TRANSFER ASSY (4WD)

31052–01

OVERHAUL

HINT:

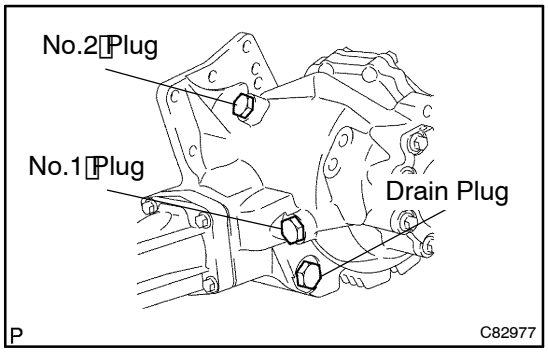
ENGINE COMPONENTS: See page 14–15

AUTOMATIC TRANSMISSION COMPONENTS: See page 40–10

TRANSFER COMPONENTS: See page 31–3

1. REMOVE ENGINE ASSEMBLY WITH TRANSAXLE (SEE PAGE 14–24)

2. REMOVE AUTOMATIC TRANSMISSION W/TRANSFER (SEE PAGE 40–11)



3. REMOVE TRANSFER CASE NO.1 PLUG

(a) Remove the transfer case No.1 plug.

(b) Remove the gasket No.1 from the transfer case No.1 plug.

4. REMOVE TRANSFER CASE NO.2 PLUG

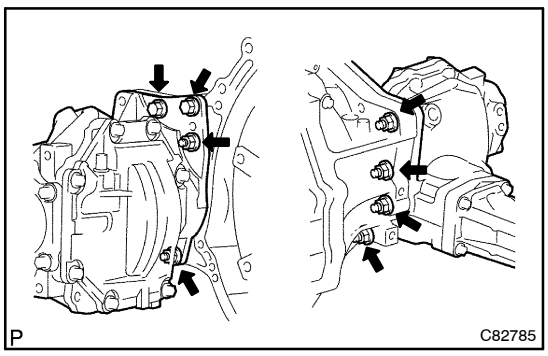
(a) Remove the transfer case No.2 plug.

(b) Remove the gasket No.2 from the transfer case No.2 plug.

5. REMOVE TRANSFER DRAIN PLUG

(a) Remove the transfer drain plug and bleed the transfer oil.

(b) Remove the drain gasket from the transfer drain plug.



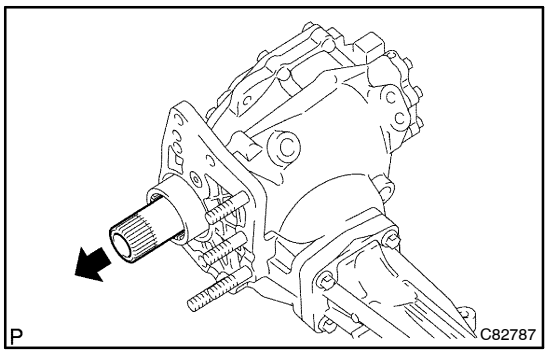
6. REMOVE TRANSFER ASSY

(a) Remove the 2 bolts and 6 nuts.

(b) Using a plastic hammer, remove the transfer assy from the transaxle assy.

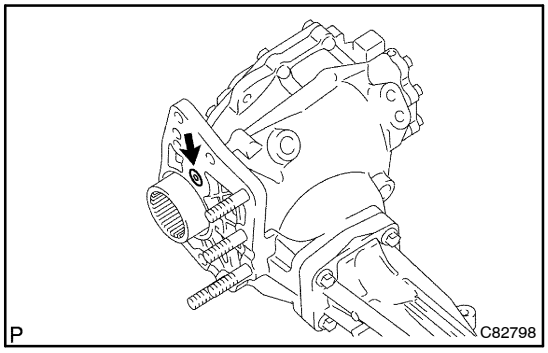
NOTICE:

- **Remove the transfer assy from the transaxle assy without tilting it.**
- **When removing the transfer assy, do not hold onto the oil seal parts on both sides of the assy.**



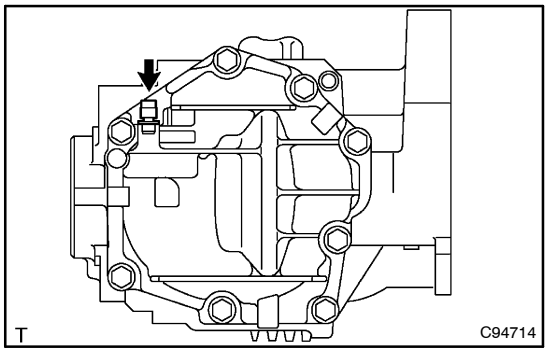
7. REMOVE DIFFERENTIAL SIDE GEAR INTERMEDIATE SHAFT NO.2 (W/O VSC)

(a) Remove the differential side gear intermediate shaft No.2 from the transfer assy.



8. REMOVE TRANSFER COVER GASKET

(a) Remove the transfer cover gasket from the transfer assy.

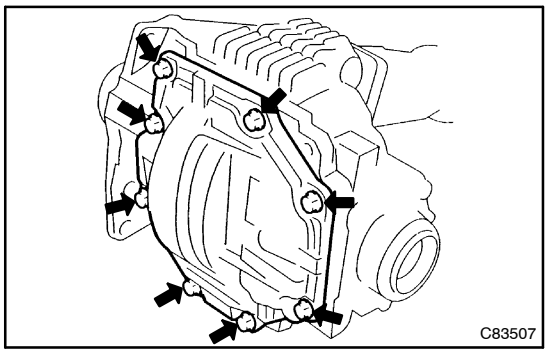


9. REMOVE TRANSFER CASE BREATHER PLUG

(a) Using a screwdriver and a hammer, remove the transfer case breather plug from the transfer case cover No.1.

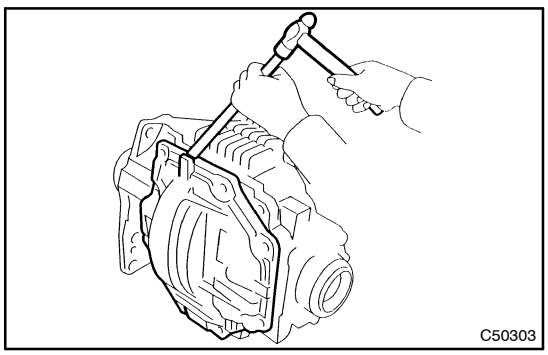
NOTICE:

Be careful not to damage the contact surface of the case cover.



10. REMOVE TRANSFER CASE COVER NO.1

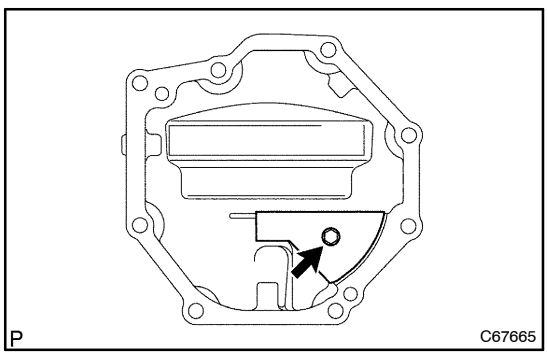
(a) Remove the 8 bolts.



(b) Using a brass bar and a hammer, remove the transfer case cover No.1 from the transfer case.

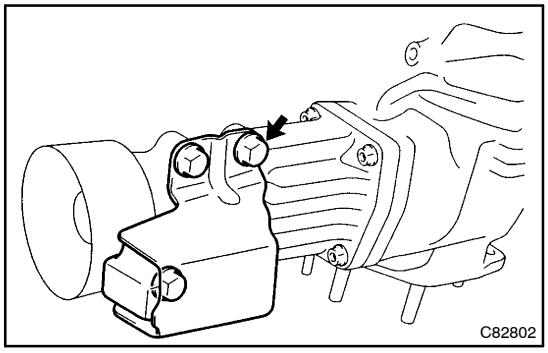
NOTICE:

Be careful not to damage the contact surfaces of the case and cover.



11. REMOVE BREATHER OIL DEFLECTOR

(a) Remove the bolt and breather oil deflector from the transfer case cover No.1.



12. REMOVE TRANSFER DYNAMIC DAMPER

(a) Remove the 3 bolts and the transfer dynamic damper from the transfer extension housing sub–assy.

13. REMOVE TRANSFER CASE STRAIGHT PIN

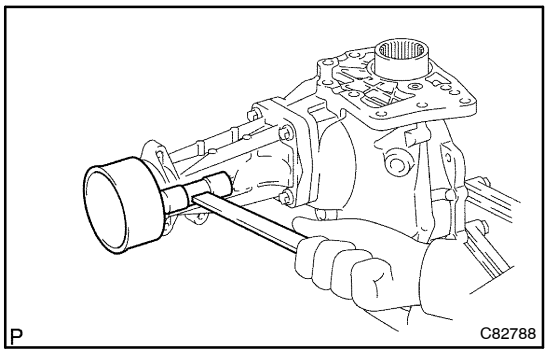
(a) Remove the 4 transfer case straight pins from the transfer case.

14. REMOVE TRANSFER & TRANSAXLE SETTING STUD BOLT

(a) Remove the 4 transfer & transaxle setting stud bolts.

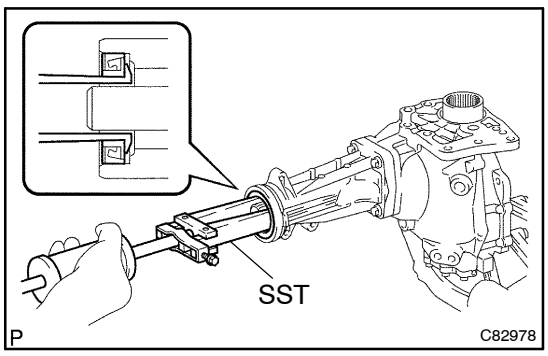
15. FIX TRANSFER ASSY

(a) Fix the transfer assy to the overhaul attachment.



16. REMOVE TRANSFER EXTENSION HOUSING DUST DEFLECTOR

(a) Using a plastic hammer, remove the transfer extension housing dust deflector from the transfer extension housing sub–assy.

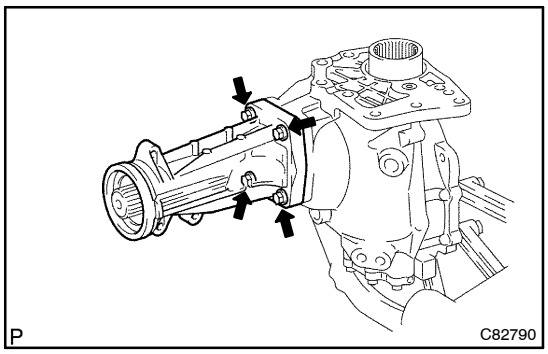


17. REMOVE TRANSFER EXTENSION HOUSING TYPE T OIL SEAL

(a) Using SST, remove the transfer extension housing type T oil seal from the transfer extension housing sub–assy.
SST 09308–00010

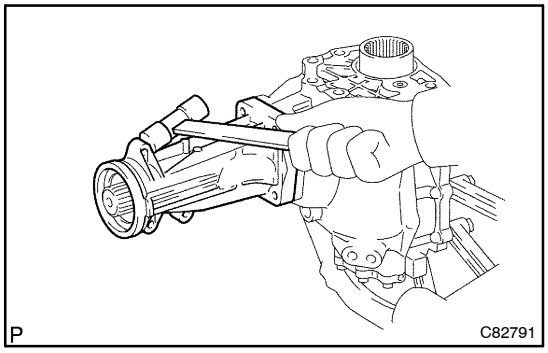
NOTICE:

Be careful not to damage the oil–seal–fitted surface of the housing and the inside surface of the bush.

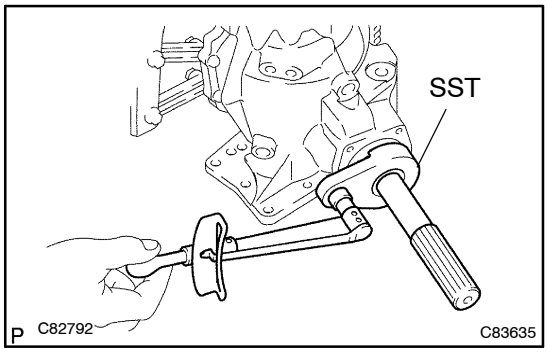


18. REMOVE TRANSFER EXTENSION HOUSING SUB–ASSY

(a) Remove the 4 bolts.



(b) Using a plastic hammer, remove the transfer extension housing sub–assy from the transfer case.



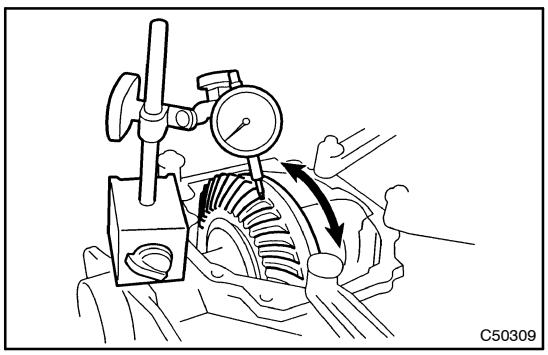
19. INSPECT PRELOAD

(a) Using SST and a torque wrench, check if the initial torque is within the backlash range.
SST 09326–20011
Torque (preload): 0.9 to 1.4 N·m
(9 to 14 kgf·cm, 8.0 to 12.4 in.·lbf)

HINT:
- Use a torque wrench with a fulcrum length of 160 mm (6.30 in.)
- If the value is out of standard range, replace the driven pinion bearing.

