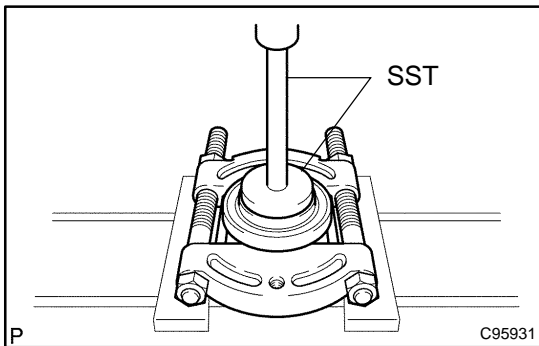
- (a) Using a screwdriver, remove the dust deflector.

HINT:

Tape the screwdriver tip before use.

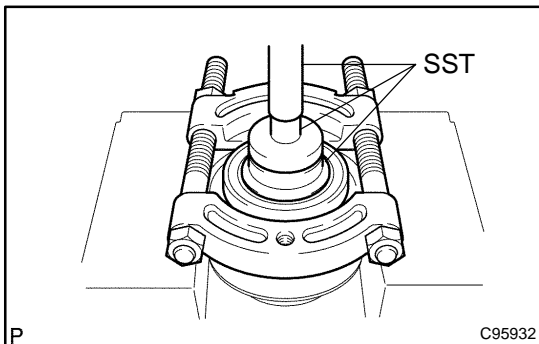
**40. REMOVE TRANSMISSION COUPLING ASSY**

- (a) Remove the transmission coupling assy from the differential carrier cover.

**41. REMOVE TRANSMISSION COUPLING RADIAL BALL BEARING**

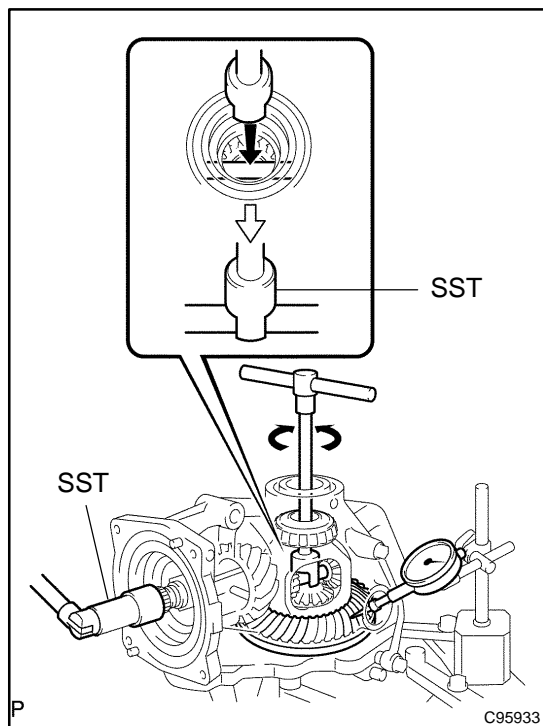
- (a) Using SST and a press, remove the transmission coupling radial ball bearing No.1.

SST 09950-00020, 09950-60020 (09951-00910),  
09950-70010 (09951-07150)

**42. REMOVE TRANSMISSION COUPLING RADIAL BALL BEARING**

- (a) Using SST and a press, remove the transmission coupling radial ball bearing No.2.

SST 09950-00020, 09950-60010 (09951-00460,  
09951-00530, 09952-06010), 09950-70010  
(09951-07150)

**43. INSPECT DIFFERENTIAL RING GEAR BACKLASH**

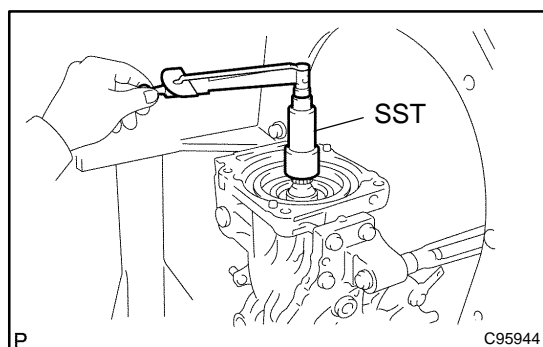
- (a) Using SST and a dial indicator, measure the backlash of ring gear while holding the drive pinion.

SST 09556-16011, 09564-32011

**Backlash: 0.10 – 0.15 mm (0.0039 – 0.0059 in.)**

**NOTICE:**

**Measure at least 3 positions on the circumference of the ring gear.**

**44. INSPECT TOTAL PRELOAD**

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

SST 09556-16011

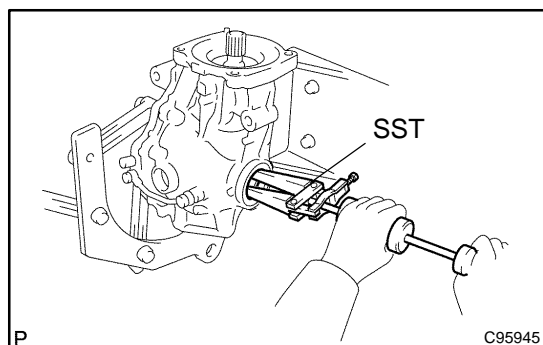
**Preload (at starting):**

**0.4 – 0.7 N·m (4 – 7 kgf·cm, 3.0 – 6.0 in.·lbf)**

**HINT:**

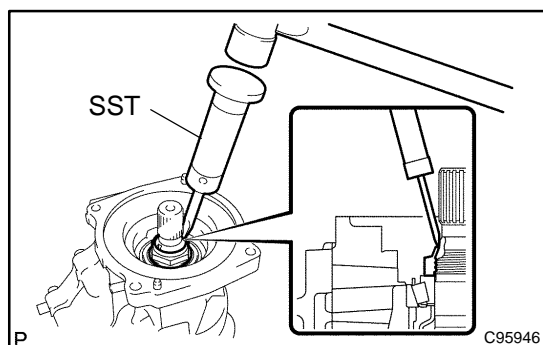
To make the case bearing smooth, turn clockwise and counter-clockwise several times before measuring.

If necessary, disassemble and inspect the differential.

**45. REMOVE REAR DIFFERENTIAL SIDE GEAR SHAFT OIL SEAL**

- (a) Using SST, remove the 2 oil seals from the housing.

SST 09308-00010

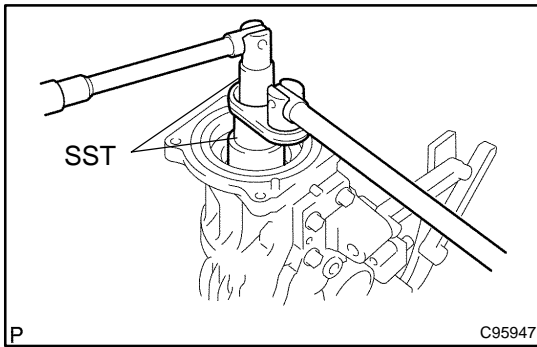
**46. REMOVE REAR DRIVE PINION NUT**

- (a) Using SST and a hammer, unstack the nut.

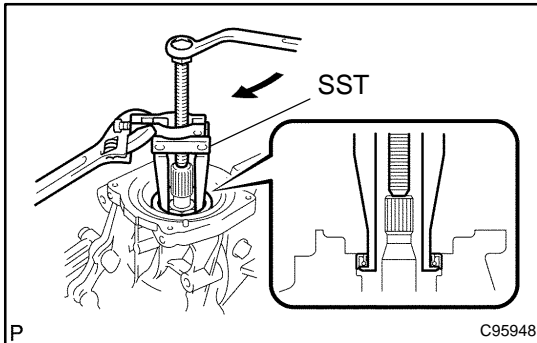
SST 09930-00010

**NOTICE:**

**Loosen the staked part of the lock nut completely, otherwise the screw of the drive pinion may be damaged.**

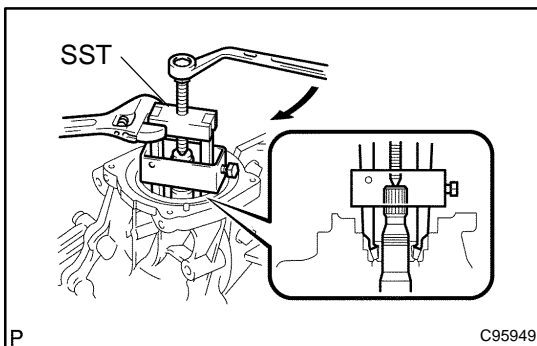


- (b) Using SST to hold the drive pinion, remove the nut.  
SST 09564-16020, 09556-16011



