DIFFERENTIAL CARRIER ASSY REAR (4WD)

2909Y–01

OVERHAUL

HINT:

- Differential components (see page 29–12)
- Rear drive shaft components (see page 30–4)

1. REMOVE REAR WHEEL

2. REMOVE PROPELLER W/CENTER BEARING SHAFT ASSY (SEE PAGE 30–11)

SST 09325–20010

3. REMOVE EXHAUST PIPE ASSY (SEE PAGE 15–2)

4. REMOVE REAR DIFFERENTIAL FILLER PLUG

(a) Using a hexagon wrench (10 mm), remove the filler plug and gasket.

5. REMOVE REAR DIFFERENTIAL DRAIN PLUG

(a) Using a hexagon wrench (10 mm), remove the drain plug and gasket, and drain the oil.

6. SEPARATE SPEED SENSOR REAR LH (SEE PAGE 30–40)

7. SEPARATE SPEED SENSOR REAR RH

HINT:

Removal procedure of the RH side is the same as that of the LH side.

8. REMOVE REAR AXLE SHAFT LH NUT (SEE PAGE 30–40)

SST 09930–00010

9. REMOVE REAR AXLE SHAFT RH NUT

SST 09930–00010

HINT:

Removal procedure of the RH side is the same as that of the LH side.

10. SEPARATE STRUT ROD ASSY REAR (SEE PAGE 27–10)

11. SEPARATE REAR SUSPENSION ARM ASSY NO.1 LH (SEE PAGE 27–13)

12. SEPARATE REAR SUSPENSION ARM ASSY NO.1 RH

HINT:

Removal procedure of the RH side is the same as that of the LH side.

13. SEPARATE REAR SUSPENSION ARM ASSY NO.2 LH (SEE PAGE 27–13)

14. SEPARATE REAR SUSPENSION ARM ASSY NO.2 RH

HINT:

Removal procedure of the RH side is the same as that of the LH side.

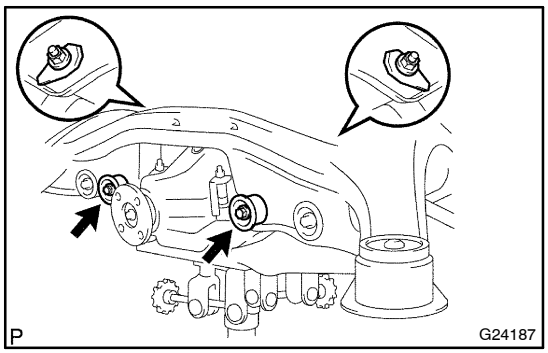
15. REMOVE REAR DRIVE SHAFT ASSY LH (SEE PAGE 30–40)

16. REMOVE REAR DRIVE SHAFT ASSY RH

HINT:

Removal procedure of the RH side is the same as that of the LH side.

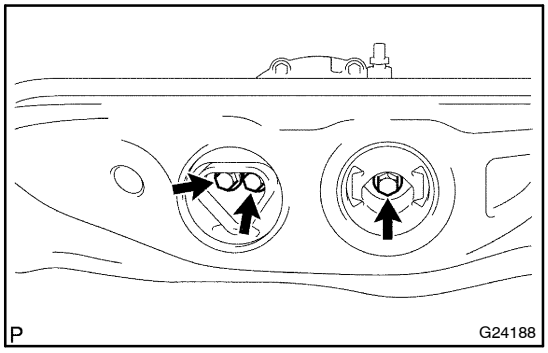
17. REMOVE REAR SUSPENSION MEMBER SUB–ASSY (SEE PAGE 27–13)



18. REMOVE DIFFERENTIAL CARRIER ASSY REAR

(a) Support the differential carrier assy rear with a jack.

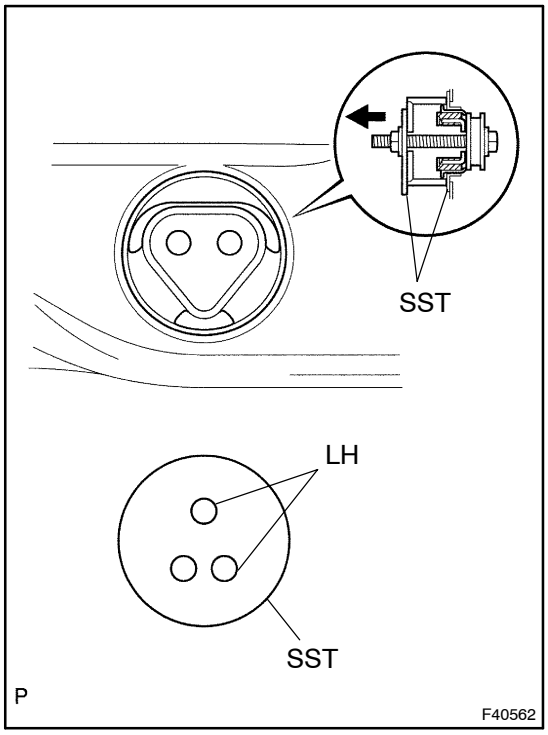
(b) Remove the 2 bolts and 2 lock nuts, and separate the rear differential support No.1 from the rear suspension member sub–assy.



(c) Remove the 3 bolts and differential carrier sub–assy rear from the rear suspension member sub–assy.

NOTICE:

Be careful not to drop the differential carrier assy rear.



19. REMOVE REAR DIFFERENTIAL MOUNT CUSHION NO.1

HINT:

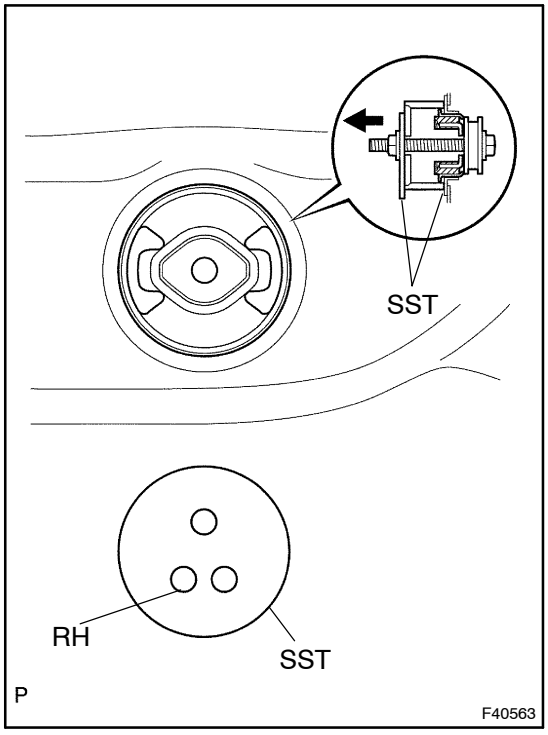
Perform this operation only when the rear differential mount cushion No.1 is damaged.

(a) Using SST, remove the rear differential mount cushion No.1.

SST 09570–24010, 09316–12010

NOTICE:

- **Do not bring SST into contact with the sub–frame.**
- **Do not slant the bolts of SST.**
- **Do not set the SST in the wrong direction.**
- **Screw the 2 bolts of SST equally into the 2 holes of the rear differential mount.**



20. REMOVE REAR DIFFERENTIAL MOUNT CUSHION NO.2

HINT:

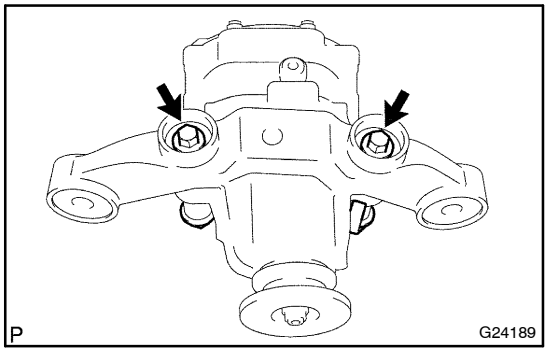
Perform this operation only when the rear differential mount cushion No.2 is damaged.

(a) Using SST, remove the rear differential mount cushion No.2.

SST 09570–24010, 09316–12010

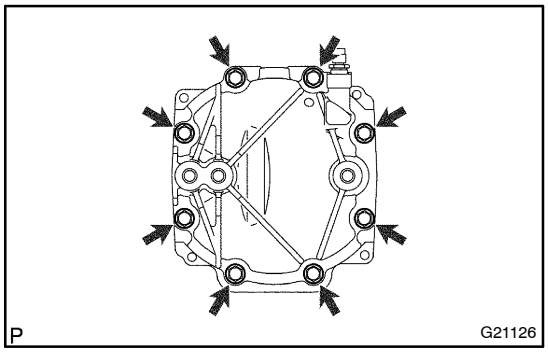
NOTICE:

- **Do not bring SST into contact with the sub–frame.**
- **Do not slant the bolt of SST.**
- **Do not set the SST in the wrong direction.**



21. REMOVE REAR DIFFERENTIAL SUPPORT NO.1

(a) Remove the 2 bolts, 2 lock nuts and rear differential support No.1 from the differential carrier sub–assy rear.

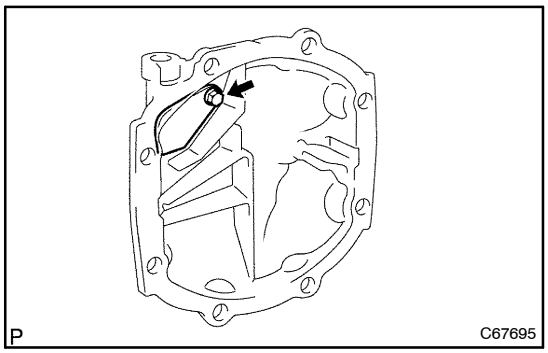


22. REMOVE REAR DIFFERENTIAL CARRIER COVER

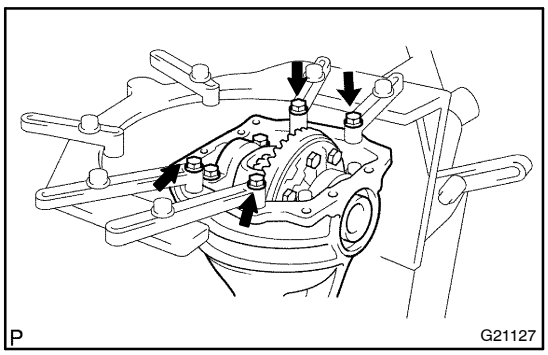
(a) Remove the 8 bolts from the carrier cover.