(b) Using SST and a torque wrench, check the initial torque while the drive pinion is in contact with the ring gear face.
SST 09326–20011
Torque: Preload + 0.15 to 0.30 N·m
(+1.6 to 3.1 kgf·cm, +1.3 to 2.7 in.·lbf)

HINT:
- Use a torque wrench with a fulcrum length of 160 mm (6.30 in.)
- If the value is out of standard range, overhaul the transfer.

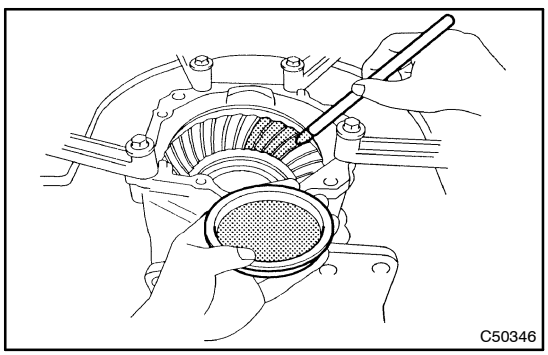


20. INSPECT BACKLASH

(a) Set a dial indicator perpendicular to the tooth face of the ring gear, fix the driven pinion and inspect the backlash while moving the gear.
Backlash: 0.1 to 0.15 mm (0.0039 to 0.0059 in.)

NOTICE:
Inspect it at 3 points or more on the gear periphery.

HINT:
Write down the result.

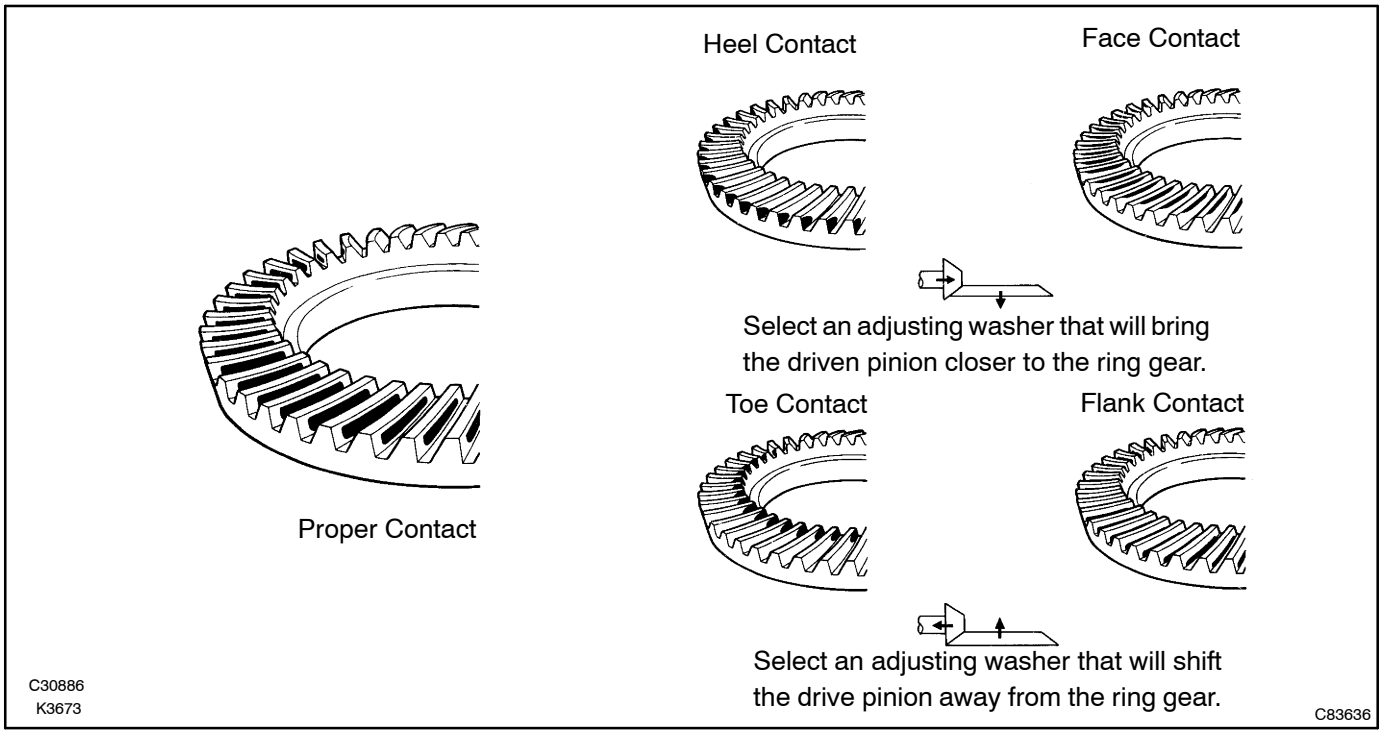


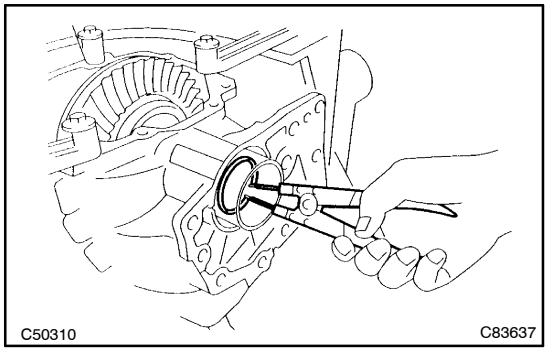
21. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVEN PINION

(a) Apply red lead primer thinly and uniformly to both faces of the ring gear and rotate several times.

NOTICE:
Inspect the tooth contact on the ring gear at 4 places or more.

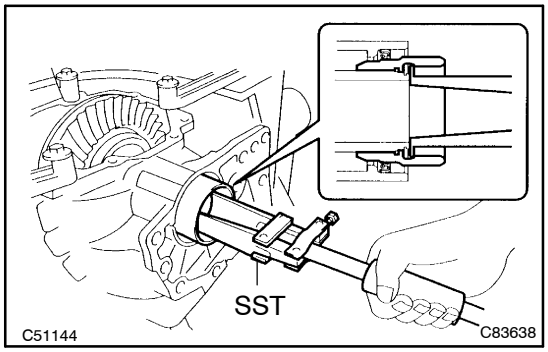
(b) Proper washer location is shown in the illustration.



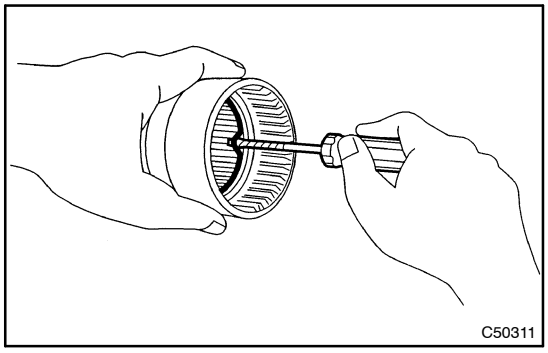


22. REMOVE CTR DIFFERENTIAL LOCK SLEEVE

(a) Using snap ring pliers, remove the shaft snap ring.



(b) Using SST, remove the CTR differential lock sleeve.
SST 09308–00010

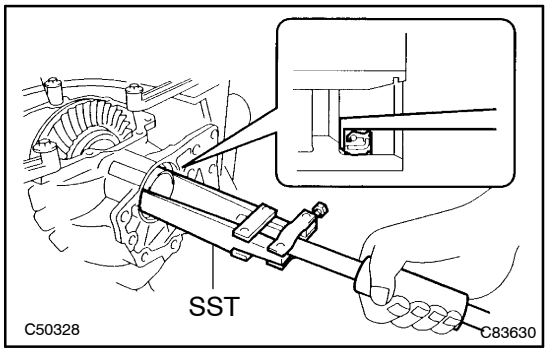


23. REMOVE O–RING

(a) Using a screwdriver with the tip protected by vinyl tape, remove the O–ring from the CTR differential lock sleeve.

NOTICE:

Be careful not to damage the lock sleeve's groove for the O–ring.



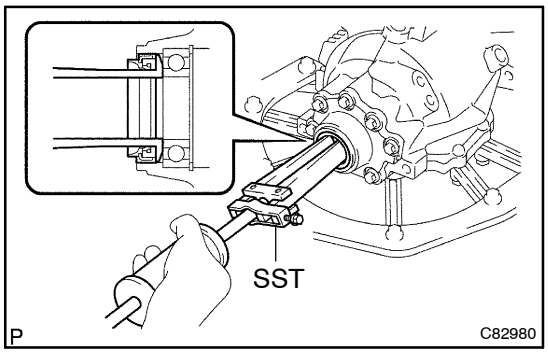
24. REMOVE TRANSFER CASE OIL SEAL

(a) Using SST, remove the transfer case oil seal from the transfer case.

SST 09308–00010

NOTICE:

Be careful not to damage the oil–seal–fitted surface of the case.



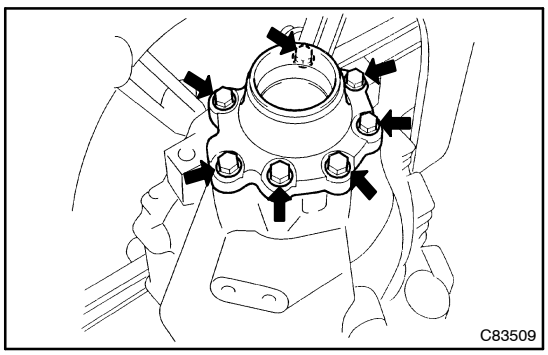
25. REMOVE TRANSFER RH BEARING RETAINER OIL SEAL

(a) Using SST, remove the transfer RH bearing retainer oil seal from the transfer RH bearing retainer sub–assy.

SST 09308–00010

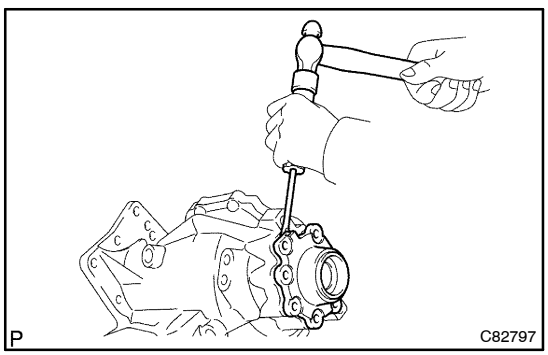
NOTICE:

Be careful not to damage the oil–seal–fitted surface of the retainer.



26. REMOVE TRANSFER RH BEARING RETAINER SUB–ASSY

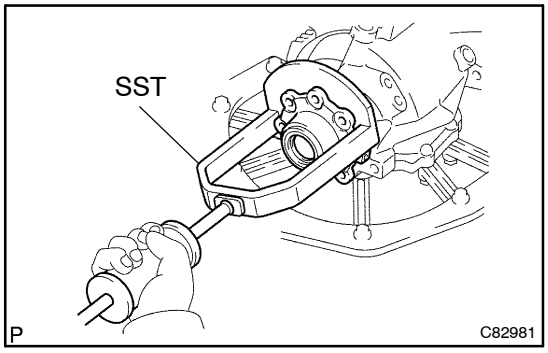
(a) Remove the 7 bolts from the transfer RH bearing retainer sub–assy.



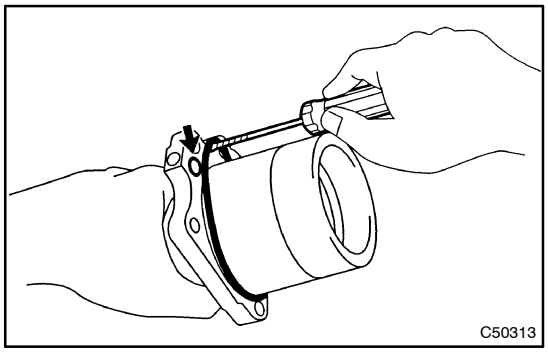
(b) Using a screwdriver and a hammer, create a clearance between the transfer RH bearing retainer sub–assy and the transfer case.

NOTICE:

Be careful not to damage the transfer RH bearing retainer and the transfer case.



(c) Using SST, remove the transfer RH bearing retainer sub–assy from the transfer case.
SST 09520–10021

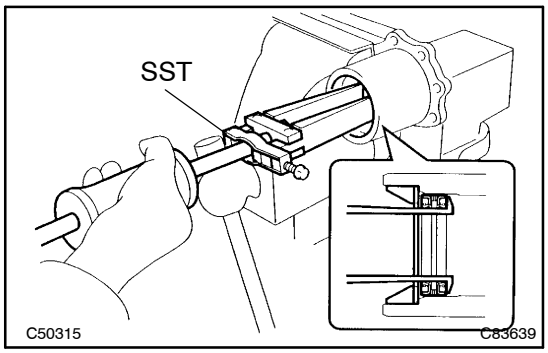


27. REMOVE O–RING

(a) Using a screwdriver with the tip protected by vinyl tape, remove the 2 O–rings from the transfer RH bearing retainer sub–assy.

NOTICE:

Be careful not to damage the retainer's grooves for the O–rings.