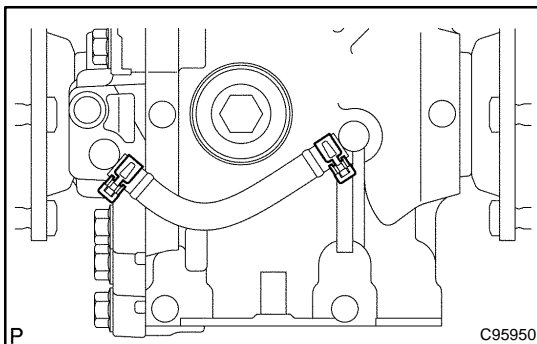
#### 47. REMOVE OIL DIAPHRAGM SEAL

- (a) Using SST, remove the diaphragm oil seal.  
SST 09308-10010



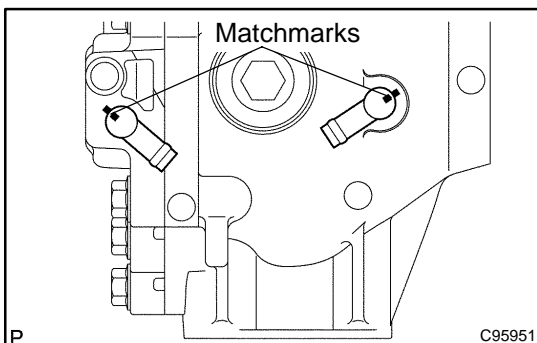
#### 48. REMOVE REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

- (a) Using SST, remove the rear drive pinion front tapered roller bearing from the drive pinion.  
SST 09556-30010



#### 49. REMOVE HOSE SUB-ASSY, DIFFERENTIAL

- (a) Remove the 2 clips and hose.

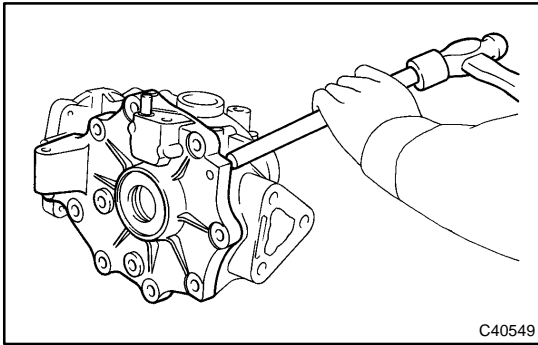


#### 50. REMOVE DIFFERENTIAL PRESSURE CONTROL HOSE ELBOW

- (a) Place matchmarks on the elbow and differential carrier.  
(b) Using a screwdriver, remove the 2 elbows.

HINT:

Tape the screwdriver tip before use.

**51. REMOVE DIFFERENTIAL SIDE BEARING RETAIER**

- (a) Remove the 10 bolts from the differential carrier.
- (b) Using a brass bar and a hammer, remove the side bearing retainer from the differential carrier.

**NOTICE:**

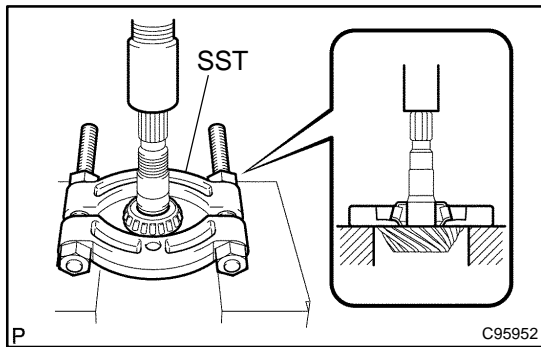
Place the brass bar on the rib of differential side bearing retainer.

**52. REMOVE REAR DEFFERENTIAL CASE SUB-ASSY****53. REMOVE REAR DIFFERENTIAL CARRIER COVER BREATHER PLUG**

- (a) Using a screwdriver, remove the breather plug from the side bearing retainer.

**HINT:**

Tape the screwdriver tip before use.

**54. REMOVE REAR DIFFERENTIAL BREATHER PLUG OIL DEFLECTOR****55. REMOVE DIFFERENTIAL DRIVE PINION****56. REMOVE REAR DIFFERENTIAL DRIVE PINION OIL SLINGER****57. REMOVE REAR DIFFERENTIAL DRIVE PINION BEARING SPACER****58. REMOVE REAR DRIVE PINION REAR TAPERED ROLLER BEARING**

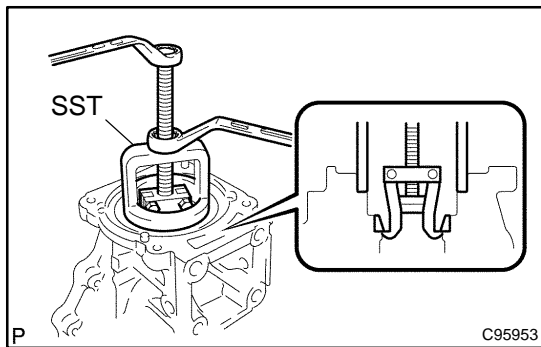
- (a) Using SST and a press, remove the bearing from the drive pinion.

SST 09950-00020

**HINT:**

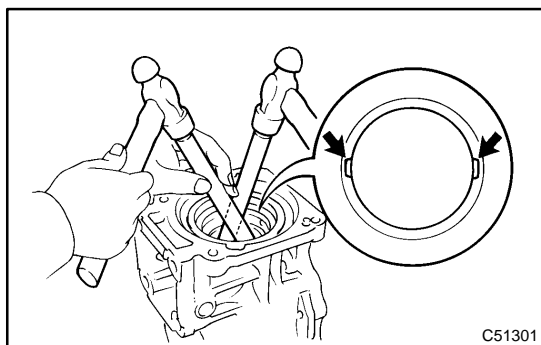
If the drive pinion and ring gear are damaged, replace them as a set.

- (b) Remove the plate washer.

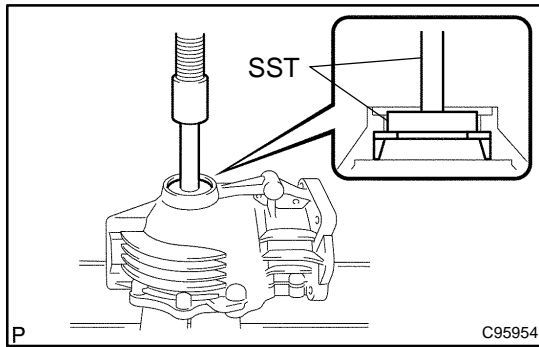
**59. REMOVE REAR DRIVE PINION FRONT TAPERED ROLLER BEARING**

- (a) Using SST, remove the outer race from the differential carrier.

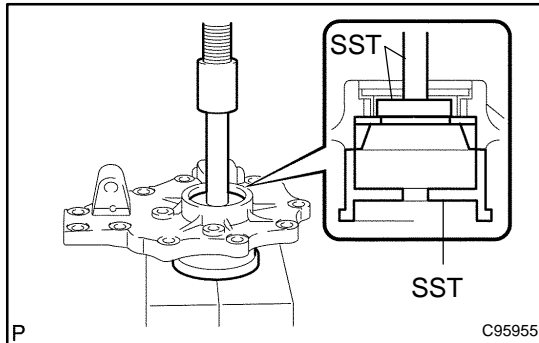
SST 09612-65014 (09612-01020, 09612-01050)

**60. REMOVE REAR DRIVE PINION REAR TAPERED ROLLER BEARING**

- (a) Using a brass bar and a hammer, remove the outer race from the differential carrier.



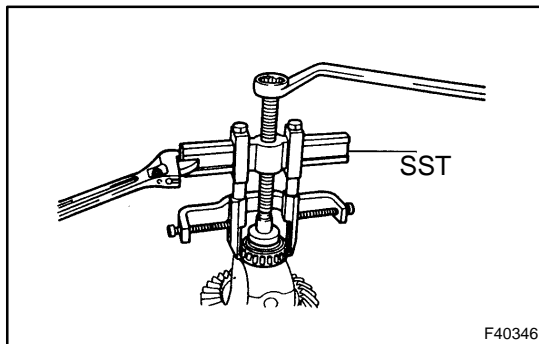
- 61. REMOVE REAR DIFFERENTIAL CASE BEARING**  
 (a) Using SST and a press, remove the outer race RH.  
 SST 09950-60010 (09951-00580), 09950-70010  
 (09951-07100)



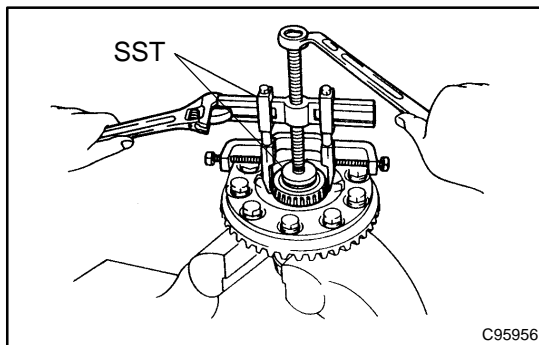
- 62. REMOVE REAR DIFFERENTIAL CASE BEARING**  
 (a) Using SST and a press, remove the outer race LH.  
 SST 09950-60010 (09951-00580), 09950-70010  
 (09951-07100), 09223-15020

**63. REMOVE REAR DIFFERENTIAL PINION SHAFT PIN**

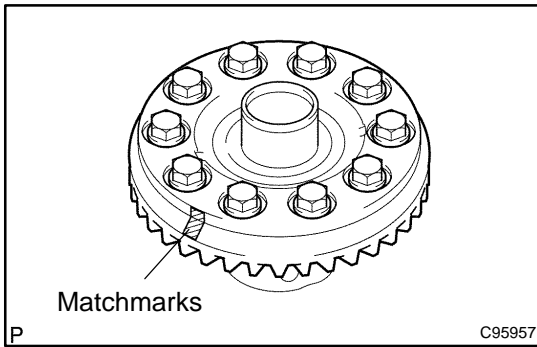
- (a) Remove the 2 straight pins from the rear differential carrier and the side bearing.