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

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

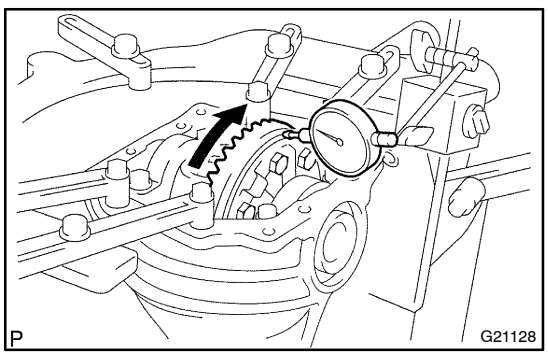


(d) W/ Torque sensing LSD:
Remove the bolt and oil deflector from the carrier cover.



23. FIX DIFFERENTIAL CARRIER ASSY REAR

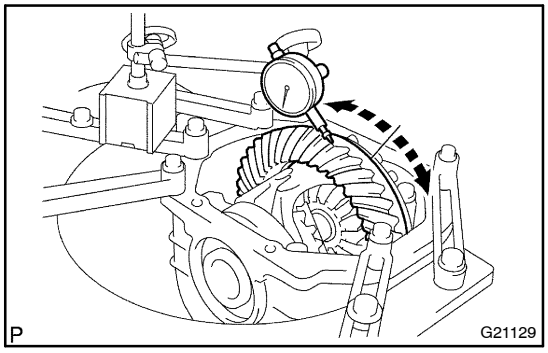
(a) Set the differential carrier to the overhaul stand, etc., as shown in the illustration.



24. 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 a new one.

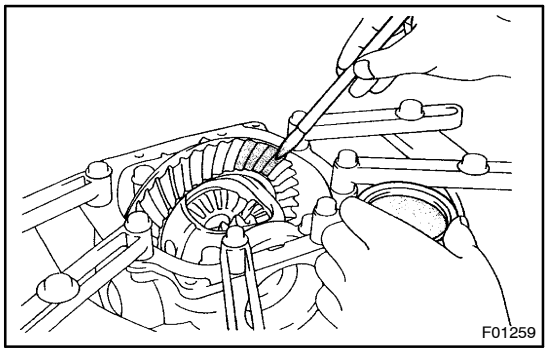


25. INSPECT DIFFERENTIAL RING GEAR BACKLASH

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

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

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



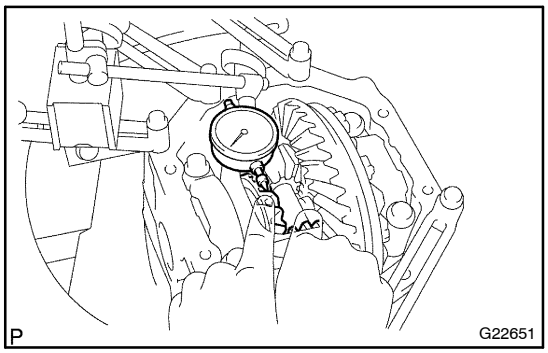
26. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION (See step 64)

(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 contact pattern.

If tooth contact pattern is not correct, replace the adjusting washer installed on the front of the drive pinion rear bearing to adjust it.



27. DIFFERENTIAL PINION AND SIDE GEAR BACKLASH (W/O TORQUE SENSING LSD)

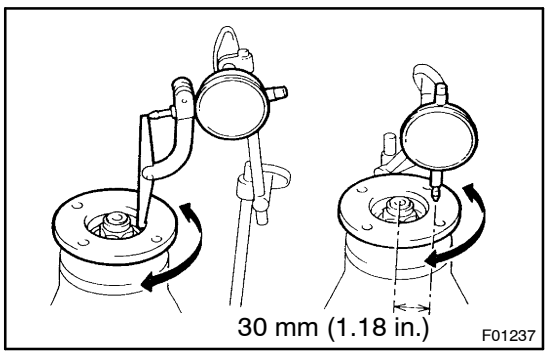
(a) Using a dial indicator, check the backlash of the side gear while holding 1 pinion gear toward the differential case.

Backlash: 0.05 to 0.20 mm (0.0020 to 0.0079 in.)

If the backlash is not within the specification, install the 2 side gear thrust washers of different thickness (See step 52).

HINT:

Measure the backlash of the side gear with the side gear shaft installed.

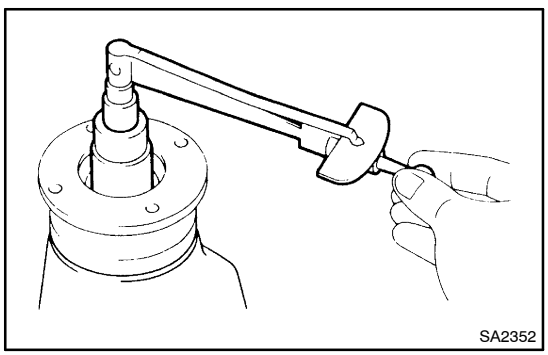


28. INSPECT RUNOUT OF REAR DRIVE PINION COMPANION FLANGE SUB–ASSY REAR

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

Maximum runout: 0.10 mm (0.0039 in.)

If the runout is greater than the maximum, replace the rear drive pinion companion flange sub–assy rear.



29. INSPECT DIFFERENTIAL DRIVE PINION PRELOAD

(a) Using a torque wrench, measure the preload of the drive pinion.

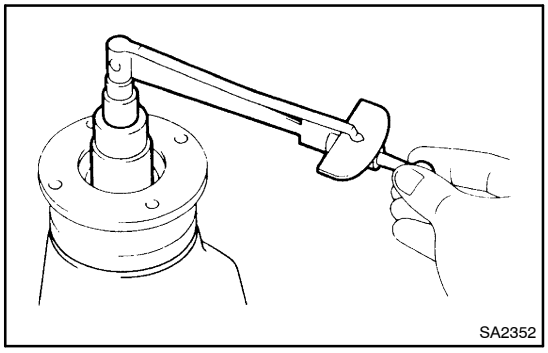
Preload (at starting):

0.6 to 0.9 N·m (6 to 9 kgf·cm, 5.2 to 7.8 in.·lbf)

If the preload is not within the specification, adjust the rear differential drive pinion preload or repair as necessary.

HINT:

This preload is within the backlash between the drive pinion and ring gear.


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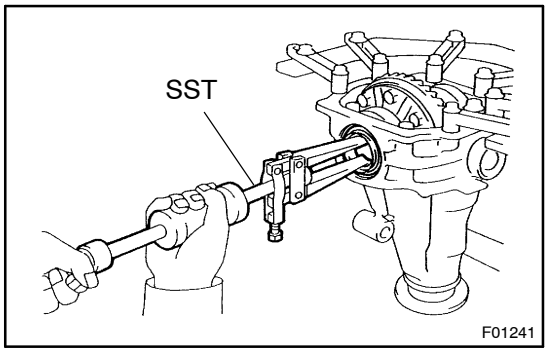
30. INSPECT TOTAL PRELOAD

(a) Using a torque wrench, measure the total preload.
Total preload (at starting): Drive pinion preload plus 0.3 to 0.5 N·m (3 to 5 kgf·cm, 2.6 to 4.3 in.·lbf)

If the total preload is not within the specification, adjust the total preload or repair as necessary.

HINT:

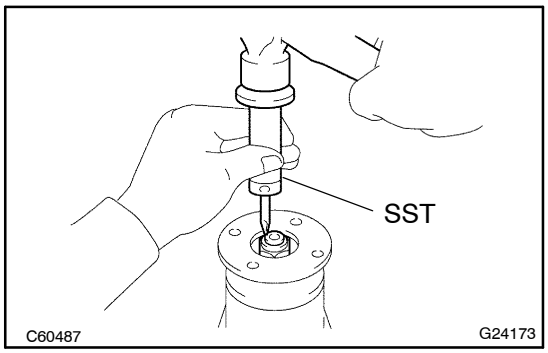
Disassemble and inspect the differential as necessary.



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31. REMOVE REAR DIFFERENTIAL SIDE GEAR SHAFT SEAL OIL

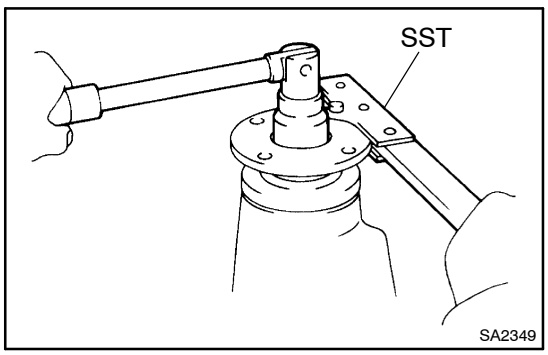
(a) Using SST, remove the 2 oil seals from the housing.
SST 09308–00010



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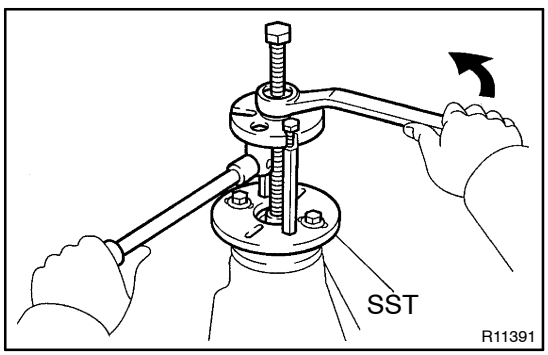
32. REMOVE REAR DRIVE PINION NUT

(a) Using SST and a hammer, unstake the staked part of the nut.
SST 09930–00010



SA2349

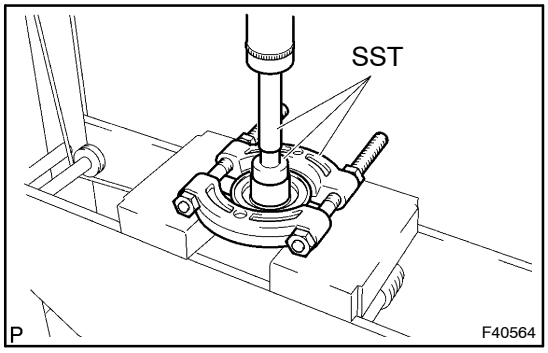
(b) Using SST to hold the flange, remove the nut.
SST 09330–00021



R11391

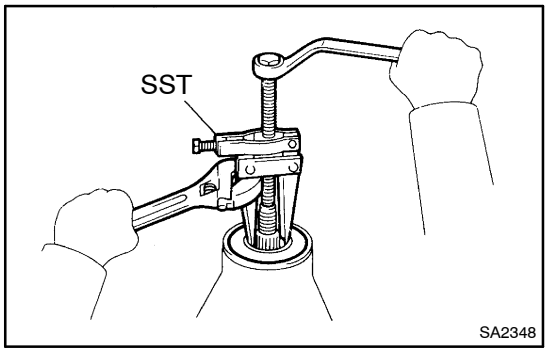
33. REMOVE REAR DRIVE PINION COMPANION FLANGE SUB–ASSY REAR

(a) Using SST, remove the companion flange.
SST 09950–30012 (09951–03010, 09953–03010, 09954–03010, 09955–03030, 09956–03020)