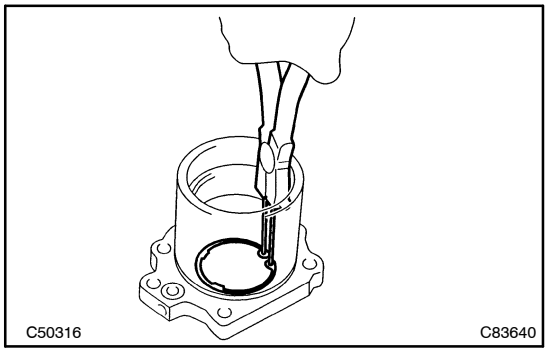
28. REMOVE CENTER DIFFERENTIAL CASE TAPERED ROLLER BEARING

(a) Fix the transfer RH bearing retainer sub–assy in a vise.

(b) Using SST, remove the center differential case tapered roller bearing RH outer race, transfer ring gear mounting case washer No.2 and transfer RH bearing retainer oil seal No.2 from the transfer RH bearing retainer sub–assy.
SST 09308–00010

NOTICE:

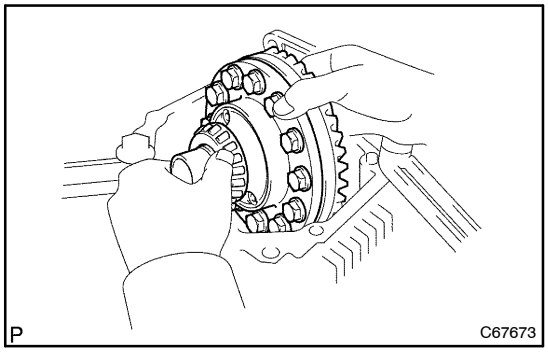
Be careful not to damage the oil–seal–fitted surface of the retainer.



29. REMOVE SIDE GEAR SHAFT HOLDER BEARING

(a) Using snap ring pliers, remove the side gear shaft holder hole snap ring.

(b) Remove the side gear shaft holder bearing from the transfer RH bearing retainer sub–assy.

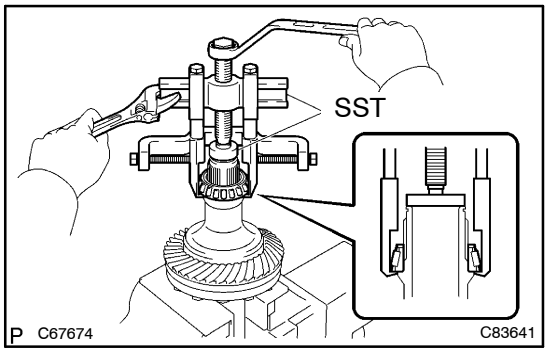


30. REMOVE CENTER DIFFERENTIAL CONTROL COUPLING ASSY (W/O VSC)

(a) Remove the center differential control coupling assy.

31. REMOVE TRANSFER RING GEAR MOUNTING CASE (W/ VSC)

(a) Remove the transfer ring gear mounting case following the same procedure as for the center differential control coupling assy.



32. REMOVE CENTER DIFFERENTIAL CASE TAPERED ROLLER BEARING

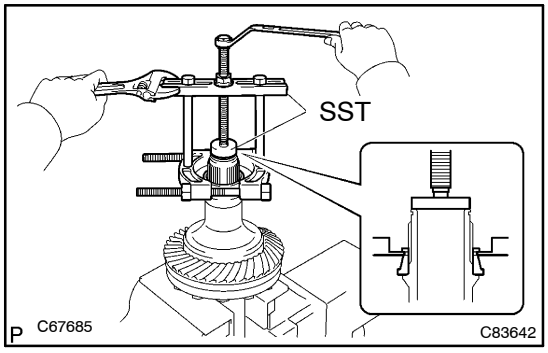
(a) LH side:

Using SST, remove the inner race of the center differential case tapered roller bearing from the transfer ring gear mounting case or center differential control coupling assy.

SST 09950–40011 (09951–04010, 09952–04010, 09953–04020, 09954–04010, 09955–04061, 09957–04010, 09958–04011), 09950–60010 (09951–00420)

NOTICE:

Apply grease to the screw thread and tip of the SST before use.



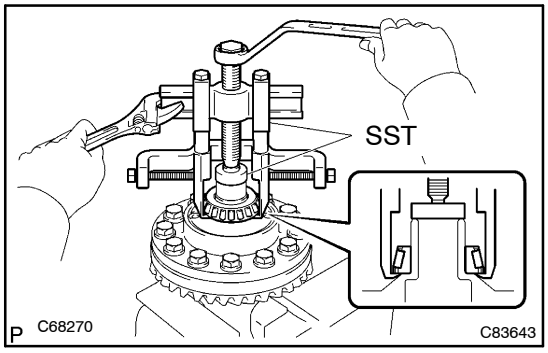
HINT:

When the roller comes off due to deformation of the gauge, completely remove the roller and remaining inner races of the center differential case tapered roller bearing from the transfer ring gear mounting case or center differential control coupling assy.

SST 09950–00020, 09950–00030, 09950–60010 (09951–00430)

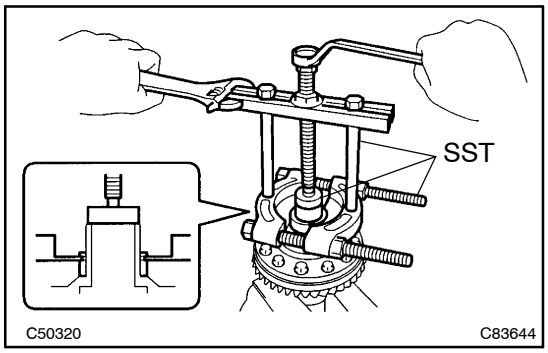
NOTICE:

Apply grease to the screw thread and tip of the SST before use.



(b) RH side:
Using SST, remove the inner race of the center differential case tapered roller bearing from the transfer ring gear mounting case.
SST 09950–40011 (09951–04010, 09952–04010, 09953–04020, 09954–04010, 09955–04061, 09957–04010, 09958–04011), 09950–60010 (09951–00360)

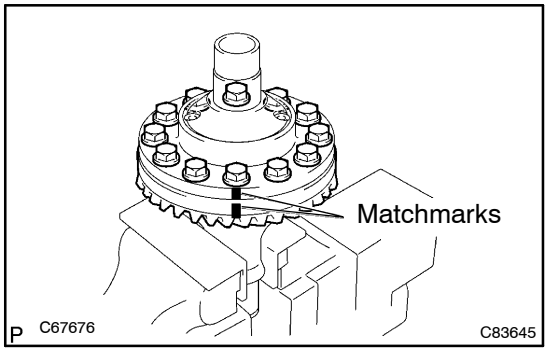
NOTICE:
Apply grease to the screw thread and tip of the SST before use.



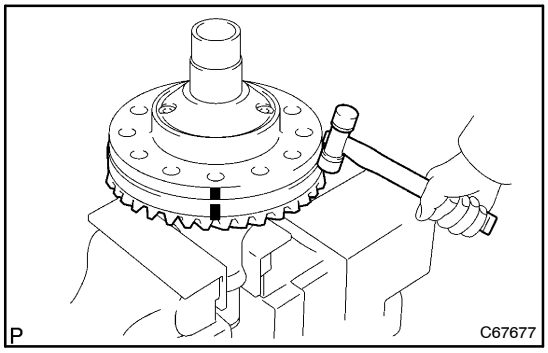
HINT:
When the roller comes off due to deformation of the gauge, completely remove the roller and remaining inner races of the center differential case tapered roller bearing from the transfer ring gear mounting case.
SST 09950–00020, 09950–00030, 09950–60010 (09951–00360)

NOTICE:
Apply grease to the screw thread and tip of the SST before use.

33. REMOVE RING GEAR

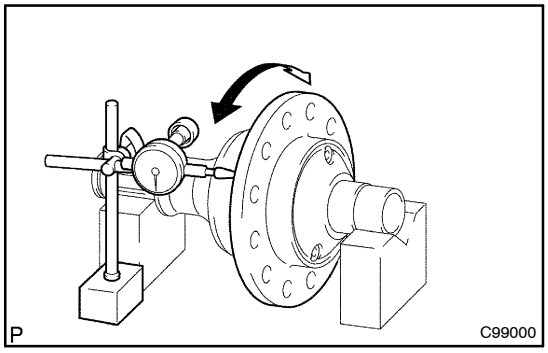


(a) Put matchmarks on the transfer ring gear mounting case or center differential control coupling assy and the ring gear.
(b) Remove the 12 bolts.



(c) Using a plastic hammer, remove the ring gear by tapping around its periphery.

NOTICE:
Do not damage the teeth of the ring gear.



34. INSPECT RUNOUT OF CENTER DIFFERENTIAL CONTROL COUPLING ASSY (W/O VSC)

(a) Using a dial indicator, check the transfer ring gear mounting case runout.

Maximum runout: 0.03 mm (0.0012 in.)

HINT:

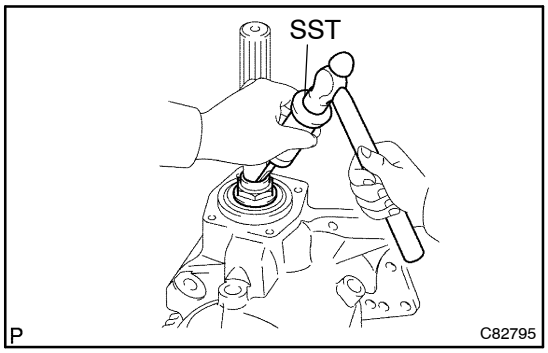
If the runout is too large, replace the center differential control coupling assy or transfer ring gear mounting case.

35. INSPECT RUNOUT OF TRANSFER RING GEAR MOUNTING CASE (W/ VSC)

(a) Use the same procedure as for the center differential control coupling assy.

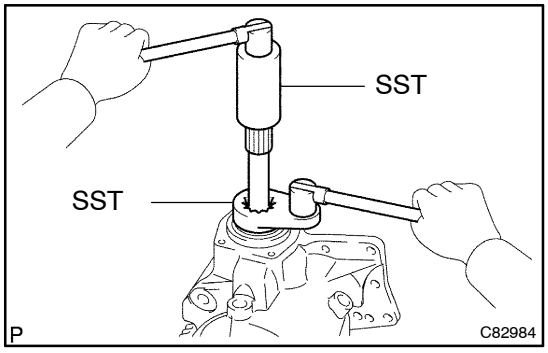
HINT:

If the runout is too large, replace the center differential control coupling assy or transfer ring gear mounting case.

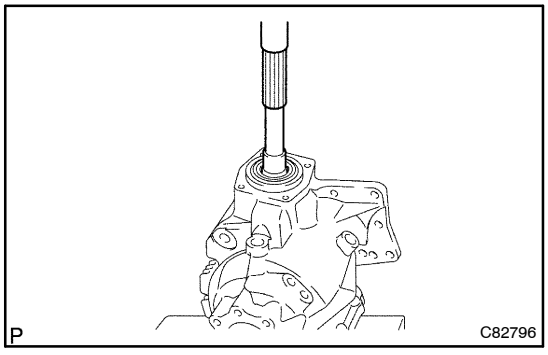


36. REMOVE DRIVEN PINION

(a) Using SST and a hammer, unstake the transfer gear nut.
SST 09930–00010



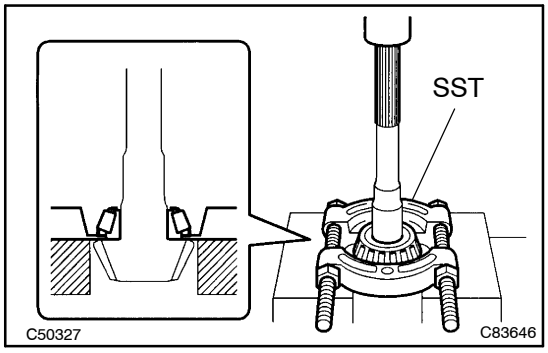
(b) Using SST, remove the transfer gear nut.
SST 09326–20011, 09556–16030



(c) Using a press, remove the driven pinion, transfer driven pinion rear bearing inner race and transfer pinion bearing spacer.

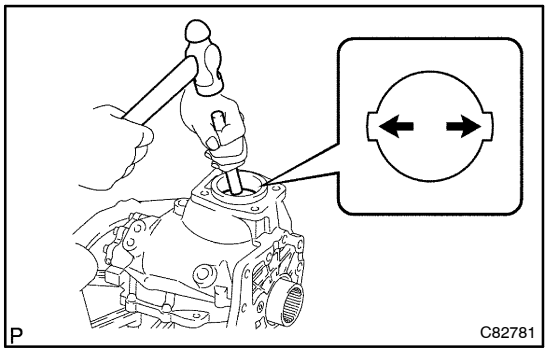
NOTICE:

- **Put a shop rag around to help prevent the driven pinion from being dropped.**
- **Place wooden blocks or equivalent under the case to keep it level.**



37. REMOVE TRANSFER DRIVEN PINION FRONT BEARING

(a) Using SST and a press, remove the transfer driven pinion front bearing inner race from the driven pinion.
SST 09950–00020

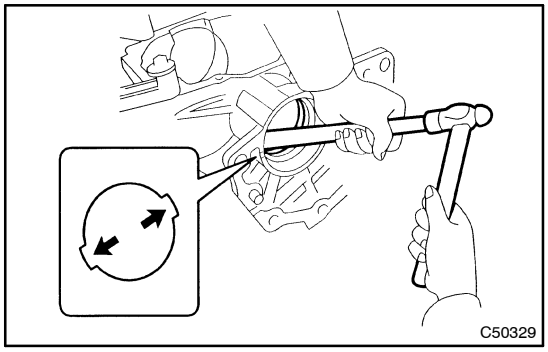


38. REMOVE TRANSFER DRIVEN PINION FRONT BEARING

(a) Using a brass bar and a hammer, lightly strike the transfer driven pinion front bearing outer race at 2 points to remove it from the transfer case.