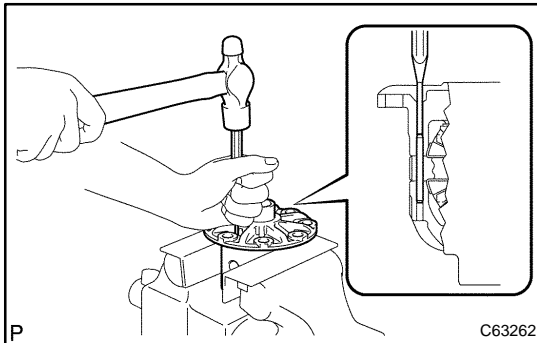
- 64. REMOVE REAR DIFFERENTIAL CASE BEARING**  
 (a) Using SST, remove the case bearing (RH) from the differential case.  
 SST 09950-40011 (09951-04020, 09952-04010,  
 09953-04020, 09954-04010, 09955-04011,  
 09957-04010, 09958-04011), 09950-60010  
 (09951-00270, 09951-00370, 09952-06010)



- 65. REMOVE REAR DIFFERENTIAL CASE BEARING**  
 (a) Using SST, remove the case bearing (LH) from the differential case.  
 SST 09950-40011 (09951-04020, 09952-04010,  
 09953-04020, 09954-04010, 09955-04061,  
 09957-04010, 09958-04011), 09950-60010  
 (09951-00270, 09951-00370, 09952-06010)

**66. REMOVE DIFFERENTIAL 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 the ring gear to separate it from the differential case.

**67. REMOVE REAR DEFFERENTIAL CASE SUB-ASSY**

- (a) Using a pin punch and a hammer, remove the straight pin.
- (b) Remove the pinion shaft, 2 pinion gears, 2 pinion gear thrust washers, 2 side gears and 2 side gear thrust washers.

**68. INSPECT DIFFERENTIAL PINION AND SIDE GEAR**

- (a) Check the differential pinion and side gear for wear.

**69. INSPECT REAR DEFFERENTIAL CASE SUB-ASSY**

- (a) Check the differential case for a crack or a damage.

**70. INSTALL REAR DEFFERENTIAL CASE SUB-ASSY**

- (a) Install the 2 proper thrust washer on the 2 side gears.

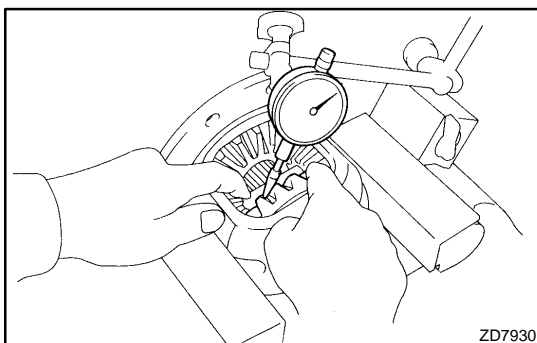
**NOTICE:**

- When installing a thrust washer, side gear, pinion check for dust or chip.
- When replacing a side gear and a pinion, replace both of them together.
- Apply hypoid gear oil to the sliding part and rotating part.

- (b) Install the 2 side gears, 2 pinion gears, 2 pinion gear thrust washers and pinion shaft in the differential case.

**HINT:**

Align the holes of the differential case and pinion shaft.



- (c) Measure the side gear backlash with holding 1 pinion gear toward the differential case.

**Backlash: 0.05 – 0.20 mm (0.0020 – 0.0079 in.)**

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

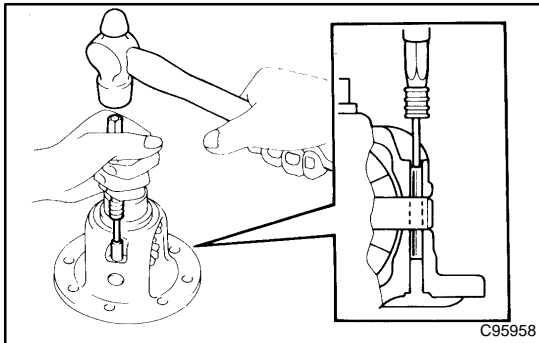
**HINT:**

Refer to the table below and select 2 thrust washers which ensures that the backlash is within the specification.

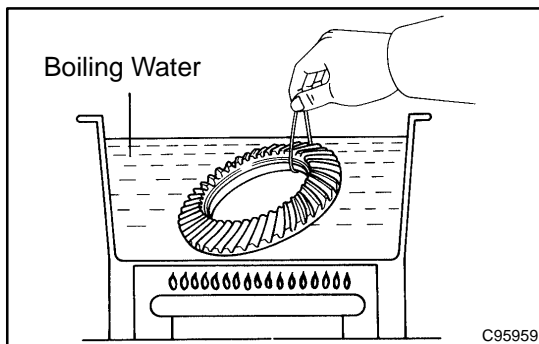


**Side gear thrust washer:**

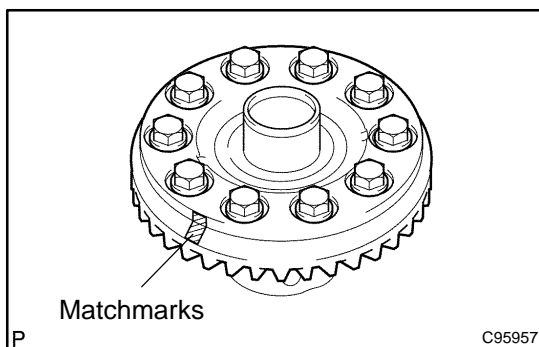
Thickness mm (in.)	Thickness mm (in.)
1.48 – 1.52 (0.0583 – 0.0598)	1.63 – 1.67 (0.0642 – 0.0657)
1.53 – 1.57 (0.0602 – 0.0618)	1.68 – 1.72 (0.0661 – 0.0677)
1.58 – 1.62 (0.0622 – 0.0638)	1.73 – 1.77 (0.0681 – 0.0697)



- (d) Using a pin punch and a hammer, install the straight pin through the differential case and hole of the pinion shaft.
- (e) Using a chisel and a hammer, stake the outside of the differential case pin hole.

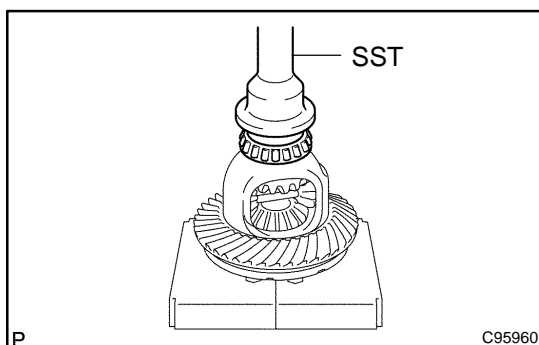
**71. INSTALL DIFFERENTIAL RING GEAR**

- (a) Clean the contact surfaces of the differential case and ring gear.
- (b) Heat the ring gear in boiling water.
- (c) Carefully remove the ring gear from the boiling water.
- (d) After the moisture on the ring gear has completely evaporated, quickly install the ring gear to the differential case.

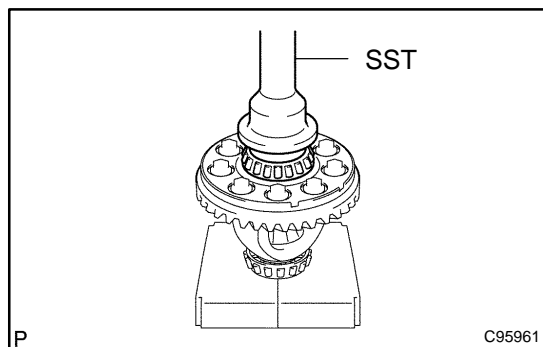


- (e) Align the matchmarks on the ring gear and differential case.
- (f) Temporarily install 10 new bolts.
- (g) After the ring gear cools down enough, torque the 10 bolts uniformly at a time.

**Torque: 78 N·m (795 kgf·cm, 58 ft·lbf)**

**72. INSTALL REAR DIFFERENTIAL CASE BEARING**

- (a) Using SST and a press, install the rear differential case bearing RH (inner race) into the differential case.  
SST 09223-46011

**73. INSTALL REAR DIFFERENTIAL CASE BEARING**

- (a) Using SST and a press, install the rear differential case bearing LH (inner race) into the differential case.