34. REMOVE REAR DIFFERENTIAL DUST DEFLECTOR

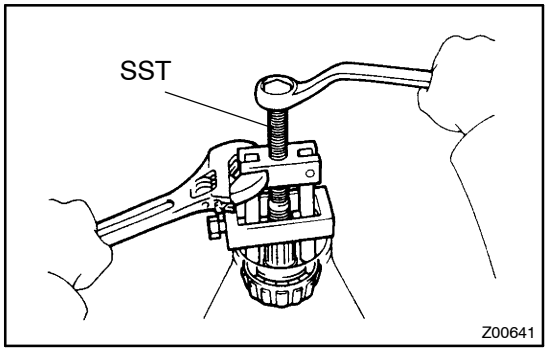
(a) Using SST and a press, remove the dust deflector.
SST 09950–60010 (09951–00360), 09950–70010 (09951–07150), 09950–00020



35. REMOVE REAR DIFFERENTIAL CARRIER OIL SEAL

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

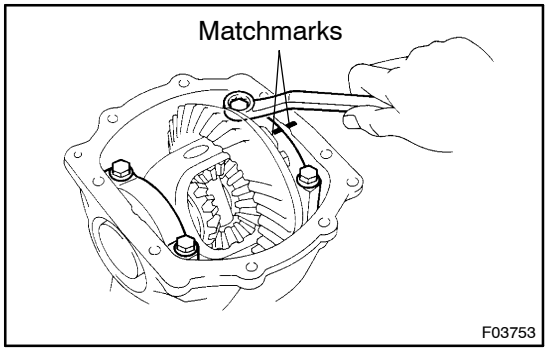
36. REMOVE REAR DIFFERENTIAL DRIVE PINION OIL SLINGER



37. REMOVE REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

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

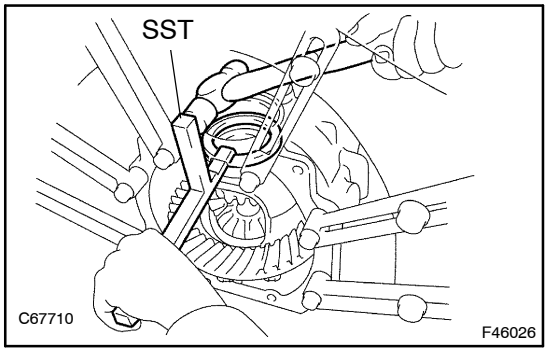
38. REMOVE REAR DIFFERENTIAL DRIVE PINION BEARING SPACER



39. REMOVE DIFFERENTIAL CASE ASSY

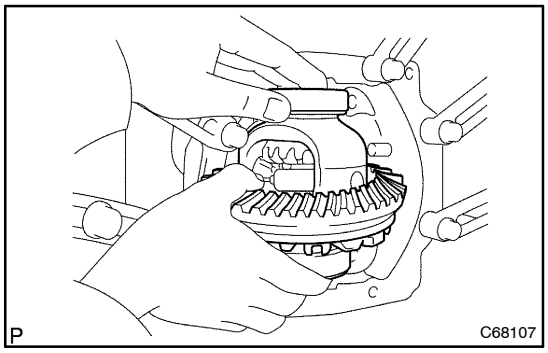
(a) Align matchmarks on the bearing cap and differential carrier.

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



(c) Using SST and a hammer, remove the 2 plate washers.
SST 09504–22011

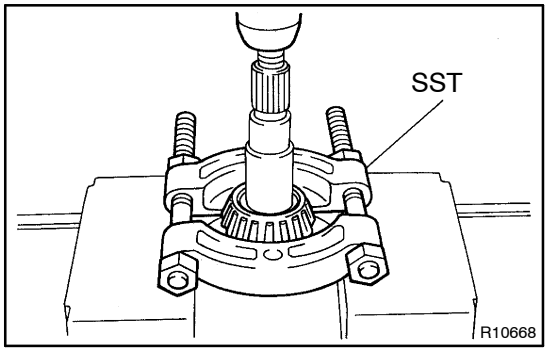
HINT:
Measure the thickness of the plate washers and note it down.



(d) Remove the differential case assy and the 2 bearing outer races from the differential carrier.

HINT:
Tag the 2 bearing outer races to show the location for reassembly.

40. REMOVE DIFFERENTIAL DRIVE PINION

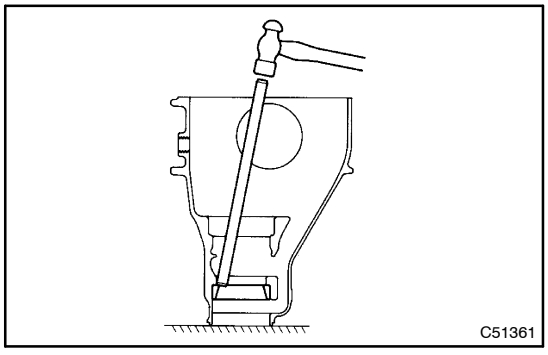


41. REMOVE REAR DRIVE PINION REAR TAPERED ROLLER BEARING

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

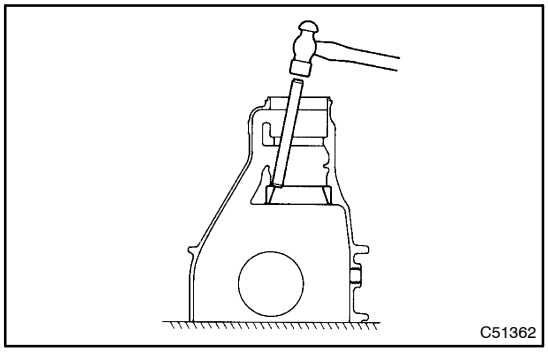
HINT:
If either the drive pinion or ring gear is damaged, replace both as a set.

(b) Remove the plate washer.



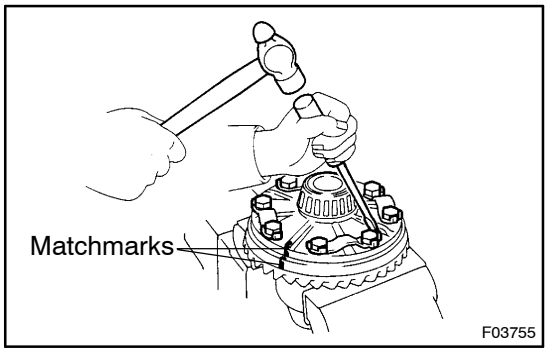
42. REMOVE REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

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



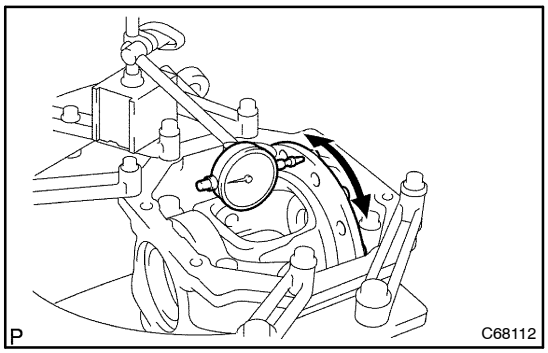
43. REMOVE REAR DRIVE PINION REAR TAPERED ROLLER BEARING

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



44. REMOVE DIFFERENTIAL RING GEAR

(a) Align matchmarks on the ring gear and differential case.
(b) Using a screwdriver and a hammer, unstake the 4 lock plates.
(c) Remove the 8 ring gear set bolts and 4 lock plates.
(d) Using a plastic hammer, tap on the ring gear to separate it from the differential case.

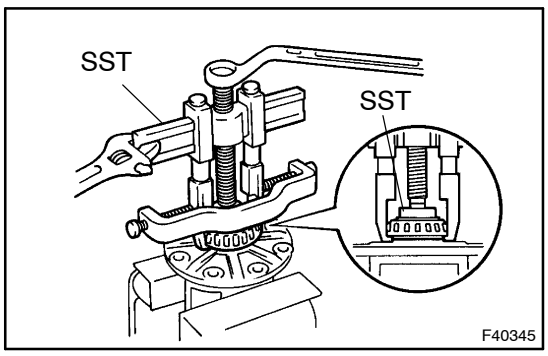


45. INSPECT RUNOUT OF DIFFERENTIAL CASE ASSY

(a) Install the differential case to the differential carrier.
(b) Install the right and left bearing caps with the 4 bolts.
Torque: 79 N·m (800 kgf·cm, 58 ft·lbf)
(c) Using a dial indicator, measure the differential case runout.
Maximum case runout: 0.07 mm (0.0028 in.)

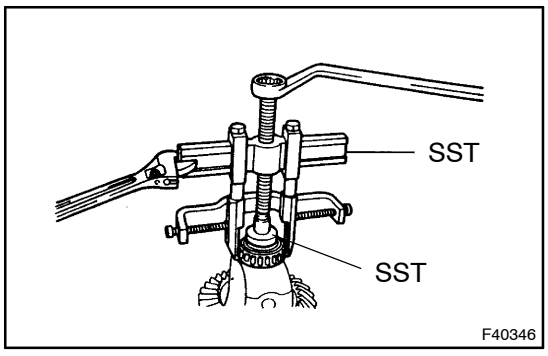
If the runout is greater than the maximum, replace the differential case assy with a new one.

(d) Remove the differential case.