39. REMOVE TRANSFER OUTPUT WASHER

(a) Remove the transfer output washer from the transfer case.

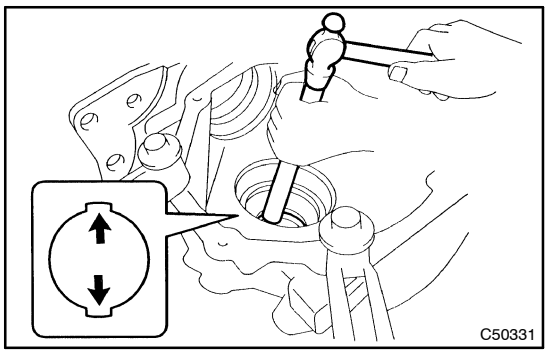


40. REMOVE CENTER DIFFERENTIAL CASE TAPERED ROLLER BEARING

(a) Using a brass bar and a hammer, lightly strike the center differential case tapered roller bearing LH outer race at 2 points to remove it from the transfer case.

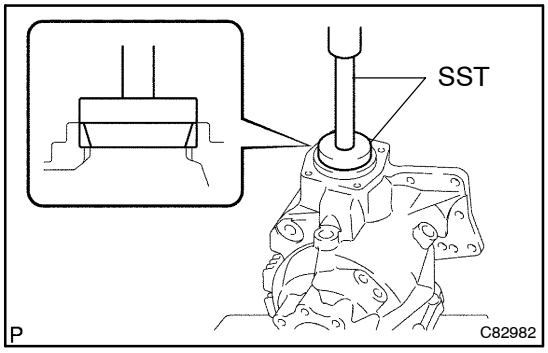
41. REMOVE RING GEAR MOUNTING CASE PLATE WASHER

(a) Remove the ring gear mounting case plate washer from the transfer case.



42. REMOVE TRANSFER DRIVEN PINION REAR BEARING

(a) Using a brass bar and a hammer, lightly strike the transfer driven pinion rear bearing outer race at 2 points to remove it from the transfer case.



43. INSTALL TRANSFER DRIVEN PINION REAR BEARING

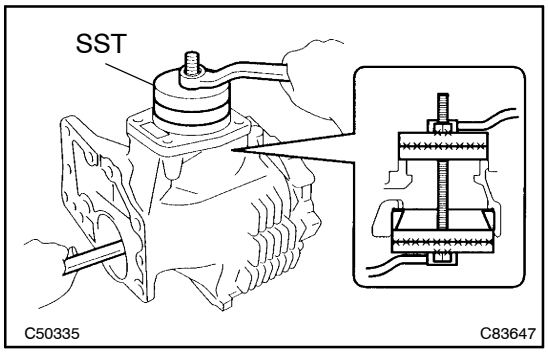
(a) Using SST and a press, install the transfer driven pinion rear bearing outer race to the transfer case.
SST 09950–60010 (09951–00620), 09950–70010 (09951–07150)

NOTICE:
Place wooden blocks or equivalent under the case to keep it level.

44. INSTALL TRANSFER OUTPUT WASHER

(a) Install the transfer output washer to the case.

HINT:
Reuse the washer.



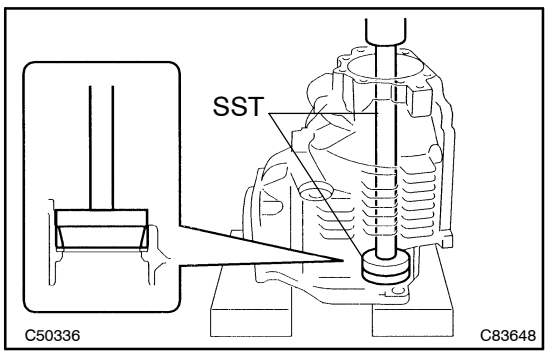
45. INSTALL TRANSFER DRIVEN PINION FRONT BEARING

(a) Install the transfer driven pinion front bearing outer race to the transfer case with SST, bolt and nut.
SST 09950–60020 (09951–00750, 09951–00770, 09951–00810), 09316–60011 (09316–00061)

46. INSTALL RING GEAR MOUNTING CASE PLATE WASHER

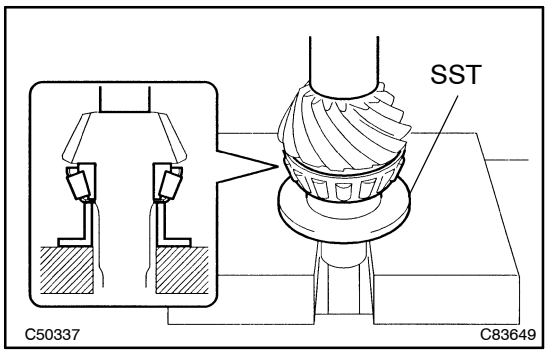
(a) Install the ring gear mounting case plate washer to the transfer case.

HINT:
Reuse the washer.



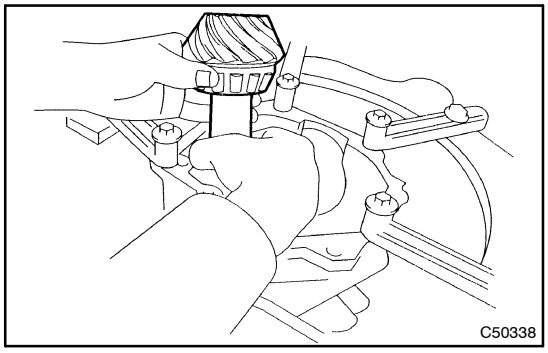
47. INSTALL CENTER DIFFERENTIAL CASE TAPERED ROLLER BEARING

(a) Using SST and a press, install the center differential case tapered roller bearing LH outer race to the transfer case.
SST 09950–70010 (09951–07200), 09316–60011 (09316–00021)



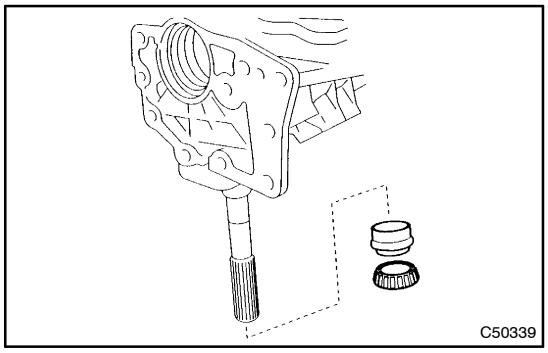
48. INSTALL CENTER DIFFERENTIAL CASE TAPERED ROLLER BEARING

(a) Using SST and a press, install the transfer driven pinion front bearing inner race to the driven pinion.
SST 09316–60011 (09316–00041)

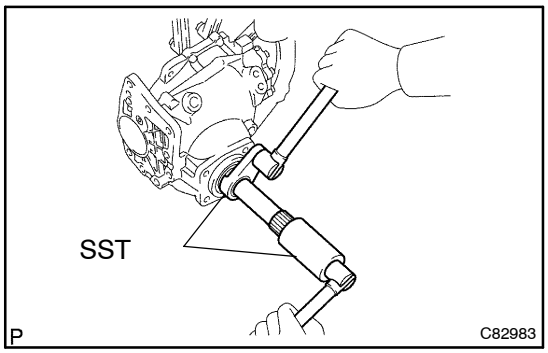


49. INSTALL DRIVEN PINION

(a) Install the driven pinion to the transfer case.



(b) Install a new transfer pinion bearing spacer and a new transfer driven pinion rear bearing inner race to the driven pinion.



(c) Using SST, tighten a new transfer gear nut (at a standard torque).

SST 09326–20011, 09556–16030

Torque:

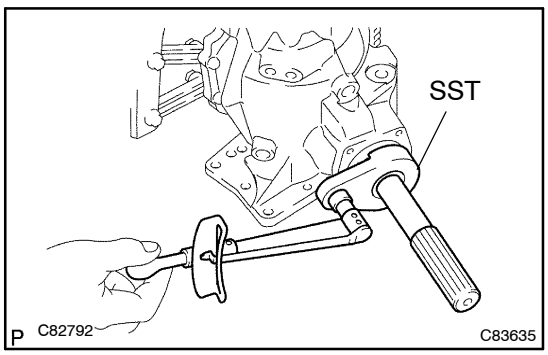
277 to 378 N·m (2,820 to 3,855 kgf·cm, 204 to 279 ft·lbf)

NOTICE:

Do not stake the transfer gear nut.

HINT:

Use a torque wrench with a fulcrum length of 750 mm (29.52 in.)



50. INSPECT AND ADJUST DRIVEN PINION PRELOAD

(a) Using SST and a torque wrench, measure the initial torque of the driven pinion.

SST 09326–20011

Preload (at starting):

New bearing:

1.1 to 1.6 N·m (11 to 16 kgf·cm, 9.7 to 14.2 in.·lbf)

Used bearing:

0.9 to 1.4 N·m (9 to 14 kgf·cm, 8.0 to 12.4 in.·lbf)

HINT:

Use a torque wrench with a fulcrum length of 160 mm (6.30 in.)

NOTICE:

Measure preload after rotating the bearing both clockwise and counterclockwise to make it fit.

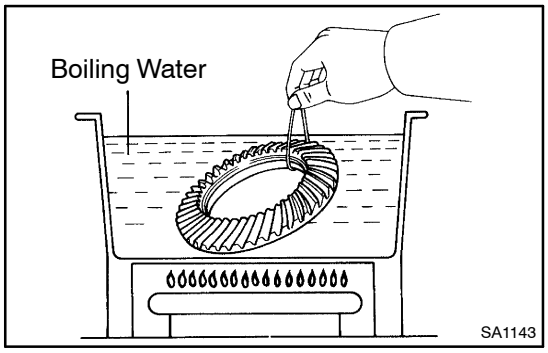
(b) If the preload is too large, replace the transfer pinion bearing spacer with a new one.

(c) If the preload is too small, repeatedly adjust the preload by tightening the transfer gear nut 5 to 10 degrees at a time until the standard value is obtained.

(d) If the preload is insufficient, even though the tightening torque of the transfer gear nut exceeds the maximum of the standard value, loosen the transfer gear nut and apply gear oil SAE 90 (GL–5) to the transfer gear nut, the screw thread and the base of the driven pinion. And then repeat the preceding operation. If the tightening torque is smaller than the standard, replace the transfer pinion bearing spacer with a new one and adjust it.

Torque: 378 N·m (3,855 kgf·cm, 279 ft·lbf)

SST 09326–20011, 09556–16030

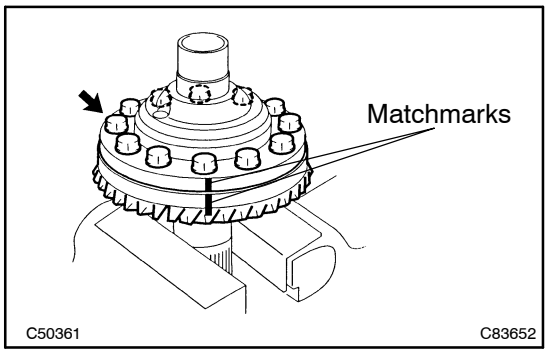


51. INSTALL RING GEAR

(a) Completely remove grease and moisture on the contact surfaces of the ring gear and the transfer ring gear mounting case or center differential control coupling assy.

(b) Heat the ring gear in boiling water from 90 to 100°C (194 to 212°F).

(c) Carefully take the ring gear out of the boiling water.



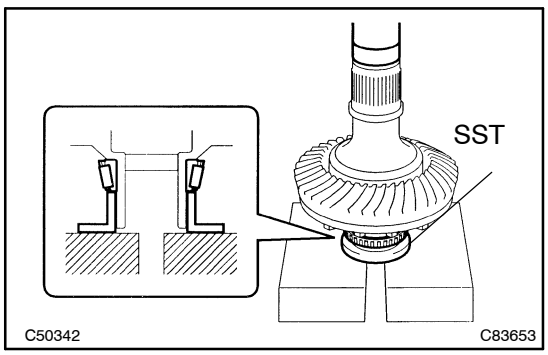
(d) Align the matchmarks on the ring gear and transfer ring gear mounting case and quickly assemble them.

(e) Tighten the12 bolts.

Torque: 78 N·m (790 kgf·cm, 57 ft·lbf)

NOTICE:

- **Tighten the bolts in diagonal order at several times.**
- **After the ring gear has well cooled down, fully tighten the bolts.**
- **Mark the bolt heads in order to check if they are re-tightened or not.**



52. INSTALL CENTER DIFFERENTIAL CASE TAPERED ROLLER BEARING

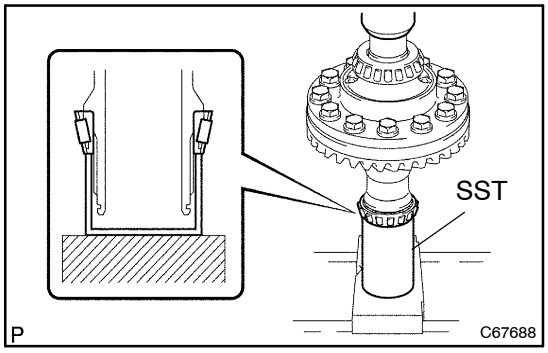
(a) RH side:

Using SST and a press, install the inner race of the center differential case tapered roller bearing to the transfer ring gear mounting case or center differential control coupling assy.