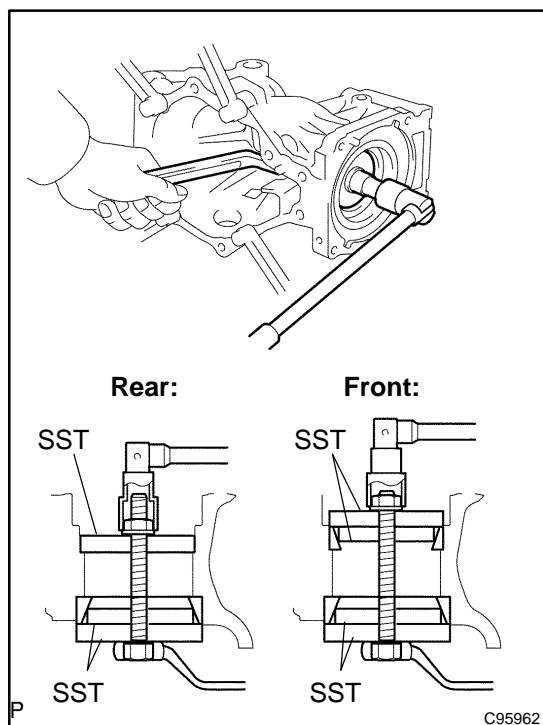
SST 09223-46011

**NOTICE:**

**Use the removed rear differential drive pinion washer when installation.**

**74. INSTALL REAR DIFFERENTIAL PINION SHAFT PIN**

- (a) Using a plastic hammer, install 2 rear differential pinion shaft pins to the rear differential carrier and the side bearing.

**75. INSTALL REAR DRIVE PINION FRONT TAPERED ROLLER BEARING**

- (a) Front side:

Using SST, bolt, nut and a washer, install the FR outer race to the differential carrier.

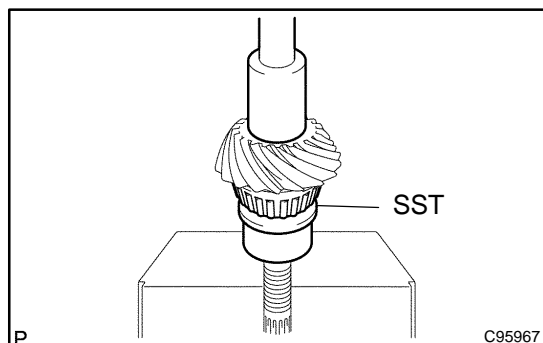
SST 09950-60010 (09951-00490, 09951-00540, 09951-00620), 09950-60020 (09951-00680)

**76. INSTALL REAR DRIVE PINION REAR TAPERED ROLLER BEARING**

- (a) Rear side:

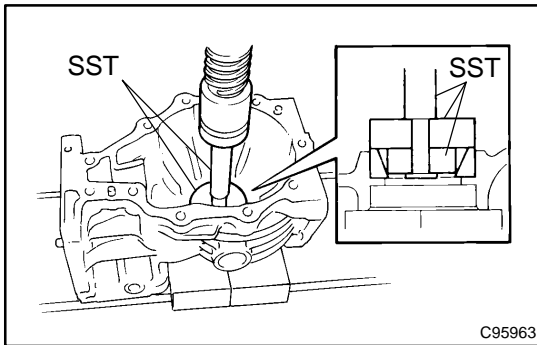
Using SST, bolt, nut and a washer, install the RR outer race to the differential carrier.

SST 09950-60010 (09951-00540, 09951-00620), 09950-60020 (09951-00680)

**77. INSTALL REAR DRIVE PINION REAR TAPERED ROLLER BEARING**

- (a) Install the removed plate washer on the drive pinion.  
 (b) Using SST and a press, install the rear bearing onto the drive pinion.

SST 09316-60011 (09316-00071)

**78. INSTALL REAR DIFFERENTIAL CASE BEARING**

- (a) Using SST and a press, install the rear differential side gear shaft washer and rear differential case bearing RH (outer race) into the rear differential carrier.

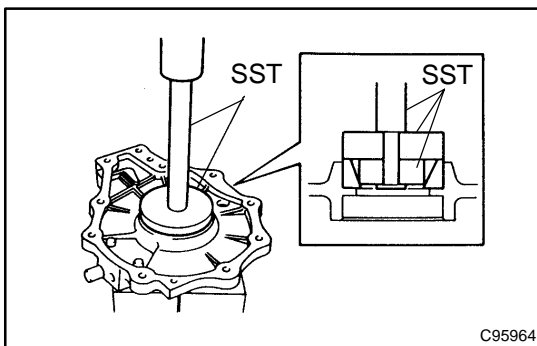
SST 09950-60010 (09951-00580, 09952-06010),  
09950-60020 (09951-00680), 09950-70010  
(09951-07100)

**NOTICE:**

- Use the removed rear differential side gear shaft washer when installation.
- When replacing the bearing, replace the outer race and the inner race together.

**HINT:**

Install the oil seal after adjusting the gear control pattern.

**79. INSTALL REAR DIFFERENTIAL CASE BEARING**

- (a) Using SST and a press, install the rear differential side gear shaft washer and rear differential case bearing LH (outer race) into the differential side bearing retainer.

SST 09950-60010 (09951-00580, 09952-06010),  
09950-60020 (09951-00680), 09950-70010  
(09951-07100)

**NOTICE:**

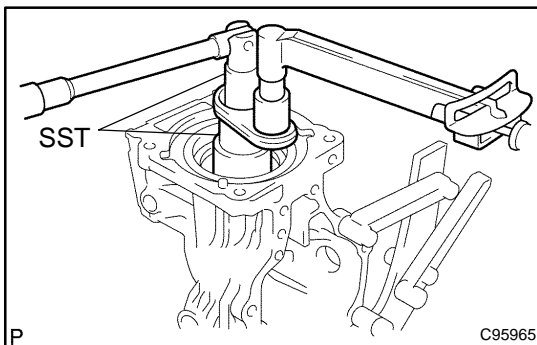
- Use the removed rear differential side gear shaft washer when installation.
- When replacing the bearing, replace the outer race and the inner race together.

**HINT:**

Install the oil seal after adjusting the gear contact pattern.

**80. ADJUST DIFFERENTIAL DRIVE PINION PRELOAD**

- (a) Install the drive pinion and front bearing.  
(b) Coat the threads of the nut with MP grease.



- (c) Using SST, adjust the drive pinion preload by tightening nut.

SST 09564-16020

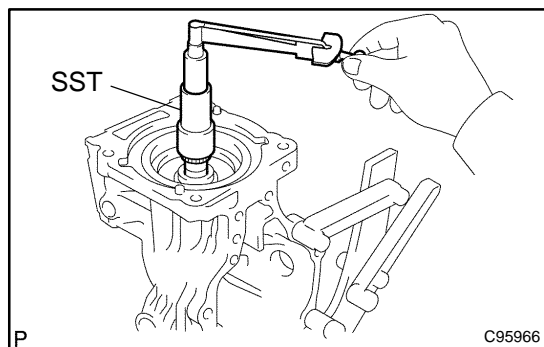
**Torque: 223 N·m (2,270 kgf·cm, 164 ft·lbf) or less**

**NOTICE:**

**Tighten the rear drive pinion nut gradually. Never tighten excessively.**

**HINT:**

Using a torque wrench with a fulcrum length of 500 mm (19.685 in.)



- (d) Using SST and a torque wrench, measure the preload.  
SST 09556-16011

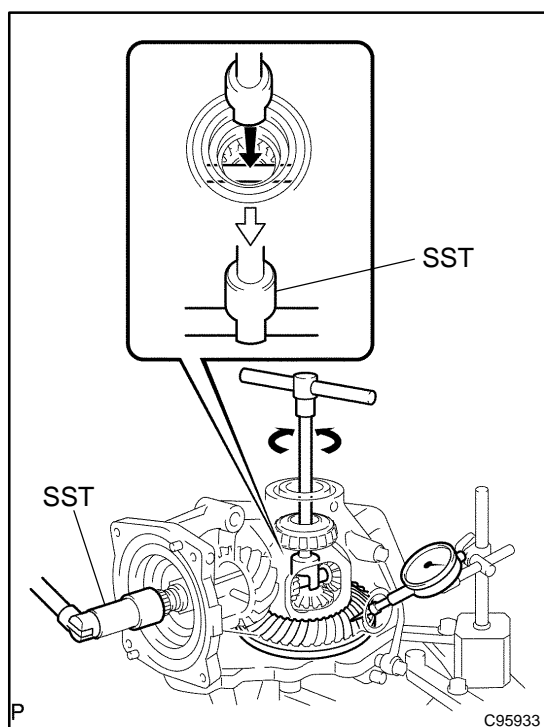
**Preload (at starting):**

New bearing	0.7 – 1.3 N·m (7 – 13 kgf·cm, 6 – 11 in.-lbf)
Reused bearing	0.4 – 0.7 N·m (4 – 7 kgf·cm, 3 – 6 in.-lbf)

### 81. INSTALL REAR DIFFERENTIAL CASE SUB-ASSY

- (a) Install the differential case with 10 bolts to the differential carrier.