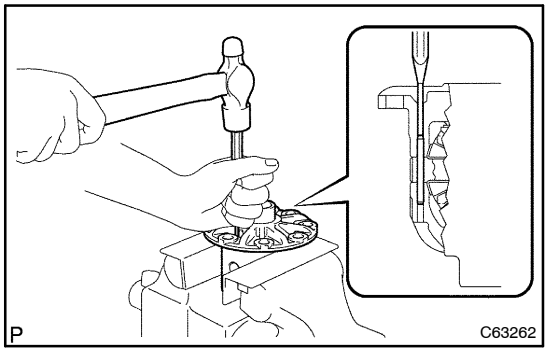
46. REMOVE REAR DIFFERENTIAL CASE BEARING

(a) Using SST, remove the case bearing (LH) from the differential case.
SST 09950–40011 (09951–04020, 09952–04010, 09953–04030, 09954–04010, 09955–04061, 09957–04010, 09958–04011), 09950–60010 (09951–00360)



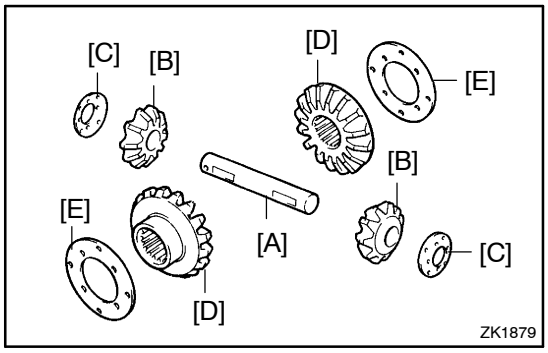
47. REMOVE REAR DIFFERENTIAL CASE BEARING

(a) Using SST, remove the case bearing (RH) from the differential case.
SST 09950–40011 (09951–04020, 09952–04010, 09953–04030, 09954–04010, 09955–04061, 09957–04010, 09958–04011), 09950–60010 (09951–00360)



48. REMOVE REAR DIFFERENTIAL PINION SHAFT (W/O TORQUE SENSING LSD)

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



(b) Remove the differential pinion shaft. [A]
(c) Remove the 2 differential pinion gears. [B]
(d) Remove the 2 differential pinion thrust washers. [C]
(e) Remove the 2 side gears. [D]
(f) Remove the 2 side gear thrust washers. [E]

49. INSPECT DIFFERENTIAL PINION AND SIDE GEAR (W/O TORQUE SENSING LSD)

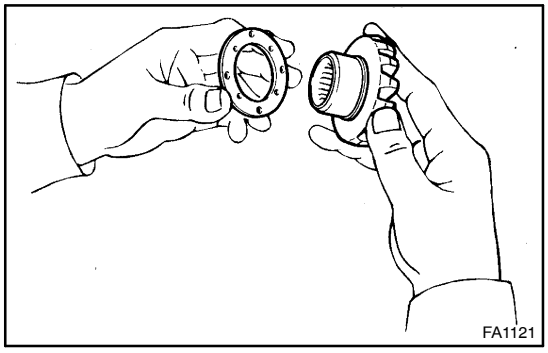
(a) Check that there is no damage to the differential pinion gear and side gear.

If the differential pinion gear and/or side gear is damaged, replace them with new ones.

50. INSPECT DIFFERENTIAL CASE

(a) Check that there is no damage to the differential case.

If the differential case is damaged, replace it.

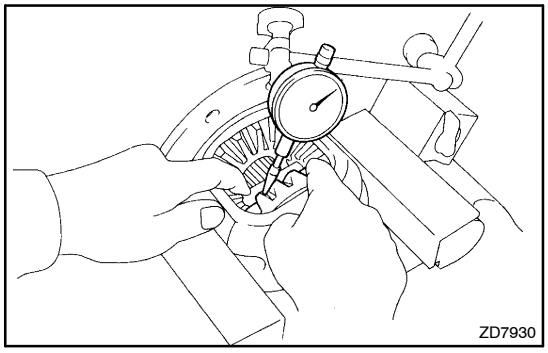


51. INSTALL REAR DIFFERENTIAL PINION SHAFT (W/O TORQUE SENSING LSD)

(a) Install the 2 thrust washers to the 2 side gears.
(b) Install the 2 side gears, 2 differential pinion gears, 2 differential pinion thrust washers and differential pinion shaft to the differential case.

HINT:

- Align the holes of the differential case and differential pinion shaft.
- Be careful in the direction of the thrust washers.


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52. ADJUST DIFFERENTIAL PINION GEAR BACKLASH (W/O TORQUE SENSING LSD)

(a) Measure the side gear backlash while holding 1 pinion gear toward the differential case.

Backlash: 0.05 to 0.20 mm (0.0020 to 0.0079 in.)

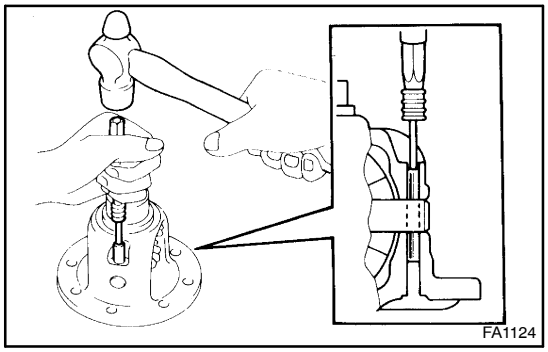
If the backlash is not within the specification, install the 2 side gear thrust washers of different thicknesses.

HINT:

Refer to the following table to select 2 thrust washers.

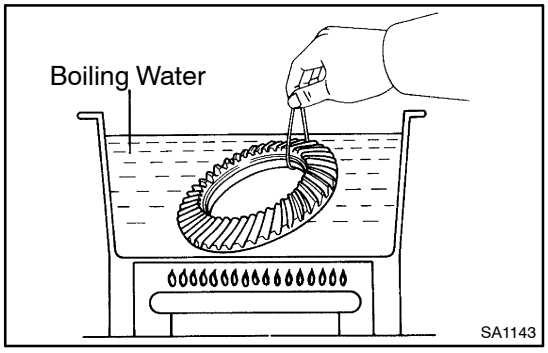
Thrust washer thickness:

Thickness mm (in.)	Thickness mm (in.)
0.93 to 0.97 (0.0366 to 0.0382)	1.18 to 1.22 (0.0465 to 0.0480)
0.98 to 1.02 (0.0386 to 0.0402)	1.23 to 1.27 (0.0484 to 0.0500)
1.03 to 1.07 (0.0406 to 0.0421)	1.28 to 1.32 (0.0504 to 0.0520)
1.08 to 1.12 (0.0425 to 0.0441)	1.33 to 1.37 (0.0524 to 0.0539)
1.13 to 1.17 (0.0445 to 0.0461)	1.38 to 1.42 (0.0543 to 0.0559)


FA1124

(b) Using a pin punch (5 mm) and a hammer, install the straight pin through the differential case and hole of the pinion shaft.

(c) Using a chisel and a hammer, stake the outside of the differential case pin hole.



SA1143

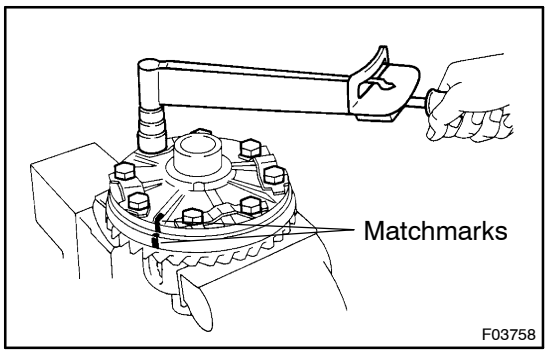
53. INSTALL DIFFERENTIAL RING GEAR

(a) Clean the contact surfaces of the differential case and ring gear.

(b) Heat the ring gear to approx. 100°C (212°F) in 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.



F03758

(e) Align the matchmarks on the ring gear and differential case.

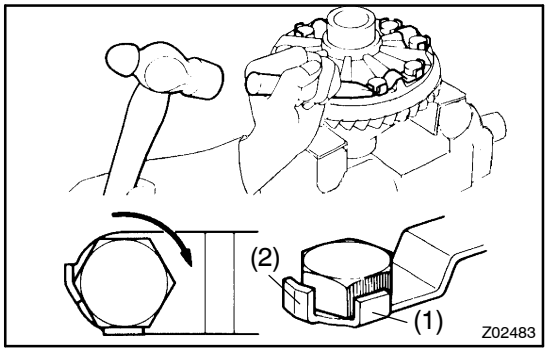
(f) Temporarily install 4 new lock plates and 8 bolts.

(g) After the ring gear cools down enough, torque the 8 bolts uniformly.

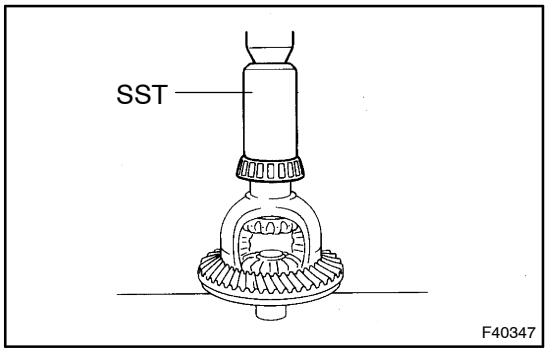
Torque: 97 N·m (985 kgf·cm, 71 ft·lbf)

HINT:

Tighten the bolts, in diagonal order, a little at a time until they are all tightened.

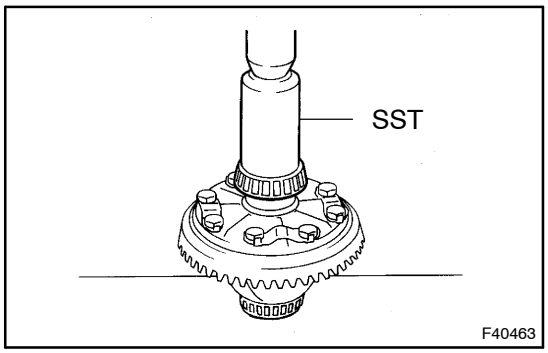


(h) Using a chisel and a hammer, stake the 4 lock plates.
(1) Stake one claw so that it is flush against the flat surface of the bolt.
(2) As for the other claw, stake it against the surface of the bolt head so as to act as a stopper if the bolt should start to loosen.



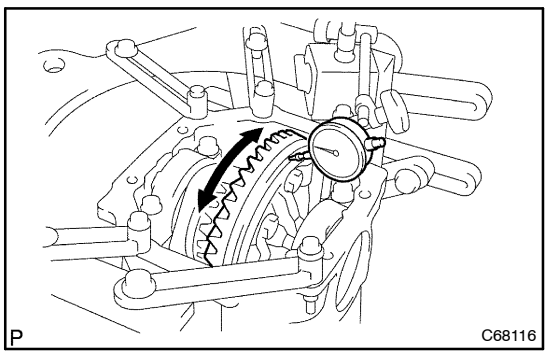
54. INSTALL REAR DIFFERENTIAL CASE BEARING

(a) Using SST and a press, install the case bearing (RH) to the differential case.
SST 09636–20010



55. INSTALL REAR DIFFERENTIAL CASE BEARING

(a) Using SST and a press, install the case bearing (LH) to the differential case.
SST 09636–20010

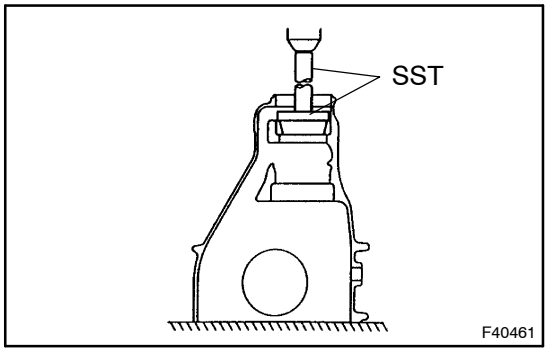


56. INSPECT RUNOUT OF DIFFERENTIAL RING GEAR

(a) Install the differential case to the carrier, and install the 2 plate washers so that there is no play in the bearing.
(b) Install the 2 bearing caps with the 4 bolts.
Torque: 79 N·m (800 kgf·cm, 58 ft·lbf)
(c) Using a dial indicator, measure the runout of the ring gear.
Maximum runout: 0.07 mm (0.0028 in.)