SST 09506–35010, 09950–60010 (09951–00430)

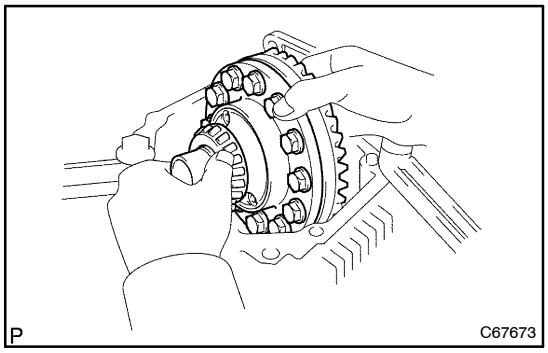
NOTICE:

When replacing the inner race, replace it together with the outer race.



(b) LH side:
Using SST and a press, install the inner race of the center differential case tapered roller bearing to the transfer ring gear mounting case or center differential control coupling assy.
SST 09223–00010

NOTICE:
When replacing the inner race, replace it together with the outer race.



53. INSTALL CENTER DIFFERENTIAL CONTROL COUPLING ASSY (W/O VSC)

(a) Install the center differential control coupling assy to the transfer case.

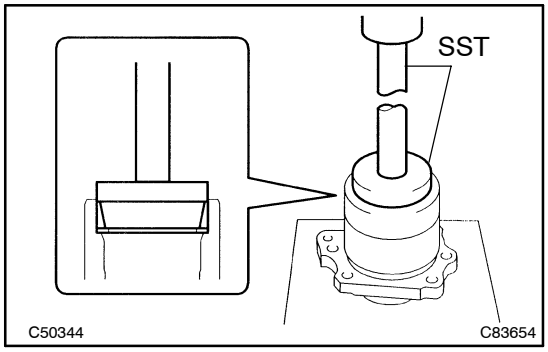
54. INSTALL TRANSFER RING GEAR MOUNTING CASE (W/ VSC)

(a) Use the same procedure as for the center differential control coupling assy.

55. INSTALL TRANSFER RING GEAR MOUNTING CASE WASHER NO.2

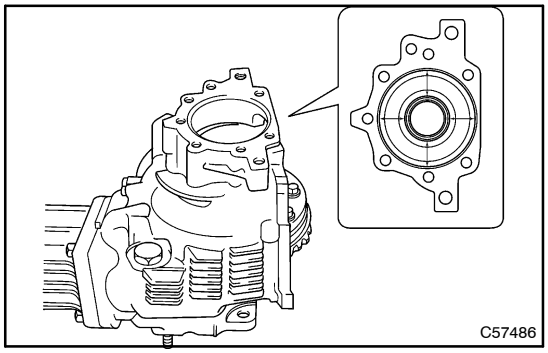
(a) Install the transfer ring gear mounting case washer No.2 to the transfer RH bearing retainer sub–assy.

HINT:
Reuse the washer.



56. INSTALL CENTER DIFFERENTIAL CASE TAPERED ROLLER BEARING

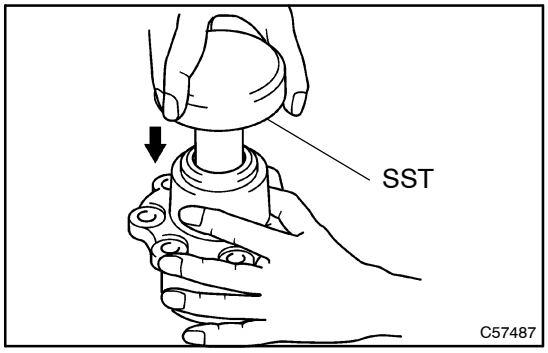
(a) Using SST and a press, install the center differential case tapered roller bearing RH outer race to the transfer RH bearing retainer sub–assy.
SST 09950–60010 (09951–00620), 09950–70010 (09951–07150)



57. INSTALL TRANSFER RH BEARING RETAINER SUB–ASSY

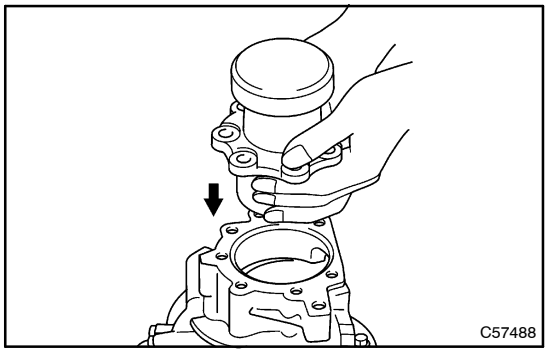
(a) Place the transfer with the face where the transfer RH bearing retainer sub–assy is to be installed up.

(b) Center–align the transfer ring gear mounting case and the transfer case.



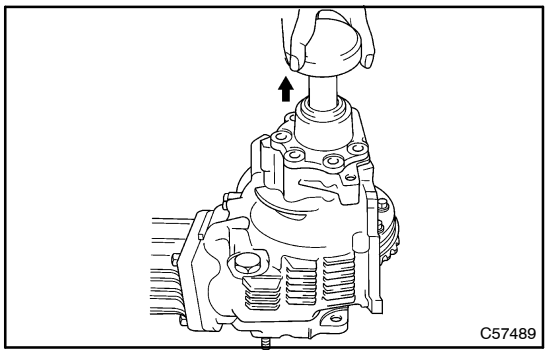
(c) Insert the SST into the transfer RH bearing retainer sub–assy.
SST 09387–00090

NOTICE:
Insert SST straight in order not to damage the oil seal lip.

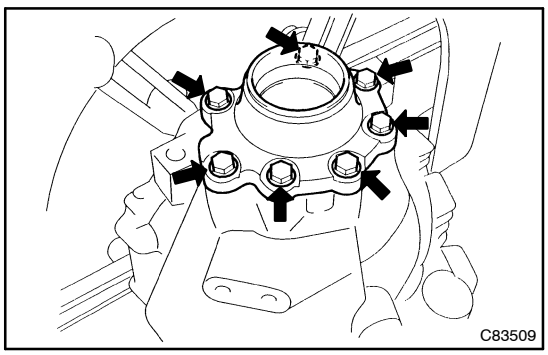


(d) Insert the transfer RH bearing retainer sub–assy together with the SST into the transfer case.

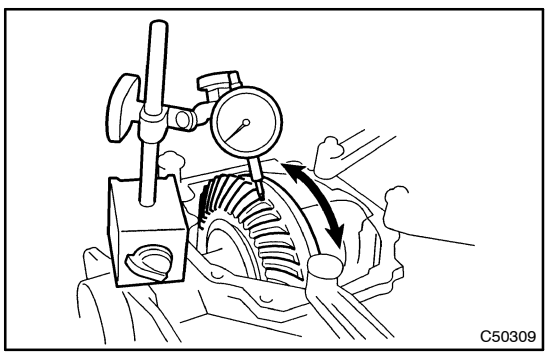
NOTICE:
Avoid interference between the case and retainer, and between the transfer ring gear mounting case and SST.
HINT:
If the retainer cannot be inserted, tap it in with a plastic hammer.



(e) After inserting the transfer RH bearing retainer sub–assy into the transfer case, remove the SST.



(f) Tighten the 7 bolts.
Torque: 28 N·m (286 kgf·cm, 21 ft·lbf)



58. INSPECT BACKLASH

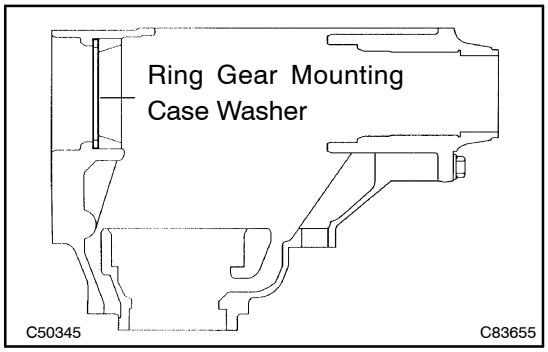
(a) Set a dial indicator perpendicular to the ring gear face, fix the driven pinion, and check backlash by moving the ring gear.
Backlash: 0.10 to 0.15 mm (0.0039 to 0.0059 in.)

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

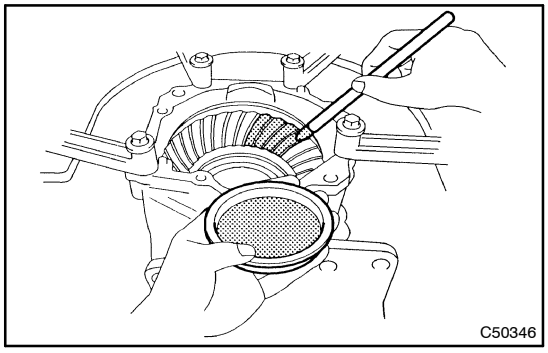
(b) If the measured value is out of standard, select a proper washer for the center differential case tapered roller bearing on the LH side from the table below and install it to obtain the standard value.

Mark	Washer Thickness mm (in.)	Mark	Washer Thickness mm (in.)	Mark	Washer Thickness mm (in.)
AA	2.07 (0.0814)	AB	2.10 (0.0826)	AC	2.13 (0.0838)
BA	2.16 (0.0850)	BB	2.19 (0.0862)	BC	2.22 (0.0874)
CA	2.25 (0.0885)	CB	2.28 (0.0897)	CC	2.31 (0.0909)
DA	2.34 (0.0921)	DB	2.37 (0.0933)	DC	2.40 (0.0944)
EA	2.43 (0.0956)	EB	2.46 (0.0968)	EC	2.49 (0.0980)
FA	2.52 (0.0992)	FB	2.55 (0.1003)	FC	2.58 (0.1015)
GA	2.61 (0.1027)	GB	2.64 (0.1039)	GC	2.67 (0.1051)
HA	2.70 (0.1062)	HB	2.73 (0.1074)	HC	2.76 (0.1086)
JA	2.79 (0.1098)	JB	2.82 (0.1110)	JC	2.85 (0.1122)
KA	2.88 (0.1133)	KB	2.91 (0.1145)	KC	2.94 (0.1157)
LA	2.97 (0.1169)	LB	3.00 (0.1181)		

HINT:
When the backlash is larger or smaller than the standard, select a thinner or thicker washer respectively.



(c) Proper washer location is shown in the illustration.

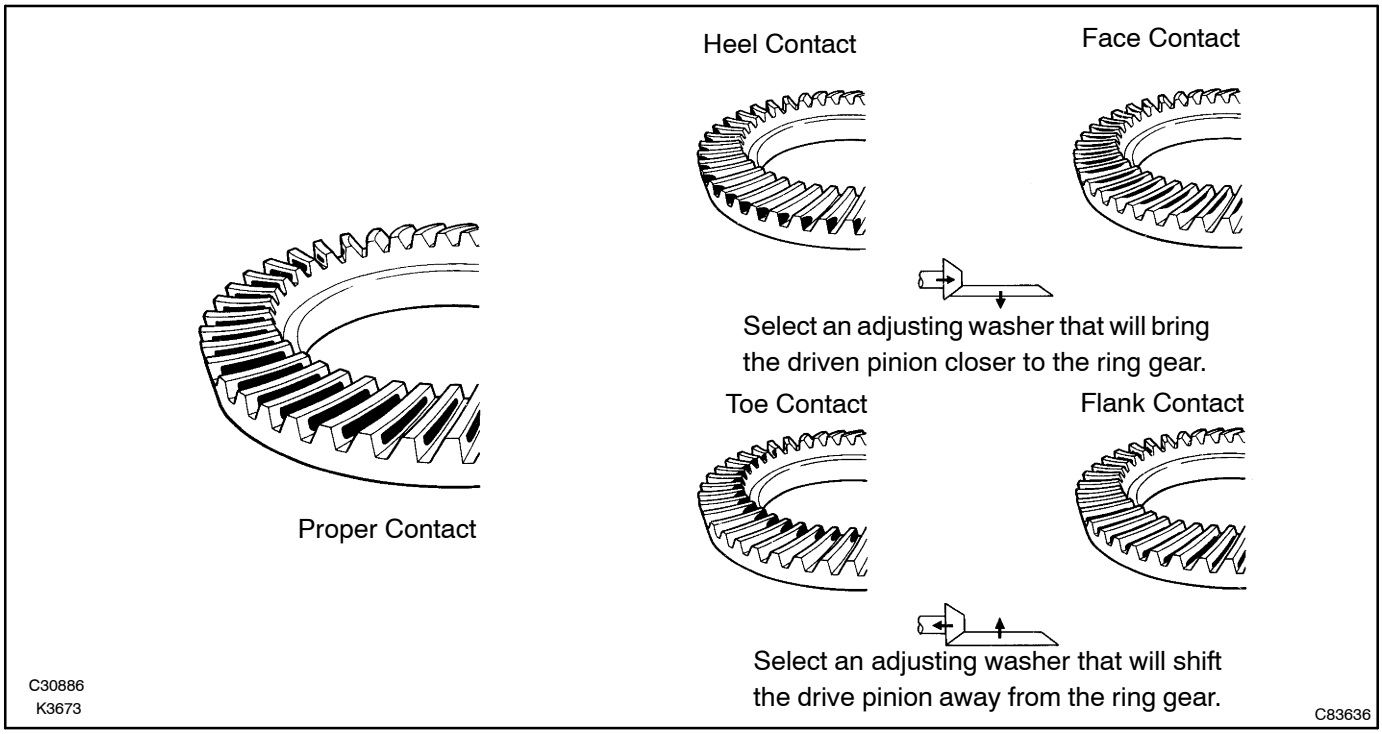


59. INSPECT TOOTH CONTACT BETWEEN RING GEAR AND DRIVEN PINION

(a) Apply red lead primer thinly and uniformly to both faces of the ring gear and rotate it several times.