**Torque: 42 N·m (430 kgf·cm, 31 ft·lbf)**



### 82. ADJUST DIFFERENTIAL RING GEAR BACKLASH

- (a) Using SST and a dial indicator, measure the ring gear backlash during holding the drive pinion.

SST 09556-16011, 09564-32011

**Backlash: 0.10 – 0.15 mm (0.0039 – 0.059 in.)**

If the value is not within the specification, adjust it by either increasing or decreasing the thickness of the washers on both sides by equal amount.

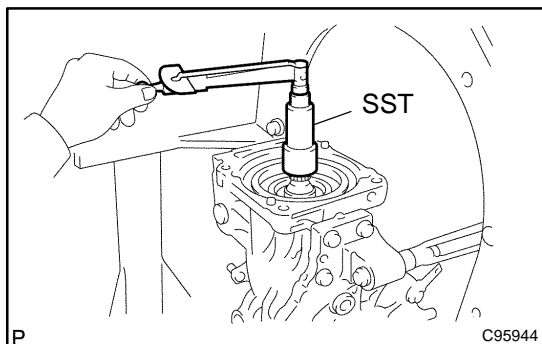
**HINT:**

- When the backlash is smaller than specified value, select the thick washer in the RH side and thin washer in the LH side.
- When the backlash is larger than the specified value, select the thin washer in the RH side and thick washer in the LH side.

**Washer thickness:**

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
25	1.59 – 1.61 (0.0626 – 0.0634)	43	2.13 – 2.15 (0.0839 – 0.0846)
26	1.62 – 1.64 (0.0638 – 0.0646)	44	2.16 – 2.18 (0.0850 – 0.0858)
27	1.65 – 1.67 (0.0650 – 0.0657)	45	2.19 – 2.21 (0.0862 – 0.0870)
28	1.68 – 1.70 (0.0661 – 0.0669)	46	2.22 – 2.24 (0.0874 – 0.0882)
29	1.71 – 1.73 (0.0673 – 0.0681)	47	2.25 – 2.27 (0.0886 – 0.0894)
30	1.74 – 1.76 (0.0685 – 0.0693)	48	2.28 – 2.30 (0.0898 – 0.0906)
31	1.77 – 1.79 (0.0697 – 0.0705)	49	2.31 – 2.33 (0.0909 – 0.0917)
32	1.80 – 1.82 (0.0709 – 0.0717)	50	2.34 – 2.36 (0.0921 – 0.0929)
33	1.83 – 1.85 (0.0720 – 0.0728)	51	2.37 – 2.39 (0.0933 – 0.0941)
34	1.86 – 1.88 (0.0732 – 0.0740)	52	2.40 – 2.42 (0.0945 – 0.0953)

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
35	1.89 – 1.91 (0.0744 – 0.0752)	53	2.43 – 2.45 (0.0957 – 0.0965)
36	1.92 – 1.94 (0.0756 – 0.0764)	54	2.46 – 2.48 (0.0969 – 0.0976)
37	1.95 – 1.97 (0.0768 – 0.0776)	55	2.49 – 2.51 (0.0980 – 0.0988)
38	1.98 – 2.00 (0.0780 – 0.0787)	56	2.52 – 2.54 (0.0992 – 0.1000)
39	2.01 – 2.03 (0.0791 – 0.0799)	57	2.55 – 2.57 (0.1004 – 0.1012)
40	2.04 – 2.06 (0.0803 – 0.0811)	58	2.58 – 2.60 (0.1016 – 0.1024)
41	2.07 – 2.09 (0.0815 – 0.0823)	59	2.61 – 2.63 (0.1028 – 0.1035)
42	2.10 – 2.12 (0.0827 – 0.0835)	60	2.64 – 2.66 (0.1039 – 0.1047)



### 83. MEASURE TOTAL PRELOAD

- (a) Using SST and a torque wrench, measure the preload.  
SST 09556-16011

**Total preload (at starting):**

**Drive pinion preload plus**

**0.3 – 0.5 N·m (3 – 5 kgf·cm, 2.6 – 4.3 in.·lbf)**

#### HINT:

Turn the drive pinion counterclockwise and clockwise several times. If the preload non-standard again select proper washer (RH side).

#### NOTICE:

**When changing the rear differential side gear shaft washer, adjust the ring gear backlash first, then adjust the total preload.**

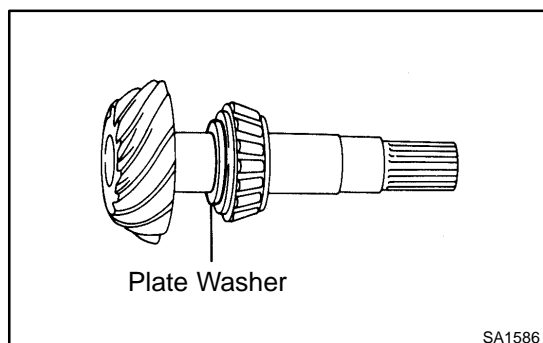
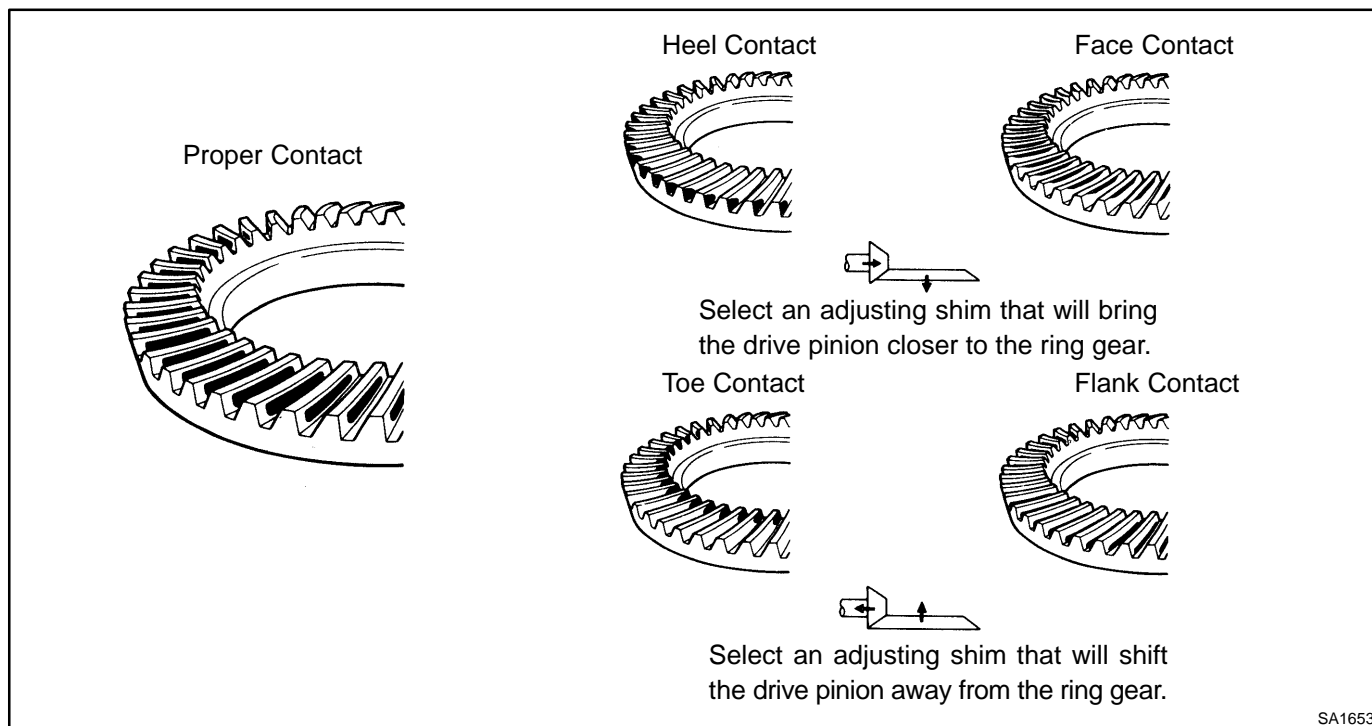
### 84. ADJUST TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION

- Remove the 10 bolts and the differential side bearing retainer.
- Remove the differential case from the differential carrier.
- Coat 3 or 4 teeth at 4 different positions on the ring gear with red lead primer.
- Install the differential case to the differential carrier.
- Install the differential side bearing retainer and the 10 bolts.

**Torque: 42 N·m (430 kgf·cm, 31 ft·lbf)**

- Turn the differential drive pinion several times.
- Remove the 10 bolts and the differential side bearing retainer.

- (h) Inspect the tooth pattern.



- (i) If the tooth contact is not good, perform the following procedures.