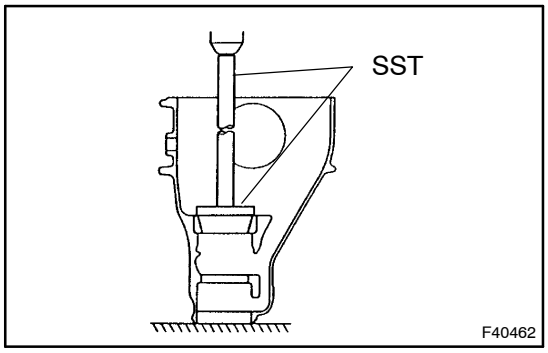
If the runout is greater than the maximum, replace the drive pinion, ring gear and differential case.

(d) Remove the 2 bearing caps, 2 plate washers and differential carrier.



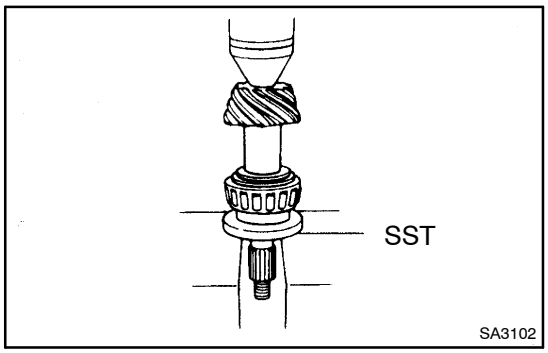
57. INSTALL REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

(a) Using SST and a press, install the front bearing (outer race) to the carrier.
SST 09950–60010 (09951–00620), 09950–70010 (09951–07150)



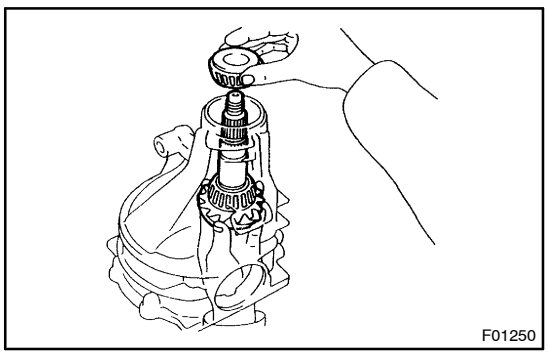
58. INSTALL REAR DRIVE PINION REAR TAPERED ROLLER BEARING

(a) Using SST and a press, install the rear bearing (outer race) to the carrier.
SST 09950–60020 (09951–00710), 09950–70010 (09951–07150)



59. INSTALL REAR DRIVE PINION REAR TAPERED ROLLER BEARING

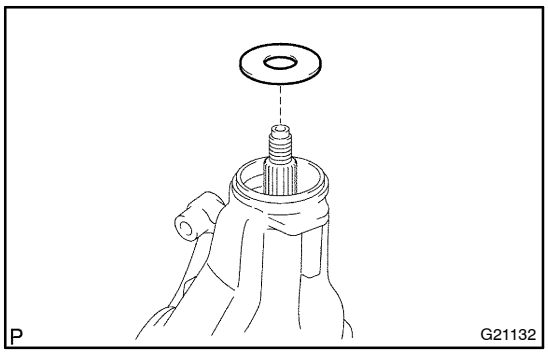
(a) Install the removed plate washer to the drive pinion.
(b) Using SST and a press, install the rear bearing to the drive pinion.
SST 09506–30012



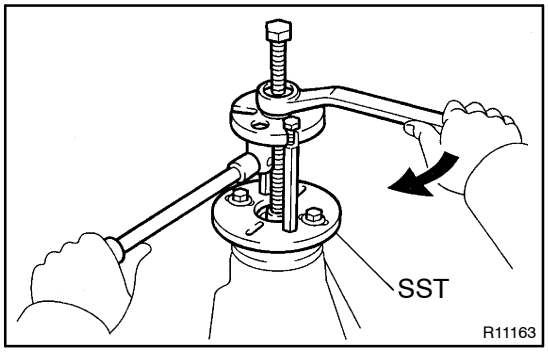
60. ADJUST DIFFERENTIAL DRIVE PINION PRELOAD

(a) Install the drive pinion and front bearing.

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

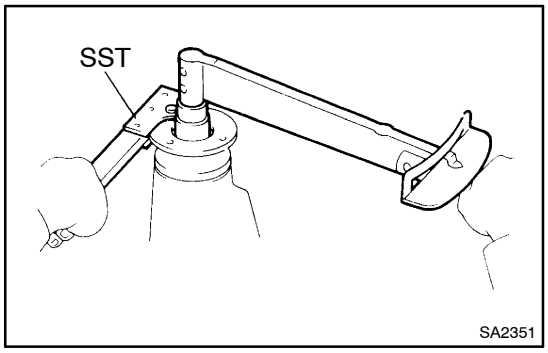


(b) Install the rear differential drive pinion oil slinger to the drive pinion.



(c) Using SST, install the companion flange.
SST 09950–30012 (09951–03010, 09953–03010, 09954–03010, 09955–03030, 09956–03020)

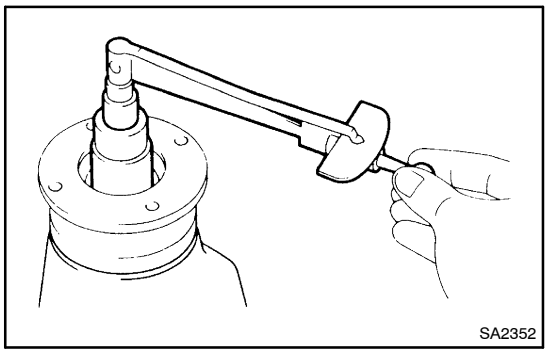
(d) Coat the threads of the nut with hypoid gear oil LSD.



(e) Using SST to hold the flange, torque the nut.
SST 09330–00021
Torque: 108 N·m (1,100 kgf·cm, 80 ft·lbf)

NOTICE:

- **Torque the nut a little at a time, being careful not to overtighten it.**
- **Apply hypoid gear oil LSD to the nut.**



(f) Using a torque wrench, measure the preload.
Drive pinion preload (at starting):
New bearing:
1.1 to 1.7 N·m (11 to 17 kgf·cm, 9.6 to 14.8 in.·lbf)
Reused bearing:
0.6 to 0.9 N·m (6 to 9 kgf·cm, 5.2 to 7.8 in.·lbf)

If the preload is not within the specification, adjust the differential drive pinion preload or repair as necessary.

61. INSTALL DIFFERENTIAL CASE ASSY

(a) Place the 2 bearing outer races on their respective bearings. Make sure the right and left races are not interchanged.

62. ADJUST DIFFERENTIAL RING GEAR BACKLASH

(a) Install the right and left bearing caps with the 4 bolts.
Torque: 79 N·m (800 kgf·cm, 58 ft·lbf)

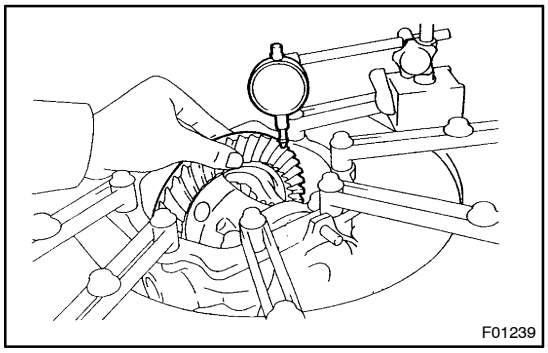
HINT:

- When using a new side bearing, select a thrust shim which is thinner than the removed one.
- If the side bearing is reused, select a thrust shim of the same thickness as the removed one.

(b) Make snug the differential case bearing and thrust shim by tapping on the ring gear with a plastic hammer.

(c) Set the dial indicator perpendicular to the end of the ring gear face.

(d) While holding the rear drive pinion companion flange rear, rotate the ring gear and measure the backlash.
Backlash: 0.13 to 0.18 mm (0.0051 to 0.0071 in.)


F01239

NOTICE:

Measure it at 3 points or more on the ring gear periphery.

If the measured value is out of the specified value, select a proper thrust shim so that the backlash of the differential ring gear is within the value, and install it to the ring gear back side.

Washer thickness:

Thickness mm (in.)	Thickness mm (in.)	Thickness mm (in.)
2.21 to 2.23 (0.0870 to 0.0878)	2.57 to 2.59 (0.1012 to 0.1020)	2.93 to 2.95 (0.1154 to 0.1161)
2.24 to 2.26 (0.0882 to 0.0890)	2.60 to 2.62 (0.1024 to 0.1031)	2.96 to 2.98 (0.1165 to 0.1173)
2.27 to 2.29 (0.0894 to 0.0902)	2.63 to 2.65 (0.1035 to 0.1043)	2.99 to 3.01 (0.1177 to 0.1185)
2.30 to 2.32 (0.0906 to 0.0913)	2.66 to 2.68 (0.1047 to 0.1055)	3.02 to 3.04 (0.1189 to 0.1197)
2.33 to 2.35 (0.0917 to 0.0925)	2.69 to 2.71 (0.1059 to 0.1067)	3.05 to 3.07 (0.1201 to 0.1209)
2.36 to 2.38 (0.0929 to 0.0937)	2.72 to 2.74 (0.1071 to 0.1079)	3.08 to 3.10 (0.1213 to 0.1220)
2.39 to 2.41 (0.0941 to 0.0949)	2.75 to 2.77 (0.1083 to 0.1091)	3.11 to 3.13 (0.1224 to 0.1232)
2.42 to 2.44 (0.0953 to 0.0961)	2.78 to 2.80 (0.1094 to 0.1102)	3.14 to 3.16 (0.1236 to 0.1244)
2.45 to 2.47 (0.0965 to 0.0972)	2.81 to 2.83 (0.1106 to 0.1114)	3.17 to 3.19 (0.1248 to 0.1256)
2.48 to 2.50 (0.0976 to 0.0984)	2.84 to 2.86 (0.1118 to 0.1126)	3.20 to 3.22 (0.1260 to 0.1268)
2.51 to 2.53 (0.0988 to 0.0996)	2.87 to 2.89 (0.1130 to 0.1138)	–
2.54 to 2.56 (0.1000 to 0.1008)	2.90 to 2.92 (0.1142 to 0.1150)	–

63. ADJUST TOTAL PRELOAD

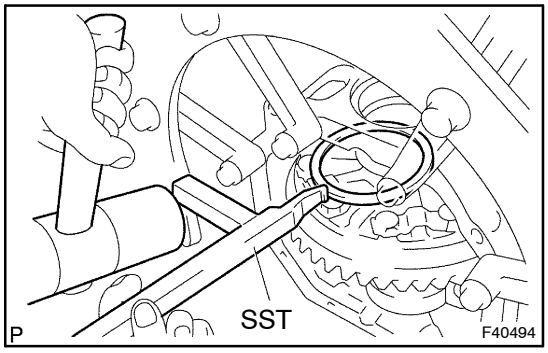
(a) After adjusting the backlash of the differential ring gear, remove the teeth side thrust shim.