NOTICE:
Check the tooth contact on the ring gear at 4 places or more.

(b) Observe the pattern shown by red lead primer.

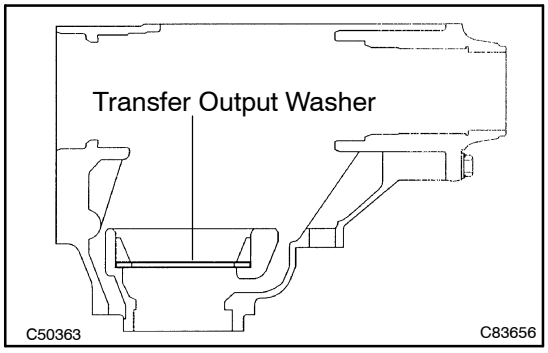


(c) In case of poor tooth contact, select a washer for the driven pinion bearing front side from the following table and replace it.

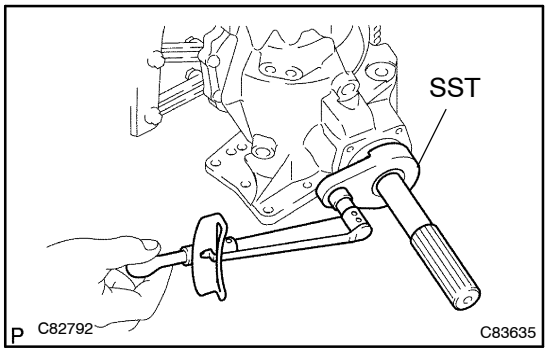
NOTICE:

If the washer thickness is changed, the backlash will be also changed.

Mark	Washer Thickness mm (in.)	Mark	Washer Thickness mm (in.)	Mark	Washer Thickness mm (in.)
AA	1.20 (0.0472)	AC	1.22 (0.0480)	BB	1.24 (0.0488)
CA	1.26 (0.0496)	CC	1.28 (0.0503)	DB	1.30 (0.0511)
EA	1.32 (0.0519)	EC	1.34 (0.0527)	FB	1.36 (0.0535)
GA	1.38 (0.0543)	GC	1.40 (0.0551)	HB	1.42 (0.0559)
JA	1.44 (0.0566)	JC	1.46 (0.0574)	KB	1.48 (0.0582)
LA	1.50 (0.0590)	LC	1.52 (0.0598)	MB	1.54 (0.0606)
NA	1.56 (0.0614)	NC	1.58 (0.0622)	PB	1.60 (0.0629)
QA	1.62 (0.0637)	QC	1.64 (0.0645)		



(d) The location of the transfer output washer for tooth contact adjustment is shown in the illustration.



60. ADJUST TOTAL PRELOAD

(a) Using SST and a torque wrench, measure the initial torque with the driven pinion being contact with the ring gear face.

SST 09326–20011

Torque:

New bearing:

Driven pinion preload +0.2 to 0.4 N·m

(+2.3 to 3.9 kgf·cm, 1.8 to 3.5 in.·lbf)

Used bearing:

Driven pinion preload +0.15 to 0.30 N·m

(+1.6 to 3.1 kgf·cm, 1.3 to 2.7 in.·lbf)

NOTICE:

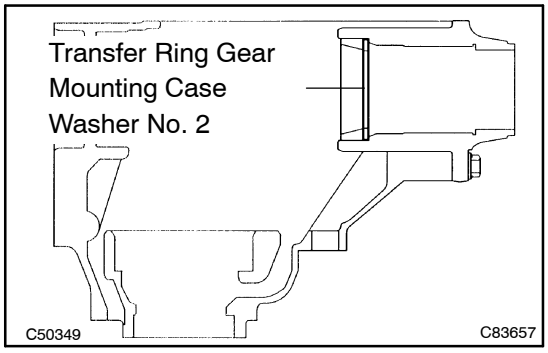
Before measurement, rotate the bearing in both directions several times to make it fit.

HINT:

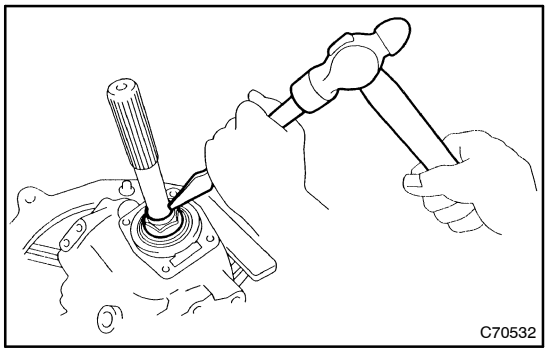
Use a torque wrench with a fulcrum length of 160 mm (6.30 in.).

(b) If the value is out of standard range, select the washer for the center differential case tapered roller bearing RH side from the following table and replace it.

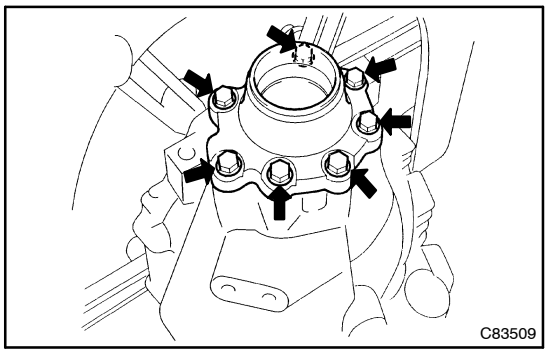
Mark	Washer Thickness mm (in.)	Mark	Washer Thickness mm (in.)	Mark	Washer Thickness mm (in.)
AA	1.47 (0.0578)	AB	1.50 (0.0590)	AC	1.53 (0.0602)
BA	1.56 (0.0614)	BB	1.59 (0.0625)	BC	1.62 (0.0637)
CA	1.65 (0.0649)	CB	1.68 (0.0661)	CC	1.71 (0.0673)
DA	1.74 (0.0685)	DB	1.77 (0.0696)	DC	1.80 (0.0708)
EA	1.83 (0.0720)	EB	1.86 (0.0732)	EC	1.89 (0.0744)
FA	1.92 (0.0755)	FB	1.95 (0.0767)	FC	1.98 (0.0779)
GA	2.01 (0.0790)	GB	2.04 (0.0803)	GC	2.07 (0.0814)
HA	2.10 (0.0826)	HB	2.13 (0.0838)	HC	2.16 (0.0850)
JA	2.19 (0.0862)	JB	2.22 (0.0874)	JC	2.25 (0.0885)
KA	2.28 (0.0897)	KB	2.31 (0.0909)	KC	2.34 (0.0921)
LA	2.37 (0.0933)	LB	2.40 (0.0944)	LC	2.43 (0.0956)
MA	2.46 (0.0968)	MB	2.49 (0.0980)	MC	2.52 (0.0992)
NA	2.55 (0.1003)	NB	2.58 (0.1015)		



(c) The location of the transfer ring gear mounting case washer No.2 for preload adjustment is shown in the illustration.

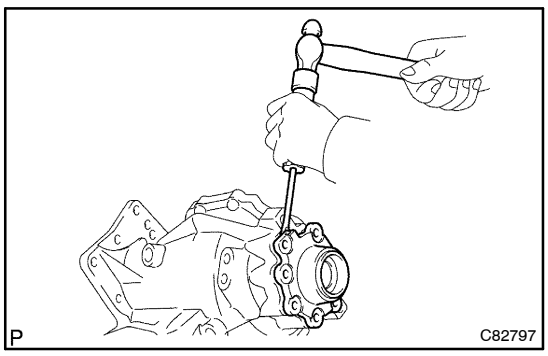


(d) Using a chisel, stake the transfer gear nut.



61. REMOVE TRANSFER RH BEARING RETAINER SUB–ASSY

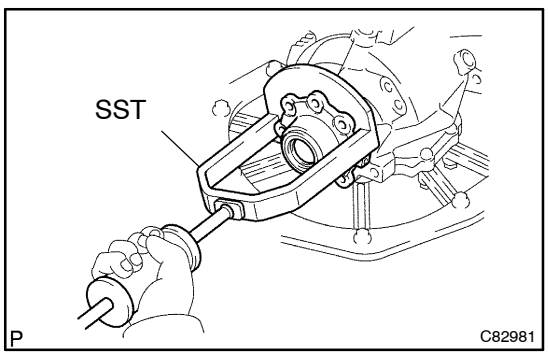
(a) Remove the 7 bolts from the transfer RH bearing retainer sub–assy.



(b) Using a screwdriver and a hammer, make an opening between the transfer RH bearing retainer sub–assy and the transfer case.

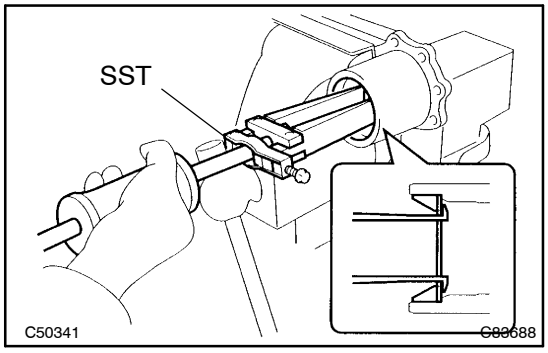
NOTICE:

Be careful not to damage the transfer RH bearing retainer sub–assy and the transfer case.



(c) Using SST, remove the transfer RH bearing retainer sub–assy from the transfer case.

SST 09520–10021

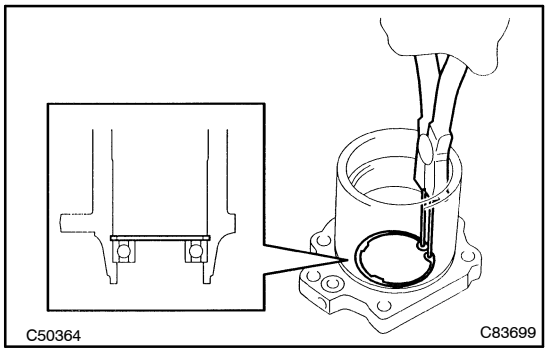


62. REMOVE CENTER DIFFERENTIAL CASE TAPERED ROLLER BEARING

(a) Fix the transfer RH bearing retainer sub–assy in a vise.

(b) Using SST, remove the center differential case tapered roller bearing RH outer race and transfer ring gear mounting case washer No.2 from the transfer RH bearing retainer sub–assy.

SST 09308–00010



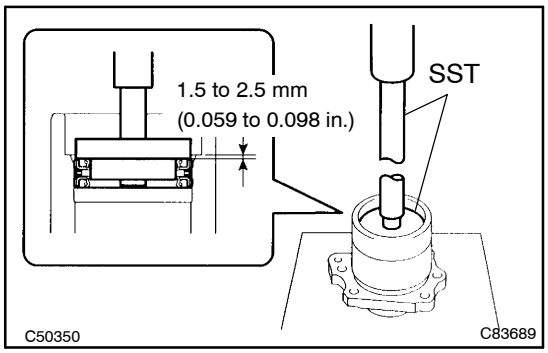
63. INSTALL SIDE GEAR SHAFT HOLDER BEARING

(a) Install the side gear shaft holder bearing to the transfer RH bearing retainer sub–assy.

(b) Using snap ring pliers, install the side gear shaft holder hole snap ring.

HINT:

Check that the side gear shaft holder hole snap ring fits in the groove of the retainer.



64. INSTALL TRANSFER RH BEARING RETAINER OIL SEAL

(a) Using SST and a press, install the transfer RH bearing retainer oil seal No.2 to the transfer RH bearing retainer sub–assy.

SST 09950–60010 (09951–00350, 09951–00560, 09952–06010), 09950–70010 (09951–07150)

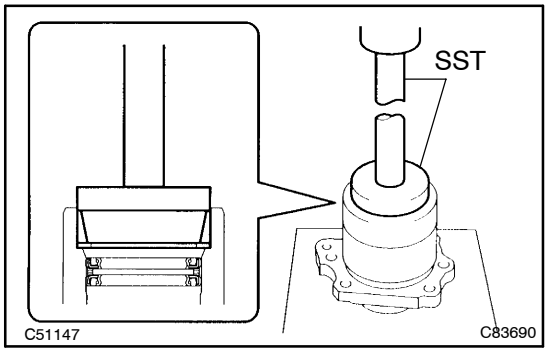
NOTICE:

Carefully press–fit so that the oil seal will not be tilted.

(b) Apply small amount of MP grease No. 2 to the oil seal lip.

65. INSTALL TRANSFER RING GEAR MOUNTING CASE WASHER NO.2

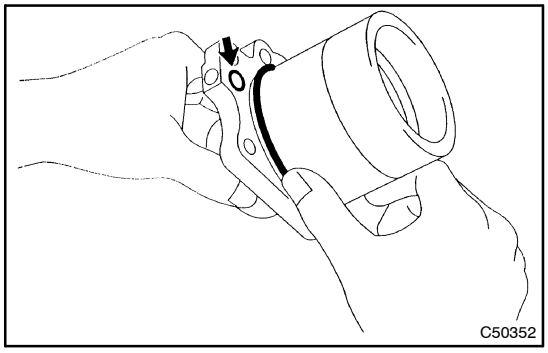
(a) Install the selected transfer ring gear mounting washer No.2 to the transfer RH bearing retainer sub–assy.