- (1) In the case of face contact or frank contact, select the rear differential side gear shaft washer with the same thickness increased and decreased in the right and left, or vice versa, and install the rear differential case bearing outer race.

**NOTICE:**

**When changing the thickness of the rear differential side gear shaft washer, adjust the ring gear backlash and total preload before adjusting the tooth contact of the ring gear and that of the drive pinion.**

- (2) In the case of heel contact or toe contact, select the rear differential drive pinion washer again, and install the rear drive pinion tapered roller bearing RR.

**NOTICE:**

**When changing the thickness of the rear differential side gear shaft washer, adjust the drive pinion preload, ring gear backlash and total preload before adjusting the tooth contact of the ring gear and that of the drive pinion.**

**Washer thickness:**

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
41	1.695 – 1.705 (0.0667 – 0.0671)	71	1.955 – 1.965 (0.0770 – 0.0774)
42	1.705 – 1.715 (0.0671 – 0.0675)	72	1.965 – 1.975 (0.0774 – 0.0778)
43	1.715 – 1.725 (0.0675 – 0.0679)	73	1.975 – 1.985 (0.0778 – 0.0781)
44	1.725 – 1.735 (0.0679 – 0.0683)	74	1.985 – 1.995 (0.0781 – 0.0785)
45	1.735 – 1.745 (0.0683 – 0.0687)	75	1.995 – 2.005 (0.0785 – 0.0789)
46	1.745 – 1.755 (0.0687 – 0.0691)	76	2.005 – 2.015 (0.0789 – 0.0793)
47	1.755 – 1.765 (0.0691 – 0.0695)	77	2.015 – 2.025 (0.0793 – 0.0797)
48	1.765 – 1.775 (0.0695 – 0.0699)	78	2.025 – 2.035 (0.0797 – 0.0801)
49	1.775 – 1.785 (0.0699 – 0.0703)	79	2.035 – 2.045 (0.0801 – 0.0805)
50	1.785 – 1.795 (0.0703 – 0.0707)	80	2.045 – 2.055 (0.0805 – 0.0809)
51	1.795 – 1.805 (0.0707 – 0.0711)	81	2.055 – 2.065 (0.0809 – 0.0813)
52	1.805 – 1.815 (0.0711 – 0.0715)	82	2.065 – 2.075 (0.0813 – 0.0817)
53	1.815 – 1.825 (0.0715 – 0.0719)	83	2.075 – 2.085 (0.0817 – 0.0821)
54	1.825 – 1.835 (0.0719 – 0.0722)	84	2.085 – 2.095 (0.0821 – 0.0825)
55	1.835 – 1.845 (0.0722 – 0.0726)	85	2.095 – 2.105 (0.0825 – 0.0829)
56	1.845 – 1.855 (0.0726 – 0.0730)	86	2.105 – 2.115 (0.0829 – 0.0833)
57	1.855 – 1.865 (0.0730 – 0.0734)	87	2.115 – 2.125 (0.0833 – 0.0837)
58	1.865 – 1.875 (0.0734 – 0.0738)	88	2.125 – 2.135 (0.0837 – 0.0841)
59	1.875 – 1.885 (0.0738 – 0.0742)	89	2.135 – 2.145 (0.0841 – 0.0844)
60	1.885 – 1.895 (0.0742 – 0.0746)	90	2.145 – 2.155 (0.0844 – 0.0848)
61	1.895 – 1.905 (0.0746 – 0.0750)	91	2.155 – 2.165 (0.0848 – 0.0852)
62	1.905 – 1.915 (0.0750 – 0.0754)	92	2.165 – 2.175 (0.0852 – 0.0856)
63	1.915 – 1.925 (0.0754 – 0.0758)	93	2.175 – 2.185 (0.0856 – 0.0860)
64	1.925 – 1.935 (0.0758 – 0.0762)	94	2.185 – 2.195 (0.0860 – 0.0864)
65	1.935 – 1.945 (0.0762 – 0.0766)	95	2.195 – 2.205 (0.0864 – 0.0868)
70	1.945 – 1.955 (0.0766 – 0.0770)	–	–

**85. REMOVE REAR DEFFERENTIAL CASE SUB-ASSY**

- (a) Remove the 10 bolts and the side bearing retainer.
- (b) Remove the drive pinion.

**86. REMOVE DIFFERENTIAL DRIVE PINION****87. INSTALL REAR DIFFERENTIAL DRIVE PINION BEARING SPACER**

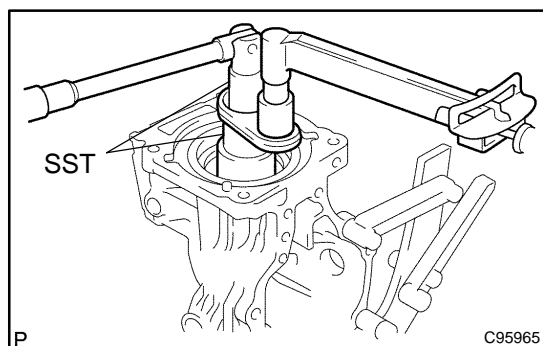
- (a) Install a new rear differential drive pinion bearing spacer to the differential drive pinion.

**88. INSTALL REAR DIFFERENTIAL DRIVE PINION OIL SLINGER**

- (a) Install the rear differential drive pinion oil slinger to the differential drive pinion.

**NOTICE:**

Face the smaller inside diameter to the front.

**89. INSTALL DIFFERENTIAL DRIVE PINION****90. INSTALL REAR DRIVE PINION NUT**

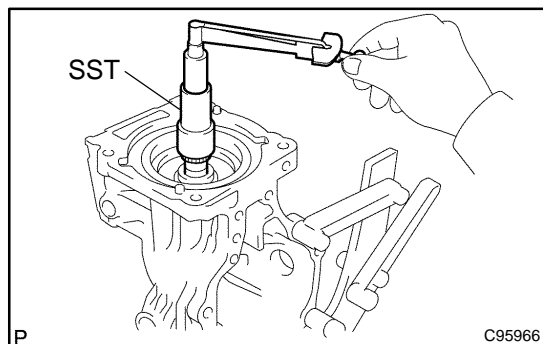
- (a) Coat the threads of a new nut with hypoid gear oil.
- (b) Using SST, adjust the drive pinion preload by tightening nut.

SST 09564-16020

**Torque: 223 N·m (2,270 kgf·cm, 164 ft·lbf) or less**

**HINT:**

Using a torque wrench with a fulcrum length of 500 mm (19.685 in.).

**91. ADJUST DIFFERENTIAL DRIVE PINION PRELOAD**

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

SST 09556-16011

**Preload (at starting):**

New bearing	0.7 - 1.3 N·m (7 - 13 kgf·cm, 6 - 11 in.·lbf)
Reused bearing	0.4 - 0.7 N·m (4 - 7 kgf·cm, 3 - 6 in.·lbf)

If the preload is less than the specification, retighten the nut 5° to 10° each at a time with SST, and adjust so that the starting torque meets the specified value.

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

**Torque: 223 N·m (2,270 kgf·cm, 164 ft·lbf) or less**

Even if the tightening torque of the rear drive pinion nut exceeds 245 N·m (2,500 kgf·cm, 181 ft·lbf), if the preload is less than the specification, loosen the rear drive pinion nut once and check if the screw top of the rear drive pinion nut and that of the differential drive pinion is crushed.

If the screw top is not crushed, replace the rear differential drive pinion spacer, apply hypoid gear oil API GL-5 to the screw, and repeat the procedure.

**92. INSTALL REAR DEFFERENTIAL CASE SUB-ASSY**



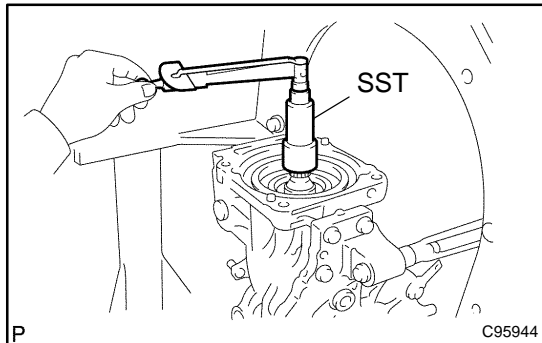
**93. INSTALL DIFFERENTIAL SIDE BEARING RETAIER**

- (a) Install the differential side bearing retainer and the 10 bolts.

**Torque: 42 N·m (430 kgf·cm, 31 ft·lbf)**

**94. INSPECT DIFFERENTIAL RING GEAR BACKLASH**

SST 09556-16011, 09564-32011

**95. INSPECT TOTAL PRELOAD**

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

SST 09556-16011

**Total preload (at starting):**

**Drive pinion preload plus**

**0.3 – 0.5 N·m (3 – 5 kgf·cm, 2.6 – 4.3 in·lbf)**

**HINT:**

Turn the drive pinion counterclockwise and clockwise several times. If the preload non-standard again select proper washer (RH side).