(b) Using a micrometer, measure the thickness of the removed thrust shim.

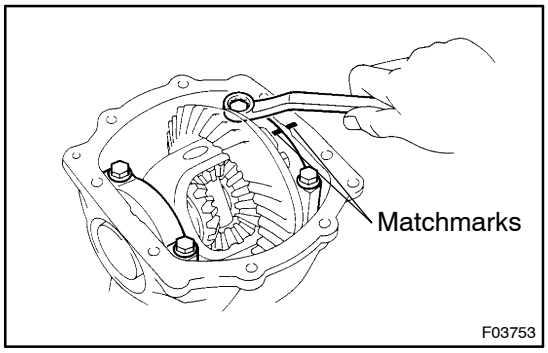
(c) Select a new thrust shim 0.06 to 0.09 mm (0.0024 to 0.0035 in.) which is thicker than the removed one.

HINT:

Select a thrust shim which can be pressed in 2/3 rds of the way by finger.



(d) Using SST and a plastic hammer, drive in the thrust shim.
SST 09504–22011

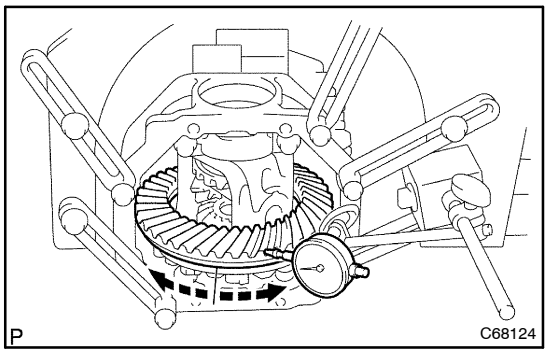


(e) Align matchmarks on the bearing cap and differential carrier, and install the 2 bearing caps.

NOTICE:

Make sure the right and left bearing caps are not interchanged.

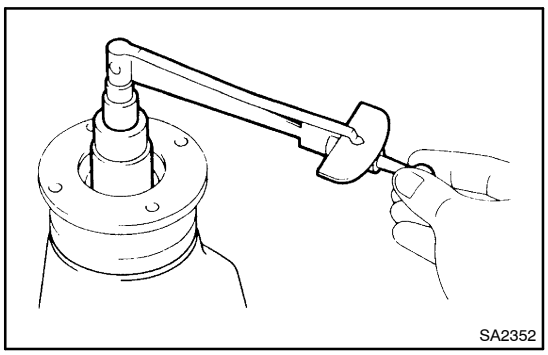
(f) Tighten both bearing caps with the 4 bolts.
Torque: 79 N·m (800 kgf·cm, 58 ft·lbf)



(g) Set the dial indicator to the end of the differential ring gear face.

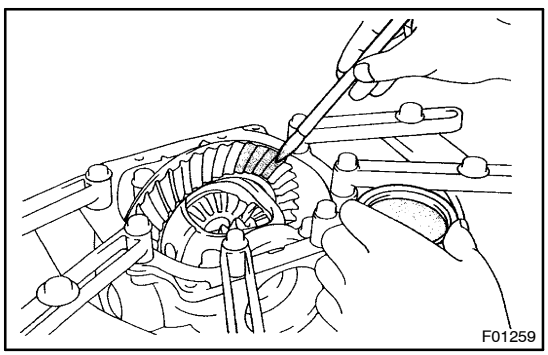
(h) While holding the rear drive pinion companion flange rear, rotate the differential ring gear and measure the backlash.
Backlash: 0.13 to 0.18 mm (0.0051 to 0.0071 in.)

(i) If the measured value is out of the specified value, adjust it by increasing or decreasing the thickness of both right and left thrust shims equally.
SST 09504–22011



(j) Using a torque wrench, measure the preload.
Total preload (at starting):
Drive pinion preload plus 0.3 to 0.5 N·m (3 to 5 kgf·cm, 2.6 to 4.3 in.·lbf)

If the preload is not within the specification, adjust the total preload or repair as necessary.

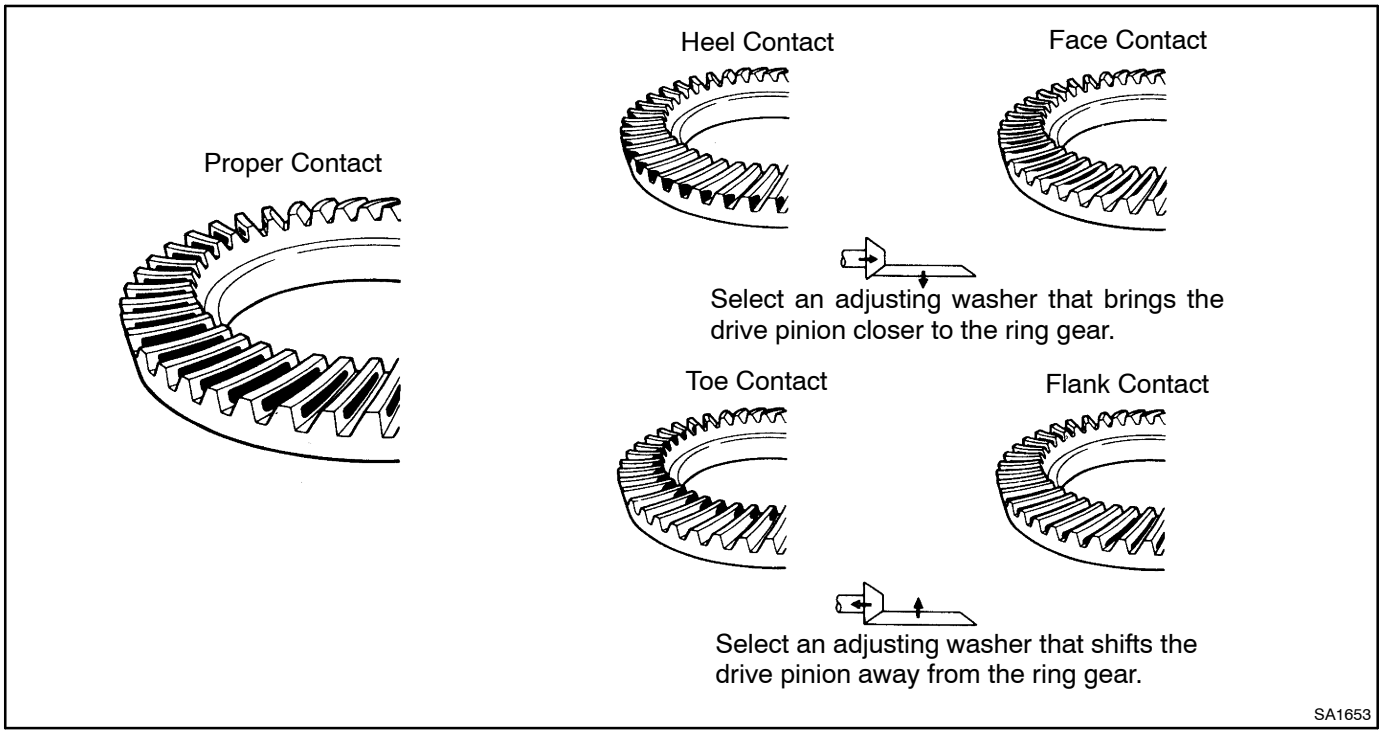


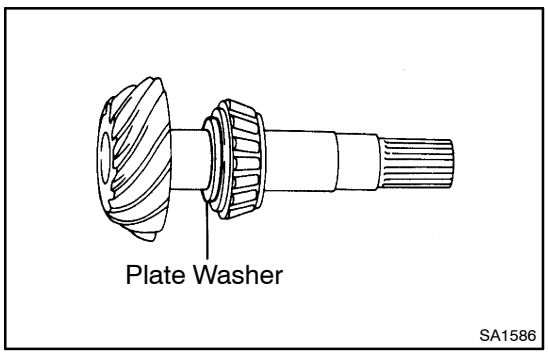
64. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVE PINION

(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 table to select a proper washer for correction.

Washer thickness:

Thickness mm (in.)	Thickness mm (in.)	Thickness mm (in.)
2.26 to 2.28 (0.0890 to 0.0898)	2.41 to 2.43 (0.0949 to 0.0957)	2.56 to 2.58 (0.1008 to 0.1016)
2.29 to 2.31 (0.0902 to 0.0909)	2.44 to 2.46 (0.0961 to 0.0969)	2.59 to 2.61 (0.1020 to 0.1028)
2.32 to 2.34 (0.0913 to 0.0921)	2.47 to 2.49 (0.0972 to 0.0980)	2.62 to 2.64 (0.1031 to 0.1039)
2.35 to 2.37 (0.0925 to 0.0933)	2.50 to 2.52 (0.0984 to 0.0992)	2.65 to 2.67 (0.1043 to 0.1051)
2.38 to 2.40 (0.0937 to 0.0945)	2.53 to 2.55 (0.0996 to 0.1004)	2.68 to 2.70 (0.1055 to 0.1063)

65. REMOVE REAR DRIVE PINION NUT (SEE STEP 32)
SST 09330–00021

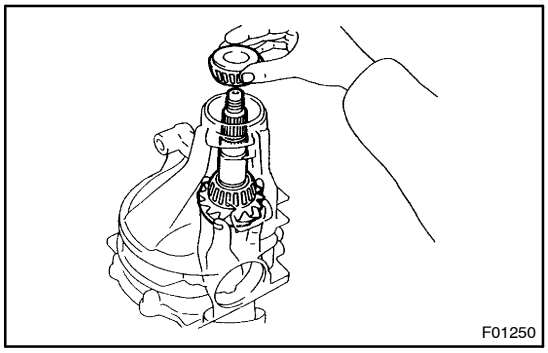
66. REMOVE REAR DRIVE PINION COMPANION FLANGE SUB–ASSY REAR (SEE STEP 33)
SST 09950–30012 (09951–03010, 09953–03010, 09954–03010, 09955–03030, 09956–03020)

67. REMOVE REAR DIFFERENTIAL DRIVE PINION OIL SLINGER

68. REMOVE REAR DRIVE PINION FRONT TAPERED ROLLER BEARING (SEE STEP 37)
SST 09556–22010

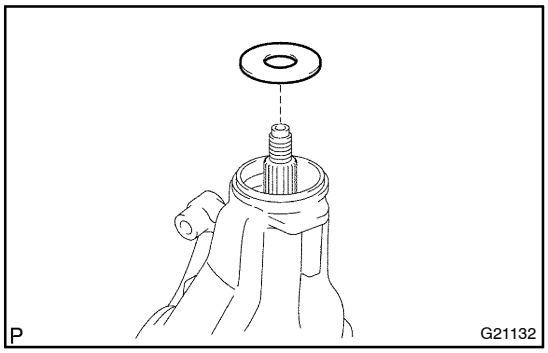
69. INSTALL REAR DIFFERENTIAL DRIVE PINION BEARING SPACER

(a) Install a new bearing spacer.