66. INSTALL CENTER DIFFERENTIAL CASE TAPERED ROLLER BEARING

(a) Using SST and a press, install the center differential case tapered roller bearing RH outer race to the transfer RH bearing retainer sub–assy.

SST 09950–60010 (09951–00620), 09950–70010 (09951–07150)



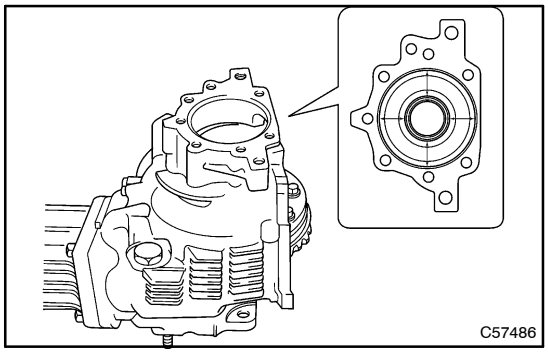
67. INSTALL O–RING

(a) Coat 2 new O–rings with hypoid gear oil.

(b) Install the 2 O–rings to the transfer RH bearing retainer sub–assy.

NOTICE:

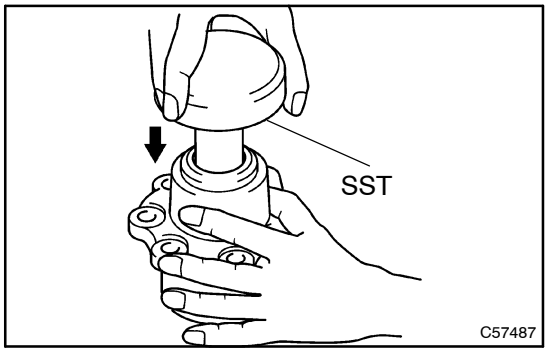
Be careful not to twist the O–ring and fit it properly in the retainer's groove.



68. INSTALL TRANSFER RH BEARING RETAINER SUB–ASSY

(a) Place the transfer with the surface where the transfer RH bearing retainer sub–assy is facing up.

(b) Align the centers of the transfer ring gear mounting case and the transfer case.

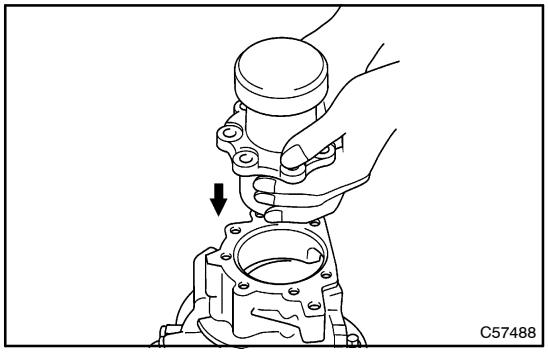


(c) Insert SST into the transfer RH bearing retainer sub–assy.

SST 09387–00090

NOTICE:

Insert the SST straight in order not to damage the oil seal.



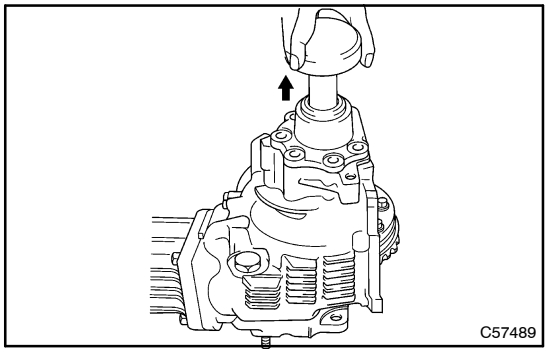
(d) Insert the transfer RH bearing retainer sub–assy together with SST into the transfer case.

NOTICE:

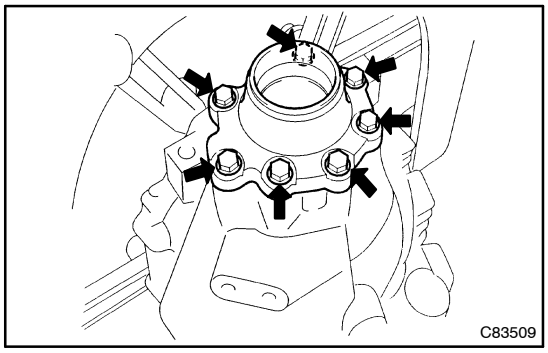
- **Avoid interference between the case and the retainer, and between the SST and the transfer ring gear mounting case.**
- **Carefully check the retainer's O–ring for damage and incorrect fitting.**

HINT:

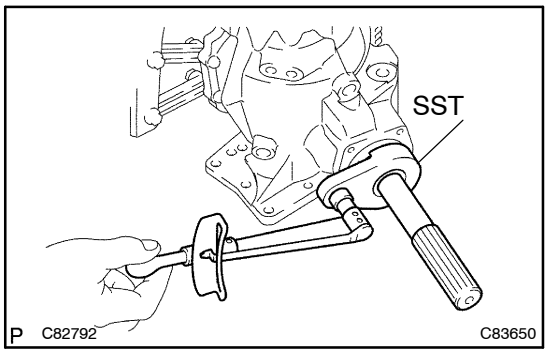
If the retainer cannot be inserted into the case, tap it in with a plastic hammer.



(e) After inserting the transfer RH bearing retainer sub–assy into the transfer case, remove the SST.



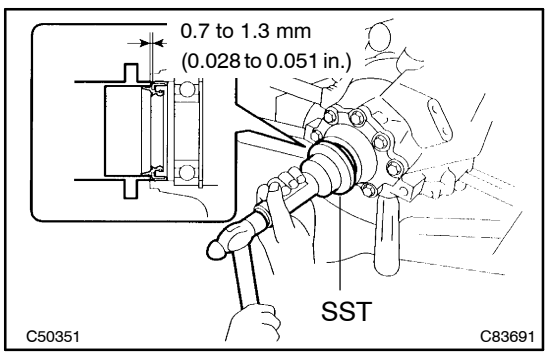
(f) Tighten the 7 bolts.
Torque: 28 N·m (286 kgf·cm, 21 ft·lbf)



69. INSPECT TOTAL PRELOAD

(a) Using SST and a torque wrench, measure the initial torque with the driven pinion being in contact with the ring gear face.
SST 09326–20011
Torque:
New bearing:
Driven pinion preload +0.2 to 0.4 N·m
(+2.3 to 3.9 kgf·cm, 1.8 to 3.5 in.·lbf)
Used bearing:
Driven pinion preload +0.15 to 0.30 N·m
(+1.6 to 3.1 kgf·cm, +1.3 to 2.7 in.·lbf)

HINT:
- Use a torque wrench with a fulcrum length of 160 mm (6.30 in.).
- If the preload is too large, inspect the transfer RH bearig retainer sub–assy.

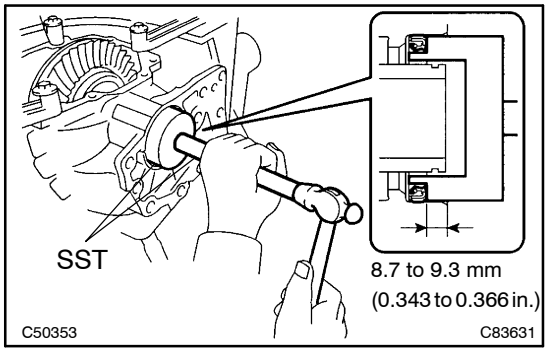


70. INSTALL TRANSFER RH BEARING RETAINER OIL SEAL

(a) Using SST, install the transfer RH bearing retainer oil seal to the transfer RH bearing retainer sub–assy to the position as shown in the illustration.
SST 09223–46011

NOTICE:
Install the oil seal carefully so that it will not be tilted.

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



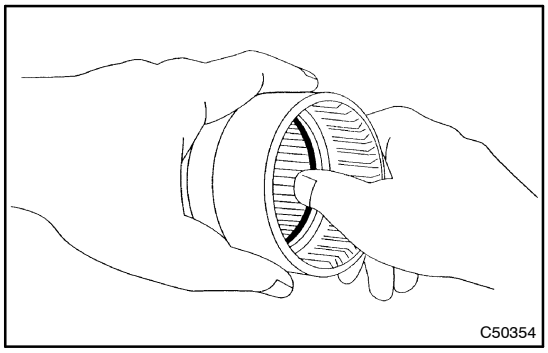
71. INSTALL TRANSFER CASE OIL SEAL

(a) Using SST, install the transfer case oil seal to the transfer case as shown in the illustration.
SST 09387–00010, 09950–70010 (09951–07150)

NOTICE:

Install the oil seal carefully so that it will not be tilted.

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



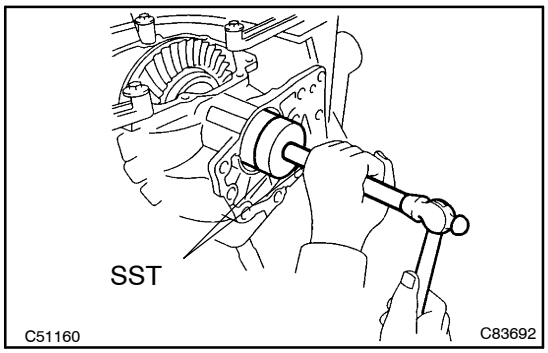
72. INSTALL CTR DIFFERENTIAL LOCK SLEEVE

(a) Coat a new O–ring with hypoid gear oil.

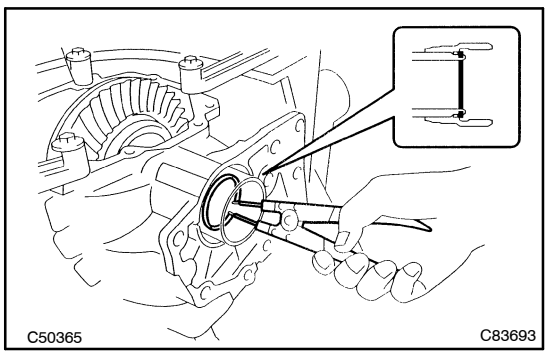
(b) Install the O–ring to the CTR differential lock sleeve.

NOTICE:

Be careful not to twist the O–ring and fit it properly in the retainer's groove.



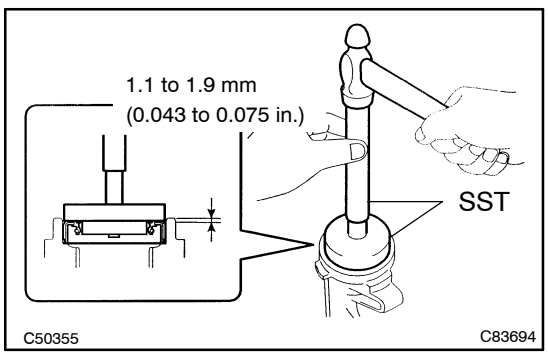
(c) Using SST, install the CTR differential lock sleeve to the transfer case.
SST 09950–60010 (09951–00610), 09950–70010 (09951–07150)



(d) Using snap ring pliers, install the shaft snap ring.

NOTICE:

Check that the snap ring is fitted in the groove of the ring gear mounting case.



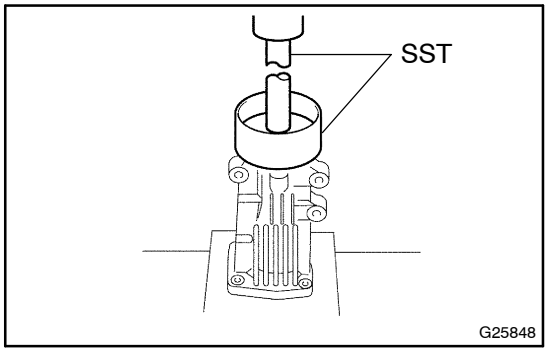
73. INSTALL TRANSFER EXTENSION HOUSING TYPE T OIL SEAL

(a) Using SST, install the transfer extension housing type T oil seal to the transfer extension housing as shown in the illustration.
SST 09950–60010 (09951–00380, 09951–00580, 09952–06010), 09950–70010 (09951–07150)

NOTICE:

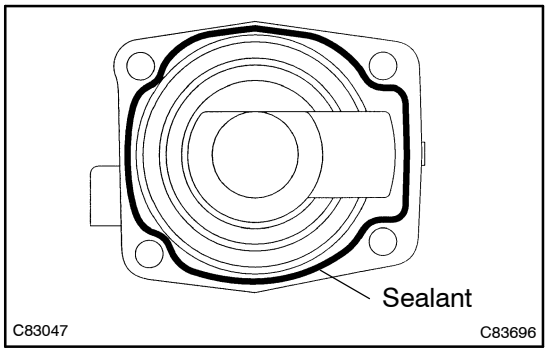
Install the oil seal carefully so that it will not be tilted.

(b) Apply small amount of MP grease No. 2 to the oil seal lip.



74. INSTALL TRANSFER EXTENSION HOUSING DUST DEFLECTOR

(a) Using SST and a press, install a new transfer extension housing dust deflector to the transfer extension housing.
SST 09950–60020 (09951–00710), 09950–70010 (09951–07150)

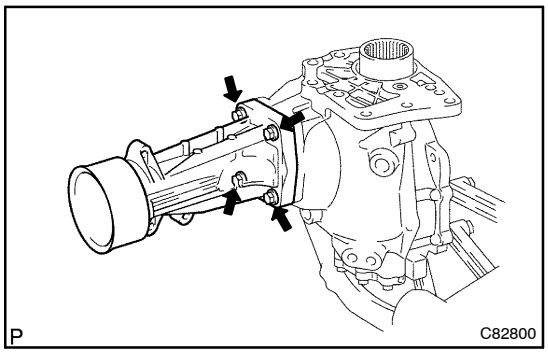


75. INSTALL TRANSFER EXTENSION HOUSING SUB–ASSY

(a) Apply sealant 1281 to the transfer extension housing sub–assy in a continuous bead of 1.2 mm diameter as shown in the illustration.