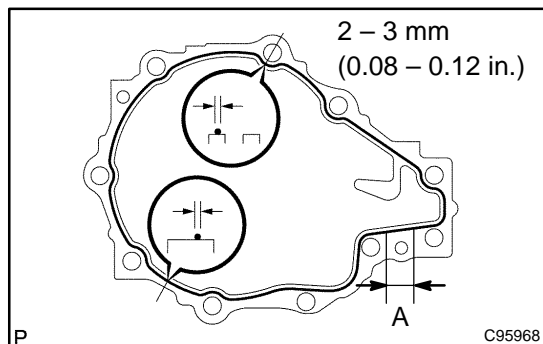
**NOTICE:**

**When changing the rear differential side gear shaft washer, adjust the ring gear backlash first, then adjust the total preload.**

**96. INSTALL REAR DIFFERENTIAL BREATHER PLUG OIL DEFLECTOR**

- (a) Install the rear differential breather plug oil deflector with the 2 bolts.

**Torque: 5.0 N·m (51 kgf·cm, 44 in·lbf)**

**97. INSTALL DIFFERENTIAL SIDE BEARING RETAIER**

- (a) Remove the 10 bolts and the side bearing retainer.  
 (b) Install the 2 bolts and oil deflector to the side bearing retainer.  
 (c) Install the breather plug to the side bearing retainer.  
 (d) Using a scraper and a wire brush, clean the seal packing attached to the rear differential carrier and the differential side bearing retainer.

**NOTICE:**

**Do not damage the installation surface.**

- (e) Clean contacting surfaces of any residual FIPG material by using gasoline or alcohol.  
 (f) Apply FIPG to the side bearing retainer.

**FIPG:**

**Part No. 08826-00090, THREE BOND 1281 or equivalent**

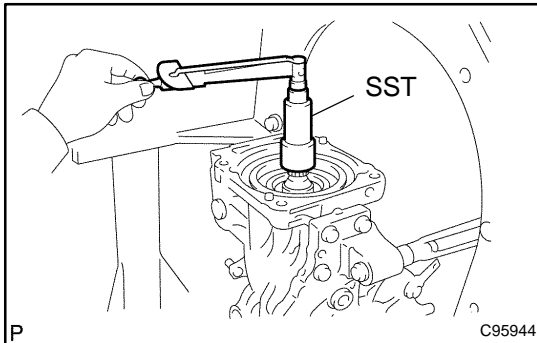
**HINT:**

- FIPG should be applied 2 to 3 mm in diameter with no break.
- Allow on overlap of 10 mm (0.37 in.) or more between the start and end of FIPG application.
- Install the carrier cover within 3 minutes after applying FIPG.
- Begin the application in the range of "A".

- Do not add oil or drive the vehicle immediately after installing the cover, and leave it as it is for an hour or more. Also, for 12 hours or more, avoid rapid acceleration/deceleration.
- (g) Install the side bearing retainer with the 10 bolts.  
**Torque: 42 N·m (430 kgf·cm, 31 ft·lbf)**

### 98. INSTALL REAR DIFFERENTIAL CARRIER COVER BREATHER PLUG

- (a) Install the rear differential carrier cover breather plug.

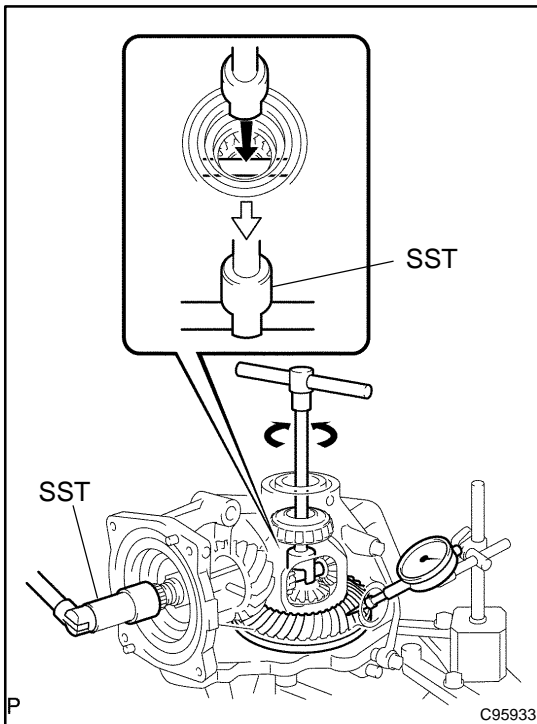


### 99. INSPECT TOTAL PRELOAD

- (a) Using SST and a torque wrench, measure the preload.  
SST 09556-16011  
**Total preload (at starting):**  
**Drive pinion preload plus**  
**0.3 – 0.5 N·m (3 – 5 kgf·cm, 2.6 – 4.3 in·lbf)**

#### HINT:

Turn the drive pinion counterclockwise and clockwise several times.

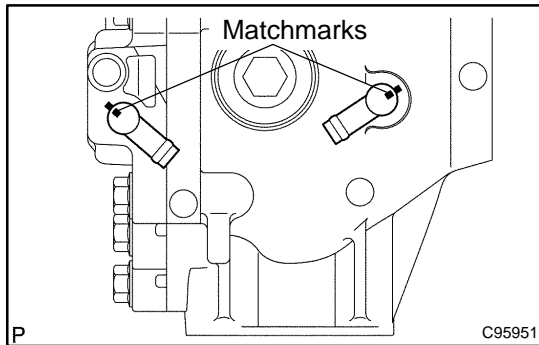


### 100. INSPECT DIFFERENTIAL RING GEAR BACKLASH

- (a) Using SST and a dial indicator, measure the ring gear backlash during holding the drive pinion.  
SST 09556-16011, 09564-32011  
**Backlash: 0.10 – 0.15 mm (0.039 – 0.059 in.)**

### 101. INSTALL REAR DRIVE PINION NUT

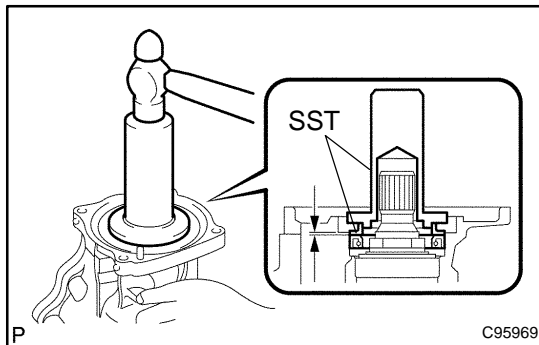
- (a) Using a chisel and a hammer, stake the rear drive pinion nut.

**102. INSTALL HOSE SUB-ASSY, DIFFERENTIAL**

- (a) Align the matchmarks on the elbow and the differential carrier.
- (b) Using the 2 clips, install the hose to the elbow.

**NOTICE:**

**Don't interfere the hose and the clips of other parts.**

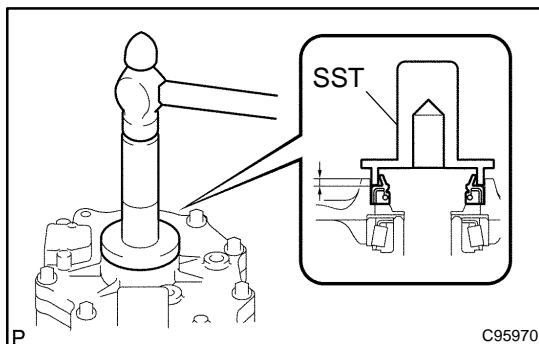
**103. INSTALL OIL DIAPHRAGM SEAL**

- (a) Using SST and a hammer, install a new front oil seal.

SST 09506-35010, 09554-22010

**Oil seal drive in depth: 0.7 - 1.3 mm (0.03 - 0.05 in.)**

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

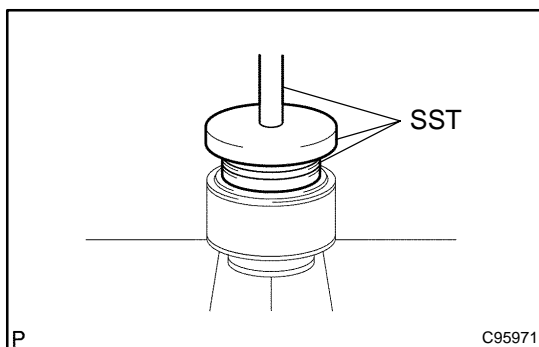
**104. INSTALL REAR DIFFERENTIAL SIDE GEAR SHAFT OIL SEAL**

- (a) Using SST and a hammer, install a new side gear shaft oil seal.