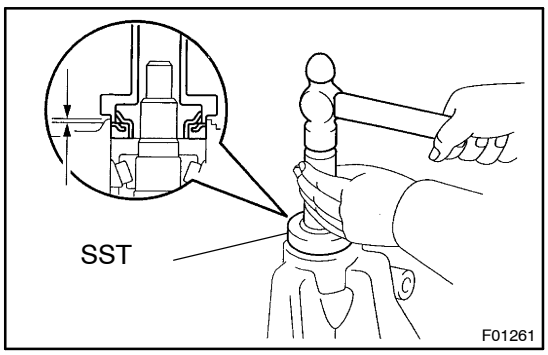
70. INSTALL REAR DRIVE PINION FRONT TAPERED ROLLER BEARING

(a) Install the rear drive pinion front tapered roller bearing to the drive pinion.



71. INSTALL REAR DIFFERENTIAL DRIVE PINION OIL SLINGER

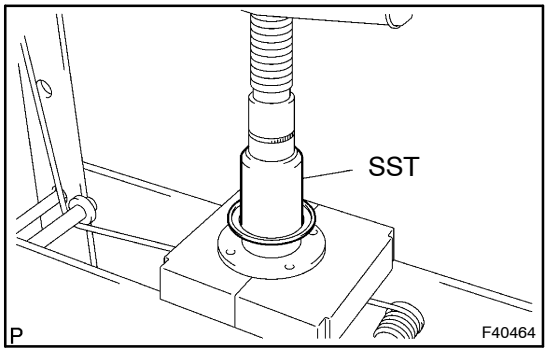
(a) Install the rear differential drive pinion oil slinger to the drive pinion.



72. INSTALL REAR DIFFERENTIAL CARRIER OIL SEAL

(a) Using SST and a hammer, install a new oil seal.
SST 09554–22010
Oil seal drive in depth:
2.0 ± 0.3 mm (0.079 ± 0.012 in.)

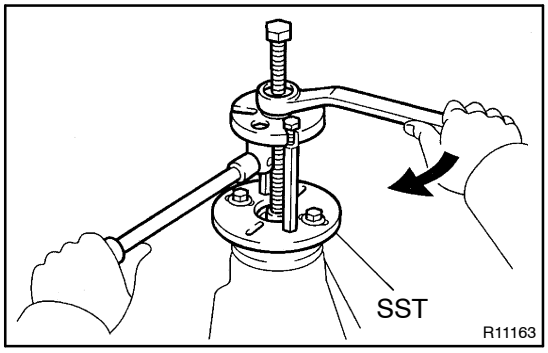
(b) Apply MP grease to the oil seal lip.



73. INSTALL REAR DIFFERENTIAL DUST DEFLECTOR

(a) Using SST and a press, install a new dust deflector.
SST 09223–00010

NOTICE:
Be careful not to damage the dust deflector.

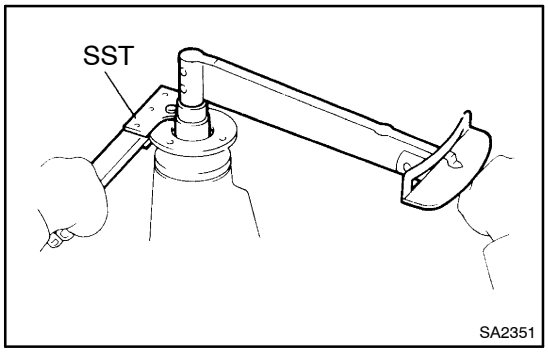


74. INSTALL REAR DRIVE PINION COMPANION FLANGE SUB–ASSY REAR

(a) Using SST, install the companion flange to the drive pinion.

SST 09950–30012 (09951–03010, 09953–03010, 09954–03010, 09955–03030, 09956–03020)

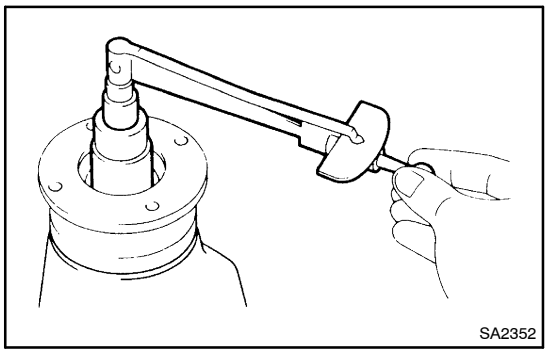
(b) Coat the threads of a new nut with hypoid gear oil LSD.



(c) Using SST to hold the flange, torque the nut.

SST 09330–00021

Torque: 108 N·m (1,100 kgf·cm, 80 ft·lbf)



75. INSPECT DIFFERENTIAL DRIVE PINION PRELOAD

(a) Using a torque wrench, measure the preload of the drive pinion.

Preload (at starting):

New bearing:

1.1 to 1.7 N·m (11 to 17 kgf·cm, 9.6 to 14.8 in.·lbf)

Reused bearing:

0.6 to 0.9 N·m (6 to 9 kgf·cm, 5.2 to 7.8 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: 108 to 235 N·m (1,100 to 2,400 kgf·cm, 80 to 174 ft·lbf)

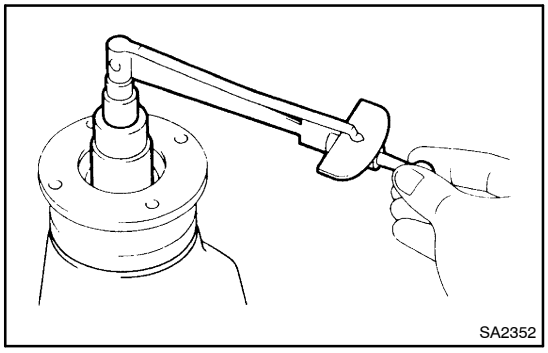
- If the torque exceeds the maximum while retightening the nut, replace the bearing spacer and repeat the preload adjusting procedure.

NOTICE:

Do not loosen the pinion nut to reduce the preload.

HINT:

This preload is within the backlash between the drive pinion and ring gear.


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76. INSPECT TOTAL PRELOAD

(a) Using a torque wrench, measure the preload.
Total preload (at starting):
Drive pinion preload plus 0.3 to 0.5 N·m (3 to 5 kgf·cm, 2.6 to 4.3 in.·lbf)

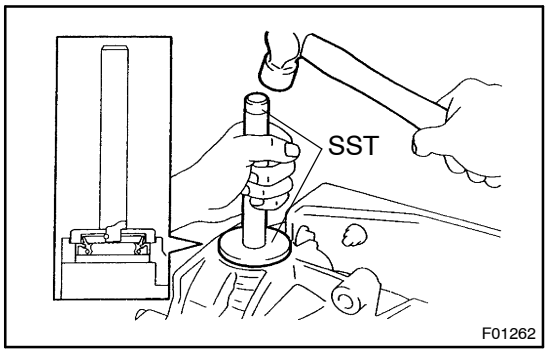
If the total preload is not within the specification, adjust the total preload or repair as necessary.

77. INSPECT DIFFERENTIAL RING GEAR BACKLASH (SEE STEP 25)

78. INSPECT RUNOUT OF REAR DRIVE PINION COMPANION FLANGE SUB–ASSY REAR (SEE STEP 28)

79. INSTALL REAR DRIVE PINION NUT

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

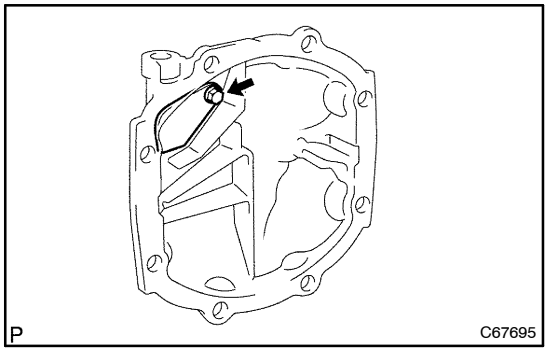


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80. INSTALL REAR DIFFERENTIAL SIDE GEAR SHAFT SEAL OIL

(a) Using SST and a hammer, install 2 new oil seals.
SST 09550–00032, 09950–70010 (09951–07200)
Oil seal drive in depth:
0 ± 0.5 mm (0 ± 0.019 in.)

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

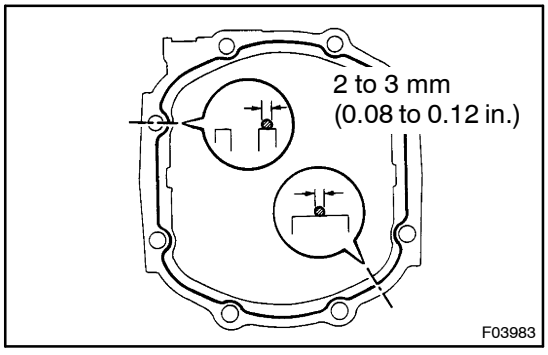

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81. INSTALL REAR DIFFERENTIAL CARRIER COVER

(a) W/ Torque sensing LSD:
Install the oil deflector and bolt to the carrier cover.
Torque: 7.4 N·m (75 kgf·cm, 65 in.·lbf)

(b) Install the breather plug to the carrier cover.
Torque: 21 N·m (210 kgf·cm, 15 ft·lbf)

(c) Clean contacting surfaces of any residual FIPG material using gasoline or alcohol.