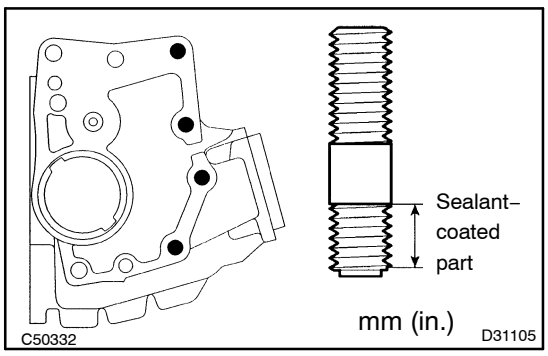
NOTICE:

- **Wipe any grease off the attaching surfaces.**
- **Install the transfer extension housing sub–assy within 10 minutes after applying the sealant.**



(b) Install the 4 transfer extension housing sub–assy to the transfer case with the 4 bolts.
Torque: 26 N·m (260 kgf·cm, 19 ft·lbf)

(c) Remove the transfer assy from the overhaul attachment.

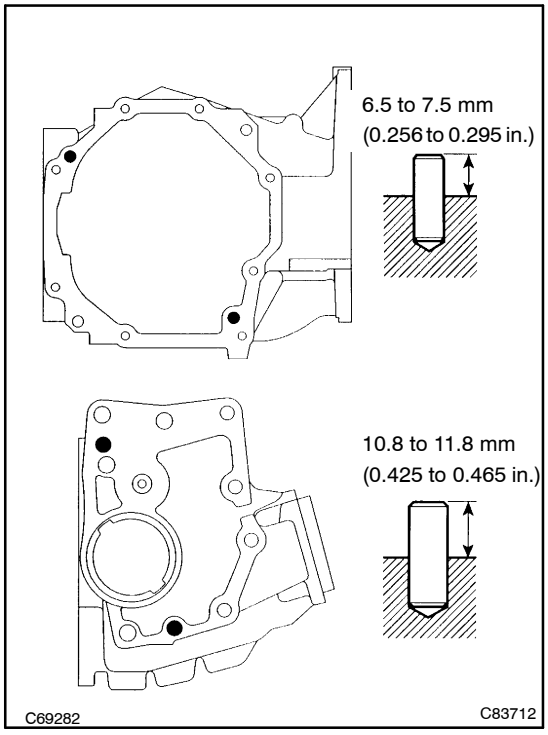


76. INSTALL TRANSFER & TRANSAXLE SETTING STUD BOLT

(a) Install the 4 transfer & transaxle setting stud bolts to the parts of the transfer case as shown in the illustration.
Torque: 39 N·m (400 kgf·cm, 30 ft·lbf)

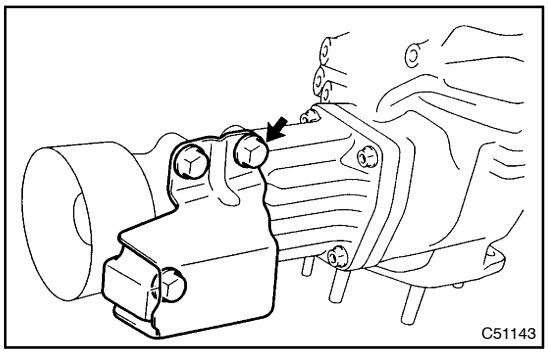
NOTICE:

Install the sealant–coated side of the transfer & transaxle setting stud bolt to the transfer case.



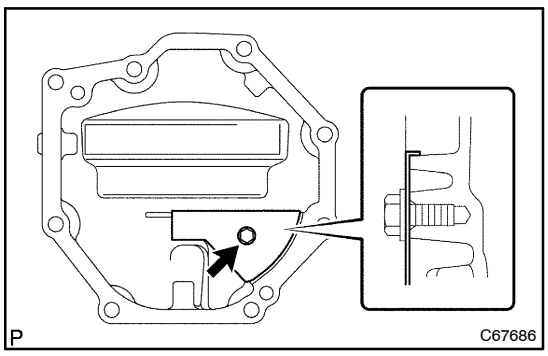
77. INSTALL TRANSFER CASE STRAIGHT PIN

(a) Using a plastic hammer, install the 4 transfer case straight pins to the transfer case as shown in the illustration.



78. INSTALL TRANSFER DYNAMIC DAMPER

(a) Install the transfer dynamic damper to the transfer extension housing sub–assy with the 3 bolts.
Torque: 26 N·m (260 kgf·cm, 19 ft·lbf)

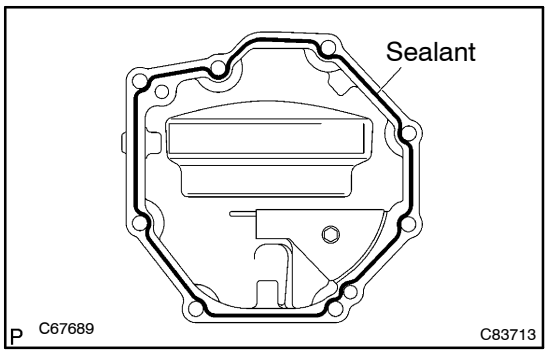


79. INSTALL BREATHER OIL DEFLECTOR

(a) Install the breather oil deflector to the transfer case cover No.1 with the bolt.
Torque: 6.5 N·m (66 kgf·cm, 57 in.·lbf)

NOTICE:

Be careful of the direction of the deflector's fold.

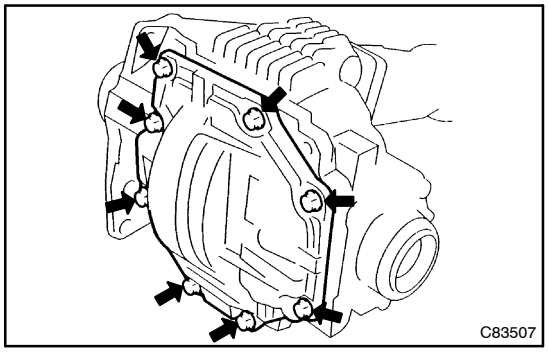


80. INSTALL TRANSFER CASE COVER NO.1

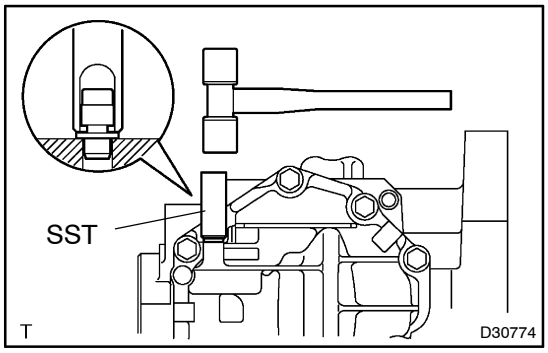
(a) Apply sealant 1281 to the transfer case cover No.1 in a continuous bead of 1.2 mm diameter as shown in the illustration.

NOTICE:

- **Wipe any grease off the attaching surfaces.**
- **Install the transfer case cover No.1 within 10 minutes after applying the sealant.**

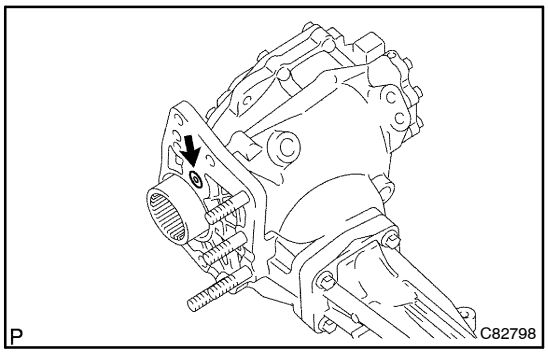


(b) Install the transfer case cover No.1 to the transfer case with the 8 bolts.
Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)



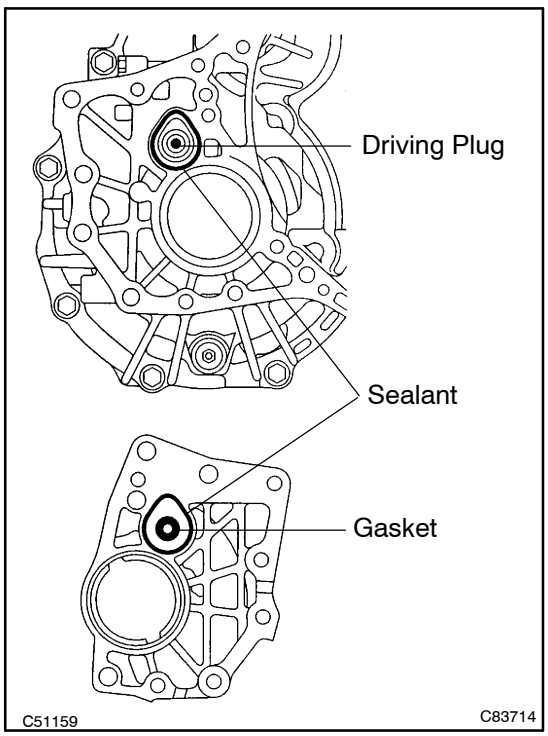
81. INSTALL TRANSFER CASE BREATHER PLUG

(a) Using SST and a hammer, install the breather plug to the transfer case cover No.1.
SST 09612–10061



82. INSTALL TRANSFER COVER GASKET

(a) Install a new transfer cover gasket to the transfer case.

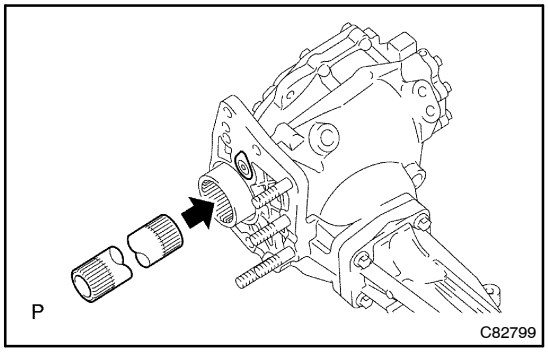


83. INSTALL TRANSFER ASSY

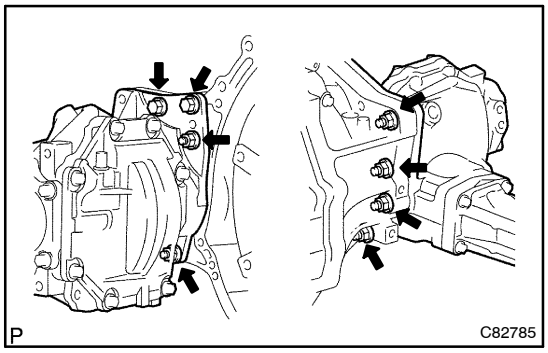
(a) Apply sealant 1281 to the transaxle assy and the transfer assy in a continuous bead of 1.2 mm diameter as shown in the illustration.

NOTICE:

- **Wipe any grease off the attaching surfaces.**
- **Install it within 10 minutes after applying the sealant.**
- **Sealant stuck on the gasket, case oil seal and driving plug may cause oil leakage and seizure due to oil shortage. Care must be taken.**



(b) w/o VSC:
After applying sealant, install the intermediate to the transfer assy.



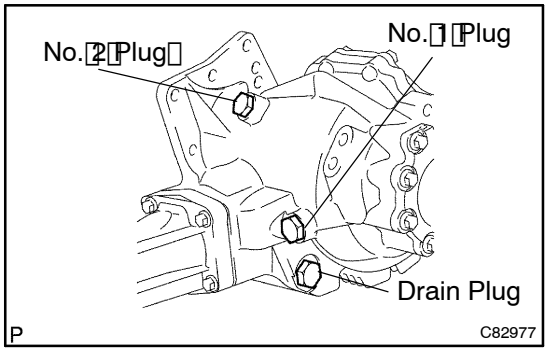
(c) Install the transfer assy to the transaxle assy with the 2 bolts and 6 nuts.
Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)

NOTICE:

- **Check that the gasket is installed to the transfer assy before instaling them to the transaxle assy.**
- **Install the transfer assy to the transaxle assy without tilting.**
- **When moving the transfer assy, do not hold the oil seal on the both sides.**

84. INSTALL AUTOMATIC TRANSMISSION W/TRANSFER (SEE PAGE 40–11)

85. INSTALL ENGINE ASSEMBLY WITH TRANSAXLE (SEE PAGE 14–24)



86. INSTALL TRANSFER DRAIN PLUG

(a) Install the transfer drain plug with a new drain gasket.
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)

87. INSTALL TRANSFER CASE NO.2 PLUG

(a) Install the transfer case No.2 plug with a new gasket No.2.

88. INSTALL TRANSFER CASE NO.1 PLUG

(a) Add oil up to 0 to 5 mm below the lower side of the plug hole.
Oil quantity: 0.9 L (0.95 US qts, 0.79 Imp. qts)

HINT:
When adding oil, pour it slowly.

(b) Install the transfer case No.1 plug with a new gasket No.1.
Torque: 49 N·m (500 kgf·cm, 36 ft·lbf)