SST 09554-22010

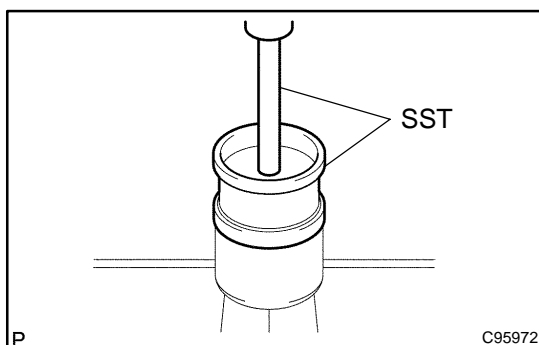
**Oil seal drive in depth: 4.2 - 4.8 mm (0.17 - 0.19 in.)**

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

**105. INSTALL TRANSMISSION COUPLING RADIAL BALL BEARING**

- (a) Using SST and a press, install the transmission coupling radial bearing (front side).

SST 09502-12010, 09550-55011 (09550-05061),  
09950-70010 (09951-07150)

**106. INSTALL TRANSMISSION COUPLING RADIAL BALL BEARING**

- (a) Using SST and a press, install the bearing (rear side).

SST 09223-15030, 09950-70010 (09951-07150)

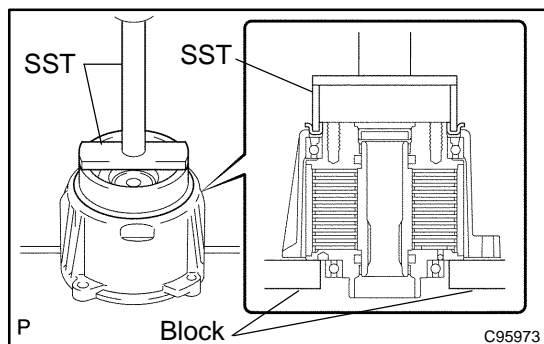
- (b) Install the transmission coupling to the differential carrier cover.

**NOTICE:**

**Install so that the black seal of the bearing faces to the front side of the vehicle (propeller shaft side).**

**107. INSTALL REAR DIFFERENTIAL CARRIER COVER**

- (a) Install the transmission coupling assy to the rear differential carrier cover.

**108. INSTALL REAR DIFFERENTIAL DUST DEFLECTOR**

- (a) Using SST and a press, install the new dust deflector.  
SST 09518-36020, 09950-70010 (09951-07150)

**109. INSTALL TRANSMISSION COUPLING SPACER****110. INSTALL TRANSMISSION COUPLING CONICAL SPRING WASHER****NOTICE:**

Install the transmission coupling conical spring washer so that the side marked orange faces to the front of the vehicle (coupling side).

**111. INSTALL REAR DIFFERENTIAL CARRIER COVER**

- (a) Install the differential carrier cover with the 4 bolts to the differential carrier.

**Torque: 19 N·m (194 kgf·cm, 14 ft·lbf)**

**112. INSTALL REAR DIFFERENTIAL DRAIN PLUG**

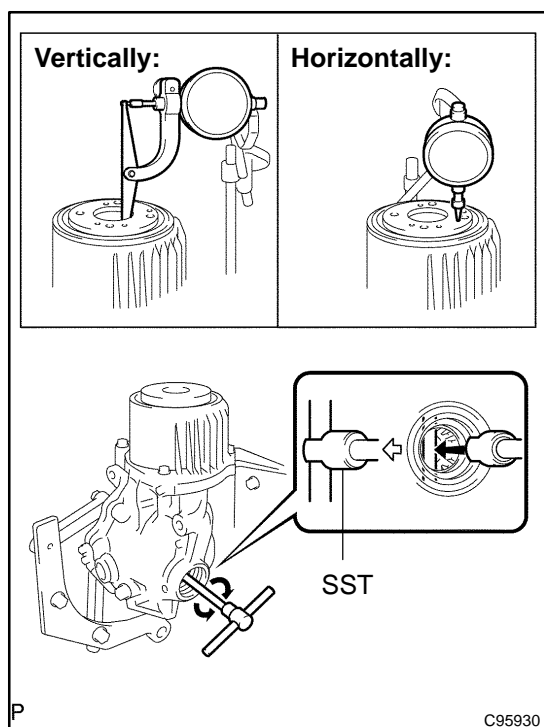
- (a) Install a new gasket with the rear differential drain plug.

**Torque: 39 N·m (398 kgf·cm, 29 ft·lbf)**

**113. INSTALL REAR DIFFERENTIAL FILLER PLUG**

- (a) Install a new gasket with the rear differential inspection plug.

**Torque: 98 N·m (1,000 kgf·cm, 72 ft·lbf)**

**114. INSPECT RUNOUT OF DIFFERENTIAL CARRIER ASSY REAR**

- (a) Using SST and a dial indicator, measure the runout of the transmission coupling vertically.

SST 09564-32011

**Maximum runout: 0.05 mm (0.002 in.)**

- (b) Using SST and a dial indicator, measure the runout of the transmission coupling horizontally.

SST 09564-32011

**Minimum runout: 0.05 mm (0.002 in.)**

**115. INSTALL REAR DIFFERENTIAL SUPPORT NO.1**

- (a) Install the rear differential support assy No.1 with the 2 bolts and 2 nuts to the differential carrier assy.  
**Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)**

**116. INSTALL DIFFERENTIAL SUPPORT**

- (a) Install the differential support with the 3 bolts to the differential carrier assy.  
**Torque: 167 N·m (1,700 kgf·cm, 123 ft·lbf)**

**117. INSTALL DIFFERENTIAL CARRIER ASSY REAR**

- (a) Install the differential w/ support rear side with the 2 bolts and 2 nuts to the rear suspension member-front side.  
**Torque: 118 N·m (1,200 kgf·cm, 87 ft·lbf)**
- (b) Install the differential w/support with the 2 bolts to the rear suspension member rear side.  
**Torque: 137 N·m (1,400 kgf·cm, 101 ft·lbf)**

**118. INSTALL REAR SUSPENSION MEMBER SUB-ASSY (See page 27-32)****119. INSTALL REAR DRIVE SHAFT ASSY LH (See page 30-46)****120. INSTALL REAR DRIVE SHAFT ASSY RH**

HINT:

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

**121. TEMPORARY TIGHTEN UPPER CONTROL ARM ASSY****122. INSTALL AXLE ASSY RR LH (See page 30-66)****123. INSTALL AXLE ASSY RR RH**

HINT:

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

**124. TEMPORARY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH (See page 27-27)****125. TEMPORARY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 RH**

HINT:

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

**126. INSTALL REAR BRAKE TUBE NO.4 (See page 32-41)**

SST 09023-00100

**127. INSTALL REAR BRAKE TUBE NO.3**

SST 09023-00100

HINT:

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

**128. INSTALL PARKING BRAKE CABLE ASSY NO.3 (See page 33-15)****129. INSTALL PARKING BRAKE CABLE ASSY NO.2**

HINT:

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

**130. APPLICATION HIGH TEMPERATURE GREASE (See page 32-41)****131. INSTALL REAR BRAKE SHOE (See page 32-41)**

SST 09718-00010

**132. INSTALL SPRING,TENSION(FOR REAR BRAKE SHOE RETURN) (See page 32-41)**

SST 09718-00010

**133. INSTALL STRUT SET,PARKING BRAKE SHOE,LH (See page 32-41)**

SST 09703-30010

**134. INSTALL FRONT BRAKE SHOE (See page 32-41)**

SST 09718-00010

**135. CONNECT STRUT SET,PARKING BRAKE SHOE,LH (See page 32-41)****136. INSTALL SPEED SENSOR REAR LH (See page 32-64)****137. INSTALL SPEED SENSOR REAR RH**

HINT:

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

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**138. CHECK REAR DRUM BRAKE INSTALLATION (See page 32-41)**

**139. INSTALL REAR BRAKE DRUM SUB-ASSY**

**140. INSTALL REAR AXLE SHAFT LH NUT (See page 30-46)**

**141. INSTALL REAR AXLE SHAFT RH NUT**

HINT:

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

**142. ADJUST REAR DRUM BRAKE SHOE CLEARANCE (See page 32-41)**

**143. INSTALL REAR STABILIZER LINK ASSY LH (See page 27-39)**

**144. INSTALL REAR STABILIZER LINK ASSY RH**

HINT:

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

**145. INSTALL PROPELLER W/CENTER BEARING SHAFT ASSY (See page 30-6)**

**146. INSTALL EXHAUST PIPE (See page 15-4)**

**147. BLEED BRAKE LINE (See page 32-6)**

**148. ADD DIFFERENTIAL OIL (See page 29-7)**

**149. INSPECT AND ADJUST DIFFERENTIAL OIL (See page 29-7)**

**150. INSTALL REAR WHEEL**

Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

**151. STABILIZE SUSPENSION (See page 27-32)**

**152. FULLY TIGHTEN UPPER CONTROL ARM ASSY (See page 27-32)**

**153. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH (See page 27-27)**

**154. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 RH**

HINT:

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

**155. CHECK FLUID LEVEL IN RESERVOIR (See page 32-6)**

**156. CHECK EXHAUST GAS LEAK (See page 15-4)**

**157. INSPECT AND ADJUST REAR WHEEL ALIGNMENT (See page 27-7)**

**158. CHECK ABS SPEED SENSOR SIGNAL (See page 05-316)**