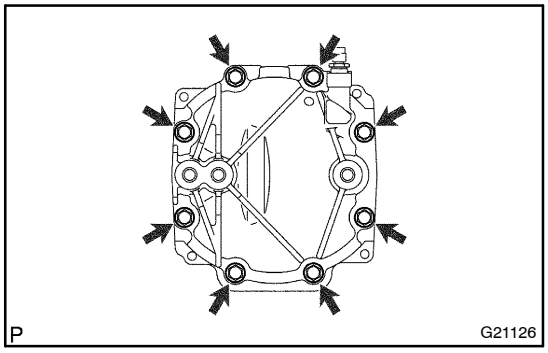


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(d) Apply FIPG to the carrier.
FIPG:
08826–00090, THREE BOND 1281 or equivalent

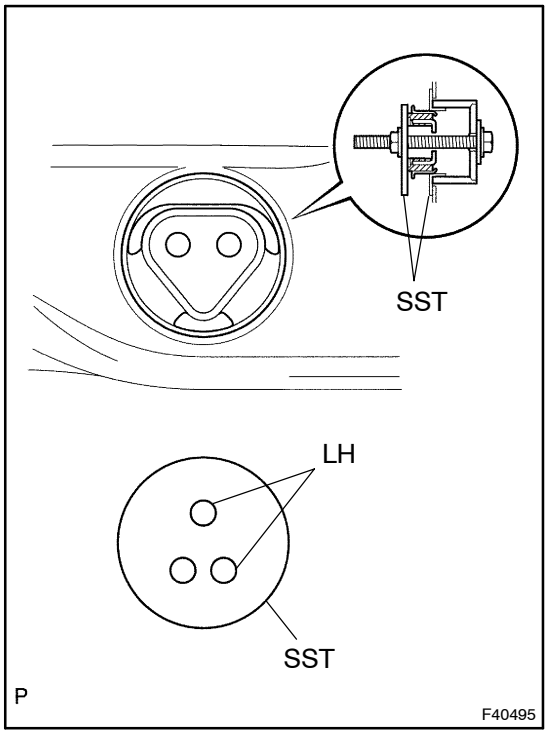
HINT:

- FIPG should be applied 2 to 3 mm (0.08 to 0.12 in.) in diameter with no break.
- Allow for an overlap of 10 mm (0.39 in.) or more between the start and end of FIPG application.
- Install the carrier cover within 3 minutes after applying FIPG.



- Do not add oil or drive the vehicle immediately after installing the cover, and leave it as is for at least an hour or more.
  Also, for 12 hours or more, avoid rapid acceleration/deceleration.

(e) Install the carrier cover with the 8 bolts.
Torque: 47 N·m (475 kgf·cm, 34 ft·lbf)

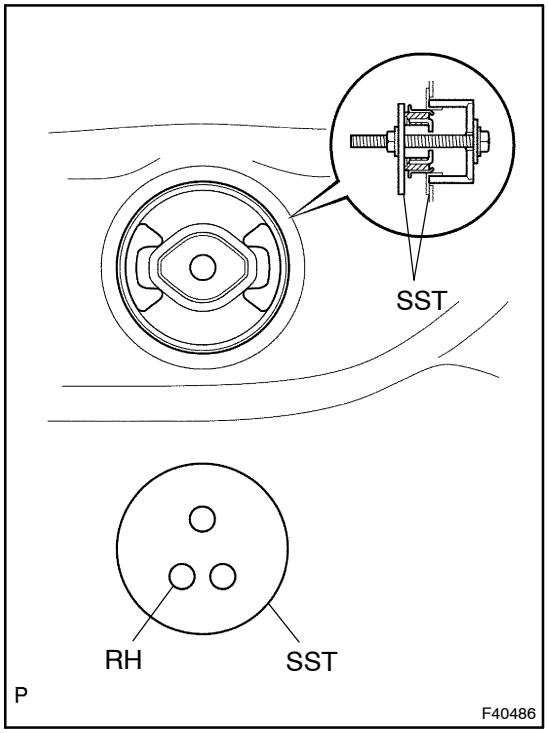


82. INSTALL REAR DIFFERENTIAL MOUNT CUSHION NO.1

HINT:
Perform this operation only when the rear differential mount cushion No.1 is replaced.

(a) Using SST, install a new rear differential mount cushion No.1.
SST 09570–24010, 09316–12010

NOTICE:
Do not set the SST in the wrong direction.

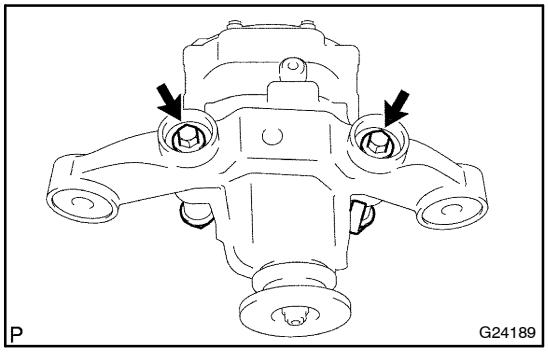


83. INSTALL REAR DIFFERENTIAL MOUNT CUSHION NO.2

HINT:
Perform this operation only when the rear differential mount cushion No.2 is replaced.

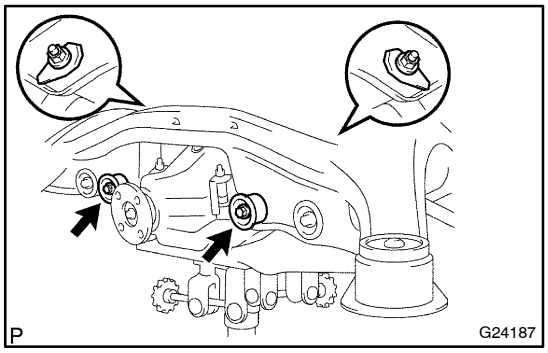
(a) Using SST, install a new rear differential mount cushion No.2.
SST 09570–24010, 09316–12010

NOTICE:
Do not set the SST in the wrong direction.



84. INSTALL REAR DIFFERENTIAL SUPPORT NO.1

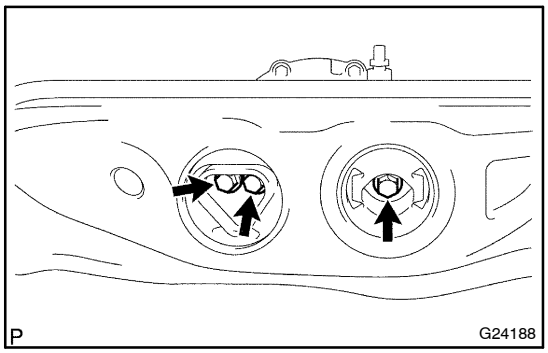
(a) Install the rear differential support No.1 to the differential carrier assy rear with the 2 bolts and 2 lock nuts.
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)



85. INSTALL DIFFERENTIAL CARRIER ASSY REAR

(a) Jack up the differential carrier assy rear and rear suspension member with a jack.

(b) Connect the rear differential support No.1 to the rear suspension member with 2 bolts and 2 lock nuts.
Torque: 137 N·m (1,400 kgf·cm, 101 ft·lbf)



(c) Install the differential carrier assy rear to the rear suspension member sub–assy with the 3 bolts.
Torque: 95 N·m (970 kgf·cm, 70 ft·lbf)

86. INSTALL REAR SUSPENSION MEMBER SUB–ASSY (SEE PAGE 27–13)
87. INSTALL REAR DRIVE SHAFT ASSY LH (SEE PAGE 30–40)
88. INSTALL REAR DRIVE SHAFT ASSY RH

HINT:
Installation procedure of the RH side is the same as that of the LH side.

89. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH (SEE PAGE 27–13)
90. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 RH

HINT:
Installation procedure of the RH side is the same as that of the LH side.

91. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH (SEE PAGE 27–13)
92. TEMPORARILY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 RH

HINT:
Installation procedure of the RH side is the same as that of the LH side.

93. TEMPORARILY TIGHTEN STRUT ROD ASSY REAR (SEE PAGE 27–10)
94. INSTALL REAR AXLE SHAFT LH NUT (SEE PAGE 30–40)
SST 09930–00010
95. INSTALL REAR AXLE SHAFT RH NUT
SST 09930–00010

HINT:
Installation procedure of the RH side is the same as that of the LH side.

96. INSTALL SPEED SENSOR REAR LH (SEE PAGE 30–40)
97. INSTALL SPEED SENSOR REAR RH
HINT:
Installation procedure of the RH side is the same as that of the LH side.
98. STABILIZE SUSPENSION (SEE PAGE 27–10)
99. FULLY TIGHTEN STRUT ROD ASSY REAR (SEE PAGE 27–10)
100. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 LH (SEE PAGE 27–13)
101. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.2 RH
HINT:
Installation procedure of the RH side is the same as that of the LH side.
102. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 LH (SEE PAGE 27–13)
103. FULLY TIGHTEN REAR SUSPENSION ARM ASSY NO.1 RH
HINT:
Installation procedure of the RH side is the same as that of the LH side.
104. INSTALL EXHAUST PIPE ASSY (SEE PAGE 15–2)
105. INSTALL PROPELLER W/CENTER BEARING SHAFT ASSY (SEE PAGE 30–11)
106. FULLY TIGHTEN PROPELLER W/CENTER BEARING SHAFT ASSY (SEE PAGE 30–11)
SST 09370–50010
107. INSTALL REAR DIFFERENTIAL DRAIN PLUG
(a) Using a hexagon wrench (10 mm), install the drain plug with a new gasket.
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)
108. ADD DIFFERENTIAL OIL
(a) Fill the rear differential carrier assy with hypoid gear oil.
Oil grade: Hypoid gear oil API GL–5
Recommended oil viscosity:
Above –18°C (0°F) SAE 90
Below –18°C (0°F) SAE 80W or 80W–90
Capacity: 0.9 ± 0.05 liters (0.95 ± 0.05 US qts, 0.79 ± 0.04 Imp. qts)
109. INSPECT DIFFERENTIAL OIL (SEE PAGE 29–6)
110. INSTALL REAR DIFFERENTIAL FILLER PLUG
(a) Using a hexagon wrench (10 mm), install the filler plug with a new gasket.
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)
111. INSTALL REAR WHEEL
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)
112. INSPECT AND ADJUST REAR WHEEL ALIGNMENT (SEE PAGE 27–4)
113. CHECK FOR EXHAUST GAS LEAKS
114. CHECK ABS SPEED SENSOR SIGNAL
(a) ABS WITH BA & EBD SYSTEM (SEE PAGE 05–156)
(b) ABS WITH EBD & BA & TRAC & VSC SYSTEM (SEE PAGE 05–234)